



AUTRONICA

Omicron gas sampling

# GAS SAMPLING SOLUTIONS

Ensuring safe operations







# SPECIALISED SOLUTIONS

for your safety

For more than 20 years we have developed and designed gas detection solutions in close cooperation with our major customers around the world in order to ensure safe operation at all times. Built to withstand the harshest conditions our Omicron Gas Sampling Systems are ideal solutions for gas detection in areas where normal installation of gas sensors is impossible. Based on our extensive application knowhow and

continued focus on innovation and quality we have developed a standardized portfolio that covers the most common gas sampling applications in the Oil and Gas market today.

Our Special Detection Competence Center in Tønsberg, Norway – just 100 km from Oslo – bundles the entire value chain from project engineering, via

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environment  
and property

production to after sales and allows us to be at the forefront in oil and gas markets globally and to meet and exceed the individual demands of each gas sampling installation by fast, efficient and high quality project realization.

Our service-friendly systems fulfill all regulatory and class societies' regulations and enable economically viable operations. The systems can be used at high complexity installations such as FPSOs, FSOs, FLNGs, FSRUs or similar as well as on- and offshore petrochemical production facilities.



# OGS 3.1 SAFE AREA

The OGS 3.1 is our 4th generation gas sampling system relied upon by major operators around the world. The system consists of a monitoring / alarm cabinet and one or more detector cabinets.

The monitoring cabinet incorporates the operator panels and power control components for the individual detector cabinets. The detector cabinet contains all sampling related electronics, gas sensors, mechanical as well as pneumatic components. The Safe Area version requires that all cabinets are installed in non-hazardous locations.

It is the ideal solution for applications where the distance between the sampling points and the gas free area is limited. By maintaining the overall system's scalability it creates a cost effective solution meeting the individual site's operational challenges, while fulfilling all requirements set out by IMO and the different classification societies.

## Key features:

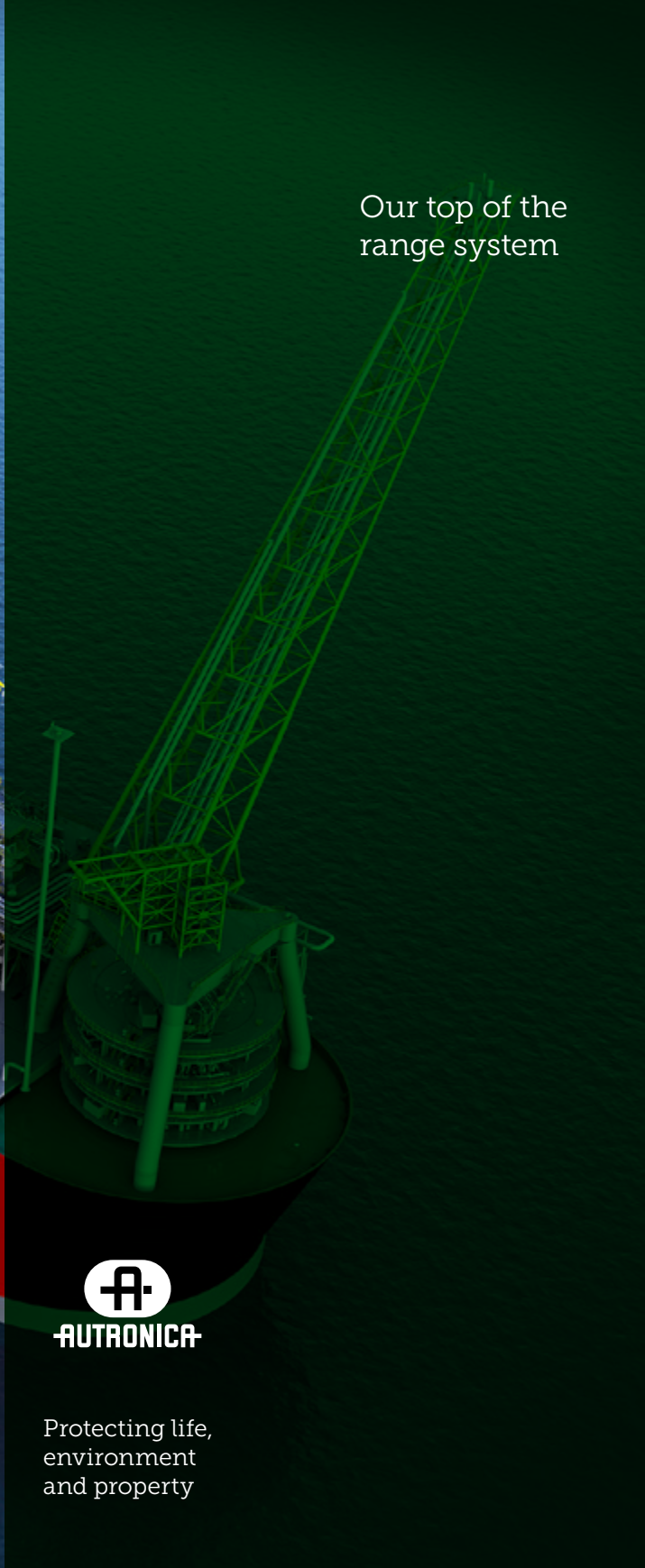
- ✓ Up to max 30 sampling points per detector cabinet
- ✓ Continuous system verification
- ✓ Detection of hydrocarbons, toxic gases, and oxygen
- ✓ Fully scalable from single- to multi-cabinet systems
- ✓ Individually adjustable purge and sample times
- ✓ Disconnection of sample points via serial line







