



PURCHASE ORDER

No: PUR/IICT/0481/24-25/EQPT/1875

Date: 08-11-2024

To

M/s. Amar Equipments Pvt Ltd

Valson Compound ,LbS Road

Bhandup(w),Mumbai 400078

Ph:+91-22-62255000/ M: +91-7506073792

Email:info@amarequip.com | E: tender@amarequip.com

Sub;-“Supply Installation and Commissioning of Autoclave Reactor Systems- reg.

Ref: - 1. Our Tender Enquiry No. PUR/IICT/0481/24-25/EQPT DT.10.07.2024 and CPPP tender enquiry No.2024_CSIR_200927_1 Dt.10.07.2024.

2. Your bid reference No: QAM-T/020/AEPL/24-25 dt.25.07.2024

Dear Sirs,

Kindly supply the following item(s) strictly as per the terms and conditions.

Sl. No	DESCRIPTION OF MATERIAL	Quantity	Price in (₹)	Total Amount in (₹)
1.	Autoclave Reactor System (Alloy C 276-1000ml/500ml)	01 No.	1514000.00	15,14,000.00
2.	Autoclave Reactor System (Alloy C 276-2000ml)	01No.	1386000.00	13,86,000.00
3.	Autoclave Reactor System (Alloy inconel 600-1000ml <i>(Detailed Specifications and other items and accessories as per Annexure enclosed)</i>)	01No.	1430000.00	14,30,000.00
				43,30,000.00
Add GST @18%				7,79,400.00
FOR CSIR-IICT, Hyderabad				51,09,400.00



TERMS & CONDITIONS:

- 1. Prices:** FOR CSIR-IICT Inclusive of all taxes, duties etc., Hyderabad. Unloading the consignment at our site is your cost.
- 2. Order Acknowledgement:** Kindly send order acknowledgement within 15 days through Email: cosp@iict.res.in and csiriicthyd@csiriict.in mention PO No. in the subject line. If you notice any discrepancy/typographical error etc. in this order, you must immediately request for its amendment/correction. Further along with duly signed and stamped copy of this P.O. as token of acceptance of terms and conditions of this P.O. You are also required to sign a contract agreement in pursuance of this Purchase Order in the prescribed format on a Non-Judicial Stamp paper of Rs 200/-**(contract form attached)**
- 3. Taxes and Levies:** Price includes GST@18% also
- 4. Delivery Period :** The ordered material should be supplied within the delivery period of 10-16 weeks from the date of receipt of the Purchase Order.
- 5. PAYMENT TERMS:** 1) 100% through RTGS /NEFT or online mode against supply in complete quantity of ordered items in good condition as per ordered specifications and terms, subject to its joint inspection in the presence of suppliers service engineers/ representative and its confirmations and acceptance by CSIR IICT user, subject to submission of prescribed PBG..
- 6. Warranty:** Warranty should be furnished for 12 months from the date of successful installation and commissioning of the equipment and subject to final acceptance of the same by the CSIR-IICT user. If CSIR IICT wants to enter into CAMC/AMC in future after warranty period the amount for AMC charges shall not be paid in advance and the same shall be paid on bill basis only.
- 7. Performance Bank Guarantee:** 5% PBG valid till 60 days beyond the date of final installation and commissioning to be submitted within 21 days from the date of the Purchase Order, failing which order may be cancelled at the discretion of CSIR IICT.
- 8. INSTALLATION, COMMISSIONING AND DEMONSTRATION:** A qualified and factory-trained service engineer should commission the supplied equipment free of cost within one month from the date of receipt of the ordered goods and onsite application training to be provided for 2 persons 3 working days at CSIR IICT., Telangana, India.
- 9. LD clause:** Timely supply is the essence of stipulation in the delivery period of



our purchase order, for our requirements have got a direct bearing with time targeted research work. By any measure, if there is any delay in delivery of the ordered material(s), a sum equivalent to **0.5 (point five)** per cent of contract value for each week of delay or part thereof until actual delivery will be deducted from the contract value as liquidated damages, subject to the maximum deduction of **10 (ten) per cent** of P.O. Value. CSIR IICT is also at liberty to consider the termination of the contract of the items is not delivered within the delivery period without assigning any reason thereof.

