

# COMPRESSOR DAY 2021 goes virtual

## Advantages of NEA reciprocating compressors in LNG BOG applications

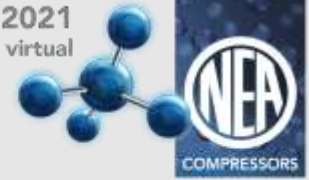
**Arnd Viets**  
Managing Director,  
NEUMAN & ESSER South East Asia



# IMPORT TERMINALS

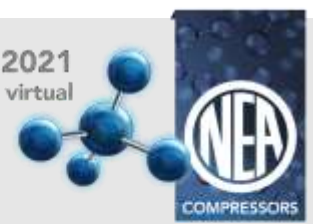
## ADVANTAGES OF NEA SOLUTIONS

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# AGENDA

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1

Type of construction

2

Flow control concepts

3

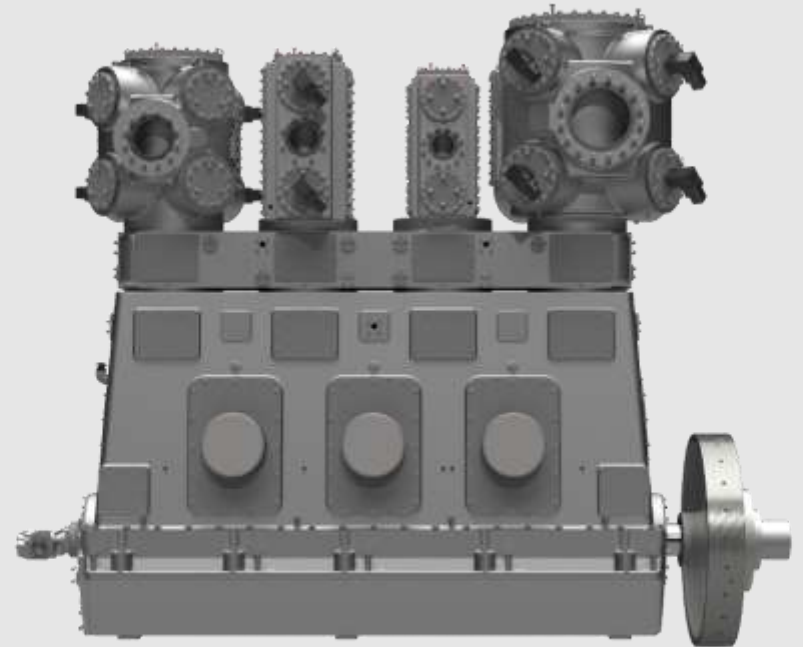
Start up sequence

# 1

## Type of construction

### Vertical Design

- Installation space
- Maintenance access of cylinders
- Less friction of wear parts
- Reciprocating weights can be balanced

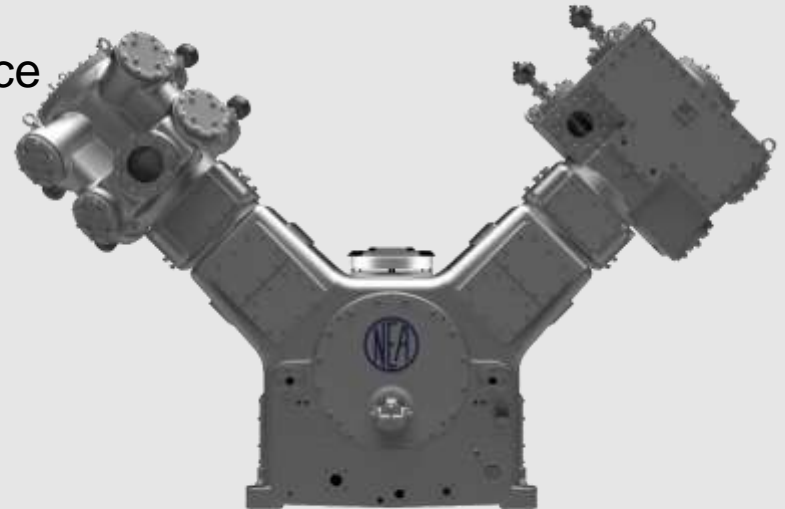


# 1

## Type of construction

### V-Type Design

- Installation space
- Belt drive design result in smaller plot space
- Maintenance access of cylinders
- Less friction of wear parts
- Balanced Massforces of 1st order

