

FEATURES AND TECHNICAL INFORMATION

# Konecranes Noell Straddle Carriers

**WITH ALL POWER OPTIONS!**

- Diesel-electric
- Hybrid
- Battery



# Konecranes Noell Straddle Carrier at a glance

## Well-built all-rounder

Konecranes Noell Straddle Carriers are designed according to the conditions prevailing in the terminal. Easy to maneuver with high travel speeds, they are lightweight but adequately rigid with a durable steel structure and low center of gravity. They provide high container handling productivity and enhanced safety and convenience to the driver.

### CABIN

- Large windows for good all-round visibility
- Ergonomically designed, adjustable driver seat and controls
- Optional electrically rotating driver's seat
- Intuitive GUIs
- Optional second seat for training instructor

### KONECRANES NOELL SPREADERS

- Single-lift, twin-lift and separating twin-lift
- Precise & fast thanks to smart sensor system and laser technology
- Soft landing function, automatic set-down function and low-maintenance guides
- Automatic movement to preset positions (20', 30', 40')
- Telescoping cylinders hydraulically locked in position: patented solution, no locking pins

### SPREADER TWISTLOCKS

- Vertically suspended, floating ISO twistlocks
- Patented, modular twistlock mounting & locking
- Identical design across all twistlock units: reduced spare part requirements
- Landing pins electronically monitored for safe container handling
- Long lifetime: strong resistance to material fatigue

### POWER OPTIONS

#### Diesel-electric

- High-performance, low consumption diesel genset
- Available in emission levels Stage IIIA & Stage V

#### Hybrid

- Built on the design of the diesel-electric straddle carrier
- Downsized powertrain/genset
- State-of-the-art inverter panel
- Battery unit instead of brake resistors, complete recuperation

#### Battery

- High-capacity battery modules for maximum continuous operating time
- Easy automatic charging from straddle parking position, through motorized charging connector

### MACHINERY PLATFORM, EASY ACCESS

- Easy access via walkway to engine, generator, hydraulics, electrical panels, hoisting motor/winches
- Powertrain can be fitted with a sound-dampening sliding cover: still easy access

### HOISTING SYSTEM

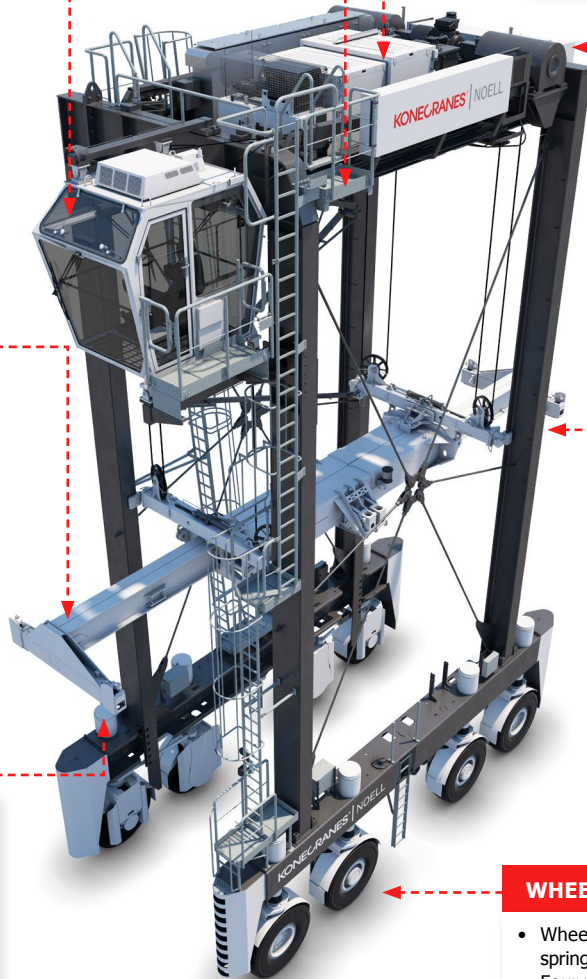
- Maximum lifting capacity 60t
- Rope drums driven and synchronized by centrally positioned electric motor
- Maintenance-free, three-phase AC motor
- Simple, clearly arranged and protected rope guides
- Small number of rope pulleys for low rope wear
- Load detection at rope ends

