

WE'RE TAKING IT HIGHER

# Konecranes Noell Hybrid Straddle Carrier NSC EHY



# Taking straddle carrier operations higher... by reducing CO<sub>2</sub> without affecting performance

Konecranes Noell Straddle Carriers are renowned for their performance, reliability and eco-efficiency, both manually operated and automated. We are pleased to introduce the Konecranes Noell Straddle Carrier NSC EHY, a diesel-battery-hybrid machine that is the next step in our endless quest for better eco-efficiency. In recent years battery technology has improved greatly while becoming more and more economical.

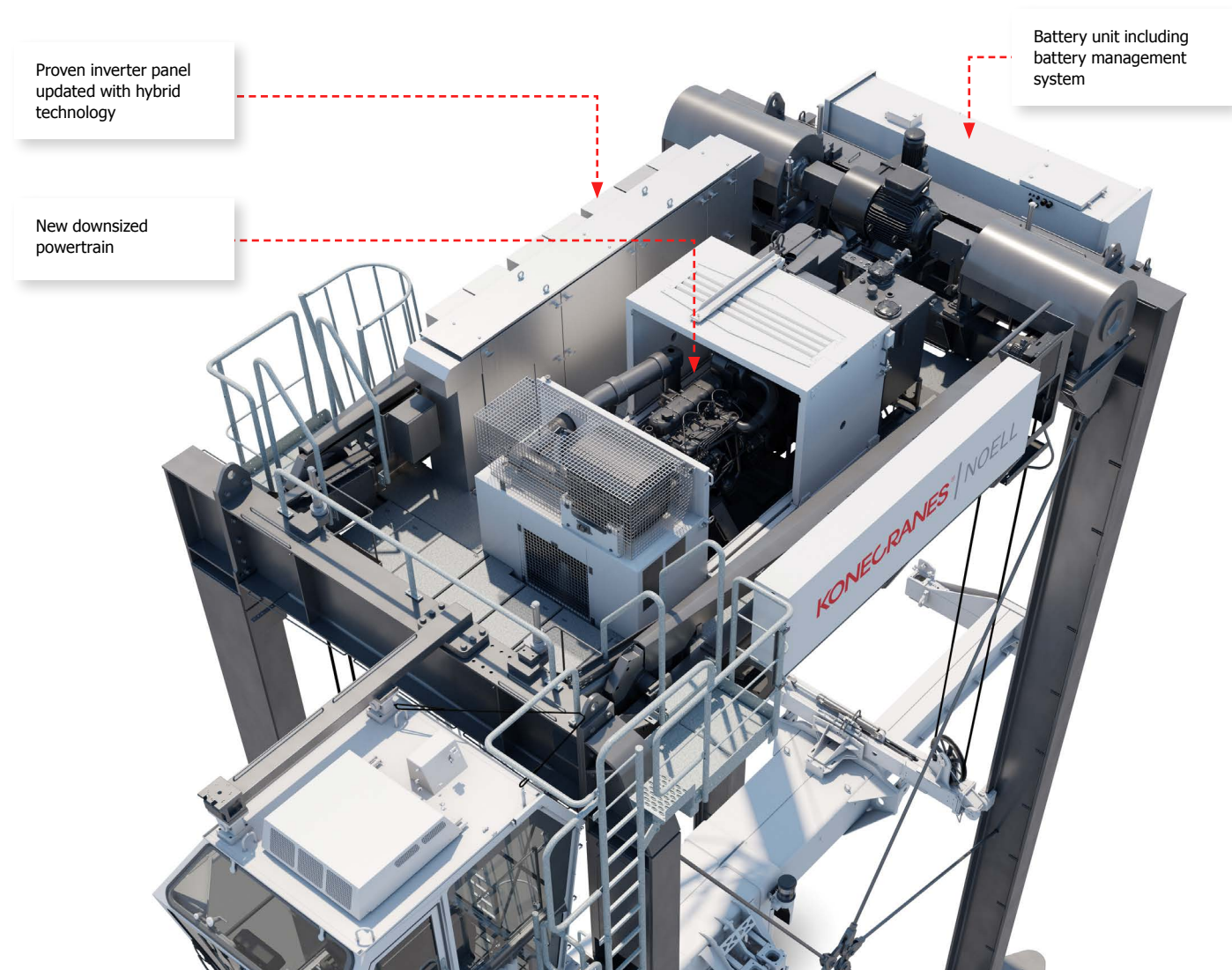
The NSC EHY straddle carrier is **Powered by Ecolifting**, Konecranes' vision to minimize the footprint and improve the handprint of equipment

for container terminals. From eco-optimizing diesel drives, to hybridization and fully-electrified fleets, we will continue to do more with less.

The NSC EHY straddle carrier, like all Konecranes Noell straddle carriers, is made in our factory in Würzburg, Germany.

The battery-hybrid technology is available for all straddle and sprinter carriers, independent of lifting capacity and stacking height.