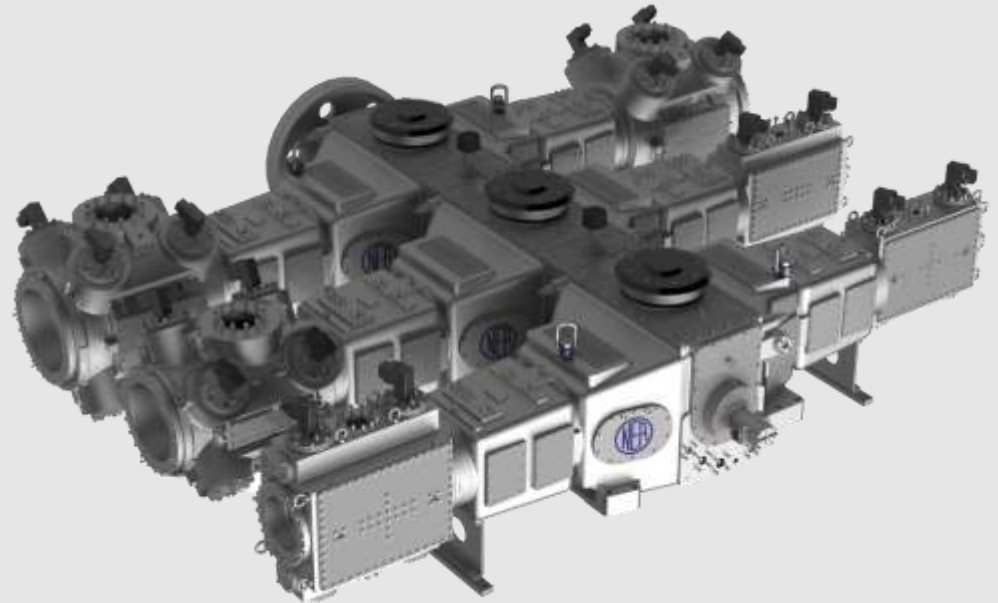


# 1

## Type of construction

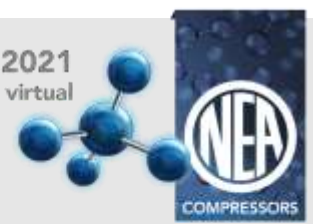
### Horizontal Design

- Installation space
- Maintenance access of cylinders
- Higher friction of wear parts
- Balanced mass forces



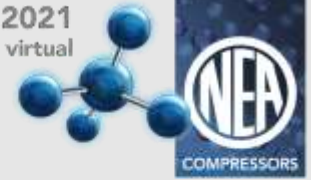
# AGENDA

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2

Flow control concepts



# 2

## Flow control concepts

### Stepless control-speed

**Operation: Truck trailer filling as part of a virtual pipeline from LNG storage**

#### Configuration:

- 2TV1
- Non lube
- Gas tight
- 800 Nm<sup>3</sup>/h
- Inlet T: -150°C
- Inlet p: 1.2 bar a
- Outlet p: 7 bar a
- 740 - 370 rpm
- Power 36 kW





2

## Flow control concepts

### Stepwise control

Operation: Handling of ship unloading & supply to 2<sup>nd</sup> compressor set

#### Configuration:

- 2TZL130
- Non lube
- 3,800 Nm<sup>3</sup>/h
- Inlet T: -150°C
- Inlet p: 1.2 bar a
- Outlet p: 10 bar a
- 392 rpm
- Power: 300 kW



2

## Flow control concepts

### Stepless control

**Operation: Handling of ship unloading & supply gas to power plant**

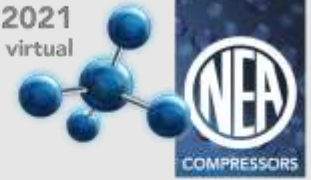
Configuration:

- 3TVS300
- Non lube
- Gas tight
- 9600 Nm<sup>3</sup>/h
- Inlet T: -140°C
- Inlet p: 1.2 bar a
- Outlet p: 34 bar a
- 424 rpm
- Power: 1,300 kW



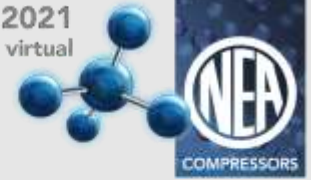
# AGENDA

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3

Start up solutions



3

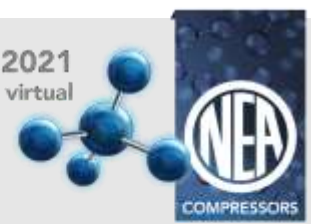
## Start up solutions

### Start up sequence

Start up  
signal

Preparation  
for start up





3

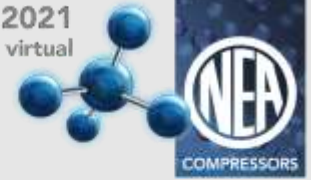
Start up solutions

Start up sequence

Compressor  
at 0% load

Pressurized  
gas at suction





3

## Start up solutions

### Start up sequence

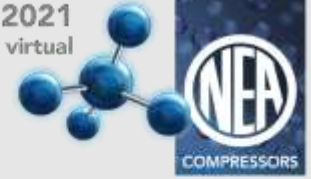


Load  
operation  
(20-40 min)

Capacity  
control  
enabled

Thank you very much for attention!

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AGILE.  
SOLUTION.  
EXPERTS.

**NEUMAN & ESSER GROUP**

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