GT SCAN

TECHNICAL DATA SHEETS

MAX PRO PLUS LITE FIRE

DIRECTORY

GT SCAN
ENVIRONMENTAL MONITORING

Guardtech offer a range of environmental monitoring system (EMS) solutions to best suit the needs of your application. Whether it's budget, lead time or performance that matters most, Guardtech provide a comprehensive choice of rapid rise door options to ensure your process requirements are achieved.

Whether it's a more basic analogue Magnehelic differential pressure gauge you need, all the way up to a comprehensive large-scale 21CFR Part 11 compliant monitoring system, Guardtech Group's Directors, Design Engineers and Installation team have worked together to carefully select four industry-leading ceiling options for your consideration.

Read on to discover the benefits and compromises of the different choices we have, then use this guide to make the most informed EMS choice possible.

Let Guardtech take your operation to the next level.

SCAN MAX
GT Scan Max is our elite-level EMS – a 21CFR Part 11 compliant system combining state-of-the-art software and hardware to provide accurate readings for temperature, humidity, differential pressure and more.

SCAN PRO
GT Scan Pro is a flush-mounted multifunction pressure transmitter that can display up to three critical atmospheric parameters, utilising the reliable and highly sophisticated ONCALL-FINESTRA EMS system software.

SCAN PLUS
Wall-mounted transmitter with user-friendly LED display in robust, attractive plastic housing. These multifunction sensors feature interchangeable probes and can display and measure parameters simultaneously.

SCAN LITE
Guardtech's entry-level environmental monitoring system – a versatile analogue Magnehelic differential pressure gauge that indicates positive, negative or differential, accurate to within 1%.

SCAN FIRE
This product range does not currently include a Fire Rated solution. Please consult a Guardtech rep for more information on your fire safety options.

GT SCAN MAX

GT Scan Max is our elite-level EMS – a 21CFR Part 11 compliant system combining state-of-the-art software and hardware to provide accurate readings for temperature, humidity, differential pressure and more.

GT Scan Max is an environmental monitoring system (EMS) that is used with Pro and IceSpy hardware to provide a secure and flexible tool for comprehensive data collection, analysis and immediate alarm notification.

GT Scan Max boasts a user-friendly contemporary browser-based interface which enables data from the hardware to be seamlessly fed into one system, providing an industry-leading software and hardware combination.
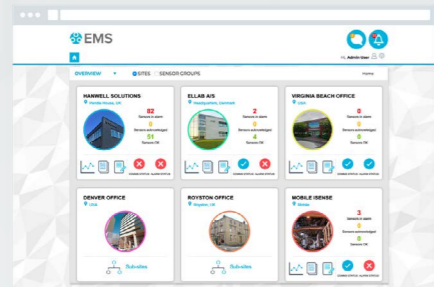
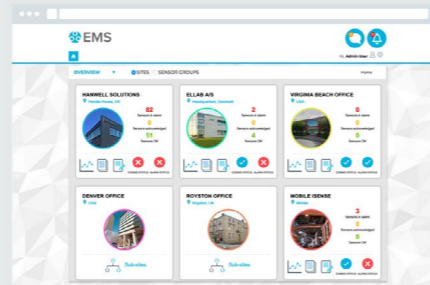| Multisite/Group	Audit trails	Historical data	Email/SMS alerts	Report Scheduling	RAG Views

PRODUCT FEATURES

OVERVIEW

Overview provides users with an overview of overall system status, while the dashboard can be customised per user.

GRAPHICAL VIEW

Graphical View provides line graphs with optional door position indicator, alarm level indication. Data overlays, zoom plus many more features.

TABULAR VIEW

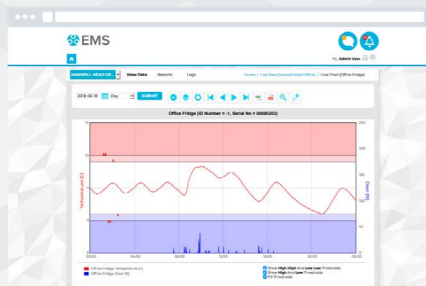Tabular View provides list of sensors with clear indication of alarm, battery status and live data.

