TEREX®

HARBOUR CRANES

QUAYMATE M50
MOBILE HARBOUR CRANE

A GREAT MATE FOR SMALL PORTS

WORKS FOR YOU.™

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FOR SMALL MARITIME AND RIVER PORTS

TEREX® QUAYMATE M50 MOBILE HARBOUR CRANE

The Terex® Quaymate M50 is a diesel-electric mobile harbour crane from Terex Port Solutions (TPS). It is designed as an entry model for small maritime and river ports aiming to professionalize their cargo handling. This means ports requiring machines that are classified for a sufficient number of load cycles and also have good technical and cost-effective features.

Unlocking terminal potential – a breakthrough for smaller ports

For new and replacement investments, the Quaymate M50 mobile harbour crane outperforms conventional telescopic, crawler and stationary cranes, excavators or other cargo handling equipment that is often found in terminals but cannot, or cannot adequately, cope with the harsh conditions found in ports. The Quaymate M50 crane offers a high drive output, low-emission, environmentally friendly operation and efficient electrical main drives. The crane also has powerful lifting capacities across the entire working area.

The Quaymate M50 is a mobile harbour crane designed for light to medium-duty handling at economically viable working speeds and with a service life appropriate to the application. It is also suitable for limited investment budgets and keeps ship lay-up times short when performing continuous-shift handling of:

- **containers with automatic or semi-automatic spreaders,**
- **bulk and scrap with motor grabs and**
- **general cargo**

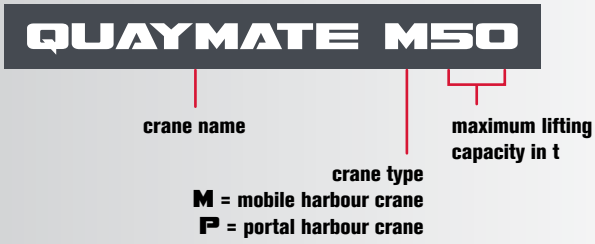
on inland barges and coasters.
The crane also handles various project cargoes.

As a single-pivot luffing-slewing crane of very compact design, the Quaymate M50 crane also impresses by virtue of its functional, robust and service-friendly construction and offers operators:

- **50 t maximum lifting capacity,**
- **an impressive lifting capacity curve,**
- **36 m maximum radius,**
- **50 m/min maximum hoisting speed.**

A NEW CRANE, A NEW NAME

The product designation of this Terex® crane is simple:



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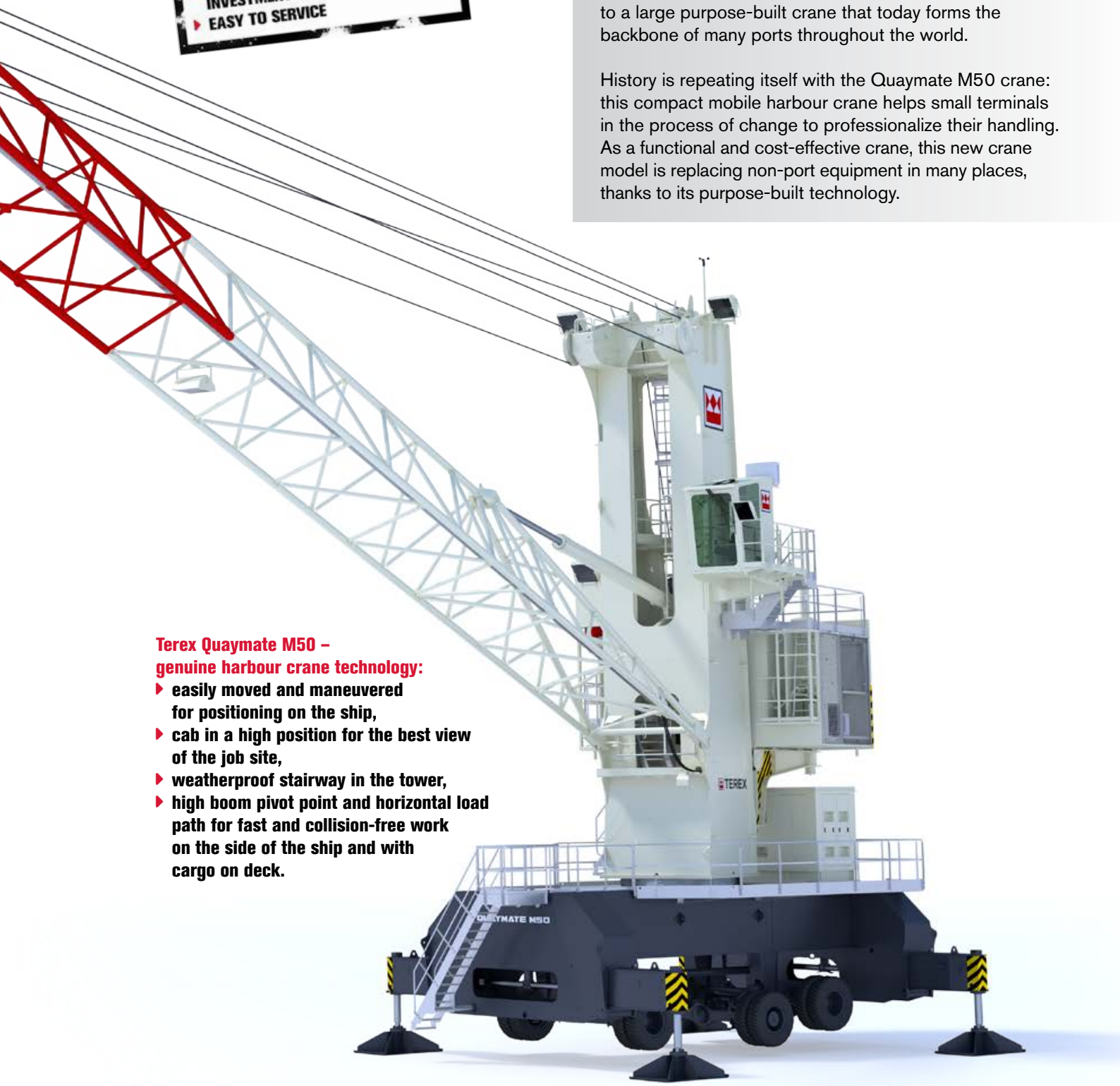
THE BENEFITS OF THE QUAYMATE M50:

- FOR VIRTUALLY ALL TYPES OF CARGO
- MOBILE, ROBUST & COMPACT
- POWERFUL LIFTING CAPACITIES ACROSS THE ENTIRE WORKING AREA
- ELECTRICALLY DRIVEN, ECONOMICAL AND 'GREEN'
- FOR LIGHT TO MEDIUM-DUTY HANDLING
- COST-EFFECTIVE WORKING SPEEDS
- LIFE-CYCLE RATING TO MATCH THE APPLICATION
- ALSO SUITABLE FOR LIMITED INVESTMENT BUDGETS
- EASY TO SERVICE

TPS INNOVATION

TPS is the pioneer of the mobile harbour crane, which was originally derived from our conventional mobile cranes. We have continuously developed our cranes over six decades, transforming them from a small universal crane to a large purpose-built crane that today forms the backbone of many ports throughout the world.

History is repeating itself with the Quaymate M50 crane: this compact mobile harbour crane helps small terminals in the process of change to professionalize their handling. As a functional and cost-effective crane, this new crane model is replacing non-port equipment in many places, thanks to its purpose-built technology.



Terex Quaymate M50 – genuine harbour crane technology:

- **easily moved and maneuvered for positioning on the ship,**
- **cab in a high position for the best view of the job site,**
- **weatherproof stairway in the tower,**
- **high boom pivot point and horizontal load path for fast and collision-free work on the side of the ship and with cargo on deck.**

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ECONOMICAL DESIGN

TEREX® QUAYMATE M50 MOBILE HARBOUR CRANE

Manufacture of lattice booms for the Quaymate M50 mobile harbour crane in Xiamen, China

International development

The basis for the Terex Quaymate M50 crane was the Terex® Gottwald Model 2 mobile harbour crane. Crane geometry and design of the Quaymate M50 model is based on the 80-t mobile harbour crane developed and manufactured by TPS in Germany. We focused on the special infrastructure and operating requirements of smaller terminals and ports to adapt lifting capacity, lifting capacity curve and working speeds of the Quaymate M50 crane to meet customers' needs.

According to the principle of *Functionality driven by German engineering*, Terex engineers from Western Europe, China and India adapted the proven Terex® Gottwald design philosophy to develop a cargo handling crane for small terminals. The new 50-t crane is manufactured in the TPS plant in Xiamen, China. From here, the Quaymate M50 crane will also enter other markets.

Good quality, compact, fast-to-assemble

The Terex Quaymate M50 crane uses quality products and components from Asia and Europe. Compact design, particularly well thought-out dimensioning and the comparably low weight of its preassembled components simplify both transport to the terminal and assembly of the crane in the terminal. Thus, avoiding the expense of leasing or supplying costly equipment.

Solid basic equipment plus options

Terminal operators will achieve excellent results with the Quaymate M50 crane because it is not only reliable, versatile and simple to operate but sufficiently well equipped, too.