10. **CSIR-IICT-GST No: 36AAATC2716R2ZF**
PAN No. AAATC2716R **TAN No. HYDI00674C**
11. **Availability of spares and service engineer support shall be conformed for a period of 10 years as part of after sales and service support on applicable charges after warranty period.**
12. The dispute settlement mechanism/arbitration proceedings shall be Concluded as under:
 - a) If any dispute or difference arises between the parties hereto as to the construction, interpretation, effect and implication of any provision of this agreement including the rights or liabilities or any claim or demand of any party against other or in regard to any other matter under these presents but excluding any matters, decisions or determination of which is expressly provided for in this Agreement, such disputes or differences shall be referred to **Delhi International Arbitration Centre (DIAC), New Delhi**. A reference to the Arbitration under this Clause shall be deemed to be submission within the meaning of the Arbitration and Conciliation Act, 1996 and the rules framed thereunder for the time being in force. Each party shall bear and pay its own cost of the arbitration proceedings unless the Arbitrators otherwise decides in the Award.
 - b) In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.

The venue of the arbitration shall be the place from where the purchase order or contract is issued. (for further information please



सीएसआईआर- भारतीय रासायनिक प्रौद्योगिकी संस्थान
CSIR-Indian Institute of Chemical Technology
आई. एस. ओ. 9001 संगठन (विश्लेषणात्मक परिसेवा हेतु) / ISO 9001 Organization (for Analytical Services)
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद) / (Council of Scientific and Industrial Research)
तारनाका, उप्पल रोड, हैदराबाद. तेलंगाना राज्य, भारत. 500 007.
Tarnaka, Uppal Road, Hyderabad. Telangana State, India. 500 007



refer to our Tender Document)

13. **Jurisdiction** - All disputes related to this tender shall be subject to the local court of competent jurisdiction at **HYDERABAD, Telangana, India** only.
14. The terms and conditions and tender specifications and clarification there off as contained in the tender document shall form part of this purchase order .However, Incase of any discrepancy between this P.O. and Tender terms this purchase order (P.O.) shall prevail.

Yours faithfully,
For & on behalf of CSIR,

(Dharmendra Kumar)
Controller of Stores & Purchase

Note: Kindly, mention our purchase order reference number for all your future correspondence so as to enable us to avoid any delay while tracking/clearing the material(s).

Budget Head: FCP512403 for Rs.51,09,400/- (Rupees Fifty One lakhs Nine thousand Four Hundred only)

