



## **Compact crane Product advantages**

# **LTC 1055-3.1**

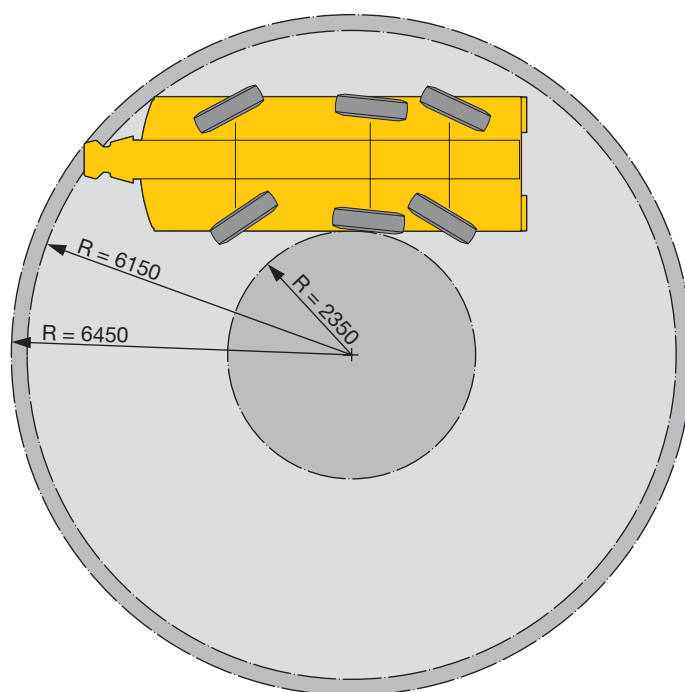
**max. load capacity: 55 t**  
**max. height under hook: 50 m**  
**max. radius: 46 m**



# **LIEBHERR**



- Overall length 8,38 m  
Carrier 7,06 m  
Carrier width 2,54 m
- Smallest turning radius by active rear-axle steering, 6,15 m over carrier, 6,45 m over telescopic boom
- Minimum clearance height 3,2 m
- Overhang angle front up to 21°, rear up to 20°
- Total weight 36 t, equal axle load distribution (12 t) through hydropneumatic suspension "Niveaumatik"
- 12 t axle load incl. 4,4 t counterweight and biparted swing-away jib







**Variable steering concept with "active rear-axle steering"**

Axles 2 and 3 are set up as "active rear-axle steering", 5 steering methods are preselectable by fixed programs (P)

**P1: On-road steering**

Axle1 is steered mechanically with hydraulic assistance with the steering wheel. Axle 3 is steered actively speed-dependent according to the cramp of the front axle, and set and locked to straight displacement at a speed over 25 km/h. The change of the steering angle according to the speed results in a precise and stable driving quality at increased speeds, the tyre abrasion is reduced and the maneuverability clearly improved

**P2: All-wheel steering**

Axles 2 and 3, dependent on the steering angle of the 1st axle are cramped by the steering wheel so that the smallest turning radii can be performed

**P3: Crab steering**

Axles 2 and 3 are cramped conveniently by the steering wheel in the same sense as axle 1

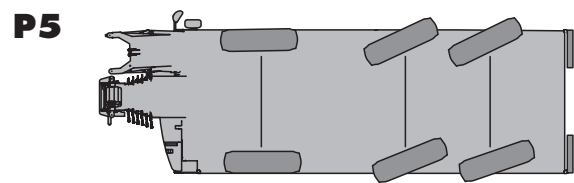
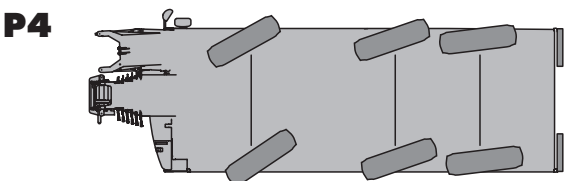
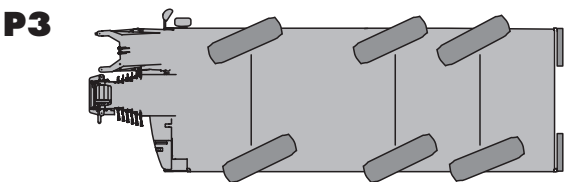
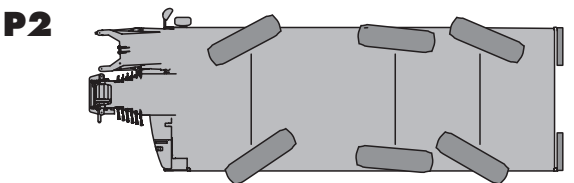
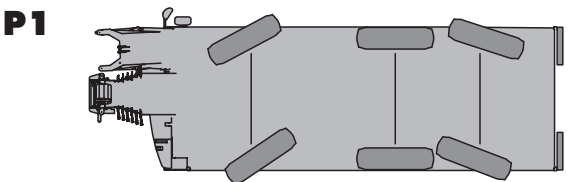
**P4: Steering without swerving out**

