

Pipelayer

**RL 56**

Litronic®

**Max. Lift Capacity**

72,000 kg / 158,733 lb

**Engine**

210 kW / 281 HP (SAE J1349)

210 kW / 286 HP (ISO 9249)

Stage IIIA / Tier 3

Stage IV / Tier 4f



**LIEBHERR**

# Technical Data



## Engine

<b>Liebherr Diesel engine</b>	D 936 A7 Emission regulations according to 97/68/EC, 2004/26/EC Stage IIIA/ Stage IV, EPA/CARB Tier 3/Tier 4f
<b>Rated power</b> ISO 9249	210 kW/286 HP
SAE J1349	210 kW/281 HP
<b>Rated speed</b>	1,800 rpm
<b>Displacement</b>	10.5 l/641 in <sup>3</sup>
<b>Design</b>	6 cylinder in-line engine, water-cooled, turbocharged, air-to-air intercooler
<b>Injection system</b>	Direct fuel injection, Common Rail, electronic control
<b>Lubrication</b>	Pressurised lube system, engine lubrication guaranteed for inclinations up to 45°
<b>Operating voltage</b>	24 V
<b>Alternator</b>	140 A
<b>Starter</b>	7.8 kW/11 HP
<b>Batteries</b>	2 x 180 Ah/12 V
<b>Air cleaner</b>	Dry-type air cleaner with pre-cleaner, main and safety elements, control light in the operator's cab
<b>Cooling system</b>	Combi radiator, comprising radiators for water and charge air. Hydrostatic fan drive



## Hydraulics

<b>Hydraulic system</b>	Load sensing (demand controlled)
<b>Pump type</b>	Swash plate piston pump
<b>Pump flow max.</b>	283 l/min./74.7 gpm
<b>Pressure limitation</b>	280 bar/4,060 psi
<b>Control valve</b>	3 circuits, expandable to 6
<b>Filter system</b>	Return filter with magnetic rod in the hydraulic tank
<b>Control</b>	Single joystick for hoist winch and adjustable boom cylinder, free all device of hook in case of danger. Further single joystick for counterweight.



## Travel Drive, Control

<b>Transmission system</b>	Infinitely variable hydrostatic travel drive, independent drive for each track
<b>Travel speed*</b>	Continuously variable
Speed range 1 (reverse):	0 – 4.0 km/h/2.5 mph (4.8 km/h/3.0 mph)
Speed range 2 (reverse):	0 – 6.5 km/h/4.0 mph (7.8 km/h/4.8 mph)
Speed range 3 (reverse):	0 – 10.5 km/h/6.5 mph (10.5 km/h/6.5 mph)
	* Travel speed ranges can be set on the travel joystick (memory function)
<b>Electronic system</b>	The electronic system automatically adjusts travel speed and drawbar pull to match changing load conditions
<b>Steering</b>	Hydrostatic
<b>Service brake</b>	Hydrostatic (self-locking), wear-free
<b>Parking brake</b>	Multi-disc brake, wear-free, automatically applied with neutral joystick position
<b>Cooling system</b>	Separate oil cooler, hydrostatic fan drive and thermostatically controlled
<b>Filter system</b>	Micro cartridge filter in the replenishing circuit
<b>Final drive</b>	Combination spur gear with planetary gear, double-sealed (duo cone seals) with electronic seal-integrity indicator
<b>Control</b>	Single joystick for all travel and steering functions



## Operator's Cab

<b>Cab</b>	Resiliently mounted cab with positive pressure ventilation, can be tilted with hand pump 40° to the rear. With integrated ROPS Rollover Protective Structure (EN ISO 3471)
<b>Operator's seat</b>	Air suspended comfort seat, fully adjustable
<b>Monitoring</b>	Touch screen: display of current machine information, automatic monitoring of operating conditions, individual setting of machine parameters

