Machine for Industrial Applications

LH 40 M

Operating Weight: 83,800 – 85,650 lb
Engine Output (SAE J1349): 188 HP / 140 kW
Engine Output (ISO 9249): 190 HP / 140 kW
Max. System Performance (SAE J1349): 226 kW
Max. System Performance (ISO 9249): 226 kW
### Technical Data

#### Engine
- **Rating per SAE J1349**: 188 HP (140 kW) at 1,700 rpm
- **Rating per ISO 9249**: 190 HP (140 kW) at 1,700 rpm
- **Model**: Liebherr D934 according to stage IIIB/Tier 4i
- **Type**: 4 cylinder in-line
- **Bore/Stroke**: 4.85/5.9 in
- **Displacement**: 427.1 in³
- **Engine operation**: 4-stroke diesel
- **Common-Rail turbocharged and after-cooled reduced emissions**
- **Max. flow**: filter
- **Cooling**: water-cooled with integrated motor oil cooler
- **Air cleaner**: dry-type air cleaner with pre-cleaner, primary and safety elements
- **Fuel tank**: 172 gal
- **Engine idling**: sensor controlled
- **Electrical system**: 24 V
- **Max. pressure**: 5,366 psi
- **Voltage**: 2 x 170 Ah/12 V
- **Batteries**: 24 V
- **Alternator**: three phase current 28 V/100 A

#### Hydraulic System
- **Hydraulic pump** for attachment and travel drive: two Liebherr variable flow, swashplate pumps (double construction)
- **Max. flow**: 36 gpm
- **Max. pressure**: 3,380 psi
- **Hydraulic tank**: 85 gal
- **Hydraulic system**: 160 gal
- **Hydraulic oil cooler**: 1 main return filter with integral partial micro filtration (5 μm)
- **MODE selection**: compact cooling system consisting cooling unit for water, hydraulic oil and charge air with stepless thermostatically controlled fan adjustment of engine and hydraulic performance via a mode pre-selector to match application, e.g. for especially economical and environmentally friendly operation
- **S (Sensitive)**: for precision work and lifting through very sensitive movements
- **E (ECO)**: for especially economical and environmentally friendly operation
- **P (Power)**: for maximum digging power and heavy duty jobs
- **Tool Control (Option)**: ten preadjustable pump flows and pressures for add on tools

#### Hydraulic Controls
- **Power distribution**: via control valves in single block with integrated safety valves
- **Servo circuit**: with hydraulic pilot control and proportional joystick levers
- **Travel**: electroproportional via foot pedal
- **Option**: proportional control, proportionally acting transmitters on the joysticks for additional hydraulic functions

#### Swing Drive
- **Drive**: Liebherr swashplate motor in a closed system with integrated brake valve
- **Transmission**: Liebherr planetary-reduction gear
- **Swing ring**: Liebherr sealed single race ball bearing swing ring, internal teeth
- **Swing speed**: 0 – 7.5 rpm stepless
- **Swing torque**: 61,955 lbf ft
- **Brake**: holding brake (spring applied + pressure released)
- **Option**: pedal controlled positioning swing brake