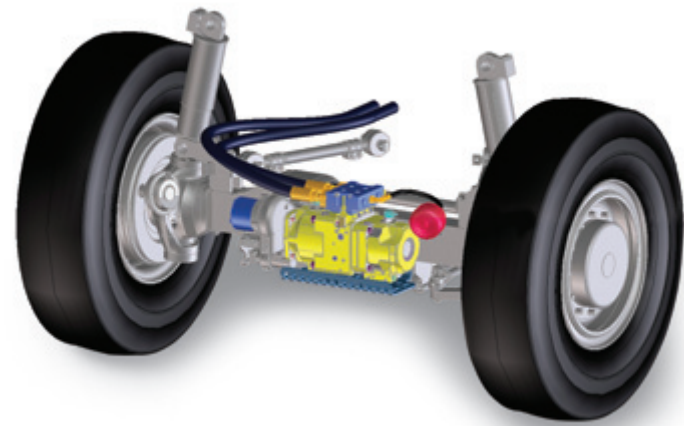
Axles 2 and 3 are steered according to the cramp of the 1st axle to prevent a swerve out of the carrier rear

**P5: Independent rear-axle steering**

Axle 1 is controlled by the steering wheel, axles 2 and 3 are steered by the left control lever, independent of the cramp of the 1st

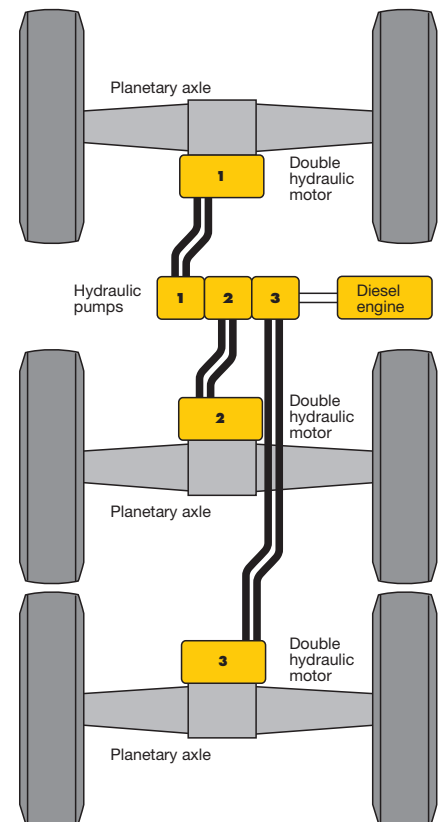
- A failure in the rear-axle steering would render it ineffective and the rear-axle is set to straight displacement by the centering rams
- Two independent hydraulic circuits with wheel- and engine-driven hydraulic pump ensure maximum safety
- Two self-contained control processors (by existing E/A modules) and diversified sensoriel system
- The entire know-how of the "active rear-axle steering" by Liebherr





