

**TECHNICAL BID PROFORMA**  
**Item Name: Solution Pump with accessories**

**1.0 Bidder Eligibility Criteria:**

I	<b>Bidder Eligibility Criteria-I (Public Procurement – Preference to Make in India)</b>	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.			
II	<b>Bidder Eligibility Criteria-II</b>	Compliance (Yes/No)	Reference Page No.	Remarks, If any
1	The bidder/OEM should have supplied at least 5 similar items to IITs, NITs, IISERs, CSIR Labs or other Govt. R&D organizations in the last 10 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.			

**2.0 Technical Compliance:**

S.NO	Feature	Required features	Complied/Not Complied	Reference Page No
1	Application	To raise the pressure of liquid solution (R134a+DMF) Where, R134a - 1,1,1,2-Tetrafluoroethane DMF – Dimethylformamide		
2	Type of pump	Hermetic centrifugal		
3	Flow rate	1 to 5 m <sup>3</sup> /hr (Rated: 2 m <sup>3</sup> /hr)		
4	Operating temperature	45°C		
5	Max. Pressure	20 bar		
6	Differential head	87 m at Q <sub>r</sub>		
7	Density (at 35°C, 270 kPa and 0.5 mass fraction of R134a)	1127.5 kg/m <sup>3</sup>		
8	Viscosity (at 35°C, 270 kPa and 0.5 mass fraction of	4.2 x 10 <sup>-4</sup> Pa.s		

	R134a)			
9	Density of individual fluids (at 25°C)	R134a – 1206.7 kg/m <sup>3</sup> DMF – 944.89 kg/m <sup>3</sup>		
10	Ambient temperature	20 to 50°C		
11	Ambient air humidity	0 to 100% RH		
12	Material of the wetted parts	Compatible with R134a+DMF solution		
13	Power supply	**AC 400 V (3 phase) ; 50 Hz		
14	Warranty	Minimum one year warranty period from the date of installation.		

(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**