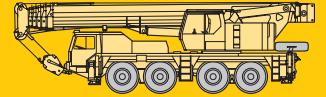


# Product advantages

## Mobile crane 1090/2



**Max. lifting capacity: 90 t at 3 m radius**

**Max. height under hook: 72 m with biparted swing-away jib**

**Max. radius: 56 m with biparted swing-away jib**

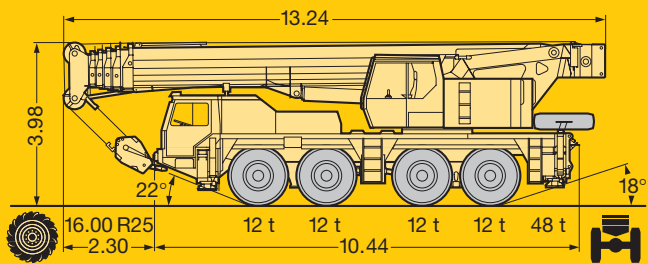


### Performance profile of the LTM 1090/2 at a glance.

- Outstanding range of lifting capacities; counterweight versions 1.2 t, 3 t, 7 t, 12.2 t and 20 t
- Robust 300 kW/408 h.p. Liebherr turbo-charged Diesel engine (Euro II)
- Compact and manoeuvrable due to all-wheel steering, smallest turning radius 7.8 m
- Travel control and setting on outriggers from crane cab (optional)
- Convenient electric/electronic crane control with integrated LICCON system
- 6-section telescopic boom of utmost stability, length 11.7 m - 52 m and 10.8 m - 19 m long biparted swing-away jib
- New rapid-cycle telescoping system "Telematik" with one telescopic ram interlocking laterally the telescope end sections. The end sections of the telescopes are interlocked with one another by pins. Automatic and manual telescoping practicable.
- LICCON, the most modern crane computer system world-wide, with informative, monitoring and control functions
- Diesel engine, slewing rim, slewing gear, winches and hydraulic pump are self-manufactured, quality checked components
- The LTM 1090/2 is manufactured by Liebherr within the scope of a quality assurance system according to DIN ISO 9001

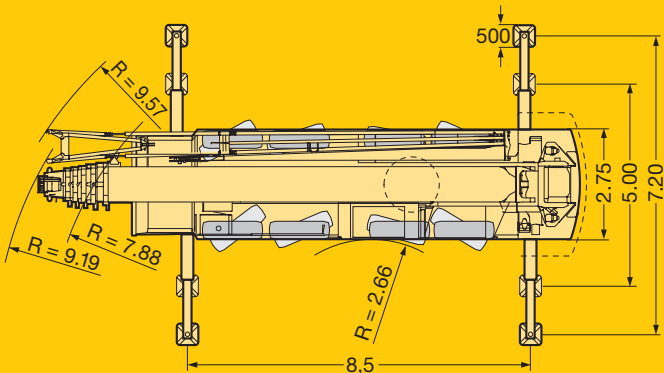
# LIEBHERR

The better crane.



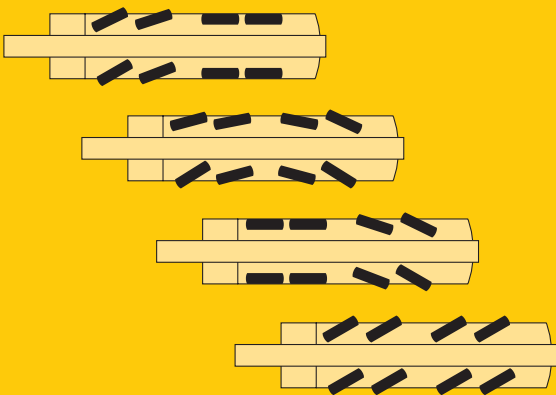
## Compact, manoeuvrable and weight-optimized.