## Hydrostatic displacement drive

- Engine on the superstructure for maximal weight exploitation, the engine serves for counterweight
- Powerful, 6-cylinder Liebherr turbo-charged Diesel engine type D846 A7, 350 kW/476 h.p, exhaust emissions acc. to 97/68/EG stage 3 and EPA/CARB Tier 3, robust and reliable, modern electronic engine management
- Stepless hydrostatic displacement drive; 3 axial-piston variable displacement pumps, one pump per axle are driven by a 3-shaft pump distribution gear within a closed oil circuit; control by a modern electronic engine/pump/hydraulic motors management
- Permanent all-wheel drive; no restraint between the axles due to the elasticity of the hydraulic drive, thus reduced tyre abrasion
- Activatable off-road ratio to increase the traction force
- Continuous speed range from 0 – 75 km/h without interruption of the traction force
- Sensitive maneuvering
- Abrasion-proof brakes with hydraulic retarder
- Tempomat, braking automatic, ABV (anti-lock device) and ASR (anti-skidding control)
- All axles are steered and driven hydrostatically by hydraulic, swivelling twin motors, differential locks for transverse locking, 2-step axle intermediate gear for on-road and off-road speed
- All axles with hydropneumatic suspension and lockable hydraulically
- Maintenance-free suspension rams, not exposed to lateral forces, piston rod protected against damage by plastic pipe

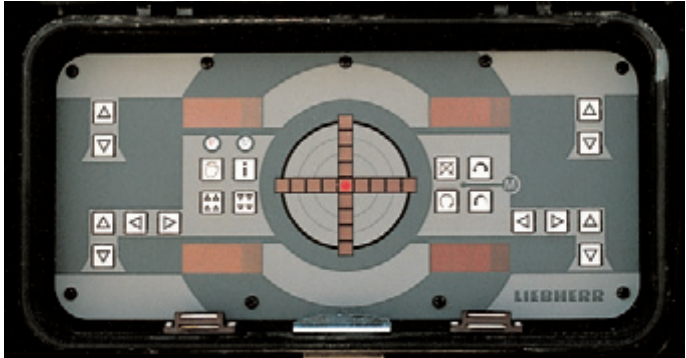
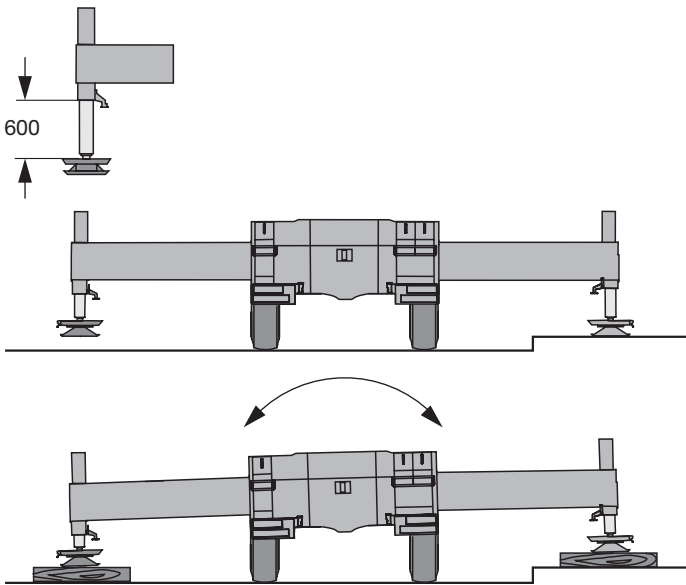






**Setting crane on outriggers - quick, convenient and safe**

- Variable supporting basis
  - Outriggers retracted
  - Supporting basis 6,26 m x 6,26 m
  - Supporting basis 4,5 m x 6,26 m
- Fix-mounted supporting pads with splash guard
- Travel of supporting ram of up to 600 mm
- Level control of the outriggers, all-automatic levelling of the crane during the supporting procedure by "push-button control"
- 2 x 7° lateral inclination of the carrier and crane superstructure
- Control panels on either side of the carrier, with membrane keyboard, electronic inclination indicator, push-buttons for ENGINE/START/STOP and speed control are illuminated and lockable
- Control of the outrigger system even from the crane cab is a standard feature
- Operation of the outrigger system in accordance with the rules for the prevention of accidents
- Illumination of the supporting area by 4 incorporated projectors



