



GfG Instrumentation

Worldwide manufacturer of gas detection solutions



TR 1003: G450 and G460 Multi-gas detectors

Overview of features and benefits

January 28, 2013

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GfG Instrumentation

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G450 / G460
Overview of features and capabilities



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Technical documentation and download site:
www.goodforgas.com



Overview of G450 / G460 Features



G450 Confined Space Gas Detector

- **One to four sensors**
- **Full 3-year warranty on all sensors**
- **Optional 6-year warranty on all sensors**
- **O2 sensor rated for continuous use in – 30°C temperatures**
- **Interchangeable rechargeable (NiMH) or alkaline battery packs last 25 hours per charge**
- **Super durable IP-67 water resistant design**
 - **Only \$695.00 USD list price (alkaline)**
 - **Only \$745.00 USD list price (rechargeable)**



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G460 Multi-gas Monitor

- **Up to SEVEN channels detection**
- **Comprehensive range of interchangeable smart sensors:**
 - **LEL, O2, CO, H2S: 3-year warranty**
 - **Infrared combustible gas: 3-year warranty**
 - **Infrared CO2: 3-year warranty**
 - **Most other substance-specific EC toxic: 2-year warranty**
 - **PID lamp: 1-year warranty**



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G450 / G460 Optional 6-year Sensor Warranty

- 3-year warranty on O₂, LEL, CO and H₂S sensors still standard
- Standard lifetime warranty on instrument
- 6-year sensor warranty option available for additional \$250.00 at time of purchase

G450 Confined Space Gas Detector Six-year Extended Sensor Warranty Program



GfG instrumentation offers the longest sensor warranty in the history of gas detection!

GfG instrumentation gas detectors offer the best features and performance, at the lowest cost of ownership of any atmospheric monitors on the market today. GfG instruments carry a lifetime warranty on the instrument itself. The standard G450 sensor warranty is a full 3-years from the date of purchase. The extended sensor warranty option provides coverage for all four sensors (O₂, LEL, CO and H₂S) for a full 6-years from the date of purchase.

Other manufacturers charge up to \$270.00 for a set of four sensors. To make it worse, most manufacturers only warrant the sensors for 2-years from purchase. Customers may have to replace all four sensors three or four times over the life of the instrument. A single set of replacement sensors is often more expensive than a brand new instrument. GfG thinks that's wrong!

- Standard 3-year warranty on all four sensors
- Standard lifetime warranty on the instrument

Most of the components in a GfG instrument never need to be replaced, and carry a lifetime warranty for as long as you own the product. The only exceptions are the battery packs, filters and sensors.

- Optional 6-year extended sensor warranty
- How does the extended sensor warranty work?
- How much can I save?

The optional extended warranty provides sensor warranty coverage for a full 6-years. The option is available for an additional \$250.00 at the time the instrument is purchased.

Sensors that fail under warranty will be replaced with a brand new sensor at no charge.

GfG instruments are designed for durability. How much you save depends on how long you own and keep your GfG instrument in service. The list price of a rechargeable four-gas G450 is \$745.00. With the extended warranty option, the six-year cost of ownership is only \$995.00. This is less than the three-year cost of ownership for most other confined space gas detectors.

Yes. When it's finally time to replace the sensors, you can buy and replace them one at a time, or you can purchase a complete set of all four sensors for \$400.00. Replacement sensors carry the same standard three year warranty as the original sensors.