- Overall length just 13.24 m, length of carrier 10.44 m only
- Large overhang angles, up to 22°
- Small turning radius of 7.88 m with all-wheel steering
- 48 t total weight, incl. 1.2 t counterweight, drive 8 x 8, TELMA-type eddy current brake, 16.00 tyres, biparted swing-away jib of 19 m, 50 t hook block
- 2 optional tyre sizes
  - 14.00 R 25 - vehicle width 2.75 m
  - 16.00 R 25 - vehicle width 2.75 m



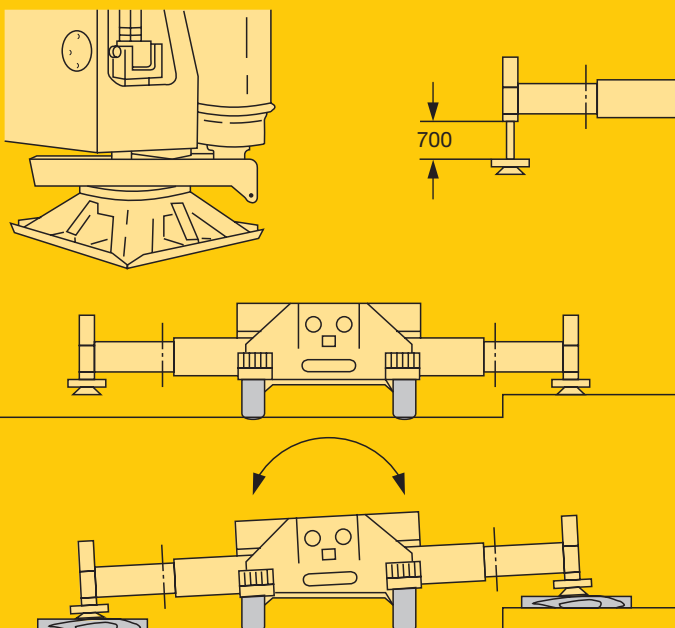
## Variable drive and steering concept.

- Drive 8 x 6: axles 1, 3 and 4 driven; 3rd and 4th axles are driven for road travel, 1st axle activatable for rough-terrain operation
- Drive 8 x 8: all axles driven; axles 3 and 4 driven for road travel, 1st and 2nd axle activatable for rough-terrain operation
- Standard all-wheel steering, 3rd and 4th axle also steerable independent of axles 1 and 2 (crab steering), the additional hydraulic steering is mechanically locked for road travel. All steering versions can also be controlled from the crane cab (optional).



## Setting crane on outriggers - quick, convenient and safe.

- Variable supporting basis
  - Outriggers retracted
  - Supporting basis 5 m x 8.5 m
  - Supporting basis 7.2 m x 8.5 m
- Supporting pads remain on rams and are protected by splash guards
- Travel of supporting rams 700 mm
- 2 x 8° lateral inclination of carrier and crane superstructure
- Electronic inclination display
- Supporting pressure display and automatic sliding outrigger control (optional)
- Outrigger control from crane cab (optional)
- Illuminated and dirt-protected reflecting levels
- Operation of outrigger system in accordance with the rules for the prevention of accidents



# The LTM 1090/2 - more efficient through advanced technology.

## Torsional rigid telescopic boom.

- New oviform boom cross-section of particular inherent stability
- Maintenance-free polyamide slide pads of telescopes
- First-rate lifting capacities, e.g.
  - 25.6 t at 10 m radius
  - 9.4 t at 20 m radius
  - 4.7 t at 30 m radius
  - 2.4 t at 40 m radius
  - 1.4 t at 50 m radius
- Telescoping with approx. 20 % of rated load practicable
- Telescoping by rapid cycle approx. 300 s for boom length 11.7 m - 52 m