1. Indentor's copy: B.VIJAYA THOMAS (FAC) 2. Accounts copy; 3. Office copy; 4. Guard File copy 5. Spare copy;



NO.PUR/IICT/0481/24-25/EQPT/1875

DT.08.11.2024

ANNEXURE

1. Autoclave (Alloy C276-1000ml /500ml) reactor System EQPT(1):

S. N	Model	A2000 Series	
A.	Volume	500ml & 1L net filling capacity (Bar stock) Interchangeable with all internal parts/ provisions	
B.	Material of Construction (for each autoclave)	Head & Body and all internal Wetted parts: Hastelloy C276 External parts and fittings - SS 316 Magnetic Drive - SS 316	
C.	Design pressure	100 bar (for each autoclave)	
D.	Maximum working temperature	250° C - 350° C (for each autoclave)	
E.	Head mounting style	Removable head and vessel design (for each autoclave)	
F.	Heating	External electrical ceramic band heater of 1500 W with cladding & insulation (for each autoclave)	
G.	Common Motor & drive	¼ hp motor with Drive belt and pulley system to control stirrer speed upto 800 rpm . Position counter shall be provided for real rpm display	
H.	Shaft sealing (for each autoclave)	Zero leakage Magnetic drive coupling of SS 316 Torque - 20 - 25 kg-cm with metal gasket . Material of bush- carbon filled PTFE (CFT) . Cooling jacket shall be provided with inlet and outlet	
I.	Stirrer (for each autoclave)	2 stage 6-bladed turbine stirrer.	
J.	Standard fittings (for each autoclave)	External Valves & Fittings: PTFE coated SS-316 Diaphragm Pressure gauge Vent needle valve for gas sampling Safety rupture disc (Hast C276) Gas / liquid inlet-valve & liquid sampling valve mounted on common dip tube. SS 316 Pressure Transmitter / Transducer Note: All nozzles & needle valves shall be Swagelok make in Hastelloy C & Valve end connection shall be ¼" NPT.	Internal Fittings: Internal cooling coil Thermowell (with RTD PT100 temperature sensor/ K type thermocouple) Dip tube
K.	Gasket	PTFE / Graphoil Gasket (for each autoclave)	
L.	Closure type	Split clamp with clamp bolts (for each autoclave)	
M.	Common control Panel	Control panel with, • Programmable P.I.D temperature controller with high temperature alarm and safety cut-off • Heater temperature display • Variable frequency drive for motor speed control. • RPM display • Digital pressure display • 4 spare belts	
N.	Spares	Extra 4 needle valves Flexible gas line hose with NRV about 4 metres 2 numbers bearings, O rings, bush, gaskets, and head gasket Spanners and Tool Kit / drive repair set	
O.	Power Supply	Iq, 220VAC 50 Hz	



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Tarnaka, Uppal Road, Hyderabad. Telangana State, India. 500 007



S. N	Model	A2000 Series
P.	Mounting	Common SS Trolley with heavy duty

Table 3 - PRICE LIST: For A2000 Series:

Model Number	Volume of Autoclave	Price in Rs. for each unit Bar Stock	Minimum Stirrable Volume	Approximate Dimension in mm
				(W x D x H)
A2115- HC6	500ml & 1L	Quoted in BOQ	85 ml	1010 x 410 x 1340
A2315- HC6	Interchangeable		130 ml	1040 x 1350

2. Autoclave (Alloy C276-2000ml) reactor System EQPT(2):

S. N	Model	A2000 Series	
A.	Volume	2 L net filling capacity (Bar stock) with all internal parts/ provisions	
B.	Material of Construction	Head & Body and all internal Wetted parts: Hastelloy C276 External parts and fittings - SS 316 Magnetic Drive - SS 316	
C.	Design pressure	100 bar	
D.	Maximum working temperature	250° C - 350 Deg C	
E.	Head mounting style	Removable head and vessel design	
F.	Heating	External electrical ceramic band heater of 1500 W with cladding & insulation	
G.	Motor & drive	¼ hp motor with Drive belt and pulley system to control stirrer speed upto 800 rpm . Position counter shall be provided for real rpm display	
H.	Shaft sealing	Zero leakage Magnetic drive coupling of SS 316 Torque - 20 - 25 kg-cm with metal gasket . Material of bush- carbon filled PTFE (CFT) . Cooling jacket shall be provided with inlet and outlet	
I.	Stirrer	2 stage 6-bladed turbine stirrer.	
J.	Standard fittings	External Valves & Fittings: PTFE coated SS-316 Diaphragm Pressure gauge Vent needle valve for gas sampling Safety rupture disc (Hast C276) Gas / liquid inlet-valve & liquid sampling valve mounted on common dip tube. SS 316 Pressure Transmitter / Transducer Flush bottom valve with SS discharge line with rising stem (Amar make) Note: All nozzles & needle valves shall be Swagelok make in Hastelloy C & Valve end connection shall be ½" NPT..	Internal Fittings: Internal cooling coil Thermowell (with RTD PT100 temperature sensor/ K type thermocouple) Dip tube
K.	Gasket	PTFE / Graphoil Gasket	
L.	Closure type	Split clamp with clamp bolts	
M.	Control Panel	Control panel with, • Programmable P.I.D temperature controller with high temperature alarm and safety cut-off • Heater temperature display • Variable frequency drive for motor speed control.	



