

Technical Comparison of Tender No. Technical Comparison NC-001238-12-R&D-NIS-
5.03-0100-17-18 for

Pirani & Cold Cathode Gauge

Company Name		EXCEL INSTRUMENTS	VT Vacuum Technologies (P) Ltd.	Pfeiffer Vacuum (India) Private Ltd.	
S/N	Item Code	Specification	Comply?	Comply?	
1	Pirani Gauges	Mounting Flange size: 16 CF Wide measurement range of 1.3×10^{-4} to 1333 mbar Built-in controller with bright LED digital display Display units in Torr/mTorr or bar/mbar 1 analog output and 1 setpoint relay	Yes	Yes	Yes (No Built-in controller with bright LED digital display, but there are 6 channel to control and display 6 nos.)
		Accuracy (N2): 1.3×10^{-4} to 1.3×10^{-3} mbar; 0.1×10^{-3} mbar resolution 1.3×10^{-3} to 530 mbar; $\pm 10\%$ of reading 530 to 1,333 mbar; $\pm 2.5\%$ of reading.	Yes	No	Yes
		Repeatability: (typical) $\pm 2\%$ of reading	Yes	Not mentioned	Yes ($\pm 2\%$ to $\pm 5\%$ of reading)
		Display: 3-digit LED from 1.33 bar to 10.0×10^{-3} mbar 2-digit LED from (9.9 to 1.0) $\times (10^{-3}$ mbar), 1-digit LED from (0.9 to 0.1) $\times (10^{-3}$ mbar)	Yes	Yes	Yes
		Operating temperature: 0 to +40 °C	Yes	Yes	Yes
		Humidity: 0 to 95% relative humidity, non-condensing	Yes	Not mentioned	Yes

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		Input power: 12 to 28 V DC	Yes	No	Yes (15 to 30 V dc)
		Analog output: log-linear 1 to 8 Vdc	Yes	Not Mentioned	Yes (log-linear 1.5 to 8.5 Vdc)
		Connector: 9 pins; D-sub male	Yes	Yes	Yes (They will not provide 9 pins; D-sub male But the connector which will be supplied by Pfeiffer will be compatible with their gauge)
		Mounting orientation: Measurement should not have affected by any mounting orientation	No (The long axis of the gauge should be horizontal a for accurate measurement)	No (Horizontal preferred)	yes
		Bakeout temperature: 70 to 150 °C.	Yes (But up to 70°C)	Yes (150°C maximum, non-operating, with electronics removed)	Yes (but up to 80°C)
		Gases compatibility: O2, N2, Ar;	Yes	Not mentioned	Yes
2	Cold cathode gauge	Mounting flange: 35 CF. Wide measurement range of 1.0 x 10 ⁻⁹ to 1 x 10 ⁻² mbar Built-in controller	Yes	Yes	Yes
		Accuracy - N2 (typical): ± 30% of reading	Yes	Yes	Yes
		repeatability - (typical): ± 5% of reading Ultra-low magnetic stray field	Yes	No	Yes
		Bakeout temperature: 150 °C	Yes (With electronics removed)	Yes (250°C Magnets removed)	Yes
		Input power: 14 to 30 V DC Response time 100 msec to 1sec	Yes	No	Yes
		Mounting orientation: any	Yes	Yes	Yes

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