**Displacement of the crane with load**

- Telescopic boom length up to 12,6 m, radius up to 9 m, load capacity up to 24,5 t
- Axle lock (locking of the suspension) can be controlled from the crane cab
- Sensitive displacement through hydrostatic displacement drive
- Loads displaceable over rear or 360°
- Loads can be deposited on the carrier



### Comfortable carrier and crane cab

- Crane cab in corrosion-resistant galvanized sheet steel version, powder-coated, with sound and heat absorbing internal panelling, interior of modern design, tinted windows, front knock-out window with large windscreen whiper with intermittent whipe/wash device, skylight with large parallel whiper and and whipe/wash device, roller blind on front window and skylight
- Greenish tinted front and side windows for heat absorption
- Pneumatically lateral extendable footboard for safe get off/access to the carrier
- 1 working projector of 70 Watt at the cabin front
- Pneumatically suspended crane operator's seat with pneumatic lumbar support, headrest and incorporated 3-point safety belt
- Operator-friendly armrest-incorporated controls, vertically and horizontally adjustable control lever consoles and armrests, ergonomically adjustable operating consoles
- Ergonomic control levers with integrated winch rotation and slewing gear signalling device
- Additional heater with engine preheating
- Automatic air-conditioning system
- Cab mounted on 4 guide rods and 2 shock absorbers with incorporated suspension
- Front-mounted swinging door for convenient access to the cab; additional swinging door, rear-mounted for access to the stow-away compartment or to the electric components respectively







**Colour monitor for displacement and crane mode**

- Optimal incorporation of the colour monitor into the instrument support; no obstruction of the operator's view
- Display of all essential operating data for the displacement and the crane mode on the LICCON screen
- Usual convenient control by function keys and membrane keyboard



**Touch displays for the selection of operating functions**

- The touch displays are incorporated into the armrests
- The programs are preselected by function keys and controlled by the touch function
- The right touch display serves for the control of the programs such as on-road displacement, displacement incl. crane operation, steering programs, outrigger system and suspension/Niveaumatik
- The left touch display serves for the control of the programs such as ballasting, working projectors, heating and automatic air-conditioning system
- Working projector: Manual, automatic load tracking or position control, i.e. the projector remains fixed on the preselected point in spite of raising or lowering of the telescopic boom



