

HEAVY LIFTING REPLICAS

PART TWO

Specialist lifting equipment rises to the challenge as **Steven Downes** takes a closer look at some of the latest releases in 1/50th scale.

Main image:
Liebherr LTM1350-6.1 Mobile Crane.

Insets (left to right):
Y-Guy arms and ballast.

Tilting upper cabin.

Fully modelled driver's cabin.



When it comes to construction projects, many require specialist lifting equipment to position structures into place, from building sites where the tower crane is king to more specific requirements like wind farm erection, bridge building and heavy engineering installations. In this issue, I take a closer look at some of the latest releases in 1/50th scale.

Mobile Cranes

The mobile crane is the workhorse of the lifting industry, capable of driving to the worksite, setting up for the lift and completing the lift in a short space of time. Depending on the job

requirements, there are a number of different sized cranes, each specifically designed with the lifting capacity for the task at hand.

Liebherr LTM1350-6.1

WSI Models have produced two stunning cranes from the Liebherr range, the first is the LTM1350-6.1 which has all the fine detailing we now expect from a WSI replica while packing plenty of functionality and very good engineering. The H-pattern outriggers can be extended and have adjustable jack legs with sliding pads to provide a stable base. The underside of the chassis has replicated suspension, steering and transmission detailing which looks very convincing while

the front cabin has good interior detailing. The upper structure has a tilting cab which has a fully replicated interior with intricate detailing throughout. The telescopic boom extends smoothly locking into the extended position and each section is produced from extruded metal, giving a very realistic and scaled appearance. The rear ballast plates connect into position with grub screws used on the hydraulic cylinders to lock the boom at the required inclination. The model is supplied with detachable Y-Guy arms which bolt into place on the boom to provide greater lifting capability and this works well, with each arm housing a winch to keep the boom aligned at full extension under load. The Liebherr



Liebherr LTC1045-3.1 Mobile Crane.

decorated version of the model comes complete with a lattice jib which bolts onto the head of the boom, offering more display possibilities and this is a welcome addition while the Mammoet decorated version has a separately available luffing jib attachment, painted in matching Mammoet colours allowing different real-life configurations to be displayed.

Liebherr LTC1045-3.1

The latest innovation from Liebherr is the LTC1045-3.1, a crane specifically designed for working in tight and confined spaces, the ideal crane for industrial installations where it can be used inside buildings. The 1/50th scale model by Conrad has authentically captured the unique features of this new generation crane, with functional steering of the axles allowing several different steering modes to be demonstrated. The single cabin is mounted to a telescopic arm, allowing it to position at the front of the crane during road travel while rising up into the air during lift procedures to give the operator a bird's eye view. For confined spaces, the front compartment can be detached to reduce the length of the chassis which is a nice addition by Conrad while the model also features a pivoting boom support and side mounted jib extension which can be realistically configured and angled.

Liebherr LTM1500-8.1

The 8-axle Liebherr LTM1500-8.1 was first launched 15 years ago and as a testament to the exceptional engineering from the Liebherr designers, the crane is still available in the product range today. Not surprisingly, Liebherr have commissioned a model of this workhorse and the results are outstanding. WSI models have released an exact replica of the LTM1500-8.1 which has stunning levels of detail and realism, from the fully modelled chassis frame and underside which features individually steering axles and drive-train detailing on the driven axles to the replicated suspension frames. The two stage outriggers extend out from the chassis with lowering support jacks allowing the model to be raised off the wheels with metal base plates included in the box. During transport, the cab swivels to the rear while in lifting configuration; the cab aligns

alongside the superstructure and offers a good degree of tilting movement. Two boom configurations can be set up, either the heavy lifting 50 metre or the 84 metre and this is a great addition from WSI with three different capacity load blocks included. Also supplied in the box is a Y-Guy frame which bolts onto the main boom to offer additional posing possibilities. The rear of the superstructure is fitted with a number of small steps and an access platform while the rear ballast system has been modelled with individual plates that fit onto the main carrier. To this, the rear frame containing two additional winches are fastened while additional side ballast stones are also included, complete with locking pins to secure them in place. In the short time the model has been available, it has been well received and a number of company decorated versions of the crane have already been announced with more likely to follow.