## Modern and powerful carrier drive.

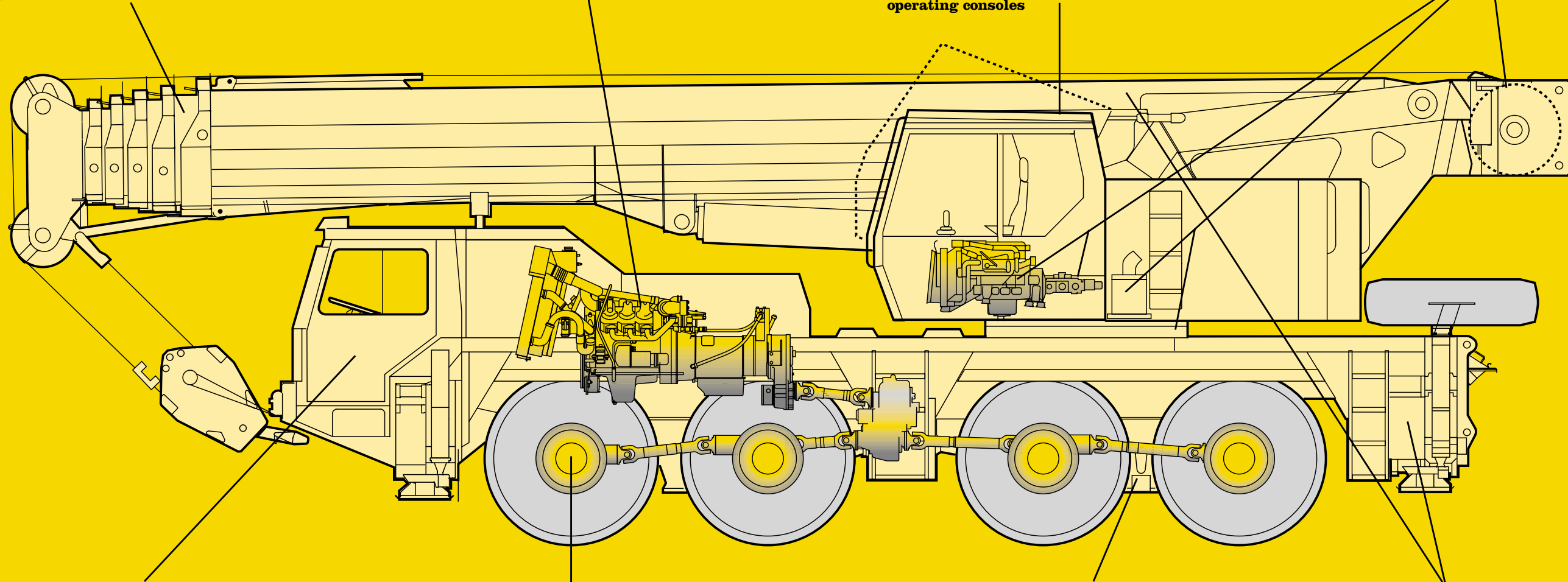
- 6-cylinder Liebherr turbo-charged Diesel engine of 300 kW/408 h.p. (Euro II), robust and reliable
- Entire exhaust gas system of stainless steel
- Allison automatic transmission with torque converter, electronic control, proved and well tested serial transmission, 5 forward and 1 reverse speed, rough-terrain ratio
- Wear resisting TELMA-type eddy current brake, standard equipment
- Max. driving speed 77 km/h, max. gradability approx. 60 %

## Spacious crane cab with armrest-integrated control levers.

- Galvanized crane cab with internal sound and heat insulating panelling, tinted panes allround, front knockout window with large parallel windscreen wiper, large skylight of bullet-proof glass with large parallel windscreen wiper, roller blind on front window and skylight, space saving sliding door
- Cab tiltable backwards by 20°
- Operator's seat with pneumatic lumbar support
- Convenient armrest-integrated controls, horizontally and vertically adjustable and inclinable master switch consoles and armrests, ergonomically inclined operating consoles

## Liebherr components, reliable and easy-to-service.

- Crane engine: 4-cylinder Liebherr turbo-charged Diesel engine of 125 kW/170 h.p., robust and reliable, located adjacent to crane cab, thus less noise pollution; exhaust gas system of stainless steel
- Slewing rim, slewing ring, winches and the axial piston variable displacement twin pump are self-produced Liebherr components and are specifically matched for the application on mobile cranes
- Centralized lubricating system for slewing rim, boom bearing application and bearings of winches and luffing ram



## Highly comfortable driving cab.

- Galvanized driving cab over width of vehicle, with internal sound and heat insulating panelling, comfortably equipped
- Air-cushioned driver's seat with pneumatic lumbar support
- Standardized and ergonomically located operating and control elements
- Steering wheel adjustable in height and inclination
- Heatable exterior mirrors

## Outstanding carrier technology for on-road and off-road application.

- Weight-optimized axles, almost maintenance-free, made of high-tensile steel, perfect track keeping and lateral stability due to special control linkage arrangement
- The maintenance-free steering knuckles are steel mounted
- The perfected and robust axles are manufactured in large series and are troublefree components
- The cardan shafts are maintenance-free; easy and quick fitting of the cardan shafts due to 70° diagonal toothing and 4 fixing screws

