

8-11 TONS

# Empty Container Handlers for Your World



The environments, climate challenges, drivers' needs, lifting loads and heights of every lift truck driver are always different and special. By listening and observing carefully to learn about your world, it's possible to design and deliver the most ideal lift truck for your operation.

### YOUR WORLD

The machines from Konecranes are very reliable and of good quality, which is very important for us living in the middle of nowhere here in the Faroe Islands. Only the best of the best is useful for us. And if necessary, we can always call for help, day and night and get the support we need."

**Johann Behrens**  
**Fleet Manager**  
**Faroe Ship, Faroe Islands**



## Built for your world

Here's a secret we know and understand: we all like to talk about ourselves, but the world that matters most to you is your world, not ours. We at Konecranes Lift Trucks listen to, learn from, design for, deliver to and support you to help you succeed in the unique world where you work.

### Continuous improvement

Our mission is to build and customize the hardest-working, longest-lasting, heavy-duty lift trucks for our customers' worlds. This has been our way ever since we made our very first lift truck in 1959 for a very special customer, and our customers still provide the most important input for the continuous improvement of our lift trucks.

### Quality in every aspect

Excellence is a cornerstone of the Konecranes product design process and a hallmark of the Konecranes brand.

Excellence shows in our heavy-duty durability, modern cabin and all the little things that makes up the efficient, high-quality lift trucks that we proudly produce every day.

Every lift truck goes through rigorous tests before delivery to check that your equipment always meets the highest possible product standards.



## First in safety

When working with material handling and heavy loads, you want to minimize safety risks to help maintain the well-being of your employees. You can do this by using our new and improved preventive safety measures.

### YOUR WORLD

Innovations like Work Zone geofencing and the Konecranes weight verification system are not important because they are cutting-edge, but because they make your work environment safer. They protect your drivers and ground staff.

## Safety-first culture

We think that the pursuit of safety never stops. It's not about built-in safety features alone – it's about preventive maintenance, training and building a safety-first working culture. Konecranes is often the first to introduce new technology that improves safety.

Safety is in everything we do, all the way from R&D to all the customization possibilities and technological innovations we offer. Depending on your particular operations, we can meet your specific needs with a wide variety of preventive solutions to maximize the safety of your personnel.

Konecranes digital services has received ISO/IEC 27001:2013 certification for information security management. Secure software development practices ensure security risks are considered in each phase of the software development lifecycle. This helps developers to build highly secure applications and ensure that risks and possible vulnerabilities are captured in the development, and not in the production.

### Technology for safe operations

Our overload detection system helps prevent accidents by sending data on the use of each of your empty container handlers for checking and analysis.

At Konecranes, the TRUCONNECT® Remote Monitoring service receives that data and can send alert notifications of overloads and overrides to designated personnel at your own facility.

Container weighing detects dangerous overweight conditions with accurate weight measurement to meet all local requirements for maritime and port safety.

### Work Zone for safer operations

Developed by Konecranes, Work Zone is a suite of location-based services designed to improve the safety of lift truck operations, especially in busy, high-traffic environments.

Work Zone uses GPS technology to create geofencing – invisible fences around real-world areas. You can remotely control lift trucks and their height limitations, speed limits and other safety matters inside computer-defined areas – virtual fences. Drivers can see selected alerts on their operating display and you can also send the alerts by SMS or email to chosen recipients.





## Customization

Every operation must meet different challenges. Lift trucks need to be able to function anywhere from the blazing deserts of the Sahara to the frozen wastes of the Arctic. With optimal performance and the right combination of features and attachments, Konecranes empty container handlers can help you maximize your operational efficiency.

### YOUR WORLD

Every industry has its own special requirements. Our empty container handlers must be customizable to your particular business, so you don't have to tailor your operations to the limitations of your new vehicles.