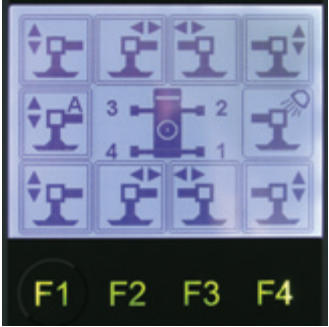
On-road displacement



Displacement with crane operation



Steering programs



Control of outrigger system



Suspension



Ballasting

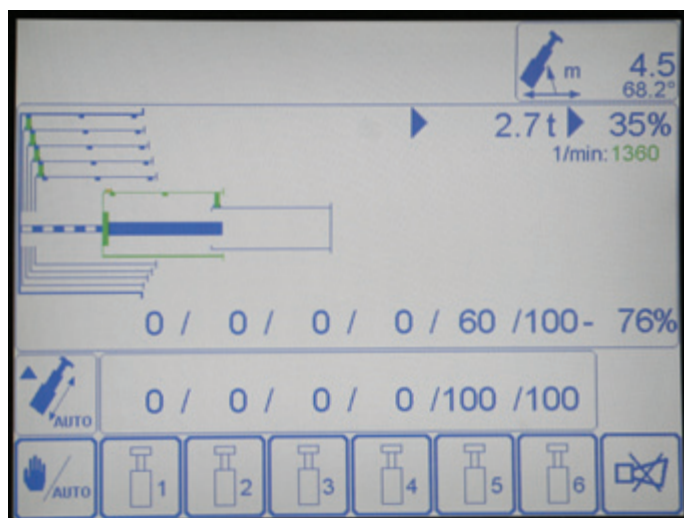
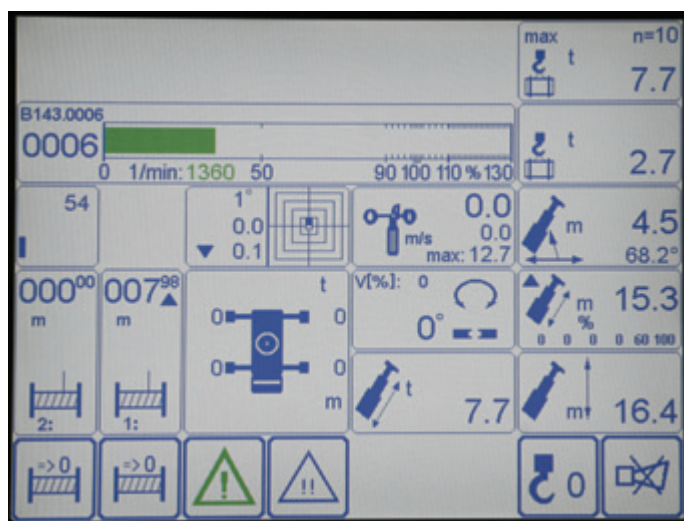
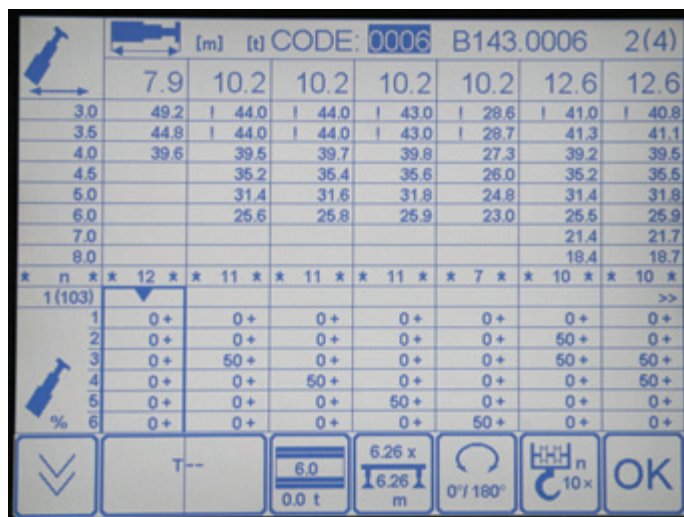


Working projectors



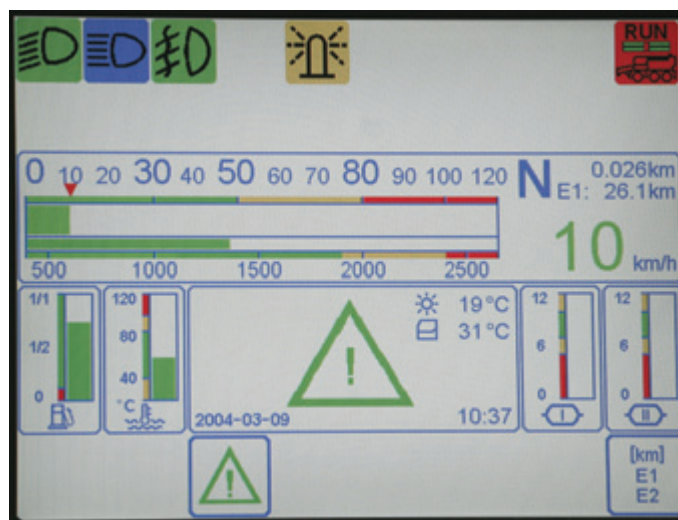
Heater, automatic air-conditioning





## LICCON configuration, operating and displacement program

- Standard application programs: Safe load indicator (LMB), configuration program with configuration picture, operating program with operation picture, telescoping program with telescoping picture, control parameter program, test system; optional features such as work area limitation and the LICCON work planner
- Setting of the configuration by convenient interactive functions
- Safe and clear acknowledgement of the adjusted configuration
- Representation of all essential data by graphic symbols on the operation picture
- Integrated wind force control (optional)
- Supporting force display (optional)
- Reliable cut-off device when exceeding the admissible load moments
- Load capacity values for any boom intermediate length
- Winch indications for precise lifting/lowering of the load
- Standardised digital displays for the displacement mode such as speed, lighting, engine temperature, reservoir contents