Similar to our larger products, option packages improve the equipment capabilities of this crane to increase productivity and professionalize cargo handling.

Functionality driven by German engineering

Terex mobile harbour cranes are products based on the quality promises of the Terex® and Terex® Gottwald brands in addition to German and international engineering expertise. As a pioneer and technological pacesetter for mobile harbour cranes, TPS transferred this globally successful technology to the new Quaymate M50 mobile harbour crane for small ports and terminals.

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The Terex Port Solutions facility in Xiamen, China, is a modern plant that manufactures professional cargo handling equipment. The facility also has a deep water connection to ship equipment to customers quickly.

With engineers from Western Europe, India and China, the TPS Center of Excellence successfully adapted the Terex® Gottwald design philosophy for the Quaymate M50 mobile harbour crane.

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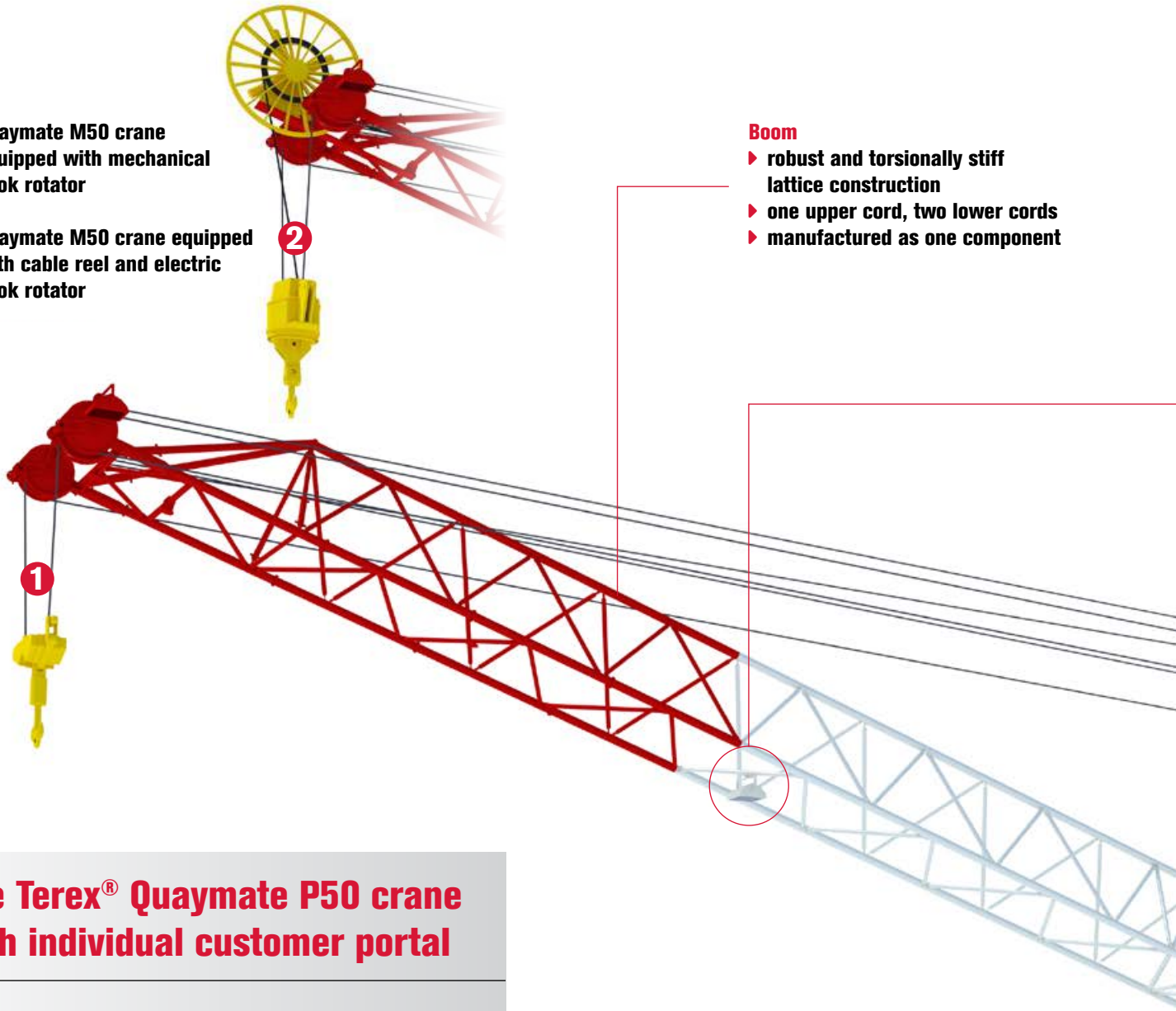
MEET YOUR MATE – AND ITS F

