

Physical Characteristics	
Gas Delivery	Unit shall be capable of sampling up to 30m at $\geq 0,25$ lpm Gas delivery time shall be ≤ 3 seconds per 1 meter
Size	Unit shall not exceed 18,5 cm L x 4,8 cm W x 3,3 cm D in total size
Weight	Weight shall not exceed 260g
Handling	Unit shall be a one -handed operation device
Case Material	Unit shall have rugged rubberized over-mold
Ingress Protection	Unit shall be minimum IP65-rated for dust and water ingress
Status Indicators	Unit shall have 3 LED indicators for Flow, Battery and Charge indication

Basic Operational Features	
Instruments Buttons	Unit shall have a single button on instrument; clearly marked, intuitive, and easy to operate while gloves are worn
Inadvertent Shutoff	Instrument shall be designed to protect against accidental shutoff
Flow Status	Device shall have a visual indicator for normal operation

Device Alarms	
Visual Alarms	Visual alarms shall consist of high brightness LED's on top of unit
Audible Alarms	Audible alarm shall be rated at >90 dB (typical)
Flow Alarm	Unit shall activate audible and visual alarms in the event of a low flow or blocked flow path condition
Battery Alarm	Unit shall provide user with 30-minute warning of batter power loss in all environmental conditions. Power consumption alarms shall activate audible and visual alarms

Basic Operational Features	
Run Time	Device run time shall be 30 hours continuous running (Normal Operating Temperature)
Power Supply	Device shall be equipped with a rechargeable battery
Charge Time	Unit shall be able to fully charge in ≤ 4 hours
Battery Life Indication	Device shall provide visual warning of low battery state
Charging Cradle	Optional charging cradle shall be offered
Charger Input Voltages	Chargers shall be available for 110VAC/220VAC and 12-24VDC
Charging Status	Device or charging cradle shall provide visual indication of battery charging status

Sampling System	
Sampling System Filters	Unit must contain user-replaceable filters to prevent liquid and dust ingress
Sample Lines	Unit shall be provided with optional sample lines of 3m, 8m, 15m and 30m lengths
Sample Line Length	Unit must be capable of sample draw from 30m within 90 seconds
Ingress Protection	Unit shall be designed to prevent water and debris from entering the unit
Instrument Connection	Unit shall be designed to quickly and easily connect to a diffusion style instrument



Environmental	
Temperature	Normal Operation: -20 °C – 50 °C Charging: 10 °C – 35 °C Storage: -5 °C – 40 °C
Humidity	15% – 90% RH (non- condensing) continuous
Drop Test	Can survive an incidental drop of 3 meters

Maintenance & Warranty	
Maintenance	Unit shall have a filter that is easily accessed and replaced by users if desired by the purchaser
Warranty	Unit shall have a three-year warranty on all electronics, battery and non- consumable components

Certifications	
Europe	ATEX ATEX II 2G Ex ia IIC T4 Gb Ta= -20°C to +50°C
USA & Canada	USA/Canada ETL Class I,[II,III] Div. 1, Groups A, B, C, D Ta= -20°C to +50°C Canada CSA Class I, Div. 1, Groups A, B, C and D, Ta= -20°C to + 50°C
Australia/New Zealand	Australia/New Zealand Test Safe Australia Ex ia IIC T4 Gb Ta= -20°C to +50°C
China	Ex ia IIC T4 Ga Ta= -20°C to +50°C
Manufacturing Quality	Unit manufacturer must be certified with ISO 9001 provisions