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G450 / G460 Optional 6-year Sensor Warranty

Cost of Ownership										
Product	MSA Altair 4X		ISC MX4		BW Quattro		X-am 2000		GfG G450	
List price of rechargeable 4 channel instrument	\$915.00		\$695.00		\$745.00		\$805.00		\$745.00	
Standard sensor warranty & price										
LEL	3-year	\$210	2-year	\$220	2-year	\$185	3-year	\$175	3-year	\$100*
Oxygen	3-year	\$180	2-year	\$165	2-year	\$135	5-year	\$145	3-year	\$100*
CO	NA	NA	2-year	\$275	2-year	\$200	5-year	\$145	3-year	\$100*
H ₂ S	NA	NA	2-year	\$275	2-year	\$150	5-year	\$145	3-year	\$100*
COSH	3-year	\$210	NA	NA	NA	NA	NA	NA	NA	
Three year cost of ownership	\$895.00		Between \$860.00 and \$1,630.00**		Between \$880.00 and \$1,415.00***		\$805.00		\$745.00	
Extended warranty option:	Yes		No		No		No		Yes	
How long?	1-year additional		NA		NA		NA		3-year additional	
How much?	\$315.00		NA		NA		NA		\$250.00	
Total cost of ownership with extended warranty	\$1,230.00 (4-years)		NA		NA		\$980.00 (5-year)****		\$995.00 (6-years)	
Total six year cost of ownership	\$1,515.00 (6-years)		Between \$1,795.00 and \$2,565.00 (6-years)		Between \$1,550.00 and \$2,085.00 (6-years)		Between \$980.00 and \$1,475.00 (6-years)		\$995.00 (6-years)	



Easy to use!

- *Basic operation is extremely simple*
- *Single on-off button all that is needed for most day to day use*
- *Every instrument shipped complete with operations manual*



G460

Multi-gas Detector

Operations Manual



GfG Instrumentation

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Three color "Traffic Signal" display

- *Back lit three-color full graphics LCD*
- *Top mounted display with wrap around (360°) LED alarm indicator*
- *LCD includes flip and zoom functions*



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Rugged design

- *Rugged, double shot molded housing includes integral rubberized boot*
- *Durable high tension steel alligator belt clip*



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G450 / G460 Multi-Gas Detector

- *Interchangeable rechargeable (NiMH) or alkaline battery packs last up to 25 hours per charge*
- *Top-mounted, three color, full graphics LCD*
- *Durable IP-67 water resistant design*
- *O2 sensor rated for continuous use in -30°C temperatures*



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G450 / G460 battery packs

- *Interchangeable rechargeable (NiMH) and alkaline battery packs last up to 25 hours*
- *NiMH batteries provide excellent cycle life and low temperature performance*
- *NiMH battery packs warranted for 2-years*
- *Typical run-time after two years for properly maintained NiMH battery packs is usually around 16 hours*



