



KONGSBERG

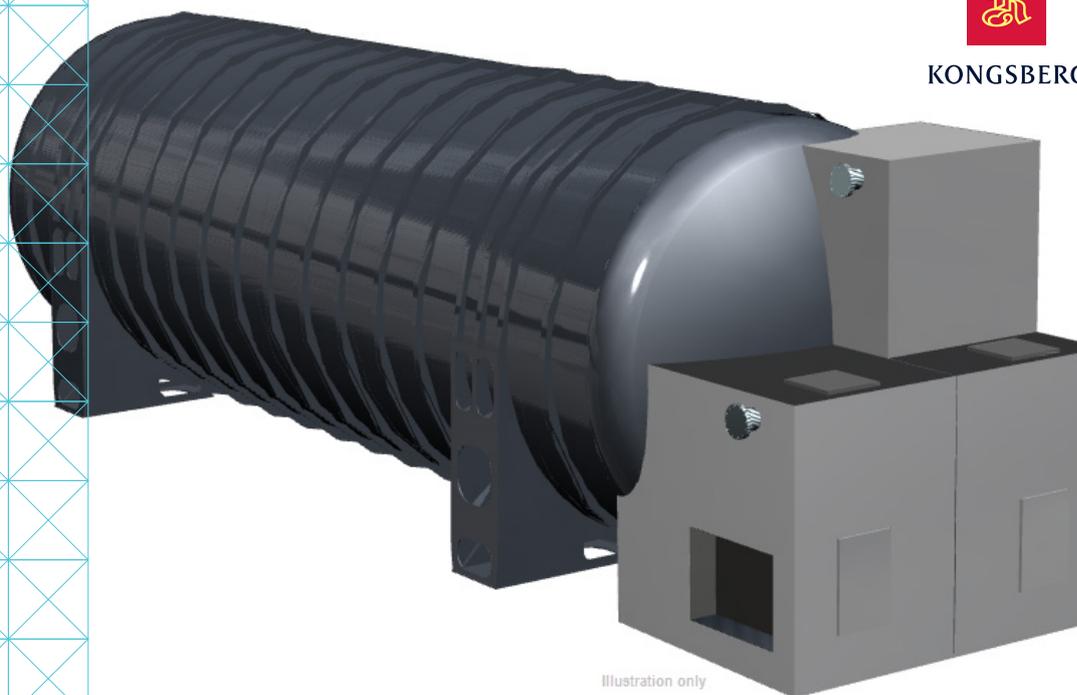


Illustration only

LNG FUEL GAS SUPPLY SYSTEM

LNG Fuel Gas Supply System

The KONGSBERG LNG Fuel Gas Supply System (LNG-FGSS) is a complete system comprising of an LNG storage tank, LNG Process System, Bunker Station and Control & Safety System. The system is designed to supply gas in the range of 6-16 barg to dual fuel and pure gas engines. The LNG-FGSS is optimised to minimise the footprint onboard. It has been manufactured in compliance with IMO IGF, Class rules and industrial standards.

The TCS is welded to the tank end and contains all the process equipment for gas processing and safety systems.

The LNG Tank is of IMO-C type insulated by vacuum and perlite. All interface piping is located in one end inside the TCS.

The Bunker Station is designed as a separate skid.

The process system and bunker station are supplied with valves and instrumentation, with interfaces to instrument air, nitrogen, water/glycol and vent mast.

FEATURES

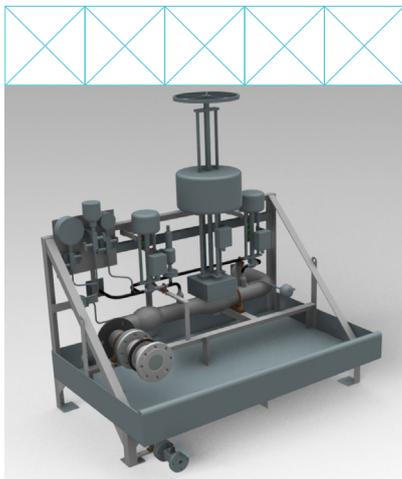
- Compact design
- Wide engine range
- Integrated into the ships automation and safety system
- 24/7 Global Customer Support.