Our top of the range system



## OGS 3.1 EX INSTALLATIONS

The OGS 3.1 EX version is our top of the range gas sampling system. The detector cabinet's design, containing all sampling related electronics, gas sensors, mechanical and pneumatic components, allows it to be operated in zone 1 & 2 hazardous areas. This flexibility enables the detector cabinet to be placed strategically, reducing sample times significantly, increasing the total number of sampling points per cabinet as well as enlarging the system's coverage.

Additionally it totally avoids gas to be sampled into areas defined as gas free, maximizing operational safety even in case of a theoretical leakage. Cabinet cooling and heating units allow the system to be used in extremely harsh environmental conditions, making it a true work horse you can count on.

### Key features:

- ✓ Zone 1 & 2 approved SS316 detector cabinet
- ✓ Weather proof design, IP66
- ✓ Fully scalable from single to multi cabinet systems
- ✓ Extensive hardware and software monitoring
- ✓ Redundant Internal Serial line communication
- ✓ Optional cabinet cooling/heating



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# OGS DIRECT SAMPLING

## Beyond traditional detection

Within the petrochemical, oil & gas market there are many areas that require continuous monitoring of gas hazards, where the environmental conditions render installation of gas sensors impossible. Our OGS Direct Sampling system is specially designed for these types of challenges and builds a unique combination of both gas sampling and point gas detection, providing the best possible level of protection for these applications.

The heart of the system is the IIC zone 1 approved detector cabinet incorporating dedicated IR sensors that are connected to the single detection points by a distinct sample line. This enables the gas detectors to be located in a clean and controlled environment as close as possible to the location that needs to be monitored, minimizing the distance the gas needs to travel and therefore ensuring fast and reliable gas detection for each individual point. The direct sampling loop is continuously monitored and all detection & flow signals are hardwired to a control / alarm panel located in a non-hazardous area guaranteeing safe operation even under the toughest environmental conditions.

### Key features:

- ✓ SS316L cabinet
- ✓ Up to 3 sampling points
- ✓ Ex d IIC Zone 1 design
- ✓ 0 - 100% LEL Infrared hydrocarbon sensors
- ✓ Ejector based sampling
- ✓ Continuous system verification





# OGS SHALE SHAKER

## Gas detection in extreme conditions

Shale shaker ventilation channels and similar areas are among the harshest oil and gas environments in which to achieve reliable gas detection. The extreme conditions quickly lead to detector pollution on traditional gas sensors. The OGS Shale Shaker is especially developed for these kind of locations with the aim to provide reliable operation without supervision.

As on the regular Direct Sampling version, the system consists of a detector cabinet where all components inside the cabinet – including the operating panel – are approved for mounting and operation in a Zone 1 area. This means that the distance between the monitored area and the detector can be minimized in order to reduce sample time and even the door can be opened in zone 1. Furthermore, the system consists of a specially designed dual inlet sample tube where one inlet is cleaned while the other inlet detects for gas and vice versa. This self-cleaning principle prevents contaminants from passing all the way through the pipes and into the detector, providing continuous and reliable detection in the monitored area at all times.

### Key features:

- ✓ SS316L cabinet
- ✓ Zone 1 approved design
- ✓ Dual sampling channels for reliable detection
- ✓ Automatic self-cleaning operation
- ✓ Limited installation costs
- ✓ Sample gas flow alarm