Main image:
Liebherr LTM1500-8.1 Mobile Crane.

Insets (left to right):
Self-erect ballast.

Two telescopic booms supplied.

Main image:
Terex AC1000-9
Mobile Crane.

Insets (top to bottom):
X pattern
outriggers.

Ballast tray with winches.

Cabin storage during travel.



Terex AC1000-9

Another large 9-axle crane designed for wind farm work is the Terex AC1000-9 which has been produced by Conrad in 1/50th scale and offers some interesting new developments from the German manufacturer. Release of the replica was delayed due to continuing development work of the full sized unit and now these updates have been completed, the crane is now available. The model can be constructed in different lifting configurations, with the heavy lift option consisting of the removal of the four smallest boom sections and blocking the opening with a plastic cover. In this configuration, the SSL (Sideways Super Lift) arms can be deployed to increase the lifting capacity and this is supplied separately in the box, allowing it to be fitted as required. Three metal hook blocks have been included, a single pulley hook, one with 5 pulleys and a large 9 pulley block, all housing individually cast rolling pulleys. The chassis is fairly basic in construction with each axle featuring independent steering while all but one of the axles has a functioning suspension system. The model is engineered such that it is possible to remove the outrigger legs for transport to reduce weight and once removed, plastic safety panels can be fitted. The X pattern outriggers are telescopically extending with each jack housing an internal thread so, as they are lowered, they look very realistic while plastic pads on the tips have a pivoting motion to sit perfectly flat on the included metal crane

mats. During setup, two support beams are used to hold the winch housing while the crane is self rigged and this works well on the replica, with individual ballast plates fitting into the trays on each side while metal walkways with integrated safety railings fit around the winch housing assembly, finally pinning into place on the mounting posts of the superstructure. The tilting operator's cabin is mounted to a pivoting arm allowing it to rotate to the rear during transport and has an accurately modelled interior. Conrad has just released a Steil decorated version of the crane, finished in a black & yellow colour scheme.



Faun ATF 70G

The Faun ATF 70G is a 4-axle mobile crane, here decorated in the Mammoet company decoration. Produced by WSI Models in 1/50th scale, the levels of realism are very good with opening covers revealing interior detailing, working outriggers which can lift the chassis off the ground, complete with floor mats and hidden screw thread and a fully replicated underside including steering axles, drive-train and simulated suspension. The telescopic boom can be set at any angle with an adjustable grub screw, and an adjustable luffing jib is included, storing on the side of the boom when not in use.

Main image:
Faun ATF 70G Mobile Crane.

Insets (top to bottom):
Opening engine covers.

Replicated front cabin.



Tower Cranes

Tower cranes come in various different shapes and sizes, from fast erecting units and self propelled cranes to stationary lattice mast cranes which are ideally suited for the general lifting requirements on building sites and high rise construction projects.

Liebherr 81K

The latest 1/50th scale model of the Liebherr 81K tower crane from NZG is a very nicely engineered replica with a host of functionality. The base features four pivoting and height adjustable jacking legs which provide a firm footing for the crane while the superstructure can rotate through 360 degrees. The crane is designed to be fast erecting and the various linkages and bars all fold authentically so that, as the main erection winch is operated, the crane begins to rise and unfold. This works rather well although the winch is a little stiff to turn by hand. Luckily, the winding key has a slot allowing the use of a flat bladed screwdriver. As the mast rises, the jib folds out with accurately scaled metal wire used for the rear equaliser. The chassis incorporates a counterweight placement area which requires the selection of ballast plates to be fitted to prevent the model falling over once erected. These are shaped with inset metal steps which look realistic, complete with the embossed Liebherr name on each plate. Once erected, the trolley slides smoothly along the jib with a separate winch controlling the lifting block. The lattice framework incorporates an operator's cabin which has tinted windows allowing the internal lattice structure to be seen, along with the fitted seat. The crane is available on its own, or as a set with additional road transport bogie wheels and a 4-axle truck decorated in Liebherr markings. The truck has a rear mounted and functional HIAB

Main image: Liebherr 81K Tower Crane.