## Everything is possible

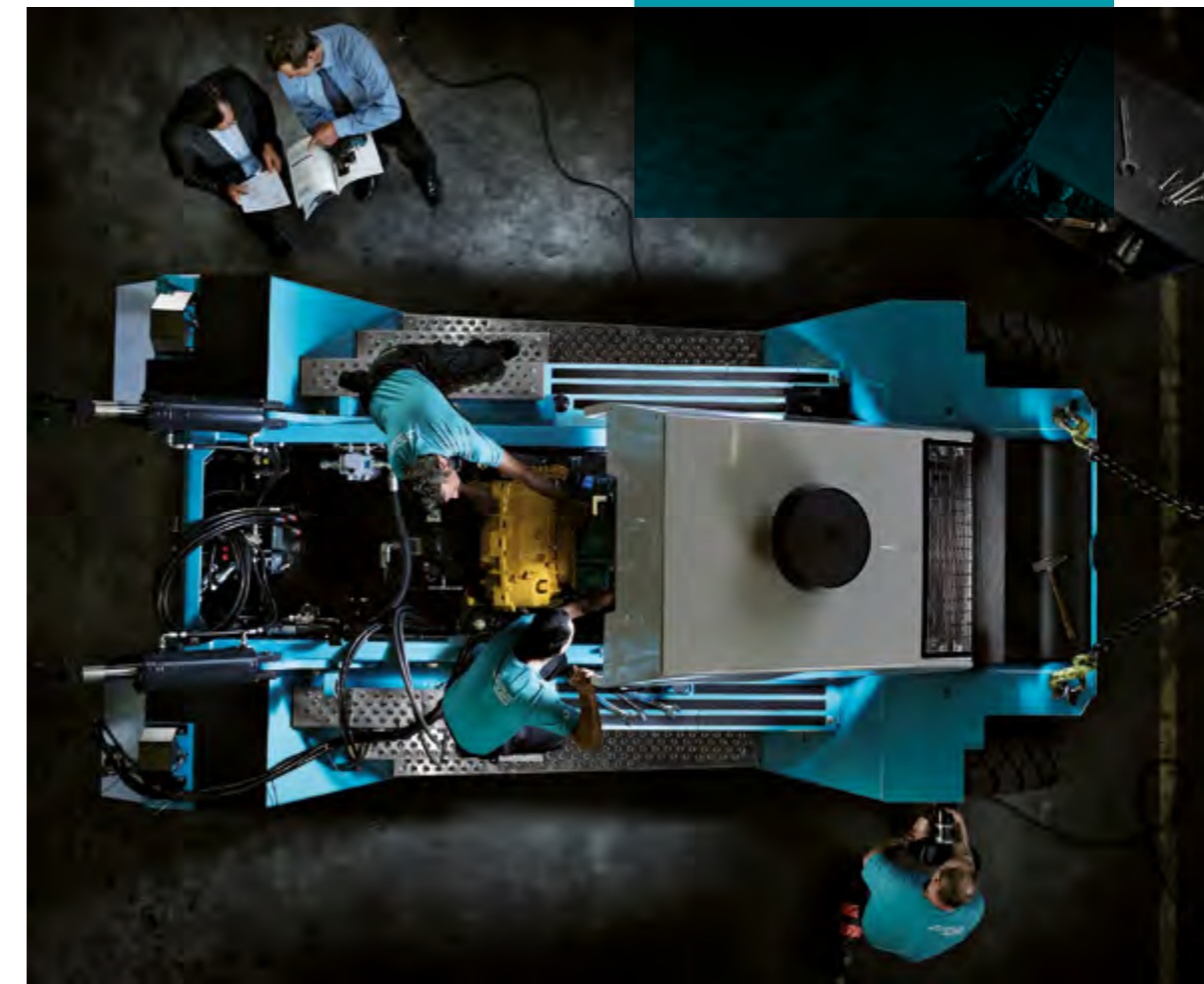
Listening to our customers and meeting their needs has been our way from the very start. Not only do we want to help you to lift loads, but we also want to help lift our customers' businesses. So we listen, learn and develop our products based on customer experience.

You provide us with the details of your operational needs and goals, and we design a lift truck that meets your expectations and more.

The strength, performance and reliability of every Konecranes lift truck are based on the heart of our technology: a strong box-type chassis, efficient load-sensing hydraulics and intelligent electronic machine control (EMC) that monitors the lift truck's vital components and functions. Our tight organization and a close dialogue between sales and engineering ensure that we can provide for your customization needs in the best way possible.