PLAN VIEW

Plan View provides visual indication of sensor location within a facility. Sensor icons show real-time data and alarms and interaction.
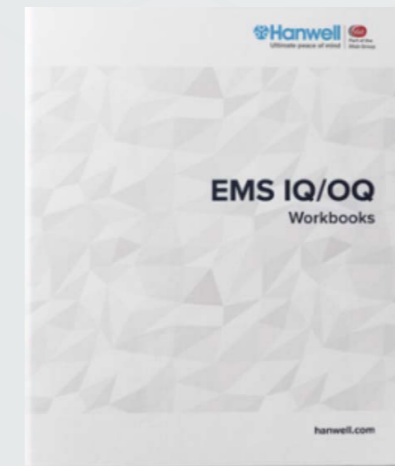
GT SCAN MAX MEASUREMENTS

Temperature – Carbon Dioxide – Differential Pressure – LUX – Relative Humidity

VALIDATABLE SOFTWARE

Specifically for the Pharmaceutical sectors, we provide comprehensive IQ and OQ protocols and custom protocols, where required. Trained engineers and distributors are available for smooth validation protocol execution.

EMS assists with national regulatory compliance requirements: GxP Guidelines, HACCP, FDA 21 CFR Part 11, EU GMP Annex 11, and ISO 22000 food standards.

EMS IQ/OQ Workbooks

BENEFITS & COMPROMISES

Benefits

• 21CFR Part 11 compliant system
• Measurements and data provided for an comprehensive range of critical cleanroom parameters
• Immediate alarm notification for superior safety
• Smartphone app
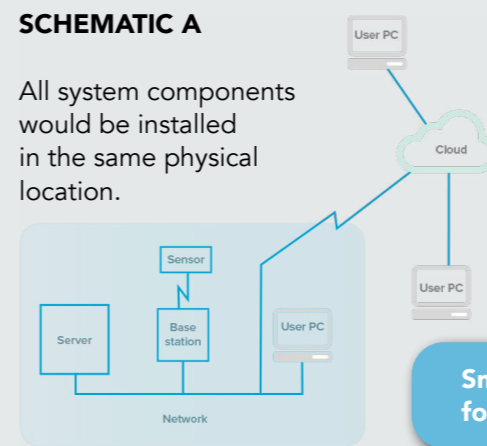• Sophisticated, industry-leading software

Compromises

• Significantly more expensive than all the other options, particularly Plus and Lite
• Requires on-going maintenance from Guardtech or associated engineers

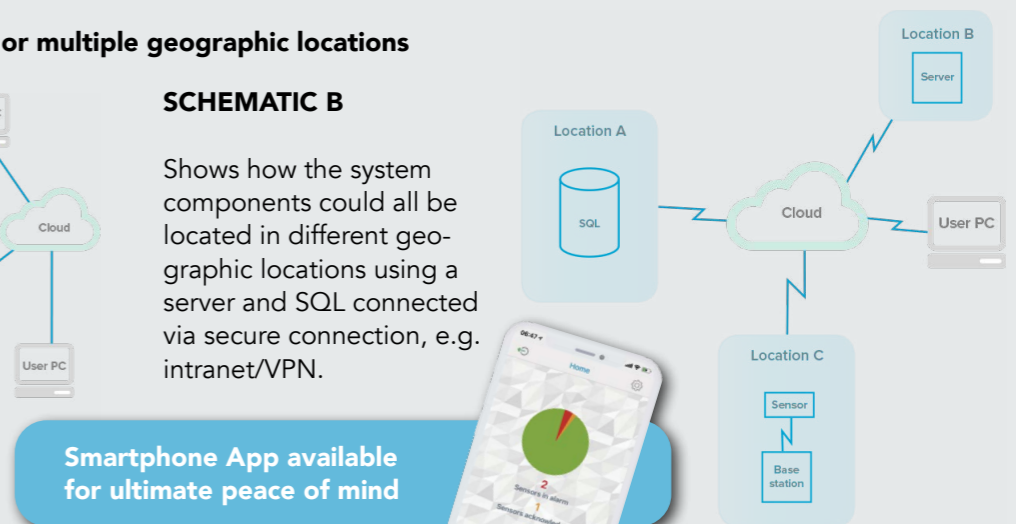## Deploy the system in a single or multiple geographic locations

SCHEMATIC A

All system components would be installed in the same physical location.

SCHEMATIC B

Shows how the system components could all be located in different geographic locations using a server and SQL connected via secure connection, e.g. intranet/VPN.