STANDARD CONFIGURATION:

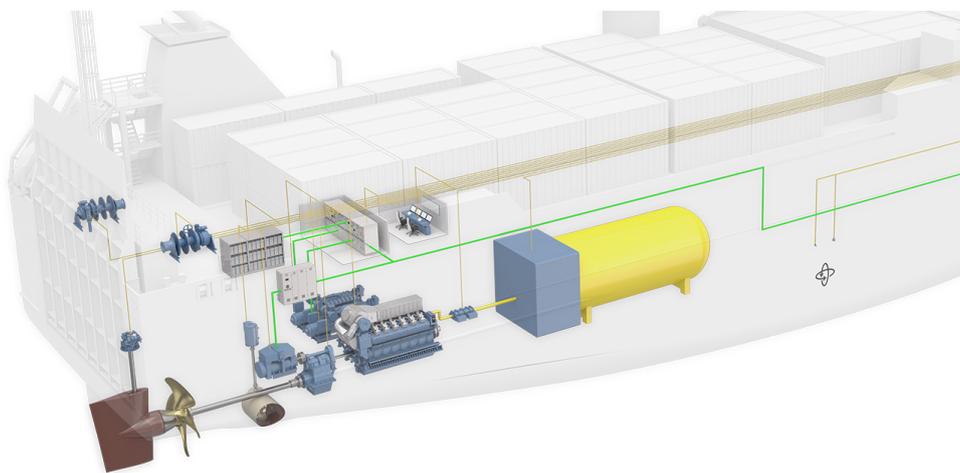
- LNG fuel pump (10-16 barg supply)
- Pressure buildup unit (9 barg supply)
- LNG vaporizer
- Gas superheater
- Supply line for one consumer
- Freeflow BOG handling system
- Piping system for bunkering, safety valves, overflow detection and level gauging
- Bunker function from shipside
- Control & Safety system
- All instrumentation pre-wired to on-skid junction box.

OPTIONAL:

- BOG handling skid
- Fuel preparation room
- Multiple gas supply lines with Master Gas Valves
- Vapor return
- Vapor crossover return
- Bunker cross over
- Gas supply crossover
- N2 generator
- Water/glycol pumps skid
- Second vent mast for TRV
- PUF insulation.



Bunkerstation with drip tray



Tank with LNG Fuel Gas Supply System integrated

TECHNICAL DATA FOR TANK CONNECTION SPACE

TYPE	TCS-100	TCS-200	TCS-300	TCS-600	TCS-1000	TCS-1900	TCS-3500	TCS-6000	TCS-9700
Engine size [kW]	700	1450	2150	4200	7100	12500	23000	39800	63600
LNG massflow [kg/h]	100	200	300	600	1000	1900	3500	6000	9700
Gas Supply Piping Size [DN] Design Reference	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150
Delivery gas pressure [barg]	6 - 16	6 - 16	6 - 16	6 - 16	6 - 16	6 - 16	6 - 16	6 - 16	6 - 16
Delivery gas temperature [C°]	0-60	0-60	0-60	0-60	0-60	0-60	0-60	0-60	0-60

TECHNICAL DATA FOR LNG IMO-C TYPE TANK

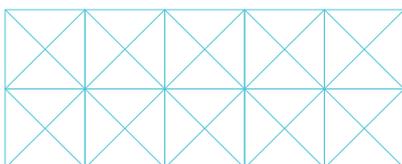
TYPE	ST-105	ST-185	ST-250	ST-300	ST-400
Tank gross volume (m3)	105	185	250	300	400
Design pressure (barg)	6-10	6-10	6-10	6-10	6-10
Insulation	Vacuum & Perlite				

TECHNICAL DATA FOR BUNKER STATION

TYPE	BS-65	BS-100	BS-150	BS-260	BS-400	BS-550
Filling rate (m3/h)	65	100	150	260	400	550
Pipe size (DN)	50	65	80	100	125	150
Design pressure (barg)	20	20	20	20	20	20

*Filling rate at liquid velocity of 8 m/s

Note: All technical data is from simulation, and is indicative numbers. Simulations are based on using LNG composition from IMO MSC.285(86)



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