



COMPRESSORS



# NEUMAN & ESSER

LNG BOG COMPRESSORS



# NEA LNG Compressor Application Range

• Offloading LNG with loading arms

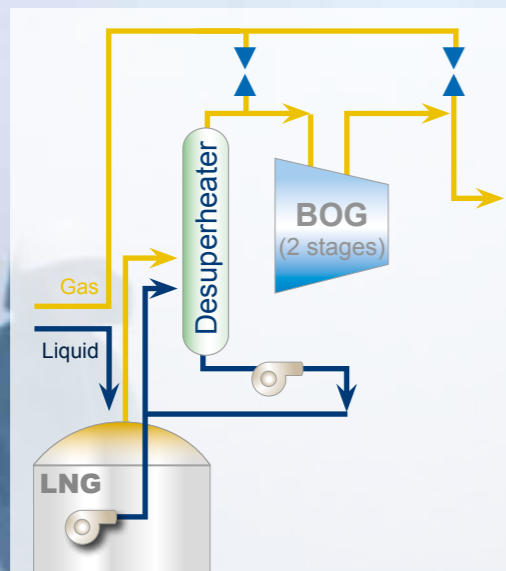
NEA LNG compressors cover the major applications for handling LNG as well as for offshore and onshore plants within the LNG chain.

In order to maintain the critical conditions within LNG tanks, our **LNG BOG compressors** are used to manage reliable and efficient boil-off of the LNG.

**LNG Send-out compressors** constantly boost the vaporised LNG up to 110 bar for all pipeline networks.

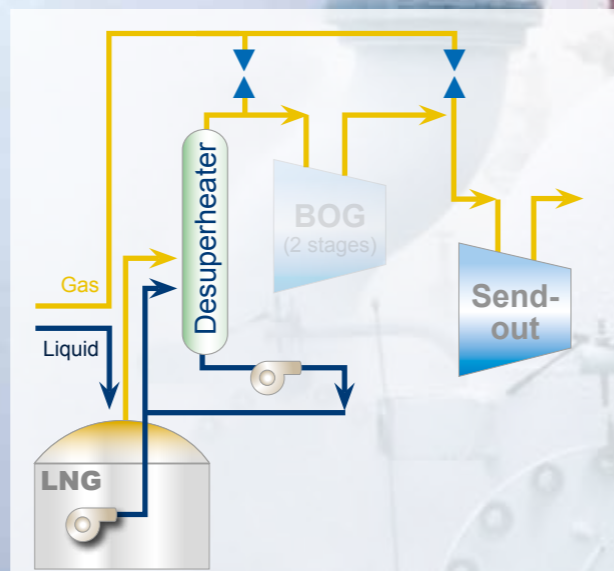
Our **LNG Fuelgas compressors** deliver the suction pressure for injecting LNG boil-off for 2-stroke and 4-stroke engines.

NEA LNG compressors provide the right solutions for the wide range of LNG applications.



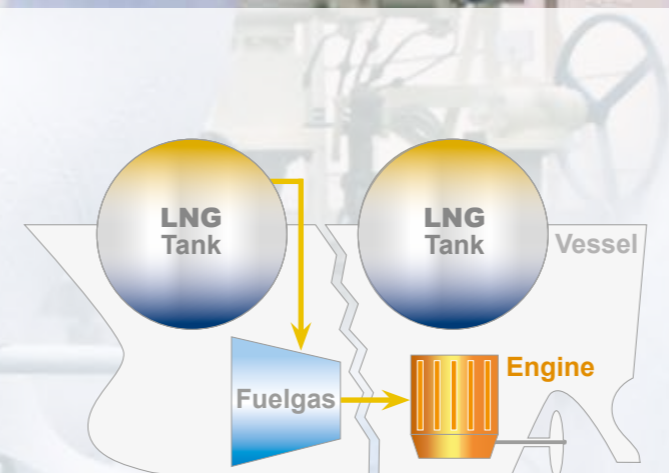
## LNG BOG Compressor

- BOG comes directly from any LNG-tank
- inlet pressure 1,02 - 1,3 bar(a) (= BOG pressure)
- outlet pressure up to 35 bar(a)
- inlet temperature range: -160° to -90°C



## LNG Send-out Compressor

- Sending-out the vaporised LNG to pipeline, onshore, etc.
- outlet pressure range: approx. 20 to 110 bar(a)
- also possible: inlet pressure = BOG pressure
- inlet temperature range: 20° to 40°C



## LNG Fuelgas Compressor

Compressing BOG for injection into cylinders of propulsion engine:

- 2-stroke engine: up to approx. 300 bar(a)
- 4-stroke engine: up to approx. 8 bar(a)
- inlet temperature range: approx. -162° to -90°C

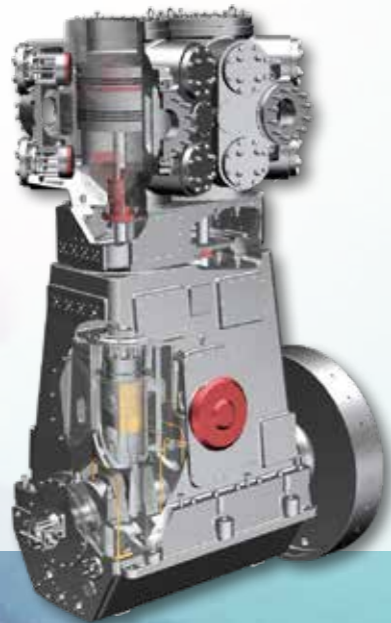


# BOG Compressor Range

interior view of a LNG tank  
(during construction works)

