

ACCESSING MORE PERFORMANCE

# **DIESEL-ELECTRIC MODEL 3 MOBILE HARBOR CRANES**



## MODEL 3 MOBILE HARBOR CRANES

# THE ENTRY MODEL FOR HIGHER REQUIREMENTS

Konecranes Gottwald Model 3 Mobile Harbor Cranes are electrically driven 2-rope cranes for moderate to medium duty handling requirements. As entry equipment in the medium-sized crane family from Konecranes, they offer powerful lifting capacity curves with lifting capacities of up to 100 t, maximum radii of 46 m and lifting speeds of up to 120 m/min.

Konecranes Gottwald Model 3 Mobile Harbor Cranes are designed for a particularly broad range of applications. In your universal or special-purpose terminal, they help you on vessels up to standard class to handle:

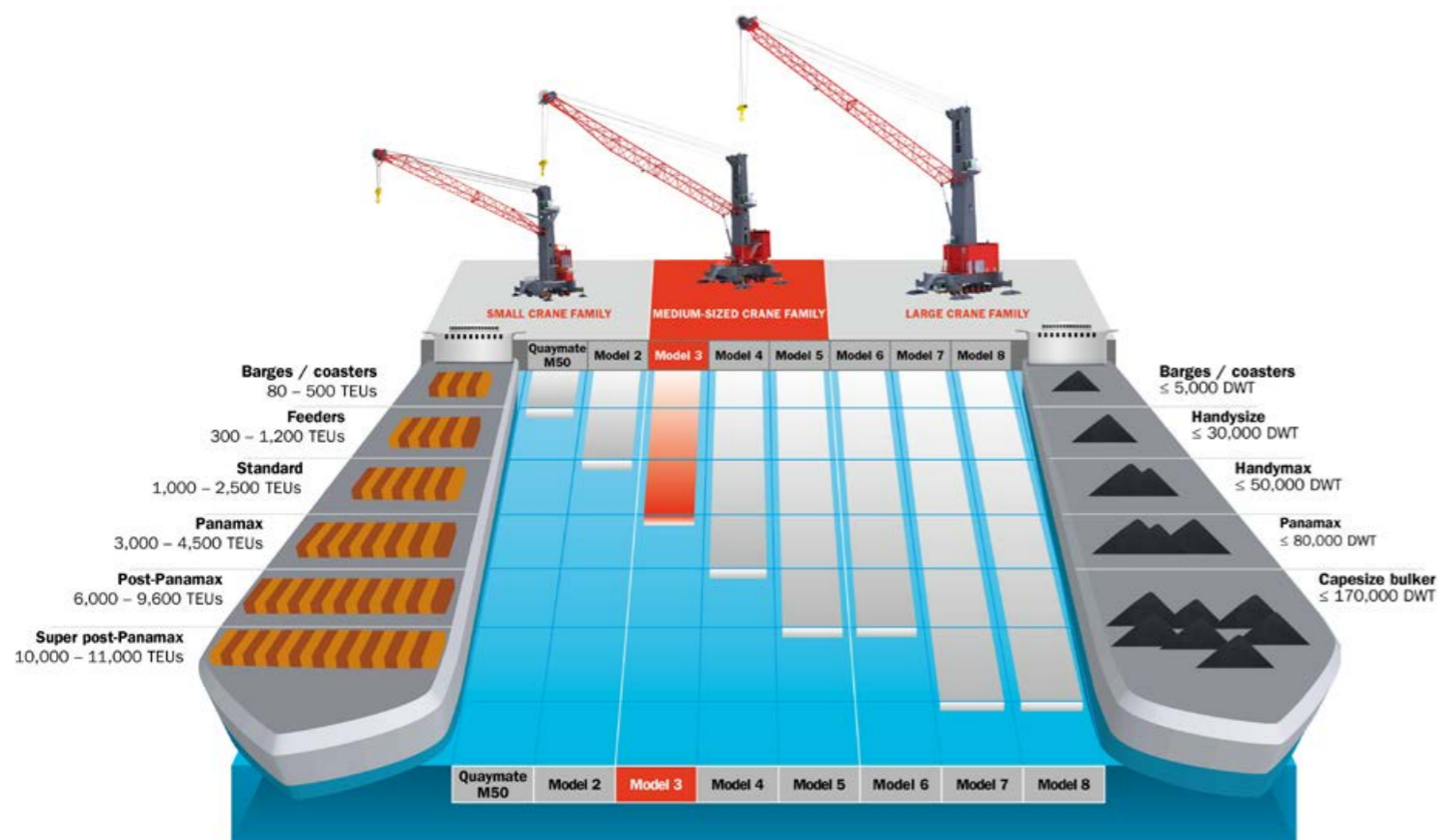
- containers,
- general cargo,
- bulk materials and
- project cargo.