### STEEL STRUCTURE

- Sleek, lightweight with diagonal braces giving optimized visibility
- Optimum balance of flexibility and long life
- Sill beam tough yet lightweight, made from a single piece of sheet metal to reduce welding
- Yoke beam guided by low-maintenance sliding pads in the portal
- Power and hydraulic supply to spreader provided via scissor arm or cable chain

### WHEEL SUSPENSION AND DRIVES

- Wheel suspension with maintenance-free spring system
- Four wheels are driven: direct drive via wheel hub motors
- Maintenance-free three-phase AC motors and wet disk brakes
- Wheels individually steered by central steering cylinders and rods
- Electric braking occurs first; then joined by hydraulic braking if greater braking force is required



## Spotlight:

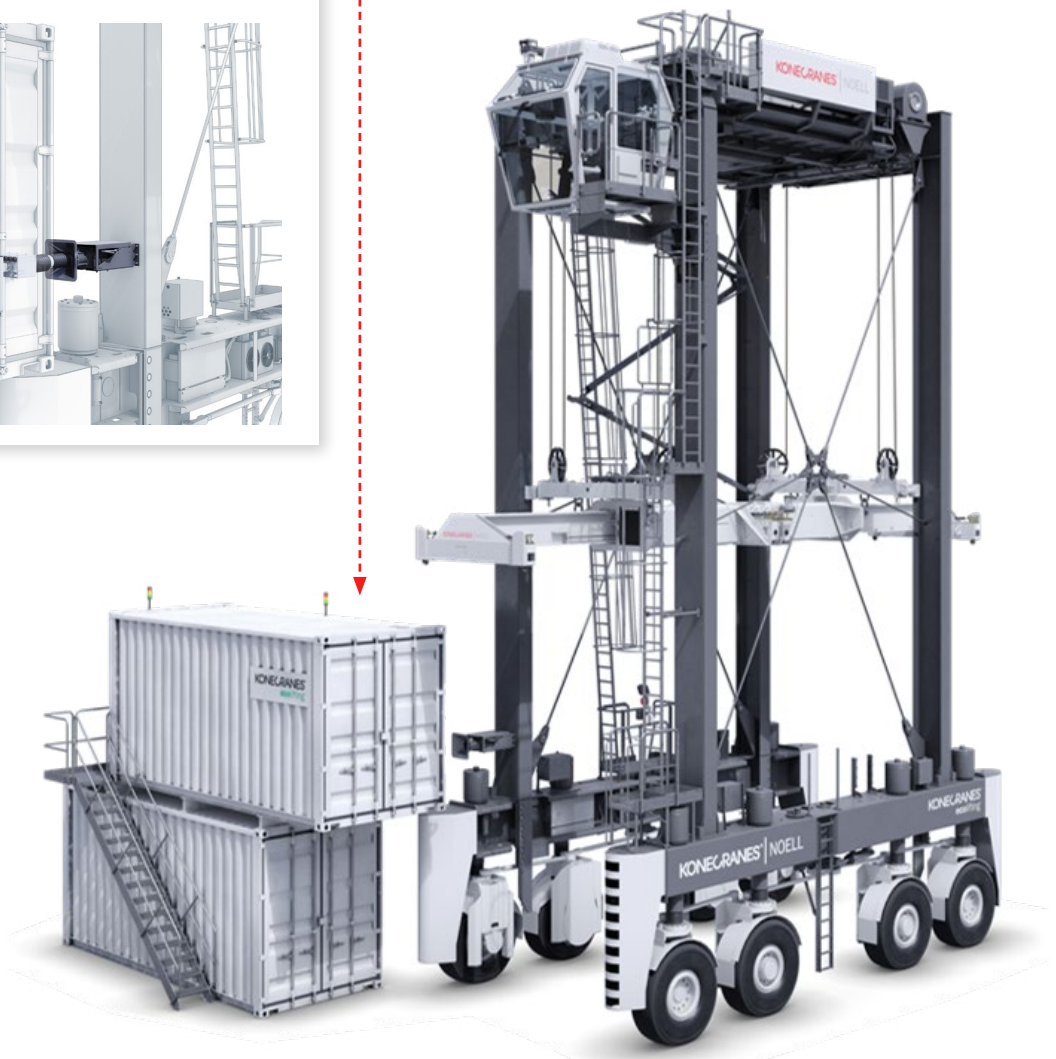
# Battery power

**Konecranes Noell Straddle Carriers are available with a battery power option. If you're interested in fully electric container handling, this option deserves your serious consideration. It greatly reduces noise emissions and gives zero local CO<sub>2</sub> emissions.**

Brownfield container terminals can adopt battery operation without major yard adjustments. The charging station is unobtrusive and connected to the terminal mains. It can be placed almost anywhere but close to a maintenance or parking area is recommended. Charging strategy will depend on your work cycles and work shift arrangements.

### CHARGING STATION

Docking at the charging station is a simple matter of driving the straddle carrier to the station, where the charging connection is made automatically.