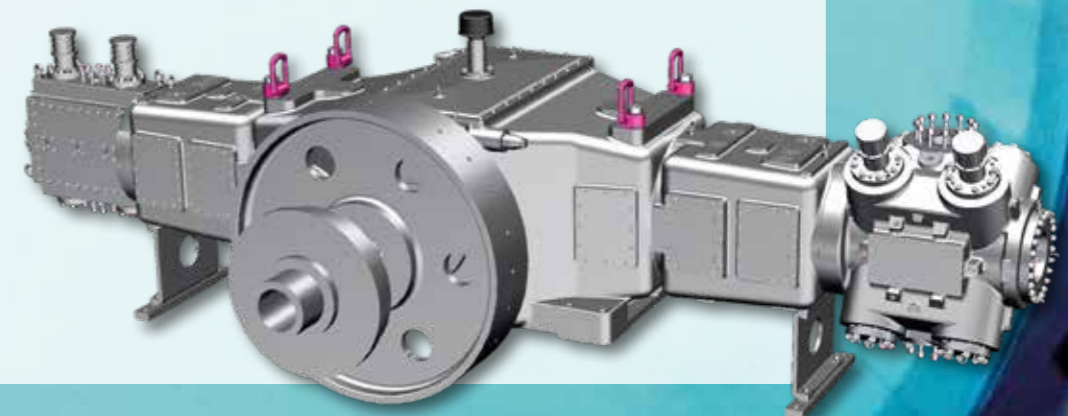
## NEA BOG - VERTICAL

- Non lube cylinders
- 2, 3, 4 crank
- Skid or foundation installation
- Outlet pressure up to 35 bar(a)
- Inlet temperature range:  
down to -160° C
- Zero emission available



## NEA BOG - HORIZONTAL

- 2, 4, 6 crank
- Skid or foundation installation
- Non lube cylinders
- Outlet pressure up to 35 bar(a)
- Inlet temperature range:  
down to -160° C
- Zero emission available





INSPIRATION  
INNOVATION  
DEDICATION

## NEA LNG Injection

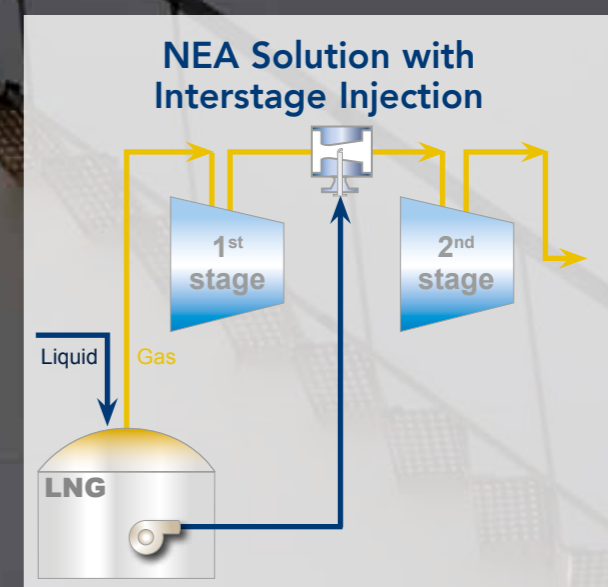
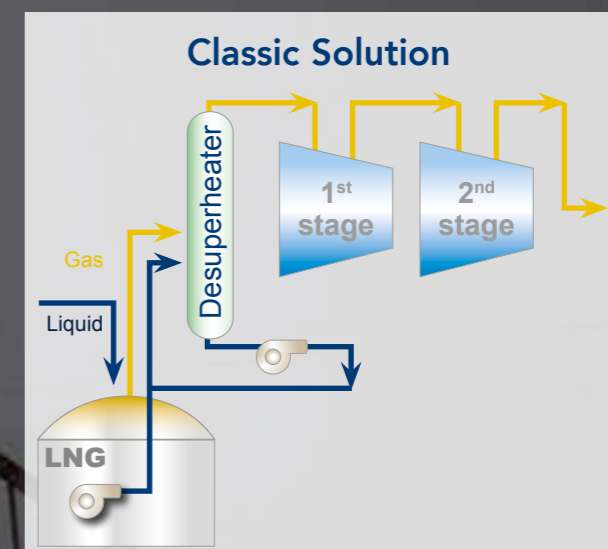
### NEA Interstage Interjection Solution

NEUMAN & ESSER's innovative concept to inject LNG after the first compressor stage is an optimized solution for both the start-up period and for continuous operation. Besides the major advantage of yielding a higher LNG mass flow whilst power consumption remains nearly constant due to higher volumetric efficiency, this NEA solution provides two further positive effects. The more stages the compressor is designed for, the greater the impact. This enables the design engineer to select a compressor frame size and gain better LNG yield at the end of the process. A second option is to keep the volume flow constant at a fixed level by deciding in favor of a smaller compressor frame size. Whatever is decided, the LNG design engineer achieves higher efficiency.

The positive effects in detail:

- LNG capacity is increased by 15% for a 2-stage BOG compressor
- LNG capacity is controlled by injected LNG flow
- Smaller compressor frame size can be selected
- Quick compressor start-up is allowed for, making pre-cooling of LNG before feeding it into the compressor pipe system redundant
- No heat exchanger for process gas is required
- Less investments in and maintenance of related system components are required

• Exterior partial view of LNG Tank





COMPRESSORS

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