#### Uppercarriage
- **Cab**: safety cab structure with individual windshields or featuring a slide-in subpart under the ceiling, work headlights integrated in the ceiling, a door with a side window (can be opened on both sides), large stowing and depositing possibilities, shock-absorbing suspension, sound damping insulating, tinted laminated safety glass, separate shades for the sunroof window and windsceen
- **Operator’s seat Standard**: air cushioned operator’s seat with headrest, lap belt, seat heater, manual weight adjustment, adjustable seat cushion inclination and length and mechanical lumbar vertebrae support and passive seat climatisation with active coil
- **Operator’s seat Comfort (Option)**: in addition to operator’s seat standard: lockable horizontal suspension, automatic weight adjustment, adjustable suspension stiffness, pneumatic lumbar vertebral support
- **Operator’s seat Premium (Option)**: in addition to operator’s seat comfort: active electronic weight adjustment (automatic readjustment), pneumatic low frequency suspension and active seat climatisation with active coil and ventilator
- **Control system**: large high-resolution operating unit, selfexploratory, colour display with touchscreen, video-compatible, numerous setting, control and monitoring options, e.g. air conditioning control, fuel consumption, machine and tool parameters
- **Operation and displays**: automatic air-conditioning, recirculated air function, fast de-icing and demisting at the press of a button, air vents can be operated via a menu; recirculated air and fresh air filters can be easily replaced and are accessible from the outside; heating-cooling unit, designed for extreme out-side temperatures, sensors for solar radiation, inside and outside temperature
- **Noise emission**: ISO 6396
  - LWA (inside cab) = 71 dBA
  - LWA (surround noise) = 103 dBA

#### Undercarriage
- **Type**: torsion-resistant box design made from high-strength steel plate, designed for the toughest requirements
- **Drive**: Liebherr variable flow swashplate motor with automatic brake valve
- **Transmission**: oversized two speed power shift transmission with additional creeper speed
- **Travel speed**: 0 – 1.6 mph stepless (creeper speed + transmission stage 1)
- **Transmission stage 1**: 0 – 3.7 mph stepless (transmission stage 1)
- **Transmission stage 2**: 0 – 6.5 mph stepless (creeper speed + transmission stage 2)
- **Driving operation**: automotive driving using accelerator pedal, cruise control function: storage of variable accelerator pedal positions
- **Axles**: 392,777 lb drive axles; manual or automatic hydraulically controlled front axle oscillation lock
- **Service brake**: two circuit travel brake system with accumulator; maintenance-free, wet and backlash-free disc brake
- **Holding brake**: wet, maintenance-free multi disc brakes
- **Stabilization**: 4 point outriggers
- **Option**: blade, at the front, for 4 point outriggers

#### Attachment
- **Type**: high-strength steel plates at highly stressed points for the toughest requirements. Complex and stable mountings of attachment and cylinders
- **Hydraulic cylinders**: Liebherr cylinders with special seal system
- **Energy recovering cylinder**: Liebherr gas cylinder with special sealing and control system
- **Bearings**: sealed, low maintenance

#### Complete Machine
- **Lubrication**: central lubrication system for uppcarriage and attachment, automatically
**Dimensions**

A rigid cab elevation has a fixed eye level height. For a lower transport height, the shell of the cab can be removed and replaced by a transport device. The dimension C is in this machine design for all rigid cab elevations 12'2".

The hydraulically adjustable cab allows the driver, that he can choose his field of view freely and at any time within the stroke.

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**Choice of Cab Elevation**

**Cab Elevation LFC (Rigid Elevation)**

**Cab Elevation LHC (Hydraulic Elevation)**

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**Increase Type** | **LFC 80** | **LFC 120** | **LFC 150**
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**Height** | 2'7" | 3'11" | 4'11"
**B** | 12' | 13' 3" | 14' 3"
**C** | 13'9" | 15' 1" | 16' 1"
**D** | 2'8" | 2' 8" | 2' 8"

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**Increase Type** | **LHC 255**
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**B1** | 9' 4"
**B2** | 17' 8"
**C1** | 11' 2"
**C2** | 19' 6"
**D1** | 4' 6"
**D2** | 4'11"
**E** | 10'11"

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*Tires 12.00-20*
### Operating Weight

The operating weight includes basic machine with 4 point outriggers, hyd. cab elevation, 8 solid tires plus intermediate rings, industrial-type straight mono boom 24’11” and industrial-type angled stick 16’5”.

