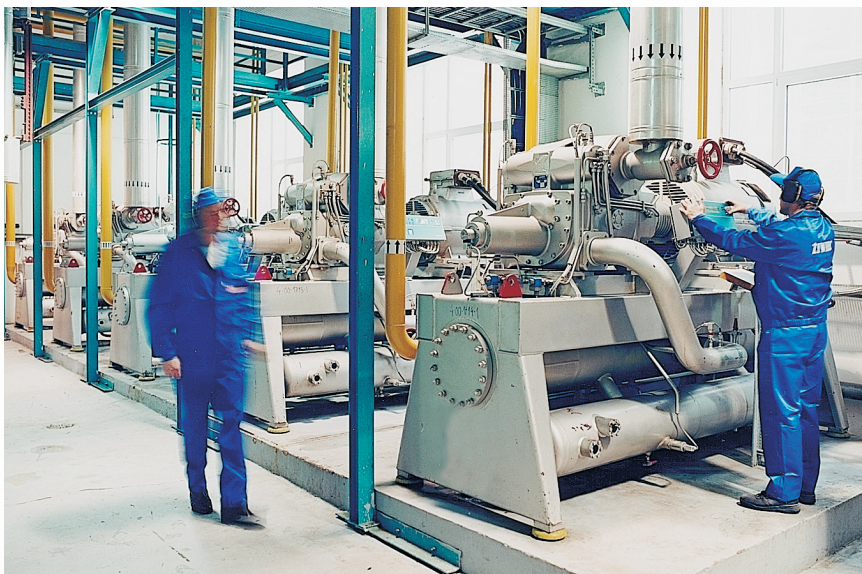


Unisafe II ammonia detection equipment



Example of a Unisafe ammonia application

Ammonia (R717) is an increasingly popular natural refrigerant with the major advantage that it presents no threat to the ozone layer or the earth's climate.

Ammonia has actually been in use as a refrigerant for more than 125 years, and has been subject to an accelerating renaissance against a background of growing worldwide acceptance of the fact that CFC and HCFC refrigerants have serious ozone-depleting effects.

In industrial applications, ammonia has long been the main option for process cooling. Today, modern chillers with ammonia are even being used in centralised systems for air conditioning and computer cooling.

However, ammonia is also toxic and flammable, making it a potential hazard to health and safety. Any ammonia leakage in refrigeration plants is therefore a threat that has to be taken into consideration. Before building a facility containing ammonia, a risk analysis must be carried out, featuring the design of an alarm system, ventilation and other safety measures.

At room temperature, ammonia is a colourless gas that – thanks to its incomparable odour – provides a clear warning even at concentrations that do not pose a threat. With the right technology and proper staff training, ammonia is an energy-efficient, safe and environmentally friendly refrigerant.

Significant advantages

- The Sabroe product range is extremely comprehensive and is backed by the requisite know-how and experience.
- Available in a wide range of preset configurations and easy to adjust to specific plant requirements and to individual detection profile requirements.
- Basic product design for reliable function and easy maintenance.
- Early detection of gas leakage.

Customer benefits

- • Best product and best price/performance is available for every situation.
- • Low installation and commissioning costs.
- • Long service life, low maintenance cost and easy troubleshooting.
- • Compliance with safety requirements as well as both national and international rules and regulations.



Thinking in systems

The benefits and savings that can be achieved with gas detection equipment in general depend on the supplier's ability to recommend suitable equipment in every situation, to recommend how to install the equipment, to deal with installation and commissioning and to undertake the increasingly mandatory annual checks (and if necessary re-calibration) of the gas detection system.

The benefits available from installing Sabroe ammonia detection equipment are therefore multiplied by Sabroe's unique know-how in this specialist field.

Mandatory requirements

In many countries, it is already mandatory to check and undertake maintenance on gas detection systems on at least an annual basis. Sabroe ammonia detection equipment makes it quicker, easier and cheaper to carry out all the necessary checks, and the results are more reliable and more easily documented.

Technical information

Special Sabroe Unisafe II ammonia detection equipment makes it possible to detect even small leakages so that the appropriate action and remedial measures can be taken at an early stage.

Sabroe Unisafe II ammonia detection equipment consists of a wide range of detectors and monitoring units. These in turn employ a range of different sensor technologies, including

- semi-conductive/chemosorption
- electrochemical
- catalytic
- infrared absorption.

Sabroe provides ammonia detection equipment that covers the whole spectrum of requirements. It can be installed as stand-alone units, connected to a Sabroe monitoring unit, or to any other appropriate control and surveillance system.

Appropriate alarm levels

The appropriate alarm levels vary depending on where each ammonia detector is positioned and in which application it is intended to monitor.

The following levels (intervals) are guidelines only, based on Sabroe's extensive experience with such installations.

People	50–300 ppm
Goods	10–100 ppm
Machinery rooms	500–1000 ppm
Risk of explosion	10–20% LEL

*Stand-alone ammonia detector
with remote sensor*



All information is subject to change without previous notice.