

ANNEXURE

No.SCR/VENT/2021/TEST/03

16.05.20

2.1	Product	Gas flow analyser for testing of Ventilator
2.2	Features	
2.2.1	Battery life hours	Min 8 hrs
2.2.2	Charge time in hours	Max 5 hrs, typical
2.2.3	Memory	Internal memory
2.2.4	Connection type	USB, Micro-B device port
2.2.5	Weight	3.6 lb (1.6 kg)
2.2.6	Display	17.8 cm (7 in)
2.2.7	Single full-range channel	√
2.3	Flow	
2.3.1	Full range flow channel (includes both low and high flow)	
2.3.1.1	Range	±300 slpm
2.3.1.2	Accuracy (air)	1.7 % or 0.04 slpm
2.3.2	Volume	
2.3.2.1	Range	±100 l
2.3.2.2	Accuracy	± % or 0.02 l
2.4	Pressure	
2.4.1	High pressure	
2.4.1.1	Range	-0.8 to 10 bar
2.4.1.2	Accuracy	±1 % or ±0.007 bar
2.4.2	Differential low pressure	
2.4.2.1	Range	±160 mbar
2.4.2.2	Accuracy	±0.5 % or ±0.1 mbar
2.4.3	Airway pressure	
2.4.3.1	Range	±160 mbar
2.4.3.2	Accuracy	±0.5 % or ±0.1 mbar
2.4.4	Barometric pressure	
2.4.4.1	Range	550 to 1240 mbar
2.4.4.2	Accuracy	±1 % or ±5 mbar
2.5	Other	
2.5.1	Temperature	
2.5.1.1	Range	0 to 50 °C
2.5.1.2	Accuracy	±0.5 °C
2.5.1.3	Resolution	0.1 °C

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2.5.2	Humidity	
2.5.2.1	Range	0 to 100 % RH
2.5.2.2	Accuracy	±3 % RH (20 to 80 % RH) ±5 % RH (20< or >80 % RH)
2.5.3	Oxygen	
2.5.3.1	Range	0 to 100 %
2.5.3.2	Accuracy	±2 %
2.6	Breath parameters	
2.6.1	Inspiratory tidal volume range	0 to 60 l
2.6.2	Inspiratory tidal volume accuracy	± % or 0.02 l
2.6.3	Expiratory tidal volume range	0 to 60 l
2.6.4	Expiratory tidal volume accuracy	± % or 0.02 l
2.6.5	Minute volume range	0 to 100 l
2.6.6	Minute volume accuracy	± % or 0.02 l
2.6.7	Breath rate range	1 to 1500 bpm
2.6.8	Breath rate accuracy	±1 %
2.6.9	Inspiratory to expiratory time ratio (I:E)	1:300 to 300:1
2.6.10	Inspiratory to expiratory time ratio (I:E)	±2 % or 0.1
2.6.11	Peak inspiratory pressure (PIP) range	±160 mbar
2.6.12	Peak inspiratory pressure (PIP) accuracy	±0.75 % or 0.1 mbar
2.6.13	Inspiratory pause pressure range	±160 mbar
2.6.14	Inspiratory pause pressure	±0.75 % or 0.1 mbar
2.6.15	Mean airway pressure range	±160 mbar
2.6.16	Mean airway pressure accuracy	±0.75 % or 0.1 mbar
2.6.17	Positive end expiratory pressure (PEEP)	±160 mbar
2.6.18	Positive end expiratory pressure (PEEP)	±0.75 % or 0.1 mbar
2.6.19	Lung compliance range	0 to 1000 ml/mbar
2.6.20	Lung compliance accuracy	±3 % or 0.1 ml/mbar
2.6.21	Inspiratory time range	0 to 60 s
2.6.22	Inspiratory time accuracy	0.02 s
2.6.23	Inspiratory hold time range	0 to 60 s
2.6.24	Inspiratory hold time accuracy	1 % or 0.1 s
2.6.25	Expiratory time range	0 to 90 s
2.6.26	Expiratory time accuracy	0.5 % or 0.01 s
2.6.27	Expiratory hold time range	0 to 90 s
2.6.28	Expiratory hold time accuracy	0.02 s
2.6.29	Peak expiratory flow range	±300 lpm
2.6.30	Peak expiratory flow accuracy	±1.7 % or 0.04 lpm
2.6.31	Peak inspiratory flow range	±300 lpm
2.6.32	Peak inspiratory flow accuracy	±1.7 % or 0.04 lpm

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2.7	Environmental	
2.7.1	Operating temp	10 °C to 40 °C
2.7.2	Storage temp	-20 °C to 60 °C
2.7.3	Operating humidity	10 to 90 % non-condensing
2.7.4	Storage humidity	5 to 95 % non-condensing
2.8	Gas corrections	Gas types
2.8.1	ATP (ambient temp/pressure, actual	Air
2.8.2	ATPD (ambient temp/pressure, dry)	Nitrogen (N ₂)
2.8.3	ATPS (ambient temp/pressure, saturated)	Nitrous Oxide (N ₂ O)
2.8.4	STP20 (20 °C temp/pressure 760 mmHg,	Carbon Dioxide (CO ₂)
2.8.5	STP21 (21 °C temp/pressure 760 mmHg,	Oxygen (O ₂)
2.8.6	STPD0 (0 °C temp/pressure 760 mmHg,	Argon
2.8.7	STPD20 (20 °C temp/pressure 760 mmHg,	Heliox (21 % O ₂ , 79% He)
2.8.8	STP or STPD21 (21 °C temp/pressure 760	Oxygen/Nitrogen
2.8.9	BTPS (body temp 37 °C/ambient pressure	Oxygen/Nitrous Oxide
2.8.10	BTPD (body temp 37 °C/ambient pressure	Oxygen/Helium