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Rechargeable battery pack

- *Available with optional built-in flashlight LEDs*



LED
location

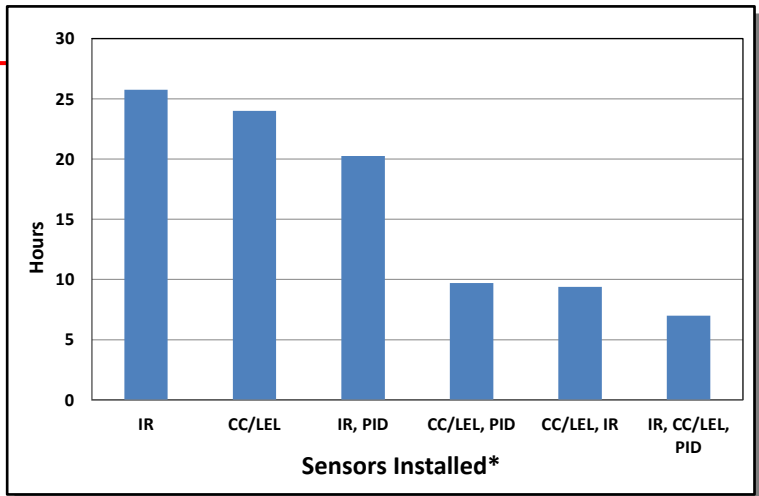


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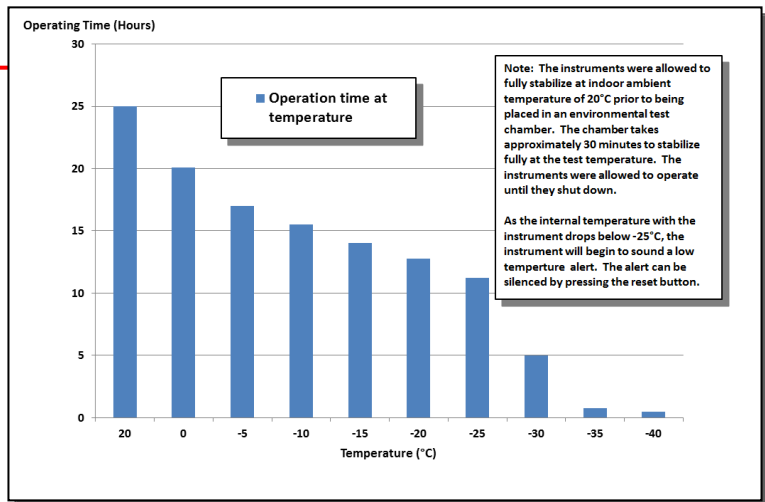
Expected G450 / G460 run times



*All configurations include O2 and CO/H2S sensors as well as the listed "high power" sensors

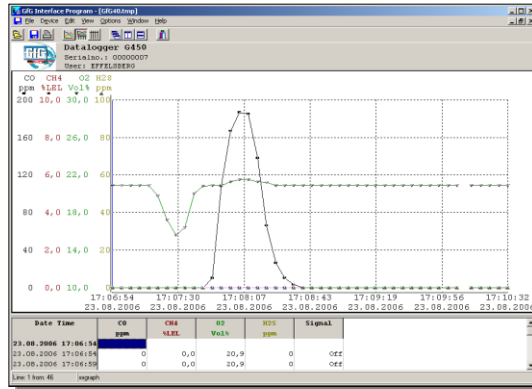


Expected G450 run times as function of temperature



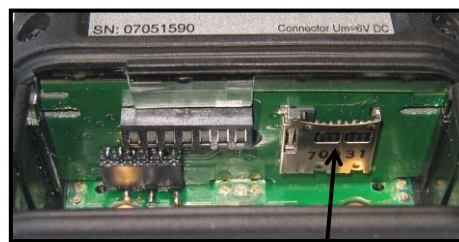
Datalogging Standard

- **Mode:**
 - **Average**
 - **Peak**
 - **Instantaneous**
- **Interval:**
 - **1 sec. – 60 min.**
- **Internal capacity:**
 - **1,890 intervals**
 - **63 hours continuous at 2 min. Interval**
- **G460:**
 - **Built-in expansion slot for 2GB additional data storage capacity**



