

# **MSA SAFETY RECEIVES THE 2023 NEW PRODUCT INNOVATION AWARD**

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*Identified as best in class in the global portable  
gas detectors industry*



## Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. MSA Safety excels in many of the criteria in the portable gas detector space.

AWARD CRITERIA	
<i>New Product Attributes</i>	<i>Customer Impact</i>
Match to Needs	Price/Performance Value
Reliability	Customer Purchase Experience
Quality	Customer Ownership Experience
Positioning	Customer Service Experience
Design	Brand Equity

### MSA’s ALTAIR io™ 4 Gas Detection Wearable Easily Bridges Customers’ Unmet Needs Through Connectivity and Ease of Use

In the second quarter of 2022, MSA Safety introduced its fully connected gas detector solution, ALTAIR io™ 4 Gas Detection Wearable—part of its MSA Connected Work Platform—which is the first to address many of the challenges of connected gas detectors. With its integrated cellular connectivity, industrial workers are always connected, and the device can be used straight out of the box, ready to function with

*“Ease of usage and reduced sophistication ensure MSA’s ALTAIR io™ 4 Gas Detection Wearable matches customers’ needs in hazardous industrial environments, so they need not depend on cellphones or connectivity infrastructure for connected gas detectors to function.”*

**- Anjan Kumar Roy,  
Industry Analyst**

the tap of a button. MSA’s ALTAIR io™ 4 requires no additional infrastructure, activation, or carrier billing, and it eliminates the need for cellphones, which usually act as a gateway for competitors’ portable gas detectors. The ALTAIR io™ 4 is connected to MSA’s cloud-based software platform, designed from the ground up. Ease of usage and reduced sophistication ensure that ALTAIR io™ 4 matches customers’ needs in hazardous industrial environments, so they need not depend on cellphones or connectivity infrastructure for connected gas detectors to function.

## Exceeding Customer Needs through Enhanced Reliability Features

MSA's ALTAIR io™ 4 consists of 3 XCell® Sensors: the first is the industry's longest-lasting and most tested catalytic bead; the second is an electrochemical sensor for hydrogen sulfide and carbon monoxide detection; and the third is a lead-free oxygen sensor, all with rapid response time for real-time sensing. The ALTAIR io™ 4 portable gas detector can simultaneously detect up to 4 gases, and its gas sensing options include combustible lower explosive limit (LEL) gases, oxygen, carbon monoxide, hydrogen sulfide, methane, sulfur dioxide, and nitrogen dioxide. Furthermore, it is configured with MSA id™, an RFID (radio frequency identification) tagging system that allows workers to check in and have a gas detector assigned to them without infrastructure, manual processing, or clipboard sign-ins, which sets a competitive benchmark for alternatives to aspire to. Finally, all real-time and historical device data is tied to the worker, promoting accountability, safety, and compliance.

## Built to Ensure an Experience of Exceptional Quality for End-users through Superior Design

MSA's wearable gas detector is built to function in the most hazardous environments, and it is MSA's most rugged and durable to date: it exceeds the transit drop test (MIL-STD-810G 516.6) and was tested for 26 drops from a height of 1.2 meters (4 feet); it has an exceptional military-grade durability rating and can sustain an incidental 7.5 m (25 feet) drop onto concrete; it possesses NFPA 1982-2018 tumble tester

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certifications that allow it to survive for 60 minutes and a dust and waterproof IP68 rating to meet the demands of 1-hour submersible testing in 2-meter-deep water; and since the workers who are required to use gas detectors are often exposed to harsh environmental conditions, MSA's ALTAIR io™ 4 is tested to perform in a temperature range from minus 20 degrees Celsius to plus 55 degrees Celsius.

Such unmatched quality, durability, and ruggedness make MSA's ALTAIR io™ 4 best-in-class in portable connected gas detectors.

## A Platform to Enhance Adoption and Offer Better Price/Performance

The ALTAIR io™ 4 is not just a gas detector, as it comes with access to MSA+ which offers a comprehensive subscription program, including hardware, software and additional services. It gives the user access to powerful cloud-based solutions enabling faster safety implementation, offers increased warranty coverage, and is equipped with automatic software and firmware upgrades. Indeed, MSA's ALTAIR io™ 4 Gas Detection Wearable is available at a low cost with both monthly and yearly subscriptions.

