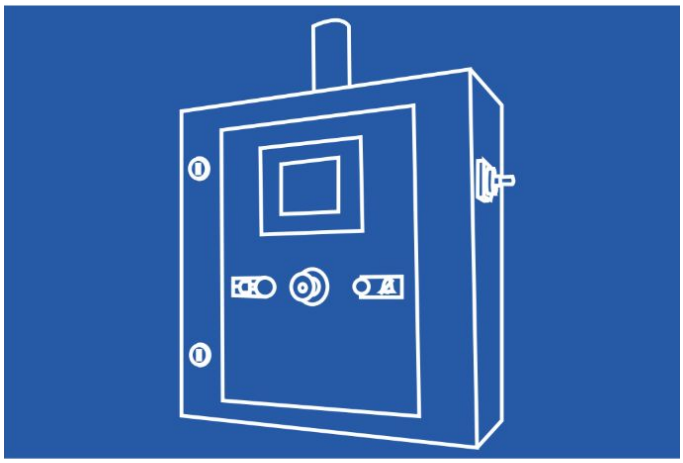
Air Liquide
creative oxygen

FOOD PROCESSING
PHARMACEUTICAL INDUSTRIES
CHEMICAL INDUSTRIES
WASTE MANAGEMENT

Tank Inerting system

- Safety and reliability
- Continuous pressure control
- Dual blanketing and purging
- Multi-tank monitoring



The Concept

The introduction of an inert gas (nitrogen, argon, carbon dioxide) into gaseous, liquid, or dust-flammable mixtures results in the relative depletion of this mixture in oxygen.
Below a certain limit, fire or explosion becomes impossible without affecting the intrinsic properties of the material being protected. Products sensitive to oxygen, moisture or air impurities are also protected this way.
A dynamic gas-injection device designed by Air Liquide, the **TANK INERTING SYSTEM** is well-suited to inert tanks, silos, vessels and reactors with great ease and precision. This intelligent system is able to effectively control and maintain the injection of inert gas as a function of pressure.

Industries

The **TANK INERTING SYSTEM** equipment range helps ensure product quality and safety for multiple applications:
• Storage of liquid foodstuffs (e.g. edible oils, wine) in tanks
• Storage of flammable products (e.g. solvents) in tanks
• Flammable product processing in reactors and vessels
• Equipment purging

Main references can be found in:
• Food processing
• Refineries
• Petrochemicals
• Basic and specialty chemicals
• Fine chemicals and cosmetics
• Waste management

Features

The standard version of a **TANK INERTING SYSTEM** is made up of:

• An electronic control module
• A pressure transmitter
• An inlet and a venting systems, both consisting of a throttle valve and a controlled pneumatic solenoid valve

Each **TANK INERTING SYSTEM** meets applicable regulations and offers state-of-the-art implementation of inert gases.
Our experts supervise the sizing, installation and commissioning of the equipment in compliance with local regulations. And in areas not subject to regulations, they ensure globally accepted Good Engineering Practices.

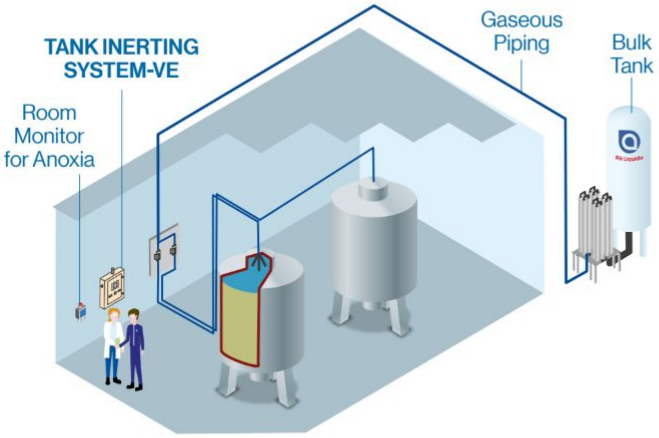
Additionally, they can support you with overall process optimization, including:

• Risk analysis
• Audit of inert-gas-supply requirements
• Ambient oxygen-monitoring systems
• Maintenance and control of the inerting system
• Monitoring
• Anoxia safety training

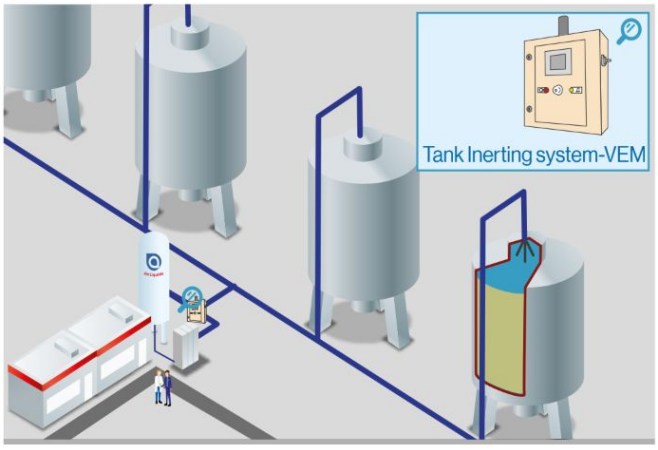
Model range

Choose from two TANK INERTING SYSTEM configurations:

• **TANK INERTING SYSTEM-VE** is an electronic unit to control one or two inerting processes.



• **TANK INERTING SYSTEM-VEM** is suitable for inerting up to 60 tanks using electronic offset units connected to one master control unit.



Technical data

All equipment is suitable for inerting airtight containers with two operating modes: purging and blanketing.

• Designed to protect vessels by continuously maintaining targeted inert-gas overpressure
• Pressure control between two pressure set points for controlling inert-gas supply and relief on/off valves.
• On the VE model, it is possible to use an alarm contactor from the oxygen (O2) measurement to switch the **TANK INERTING SYSTEM** to purging mode.

The multi-tank option consists of a master unit that controls a large number of tanks. From a single LCD screen, you can monitor all of their parameters and statuses. The master control command is connected to offset units via Profibus. Each offset unit is dedicated to a group of tanks and can be installed in the tank vicinity in compliance with the applicable hazardous classification (e.g ATEX[1]).

[1] The European ATEX Directive 2014/34/EU covers equipment and protective systems intended for use in potentially explosive atmospheres

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