GASTECH AUSTRALIA

FIRSTCHECK+

Revolutionary PID Multi-gas for Toxic and Combustible Gases

FirstCheck+ is the world's first ppb capable PID multi-gas to combine a true full featured PID for VOC and toxic gas detection with traditional multi-gas sensors for oxygen, hydrogen sulphide, carbon monoxide and explosive gases.

Key Features:

- First PID multi-gas with sensors for oxygen, hydrogen sulphide, carbon monoxide and explosive gases
- Patented Fence Electrode Technology for best sensitivity, accuracy and reproducibility and humidity and contamination resistant operation
- Inert flow path maximises response to heavy and reactive compounds

Features:

- Rapid response and recovery for fast detection
- Detects VOCs from 1 ppb - 10,000 ppm
- Intrinsically safe for use in flammable areas
- Health & Safety mode for STEL and TWA
- Large numerical back-lit display for easy viewing
- Choice of readouts - numeric or real-time graph
- Traceability - automatic, continuous data logging
- Universal graphical interface and icon menu
- Swift, simple data download via IRDA link
- Fully interactive, easy-to-useIon PC software for download, analysis and programmable features
- Upgradeable throughout the FirstCheck+ range

Advanced Gas Sensing Technologies

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First multi-gas / PID detector

FirstCheck+ is the first PID multi-gas to combine volatile organic compounds (VOCs) and toxic gas detection with traditional mult-igas sensors for oxygen, hydrogen sulphide, carbon monoxide and explosive gases. Its unique patented Fence Electrode Technology incorporates a three-electrode format ensuring proven resistance to humidity and contamination, giving optimal user performance in the form of accuracy and repeatability in the field. It has an inert flow path where the sample enters the PID first, then the multi-gas module then exits via the pump.

This construction gives a true response from all the sensors without any losses, due to absorption or even speed of response. Additionally no software damping or filtering or auto zeroing is used, giving the user full confidence that what the sensor sees is what the user sees too.

Applications:

- First response
- Confined space entry
- HazMat
- Industrial
- Leak detection / fugitive emissions

Detection levels:

Gas	Range
VOCs	0.1 - 10,000 ppm 1 ppb - 10,000 ppm
O2	0 - 28%
CO	1 - 1000 ppm
H2S	0.1 - 100 ppm
LEL	0 - 100% LEL

Dynamic Detection Range

Capable of detecting VOCs at very low ppb toxic thresholds, FirstCheck+ 5000 can accurately detect VOCs from 1 ppb up to 10,000 ppm with additional sensors for O2, CO, H2S and LEL detection. The instrument's high sensitivity and inert flow path enables the detection of many gases that are toxic at low ppb levels and undetectable by other VOC multi-gas detectors.

Developed for First Responders

With safety as the instrument's primary focus, FirstCheck+ has been developed with input from First Responders for hazardous incidents including TICs, TIMs and WMDs. The instrument's rapid response (T90 in 1 sec*) enables fast assessment of a given situation allowing the user to respond timely to the incident.

*Sensor dependant, PID = T90 in 1 sec

Flexible Upgradeability Options

A highly flexible instrument, FirstCheck+ is available in a number of upgradeable versions from the basic, low-cost 1000+, through to the sophisticated 5000+ with advanced features and extended detection range.

FirstCheck+ 1000Ex (upgradeable)

Intrinsically safe with a detection range of 0.1 - 4,000 ppm, the 1000Ex has user set single point alarms and gas table of over 450 gases (including their unique response factors.)

FirstCheck+ 2000Ex (upgradeable)

With added data logging capability, the 2000Ex allows storage of over 37 hours of data logged readings taken every second (over 130,000 individual readings!) 2000Ex has a date and time stamp for download to a PC via an IRDA link for detailed analysis.

FirstCheck+ 3000Ex (upgradeable)

In addition to the features of the 2000Ex, FirstCheck+ 3000Ex has an extended detection range of 0.1 to 10,000 ppm, and additional operating mode for health and safety monitoring with pre-programmed STEL and TWA values.