## Undercarriage

<b>Design</b>	Track frame, rigid
<b>Mounting</b>	Elastic components at a separate pivot
<b>Track chains</b>	Lubricated, single-grouser shoes, tensioning via steel spring and grease tensioner
<b>Links, each side</b>	45
<b>Track rollers, each side</b>	9
<b>Carrier rollers, each side</b>	2
<b>Sprocket segments, each side</b>	5
<b>Track shoes</b>	914 mm/36"

## Sound Levels

<b>Operator sound exposure ISO 6396</b>	
L <sub>PA</sub> (in the cab)	78 dB(A)
<b>Exterior sound pressure 2000/14/EC</b>	
L <sub>WA</sub> (to the environment)	108 dB(A)

## Refill Capacities

<b>Fuel tank</b>	505 l/ 133.3 gal
<b>Cooling system</b>	60 l/ 15.08 gal
<b>Engine oil with filter</b>	43 l/ 11.4 gal
<b>Splitter box</b>	8.5 l/ 2.2 gal
<b>Hydraulic tank</b>	112 l/ 29.6 gal
<b>Final drive, each side</b>	19.5 l/ 5.1 gal

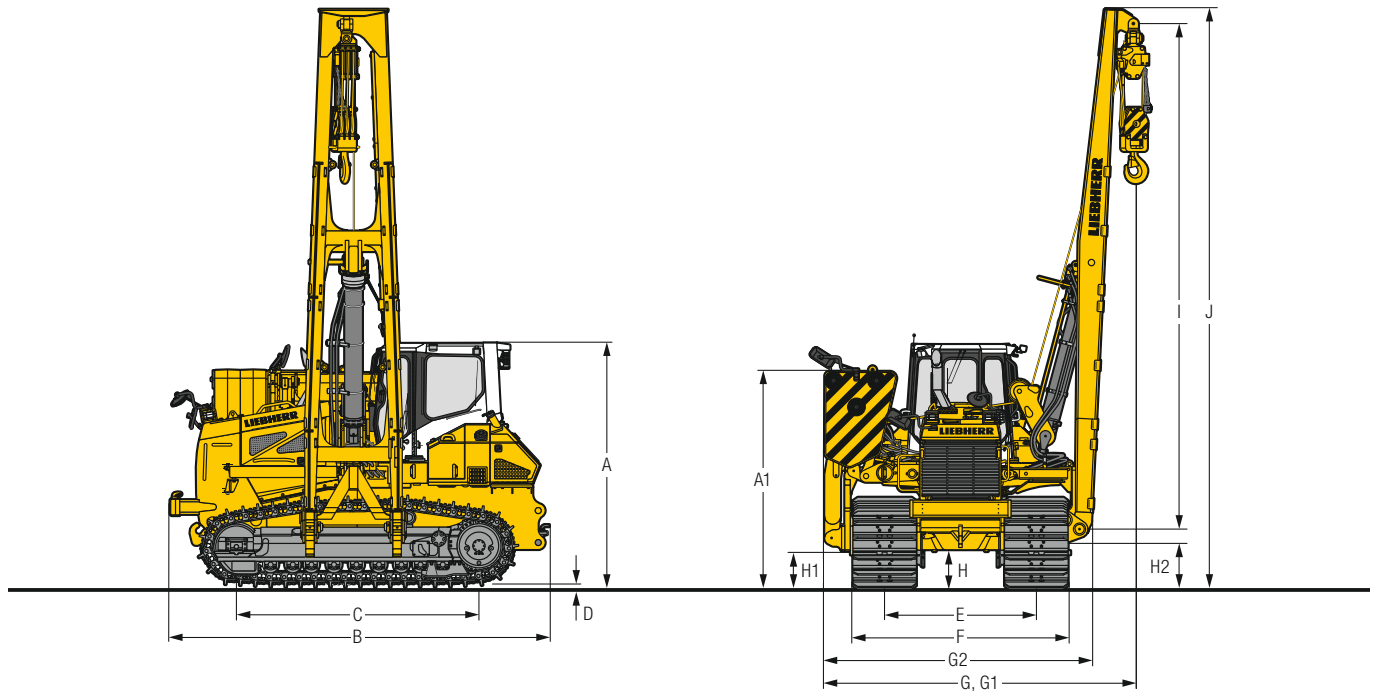
## Hydraulic Winch

<b>Hoist winch</b>	Variable flow hydraulic pump
<b>Safety brake</b>	Spring-loaded disk brake holds the load safely in any position
<b>Drum diameter</b>	254 mm/ 10"
<b>Drum length</b>	274 mm/ 10.79"
<b>Flange diameter</b>	610 mm/ 24.02"
<b>Cable diameter</b>	20 mm/ 0.8"
<b>Cable length</b>	80 m/ 87.49 yd
<b>Hook block</b>	3 sheaves
<b>Hook speed (up, down)</b>	0 – 20.0 m/min/ 0 – 66 ft/min
<b>Security</b>	Free fall device

## Dawbar Pull

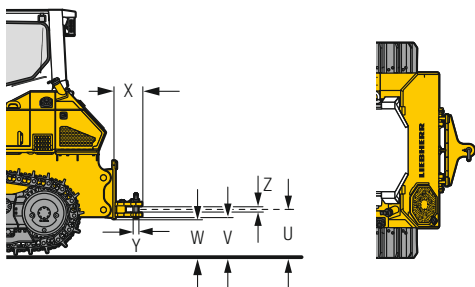
<b>Max.</b>	387 kN
<b>at 1.5 km/h/ 0.9 mph</b>	387 kN
<b>at 3.0 km/h/ 1.9 mph</b>	216 kN
