Module Systems for LNG

Versatile gas systems for reliability, cost efficiency, and a cleaner environment
Innogas Modular Gas Terminals

Innogas offers a new module based system for storage and regasification of LNG and cryogenic gases. The system consists of a two units, the storage and the regasification module. The system requires no concrete foundation at site and connects to local gas grid and power, and can easily be adjusted to the gas supplier’s requirements during market development. This simplifies the supplier’s introductory sale to new customers, reduces the capital requirement during the build up of the customer base, and secures the gas suppliers an early capital income.

Modular tanks for storage of cryogenic gases.
- Tanks 5 – 60 m³ installed in standard ISO container frames.
- Ambient pressure builder and regulator installed on tank.
- All tank valves enclosed in valve cabinet.
- Pneumatic fail-safe ESD valves.
- Vacuum jacket on first part of liquid withdrawal line to minimise icing.
- Automatic and/or manual economiser.
- Spill collection under liquid valves and flanges, with leak detection.

Flexible Solutions

For small users, consumers with seasonal variations, and in the start up for bigger consumers, module based systems are an economical and flexible solution. The modules are easily transported to the user’s site with standard trucks at low cost. Installation at site can be done at minimum cost as concrete foundations could be avoided. The liquid gas is distributed to site by containers or by trailers. The end-user will only have the tank module and the regasification module for storage and gas delivery to local grid.

With the modular system, there is no need for heavy infrastructure efforts for smaller gas users. Modules are interchangeable, and may easily be replaced by larger units if gas consumption increases or if the gas supplier’s customer base changes.

System Design

- Innogas offers a range of standard module designs, and we also deliver tailored design according to customer’s preferences.
- Innogas delivers complete turn-key solutions or stand alone modules.
- Process lines are made of stainless steel. Vaporisers are high surface area finned aluminium profiles. Skid frame and tank outer vessel are painted carbon steel. The process module is built with stainless steel fence to hinder unauthorized reach.
- Electro and control panels can be installed in separate containers located in safe area or located inside nearby building.
- Innogas delivers completely tested units (or system) with all documentation.

ADVANTAGES
- Low system cost.
- Reliable system, proven design and performance.
- Flexible concept. Standard modules and piping interfaces.
- Vaporisation modules may be combined with larger, stationary tanks (e.g. 50-150 m³).

Manufacturing & Testing

The cryogenic tanks that Innogas deliver are vacuum insulated. They have an inner vessel in stainless steel and an outer jacket in painted carbon steel. The annular space between the inner and outer vessels is filled with perlite or multi layer insulation held under vacuum to ensure long holding times and low boil-off in the tank.

- Our systems are manufactured to the highest standards.
- Approval of design, inspection and follow-up in manufacturing by TÜV.
- Manufacturing by partner Aritas Pressure Vessels Co., a leading manufacturer of cryogenic equipment located in Istanbul. Aritas is an ISO 9001:2000 Company, AD2000-Merkblatt HP 0 & DIN EN 729-2 Certified, ASME U Stamp & S Stamp holder and has more than 30 years experience in cryogenics.