

# ACCURATE, CONTINUOUS MULTI-POINT DETECTION OF TOXIC GASES AT A HIGH LEVEL OF RELIABILITY

Vertex<sup>™</sup> – the highly sensitive and reliable multi-point low-level toxic gas monitoring system backed by physical evidence of an actual gas release.

# **VERTEX OFFERS A GAS MONITORING SOLUTION THAT** ADAPTS TO YOUR CHANGING GAS DETECTION NEEDS

#### **Accuracy**

The Vertex provides various benefits, including improved accuracy and safety through well-defined visual staining even at low concentrations detection enabled by Honeywell's flow-through closed-loop optical system. This feature enhances the system's ability to detect toxic gases, leading to a more efficient, safer operation and helps to minimize downtime.

# **Enhanced safety and operational efficiency**

The Vertex's full suite of redundancy features advanced communications that mitigate the risk of system failure, such as

- Dual power supply
- · Dual hard drives
- Dual pumps

Support continuous operation even in the event of system continuity issues, promoting enhanced safety and improved operational efficiency.

# Reduced total cost of ownership

Vertex provides a reduced total cost of ownership through automatic flow adjustments, which reduces the time required for servicing and maintenance. Advanced diagnostics include 100+ instrument and maintenance faults to advise the user of the system's operational state







# A CLEARLY VISIBLE STAIN FOR LOW-LEVEL DETECTION YOU CAN COUNT ON

As the pioneer of Chemcassette® gas analyzers, we engineered the Vertex to deliver an increased level of reliability.

With Honeywell Chemcassette technology, the density of the stain on the tape is proportional to the concentration of the gas, so visibility of the stain is critical. That's why Honeywell Vertex tape-based systems, generates a clear, easy-to-view stain that matches the severity of the gas release. With this precision, the optical scanners in Vertex can measure the stain accurately and trigger the right alarm.





#### **FEATURES AND BENEFITS**

#### Reliable

Vertex offers powerful, built-in system redundancy as standard equipment to effectively safeguard against downtime.

- Back-up pump and internal power module
- Chemcassette technology provides physical evidence of a gas event
- System data backup. If main data acquisition PC fails, analyzers continue to monitor, log data and alarm
- Drip-resistant cap for system protection from overhead leaks
- Automated leak test with line integrity option

#### **Flexible**

Start your Vertex system with as little as eight points. Vertex expands as your monitoring needs change, offering up to 72 points of continuous gas detection. Place sampling points up to 400 feet (120 meters) from the system. There is a choice of universal analyzer modules and/or pyrolyzer analyzers.

#### Easy to use

- Touchscreen for easy access to data
- Software updates via CD-ROM or network to all system components

- Configuration profile editing and data retrieval are all achievable without taking unit offline
- Radio frequency identification tag (RFID) ensures Chemcassette are installed into appropriately programmed analyzer, eliminating human error
- Online help system

#### Security

- Multiple levels of password protection
- Reconfigure security setup without taking unit offline

# Reduced total cost of ownership

- Vertex's smaller footprint and greater density of points reduces your cost per point
- Eight points per analyzer lowers Chemcassette costs
- Maximized 72-point systems provide low cost per point as compared to other continuous monitors
- One system monitors up to nine gas families and more than 40 gases
- You can split your sample into more than one analyzer

## Easy to maintain

Vertex uses cost-effective XP
 Chemcassettes providing up to four months of continuous monitoring

- Simplified replacement of Chemcassettes and automated optics verification
- No dynamic calibration required
- Easy access to analyzers, pumps, power supplies and touchscreen from front panel
- Onscreen interactive electronic manual

#### **Advanced communications**

- Built-in configurable PLCs with optional 176 relay contacts
- Standard OPC interface for easy integration into your existing factory automation system or HMI
- Optional Ethernet/CIP, DeviceNet<sup>™</sup>,
   Profibus<sup>®</sup>, Profinet<sup>®</sup>, Modbus/TCP or
   ControlNet<sup>™</sup> outputs available
- Optional ChemCam camera permits viewing of stain, locally or remotely, for proof of the gas event. Image is electronically saved for future retrieval.
- Optional remote control/viewing software enables total visualization of the monitor screens at a remote PC