### EXAMPLES OF CUSTOMIZED EMPTY CONTAINER HANDLER SOLUTION

- Safety cage to protect the cabin from falling objects
- Triplex mast with lower building height than duplex – to accommodate ceilings.





## Fast growth creates demand for more container handlers

Haikou Port Container Terminal Co. Ltd. is situated on the northern coast of Hainan Province in southern China, directly across from the Chinese mainland. It is the first state-owned enterprise in Hainan to run international and domestic container handling, storage, packing and unpacking, and land transportation. They also take care of specialist freight requirements such as cold storage, waterways, and bulk cargo.



### CUSTOMER STORY:

**NAME:**  
Haikou Port Container Terminal Co. Ltd.

**INDUSTRY:**  
Port and terminal

**COUNTRY:**  
China

**“Konecranes machines use original imported components and an outstanding level of manufacturing technology. They are really high in quality.”**

**Chuanzhong Zhong**  
Assistant Manager,  
Equipment Support  
Department  
Haikou Port Container  
Terminal Co. Ltd.

### Capacity challenges

The company plays a major role in helping Hainan build a pilot free trade zone, and in creating better access to shipping routes in the Indian Ocean and Pacific Ocean. This activity has seen their throughput increase to more than 6 times what it was just 10 years ago – from 300,000 TEU in 2008 to 1.847 million in 2018. At only 280,000 m<sup>2</sup>, the site area is limited, as are the number of berths. With a lot of cargo coming through a small space, operating pressure is understandably high. Traffic flow is uneven, so blockages sometimes occur, affecting the efficiency of container handling.

Haikou’s first experience with Konecranes was in 1994, when they purchased a gantry crane with a 37-meter outreach and a lifting capacity of 40 tons. Impressed with its performance, they turned to Konecranes again when they needed to develop their lift truck fleet.

### New engine technology

Since they started using their first two Konecranes SMV 6/7 ECB90 empty container handlers in 2008, Haikou has been very pleased with the equipment. With a powerful 7 liter, 180 kW, 1050 Nm engine, these ECBs have greatly boosted site productivity and have proven to be highly durable. Each lift truck operates up to 20 hours per day, which means 5000+ hours every year. Even with this sustained,

heavy-duty operation, there have been no major faults, just whatever has been needed to take care of the machines on a daily basis.

A lack of mechanical failure combined with low-cost maintenance showed Haikou that Konecranes lift trucks could support them in their toughest container handling tasks. As business just kept on growing, Haikou bought their third Konecranes empty container handler in 2010, and two more in 2012. With their current volume of cargo, all five ECBs run almost continuously.

### Quality all the way

“Konecranes machines use original imported components and an outstanding level of manufacturing technology,” says Chuanzhong Zhong, Assistant Manager, Equipment Support Department of Haikou Port Container Terminal Co. Ltd. “They are really high in quality.”

Haikou is well on its way to reaching its goals - with the help of Konecranes.



## The Lifetime Advantage

Owning the perfect lift truck is not only about the machine itself. It's about maintaining high performance as the years go by, with services such as quality spare parts, preventive maintenance, support when you need it, or tailored training for in-house mechanics.

### YOUR WORLD

**"The new Konecranes empty container handler ensures high productivity and makes further growth possible. Another good thing is that fuel consumption and emissions can be lowered, which is good for the environment and the climate."**

**Thorsten Kosog  
Technical Coordinator  
NTB North Sea Terminal  
Bremerhaven GmbH & Co.**

## Smart Connected Lift Trucks

Konecranes Smart Connected Lift Trucks is a range of remote service applications that track the real usage and conditions of your lift trucks in real time, allowing you to use insights from this data to optimize the productivity of your operation. For example, you can better forecast and schedule estimated maintenance, discover and improve weaknesses in safety and efficiency, or enhance driver performance by identifying training needs for more economical and ecological driving.

