# LNG Bunkering Hoses

## Hose for LNG Bunkering

Liquefied Natural Gas (LNG) systems present special challenges during bunkering/fueling activities. LNG is typically transferred at - 162 degrees C (- 260 degrees F), well beyond the low-temperature limits of many hose materials. Hose Master offers specially designed corrugated metal hose assemblies that can handle the extreme temperatures and harsh environments encountered when transferring LNG. Whether shore-based systems or on-board components, Hose Master provides certified solutions for LNG bunkering operations.

During LNG transfer, ice builds up on the exterior of the assembly, which can damage bunkering hoses if improperly designed. Additionally, LNG is subject to phase changes (liquid to gas, gas to liquid), resulting in pressure and temperature variations that can cause less rugged hoses to deform or collapse. Our special braid construction and proprietary fabrication techniques ensure that the assembly can hold up under the toughest conditions.

#### **FEATURES:**

- 316L offers excellent low-temperature resistance at cryogenic temperatures well below -260° F
- Phase changes of LNG during transfer can result in elevated pressures or full vacuum conditions. Annular stainless steel corrugations provide tremendous hoop strength to resist both conditions
- Special braid construction helps prevent ice buildup from damaging the core
  hose and braid
- Fully-welded high quality fabrication: All manufacturing completed in an ISO compliant facility with welding certified to our ASME IX cryogenic specific weld procedures requiring fully purged welds
- ABS Product Type Approved: Complies with Steel Vessel Rules 2019, Part 5C, Chapter 8: Vessels Intended to Carry Liquefied Gases in Bulk (5C-8-5/11.7)
- Available conformance to ASTM F3312/F3312M 18 Standard Practice for Liquefied Natural Gas (LNG) Bunkering Hose Transfer Assembly
- Available conformance to Coast Guard Requirements

#### **BENEFITS**:

- Reliability: Proprietary manufacturing and fabrication methods ensure maximum service life in demanding environments
- **Safety:** 100% stainless steel construction offers the best resistance to extreme temperatures encountered during LNG transfer, and is fire-resistant
- Versatility: Able to accommodate vapor and liquid media phases because stainless steel construction eliminates media permeation issues
- **Durability:** Quality fabrication by ASME B&PV Code Section IX certified welders ensure positive fitting retention and provides maximum resistance to corrosion and metal fatigue
- **Ease of Use:** Superior flexibility combined with a compact end fitting configuration facilitates handling while connecting and disconnecting hoses, reducing worker fatigue

### Hose Master is a Service and Engineering Company

As the leading North American manufacturer of metal hose and expansion joints, Hose Master has grown through product innovation to define the industry standard. We do this by designing and building our own equipment to meet the most stringent requirements in an ever more demanding marketplace.

Our engineering expertise stems from a combination of long-standing industry field experience and 10% of our total workforce being devoted to research and development. But our primary driver to change and improve our organization has always been service to our customers.

By expanding our national presence to include three additional manufacturing satellites to support our extensive outside sales force, and increasing our fabricating footprint by employing and training our 100+ ASME IX welders, we are able to provide premium fabricating and sales service across the country.



Selecting the proper hose and assembly components is crucial. You must ensure each assembly is designed specifically for your intended purpose and operating conditions. Please consult our website or Inside Sales for assistance.