### VARIANTS FOR DEDICATED APPLICATIONS

With all the variants of Model 3, you profit from a high-performance 2-rope crane with good capabilities and a wide working radius, for efficient container handling. For handling bulk materials, Model 3 also has a 34-t motor grab curve.

Model 3 harbor cranes allow you to access a higher performance range and possess all the features you expect in a handling machine for productive and durable operation. Model 3 cranes are:

- versatile,
- easy to maintain,
- ergonomic and
- environmentally friendly.



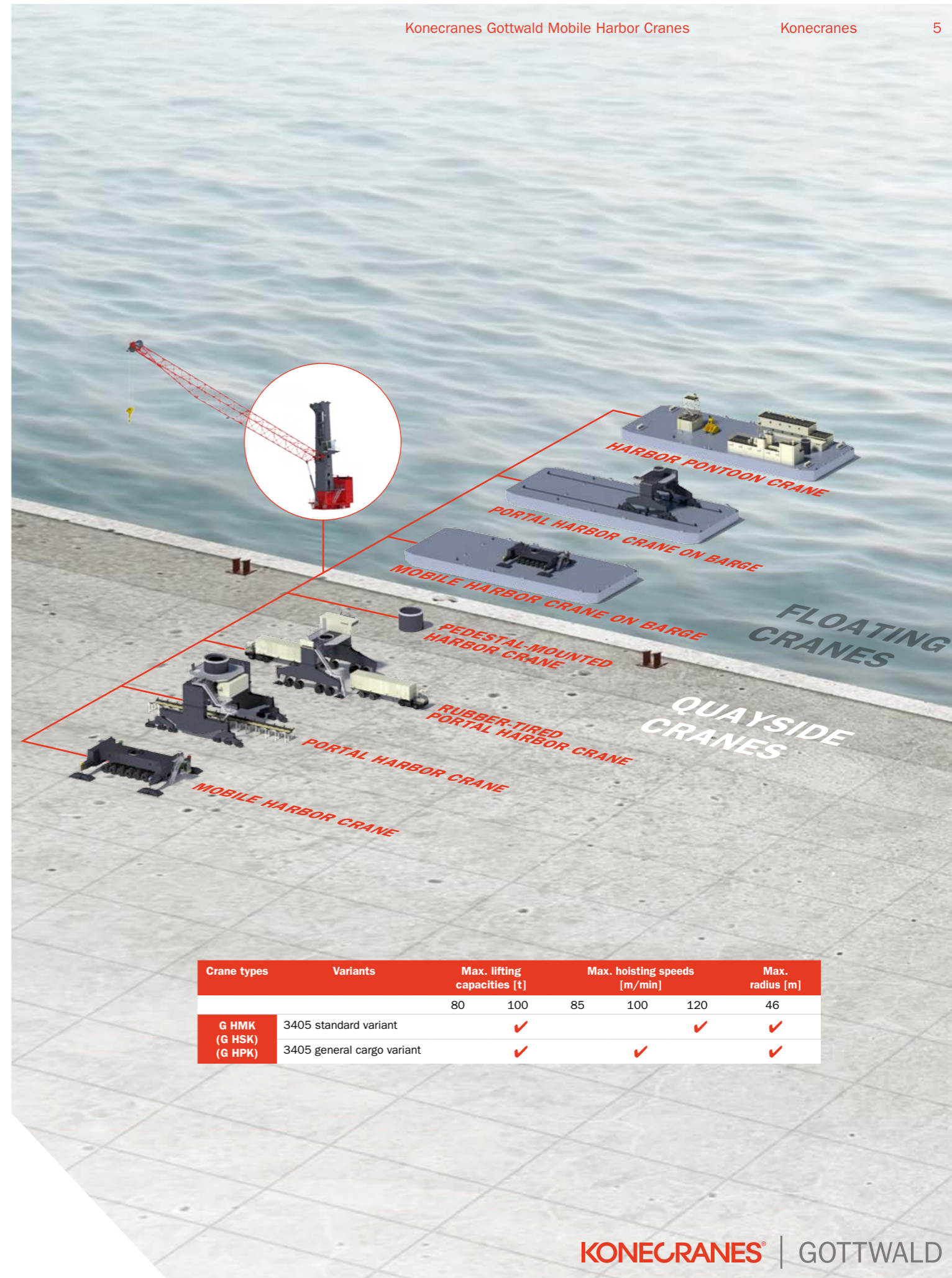
**MODEL 3 CRANE TYPES – HARD TO BEAT**

**THE RIGHT CRANE FOR EVERY SITE**

As the industry's pioneer, Konecranes created modular quayside and floating crane types based on mobile harbor crane technology to suit a wide variety of applications on quay, mid-stream and on the open sea.