### Listening to your lift truck

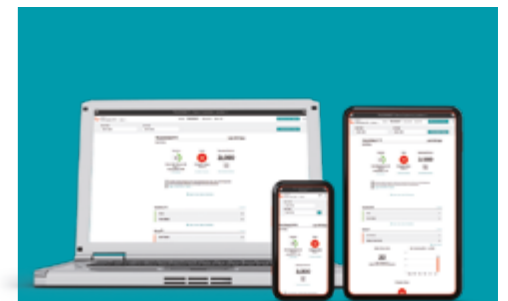
Is your maintenance at regular intervals, or do you plan it based on your actual needs? Do you order spare parts after a breakdown, or do you get them before they are needed? Do you know how your lift trucks are doing, or are you still guessing?

Knowledge is power, and when it comes to taking expert care of your lift truck, nothing beats knowing what will happen before it happens. So, what do your Smart Connected Lift Trucks want to tell you today?

### Expert support when you need it

We have a unique service concept in the lift truck industry. It provides you with a seamless service experience, starting with the condition of the empty container handler, and producing all needed parts and work orders.

Being a global company, Konecranes is at the center of a huge network of service and distribution partners around the world. Our expert support helps you to maintain extended use cycles and give your equipment a longer lifetime. We also offer several related services, such as upgrades, safety and maintenance kits, e-learning platforms, recommended parts lists and more.



### YOUR WORLD

**"Konecranes facilitates my work because I can trust in the operational reliability of the lift trucks."**

**Rolf Andersén  
Gränges, Sweden**





## Eco-efficiency

To be able to make choices for a better tomorrow, you must find new ways to reduce costs without compromising performance. With the optimal combination of features and attachments, you can help protect the environment and still maximize your operational efficiency.

### YOUR WORLD

Product advances like Konecranes Ecolifting can make a big difference in operating costs without any decrease in performance.

## Konecranes Ecolifting

Developing environmental solutions has been important to us for a very long time. We give you the opportunity to simultaneously save money and help the environment by using less fossil fuels.

Konecranes Ecolifting is a future-proof concept with new solutions continuously in development. In all of our products, true value lies in the small and intelligent details implemented with cutting-edge technology that make Konecranes Lift Trucks some of the world's most advanced lift trucks. Small things make a huge difference.

Currently, we offer Power Drive for your Konecranes empty container handlers. With this Ecolifting solution, you can reduce fuel consumption and emissions without compromising performance.

Development is on-going at Konecranes, and further Ecolifting solutions for reducing emissions are in the pipeline.

### POWER DRIVE

- reduce fuel consumption and emissions by up to 15%
- minimal capital investment and payback in less than a year
- same performance, less fuel consumption



# Driver-friendliness

For the driver spending countless hours in a lift truck, the most important thing is not the return on investment or the overall performance of the fleet. Drivers want to feel secure and comfortable, and have the opportunity to do their jobs with precision and effectiveness.

## FEATURES FOR DRIVER-FRIENDLY OPERATIONS

### VERY FAST LIFTING AND LOWERING

Lift 8 containers high with a wide mast: hoses and cables are minimized for low maintenance costs and maximum uptime. A heavy-duty mast and tilt cylinder improves stability and safety.

### OUTSTANDING ERGONOMICS

With driver-focused design, the OPTIMA cabin is one of the most spacious on the market. Everything is within easy reach.

### CURVED GLASS GIVES REMARKABLE VISIBILITY

Drivers have an exceptional range of vision through very large, lowered windows with no corner posts, a thin but very strong roof crossmember, and curved panels.

### SMART LIFT

Drivers select lifting height depending on container size and stack position. Lasers automatically set the correct height.

### SINGLE AND DOUBLE STACKING

Handle 20-40 ft. containers with sidelifit and 45-53 ft. containers in 10 ft. position with twistlocks only. Large sideshift, mechanical pile slope and an optional hydraulic pile slope. Lift up to 8 containers high in single mode, up to 2 over 6 in double mode.

### SMART LOAD-SENSING HYDRAULICS

Specially designed hydraulics sense the weight of the load and adapt lifting power accordingly. The truck provides maximum power only when really needed, so it consumes less fuel while reducing emissions and noise.

### ELECTRONIC MACHINE CONTROL, EMC MASTER

Full monitoring of all vital components and functions on a 7" touch screen. Programmable settings. CanBus technology increases engine and transmission reliability as well as hydraulics and levers.