## LICCON-assisted telescoping system

- Telescoping by single-stage hydraulic ram with hydraulic driving tenons (patented internal interlocking system)
- Telescoping procedure controllable by convenient operator's guide on the monitor, precise approach of the interlocking positions
- Telescopable loads are displayed on the LICCON operation picture
- Rapid-cycle telescoping system with "automatic mode", i.e. all-automatic telescoping to the required boom length
- Very compact and light-weight telescoping system, thus increased load capacities, especially with long booms and large radii
- Automatic cushioning in end positions during boom extension and retraction for the preservation of the structural members





**Mounting of 4,4 t counterweight (12 t axle load)**

- Slew superstructure with the fix-mounted counterweight (2,5 t) and pick up the counterweight deposited on the carrier front (1,9 t) (fig. 1 – 6)
- Counterweight radius just 3,35 m



1



2



3



4



5



6

**Mounting of 10,4 t counterweight (6 t additional counterweight)**

- Attach additional counterweight 2,5 t to the counterweight plate 1,9 t, put on additional counterweight 3,5 t and pick it up with the fix-mounted counterweight (2,5 t) of the superstructure (fig. 1 – 6)
- Counterweight radius just 3,59 m



1



2



3



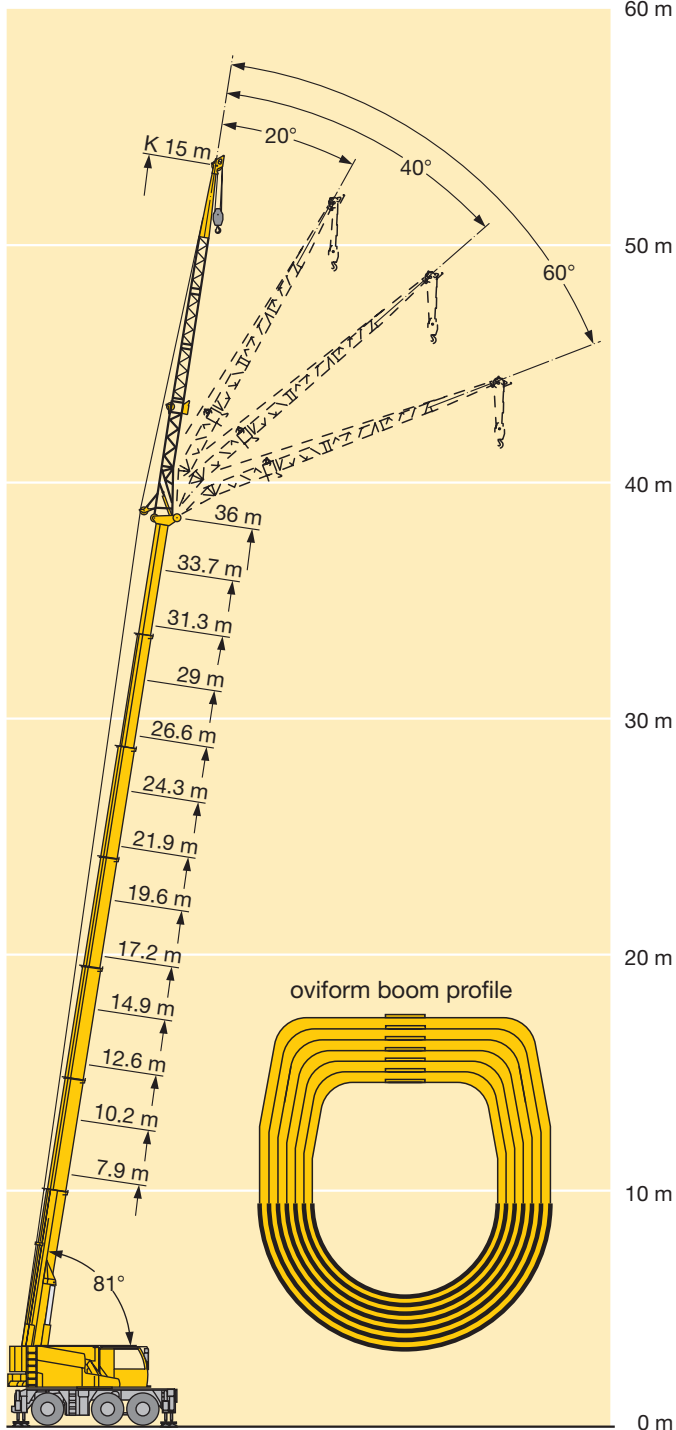
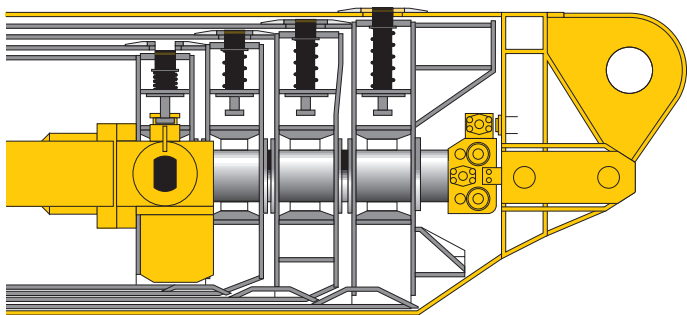
4