TEREX® QUAYMATE M50 MOBILE HARBOUR CRANE



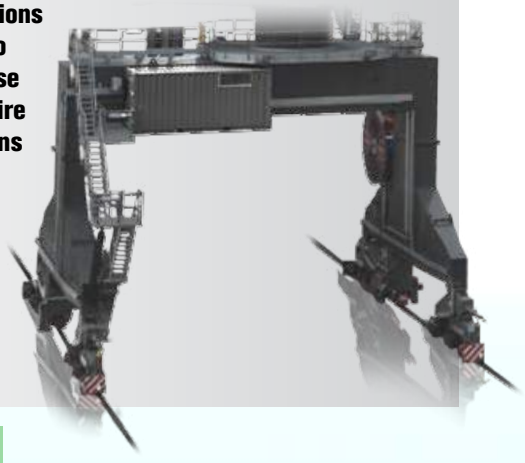
1. Quaymate M50 crane equipped with mechanical hook rotator
2. Quaymate M50 crane equipped with cable reel and electric hook rotator

Boom

- robust and torsionally stiff lattice construction
- one upper cord, two lower cords
- manufactured as one component

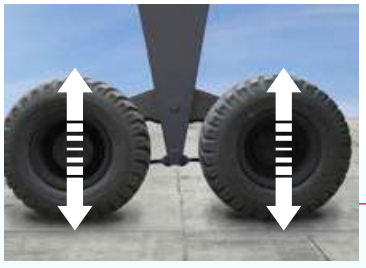
The Terex® Quaymate P50 crane with individual customer portal

In addition to the conventional Quaymate M50 mobile harbour crane with rubber-tyred chassis, TPS also supplies the new cargo handling crane as a portal harbour crane with the designation Quaymate P50. Its range of applications has been extended to include quays, whose infrastructures require rail-mounted solutions with a portal for various rail gauges and loadings in addition to clearance heights.



Chassis

- two steered axles, one driven
- can be easily maneuvered for positioning on the ship
- large wheels and vertical mechanical axle compensation (+/- 250 mm) for traveling over uneven ground on the quay



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ULL SCOPE OF ...

Lighting
- high-intensity lamps illuminate the entire working area
- optional lateral tower lamps can provide additional illumination

Tower
- robust box-girder construction
- weatherproof stairway to tower cab
- good view of the working area thanks to heightened position of the tower cab
- ergonomically designed steps for ease of ascent

Cab
- ergonomically designed and equipped
- Visumatic® crane management system for simple and intuitive operation

Main machinery house
- located on the base platform at the rear of the tower
- clearly arranged layout, thanks to separate rooms, providing easy access for maintenance and service

Diesel generator
- soundproof
- self-contained and independent of the terminal infrastructure

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. . . CONVINCING TECHNOLOGY

TEREX® QUAYMATE M50 MOBILE HARBOUR CRANE

With the Terex® Quaymate M50 mobile harbour crane, all important function groups are structured as service-friendly modules forming a harmonious whole.

