CONSTRUCTION REVIEW

Conrad Liebherr LG1750 1:50

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The Liebherr LG1750 is a new addition to the heavy lifting range of products featuring a lifting capacity of 750-tonne that combines the flexibility of a crawler crane with the mobility of a road crane. The crane is modular in design with the slewing platform, boom and jib shared from the LR1750 crawler crane with a specially designed rugged and compact 8-axle chassis with star pattern folding and extending outriggers giving the crane superb stability over an area of 16 square meters. The main 680hp, 8-cylinder D9508 diesel engine and TC-Tronic automatic transmission with 12 forward and two reverse speeds provide the power to move the crane with a hydro-pneumatic suspension system providing a smooth ride whilst the second D9508 engine powers the crane slewing motors and lifting winches. The suspended ballast tray can hold an impressive 400-tonne at a radius of 20 metres whilst the side mounted trays hold an additional 170-tonne.

Conrad has produced a highly detailed 1:50 scale replica of this enormous crane packed into a large and heavy box. Removing the outer cardboard sleeve reveals three large interlocking polystyrene trays holding all the parts needed to erect the crane into one of several configurations. One of the things I like about the way Conrad produce these models is that the collector has the choice of how they want to display the finished model. The boom sections are strong and crisply cast with plastic push fit pins used to join the sections together. The instruction sheet supplied with the model gives pictorial diagrams on the stages of construction and how the various winches are rigged although you should allow at least 5 hours to fully construct the model with luffing jib and hook blocks all rigged.

The shape of the carrier with its 8 axles and huge outriggers with low mounted cab give the machine a very rugged and unusual appearance and this has been fully captured on the model. The large tyres have a rugged tread pattern moulded into the surfaces and each axle features independent steering. The centre of the chassis houses the main slewing ring casting where the upper structure connects to the chassis. The design of the coupler has been nicely engineered to allow the two sections to be separated easily and yet there is enough strength to keep everything rigid. The front section houses the engine and a silver exhaust stack along with air filters which are mounted to the top of the engine housing along with diamond plate textured floor panels.

The four enormous outriggers are connected to the chassis with large, stiff hydraulics which allow them to hold the position chosen. The two-stage outrigger beams extend smoothly and click into

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place when extended and the main jacks have been engineered to hide the screw thread within which is a very welcomed touch. When extended and lowered, the stabilisers are capable of holding the weight of the carrier without any noticeable droop of the arms. The front cab is mounted low to the ground with access steps cast into the lower frame along with integrated headlights with plastic lenses, printed windscreen wipers on the front windows and amber warning beacons mounted to the cab roof. The interior has been replicated with drivers seat and wrap-round control panel all visible through the clear windows with the dominant radiator cooling system rising up behind the cab.

A large number of counterweight slabs are included in the box and there are certainly more than you would need to display the model. Each one fits together and they are placed in the side mounted trays and suspended counterweight structure.

The box also contains a number of boom sections to allow the crane to be erected with full jib, derrick boom and suspended counterweight tray. The main boom base has two winches mounted into the holders and all the winches need loading with rope which is supplied in the box on five plastic spools. It is much easier to load the ropes before assembling the model and the supplied winding key can be used with a powered screwdriver to make the task much easier. Two full length main boom sections are supplied along with a single length derrick boom section which all pin together using the push fit plastic pins. Some of these can be a little tight to insert so what I tend to do is gently remove a little paint from the holes in the boom with a small diameter round file. This also has the benefit of making it a little easier to dismantle when required.

Other components supplied in the box include four plastic stabiliser pads which fit to the ends of the jacks, two metal walkways, complete with safety rails which fit to the upper structure and two hook blocks, a 250-tonne 10 sheave hook and a 500-tonne double hook block with side fitting weights. The addition of the walkways gives the model a different look to the original LR1750 and they slide into place easily once the crane has been assembled and the cab positioned into the "work" position. The counterweight holders hang onto the cast lugs of the rear frame and need to be fitted before the suspended counterweight arm is fitted. The crane engine is located at the rear of the upper structure and engine cover panels, complete with fine grill texture, have been added both to the underside and top side of the engine bay with exhaust silencers mounted to each side of the chassis.

The engineering of the pennant lines has changed on the LG1750 and each pennant is pinned together with a small plastic pin. This gives the pennants more strength and makes them easier to assemble and join during assembly of the model. The derrick boom is connected to the A frame using the pennant lines and spring loaded cylinders keep the mast tensioned to prevent the ropes jumping off the pulleys. To make assembly easier, it is possible to assemble the derrick boom and reeve the pulley block which connects to the tip of the main boom in situ on a bench. Once assembled, the derrick can be connected to the main boom and this also uses two cylinders with spring loaded pistons to keep tension.

The suspended counterweight tray is pinned into position and linked to the derrick boom tip with more pennant lines. The arms that connect to the frame can be extended to move the tray away from the chassis and rest against the rear frame of the crane when fully lowered which ensures that, when fully loaded with counterweight pieces, most of the weight is taken off the pennant lines to prevent them failing.

Once all the booms have been assembled, the ropes need to be rigged over the plastic pulleys. This is a time consuming task as the pulleys are loose fitting and the rope has a tendency to jump off the pulleys during the rigging process. Patience and a steady hand are essential and the hook block is the most time consuming part of the assembly, consisting of two inter-connected 250 ton blocks, each of which is connected to their own winch in the main chassis housing. The rope travels through the derrick boom before starting the rigging and once complete, both winches need to be operated at the same time to raise and lower the hook. If the luffing jib has been assembled, the spare 250 ton hook can be rigged to the pulleys in the boom tip.

The version of the crane reviewed here is available to the collector market and is limited in availability. A new version of the model has been produced which is exclusive to the Liebherr Online Shop and does not have the derrick, luffing jib or suspended ballast tray components. This new version allows the crane to be erected into the SLH configuration typically used for windmill erection and consists of a new set of boom sections and extended ballast frame. A Felbermayr version of the model presented here is also available along with a matching LR1750 in a very limited production run.