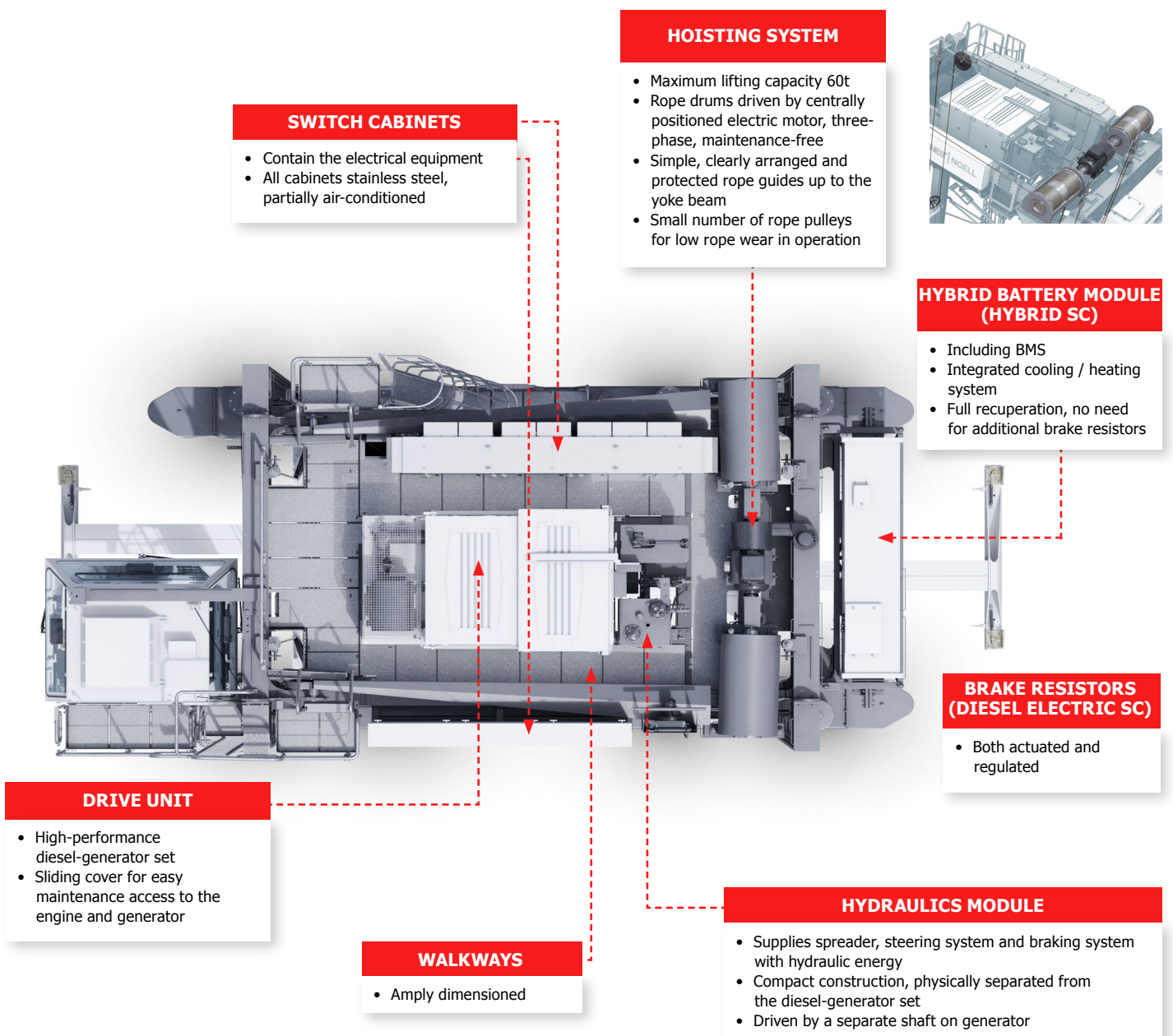
## Machinery platform

# Easy to access

The machinery platform of the Konecranes Noell Straddle Carrier is clearly structured. Its components are arranged for easy access in order to make service and maintenance quick and convenient. The use of durable components ensures long service intervals, which significantly contributes to the high availability of Konecranes Noell Straddle Carriers.

The diesel generator set is positioned at the center of the machinery platform. It can be fitted with a compartment to reduce noise emissions.

The hoisting system of Konecranes Noell Straddle Carriers is positioned at the edge of the machinery platform to save space. It consists of a centrally positioned electric motor and two synchronized rope drums.



# Konecranes Noell Straddle Carriers

## Hoisting unit

|   |                                    | 3-high     | 4-high     |
|---|------------------------------------|------------|------------|
| Nominal speeds  | Lift/lower with empty / <40 t load | 24.0 m/min | 24.0 m/min |
|   | Lift/lower with 40 t load          | 20.0 m/min | 20.0 m/min |
|   | Lift/lower with 50 t twin load*    | 16.0 m/min | 16.0 m/min |
| Lifting and driving can be done simultaneously to increase the number of cycles.<br>The electronic control prevents overloading of the diesel engine and ensures the distribution of load between the hoist unit and the chassis. |                                    |            |            |
