



EBARA International Corporation
Cryodynamics Division



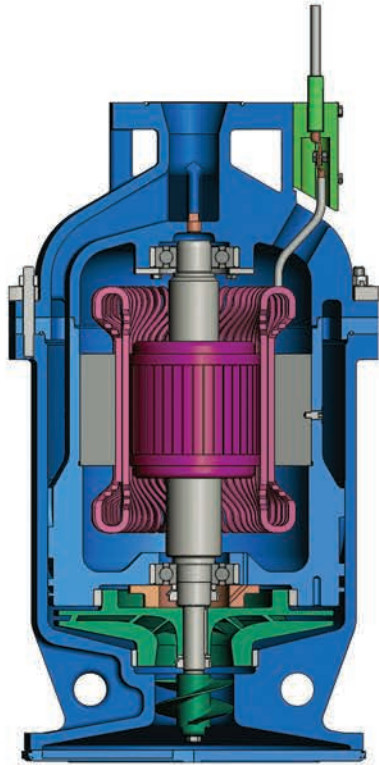
**Small-Scale LNG Equipment
for Cryogenic Applications**



CRYODYNAMICS

WWW.EBARAINTL.COM

SMALL SCALE EQUIPMENT



EBARA INTERNATIONAL CORPORATION (EIC) CRYODYNAMICS DIVISION

EIC, Cryodynamics Division is the premier manufacturer of Cryogenic Pumps and Expanders for the many segments and applications of the worldwide liquefied gas industry. With over 40 years of continuous engineering advancement, EIC is the only manufacturer of its kind with the knowledge and expertise to provide the most complete catalog of both standard and custom cryogenic equipment in the world.

EIC machines incorporate the highest caliber of engineering and technological advancement, delivering the most dependable and efficient equipment you can buy.

SMALL SCALE EQUIPMENT

The liquefaction, marine, land, transport and regasification industries are changing. Facility size, storage, distribution and transportation methodologies are all progressing, delivering power and energy to even the most unlikely, difficult-to-reach corners of the earth.

REGARDLESS OF WHERE YOU ARE IN THIS GLOBAL PIPELINE, EIC HAS THE PUMP OR EXPANDER TO SUPPORT YOUR SPECIFIC APPLICATION.

EIC EQUIPMENT FEATURES/OPTIONS

- **Submerged Induction Motors**
Submerged in oxygen-free cryogenic liquid, removing potential for ignition; no mechanical seals
- **EIC's Patented Thrust Equalizing Mechanism® (TEM®)**
Zero thrust load on the bearings, for longer life
- **Complete Electrical System Packages**
Variable Frequency Drive, Power Cables & Junction Boxes Included
- **Inducers**
Pumps operate at extremely low NPSH levels without cavitation
- **Performance Testing with Actual Field Operation Conditions**
We test every pump in LNG for absolute quality assurance
- **Vessel Options**
Single Wall or Vacuum Insulated
- **Condition Monitoring Including Cryogenic ICP® Accelerometers**
- **Skid Packaging**



MARINE

EIC Cryodynamics manufactures the most reliable marine equipment in the industry. With literally thousands of these machines installed, you are rest-assured that you are purchasing a proven, fail-safe machine.

- Ship Engine Fuel Supply Systems
- Small-Scale Marine Applications
- Skid-Mounted Canned Pump & Expander Designs for Floating Applications



MOBILE

A variety of new applications are being developed to transport gas to places where economical or technical constraints make traditional pipeline transportation not suitable.

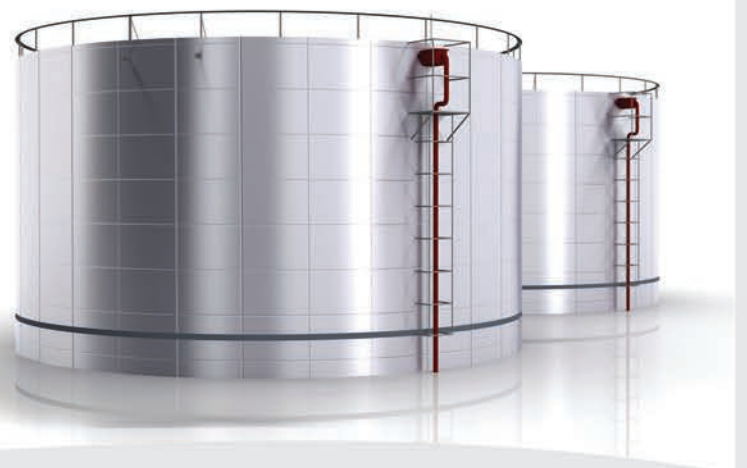
- Transportation Fuel Systems
(On board the truck/train/vehicle)
- Mobile Fueling Stations
(Fueling Station on wheels or a skid)



STORAGE

On land and at sea, both short and long-term storage options are necessary to deliver inventory-level flexibility to these new and quickly expanding distribution channels.