**FOR FAST, EFFICIENT CARGO HANDLING**

Available in different crane types and variants, the Model 3 crane is a universally applicable machine which can quickly and efficiently handle cargo with a broad range of lifting gear.



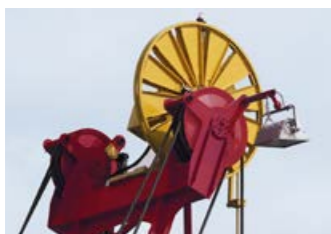
Crane types	Variants	Max. lifting capacities [t]		Max. hoisting speeds [m/min]			Max. radius [m]
		80	100	85	100	120	
G HMK (G HSK) (G HPK)	3405 standard variant		✓			✓	✓
	3405 general cargo variant		✓		✓		✓

### MODEL 3 MOBILE HARBOR CRANES AT A GLANCE

# ALL-ROUND EXCELLENT DESIGN

#### CABLE REEL

Safe cable control and reduced cable loading due to torque-regulated cable reel.



#### TOWER HEAD

Ladders for safe ascent to the tower head. Extended platform for easy access to rope pulleys for maintenance work.

#### TOWER CAB

Ergonomically designed cab affords enhanced comfort.

High crane uptime through enhanced diagnostic via the Visumatic® crane management system.

Excellent view of the work site due to tower cab located high up on the tower. Even better view thanks to the forward-mounted cab (optional).



#### LIGHTING

Well-lit working site thanks to powerful lamps.



#### PROPPING SYSTEM

Proven H-type stabilizers including:

- automated propping system,
- stabilizer pads chosen for the particular conditions of the quay.



#### DRIVER CAB

Driver cab on the chassis (optional).

#### RUBBER-TIRED CHASSIS

Maintenance-free equalizer beams with vertical compensation of up to +/- 250 mm means the axle load is always evenly distributed.

Tight turning circle and crab steering provide excellent maneuverability.