5



6

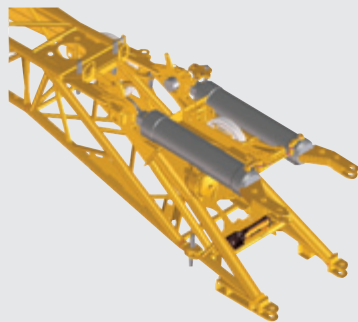


### Lifting loads - precise and safe

- 7-section, 7,9 m – 36 m long telescopic boom and 2-section, 4,5 m – 7,8 m long biparted swing-away jib for 43 m height under hook and 40 m radius
- Three intermediate sections 2,4 m each for the extension of the swing-away jib to 15 m, max. height under hook 50 m, self-erection, transportable on the carrier rear



- Telescopic boom with rounded, oviform bottom shell, thus high lateral stability
- Optimal exploitation of the telescopic boom due to a multitude of telescoping variants
- Swing-away jib mountable at 0°, 20°, 40° and 60°, 2 hydraulic rams for the continuous variation of the swing-away jib from 0° - 60° (optional)



- Luffing under load (interpolation of the load capacities)
- Erection jib of 1,2 m integrated into the swing-away jib, mountable at 0°, 20°, 40° and 60° inclination, hydraulic ram for the continuous variation of the erection jib from 0° - 60°
- Pulley set/hook for erection jib, 3 rope pulleys for a max. load capacity of 26 t, single hook for max. 26 t load capacity
- Easy and quick re-reeving of the hoist rope by rope dead end connection
- Load hook with rope dead end connection, cylindrical shape of the load hook for easy displacement by rolling on the ground





**Special and indoor jobs  
are its strong points**

- Outstanding compactness and maneuverability
- Sensitive maneuvering due to hydrostatic displacement drive
- Short basic boom for small constrained radii at low hall heights