FirstCheck+ 5000Ex (upgradeable)

The most sophisticated PID, the 5000Ex provides full features and a dynamic detection range of 1 ppb to 10,000 ppm. Dangerous toxic gases can be detected at low ppb levels where hazardous to health, as well as flammable gases at LEL thresholds. Ideal for the First Responder, the sensitivity of the 5000Ex is a potential life saving instrument in the most hazardous environments. Its inert flow path ensures optimal response to heavy and reactive chemicals not detected by other units, such as MDI, Mustard and Tabun.

(Full FirstCheck+ features and upgradeability options can be found on page 4).

Personalised display and easy to use icon menu

FirstCheck+ allows the user to select the most appropriate method for readings to be viewed to suit both the individual and any given detection situation that may arise.

Large Numeric Display

Ideal for use in confined spaces, the large number readings give easy viewing. When set to 'rotate' each sensor measurement can be viewed in turn.

Single Graph Display

Each sensor reading can be viewed as real-time graph giving an instant overview of developing trends.

Multiple Numeric Display

Enables the viewing of all sensor readings at the same time as numbers for instant understanding of results.

Universal graphical interface and icon menu

Free from translation difficulties and language barriers, FirstCheck+ incorporates a unique graphical interface and icon driven menu for use within global markets.

Easy operation

The instrument's simplicity and easy-to-use menu icons allow for fast, effective operator use without the need for extensive training.

Interactive Software

FirstCheck+ can be easily personalised to accommodate user specific needs through the on-screen menu or via a PC using the interactive Ion PC software. Adjustable features include zone references, alarm levels, custom calibration settings and the ability to add gases to the instrument's gas table.

Continuous data logging

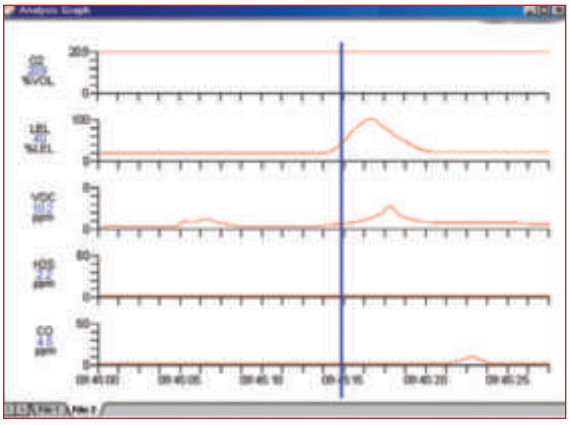
The enhanced 8Mb memory capacity of FirstCheck+ (2000+, 3000+ and 5000+) allows for continuous data logging of all five sensors ensuring traceable results. Readings from each sensor are logged every second with the ability to store over 130,000 individual readings. The unique memory saving feature only logs a value if the detector senses a changes in the detected level of gas.

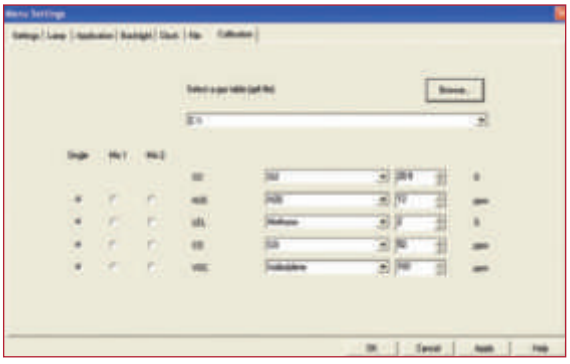
IRDA communication

Stored data can be viewed on-screen for an instant overview of results, or easily downloaded to a PC via an IRDA link using Ion PC software for detailed analysis. (Ion PC software is compatible with Windows XP or VISTA.)

Security setting

The security setting allows the instrument to have its features set by a PC and 'locked' so they cannot be adjusted manually. This feature gives control over specific user settings. Settings can also be stored on a PC and later downloaded to any number of instruments giving identical features to all, saving time.