<b>at 6.0 km/h/ 3.7 mph</b>	108 kN
<b>at 9.0 km/h/ 5.6 mph</b>	72 kN

# Dimensions and Weights



## Dimensions

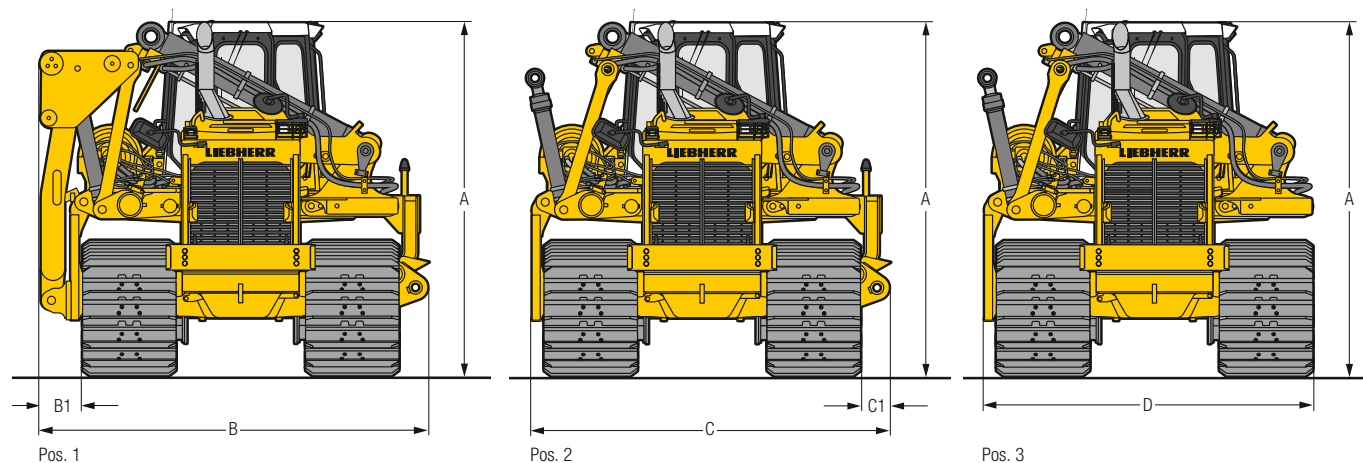
			Standard 7,300 mm	Optional 8,500 mm
<b>Boom</b>				
<b>A</b>	Height over cab	mm / ft-in		3,529 / 11'7"
<b>A<sub>1</sub></b>	Height over counterweight	mm / ft-in		3,068 / 10'1"
<b>B</b>	Overall length	mm / ft-in		5,446 / 17'10"
<b>C</b>	Length of track on ground	mm / ft-in		3,504 / 11'6"
<b>D</b>	Height of grousers	mm / in		71 / 2.8"
<b>E</b>	Track gauge	mm / ft-in		2,180 / 7'2"
<b>F</b>	Total width over undercarriage	mm / ft-in		3,094 / 10'5"
<b>G</b>	Width (counterweight retracted)	mm / ft-in		3,785 / 12'5"
<b>G<sub>1</sub></b>	Width (counterweight extended)	mm / ft-in		5,544 / 18'2"
<b>G<sub>2</sub></b>	Width (console to boom)	mm / ft-in		3,785 / 12'5"
<b>H</b>	Ground clearance	mm / ft-in		501 / 1'8"
<b>H<sub>1</sub></b>	Ground clearance of console	mm / ft-in		548 / 1'10"
<b>H<sub>2</sub></b>	Ground clearance of boom	mm / ft-in		747 / 2'5"
<b>I</b>	Boom length	mm / ft-in	7,300 / 23'11"	8,500 / 27'11"
<b>J</b>	Total height	mm / ft-in	8,281 / 27'2"	9,481 / 31'1"
<b>K</b>	Distance (outer edge of chain link to hook)	mm / ft-in		1,200 / 3'11"
<b>Operating weight</b>			46,050 / 101,523	46,280 / 102,030
<b>Counterweight without frame</b>				9,534 / 21,019
<b>Counterweight</b>				12,730 / 28,065
<b>Weight of standard boom</b>			2,264 / 4,991	2,497 / 5,505