### MAINTENANCE-FREE BRAKES

Brakes with continuous oil cooling give full braking power in every situation.

## YOUR WORLD

People are your most valuable asset. Driver-friendly trucks facilitate the well-being and work of the drivers.

Cabins that are well-designed for long shifts and demanding conditions lead to relaxed and more effective drivers. Konecranes cabins put your drivers in a position to succeed – to be their best at what they do.

# Meeting the needs of drivers

Cabin OPTIMA, designed and built by Konecranes Lift Trucks, offers comfort and superior visibility for your drivers. Both the cabin and the truck itself can be customized to fit your specific needs, so all of your operations on the ground can run safely and smoothly.

## Ergonomically advanced

Instrumentation is conveniently accessible to the right of and above the driver, improving driver posture and positioning during operation. If you need it, ask us to install extra equipment and add the controls as part of the instrumentation layout.

## Solutions for comfort

An excellent seat with compressor suspension, cabin heating and ventilation, air conditioning – we provide your drivers with every possible comfort. Optional ergonomic steering solutions improve your drivers' productivity.





WHAT DO YOU NEED TO LIFT?

# We have the attachment

You'll find your lifting solution in our range of attachments for empty container handlers.



## Container handling



### ELME 588TB Innovation single-stacking spreader

The 588TB is a telescopic side lift spreader with vertical twist locks for handling single empty 20 and 40 ft ISO and Binnencontainers up to 9 tonnes and 45 ft container in the 40 ft position. It is designed to be integrated in the mast of an empty container handling truck. The latest model features a reinforced structure, enhanced durability, an optimized hydraulic system and improved visibility for the driver.

(ELME 589TB Innovation with hydraulically adjustable heads is available as option)