| Side shift/swing angle  |                                    | +/-300 mm  | +/-300 mm  |
|   |                                    | +/-6°      | +/-6°      |

\* Data based on operation with twin spreader.

## Chassis

|                           |                         | 3-high           | 4-high           |
|---------------------------|-------------------------|------------------|------------------|
| Nominal speeds            | With load               | Approx. 30 km/h* | Approx. 24 km/h* |
|                           | Without load            | Approx. 30 km/h* | Approx. 24 km/h* |
| Acceleration times 0–50 m | Load and lift           | Approx. 12 s*    | Approx. 12 s*    |
|                           | Without load            | Approx. 15 s*    | Approx. 15 s*    |
|                           | With load               | Approx. 25 s*    | Approx. 25 s*    |
| Climbing ability          | With / without load     | Approx. 6 %      | Approx. 6 %      |
| Turning radius            | Inside                  | Approx. 3.6 m    | Approx. 3.6 m    |
|                           | Outside (40' container) | Approx. 9.3 m    | Approx. 9.3 m    |
| Fuel tank                 | Total capacity of tank  | 750/1500 liters  | 750/1500 liters  |

\* With engine at normal operating temperature, head wind not exceeding 3 bft, and container in traveling position.

### Remark:

Straddle carrier performance data relate to a nominal weight of 30.5 t which corresponds to the permissible gross weight of an ISO 40' container.

