

**Ribble Enviro**  
*...everything gas detection*

# Data Sheet

[sales@ribble-enviro.co.uk](mailto:sales@ribble-enviro.co.uk)

+44(0)1200 445 804

[ribble-enviro.co.uk](http://ribble-enviro.co.uk)

Unit 4, Business Park, Gisburn, Clitheroe BB7 4JP

Company No: 06140589 VAT No: GB 906 6241 34



## PS500 - CO2

The Carbon Dioxide detection solution



**Designed by our customers, this robust and accurate gas detector provides unrivalled protection in confined space applications.**

- 0-5% Carbon Dioxide (CO<sub>2</sub>) detection
- NDIR sensing technology
- Large font for easy reading
- Piercing 95 dB audible plus 360-degree high-visibility light bar
- On-board datalogging for calibration certificates, data management, and event logging
- High impact rubberised case
- IP65
- Low cost of ownership

### Auto Bump & Calibration Station

- Simple user interface
- Bump test or calibration
- Bump/calibration results storage
- Standalone, PC or Ethernet options
- Robust construction



# PS500 - CO2

The Carbon Dioxide detection solution



The PS500- CO2 detects 0-5% volume CO2 reliably and accurately using infrared capabilities.

The large display font allows for easy measurement readings.

The PS500-CO2 is particularly useful in noisy environments, featuring a very loud (95dBA) penetrating and distinctive audible alarm together with high visibility large area visual alarm.

Sampling type: diffusion for confined space working.

A robust moulded, rubberised casing guaranteeing Hi-impact resistance, the PS500-CO2 can be used in the most demanding industrial environments.

Technical specification	
Size	140 x 85 x 45 mm / 5.5" x 3.3" x 1.7"
Weight:	0.4 kg / 14 oz.
Humidity:	0-98% non condensing
Alarms:	Visual 360° full light bar, piercing 95db audible 4 gas alarms per gas user programmable TWA/STEL alarms visual and audible Flow fault visual and audible Low battery alarm
Display:	LCD backlight display
Datalogging:	Timed: 24 hours of timed logs at 1 log per minute Session: Minimum of 180 logs Calibration: Minimum of 8 calibration logs
Battery:	NiMH rechargeable battery – 12 hr. minimum
Enclosure:	High impact rubberised polycarbonate case
Rating:	IP65 (Dust tight and water resistant)
Approvals:	CE 0518 ATEX  II 2 G EEx iad IIC T3
IECEX:	EEx iad IIC T3
Warranty:	2 years

Sensor specification				
Gas	Range	Resolution	Sensor type	T90
CO <sub>2</sub>	0 - 2.50%	0.01%	NDIR	25 sec
	2.50 - 5.00%	0.05%		

Ordering information and accessories	
61371P	PS500-CO2 Instrument The instrument is supplied calibrated and complete with: - Charger (Universal plug) - Battery / sensor grille key - User CD - Quick operation guide
66028	Neck harness
61208	Datalogging package
66083	Sensor grill hydrophobic filter
66084	Sensor gas inlet filter
66206	Car/vehicle charge 12/24V
61502	Automatic Bump / Calibration Station

For a comprehensive list of accessories, contact your local distributor, or alternatively, GMI Ltd.

As an ISO 9001 approved company, Gas Measurement Instruments quality assurance programmes demand the continuous assessment and improvement of all GMI products. Information in this leaflet could thus change without notification and does not constitute a product specification. Please contact GMI or their representative if you require more details.



**AMERICAS**  
4055 Technology Forest Blvd.  
The Woodlands, TX 77381  
USA  
Tel.: +1-713-559-9200

**EMEA**  
Inchinnan Business Park  
Renfrew, PA4 93G  
Scotland, UK  
Tel.: +44(0) 141 812 3211

**ASIA PACIFIC**  
290 Guiqiao Road  
Pudong, Shanghai 201206  
People's Republic of China  
Tel.: +86-21-3127-6373



## PS500

Portable 5 Gas Monitor



**Designed by our customers, this robust and accurate gas detector provides unrivalled protection in confined space applications.**

### Auto Bump & Calibration Station

- Simple user interface
- Bump test or calibration
- Bump/calibration results storage
- Standalone, PC or Ethernet options
- Robust construction

### Features

- Over 15 "plug-and-play" smart sensors
- PID sensors for VOC detection
- Flexible configuration to suit your requirements
- Audible and visual alarms
- Datalogging for calibration certificates, data management, and event logging
- Robust construction
- Internal pump (optional)
- Easy maintenance
- Low cost of ownership



# PS500

## Portable 5 Gas Monitor

### Description

The PS500 can be configured to detect up to five gases with its electrochemical and catalytic sensors, photo ionisation detectors (PID), and infrared capabilities.