TOS available from  
**T | B | A**<sup>®</sup>  
Simplifying your operation



## Uncompromised performance

The diesel-battery-hybrid Konecranes Noell Straddle Carrier offers the same performance as our earlier generations of diesel-electric straddle carrier under high-performance terminal operating conditions. There are no container handling limitations and no need for special operator training.

## Fuel savings

A VDMA\* test cycle was carried out for a 1-over-3 diesel-battery-hybrid Konecranes Noell Straddle Carrier with the verified fuel consumption measurements at right:

Thanks to its lower fuel consumption, the diesel-battery-hybrid Konecranes Noell Straddle Carrier can operate for approximately 100 hours before refueling, increasing operating time and productivity.

\*VDMA (Verband Deutscher Maschinen- und Anlagenbau, Mechanical Engineering Industry Association)

## Reduction of CO<sub>2</sub> emissions

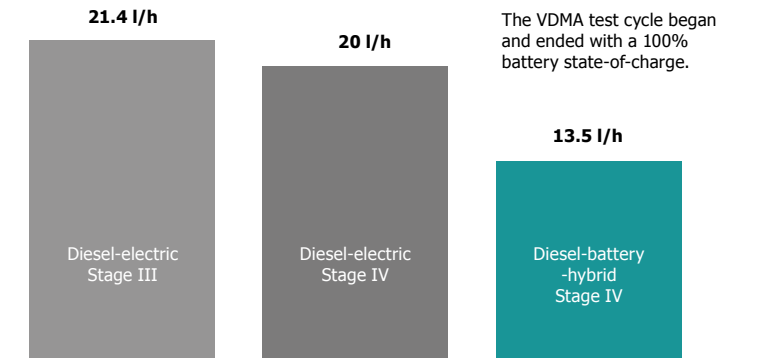
Taking the preceding VDMA fuel consumption test results and applying them on the basis of a typical container terminal's operating intensity of 6000 operating hours/year, we get the results at right. The diesel-battery-hybrid Konecranes Noell Straddle Carrier offers the same performance as our earlier generations of diesel-electric straddle carrier under high-performance terminal operating conditions.

If the diesel-battery-hybrid Konecranes Noell Straddle Carrier is compared to a diesel-electric Konecranes Noell Straddle Carrier with a CAT C13 engine the CO<sub>2</sub> reduction amounts to approximately 1060 tons of CO<sub>2</sub> over the nominal lifetime.

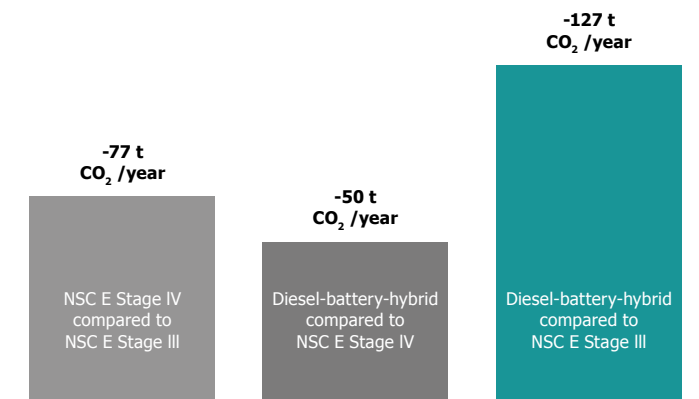
## Built on a proven platform design

The diesel-battery-hybrid Konecranes Noell Straddle Carrier is built on the platform design of the diesel-electric Konecranes Noell Straddle Carrier, introduced in 2001, with over 1800 units working around the world.

### Fuel savings up to 35%



### Annual CO<sub>2</sub> reduction, 6000 operating hours/year 127 tons



Over 50,000 operating hours, the diesel-battery-hybrid Konecranes Noell Straddle Carrier produces approximately 415 tons less CO<sub>2</sub> than diesel-electric Konecranes Noell Straddle Carriers with an earlier generation engine.

### Technical highlights at a glance

- Energy recuperation from gantry motors and hoist motor
- New downsized powertrain/genset, enhanced engine power management for more economical energy use
- Primary power source is the downsized powertrain, peak demands are supplied by the battery, which optimizes system efficiency and maximizes battery lifetime
- Li-ion battery instead of brake resistors, no additional brake resistors needed
- Fully integrated battery management system minimizes fuel consumption and maximizes battery life
- Simple drive design with intelligent DC bus feed and battery directly connected to DC bus
- Battery with temperature management system lengthens battery lifetime
- Optimized sizing of drive components based on data from high-performance terminals
- Proven inverter panel updated with hybrid technology
- Relevant drive info and comprehensive battery diagnostics on operator's display
- Safety features as standard covering the whole machine including battery unit

**Konecranes is a world-leading group of Lifting Businesses™, serving a broad range of customers, including manufacturing and process industries, shipyards, ports and terminals. Konecranes provides productivity enhancing lifting solutions as well as services for lifting equipment of all makes. In 2019, Group sales totaled EUR 3.33 billion. Including MHE-Demag, the Group has around 18,000 employees in 50 countries. Konecranes shares are listed on the Nasdaq Helsinki (symbol: KCR).**

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**From the inventor of the straddle carrier for container handling**

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