## Niveaumatik suspension - preserving crane and roads.

- Maintenance-free suspension rams, free of lateral forces; protected by synthetic tubes
- Level adjustment (suspension on "travelling mode") can be activated automatically by push-button from any position
- Stable cornering ability due to cross mounting of the hydropneumatic suspension
- Axle locking system (locking of suspension for travelling with load) integrated into suspension ram and controllable from driving cab
- Travel of suspension system +150 mm and -100 mm respectively

## Weight-optimized steel structure.

- Carrier, superstructure and telescopic boom in light-gauge design, calculated by the FEM method, weight-optimized and of outstanding torsional rigidity
- Tensile property of material with high safety factor through the application of STE 960 (960 N/mm<sup>2</sup>) for all supporting members

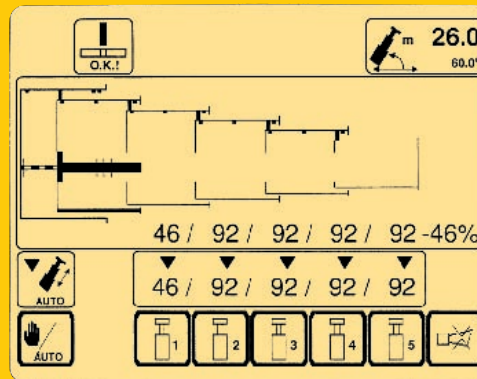


## Lifting loads - precise and safe.

- 6-section, 52 m long telescopic boom and 19 m biparted swing-away jib for 72 m height under hook and 56 m radius
- Rigging of swing-away jib practicable at 0°, 15°, 30° or 45°, hydraulic rigging aid
- Optimal utilization of telescopic boom through 23 different telescoping options
- The LICCON system calculates the optimal load curve at any boom length
- Simple and quick rereeving of hoist rope through modern self-locking rope dead end connection

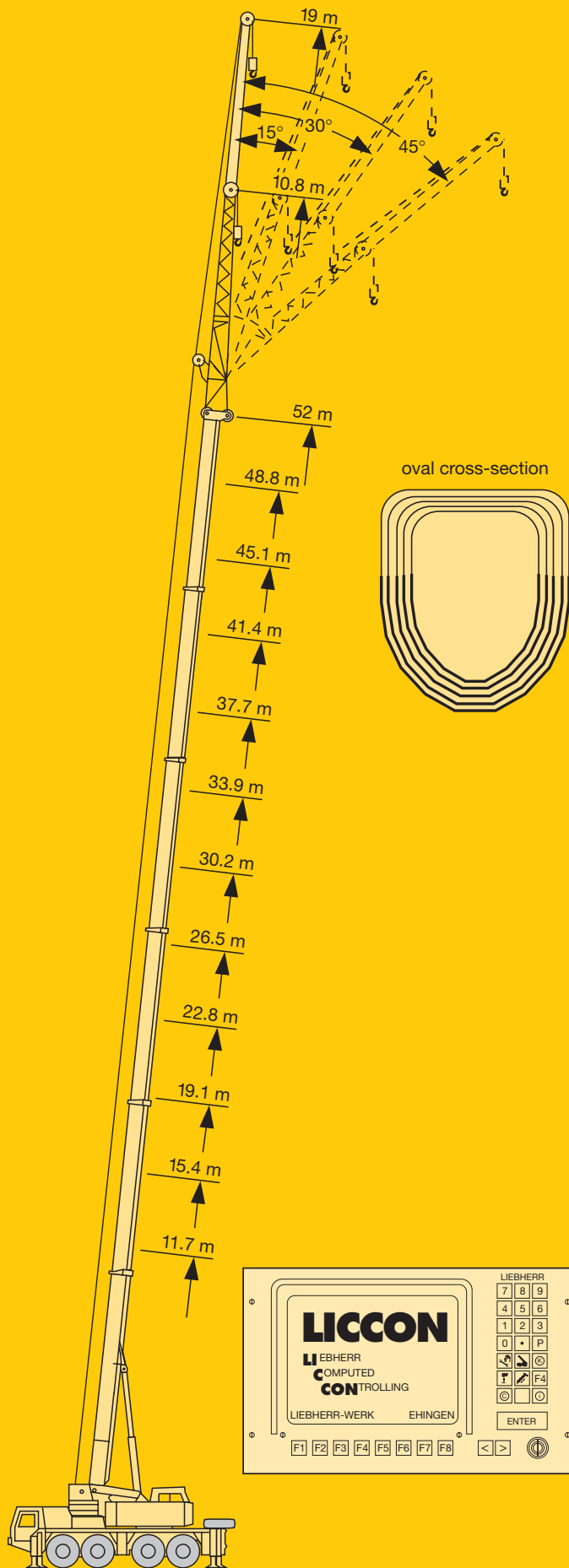
## LICCON assisted telescoping system.