Smartphone App available for ultimate peace of mind

APPLICATIONS

Pharmaceuticals	Semiconductor	Graphene	Cell & Gene	Battery	Laser & Optical

GT Scan Max suits the most demanding of applications, typically where particulate needs to be controlled to extremely tight tolerances, including rooms required to comply with cGMP conditions outlined in EU GMP Annex 1 and ISO 14644-1.

GT SCAN PRO

GT Scan Pro is a flush-mounted multifunction pressure transmitter that can display up to three critical atmospheric parameters, utilising the reliable and highly sophisticated ONCALL-FINESTRA EMS system software.

GT Scan Pro is a flush-mounted multifunction pressure transmitter that can display up to three parameters alternatively, including:

- Air velocity
- Carbon monoxide
- Carbon dioxide
- Differential pressure
- Humidity
- Temperature

These multifunction pressure sensors utilise the highly reliable, sophisticated and intelligent ONCALL-FINESTRA EMS system software.

The CIONICS software continuously polls the transmitters to extract and record the relevant parameters, with compliance to ISO standards governed through the application of alarm thresholds set against data received from each transmitter.
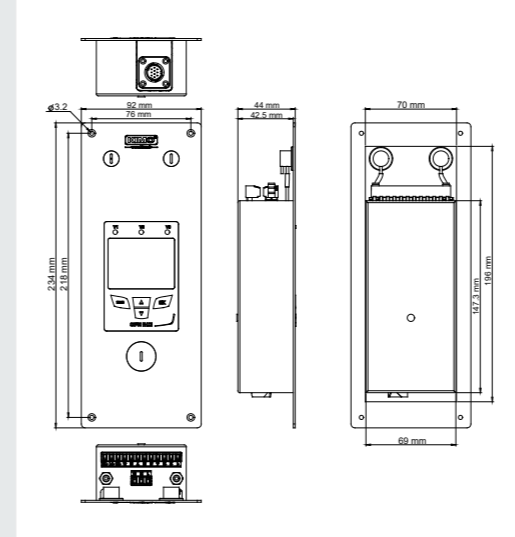
TECHNICAL FEATURES

TECHNICAL DETAILS

Displays	2-line display
IP Protection	IP 65
Standards	2011/65/EU RoHS II 2012/19/UE DEEE 2014/30 UE EMC 2014/35/EU Low Voltage
Power supply	24 Vac/Vdc±10% (active)
Outputs	3 x 0/4-20 mA or 3 x 0-5/10 V (4 wires)
Relay	Four RCR relays (option)
Ethernet communication	No
ModBus network	No

MEASURE DETAILS	
UNITS	Pa, mbar, hPa, inWg, mmH20, mmHg, daPa
ALARMS	Buzzer (70 dB at 10 cm) / Blinking of the value
INSTRUMENT DIMENSIONS	
LENGTH	92mm
WIDTH	44mm
HEIGHT	234mm
WEIGHT	640g
OPERATING TEMPERATURE	
MIN	-10.00°C
MAX	50.00°C
STORAGE TEMPERATURE	
MIN	-10.00°C
MAX	70.00°C

TECHNICAL DRAWINGS

PRODUCT FEATURES

Input for interchangeable probe (Class 310)

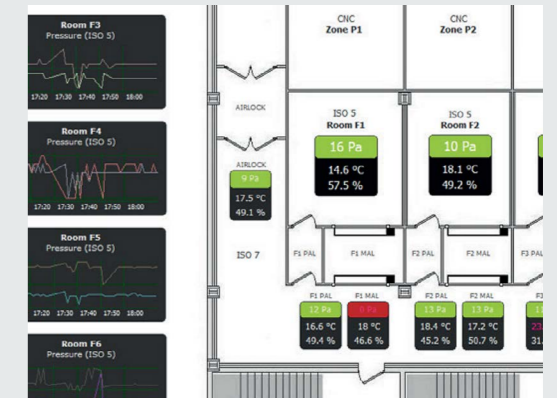**3 analogue outputs 0-5/10 V or 0/4-20 mA**

3 audible and visual alarms

RS485 Modbus RTU (optional)

- Measuring ranges: CPE 310-S: from -100 to +100 Pa and CPE 311-S: from -1,000 to +1,000 Pa
- Measures temperature, humidity, air velocity, CO, CO2
- One input for probe
- Three visual and audible alarms
- Three analogue outputs 0-5/10 V or 0/4-20 mA
- Adjustment certificate
- Front face differential pressure calibration
- Alternating display of 1 to 3 parameters