CLEARLY ARRANGED AND EASILY ACCESSIBLE

# A CLOSER LOOK AT OUR INNOVATIVE TECHNOLOGY

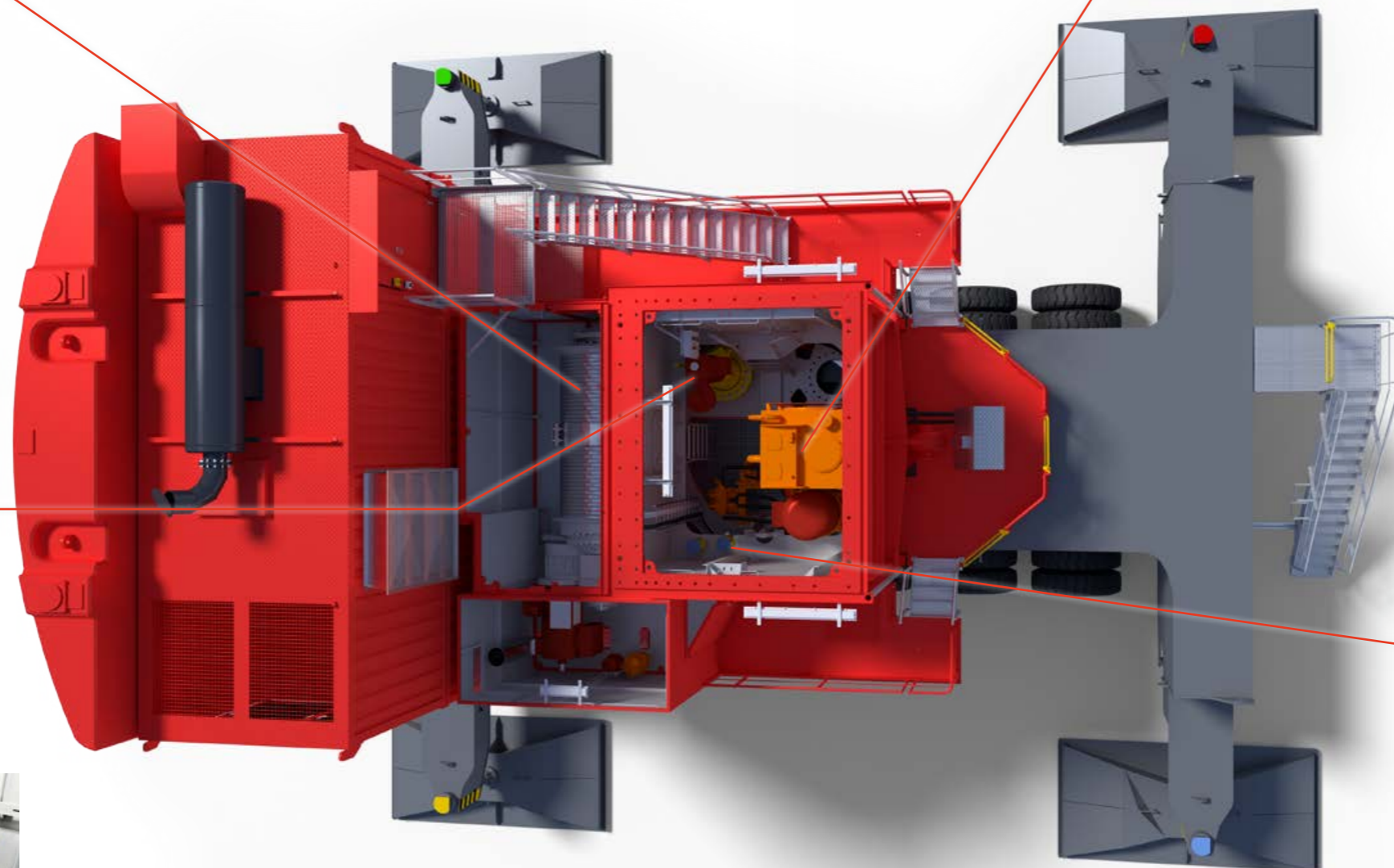
### HOISTS

- Easily accessible
- Proven planetary gear integrated in the drum with oil cooler
- 3-phase drive, smooth acceleration and deceleration of the hoisting motion
- Protective enclosure for drive unit and optional for hoist



### SLEWING GEAR UNITS

- Slewing gear units designed as modular assemblies
- The number of units is as required for the crane variant and application
- Proven planetary gear
- 3-phase drive, smooth acceleration and deceleration of the slewing motion



### CENTRAL LUBRICATION SYSTEM

- Provides regular and proper lubrication of slew ring, boom root and luffing cylinder bearings
- Optionally extendable to include chassis and rope pulleys
- Pinion lubrication using special-purpose, high-performance grease via separate central lubrication system



### HYDRAULIC UNIT

- With main hydraulic pump and tank
- Supplies luffing cylinder, travel gear, stabilizers, steering and brake systems with hydraulic oil



## SERVICE-FRIENDLY AND COMPACT

# WELL-ENGINEERED CONSTRUCTION

### STAIRWAYS

- Provide easy access to the tower cab
- Feature an ergonomic design – with 50° inclination



### PRACTICAL DESIGN

- For oil cooler and air conditioning
- Easy component maintenance
- Space for additional/optional components

### DIESEL GENERATOR

- Housed in weatherproof, soundproofed container
- Features drive power based on crane variants and application
- Has sufficient power for all crane functions to be performed simultaneously and independently of each other



### ELECTRICS ROOM

- Weatherproof and air-conditioned
- Contains electrical equipment and control system
- Clearly divided into function groups
- Features diagnostics panel to facilitate troubleshooting

**EXTERNAL POWER SUPPLY**

Our cranes can make use of low or medium-voltage mains supplies. They may be equipped with the necessary units ex works or upgraded at a later date.

**3-PHASE TECHNOLOGY****Model 3 – with innovative electric-drive concept**

With Model 3, Konecranes has expanded its electric drive concept and takes full advantage of technical progress and economic efficiency in 3-phase technology for drive motors.

The advantages of 3-phase power:

- regular maintenance of carbon brushes no longer required,
- gentle, power-dependent starts mean reduced power surges for the generator,
- easier application of energy-saving technologies because certain equipment is present from the start, for fitting ultracaps, for example,
- mitigated line-side harmonics in power supplies.

**DRIVE****ELECTRICAL, EFFICIENT AND ECO-FRIENDLY**

**The Model 3 mobile harbor crane is powered by electricity. The crane draws its power from the on-board diesel-powered generator or from the quayside mains supplying low or medium-voltage electricity.**

**GENERATING ELECTRICITY ON-BOARD**

The diesel-powered generator features low fuel consumption thanks to its outstanding efficiency. Use of state-of-the-art dynamic brake resistors – standard on Konecranes Gottwald cranes – can provide savings in primary energy of up to 15% depending on operating conditions and crane capacity.

