MODEL 5 HARBOUR CRANE
EXTRA LARGE VALUE IN CARGO HANDLING
Terex® Gottwald Model 5 harbour cranes are very powerful, electrically driven 2-rope cranes and are the largest in the medium-sized crane family from Terex Port Solutions (TPS). They combine a compact, economical design with advanced operational capabilities, offering strong lifting capacity curves with lifting capacities of up to 125 t, maximum radii of 51 m and lifting speeds of up to 120 m/min.

Model 5 harbour cranes are functional and designed for a particularly broad range of applications. In your universal or special-purpose terminal, they help you on vessels up to Post-Panamax class to handle:

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

Far-reaching handling capabilities
With Model 5 harbour cranes, you profit from a particularly wide working radius. The high tower variant also enables high container stacks to be handled on deck. With a lifting capacity of 125 t, you can load and unload a wide range of heavy loads. You can utilize a 40-t motor grab curve for handling bulk materials.

With their high operational and cost-efficient benefits, Model 5 harbour cranes provide extra large value and possess all the features you expect in a handling machine for productive and durable operation. Model 5 cranes are:

- versatile,
- easy to maintain,
- ergonomic and
- environmentally friendly.
The Model 5 harbour crane is characterized by its compact construction, functional design and very powerful – like all Terex® Gottwald harbour cranes, it combines low operating costs with high reliability.
THE RIGHT CRANE FOR EVERY

MODEL 5 TYPES – HARD TO BEAT

The mobile harbour crane technology available from TPS is not restricted to the mobile harbour crane. As the industry’s pioneer, we have used the basis of this sophisticated technology to create a modular system of harbour crane types on quays, rivers and on the open sea.

The types and variants of Model 5 harbour cranes

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<th>Crane types</th>
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Short tower

QUAYSIDE CRANES

- G HPK pedestal-mounted harbour crane
  - Stationary, customized pedestal
- G HSK portal harbour crane
  - Rail-mounted
  - Customized portal
  - Clearance height under portal and clear width to customer’s specifications
- G HMK mobile harbour crane
  - Classic chassis
  - Compact dimensions

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Available in different crane types and variants, Model 5 is a universally applicable machine which can quickly and efficiently handle cargo with a broad range of lifting gear.

**FOR FAST, EFFICIENT CARGO HANDLING**

Maximum wave height 2.5 m

- G HPK harbour pontoon crane
- Customized barge

**FLOATING CRANES**

- High tower
Torsionally stiff boom is a lattice construction with permanently fixed flange connections.

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 ensure excellent maneuverability.

Well-lit working site thanks to powerful lamps.

Safe cable control and minimum cable loading thanks to torque-regulated cable reel.

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

Optional driver cab on the chassis.
Proven H-type stabilizers – automatic propping system – stabilizer pads chosen for the particular conditions of the quay.

Visumatic® crane management system is equipped with color graphic symbols clearly represented on a screen that act as an intuitive operator guidance system.

Ergonomically designed cab affords the best possible comfort. High crane availability through enhanced diagnostics 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).

Ladders for safe ascent to the tower head. Extended platform for easy access to all rope pulleys for maintenance work.
CLEARLY ARRANGED AND EASILY ACCESSIBLE
A CLOSER LOOK AT OUR INNOVATIVE TECHNOLOGY

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

Hoist
- 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
ACCESSIBLE

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

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
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
- Housed in weatherproof, air-conditioned container
- Contains electrical equipment and control system
- Clearly divided into function groups
- Features diagnostics panel to facilitate troubleshooting
EFFICIENT, ECO-FRIENDLY AND DURABLE

ELECTRIC DRIVES

The Model 5 harbour crane is powered by electricity. The crane draws its power from either:

- the on-board diesel-powered generator or
- 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 Terex® Gottwald cranes – can provide savings in primary energy of up to 15% depending on operating conditions and crane capacity.

HYBRID DRIVE

When generating power on-board, the crane is more efficient with the Terex® 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.

Our cranes make use of low or medium-voltage mains supplies. They are equipped with the necessary units ex works or can be upgraded at a later date.
External power supply
If used with electricity from the harbour mains, your Terex® Gottwald crane offers these benefits:
- even more enhanced efficiency throughout the drive train,
- the opportunity to return electricity to the mains
- savings in overheads,
- zero exhaust emissions in the terminal from these machines,
- reduced noise emissions,
- reduced servicing costs.

3-PHASE TECHNOLOGY

Model 5 – innovative electric-drive concept
With Model 5, Terex® Gottwald has expanded its electric drive concept and taken 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,
- mitigated line-side harmonics in power supplies.
The Model 5 harbour crane is packed with smart technology. TPS design engineers always focus on safety and productivity for both the machine and the crane driver.

As standard: ergonomic, top-of-the-range equipment
Model 5 includes user-friendly functions as standard. These features include:
- 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 the best possible 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.

Many optional features enable customers to adapt their Terex® Gottwald Model 5 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 to crane drivers for repetitive load moves,
- Vertical Lift Assistant for vertical load guidance to stop the load swinging after being raised and prevent horizontal loads on the boom,
- Tandem Lift Assistant for synchronized lifts using two cranes, making full use of their maximum lifting capacities,
- web-based information and diagnostics system to record operating data and provide access to service data.
Intuitive operation through user-friendly human-machine interface
TPS develops high-performance harbour cranes – such as Model 5 – for all types of cargo. But that is not all: we also offer equipment for other points along the logistics chain – in this way, we create 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 new terminal investments and expansion projects. To help you, we employ state-of-the-art software solutions including simulation and emulation specifically for container handling.
With our Model 5 harbour cranes, we offer universal loading and unloading equipment for handling all types of cargo.

For containers, Model 5 cranes:
- serve vessels up to standard class,
- support ship-to-shore cranes in areas difficult to access, such as bow and stern, and also load and unload project cargo.

For general and project cargo, Model 5 cranes:
- feature lifting capacities of up to 125 t,
- work together with ancillary equipment such as forklift trucks.

For bulk material, Model 5 cranes:
- come equipped with motor grab,
- serve hoppers and conveyor belts, and load trucks and wagons directly.
For all its port technology products, TPS offers reliable, worldwide, customer-oriented service. This means that your machines are maintained at a high 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.
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.terexportssolutions.com

Effective date: November, 2014. Product specifications and prices are subject to change without notice or obligation. The photographs and/or drawings in this document are for illustrative purposes only. Refer to the appropriate Operator’s Manual for instructions on the proper use of this equipment. Failure to follow the appropriate Operator’s Manual when using our equipment or otherwise failure to act responsibly may result in serious injury or death. The only warranty applicable to our equipment is the standard written warranty applicable to the particular product and sale and Terex Port Solutions makes no other warranty, express or implied. Terex, the Terex Crown design, Terex Gottwald and Works For You are trademarks of Terex Corporation or its subsidiaries. All other trademarks are property of their respective owners. © 2014 Terex Corporation.