- Configurable measuring ranges
- Front face keypad allowing to configure the transmitter and acknowledge the alarm
- 3 analogue outputs 0-5/10 V or 0/4-20 mA
- High resolution in pressure on model -100/+100 Pa (ex: 0.1 Pa) (optional)
- Outputs diagnostic
- Front face made of brushed stainless steel with electroluminescent display

BENEFITS & COMPROMISES

Benefits

- Measurements and data provided for an comprehensive range of critical cleanroom parameters
- Reliable, user-friendly, flush-mounted transmitter hardware
- Utilises a reliable, intelligent software

Compromises

- Significantly more expensive than Plus and Lite options
- Requires on-going maintenance from Guardtech or associated engineers
- Measurement options not as wide ranging as GT Scan Max

ONCALL-FINESTRA SOFTWARE

APPLICATIONS

Medical Device   Healthcare   Oil & Gas   Cell & Gene   Battery   Laser & Optical

GT Scan Pro Environmental Monitoring System (EMS) is suitable for a wide variety of applications in a diverse range of sectors. Whilst it may not provide as comprehensive a range of measurements as GT Access Max, this solution remains a high-performance EMS option for the full range of ISO classifications.

GT SCAN PLUS

Wall-mounted transmitter with user-friendly LED display in robust, attractive plastic housing. These multifunction sensors feature interchangeable probes and can display and measure parameters simultaneously.

GT Scan Plus is a wall-mounted environmental monitoring transmitter with a user-friendly LED display in robust and attractive plastic housing.

These multifunction sensors feature interchangeable probes and can display and measure four critical controlled environment parameters simultaneously, including:

- Air velocity
- Airflow
- Atmospheric pressure
- Carbon monoxide
- Carbon dioxide
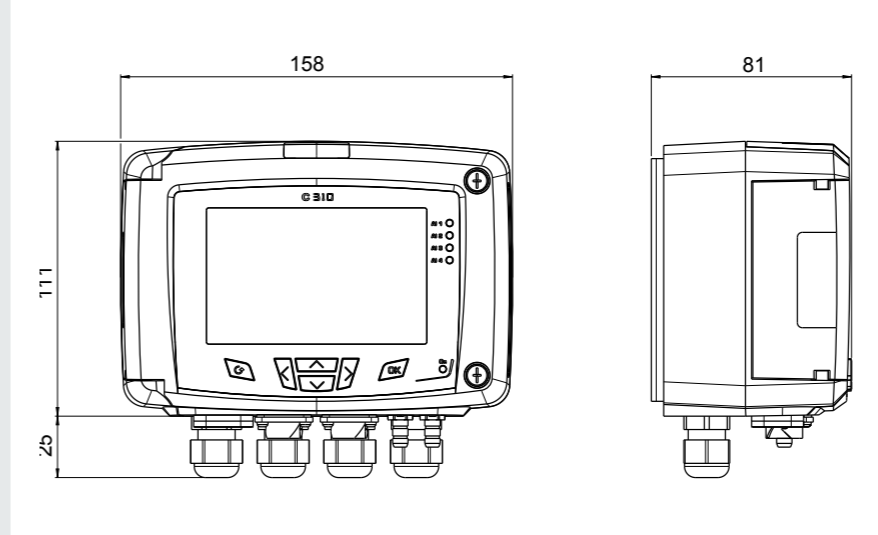- Differential pressure
- Humidity
- Temperature

TECHNICAL FEATURES

TECHNICAL DETAILS

Displays	4-line display
IP Protection	IP 65
Standards	2011/65/EU RoHS II 2012/19/UE DEEE 2014/30 UE EMC 2014/35/EU Low Voltage
Power supply	24 Vac/Vdc or 115-230 Vac (Active)
Outputs	2 x 0/4-20 mA or 2 x 0-5/10 V (4 wires)
Relay	Four RCR relays (option)
Ethernet communication	Not as standard
ModBus network	Not as standard

MEASURE DETAILS	
UNITS	°C, % RH, Pa, ppm, m/s, hPa, m³/h
ALARMS	4 visual (dual-colour LEDs) and audible alarms
INSTRUMENT DIMENSIONS	
LENGTH	158mm
WIDTH	81mm
HEIGHT	111mm
WEIGHT	700g
OPERATING TEMPERATURE	
MIN	-10.00°C
MAX	50.00°C
STORAGE TEMPERATURE	
MIN	-10.00°C
MAX	70.00°C