“Plug and Play” maximizes flexibility by allowing other gases to be detected, by simply inserting a new smart sensor assembly.

The PS500 is effective in noisy environments, featuring a loud (95dB) penetrating and distinctive audible alarm together with a high visibility visual alarm.

With a robust, rubberized casing guaranteeing hi-Impact resistance, the PS500 is ideal for the most demanding industrial environments.

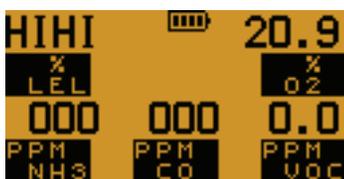
An optional internal pump allows both pumped or diffusion measurements. If the pump is fitted, it can be easily turned on/off, depending on application. E.g. pump on to perform pre-entry measurements correctly, pump off for confined space working.

### Technical Specification

Size:	140 x 85 x 45 mm / 5.5" x 3.3" x 1.7"
Weight:	0.4 kg / 14 oz.
Humidity:	0-98% non condensing
Alarms:	Visual 360o full light bar, piercing 95db audible Low battery alarm User programmable alarms: Up to 4 alarms per toxic gas (incl. STEL / TWA) 3 alarms for O2 2 alarms for LEL
Display:	LCD backlight display
Datalogging:	Timed: 24 hours of timed logs at 1 log per minute Session: Minimum of 180 logs Calibration: 8 calibration logs
Sampling:	Maximum tubing length - 30 m / 98 ft. (Response times increase by approx. 1 second for every metre / 3 ft. of tubing used)
Battery:	NiMH rechargeable battery - 12 hr. minimum with pump Alkaline battery pack (3 AA) - 12 hr. minimum with pump
Enclosure:	High impact rubberised polycarbonate case
IP Rating:	IP65 (Dust tight and water resistant)
Approvals:	* UL 913 Class I, Div 1 Groups A,B,C,D MED (0038/YY) - Module B & E CE ATEX II 2 G EEx iad IIC T3 / T4
IECEx:	Ex iad IIC T4/T3
Warranty:	2 years

\* Excludes NDIR sensor option.

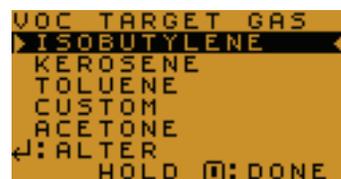
### Features



Display in alarm conditions



Configurable calibration options



VOC target gas selection

## Automatic Bump Testing and Calibration

To provide accurate performance and results, the PS500 has to be properly used and maintained. The Auto Bump & Calibration Station (ABC) provides bump testing, calibration and data management options and is compact, robust and intuitive to use. Two versions of the ABC are available allowing either a single gas cylinder or up to three cylinders to be connected. Additionally, a special three cylinder version is available for reactive gases. The ABC is fully configurable and can operate in three distinct modes of operation:



### Standalone

- No PC or network connection required
- Simple setup and configuration
- Results stored on ABC
- USB access for results extraction
- Settings App for easy printing of calibration certificates

### PC

- PC / laptop connected to ABC
- Setup and configuration using flexiCal Plus software
- Results stored in the PC / laptop
- Easy access to all results
- Powerful data management / calibration certificate generation

### Ethernet

- Multiple ABC's can be connected to a network
- Setup and configuration using IMS Settings software
- All results stored in the IMS database
- Easy access to all results
- Powerful data management / calibration certificate generation

### Auto Bump & Calibration Station Technical Station

Size:	200 x 140 x 135mm (7.9" x 5.5" x 5.3")
Weight:	Single Gas - 1.2kg (43oz) Multi Gas - 1.35kg (48oz)
Interfaces:	Standalone /USB /Ethernet
LED Indicators:	Power (Green) /Testing (Orange) / Pass (Green) / Fail (Red)
Testing Time:	Bump Test 150 secs Calibration Test 150 secs
Data Storage:	Up to 6000 Bump & Calibration results
Power Supply:	12V dc, 2A
Operating Temperature:	-10°C to 40°C (14°F to 104°F)
Gas Ports:	Single Gas - 3 (Air, Gas & Exhaust) Multi Gas - 5 (Air, Gas x 3 & Exhaust)

