

TECHNICAL BID PROFORMA

Item Name: Physiological/Cardiovascular Flow Simulation Pump System

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 th September 2020 and other subsequent orders issued therein.			
2.0	Bidder Eligibility Criteria-II	Compliance (Yes/No)	Reference Page No.	Remarks, If any
1	The bidder/OEM should have supplied at least 2 similar items to IITs, NITs, IISERs, CSIR Labs or other R&D organizations or institutions in India or abroad in the last 5 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:

S.n o	Specifications	Complied / Not Complied	Reference, Page. No.
1	A fully functional and tested Cardiac and Vascular flow simulating pumps should be provided.		
2	The pump should generate controlled pulsatile flow		
3	The equipment should provide a proprietary software for emulation of various flow conditions		
4	The equipment should provide pre-programmed waveforms and pre-configurations		
5	The equipment should have provision for external control using a proprietary software		
6	The controlled should offer variable amplitude, and monitor positions and velocities		
7	The equipment should provide Arrhythmia and wave train functions		
8	A Pump head should be provided for creating mock circulatory and physiological flow loops		
9	The pump head should have simulated aortic and mitral check valves, and a ventricular membrane in conjunction with them to emulate realistic flow patterns		
10	The pump head should further have ventricular pressure monitor		
11	In addition to the above, the Cardiac and Vascular flow simulating pump supplied should conform to the detailed specifications as listed below:		
	Operation voltage	90 - 240 / 50 - 60 Hz	
	Pump dry weight	< 8 kg	
	Actuator controller	< 5 kg	

	Cycle rate	30- 200 BPM		
	Displacement volume	180 ml		
	Hose connectors	19 mm		
	Waveform Accuracy	< 4% of Stroke Volume at 70 BPM < 5% of Stroke Volume at 200 BPM		
	Power Consumption	Max 300W		
	Synchronisation Pulse	+5V signal with Adjustable from 0 to 2000ms delay		
	Terms and Conditions:			
1	The equipment must have one year warranty.			

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the above points with document proof as required. Failing which bidders will be technically disqualified)

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