with grapple model GM 70C/1.05 yd³ semi-closed tines | 83,800 lb

### Dimensions

The lift capacities on the stick end without attachment are stated in lb x 1,000 and are valid on a firm, level supporting surface with blocked oscillating axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (+/- 15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. Indicated loads comply with the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity. The lift capacity values indicated are attained at the corresponding operating temperature. This operating temperature is ensured by continuous movement of the boom. Weights of fitted working tools (grabs, load hooks, etc.) and load accommodation equipment are to be deducted from the lift capacity values. The lift capacity of the unit is limited by its stability, the lifting capability of the hydraulic elements, or the maximum permissible lifting capacity of the load hook.
Operating Weight

The operating weight includes basic machine with 4 point outriggers, hydr. cab elevation, 8 solid tires plus intermediate rings, industrial-type straight mono boom 28’3” and industrial-type stick with tipping kinematics 16’5”.

with sorting grab SG 30/1.11 yd³ tines  | 85,100 lb

Dimensions

Industrial Stick 16’5”

The lift capacities on the stick end without attachment are stated in lb x 1,000 and are valid on a firm, level supporting surface with blocked oscillating axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (+/– 15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. Indicated loads comply with the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity. The lift capacity values indicated are attained at the corresponding operating temperature. This operating temperature is ensured by continuous movement of the boom. Weights of fitted working tools (grabs, load hooks, etc.) and load accommodation equipment are to be deducted from the lift capacity values. The lift capacity of the unit is limited by its stability, the lifting capability of the hydraulic elements, or the maximum permissible lifting capacity of the load hook.
Attachment AF14 (Kinematic 2D)

Operating Weight

The operating weight includes basic machine with 4 point outriggers, hydr. cab elevation, 8 solid tires plus intermediate rings, industrial-type angled mono boom 28’3” and industrial-type flat angled stick 19’8”.

with clamshell model GM 20B/1.96 yd³
shells for loose material 85,100 lb

Dimensions

Industrial Stick 19’8”

The lift capacities on the stick end without attachment are stated in lb x 1,000 and are valid on a firm, level supporting surface with blocked oscillating axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position (+/– 15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. Indicated loads comply with the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity. The lift capacity values indicated are attained at the corresponding operating temperature. This operating temperature is ensured by continuous movement of the boom. Weights of fitted working tools (grabs, load hooks, etc.) and load accommodation equipment are to be deducted from the lift capacity values. The lift capacity of the unit is limited by its stability, the lifting capability of the hydraulic elements, or the maximum permissible lifting capacity of the load hook.
The operating weight includes basic machine with 4 point outriggers, hydr. cab elevation, 8 solid tires plus intermediate rings, industrial-type angled mono boom 28'3" and industrial-type flat angled stick 19'8".

**Dimensions**

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Operating Weight

The operating weight includes basic machine with 4 point outriggers, hydr. cab elevation, 8 solid tires plus intermediate rings, industrial-type straight mono boom 28’3” and industrial-type angled stick 19’8”.

with grapple model GM 70C/1.05 yd³ semi-closed tines | 84,900 lb

Dimensions

Industrial Stick 19’8”

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**Attachment AF15 (Kinematic 2D)**

**Operating Weight**

The operating weight includes basic machine with 4 point outriggers, hydr. cab elevation, 8 solid tires plus intermediate rings, industrial-type angled mono boom 28’3” and industrial-type flat angled stick 24’7”.

with clamshell model GM 20B/1.96 yd³ shells for loose material  85,650 lb

**Dimensions**

**Industrial Stick 24’7”**

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**Height**

- Can be slewed through 360°
- In longitudinal position of undercarriage

**Max. reach**

- Limited by hydr. capacity

The lift capacities on the stick end without attachment are stated in lb x 1,000 and are valid on a firm, level supporting surface with blocked oscillating axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (+/- 15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. Indicated loads comply with the ISO 10567 standard and do not exceed 75 % of tipping or 87 % of hydraulic capacity. The lift capacity values indicated are attained at the corresponding operating temperature. This operating temperature is ensured by continuous movement of the boom. Weights of fitted working tools (grabs, load hooks, etc.) and load accommodation equipment are to be deducted from the lift capacity values. The lift capacity of the unit is limited by its stability, the lifting capability of the hydraulic elements, or the maximum permissible lifting capacity of the load hook.
### Operating Weight

The operating weight includes basic machine with 4 point outriggers, hydr. cab elevation, 8 solid tires plus intermediate rings, industrial-type angled mono boom 28’3” and industrial-type flat angled stick 24’7”.