G460 Optional Extended Datalogging Storage Capacity

- **Built-in slot for optional high capacity extended memory card**

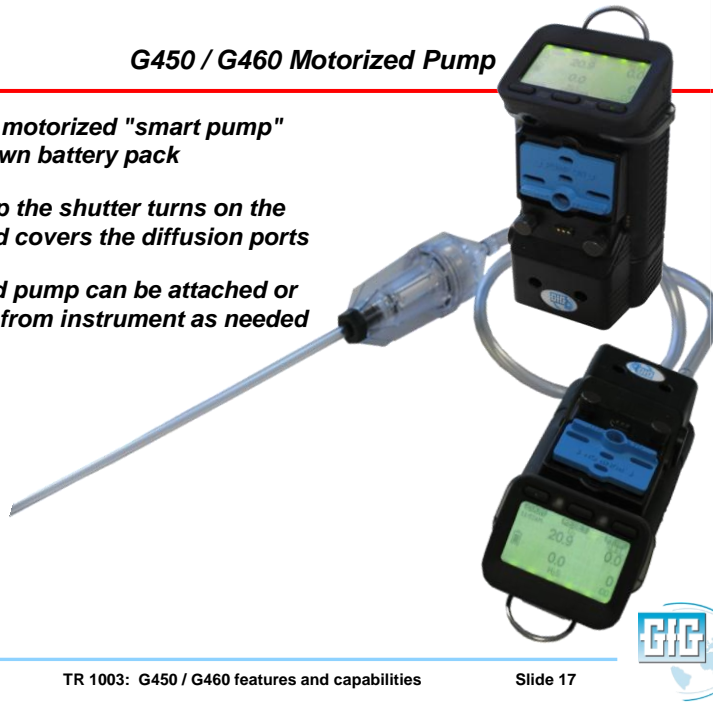


Memory expansion card slot



G450 / G460 Motorized Pump

- *Powerful motorized "smart pump" with its own battery pack*
- *Sliding up the shutter turns on the pump and covers the diffusion ports*
- *Motorized pump can be attached or removed from instrument as needed*



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G450 / G460 Motorized Pump

- *"Smart" motorized pump directly monitored by instrument for proper performance*
- *Low flow and pump malfunction alarms*



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G450 / G460 Drop-in Charger



- **Smart charger includes trickle charge mode to prevent damage to battery pack due to overcharging**
- **Available in single and double versions**
- **Available for use with 12 VDC vehicle charging system**



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Optional G450 / G460 Drop-in Charger for Pump Equipped Instruments

- **Charger simultaneously charges both pump AND instrument**
- **Available for use with 12 VDC vehicle charging system**



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**G450 / G460
Five-Unit Multi-Charger**

- *Five instrument multi-charger*



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Five instrument multi-charger



- *Can be substituted in place of standard cradle chargers with orders of 5 or more instruments*



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Other accessories

- **Calibration adapters**
- **Sampling probes**
- **Leather holsters**
- **Calibration kits**



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Use TS-400 Test Station for daily bump check

- **Standalone operation - No PC required!**
- **Automatic bump-test only**
- **Success / failure indication after each test**
- **Economic use of test gas**
- **Easy collection of unit test and logged data**



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Use DS400 Docking Station for daily bump check and / or periodic calibration



- **Standalone operation:**
- **No PC required**
- **Automatic bump-test**
- **Automatic span calibration**
- **Success / failure indication after each test**
- **Economic use of test gas**
- **Easy collection of unit test and logged data**
- **Reduced maintenance cost**



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DS-400 Docking Station for daily bump check and / or periodic calibration



- **No computer required!**
- **Docking station controlled by instrument's control buttons:**
 - **Push "Test" for Bump Test**
 - **Push "Cal" for Auto Cal**
 - **Push "Cancel" to charge only**

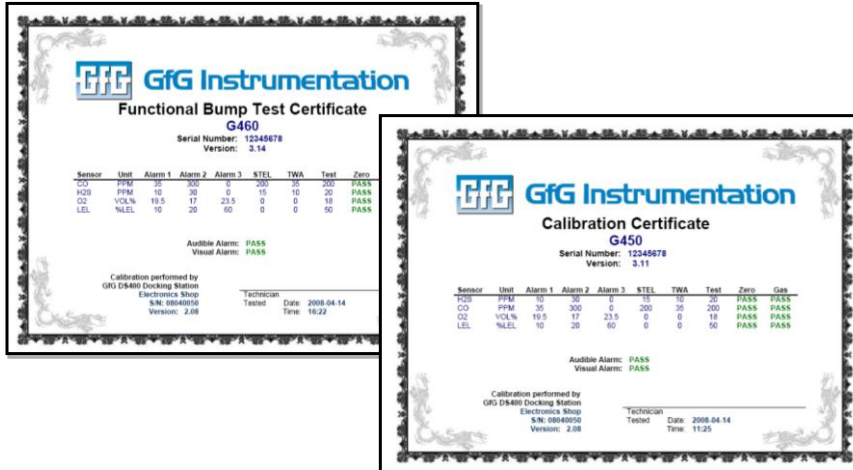


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Automatically generate calibration and bump test certificates



