



OPTI-LNG-M™: Micro LNG Production Plants 5 to 15 Thousand Gallons per Day



New Fuel Demand

Demand and recognition for Liquefied Natural Gas (LNG) as a more sustainable and lower cost fuel continues to grow. In addition, the number of LNG applications within the transportation, heating, power generation and utility sectors is also increasing. LNG use as an alternative fuel allows for a reduction in carbon emissions and other emissions such as NOX, SOX and particulate matter which are harmful to air quality. In where there is little to no access to natural gas pipeline distribution networks, LNG distribution has enabled the creation of virtual pipelines through on road and maritime transportation of the fuel.

Smaller scale distributed LNG production has allowed producers to locate LNG supply within regions of high demand, thus reducing the cost of LNG distribution. With small scale production, there is now the possibility for stranded gas resource owners to monetize their gas assets which could not be connected to a natural gas pipeline network.

Features

- Compact, skidded single trailer design includes gas pretreatment and liquefaction
- Liquid nitrogen used for refrigeration, no rotating equipment
- On demand production combined with efficient turndown
- Dry nitrogen availability
- Plug and Play operation

Benefits

- Reduced maintenance costs and increased reliability
- Low power consumption
- Only use liquid nitrogen when producing LNG,
- Vaporized nitrogen can be used for purging, drying, cooling, instrument gas applications at the LNG plant site

Distributed Micro LNG Mobile Unit Production

Within the LNG industry a new trend has emerged for distributed LNG production: smaller plants built in regions where demand exists and will grow over time or regions where attractive sources of low cost gas are available. For the small plant capacities in the range of 5 to 15 thousand gallons per day, Linde now offers a new solution which leverages its own distributed refrigeration network of liquid nitrogen plants. OPTI-LNG-M is a highly compact, skidded and mobile plant design, which enables a lower capital means for production of LNG. OPTI-LNG-M fits on the back of a single 50ft trailer and includes gas pre-treatment and liquefaction equipment. Liquid nitrogen



Distributed Micro LNG Mobile Unit Production (continued)

is utilized as the sole source of refrigeration for the mobile plant. Linde's established network of liquid nitrogen supply plants enables the economic deployment of this technology. The unit's mobility enables short term deployment applications such as flare gas capture. It is also specifically targeted for offering LNG supply at CNG filling stations as well seeding LNG operations in regions where demand may be expected to grow over a number of years. The production capacity of OPTI-LNG-M is well suited for production of Bio LNG from various biogas sources such as landfill gas or biogas from anaerobic digesters at municipal waste, waste water and dairy treatment plants.

Design Parameters

Feature	US	Metric Units
LNG Capacity	5 to 15 kgpd 750 to 2200 lbs/hr	790 to 2370 l/hr 8 to 24 MTPD
Natural Gas Flow	0.4 to 1.2 MMSCFD	450 to 1350 Nm ³ /hr
Required Feed Gas Pressure	> 30 psig	> 2 Barg
LNG Temperature	-258 to -261°F (7 psig saturation)	-161 to -163 deg. °C
Plant Foot Print	25 x 60 ft	8m x 18m
Power Consumption	Less than 50 KW	

A Growing Number of Applications

- Natural Gas Pipeline Pressure Support
- Uninterrupted Supply During Pipeline Maintenance
- Back up Energy/Fuel Storage
- Oil and Gas Drilling/ Stimulation Operations
- Mining Operations
- Mobile Asphalt Plants
- Grain Drying
- On Road Heavy Transport
- Marine and Rail Fuel Supply
- Remote Communities Power/Heat Supply

For more information, call **1-844-44LINDE** or visit us online at www.lindeus.com.

Linde
10 Riverview Drive
Danbury, CT 06810
Phone 1.844.44LINDE (1.844.445.4633), Fax 1.800.772.9985; 716.879.2040
www.linde.com

The Linde logo, the Linde wordmark and OPTI-LNG-M are trademarks or registered trademarks of Linde plc or its affiliates. The information contained herein is offered for use by technically qualified personnel at their discretion and risk without warranty of any kind.

Copyright © 2020, Linde plc. 1/2020 P-40-4562