<table>
<thead>
<tr>
<th>Attachment AF15(Kinematic 2C)</th>
<th>Operating Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>with clamshell model GM 20B/1.96 yd³ shells for loose material</td>
<td>85,650 lb</td>
</tr>
</tbody>
</table>

### Dimensions

#### Industrial Stick 24’7”

| ft | Undercarriage | 10 ft | 15 ft | 20 ft | 25 ft | 30 ft | 35 ft | 40 ft | 45 ft | 50 ft |
|----|---------------|------|------|------|------|------|------|------|------|------|------|
| 45 | Stabilizers raised | 12.3 | 12.3 | 20.9 | 27.7 | 23.7 | 23.7 | 16.6 | 18.1 | 14.8 | 14.8 |
| 40 | Stabilizers raised | 12.3 | 12.3 | 27.7 | 27.7 | 20.2 | 20.2 | 16.1 | 16.1 | 13.5 | 13.5 |
| 35 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| 30 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| 25 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| 20 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| 15 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| 10 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| 5  | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| 0  | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| -5 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| -10 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| -15 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| -20 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |
| -25 | Stabilizers raised | 9.7  | 9.7  | 17.4 | 17.4 | 23.2 | 23.2 | 18.1 | 18.1 | 14.9 | 14.9 |

The lift capacities on the stick end without attachment are stated in lb x 1,000 and are valid on a firm, level supporting surface with blocked oscillating axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (+/− 15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. Indicated loads comply with the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity. The lift capacity values indicated are attained at the corresponding operating temperature. This operating temperature is ensured by continuous movement of the boom. Weights of fitted working tools (grabs, load hooks, etc.) and load accommodation equipment are to be deducted from the lift capacity values. The lift capacity of the unit is limited by its stability, the lifting capability of the hydraulic elements, or the maximum permissible lifting capacity of the load hook.
The operating weight includes basic machine with 4 point outriggers, hydr. cab elevation, 8 solid tires plus intermediate rings, industrial-type straight mono boom 29'10" and industrial-type angled stick 22'4".

with grapple model GM 65/0.78 yd³ semi-closed tines 84,900 lb

The lift capacities on the stick end without attachment are stated in lb x 1,000 and are valid on a firm, level supporting surface with blocked oscillating axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (+/- 15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. Indicated loads comply with the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity. The lift capacity values indicated are attained at the corresponding operating temperature. This operating temperature is ensured by continuous movement of the boom. Weights of fitted working tools (grabs, load hooks, etc.) and load accommodation equipment are to be deducted from the lift capacity values. The lift capacity of the unit is limited by its stability, the lifting capability of the hydraulic elements, or the maximum permissible lifting capacity of the load hook.
Kinematic Variants

Kinematic Variant 2A

Hole A

Energy recovery with kinematic variant 2A

Kinematic Variant 2D/2C

Hole D

Energy recovery with kinematic variant 2D

Hole 2

Energy recovery with kinematic variant 2C

2D

2C

Altered range curve with additional reach depth, e.g. for unloading from ships
### Variety of Tools

#### Shells for Loose Material

<table>
<thead>
<tr>
<th>Shells for loose material with cutting edge (without teeth)</th>
<th>Shells for Loose Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutting width of shells</td>
<td>ft in</td>
</tr>
<tr>
<td>Capacity</td>
<td>yd³</td>
</tr>
<tr>
<td>For loose material, specific weight up to</td>
<td>lb/yd³</td>
</tr>
<tr>
<td>Weight</td>
<td>lb</td>
</tr>
</tbody>
</table>

