

**TECHNICAL BID PROFORMA**

Item Name: Double Jet core-shell fiber spinner

**1.0 Bidder Eligibility Criteria:**

I	Bidder Eligibility Criteria-I (Public Procurement – Preference to Make in India)	Class I / Class II	Local Content value	Reference, Page No.
I	Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16 <sup>th</sup> September 2020 and other subsequent orders issued therein.			
2.0	<b>Bidder Eligibility Criteria-II</b>	<b>Compliance (Yes/No)</b>	<b>Reference Page No.</b>	<b>Remarks, If any</b>
1	The bidder/OEM should have supplied at least 10 similar items to IITs, NITs, IISERs, CSIR Labs or other Govt. R&D organizations in the last 3 years, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation.			

**3.0 Technical Compliance:****Double Jet core-shell fiber spinner**

S.N o.	Description	Specification Requested	Complied / Not Complied	Ref. Page
1	High voltage power supply 2 Nos.	a) Variable from 0 to 50 kV b) With voltmeter & microammeter c) Max current 1.0 mA d) Static removal device -shorting stick e) Over load and short circuit protected		
2	Syringe Dispenser 4 Nos.	a) To dispense from 2 nos. of standard syringes 2,5 & 10 ml b) Fabricated using insulated material and minimal metallic components to work under high voltage conditions and to avoid electric field distortions around the unit c) Independent motor control through PLC & touch screen (HMI) to control and indicate flow rate d) Two pumps placed on opposite sides of drum collector e) Flow rate 1uL / min to 10 mL / min. Resolution 0.1 f) Volume and Flow control g) Time control h) Syringe sizes till 20ml		
	Coaxial spinneret	a) Spinneret for coaxial spinning. – 2 nos		

	Multi Nozzle	b) Tubing to connect syringe with spinneret To fit 5 needles from one syringe – 2 nos		
3	Collector Assemblies A. Drum Collector  B. Disc Collector  C. Rod Collector   D. Plate Collector  E. Solvent collector	Diameter 100 mm length 300 mm  Diameter 100 mm edge thickness 10 mm  Diameter : 25, 15, 12, 6, 4, 2 mm Different Rod from Diameter less than 25mm can be fit other than the 6 sizes provided by us. Rod, Disc & Drum Speed Variable - 300 to 4000 PM Double side spinning  300 mm x 300 mm Spinning only on one side  Trough to contain liquid on which fibres are to be collected.		
4	Drum Translation Stage	a) Movement of 300 mm. b) 150 mm on each side from mean position c) Facility to limit movement from 10 to 150 mm independently on either side d) Digital display of rate of movement with speed control e) Max traverse speed 250mm / min		
5	Distance Adjustment 2 nos	Motorized Distance adjustment between Syringe and Collector assembly		
6	Plate translation stage	a) Plate Translation stage Movement of 300 mm. b) 150 mm on each side from mean position c) Facility to limit movement from 10 to 150 mm independently on either side d) Digital display of rate of movement with speed control Max traverse speed 250mm / min		
7	Electrospinning Enclosure Construction   Stand Alone Instrument  Safety and additional features of cabinet	Aluminum Strut frame with glass/polycarbonate clear panel on the Left side and front doors. All other panels made of Epoxy based insulated material and aluminum sheets  Instrument Dimensions 1800 x 900 x 1700 in mm ( LxBxH) Approx a) With Static removal device – Residual Charge Discharge Stick b) Safety switch to switch off H.V. Power supply when door is opened. c) Hazard lamp to indicate that H.V. Power supply is on. d) Proper cabin lighting and Exhaust Fan-ventilation and Emergency Stop.		

		e) Rubber floor mat for user safety f) UV Lamp		
8	Temperature and Humidity Display	Digital meters		
9	Spares	a) Standard Disposable syringes of 2,5 and 10ml 100 nos. each b) Aluminum Foils 100 nos. c) Sample solution for Electrospinning d) One Meter Tubing for Coaxial spinning e) Necessary Cables and Connector f) Operating Instructions and Warranty Card		
10	Cabin Heating	Provision to heat cabin up to 50°C		
11	Orientation	Horizontal Spinning		
12	Controls	PLC & HMI Control for 4 Syringe Pumps , Distance adjustment, Drum Translation Stage, Cabin Light, Back Light & Exhaust Fan. Panel Mounted control for High Voltage, Drum Collector, Temperature control & Humidity Display.		

#### Terms and conditions

1.	Soft and hard copy of the manual should be provided with the instrument.		
2.	Test report of the instrument should be provided.		
3.	Installation should be free		
4.	Training session related to equipment and software related to the system to be done atleast three times per year until warranty expire		
5.	Warranty: Minimum 3 years, Company must take responsibility to replace the consumables if needed during the three years of warranty Period.		
6.	Supplier should clearly mention about their service set up in India (preferably in South part of India) for prompt service support along with contact details of service engineers specially trained on the offered system. Service should be provided within 24 hrs from the report of technical problem so that machine down time is minimized. In case the Equipment / System remains non-operational for more than 5 days then warranty period will be extended for the equivalent period for which Equipment / System remained non-operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract.		
7.	Spares: Supplier should confirm the availability of spares for next 10 years from the date of installation. All essential spares for day-to-day operation needs should be provided as standard supply.		
8.	Pre-Installation Requirement: Necessary pre-installation advice should be sent immediately after the placement of the order.		
9.	Delivery Condition: The instrument should be delivered within 10-12 weeks.		

**SIGNATURE OF BIDDER ALONG WITH  
SEAL OF THE COMPANY WITH DATE**