The device's capacity for connection, along with the MSA grid software, provides insights and visibility into end-user organizations, granting managers a monitoring solution that connects workers, worksites, and workflows. Furthermore, the device comes with auto-calibration features, and a bump test before using the detectors can be done via the automated ALTAIR io DOCK to simultaneously test multiple gas sensors. Any malfunction is also covered under warranty for the subscription's duration.



Frost & Sullivan thus concludes that MSA's gas detector, integrated with the MSA+ platform, offers a better price/performance value than any of its existing competitors since it offers a superior product design, unmatched connectivity features, and auto-calibration accessories.

### **Unmatched Customer Ownership Experiences**

The XCell® sensors offer a fast response time (less than 10 seconds for methane and less than 15 seconds for pentane), thereby limiting workers' exposure time to hazardous environments. Furthermore, since the sensors require less concentration of gases to detect leakage (thanks to their dual detector beads), the sensors last 4–5 years against the 1–2 years of competitor's gas detectors. MSA Safety's deep-rooted industry knowledge and understanding of customers' usage patterns have enabled them to optimize battery consumption. In one scenario, battery consumption was reduced by 20–25% via an over-the-air software update. Unlike its competitors' offerings, where portable gas detectors are developed for lone worker solutions and individual connected systems, MSA's ALTAIR io™ 4 Gas Detection Wearable is based on fleet management and offers a collective safety protection system for the entire fleet with each member tracked through a unique MSA id™. As a result, the technical superiority of ALTAIR io™ 4 provides an enhanced customer ownership experience.

### **Customer-centric Development Enables a Superior Customer Purchase Experience**

One of the major challenges in the industry is growing inflation and users' concerns about large up-front costs associated with outright sales of portable gas detectors. In this context, MSA is developing an entire ecosystem in which connected safety solutions are available with minimal capital expenditure under the MSA+ program, including the ALTAIR io™ 4. This will be illustrated next.

Usually, low levels of gas leaks remain unnoticed and cause health concerns in the long run, but MSA's ALTAIR io™ 4 detects even low-level gas leaks. Case in point: a wastewater company had leaks in their facility that they were unaware of and that could only be discovered after partnering with MSA Safety, leading to corrective actions and safeguarding employees from hazards. Similarly, MSA's detector enabled an oil and gas company to track one operator who accounted for more than 90% of the entire company's non-compliance incidents. MSA's ALTAIR io™ 4 Gas Detection Wearable, with its cloud-connected data analytics, will enhance safety training modules and allow end users to develop proactive safety protocols, improving safety and customer purchase experience.

## **Conclusion**

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MSA ALTAIR io™ 4 Gas Detection Wearable is not just a device. It is a complete ecosystem of rugged hardware systems, MSA+ program, and MSA Grid software with MSA id™ RFID tagging capabilities. MSA ALTAIR io™ 4 Gas Detection Wearable offers better price/performance capabilities along with an unrivaled customer purchase and customer ownership experience compared to any of its existing competitors.

With its strong overall performance, MSA Safety earned Frost & Sullivan's 2023 Global New Product Innovation Award in the portable gas detection industry.

## What You Need to Know about the New Product Innovation Recognition

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Frost & Sullivan's New Product Innovation Award recognizes the company that offers a new product or solution that uniquely addresses key customer challenges.

### Best Practices Award Analysis

For the New Product Innovation Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

#### *New Product Attributes*

**Match to Needs:** Customer needs directly influence and inspire product design and positioning

**Reliability:** Product consistently meets or exceeds customer performance expectations

**Quality:** Product offers best-in-class quality with a full complement of features and functionality

**Positioning:** Product serves a unique, unmet need that competitors cannot easily replicate

**Design:** Product features an innovative design that enhances both visual appeal and ease of use

#### *Customer Impact*

**Price/Performance Value:** Products or services provide the best value for the price compared to similar market offerings

**Customer Purchase Experience:** Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

**Customer Ownership Experience:** Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

**Customer Service Experience:** Customer service is accessible, fast, stress-free, and high quality

**Brand Equity:** Customers perceive the brand positively and exhibit high brand loyalty

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- **Growth Pipeline:** Continuous Flow of Growth Opportunities
- **Growth Strategies:** Proven Best Practices
- **Innovation Culture:** Optimized Customer Experience
- **ROI & Margin:** Implementation Excellence
- **Transformational Growth:** Industry Leadership



## The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

### Analytical Perspectives:

- **Mega Trend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**