#### Multiple Tine Grapples

<table>
<thead>
<tr>
<th>Multiple Tine Grapples</th>
<th>open tines</th>
<th>semi-closed tines</th>
<th>closed tines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grapple Model GM 64 (4 tines)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>yd³</td>
<td>0.52</td>
<td>0.78</td>
</tr>
<tr>
<td>Weight</td>
<td>lb</td>
<td>1,863</td>
<td>2,491</td>
</tr>
<tr>
<td>Grapple Model GM 65 (5 tines)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>yd³</td>
<td>0.52</td>
<td>0.78</td>
</tr>
<tr>
<td>Weight</td>
<td>lb</td>
<td>2,535</td>
<td>2,712</td>
</tr>
<tr>
<td>Greifer Typ GM 69 (4 tines)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>yd³</td>
<td>1.05</td>
<td>1.44</td>
</tr>
<tr>
<td>Weight</td>
<td>lb</td>
<td>2,965</td>
<td>3,075</td>
</tr>
<tr>
<td>Greifer Typ GM 70C (5 tines)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>yd³</td>
<td>1.05</td>
<td>1.44</td>
</tr>
<tr>
<td>Weight</td>
<td>lb</td>
<td>3,275</td>
<td>3,505</td>
</tr>
</tbody>
</table>

#### Wood Grapple

<table>
<thead>
<tr>
<th>Wood Grapple</th>
<th>Grapple Model GM 20B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claw width</td>
<td>ft in</td>
</tr>
<tr>
<td>Size</td>
<td>in²</td>
</tr>
<tr>
<td>Height of grapple, closed</td>
<td>ft in</td>
</tr>
<tr>
<td>Weight</td>
<td>lb</td>
</tr>
</tbody>
</table>

#### Sorting Grapple

<table>
<thead>
<tr>
<th>Sorting Grapple</th>
<th>Grapple Model SG 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutting width of shells</td>
<td>ft in</td>
</tr>
<tr>
<td>Capacity</td>
<td>yd³</td>
</tr>
<tr>
<td>Max. closing force</td>
<td>lb</td>
</tr>
<tr>
<td>Weight incl. adapter plate</td>
<td>lb</td>
</tr>
</tbody>
</table>

#### Crane Hook with Suspension

<table>
<thead>
<tr>
<th>Crane Hook with Suspension</th>
<th>Max. load</th>
<th>Height with suspension</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb</td>
<td>27,558</td>
<td>3’1”</td>
</tr>
</tbody>
</table>

#### Magnet Devices/Lifting Magnets

<table>
<thead>
<tr>
<th>Magnet Devices/Lifting Magnets</th>
<th>Generator kW</th>
<th>Electromagnets with Suspension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Generator</td>
<td>kW</td>
<td>8.5/10</td>
</tr>
<tr>
<td>Electromagnets with Suspension</td>
<td>Power kW</td>
<td>4’5”</td>
</tr>
<tr>
<td></td>
<td>Diameter of magnet ft in</td>
<td>3,748</td>
</tr>
</tbody>
</table>
ERC System – More performance, less consumption

Lowering the equipment stores energy in the ERC system. This stored energy is then made available to the machine to provide additional engine power. When the equipment is raised the stored energy is released and is reflected in powerful, homogeneous operating cycles. The result is a clear saving on fuel – and, at the same time, even greater performance.