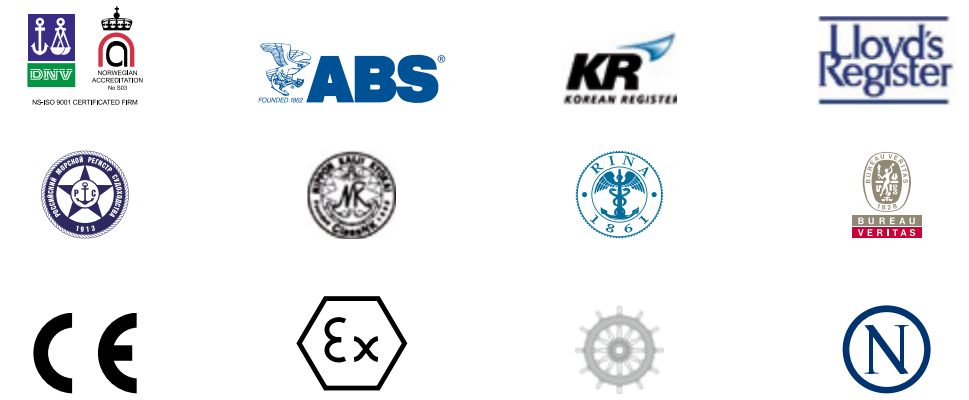




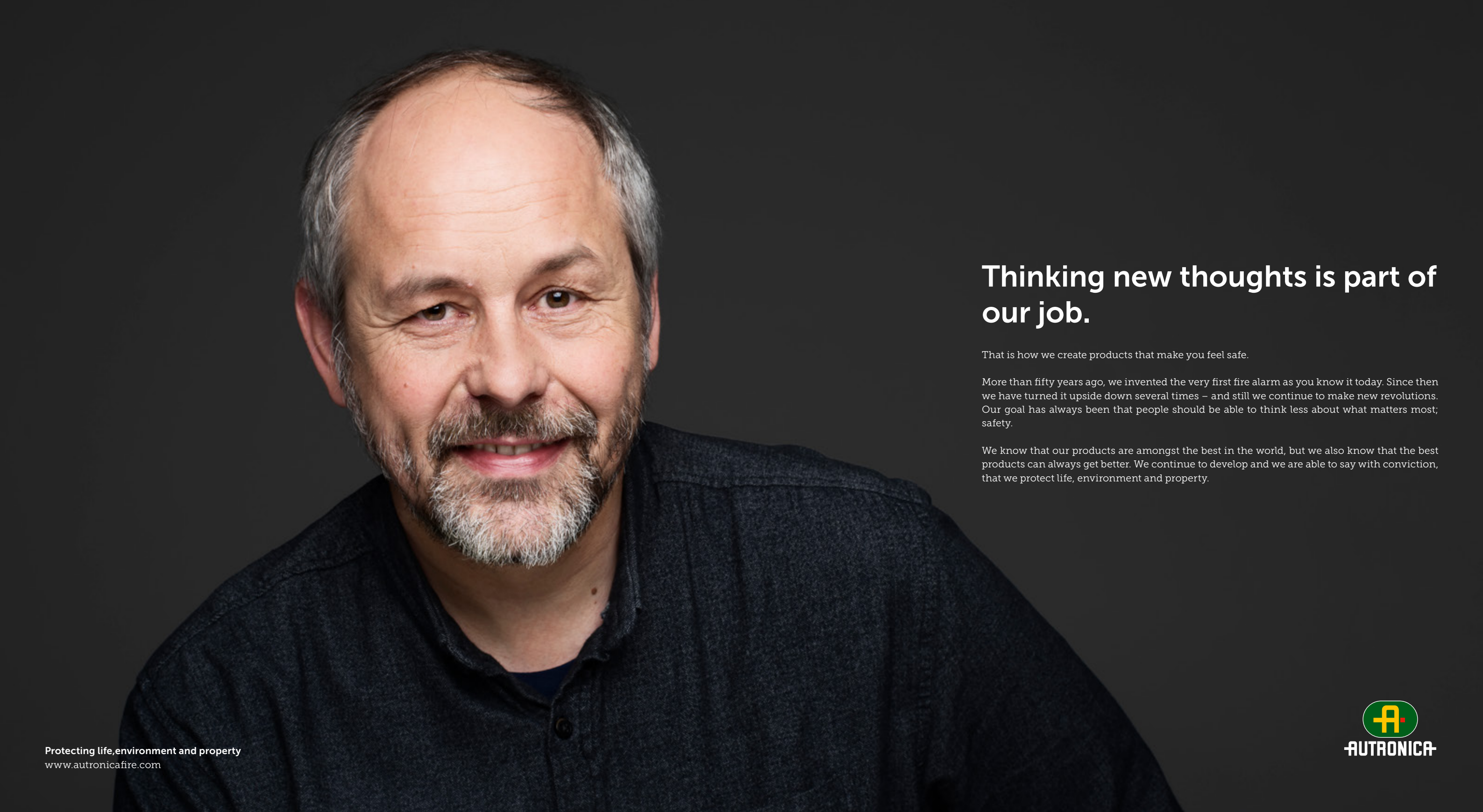
# PROVEN EXCELLENCE

Stringent control throughout Autronica Fire and Security assures the excellence of our products, processes and services.

Our products are developed for meeting worldwide standards and regulations. Below is a collection of the classification bodies by which we are certified.







## Thinking new thoughts is part of our job.

That is how we create products that make you feel safe.

More than fifty years ago, we invented the very first fire alarm as you know it today. Since then we have turned it upside down several times – and still we continue to make new revolutions. Our goal has always been that people should be able to think less about what matters most; safety.

We know that our products are amongst the best in the world, but we also know that the best products can always get better. We continue to develop and we are able to say with conviction, that we protect life, environment and property.





**Autronica Fire and Security AS is a leading innovator, manufacturer and supplier of fire and gas protection, safety and maritime measuring equipment worldwide.**

Our products ensure safety in applications on land, sea and in the petrochemical, oil and gas sectors.

We are an international company with worldwide offices and our HQ is located in Trondheim, Norway's technology hotspot.

**Protecting life, environment and property**