Hoist

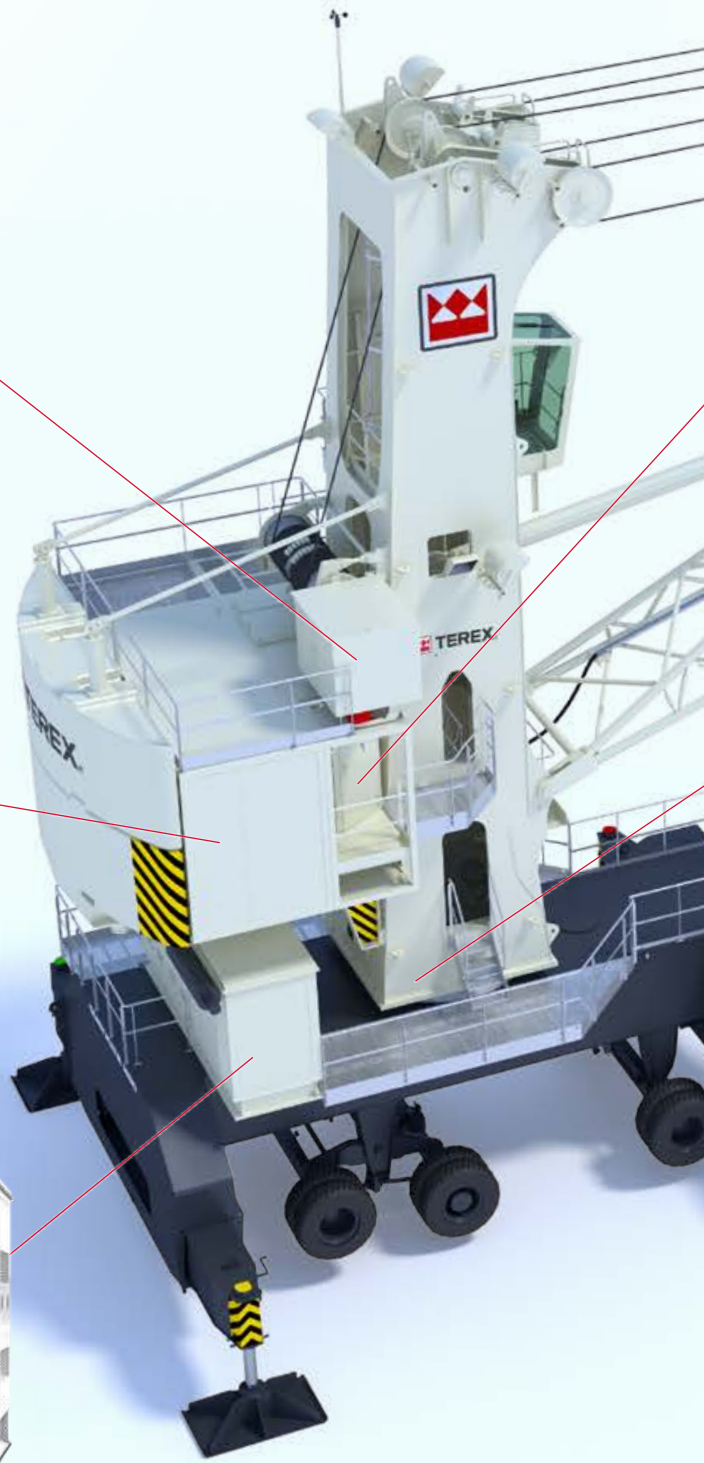
- easy to access
- low-maintenance, modern three-phase drive
- protective enclosure for drive unit (option)
- proven planetary gear

Electrics room

- high degree of freedom of movement
- good overview of the electrical equipment and control systems

Diesel-generator set

- 6-cylinder, diesel engine power: 455 kW
- dimensioned in order to execute all crane functions simultaneously and independently
- mounted in weatherproof protective housing on the chassis



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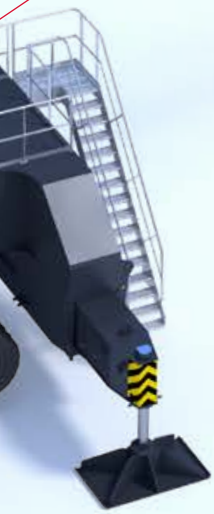
Hydraulics unit

- **main hydraulic pump and hydraulic tank**
- **efficient hydraulic oil distribution to components including luffing cylinder, travel gear, stabilisers, steering and brake systems**

ELECTRICALLY DRIVEN

Slewing gear

- **low-maintenance, modern three-phase drive**
- **proven planetary gear**



ELECTRICAL DRIVE SYSTEM

ENVIRONMENTALLY FRIENDLY

Efficient and sustainable
Like all Terex® and Terex® Gottwald mobile harbour cranes, the Quaymate M50 is electrically driven. Power supply is via the on-board diesel generator or via power from the harbour mains with low or medium voltage.

External power supply
When connected to the existing harbour mains, our cranes provide the following benefits:

- **a greater level of efficiency for the whole drive train**
- **saves operating costs**
- **zero exhaust gas emission in the terminal**
- **reduced sound emissions**
- **reduced diesel engine maintenance costs**

