

Equipment Name: PRV

Pressure Regulating Valve for sCO₂

System Requirements

Parameter	
Maximum Set Point Pressure to be Maintained	300 bar
Temperature	Min of 5 deg C
Make	SS316 L
Pressure Sensor	In-built range 300 bar
ICE Protection	Yes
Inbuilt Heater	Yes for ICE protection
Maximum sCO₂	0.2 kg/s
Maximum CO₂ temperature	100 ° deg C
Minimum CO₂ temperature	5 ° deg C
Control Connection	RS232/RS485 connection to PC
	~ 30 litres
Inlet Port	Preferred 1" inch BSP (above the liquid level)
Output Port	Preferred 1" inch BSP (from the bottom)
Pilot Port	Preferred 1" inch BSP
Fluid Properties	Use Refprop of NIST database (https://www.nist.gov/srd/refprop)
Design	Meeting ASME codes of design

Electrical Requirement

Voltage	220 to 240 V
Current	15 amps / 3 Phase supply

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. Quotation for AMC per year after the warranty period.
4. Installation/Commissioning to be done at IITM.
5. Should provide list of spares and their cost.
6. Must provide Test certificates and performance curves for the items.