## Drawbar

			rigid
U	Height of jaw	mm / ft-in	576 / 1'11"
V	Ground clearance below drawbar	mm / ft-in	474 / 1'7"
W	Ground clearance below drawbar suspension	mm / ft-in	424 / 1'5"
X	Additional length	mm / ft-in	435 / 1'5"
Y	Socket pin diameter	mm / in	60 / 2.36"
Z	Jaw opening	mm / in	105 / 4.13"
	Weight	kg / lb	460 / 1,014

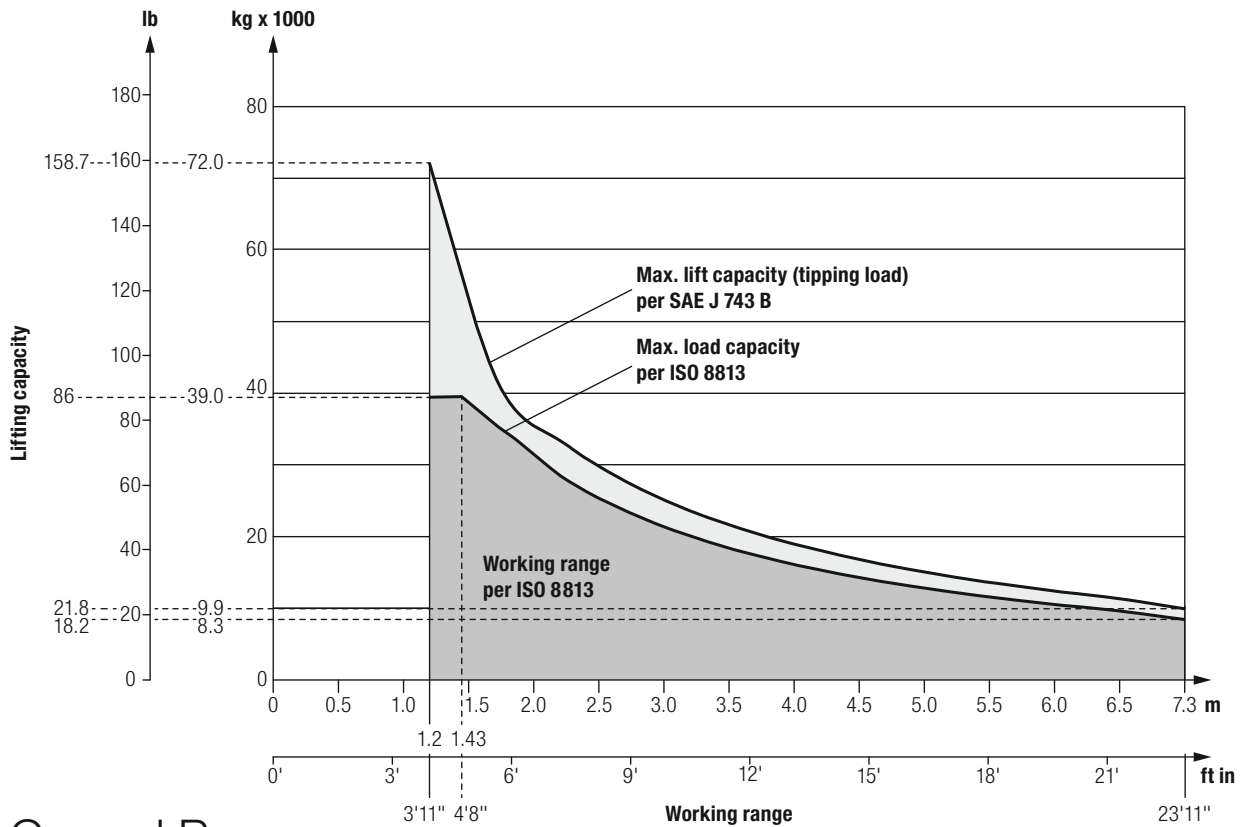
# Transport Dimensions and Weights



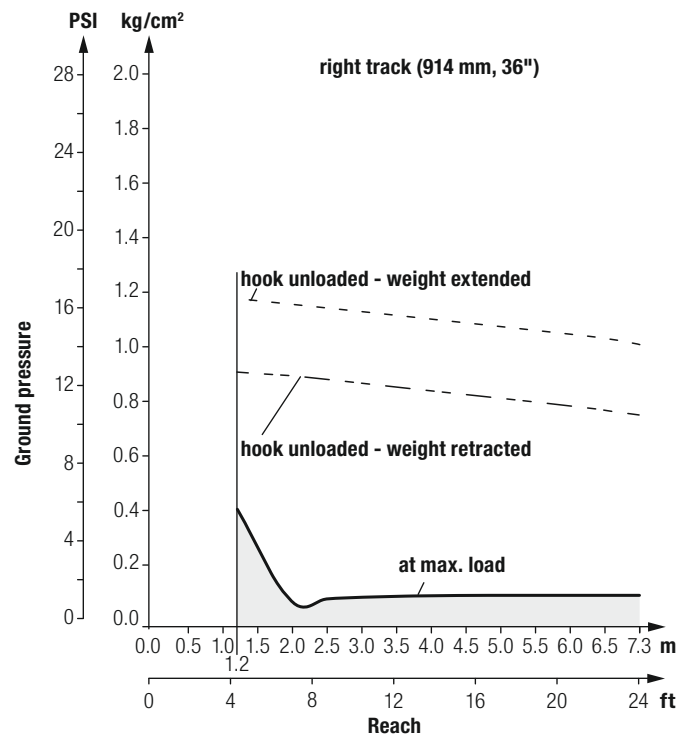
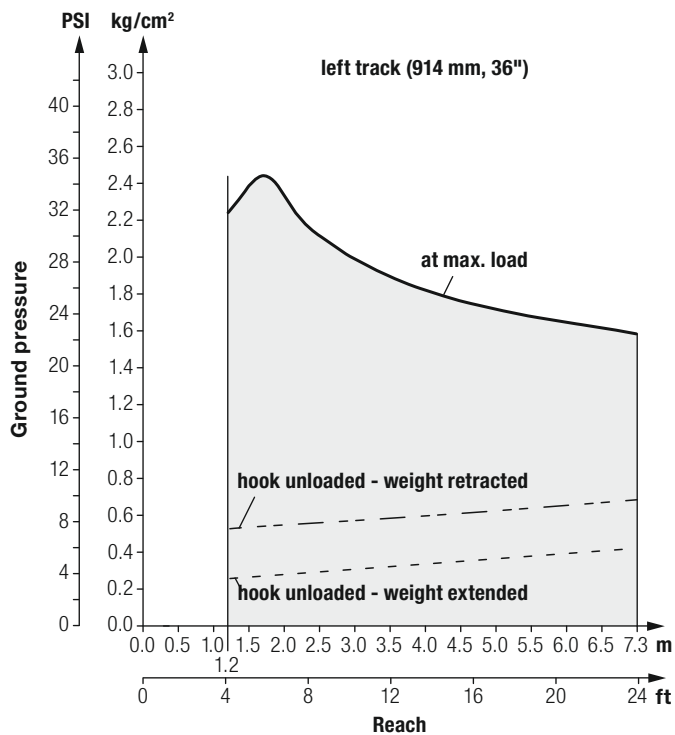
## Transport Dimensions