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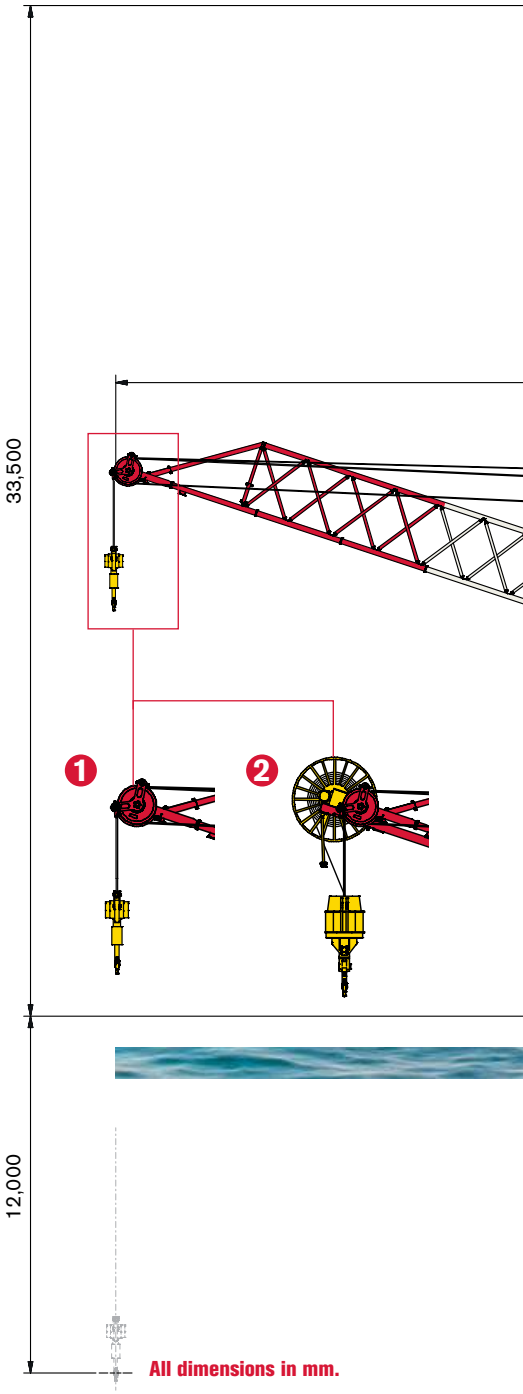
PROPERLY CONFIGURED FOR ALL

TEREX® QUAYMATE M50 MOBILE HARBOUR CRANE

Equipped with a *mechanical hook rotator* ❶, the Quaymate M50 crane moves a wide range of cargo. Optional operation with *cable reel and electrical hook rotator* ❷ considerably extends the range of applications of the crane. Fitted with professional load handling attachments such as an automatic spreader or motor grab, the Quaymate M50 mobile harbour crane becomes a high-performance machine that can handle containers, bulk goods or scrap even more cost effectively.



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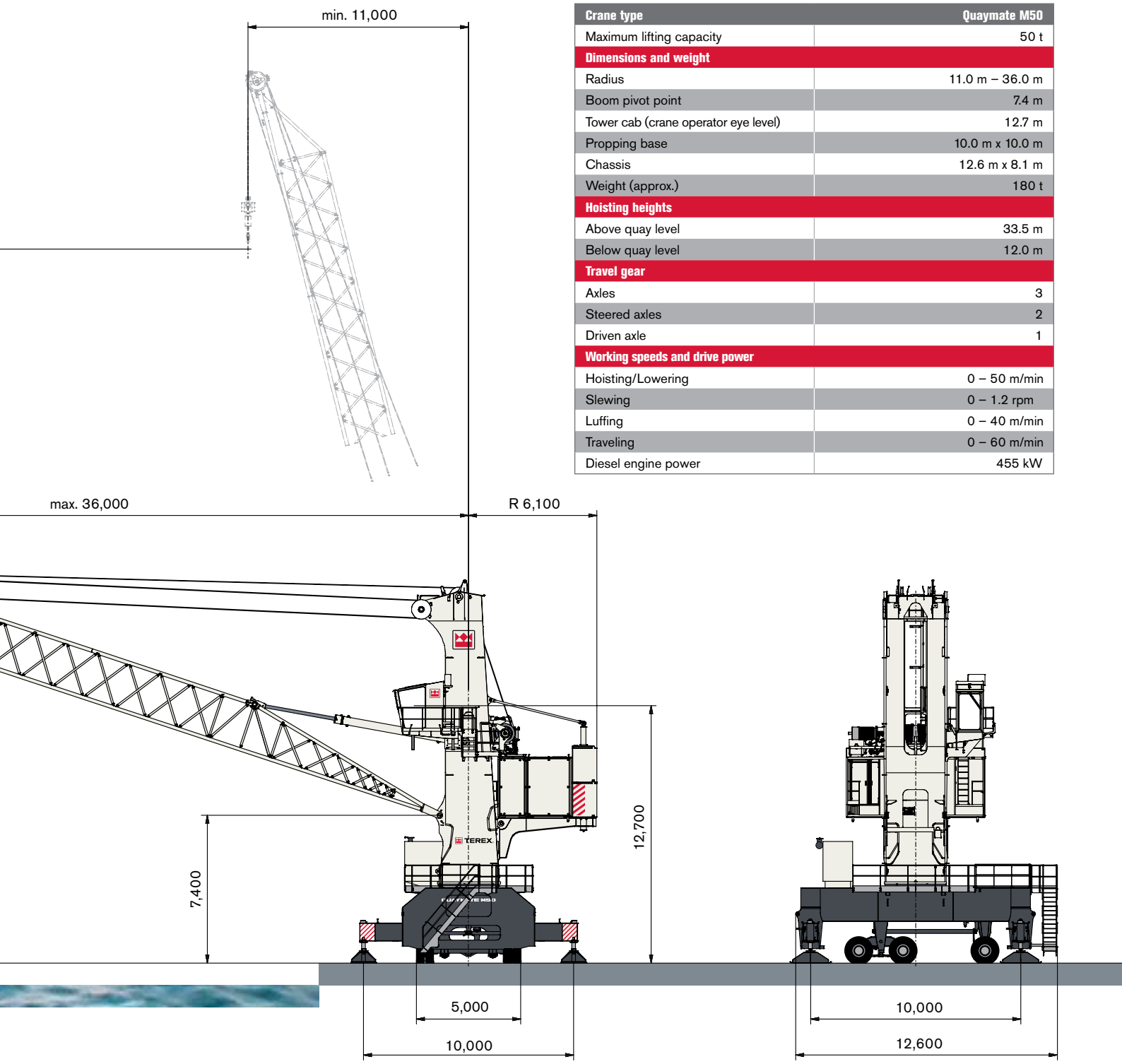
. APPLICATIONS