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S. N	Model	A2000 Series
		<ul style="list-style-type: none"> RPM display Digital pressure display.
N.	Spares	Extra 4 needle valves and 1 bottom valve Flexible gas line hose with NRV about 4 metres 2 numbers bearings, O rings, bush, gaskets, and head gasket Spanners and Tool Kit / drive repair set 4 spare belts
O.	Power Supply	1φ, 220VAC 50 Hz
P.	Mounting	SS Trolley with heavy duty

Table 3 - PRICE LIST: For A2000 Series:

Model Number	Volume of Autoclave	Price in Rs. for each unit Bar Stock	Minimum Stirrable Volume	Approximate Dimension in mm
				(W x D x H)
A2313- HC6	2L	Quoted in BOQ	130 ml	1010 x 410 x 1350

3. Autoclave (Alloy Inconel 600-1000ml) reactor System EQPT (3)

S. N	Model	A2000 Series	
A.	Volume	500ml & 1L net filling capacity (Bar stock) Interchangeable with all internal parts/ provisions	
B.	Material of Construction (for each autoclave)	Head & Body and all internal Wetted parts: Inconel 600 External parts and fittings – SS 316 Magnetic Drive – SS 316	
C.	Design pressure	100 bar (for each autoclave)	
D.	Maximum working temperature	300 - 350° C (for each autoclave)	
E.	Head mounting style	Removable head and vessel design (for each autoclave)	
F.	Heating	External electrical ceramic band heater of 1500 W with cladding & insulation (for each autoclave)	
G.	Common Motor & drive	¼ hp motor with Drive belt and pulley system to control stirrer speed upto 800 rpm . Position counter shall be provided for real rpm display	
H.	Shaft sealing (for each autoclave)	Zero leakage Magnetic drive coupling of SS 316 Torque – 20 – 25 kg-cm with metal gasket . Material of bush- carbon filled PTFE (CFT) . Cooling jacket shall be provided with inlet and outlet	
I.	Stirrer (for each autoclave)	2 stage 6-bladed turbine stirrer.	
J.	Standard fittings (for each autoclave)	External Valves & Fittings: PTFE coated SS-316 Diaphragm Pressure gauge Vent needle valve for gas sampling Safety rupture disc (Hast C276) Gas / liquid inlet-valve & liquid sampling valve mounted on common dip tube. SS 316 Pressure Transmitter / Transducer	Internal Fittings: Internal cooling coil Thermowell (with RTD PT100 temperature sensor/ K type thermocouple) Dip tube

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S. N	Model	A2000 Series
		Note: All nozzles & needle valves shall be Swagelok make in Hastelloy C & Valve end connection shall be 1/2" NPT.
K.	Gasket	PTFE / Graphoil Gasket (for each autoclave)
L.	Closure type	Split clamp with clamp bolts (for each autoclave)
M.	Common control Panel	Control panel with, <ul style="list-style-type: none"> • Programmable P.I.D temperature controller with high temperature alarm and safety cut-off • Heater temperature display • Variable frequency drive for motor speed control. • RPM display Digital pressure display.
N.	Spares	Extra 4 needle valves Flexible gas line hose with NRV about 4 metres 2 numbers bearings, O rings, bush, gaskets, and head gasket Spanners and Tool Kit / drive repair set 4 nos spare belts
O.	Power Supply	1 ϕ , 220VAC 50 Hz
P.	Mounting	Common SS Trolley of heavy duty

Table 3 - PRICE LIST: For A2000 Series:

Model Number	Volume of Autoclave	Price in Rs. for each unit Bar Stock	Minimum Stirrable Volume	Approximate Dimension in mm
				(W x D x H)
A2115- INC	500ml & IL	Quoted in BOQ	85 ml	1010 x 410 x 1340
A2315- INC	Interchangeable		130 ml	1040 x 410 x 1350

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COSP