**EXTERNAL POWER SUPPLY**

If used with electricity from the harbor mains, your Konecranes Gottwald crane offers:

- enhanced efficiency throughout the drive train,
- the opportunity to return electricity to the mains,
- help in reducing overhead costs,
- zero exhaust emissions in the terminal,
- reduced noise emissions,
- reduced servicing costs.

**HYBRID DRIVE**

When generating power on-board, the crane is more efficient with the Konecranes Gottwald hybrid drive – a combination of the diesel-powered generator and electrostatic short-term storage media. The energy recovered from lowering and braking motions is stored in ultracaps, and is then available to the crane's electric circuits for the next work cycle. The result is a potential reduction in fuel consumption of up to 23% depending on operating conditions and crane capacity.



Electrostatic short-term storage media

## KONECRANES GOTTWALD MOBILE HARBOR CRANES

# SMART, USER-FRIENDLY, SAFE

The Model 3 mobile harbor crane is packed with smart technology. Konecranes focuses on safety and productivity for both the machine and the crane driver.

### AS STANDARD: ERGONOMIC, TOP-OF-THE-RANGE EQUIPMENT

The Model 3 mobile harbor crane includes user-friendly functions:

- comfortable, air-conditioned tower cab, with optional air-suspension seat for safe, comfortable work,
- Visumatic® crane management system with clearly arranged graphic symbols for intuitive operator guidance,
- camera on the boom tip for a close-up view of the work site via the monitor screen in the cab,
- ergonomically designed stairways with an inclination of 50° for comfortable, easy access to tower cab, machinery rooms and service points.

## MORE CONTROL – MORE EFFICIENCY

Many optional features enable customers to adapt their Konecranes Gottwald Model 3 crane to the exact conditions of use, these features include:

- radio remote control – to avoid repeated ascent to the tower cab during complex crane maneuvers,
- automatic point-to-point handling mode to provide efficient support for repetitive load moves,
- vertical lift assistant to stop the load swinging after being raised and prevent horizontal loads on the boom,
- tandem lift assistant permits use of full lifting capacities and control of two cranes by only one operator,
- web-based information and diagnostics system to record operating data and provide access to service data.



### EVERYTHING UNDER CONTROL

Intuitive operation through user-friendly human-machine interface.



HIGHLY EFFICIENT SOLUTIONS

# PERFECTLY INTEGRATED HANDLING

**Konecranes offers a comprehensive range of equipment for all points along the logistics chain – to provide integrated handling solutions from a single source.**

As an experienced port solutions provider, we meet the needs of the entire logistics chain and its interfaces – whether in container, general cargo or bulk handling.

**THE RIGHT CHOICE – FROM THE START**

We also offer planning and advisory services on all aspects of terminal investments and expansion projects. To help you, we employ state-of-the-art software solutions including simulation and emulation specifically for container handling.

**BULK HANDLING**

Konecranes also enhances bulk handling capability by offering:

- consultancy services and
- software designed specifically for bulk terminals.

Konecranes Gottwald Mobile Harbor Cranes are suitable for a complete range of cargo handling applications and are adapted to specific quay infrastructures. Our ever-expanding product range also includes software developed specifically for bulk terminals.



**SOLUTIONS FOR CONTAINER TERMINALS**

We offer a comprehensive range of container handling equipment for the entire logistic chain.



**SOLUTIONS FOR GENERAL AND PROJECT CARGO**

Model 3 and the larger Model 8 mobile harbor cranes working hand in hand. Thanks to the tandem lift assistant, both cranes make use of their maximum lifting capacity.



For limited and missing quay infrastructures Konecranes offers floating cranes.



**SOLUTIONS FOR CHALLENGING QUAY INFRASTRUCTURES**

Model 3 is available as portal harbor crane with customized portals in regards to height, span and quay loading.

**YOUR MODEL 3 MOBILE HARBOR CRANE IS IN THE BEST HANDS WITH US**  
**COMPREHENSIVE SERVICE**

**During the development of our Model 3 mobile harbor cranes and their variants we were already thinking about ease of maintenance. The robust machines are user-friendly thanks to easily accessible maintenance points. Our expertise is complemented by the use of components from globally renowned manufacturers.**

**WE MAINTAIN AVAILABILITY**

We contribute to maintaining the availability of your Model 3 mobile harbor crane. Our global service organization is local to you in all time zones, and offers you expertise in maintenance and repair in combination with fast delivery of spare parts.

**WE KEEP THE VALUE OVER MANY YEARS**


We are the right choice to provide support for your Model 3 mobile harbor crane because we built it and therefore know it best. With our comprehensive service portfolio, your crane remains state of the art, its service life increases and it maintains its value over many years.



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