Features and upgradeability options

Key: Standard feature = ■ Upgradeable = □

Feature	1000	1000Ex	2000Ex		5000Ex
Detection range 0.1 - 4000 ppm	■	■	■		
Detection range 0.1 - 10,000 ppm				■	
Detection range 1 ppb - 10,000 ppm					■
Intrinsically safe		■	■	■	■
Health & Safety mode for STEL and TWA monitoring		□	□	■	■
IRDA for wireless communications with a PC		■	■	■	■
Auto range ppm/ppb		□	□	□	■
Real-time graph display on screen		■	■	■	■
Simple data store	■				
Data logging		□	■	■	■
Date and Time stamp		□	■	■	■
Interactive Ion PC software for instrument configuration and data handling		■	■	■	■
Easy-to-use graphical icon based interface	■	■	■	■	■
Zone name creator		□	■	■	■
Audible alarm 90 dBA	■	■	■	■	■
Visual alarm (LED)	■	■	■	■	■
Gas table of 250+ gases and their individual response factors		■	■	■	■
Selectable mg/m^3 or ppm/ppb		■	■	■	■

Note: Ion PC software runs on Windows XP and Vista

FirstCheck+ Sensor Specifications

Detector	Range	Response Time
PID (VOC detector) Ion Science photoionisation cell fitted with Fence Electrode Technology 10.6 eV Krypton PID Lamp supplied as standard (others available - contact us for alternative lamps)	FirstCheck+ 1000 & 2000 0.1 to 4000 ppm FirstCheck+ 3000 & 5000 0.1 to 10,000 ppm	T90 < 1 seconds
Oxygen, O_2 - Electrochemical sensor	0 to 28%	T90 < 15 seconds
Carbon monoxide, CO - Electrochemical sensor	1 to 1000ppm	T90 < 15 seconds
Hydrogen sulphide, H^2S - Electrochemical sensor	0.1 to 100 ppm	T90 < 20 seconds
Lower Explosive Level LEL - Catalytic (Pellistor) sensor	0 to 100% LEL	T90 < 15 seconds

TECHNICAL SPECIFICATION

DETECTOR
For details of each sensor, its range and response time please see the FirstCheck+ Sensor Specification table.

INTRINSICALLY SAFE APPROVALS
Ⓔx II2 G Baseefa 03ATEX0742
Ex iad IIC T4 (-20 °C ≤ Ta ≤ 60 °C)
IECEx BAS 04.0033 (world standard)

ACCURACY*
± 5% displayed reading at calibration point

LINEARITY*
± 5%

DATA LOGGING
Automatically recording all 5 sensors every second including date and time stamp
8 Mb (expandable) data memory
Incorporates a secure storage algorithm to reduce stored data corruption

CALIBRATION
Via calibration kit accessory

OPERATION
Dry Cell: Alkaline 4 x AA:11 hours

ALARM
Flashing LED and 90 dBA (10cm) audible sounder
User set and TWA & STEL
Pre-programmed 450+ gases and gas mixtures

FLOW RATE
220 ml/min or 220 cc/min with flow fail alarm

TEMPERATURE
Operating: -20 to 60 °C, -4 to 140 °F
Humidity: 0-99% RH (non condensing)

WEIGHT & DIMENSIONS
Instrument without probe
340 x 60 x 49 mm (13.5 x 2.3 x 1.9")
Standard case 420 x 320 x 97 mm (16.5 x 12.5 x 3.8")
Instrument 0.615 kg (1.36 lb)
Packed 3.045 kg (6.7 lb)

NB: PID specifications relate to an isobutylene 100 ppm in air calibration at 20 °C and 90% RH. LEL specifications relate to a methane (CH_4) calibration, other gases available on request. Other gas sensors as specified at appropriate international alarm standards.

*Assuming constant environmental conditions

Note: Fence Electrode Technology is produced by Ion Science Ltd, and protected by U.S. Patent No. 7,046,012. EP 1474681, other patents pending.

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