#### **Operating system**

• Windows® 10 IoT Enterprise to improve IT security

# DESIGNED FOR THE TOXIC GASES IN YOUR OPERATIONS

# **DESIGNED FOR THE TOXIC GASES IN YOUR OPERATIONS**

Honeywell Vertex can be tailored to meet the requirements of your facility. With up to nine Chemcassette gas analyzers, each with eight points of detection, the system monitors virtually every gas used in semiconductor fabs — down to parts per billion (ppb). These gases include:

GASES MONITORED				
ACT935 Photoresist Stripper	Chlorine Trifluoride	Germane	Phenyl Trichlorosilane	Stibine
Ammonia	Cupra Select	Hexachlorodisilane	Phosgene	Sulfur Tetrafluoride
Arsenic Pentafluoride	Diborane	Hydrogen Bromide	Phosphine	Tertiarybutlyarsine
Arsenic Trichloride	Dichlorosilane	Hydrogen Chloride	Phosphorous Oxychloride	Tertiarybutylphosine
Arsenic Trifluoride	Digermane	Hydrogen Cyanide	Phosphorous Pentachloride	Tetrachlorosilane
Arsine	Dimethylamine	Hydrogen Fluoride	Phosphorous Pentafluoride	Tetrakis (dimethylamino) titanium
Boron Tribromide	Dimethylsilane	Hydrogen lodide	Phosphorous Tribromide	Tin Tetrachloride
Boron Trichloride	Digermane	Hydrogen Selenide	Phosphorous Trichloride	Titanium Tetrachloride
Boron Trifluoride	Dimethylamine	Hydrogen Sulfide	Phosphorous Trifluoride	Trichlorosilane
Carbonyl Fluoride	Dimethylsilane	n-Butylamine	Silane	Trimethylsilane
Chlorine	Disilane	Nitric Acid	Silane Tetrachloride	Tungsten Hexafluoride
Chlorine Dioxide	Fluorine	Nitrogen Dioxide	Silane Tetrafluoride	Nitrogen Trifluoride

New calibrations are continuously developed.

#### **ACCESSORIES**



Floor Mounting



**Duct Adapter** 

- Chemcam Camera
- Line Filters
- **Tubing**



# RELIABILITY AND DURABLE SUPPORT

Honeywell is a major gas detection provider with a division focused exclusively on semiconductor manufacturing and other high tech industries such as solar material, flat panel displays and more. That means we know your business — and how you need to protect it.

At Honeywell, we understand the value of your production. That's why we engineered the Honeywell Vertex for an enhanced standard of accuracy and reliability, so you can feel confident that your toxic gas management system is helping to keep your people safe and your operations running.

Every day, Honeywell gas detection technologies protect people and billions of dollars in assets at semiconductor fabs, research labs and other high tech facilities throughout the world. And since we are the original manufacturer of the Vertex product lines we sell, we know how to support it. Honeywell has a worldwide network of service engineers who are knowledgeable and passionate about gas detection.

Honeywell Vertex is part of a comprehensive ecosystem of gas-detection products and services for your operations, including fixed systems, portable and transportable gas detectors, controllers, software, systems integration and more. So when you demand enhanced safety standards and deep knowledge of industrial technology and applications, Honeywell is here for you.

# **WORLD LEADER IN GAS DETECTION**

Honeywell Analytics offers you more than 30 years' experience in developing patented Chemcassette® tape technology. Vertex™ Multi-Point Toxic Gas Monitoring System complements electrochemical cell, catalytic bead and infrared monitors.

#### 24 HOUR SERVICE

Honeywell's global team of technical service professionals is at your service 24 hours a day, 7 days a week in more than 60 countries.

# For more information

sps.honeywell.com

# **Honeywell Gas Analysis and Safety**

9680 Old Bailes Rd, Fort Mill, SC 29707 (803) 835-8000

# **Contact us**

US: Canada:

Tel. 800.430.5490 Tel. 888.212.7233 Fax. 800.322.1330 Fax. 888.667.8477

informationsp@honeywell.com

Profibus and Profinet are trademarks or registered trademarks of Profinet International (PI).

 $\label{lem:controlNet} \mbox{DeviceNet and ControlNet are trademarks or registered trademarks of ODVA, Inc.}$ 

Windows is a trademark or registered trademark of Microsoft Corporation in the United States and other countries. Vertex and Chemcassette are trademarks or registered trademarks of Honeywell International Inc.

HGAS\_Vertex™\_BRO\_US-EN\_0323 ©2023 Honeywell International Inc.