			displayed position
<b>A</b>	<b>Total height</b>	mm / ft-in	3,529 / 11'7"
<b>B</b>	<b>Overall width</b>	mm / ft-in	3,500 / 11'6"
<b>B<sub>1</sub></b>	<b>Width (from console to left track)</b>	mm / ft-in	406 / 1'4"
	<b>Weight (Pos. 1)</b>	kg / lb	33,656 / 74,199
<b>C</b>	<b>Overall width</b>	mm / ft-in	3,497 / 11'6"
<b>C<sub>1</sub></b>	<b>Width (from console to right track)</b>	mm / in	285 / 11.22"
	<b>Weight (Pos. 2)</b>	kg / lb	31,690 / 69,864
<b>D</b>	<b>Overall width</b>	mm / ft-in	3,212 / 10'6"
	<b>Weight (Pos. 3)</b>	kg / lb	31,023 / 68,394

# Lift Capacity (ISO 8813)



# Ground Pressure (ISO 8813)



# Equipment



## Base Machine

Air filter with automatic dust ejector	+
Air filter, dry type, dual step, with pre-filter	•
Air pre-filter, Top Air	1)
Battery compartment, lockable	•
Cooling fan front, tilt-out	•
Cooling fan rear, tilt-out	•
Cooling fan, hydraulically driven	•
Cooling fan, with safety guard	•
Data interface for data transmission (e.g. J1939)	1)
DEF tank, lockable 2)	•
Diesel tank condensate drain	•
Double-glazing	+
Dust ejector, automatic	+
Dust ejector, manual	+
Dust extraction valve	•
Engine compartment doors, lockable	•
Engine cover, perforated	•
Engine doors, perforated	•
Fan reversal, manual (for operation at extremely low temperatures)	1)
Filling with hydraulic fluid, cold resistant	+
Filling with Liebherr Basic 100 hydraulic fluid	+
Filling with Liebherr HVI hydraulic fluid	•
Fuel pre-filter, with electric heater	+
Fuel water separator	•
Fuel water separator with electric heater	+
Hot water heater with priority engine pre-heating and battery heating panel, disengageable	+
Insulation on battery compartment	+
Jump-start equipment	1)
LiDAT – Data transmission system	+
Lifting cable	•
Load torque limitation	+
Lugs for crane lifting	+
Radiator guard heavy duty, front	•
Radiator guard hinged, front	•
Radiator, wide-meshed	•
Refuelling pump	+
Running gear components, cold-resistant	+
Simultaneous adjustment for travelling drive (dozer track)	1)
Special paint, several colours	+
Special paint, single colour	+
Tarpaulins	+
Tool kit extended	+
Towing hitch rear	•
Towing lug front	•