Insets (top to bottom):
Authentic operation chart.

Integrated cabin.

knuckle boom crane with extending outriggers and a low-sided loading deck area, ideal for transporting the crane's ballast. The transport system for the 81K consists of a two axle rear dolly which bolts onto the superstructure of the crane while a front single axle module connects to the hooks on the crane's rotating undercarriage. The axle features working steering with a pivoting and extending tow bar.



Crawler Cranes

Track mounted cranes are another option when it comes to lifting, while they can also be used for other applications including foundation work, dredging and demolition tasks.

Liebherr LR1600-2

The Liebherr LR1600-2 track mounted lattice boom crane is another exceptional release from NZG with a lot of thought and engineering going into the creation of a truly realistic replica. Packed into a rather large box, the model contains everything needed

to erect various different configurations with detailed instructions given for the full setup which includes Derrick back mast, wheeled counterweight trailer and luffing jib. Fine detailing on the model includes photo-etched walkways and metal safety railings fitted to the boom and derrick mast sections, with side platforms and metal safety railings also fitted to the main chassis. The undercarriage track frames can be detached for a true transport configuration while ballast holders and mesh platforms with metal access steps also fit onto the undercarriage frame. All the pulleys are individual and made from metal so rotate rather well, especially under load.



Above (left to right):
Highly detailed wheeled ballast trolley, rotating and pivoting wheels and access platforms with mesh floor plates.

Mesh walkways and access steps included.

Plenty of boom sections provided allowing different configurations to be erected. Metal pennants and two hook blocks included.

Right:
Liebherr LR1600-2 Crawler Crane.



Sennebogen 690HD

The Sennebogen 690HD crawler lattice crane has been released in two different configurations, one as a foundation machine with diaphragm wall grab and the other as a dragline with authentic bucket. Both are produced by ROS in 1/50th scale and have different boom configurations and work tools while sharing the same main body, undercarriage and cabin castings. The undercarriage is nicely engineered with functionally extending track frames, each fitted with linked metal track pads. The upper structure rotates through 360 degrees with non removable ballast plates modelled on the rear, complete with small safety chains. One great feature on the model are the three working winches which are located in the heart of the upper works, with a removable side panel hiding the holes for the winding keys. Operation is smooth and it is possible to simulate the complete load/dump cycle, clipping the cover back in place once finished. The cabin has a modelled interior which looks authentic, while safety railings are located around the upper edge of the engine housing.

Right:
Sennebogen 690HD Crawler Crane.

Below (left to right):
Cleverly hidden winding keys and winch access.

Good interior cabin detailing.



Hitachi Sumitomo SCX1500-A3 Crawler Crane.

Inset:
Authentically strips down into transport configuration.



Hitachi Sumitomo SCX1500-A3

The Hitachi Sumitomo SCX1500-A3 is a new release in 1/50th scale from Replicars and accurately captures the functionality of the crane very convincingly, supplied in component form allowing it to make a realistic transport load. With detachable track frames, rotating cabin and separate ballast plates fitting to the undercarriage and superstructure, the crane accurately captures the operational features of the full sized unit, complete with a very short heavy lifting lattice boom with functioning winches powering the hook block and a-frame. The colour scheme has been applied well with accurately applied decoration and crisp surface casting details of the various door panels and handles while a number of safety mirrors are also included and need adding to the model. While the SCX1500-A3 is reviewed here, the model is also available as a SCX1200 which is the same castings with differences to the printing and the omission of the undercarriage ballast plates. **DC**

i In part three of this fascinating series, Steven will be digging up details on earthmoving equipment. The next instalment will appear in the February 2014 issue.