

Equipment Name: Coriolis Flow Meter for sCO₂

Coriolis Flow Meter for sCO₂

The flow meter is expected to measure flow rate of high pressure (~ 200 bar) super critical CO₂ fluid. The unit shall be capable of measuring up to 0.5 kg/s of maximum flow of liquid CO₂. The unit shall be able to interface with the controlling device to be able to precisely control flow. The unit shall be able to withstand the maximum operating temperature of 100° C. The unit shall comply with ASME standards of high pressure piping requirements.

Detailed technical specifications for the requirements are listed below.

Operational Specifications

<u>S.No.</u>	<u>Description</u>	
1.	Nominal Mass flow	0 – 0.5 kg/s or 0 to 1800 kg/h
2.	Maximum Pressure in the Line	200 bar
3.	Maximum Temp (C)	100° C
4.	Communication	RS232/RS485
5.	Mode of Operation	Continuous
6.	Type of Fluid	sCO ₂ in liquid state
7.	Data Transmission	Milliamp / digital outputs
8.	Mass Flow Accuracy	Shall not exceed ± 0.1 % of max flow
9.	Temperature Accuracy	$\pm 1^{\circ}$ C

Mechanical Specifications

<u>S.No.</u>	<u>Description</u>	
1.	Nominal Inlet Diameter	BSP 1" inch
2.	Nominal Outlet Diameter	BSP 1" inch
3.	Material Make	316L stainless steel

Electrical Specifications

<u>S.No.</u>	<u>Description</u>	
1.	Voltage	3 Phase – 220- 240 V
2.	Current	10 - 15 A
3.	Frequency	50 – 60 Hz

Additional Specifications

<u>S.No.</u>	<u>Description</u>	
1.	Display	Input digital display
2.	Current	10 - 15 A
3.	Frequency	50 – 60 Hz

General Conditions:

1. List of Purchase orders or supply references to any institute of National importance, PSU, or premier research institutes to be attached.

2. Quotation for 2 years standard warranty + 1 year optional warranty.
3. Installation/Commissioning to be done at IITM.
4. Should provide list of spares and their cost.
5. Must provide calibration certificate for the item.