- Telescoping by means of a single action hydraulic ram with a pneumatic driving pin
- Telescoping procedure controllable on the LICCON monitor, assisted by a convenient operator's guide, precise approach of interlocking positions
- Loads telescopable are indicated on the operating display
- Rapid cycle telescoping system with "automatic mode", i.e. automatic telescoping to the boom length desired
- Particularly light-weight telescoping system, thus increase of lifting capacities, especially with long booms and at large radii
- Automatic cushioning in end positions during telescoping and retracting for preserving structural members



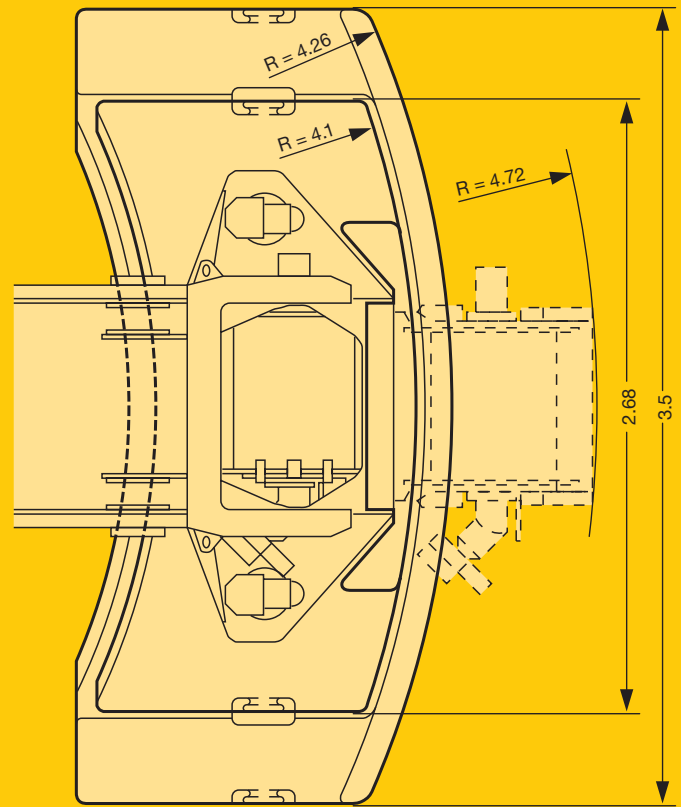
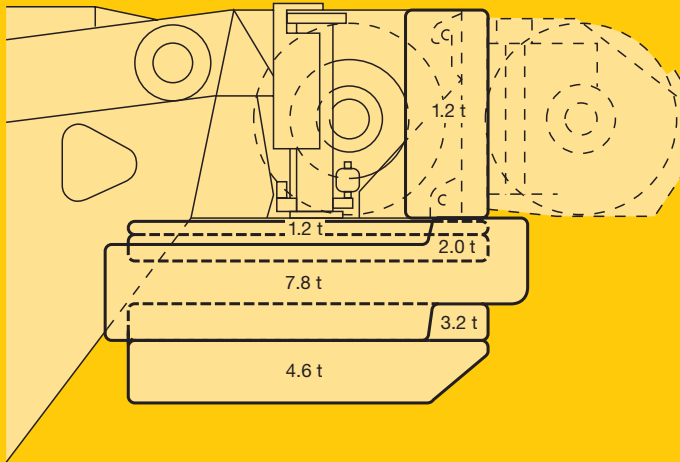
## LICCON computer with SLI, test system and PLC control.

