

LNG

REGASIFICATION SYSTEM



LNG Satellite Regasification Systems

Liquefied natural gas transported and stored in cryogenic liquid form:

- Maximizes the density of the delivered gas
- Significantly lowers the distribution cost by maximizing the amount of mass delivered in one trailer.
- Maximizes the amount you are able to store onsite, decreasing your storage capacity requirements.

A regasification system is required to provide you the usable energy needed in your application. This guide is meant to help you quickly and easily configure a system from our product line of cryogenic equipment.

Combined with the benefits of LNG conversion, Worthington's in-house team of application engineers, manufacturing capabilities and system building experience provide you the performance, reliability and safety you've come to expect of conventional fuels. Standard systems range from 1,000 scfh - 150,000 scfh with individual components also available. Our regasification systems have been used in the following off-pipeline applications:

- Industrial boilers
- Asphalt or concrete processing plants
- Off grid communities gas supply
- Power generation
- Natural gas engine testing
- Peak shaving for utility pipelines

Regardless of scale or operating conditions, Worthington can help build the optimal system. Trial, lease, payment, and purchase options available.

**Our application engineers are available to help
find the proper equipment for your application.**

Key System Components

Bulk Storage

- Sized based on desired delivery frequency to maintain your product supply
- Operating pressure must be higher than the final use pressure - typically between 40-70 psig.
- Super-efficient insulation minimizes the amount of boil-off gas, saving product and emissions
- High liquid filling rates for low trailer unloading times
- Tanks are ASME Type C pressure vessels
- Piping, valves and accessories designed for specific application, local requirements or customer preference.
- Pressure relief valves sized to prevent tank over pressurization as per ASME code

*For more information see Worthington's LNG Bulk Tank or LNG Engineered Tanks Product Literature

Vaporizers

- Sized based on maximum flow rate and duty cycle of your process
- Ambient vaporizers, recommended for most small scale applications, minimize energy usage and are cost effective
- Steam-heated and glycol-heated indirect vaporizers can be used for high flow applications where resources (e.g., steam) are available
- Electric vaporizers, generally inexpensive, can have high energy consumptions
- Natural gas heaters, used for high flow rates, leverage some process gas for energy
- Automatically switching vaporizers can be added for redundancy or for high flow continuous operations
- Modular 'box-style' vaporizers accommodate tight spaces

*For more information see Worthington's Vaporizers Product Literature

Controls

- Safely operate, monitor, and control the regasification system
- First line of safety defense with predetermined safety interlocks, shutdowns (ESD) and alarms.
- Remote HMI monitoring and telemetry available
- Optimize the operation and performance of the system
- Three model range options to suit your specific application

	Silver	Gold	Diamond
Simple pushbutton control system that safely operates the regas system	•		
Flashing alarm light for emergencies	•	•	•
NEMA 4 painted control panel	•	•	
Methane and Flame detection system included.	•	•	•
Monochrome HMI screen for view and control of system parameters.		•	
Remote monitoring system for full virtual HMI view and control remotely via any internet connection.		•	•
Wired or wireless internet gateway.		•	•
Cellular data modem		•	•
NEMA 4 rated stainless steel panel			•
Full color touchscreen HMI for viewing system control parameters and valve and instrumentation valve status.			•
Stainless steel control panel for corrosion resistance			•

All key system components meet NFPA 59A. Other design criteria, safety standards and additional safety equipment can be provided upon request.

What do you need to get started?

All that is needed from you to determine your system is:

- Flowrate
- End Usage Temperature
- End Usage Pressure