Technical data

Crane type	Quaymate M50
Maximum lifting capacity	50 t
Dimensions and weight	
Radius	11.0 m – 36.0 m
Boom pivot point	7.4 m
Tower cab (crane operator eye level)	12.7 m
Propping base	10.0 m x 10.0 m
Chassis	12.6 m x 8.1 m
Weight (approx.)	180 t
Hoisting heights	
Above quay level	33.5 m
Below quay level	12.0 m
Travel gear	
Axles	3
Steered axles	2
Driven axle	1
Working speeds and drive power	
Hoisting/Lowering	0 – 50 m/min
Slewing	0 – 1.2 rpm
Luffing	0 – 40 m/min
Traveling	0 – 60 m/min
Diesel engine power	455 kW



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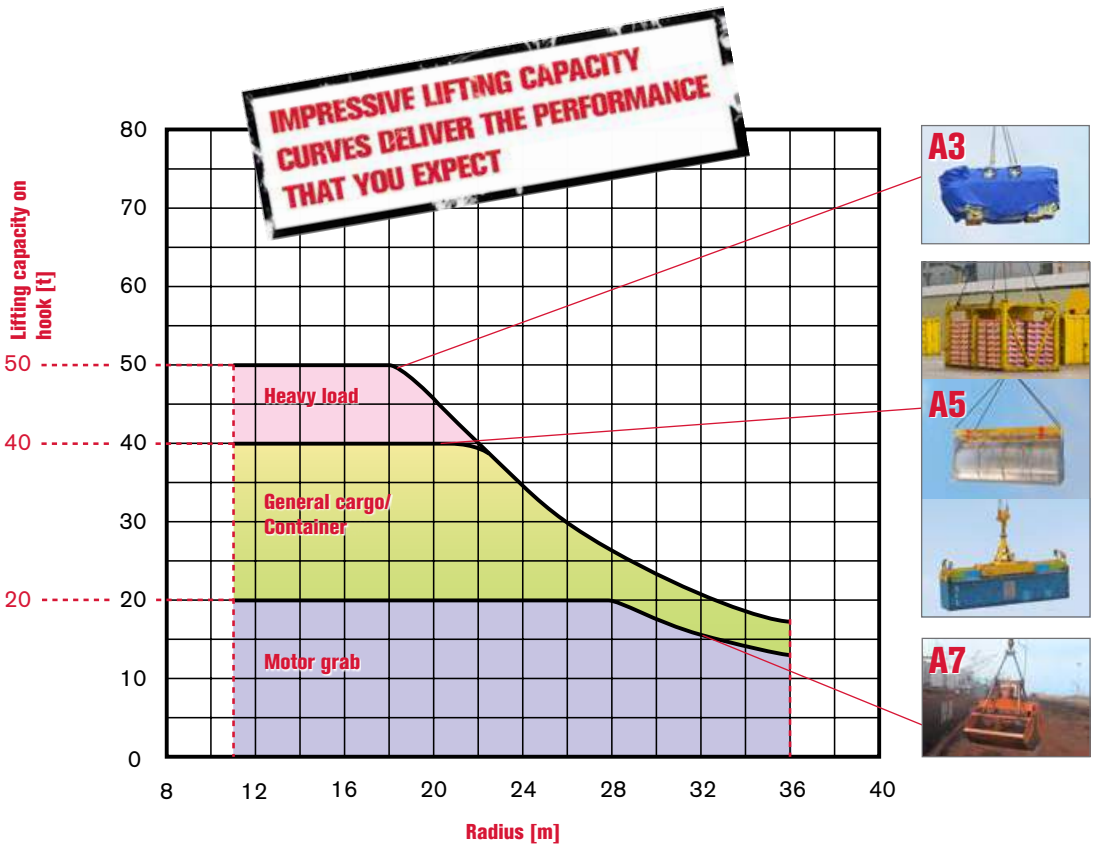
LIFTING CAPACITIES