System power

The energy recovery cylinder is a storage system which is independent of the diesel engine. The system performance of material handling machines fitted with the ERC system is composed of the installed engine power and the energy recovery cylinder. When the equipment is raised, energy from the ERC system is supplied in addition to the power from the diesel engine.
# Equipment

## Undercarriage
- Support rocker, variants
- Individual control outriggers
- Shuttle axle lock, automatic
- Dozer blade
- Outrigger monitoring system
- Tyres, variants
- Protection for travel drive
- Protection for piston rods, outriggers
- Tool equipment, extended
- Two lockable storage boxes

## Uppercarriage
- Refuelling system with filling pump
- Railing on uppercarriage
- Generator
- Main battery switch for electrical system
- Protection for headlights
- Protection for rear lights

## Hydraulics
- Electronic pump regulation
- Liebherr hydraulic oil from −4 °F to +104 °F
- Liebherr hydraulic oil, biologically degradable
- Magnetic rod in hydraulic tank
- Bypass filter
- Preheating hydraulic oil

## Engine
- Fuel anti-theft device
- Liebherr particle filter
- Reversible fan drive, fully automatic
- Air pre-filter with dust discharge
- Protective grid in front of cooler intake
- Preheating fuel
- Preheating coolant
- Preheating engine oil

## Operator’s Cab
- Cab lights rear, halogen
- Cab lights rear, LED 1300 lumen
- Cab lights front, halogen
- Cab lights front, LED 1300 lumen
- Operator’s seat Standard
- Operator’s seat Comfort
- Operator’s seat Premium
- Driving alarm (acoustic signal is emitted during travel, can be switched ON/OFF)
- Fire extinguisher
- Joystick steering
- Cab elevation, hydraulic (LHC)
- Cab elevation, rigid (LFC)
- Automatic air conditioning

## Attachment
- Boom lights, 2 pieces, halogen
- Boom lights, 2 pieces, LED 1300 lumen
- Stick lights, 2 pieces, halogen
- Stick lights, 2 pieces, LED 1300 lumen, with protection
- Boom shutoff, ascending
- AutoLift
- ERC system
- Height limitation and stick shutoff, electronically
- Boom cylinder cushioning
- Industrial stick with quick coupling
- Stick camera (with separate monitor), bottom side, with protection
- Liebherr lightweight stick
- Liebherr multi coupling system
- Liebherr quick coupler, hydraulic or mechanical
- Pipe fracture safety valves hoist cylinders
- Pipe fracture safety valve stick cylinder
- Quick coupling system LIKUFIX
- Quick coupling system MH40/MH110
- Protection for piston rod, ERC
- Protection for piston rod, hoist cylinder
- Retract stick without pressure
- Overload warning device
- Protection for stick

## Complete Machine
- Electric cooler
- LiDAT Plus (extended Liebherr data transfer system)
- Bullet proof glass
- Positioning swing brake
- Proportional control
- Radio Comfort (control via display)
- Preparation for radio installation
- Back-up alarm (acoustic signal is emitted traveling backward, can not be switched off)
- Warning beacon on cab
- Windscreen wiper, roof
- Top guard
- Front guard
- Sunvisor
- Auxiliary heating, adjustable (week time switch)
- Flashing light (xenon)
- Electronic immobilizer

* = Standard, + = Option
* = optionally extendable after one year

Options and/or special attachments, supplied by vendors other than Liebherr, are only to be installed with the knowledge and approval of Liebherr in order to retain warranty.
The Liebherr Group of Companies

Wide Product Range
The Liebherr Group is one of the largest construction equipment manufacturers in the world. Liebherr's high-value products and services enjoy a high reputation in many other fields. The wide range includes domestic appliances, aerospace and transportation systems, machine tools and maritime cranes.

Exceptional Customer Benefit
Every product line provides a complete range of models in many different versions. With both their technical excellence and acknowledged quality, Liebherr products offer a maximum of customer benefits in practical application.

State-of-the-art Technology
To provide consistent, top quality products, Liebherr attaches great importance to each product area, its components and core technologies. Important modules and components are developed and manufactured in-house, for instance the entire drive and control technology for construction equipment and mining trucks.

Worldwide and Independent
Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a group of more than 130 companies with over 38,000 employees located on all continents. The corporate headquarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.

www.liebherr.us