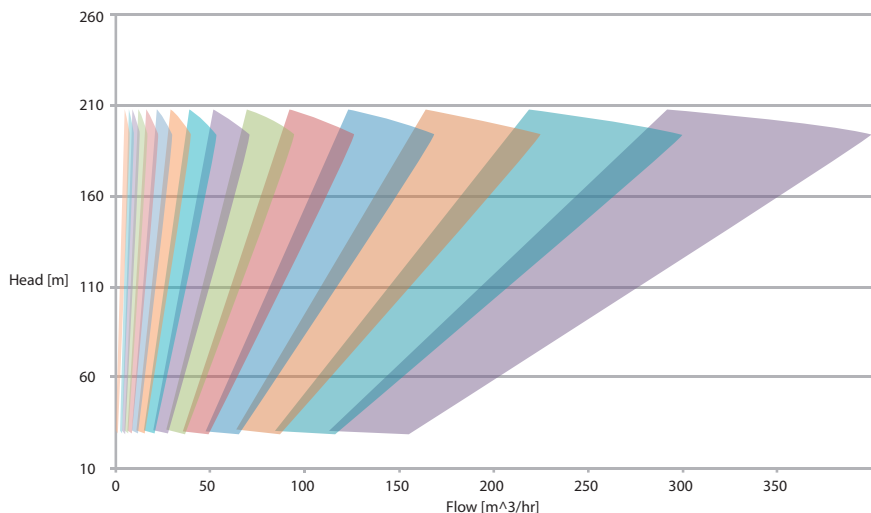
- Bunkering Facilities
- Fixed Fueling Stations
(Small, Land-based Stationary Refueling stations)
- Micro-Liquefaction
- Micro-Receiving





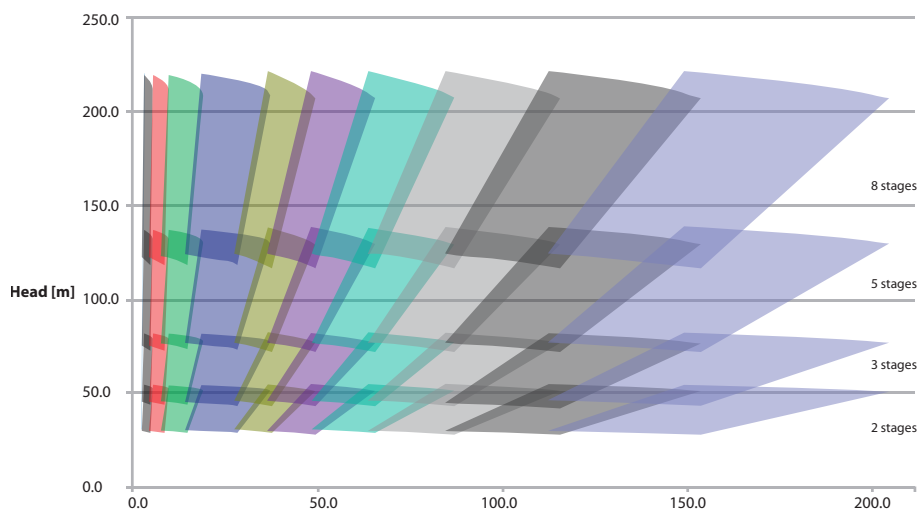
EQUIPMENT DUTY COVERAGE

Variable Speed Operation



- Variable speed operation allows operating at multiple duty points with one machine
- Operating speeds up to 10,000 RPM reduce pump size and increases efficiency
- VFD systems allow simple remote control and monitoring of pump operation

Fixed Speed Operation



- Wide coverage range for fixed speed applications
- Various stage configurations to optimize hydraulic efficiency
- 50 and 60 hz motors available



QUALITY

Ebara Cryodynamics has a world-class quality system that includes ISO 9001 and ISO/TS 29001:2010 certifications. In addition, every machine we manufacture undergoes real-life situational LNG testing on our one-of-a-kind cryogenic test stand, giving you solid quantitative data, demonstrating your machine’s capabilities, and providing peace of mind that you are receiving a product of the highest caliber pump-engineering in the world.

CONTACT US

North America, Southeast Asia & Caribbean
 Africa, Australia, Europe, India & Middle East
 China
 South America

+1 775-356-2796
 +44 1372-739-666
 +86 21 54260930
 +1 832-298-7797

sales@ebaraintl.com
 sales@ebaraintl.com
 cryo-sales-china@ebaraintl.com
 sales@ebaraintl.com

For a complete list of our global network of authorized agents, please visit us at: www.ebaraintl.com/contact/#agents