Basic operation

- **Basic operation is extremely simple**
- **Single on-off button all that is needed for most day to day use**
- **Every instrument shipped complete with operations manual**



Accessories included with every instrument

- **Instrument with CO, H₂S, LEL and O₂ sensors (installed)**
- **Operations manual**
- **Battery pack (installed)**
 - **Rechargeable NiMH or**
 - **Alkaline**
- **Charging cradle (when instrument has rechargeable battery pack)**
- **110 VAC wall-cube power source**
- **Calibration adapter**



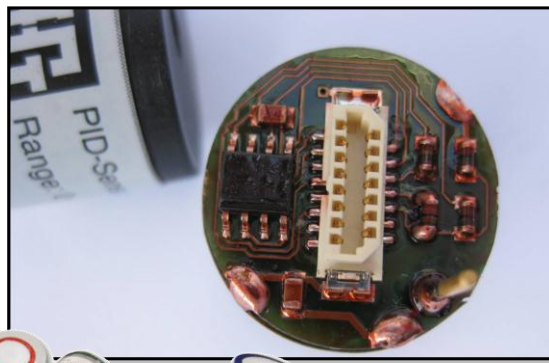
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Traditional Electrochemical Toxic Gas Sensors

- **More types of sensors available every year**
- **Toxic gas sensors designed to detect target gases at ever lower concentrations**



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G460 Interchangeable Plug-and-Play Smart Sensors

• Available sensors include:

- O₂
- Catalytic LEL
- Infrared LEL
- Infrared CO₂
- CO
- H₂S
- COSH
- PID
- SO₂
- Cl₂
- ClO₂
- NH₃
- H₂
- PH₃
- HCN
- NO
- NO₂
- HCL
- HF
- EtO
- O₃
- COCl₂
- HBr
- THT
- and more!

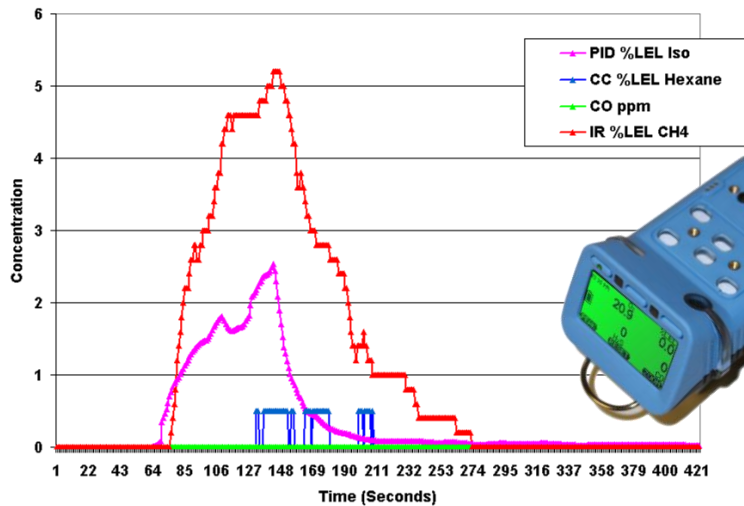


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G460 has the flexibility to support the right sensor technology for the job!



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GfG wins hands down when it comes to features AND three year cost of ownership!



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Sales Support:
www.Goodforgas.com

- **Data sheets**
- **Price lists**
- **Manuals**
- **Application Notes**
- **Product images**
- **Print ads**
- **...and more!**

Multi-Sensor Atmospheric Monitor

Confined Space performance

Choosing the best detection technologies for measuring combustible gas and VOC vapors

Operations Manual

G460 Multi-gas Detector

Supplier Of Gas Detection Solutions

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Questions?



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