# PS500

## Ordering information

Sensor Specification				
Gas	Ranges	Resolution	Sensor Type	T90
LEL	0 - 100% LEL	1% LEL	Cat-bead	15 sec
	0 - 100% LEL	1% LEL	NDIR	35 sec
CO <sub>2</sub>	0 - 2.50%	0.01%	NDIR	25 sec
	2.50 - 5.00%	0.05%		
O <sub>2</sub>	0 - 25%	0.1%	Electrochemical	10 sec
CO	0 - 1000PPM	1PPM	Electrochemical	35 sec
H <sub>2</sub> S	0 - 100PPM	1PPM	Electrochemical	25 sec
DUAL TOX CO/H <sub>2</sub> S	0-1000PPM(CO)	1PPM	Electrochemical	35 sec & 25 sec
	0-100PPM(H <sub>2</sub> S)			
SO <sub>2</sub>	0 - 30PPM	1PPM	Electrochemical	10 sec
	0 - 100PPM	1PPM	Electrochemical	10 sec
Cl <sub>2</sub>	0 - 10PPM	0.1PPM	Electrochemical	30 sec
NH <sub>3</sub>	0 - 100PPM	1PPM	Electrochemical	60 sec
NO	0 - 300PPM	1PPM	Electrochemical	20 sec
NO <sub>2</sub>	0 - 20PPM	0.1PPM	Electrochemical	185 sec
PH <sub>3</sub>	0 - 100PPM	1PPM	PID	5 sec
VOC	0 - 100PPM	0.1PPM	PID	5 sec
	0 - 1000PPM	1PPM	PID	5 sec
C <sub>6</sub> H <sub>6</sub>	0 - 20PPM	0.1PPM	PID	5 sec

Long duration battery pack and instrument with fast charge battery pack, charging in Fast Charger master / slave units.



Battery / Charger Accessories	
66701	Long duration rechargeable battery pack
66702	Alkaline battery pack (3 x AA batteries)
66703	Fast charge rechargeable battery pack
66140	Standard charger - c/w universal plug (for 66701)
66200	5-way charger - c/w universal plug (for 66701)
66207	10-way charger - c/w universal plug (for 66701)
66206	Car/vehicle charger 12/24V (for 66701)
66513	Fast charger - c/w universal plug
66516	10-way fast charger master unit - c/w universal plug
66514	10-way fast charger slave unit - c/w universal plug

Recommended Accessories / Spare Parts	
66485	Hydrophobic filter - external inline
66136	3m sample line (Tygon® tubing) with connector
66930	3m reactive gas tubing with connector
66028	Neck harness
66017	Probe assembly
61208	Datalogging package
61445	PS500 CAL - Calibration Package
66083	Sensor grill hydrophobic filter
66084	Sensor gas inlet filter
66108	Blank sensor plug
66190	Pump assembly kit - includes pump, tubing and fittings

Automatic Bump & Calibration	
61502	Auto Bump & Calibration Station - single gas connection (6mm fittings & incl. PSU & USB stick with Standalone software)
61504	Auto Bump & Calibration Station - multi gas connections (4mm / 6mm fittings & incl. PSU & USB stick with Standalone software)
61504R	Auto Bump & Calibration Station - multi gas connections (for reactive gases Cl <sub>2</sub> / NH <sub>3</sub> )
99553	flexiCal Plus software for PC
99118	Demand flow regulator
64265	Tubing with 6mm push fit connection (for 61502)
61540	600mm reactive gas tubing (for 61504R)
64443	6mm Push fit Barbed Adaptor
61536	4mm Push fit Barbed Adaptor (for 61504)

Gas Kits for Automatic Bump & Calibration Station	
99146	Combi Test Gas Cylinder (2.5% CH <sub>4</sub> , 500ppm CO, 50ppm H <sub>2</sub> S, 18% O <sub>2</sub> , balance N <sub>2</sub> )
64060	Test Gas Kit (Combi test gas 99146, demand flow regulator 99118 c/w 6mm tubing)

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**AMERICAS**  
4055 Technology Forest Blvd.The  
Woodlands, TX 77381  
USA  
Tel.: +1 713-559-9200

**EMEA**  
Inchinnan Business Park  
Renfrew, PA4 9RG  
Scotland, UK  
Tel : +44 (0)141 812 3211

**ASIA PACIFIC**  
290 Guiqiao Road  
Pudong, Shanghai 201206  
People's Republic of China  
Tel.: +86-21-3127-6373