TECHNICAL DRAWINGS

PRODUCT FEATURES

2 inputs for interchangeable probes

2 analogue outputs (4 wires) 0/5-10 V or 0/4-20 mA*

4 visual (dual-color LEDs) and audible alarms

Simultaneous display of 1 to 4 parameters

- Slot for pressure measurement board
- Two inputs for probes
- Two analogue outputs 0-5/10 V or 0/4-20 mA
- Four RCR relays (option)
- Ethernet communication (option) and RS485 MODBUS (option)
- Adjustment certificate
- One location for interchangeable SPI-2 board
- Trend indicator

- 4-relay board (optional)
- 24 Vdc/Vac or 115/230 Vac power supply
- Outputs diagnostic
- Ethernet communication (optional)
- MODBUS network RS485 system (optional)
- ABS housing with stainless steel front, IP65, with or without backlit graphic display
- "¼ turn" system mounting with wall-mount plate

BENEFITS & COMPROMISES

Benefits

- Measurements and data provided for a decent range of critical cleanroom parameters
- Robust hardware that copes well with the rigours of deep cleans
- Interchangeable probes that can display and measure parameters simultaneously

Compromises

- Not a flush-mounted soution
- More expensive than GT Scan Max
- Less detailed data collection than GT Max and Pro options

APPLICATIONS

Cosmetics Automotive Horticulture Digital Printing Aerospace Manufacturing

GT Scan Plus is a versatile EMS solution suitable for a significant number of different industries using controlled environments as part of their process. However, because this solution is not a 21CFR Part 11 compliant system, it would not be suitable for cGMP cleanrooms at the higher end of the classification scale.

GT SCAN LITE

Guardtech's entry-level environmental monitoring system – a versatile analogue Magnehelic differential pressure gauge that indicates positive, negative or differential, accurate to within 1%.

GT Scan Lite is a versatile low differential Magnehelic pressure gauge.

Using a simple, frictionless Magnehelic gauge movement, GT Scan Lite quickly indicates air or non-corrosive gas pressures – either positive, negative (vacuum) or differential.

The design resists shock, vibration, over-pressures and is weatherproof to IP67.

Select the High Accuracy (HA) Magnehelic gauge option for an accuracy within 1% of full scale. Also included with the HA option at no extra cost are a mirrored scale overlay and a six-point calibration certificate.

TECHNICAL FEATURES

• **Service:** Air and non-combustible, compatible gases (natural gas option available).

Note: May be used with hydrogen. Order a Buna-N diaphragm. Pressures must be less than 35 psi.

• **Wetted Materials:** Consult factory. Housing: Die cast aluminium case and bezel, with acrylic cover. Exterior finish is coated grey to withstand 168 hour salt spray corrosion test.

• **Accuracy:** ±2% (-HA model ±1) of FS (±3% (-HA ±1.5%) on -0, -100PA, -125PA, -10MM and ±4% (-HA ±2%) on -00, -60PA, -6MM ranges), throughout range at 70°F (21.1°C).

• **Pressure Limits:** -20 in Hg to 15

SPECIFICATIONS

psig (-0.677 to 1.034 bar); MP option: 35 psig (2.41 bar); HP option: 80 psig (5.52 bar).

• **Enclosure Rating:** IP67.

• **Overpressure:** Relief plug opens at approximately 25 psig (1.72 bar), standard gages only.

• **Temperature Limits:** 20 to 140°F* (-6.67 to 60°C). -20°F (-28°C) with low temperature option. Size: 4˝ (101.6 mm) diameter dial face.

• **Mounting Orientation:** Diaphragm in vertical position. Consult factory for other position orientations.