# Konecranes Noell Straddle Carriers

## Dimensions and weight

|  | 3-high          | 4-high          |
|--|-----------------|-----------------|
| Lifting height under twistlocks [H2]     | 9.1 m           | 12.0 m          |
| Lowest position BE (below edge) spreader | 0.3 m           | 0.3 m           |
| Overall height (unloaded) [H1]           | 12.5 m          | 15.7 m          |
| Overall length including ram buffer [L3] | 10.3 m          | 10.3 m          |
| Overall width (with front cab) [W2]      | 4.87 m          | 4.87 m          |
| Clearance sill beam [W1]                 | 3.47 m          | 3.47 m          |
| Wheel base (inside wheels) [L1]          | 3.7 m           | 3.7 m           |
| Wheel base (outside wheels) [L2]         | 7.7 m           | 7.7 m           |
| Inside turning radius [R1]               | 3.6 m           | 3.6 m           |
| Outside turning radius [R2]              | 9.3 m           | 9.3 m           |
| Total weight, ready to operate*          | 69 t            | 72 t            |
| <b>Konecranes Noell Spreader</b>         |                 |                 |
| Spreader, single-lift [S1]               | 20 / 30 / 40 ft | 20 / 30 / 40 ft |
| Spreader, twin-lift [S1]                 | 2 x 20 ft       | 2 x 20 ft       |
| Spreader, side shift [S2]                | +/- 300 mm      | +/- 300 mm      |
| Spreader, swivel angle [S3]              | +/- 6 °         | +/- 6 °         |

\* Based on a diesel-electric or hybrid straddle carrier with standard equipment, including single spreader

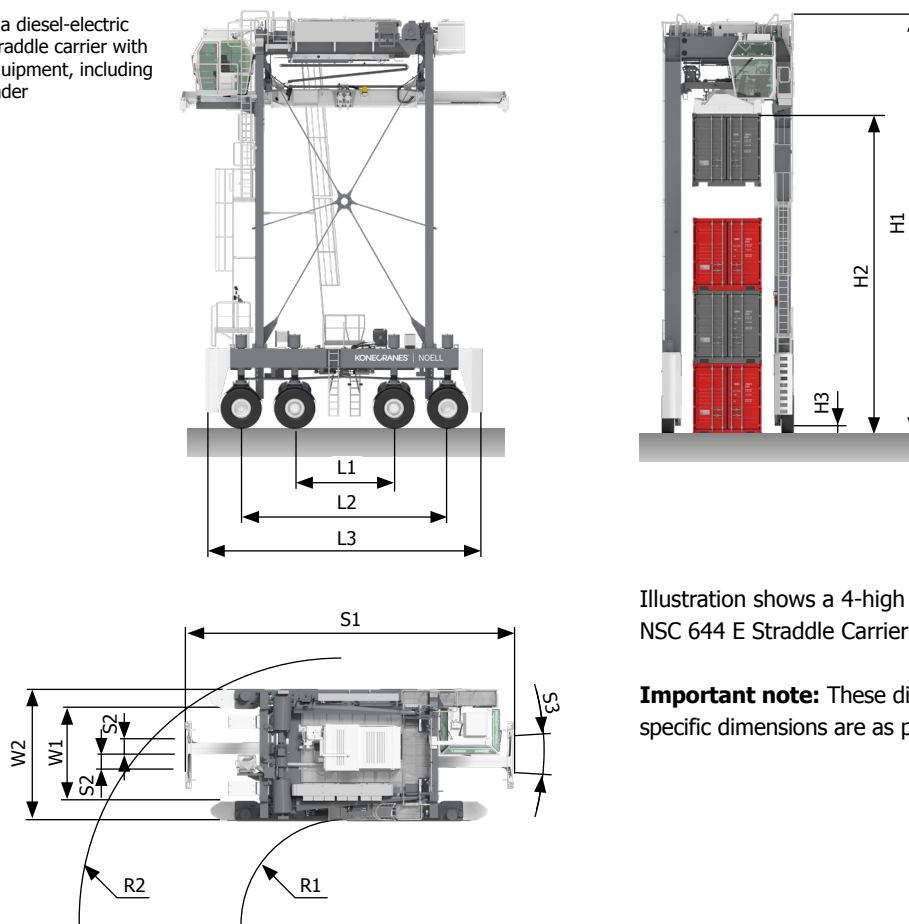


Illustration shows a 4-high Konecranes Noell NSC 644 E Straddle Carrier

**Important note:** These dimensions are examples only, specific dimensions are as per project / customer requirements



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