## Tavel Drive

Electronic control	•
Emergency stop	•
Final drives planetary gear	•
Inch brake pedal	1)
Load limit control, electronic	•
Oil cooler	•
Parking brake, automatic	•
Travel control, 3 speed ranges	•
Travel drive, hydrostatic	•



## Undercarriage

Master link, two-piece	•
Pivot shaft, separate	•
Sprocket segments, bolted	•
Track frame, closed	•
Track frame, rigid	•
Track guide centre part	+
Tracks, oil-lubricated	•



## Operator's Cab

Air-conditioner	•
Armrests 3D adjustable	•
Cab heating	1)
Coat hook	•
Dome light	•
Dormer window	•
Enclosed cab	•
Extension, seat back	+
Fire extinguisher in the cab	+
FOPS	1)
Joystick control	•
Operator's seat Comfort, air-suspended	+
Operator's seat Premium, air-suspended	+
Operator's seat Standard, mechanical	•
Premium touchscreen display	•
Pressurised cab	•
Protective bracket for sensor on drive hydraulics	1)
Protective bracket for sensor on operating hydraulics	1)
Radio	+
Radio preparation kit	+
Rear mirror left and right	+
Rear mirror, inside	•
Rear view camera	+
ROPS integrated	•
Safety glass tinted	•
Sliding window for right-hand side windows	+
Socket 12 V	•
Sunblind, all around	+
Tilttable cab	•
Warm water heating	•
Warm water heating with priority for cab	+
Wide-angle interior mirror for reversing	•
Windshield wiper dormer window	1)
Windshield wipers for all windows and doors in the cab without side window right and without dormer window	•

• = Standard

+ = Option

1) on demand

2) only for stage IV/Tier 4f



## Electrical System

1 halogen working lights on right side on cable winch	•
2 cold start batteries	•
2 halogen working lights on engine hood, front	•
2 halogen working lights on the cab, rear	•
3 halogen working lights on left side	•
All working lights in LED version	+
Alternator 140 A	•
Back-up alarm	+
Back-up alarm acoustic, disengageable	+
Battery main switch mechanical, lockable	•
Amber beacon	+
Horn	•
Immobiliser, electronic	1)
On-board voltage 24 V	•
Starter	•



## Control and Warning Lights

Display engine coolant temperature	•
Display fuel level (digital)	•
Display travel speed ranges	•
Hour meter (digital)	•
Indicator light air filter contamination	•
Indicator light battery charge	•
Indicator light diesel engine	•
Indicator light hydraulic oil temperature	•
Indicator light oil filter contamination	•
Indicator light oil level in hydraulic oil tank	+
Indicator light pump replenishing pressure	•
Indicator parking brake	•
Overload warning system	+



## Hydraulic System

3 additional circuit segments	+
3 control blocks	•
Free fall device	•
Hydraulic control counterweight	•
Hydraulic control winch and boom	•
Hydraulic servo control	•
Hydraulic tank oil level control	+
Oil filter in hydraulic tank	•
Variable flow pump, load-sensing	•



## Attachments

Boom 24'	•
Boom 27'10"	+
Boom protection strips	+
Counterweight	•
Counterweight, rear	+
Drawbar rear, rigid with two lugs	+
Hook with rope	•
Hydraulic attachment kit for hydraulic pump, e.g. for crane	1)
Hydraulic attachment kit for operation of generator and pipefacing	+
Mounting plate for third-party equipment	1)
Winch, rear	1)

• = Standard

+ = Option

1) on demand

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 hold a high reputation in many industries. 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 customers the highest benefits in practical applications.

## State-of-the-art Technology

Liebherr attributes great importance to the product areas of core technology and components, in order to achieve its consistent, top-quality products. Important modules and components are developed and manufactured in-house, for instance the entire drive and control technology for the construction equipment and mining trucks.

## Worldwide and Family-Owned

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 41,000 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](http://www.liebherr.us)**

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