INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

Powai, Mumbai 400076.

Ref. PR No. 1000058064 **RFx. No. 6100003163**

Technical Description: Mass Flow Controllers & Digital Pressure Regulator & Capacitance Manometers

Sr. No	Item Description and Detailed Technical Specification	Technical Compliance (Yes / No)	Additional Information (if any)
1	**Mass Flow Controllers** 1. 5 SLM: H2: ¼ VCR- 6 QTY 2. 200 SCCM: H2: ¼ VCR- 6 QTY 3. 1000 SCCM: H2: ¼ VCR- 4 QTY 4. 20 SLM: N2: ¼ VCR- 6 QTY 5. 100 SCCM: O2: ¼ VCR- 1 QTY 6. 1000 SCCM: O2: ¼ VCR- 1 QTY 7. 100 SCCM: H2S: ¼ VCR- 1 QTY 8. 1000 SCCM: H2S: ¼ VCR- 1 QTY 9. 100 SCCM: H2Se: ¼ VCR- 1 QTY 10. 1000 SCCM: H2Se: ¼ VCR- 1 QTY 11. 500 SCCM: Ar: ¼ VCR- 3 QTY 12. 1000 SCCM: Ar: ¼ VCR- 1 QTY 13. 500 SCCM: O2: ¼ VCR- 1 QTY a) Max Operating Pressure: 4.5 bar b) Communication type: Digital RS 485 c) Response Time: ≤ 1.5 sec d) Accuracy: ±0.3% F.S. (Flow rate ≤ 30% F.S.) e) ±1.0% S.P. (Flow rate > 30% F.S.) f) Repeatability: ±0.2% F.S. g) Linearity: ±0.5% F.S. h) Connection type: ¼” VCR Male Type		

	i) Input & Output Signal: 0 - 5 Vdc (Analog) j) Power Supply: ±15V DC k) Valve type: Normally close l) Leak Integrity: 1x10^-10 Pa.m3/sec(He) or less m) Seal: Elastomeric n) Cables: - 1 Each o) Inlet pressure: 1000 Torr p) Outlet Pressure: 10 mTorr to 800 Torr		
2	**Digital Pressure Regulator-** 4 QTY a) Flow rate: 5 SLM b) Inlet pressure: 1000 Torr c) Outlet Pressure: 10 mTorr to 800 Torr d) Connection type: ¼" VCR Male Type e) Power Supply: (+/-)15V DC f) Output: Digital RS-485, Analog 0 5 Vdc		
3	**Capacitance Manometers** a) Pressure: 1000 torr, Heating type: 100 °C- 1 QTY b) Pressure: 1 torr, Heating type: 100 °C- 1 QTY c) Reference Side Fitting: 1/4 male VCR d) Measurement Side Fitting: 1/4 male VCR e) Input/Output and Calibration (SS): ±15 VDC input/0 - 10 VDC bidirectional output f) Accuracy: 0.50% Full Scale (standard) g) Electrical Connector (T): 9-pin D (standard) h) Mounting (V): Mounting bracket, standard		