• **Process Connections:** 1/8˝ female

NPT duplicate high and low pressure taps - one pair side and one pair back.
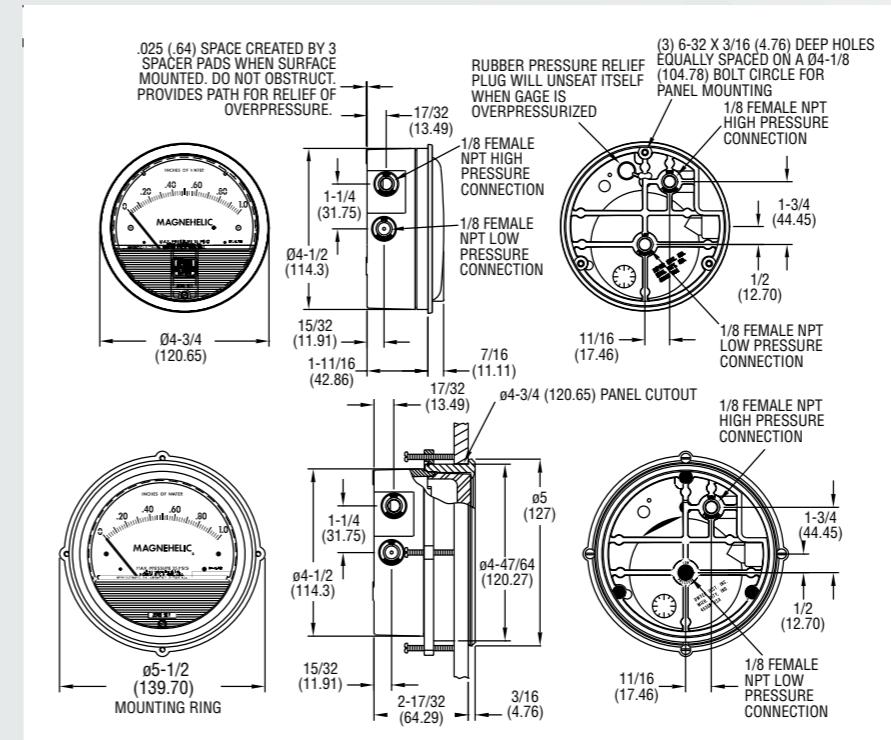
• **Weight:** 1 lb 2 oz (510 g), MP & HP 2 lb 2 oz (963 g).

• **Standard Accessories:** Two 1/8˝ NPT plugs for duplicate pressure taps, two 1/8˝ pipe thread to rubber tubing adapter, and three flush mounting adapters with screws. (Mounting and snap ring retainer substituted for three adapters in MP & HP gage accessories.)

• **Agency Approvals:** Meets the technical requirements of EU Directive 2011/65/EU (RoHS II). **Note:** -SP models not RoHS approved.

TECHNICAL DRAWINGS

*The blowout plug is not used on models above 180 inches of water pressure, medium or high pressure models, or on gauges which require an elastomer other than silicone for the diaphragm.

STANDARD

HIGH ACCURACY

BENEFITS & COMPROMISES

Benefits

• Easy-to-read gauge through undistorted plastic face permits viewing from far away
• Patented design provides quick response to pressure changes, meaning no delay in assessing critical situations
• Durable and rugged housing and high-quality components combine to provide long service life
• Flush mounting option

Compromises

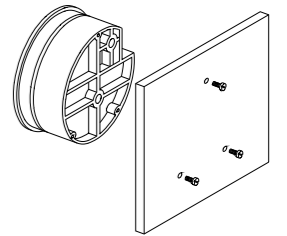• Only equipped to measure pressure differential
• Solely analogue device

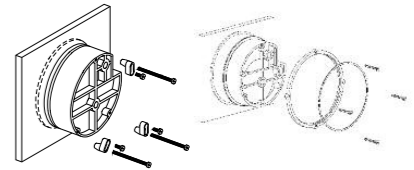**SURFACE MOUNTING**

FLUSH MOUNTING

APPLICATIONS

| Universities | R&D | Packaging | Injection Moulding | Food | Diagnostics |

GT Scan Lite suits the least demanding of applications – most commonly laboratories or non-classified controlled environments – where only differential pressure readings are required for the cleanroom's successful operation.

QUICK-LOOK COMPARISON GUIDE

FEATURES

FEATURES	MAX	PRO	PLUS	LITE
21CFR Part 11 compliant	⬡			
Temperature & humidity measurements	⬡	⬡	⬡	
Differential pressure readings	⬡	⬡	⬡	⬡
Supported by computer software	⬡	⬡		
Suitable for GMP environments	⬡			
Digital interfaces	⬡	⬡	⬡	
Air velocity & airflow measurements	⬡	⬡	⬡	
Carbon monoxide & carbon dioxide data	⬡	⬡		
Atmospheric pressure readings	⬡	⬡	⬡	
Weatherproof solution				⬡
Smartphone app	⬡			

Guardtech

group