TEREX® QUAYMATE M50 MOBILE HARBOUR CRANE

Operating modes	Heavy load	General cargo	Container*		Motor grab
			Spreader 1	Spreader 2	
Radius [m]					
11 – 18	50.0	40.0	35.0	32.2	20.0
19	49.0	40.0	35.0	32.2	20.0
20	45.5	40.0	35.0	32.2	20.0
21	42.0	40.0	35.0	32.2	20.0
22	39.0	39.0	35.0	31.2	20.0
23	36.6	36.6	34.3	28.8	20.0
24	34.3	34.3	32.0	26.5	20.0
25	32.2	32.2	29.9	24.4	20.0
26	30.2	30.2	27.9	22.4	20.0
27	28.5	28.5	26.2	20.7	20.0
28	27.0	27.0	24.7	19.2	20.0
29	25.5	25.5	23.2	17.7	18.8
30	24.2	24.2	21.9	16.4	17.8
31	22.9	22.9	20.6	15.1	16.9
32	21.8	21.8	19.5	14.0	16.1
33	20.7	20.7	18.4	12.9	15.3
34	19.7	19.7	17.4	11.9	14.5
35	18.8	18.8	16.5	11.0	14.0
36	17.9	17.9	15.6	10.1	13.5

Heavy load, general cargo and motor grab mode on hook. Container operation below spreader.
* Spreader 1 = Semi-automatic 40' spreader (2.3 t)
Spreader 2 = Bromma EH 12U (7.8 t)



The Quaymate M50 mobile harbour crane is designed for handling heavy loads, including: general cargo, containers with single lift spreader and bulk with motor grab in the A3 to A7 appliance group as per the F.E.M. guideline 1.001.

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CRANE EQUIPMENT

TEREX® QUAYMATE M50 MOBILE HARBOUR CRANE

Equipment

Section	Standard	Option
Drive systems		
Diesel generator drive		
– Diesel engine (455 kW)	✔	
External power supply		
– Preparation for external power supply		✔
– Low-voltage mains power equipment		✔
– Medium-voltage mains power equipment		✔
Dynamic brake resistors	✔	
Controls		
Visumatic® Crane Management System	✔	
Remote control		
– Wired rigging	✔	
– Radio (all functions)		✔
Camera at the boom tip		✔
Cabs		
Tower cab		
– Air conditioner	✔	
Additional design features		
Mechanical hook swivel gear	✔	
Cover for hoist		✔
Smoke detector		✔
Automatic lubrication system		✔
Lighting		
– On boom head, boom mid-section, front and rear of tower	✔	
– On tower side		✔
Surface treatment		
Customer-specific livery		✔
Customer logo		✔

More information about additional options on request.
Based on individual needs, we can supply lifting gear, such as spreaders and grabs.

Increase your operability and efficiency

In order to further increase the operability and efficiency of the Terex® Quaymate M50 mobile harbour crane, Terex Port Solutions also offers options and complete option packages in addition to the basic equipment.

Option package		
Cable reel		✔
Hook swivel gear with drive		✔
Automatic spreader		✔
Motor grab		✔

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AROUND THE CLOCK, AROUND THE WORLD, AROUND YOUR BUSINESS

LIFE CYCLE SUPPORT

For all its port technology products, Terex Port Solutions offers reliable, worldwide, customer-oriented service. This means that your Terex® and Terex® Gottwald machines are maintained at the highest possible level of availability while securing the value of your investments.

We have a dedicated, integrated, reliable service network that provides professional troubleshooting to support you efficiently. When you purchase a product bearing the Terex® or Terex® Gottwald brand, we provide a contact responsible in your region. This helps overcome language barriers and time zones and provides help quickly whenever needed.

Spare parts supply

Repairs

Upgrades and retrofits

Professional Crane Inspections (PCI)

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Service packages

Installation and commissioning

General overhauls

Crane transport

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TEREX PORT SOLUTIONS

THE BROADEST RANGE OF CARGO HANDLING EQUIPMENT

TPS-QM-EN-01

The most comprehensive portfolio of port-related products

From ship-to-shore cranes and mobile harbour cranes to reach stackers through to integrated systems for fully automated container handling or professional bulk handling – Terex Port Solutions offers you the right solution from a single source.

With our broad portfolio of products and services, sound planning and advisory expertise and a global service network, we are your go-to expert for efficient, safe and environmentally aware cargo handling in ports and terminals.

www.terexportsolutions.com

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