

# Wärtsilä LNGPac™

## PRODUCT LEAFLET



With LNG becoming increasingly viable and popular as a marine fuel, Wärtsilä continues to develop technical solutions that facilitate this trend. The latest Wärtsilä developments in this field involve an upgraded version of its LNGPac™ system.

Wärtsilä LNGPac™ is a complete fuel gas handling system for LNG fuelled ships and includes the bunkering station, LNG tank and related process equipment as well as the control and monitoring system. The LNG fuel system can be offered as a standalone product, as well as a part of a complete propulsion system. Wärtsilä can deliver LNG systems for propulsion and power generation for any applicable types of ship or engine.

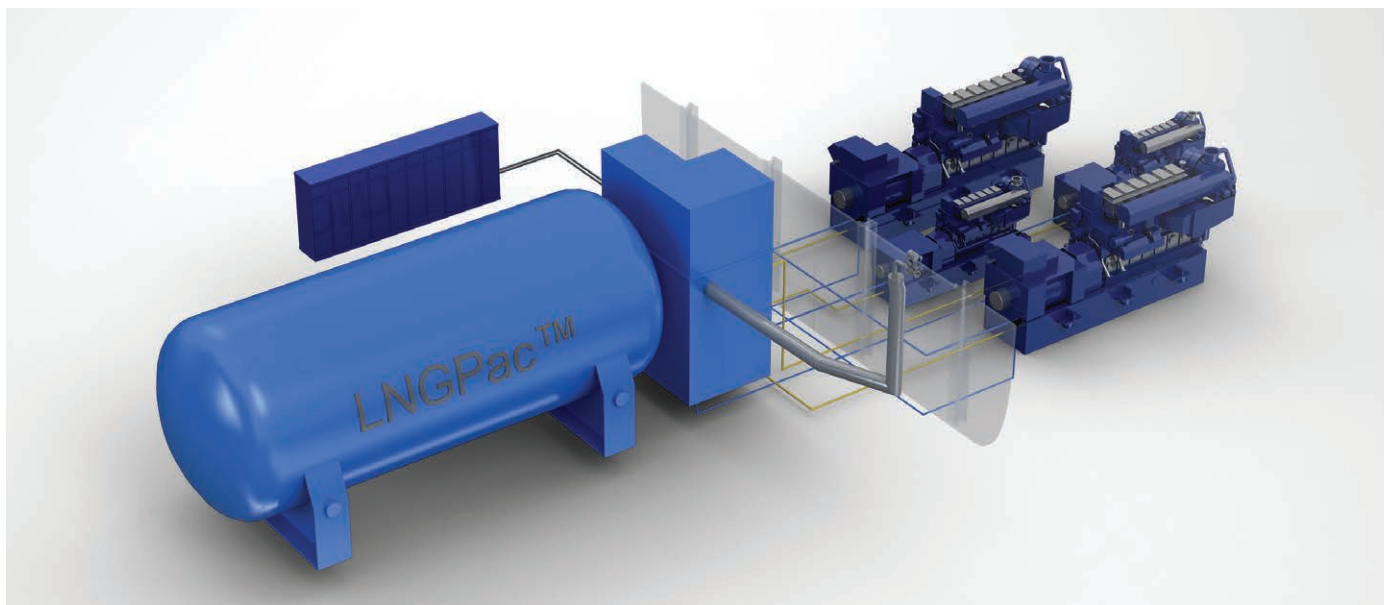
### COMPLETE SOLUTION

The Wärtsilä LNGPac™ system is based on an IMO type C LNG storage tank with either double walled vacuum or single walled polyurethane insulation. Bunkering takes place from the bunkering station to the LNG tank via an insulated pipe. All necessary process equipment is installed in a separate unit which can be either mounted directly to the LNG tank or placed remotely from the LNG tank. The main process equipment ensures correct gas temperature and pressure for the engines and other gas consumers. All operations of

the LNGPac™ are controlled by the automation system which provides excellent safety and control of the LNG system with a HMI adopted to customer needs. Control system that can be delivered Integrated with the Vessel Automation (IAS) and with Monitoring & Remote access to diagnostics (CBM) of Wärtsilä Life Cycle Service. Compliance with international safety requirement and operational standards specific to a gas processing facility. The LNGPac™ system can be customised to the needs of each project on a case to case basis. Dedicated engineering is conducted from the beginning of the project to match the specific operational requirements, safety and classification society requirements.

### KEY BENEFITS

- Efficient space utilisation
- Fewer interfaces
- Reduced CAPEX & OPEX
- Increased reliability
- Maximised LNG storage volume





Our innovative features have made the LNGPac™ a simple plug and play solution with the following benefits:

#### **INTEGRATED AIRLOCK**

The Airlock can be integrated with the LNGPac™. This reduces the floor foot print, increases safety aspects and makes the installation for the yard much easier.

#### **INTEGRATED CONTROL CABINET**

The Control Cabinet can be integrated with the LNGPac™. This innovation results in a dramatic reduction of interfaces since the electrical cabling from the LNGPac™ to the external switchboards can be reduced to only a few cables. LNGPac™ automation can be connected to the Wärtsilä engine digital ecosystem for global maintenance support during complete vessel life cycle. One supplier for automation design, project execution, commissioning work and services – reducing project risk and minimizing delays in communication.

#### **INTEGRATED GAS VALVE UNIT (GVU)**

The functional components of the GVV can be integrated as part of the LNGPac™. By combining the LNGPac™ and the GVV into a single system, considerable space can be saved. The solution will also save installation time and costs for the yard.

#### **REMOVAL OF THE HEATING MEDIA SKID**

A new evaporator type allows the engine LT-water to be directly connected to the LNGPac™ without the need of an intermediated heating media circuit. This leads to fewer interfaces and less installation work is required.

#### **SEAMLESS INTEGRATION OF WÄRTSILÄ SVANEHØJ ECA FUEL PUMP**

The LNGPac™ can be equipped with the Wärtsilä Svanehøj ECA fuel pump both for vacuum insulated tanks with the fuel pump placed in a cryosump integrated in the tank connection space or alternatively as a deepwell installation on single shell tanks.

#### **MAINTENANCE ORIENTED DESIGN**

LNGPac™ design focuses on enabling safe service and maintenance of all core equipment related to the operational functionality of LNG bunkering and gas consumption without any need for emptying the tank.

The Wärtsilä GVV-ED™  
(gas valve unit - enclosed design)