- Setting of crane configuration by convenient conversational mode functions
- Reliable acknowledgement of crane configuration set
- Representation of all essential data by graphic symbols within the operating display
- Integrated wind speed control (optional)
- Reliable cut-off device in the event of exceeding the permissible load moments
- Indication of lifting capacities for any boom intermediate length
- Winch indications for load hook course with zero adjuster for ultra-precise lifting/lowering
- Test system for servicing, providing the facility of checking all sensors and consumers within the system on the monitor
- Convenient programmable logical control (PLC) for winches, slewing gear, luffing and telescoping motions



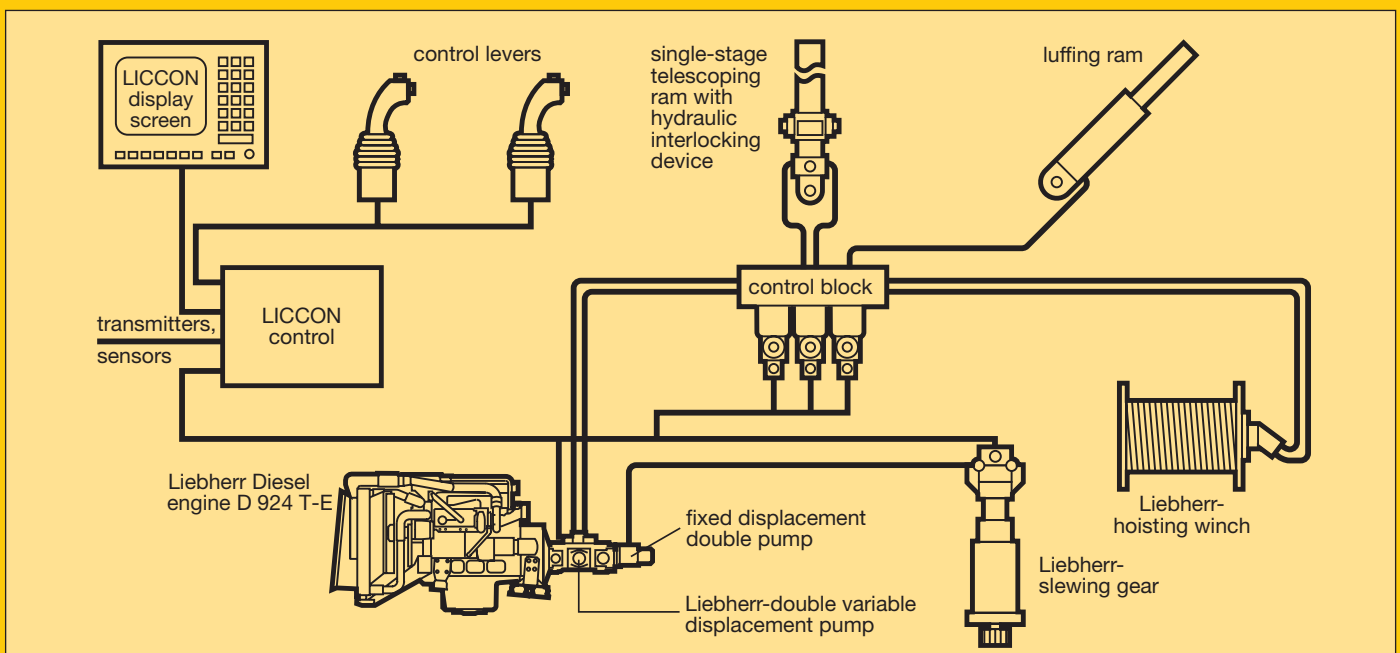
## The ballasting system for more flexibility.

- Counterweight variants: 1.2 t, 3 t, 7 t, 12.2 t, and 20 t, thus a wider range of application facilities
- Handling of counterweight controlled from crane cab; not requiring the assistance of an auxiliary crane
- Compact counterweight dimensions; e.g. 12.2 t counterweight have a width of 2.68 m only



## Electric/electronic crane control with integrated safe load indicator.

- Control of winches, slewing gear as well as of luffing and telescoping motions via LICCON system
- Summation regulated control, i.e. both pumps can be switched to one consumer
- Load sensing system with electrical activation, four working motions can be performed independently from one another
- High-speed activation also possible during a working motion
- Hoisting/lowering, luffing and slewing speeds preselectable in 6 steps
- Extremely short response times when initiating working motions
- Functional test of all essential components by test system



Subject to modifications

TP 235a. 1.97

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