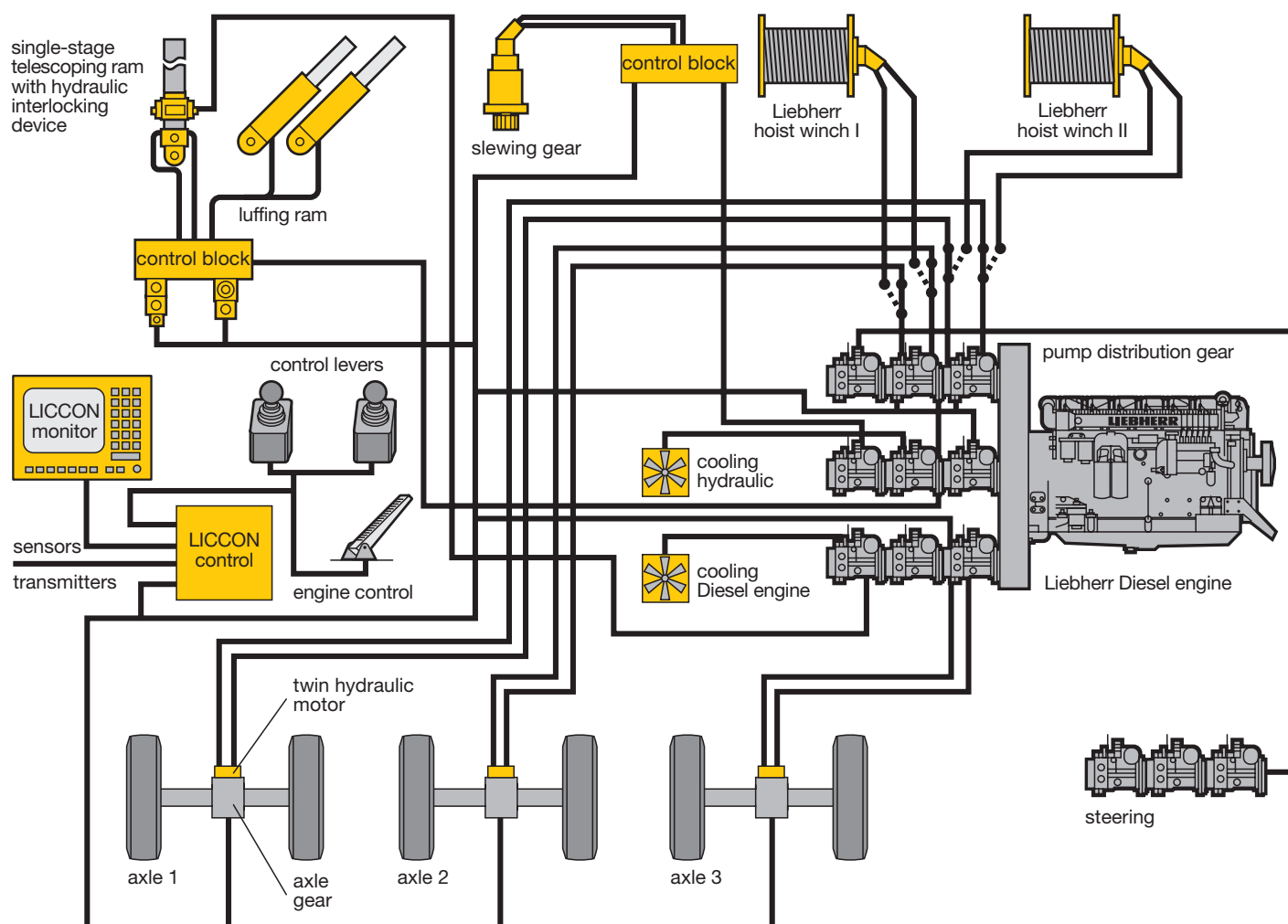
- Gain of height under hook and radius by the erection jib of 1,2 m incorporated into the swing-away jib, optionally hydraulically inclinable at 0° - 60° under full load
- High telescopic loads of up to 27.5 t due to the specific dimensioning of the telescoping ram and the length dependent controlled hydraulic pressure





## Electric/electronic PLC crane control with test system

- Control of the winches, slewing gear as well as luffing and telescoping motions by the LICCON computer system (PLC control)
- Electric load-sensing, open oil circuits with capacity control for luffing and telescoping
- Hoist gears within closed oil circuit
- Slewing gear invertible from released to locked as a standard feature
- Four working motions can be performed independent from one another
- Speeds for hoisting/lowering, luffing and slewing are preselectable
- Very short response rates at the initiation of crane motions



## Optional features contribute to an expansion of the application spectrum and increase comfort and safety

### On the carrier

- Supporting pressure indication on the carrier and in the crane operator's cab
- Stow-away box for underlay timber
- Trailer coupling D12/D19
- Transport attachment for the intermediate sections of the swing-away jib

### On the crane superstructure

- 2nd hoist gear
- Seat heating
- Work area limitation
- Aircraft warning light

- Xenon working projector on base section, electrically adjustable
- Twist absorber
- Tele-diagnostic with installed GSM module
- Radio set with CD player
- Emergency actuation
- Anemometer
- Navigation system
- Reversing camera

Further optional features by request