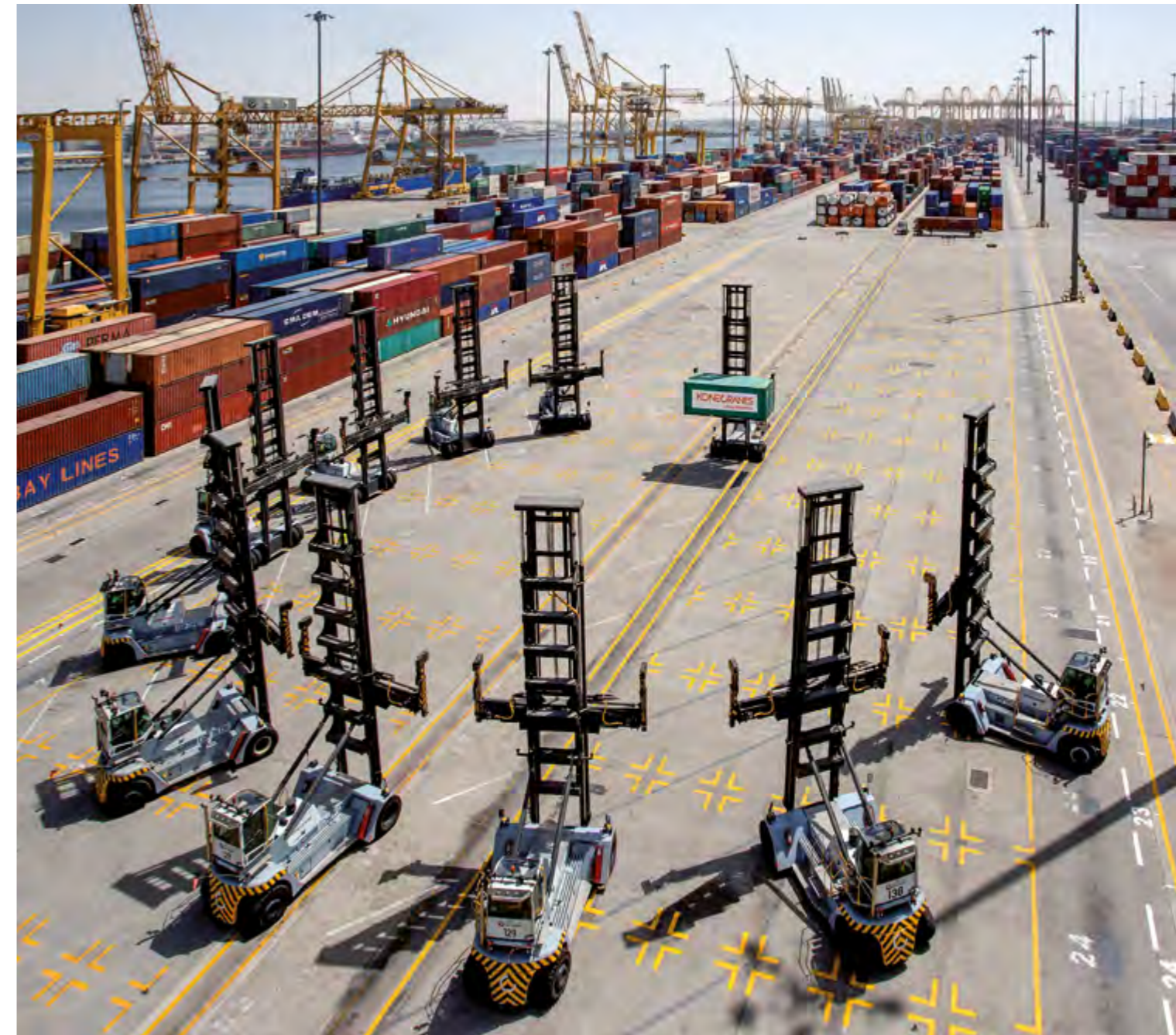


### ELME 584LD Innovation double-stacking spreader

The 584LD is an 11-ton telescopic side lift spreader for handling two empty ISO/refriger containers simultaneously. It engages and secures the containers with two horizontal lifting hooks and side clamps. Ideal for heavy-duty double handling applications, combined with handling eccentric load, it can take double reefer containers with refrigeration units aligned. This simplifies handling and improves lifting efficiency.

The latest model features a reinforced spreader with a stronger structure, enhanced durability, Power Pile Slope as standard, an optimized hydraulic system and improved visibility for the driver.

(ELME 582LS and LT Innovation with four horizontal twist locks are available as option)



8 TO 11 TONS

# Taking container handling to a higher level

When you buy a Konecranes empty container handler, you are investing in time-tested technology with innovative, eco-efficient features to enhance productivity and cut lifecycle costs. We offer a range of solutions and technologies to reduce

engine, drive train and tire wear, extend the functional life of your empty container handler and decrease your running expenses. When your lifting needs change, a well-maintained empty container handler also has high resale value.



8 TO 11 TONS



MODEL NAME	CAPACITY	WHEELBASE
SMV 3 ECC 80	8 tons at 1220 mm	3750 mm
SMV 4 ECC 80	8 tons at 1220 mm	3750 mm
SMV 5 ECC 80	8 tons at 1220 mm	3750 mm
SMV 6 ECC 80	8 tons at 1220 mm	3750 mm

MODEL NAME	CAPACITY	WHEELBASE
SMV 5/6 ECC 90	9 tons at 1220 mm	4500 mm
SMV 6/7 ECC 90	9 tons at 1220 mm	4500 mm
SMV 7/8 ECC 90	9 tons at 1220 mm	4500 mm

MODEL NAME	CAPACITY	WHEELBASE
SMV 4/5 ECC 100 DS	10 tons at 1220 mm	4500 mm
SMV 5/6 ECC 100 DS	10 tons at 1220 mm	4500 mm
SMV 6/7 ECC 100 DS	10 tons at 1220 mm	4500 mm
SMV 7/8 ECC 100 DS	10 tons at 1220 mm	4500 mm
SMV 4/5 ECC 110 DS	11 tons at 1220 mm	4500 mm
SMV 5/6 ECC 110 DS	11 tons at 1220 mm	4500 mm
SMV 6/7 ECC 110 DS	11 tons at 1220 mm	4500 mm

DS = double-stacking spreader

Other models upon request

**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 2020, Group sales totaled EUR 3.2 billion. The Group has 16,900 employees in 50 countries. Konecranes shares are listed on the Nasdaq Helsinki (symbol: KCR).**



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