

# Scrap handling

## LIEBHERR

Material handling



# Liebherr specialist machines for scrap handling

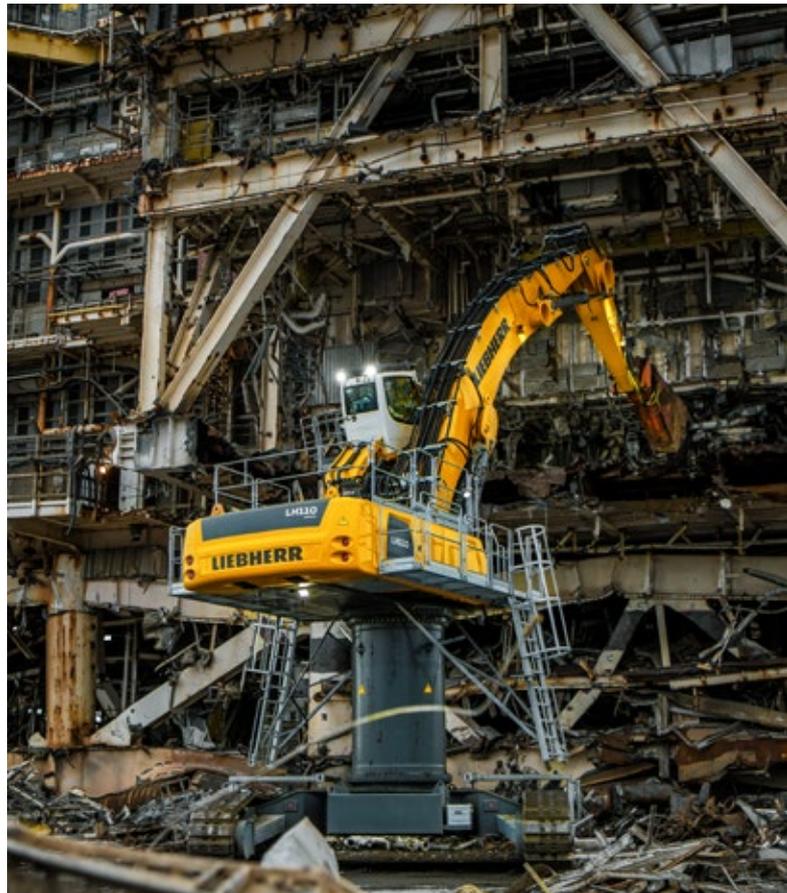
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Handling scrap steel and other metals is one of the toughest operational areas in industrial material handling. To cope with this, robustness and reliability are needed in particular. But high performance and efficient operation are also areas of focus in the construction of Liebherr specialist machines for scrap material handling. The challenge, on one hand, is to build machines that are extremely sturdy to deal with the toughest of demands and, on the other, to make them extremely powerful yet economical. Liebherr masters this, among other ways, by producing many of the components in-house. The demands that have to be met for later deployment are included right from the development stage of these components, which means that Liebherr specialist machines are well prepared for any work situation.

Components such as the engine, injection system, hydraulic cylinders and electronics are designed to work in synergy with one another and contribute significantly towards the capability and efficiency of Liebherr machines. Whether loading or unloading HGVs, loading shredder conveyors or sorting out different kinds of metals, the Liebherr specialist machines are the perfect machines for operationally effective scrap material handling.

- Material handling machines
- Mobile harbour cranes
- Wheel loaders
- Telescopic handler





# Material handling machines

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## Performance

In the area of scrap handling, performance is extremely important. Whether sorting out mixed scrap material, loading and unloading HGVs and ships or loading shredders, shears and press plants, the Liebherr material handling machines have been developed for the highest productivity. High lift capacities and fast work cycles are the essential prerequisites for efficient handling operations. The optimum interplay between the hydraulics and electronics guarantee powerful, fast movements during handling and at the same time make it possible to work sensitively and precisely on challenging sorting tasks.

## Economy

Liebherr relies on state-of-the-art engine technology here with intelligent machine controls that optimise the interplay of the drive components in terms of their degree of efficiency. In addition to diesel-powered machines there are a number of electric drive material handlers in the range which guarantee extremely low operating costs. They are very environmentally friendly, completely emission-free and therefore independent of statutory exhaust emission standards. For conventional machines Liebherr-Power Efficiency (LPE) enables machine operation in the area of the lowest specific fuel use. Combined with the innovative Liebherr energy recuperation system, a standard feature on the LH 40 range and above, fuel consumption is reduced to a minimum and, at the same time, material handling is significantly increased thanks to faster and more homogeneous operating cycles – for the lowest consumption and greater efficiency at maximum output.

## Reliability

Liebherr material handling machines guarantee the prerequisite stability and with their sturdy and durable construction ensure the lowest downtimes in the scrap recycling industry. Equipment such as cab guards, laminated safety glass smashing-resistant, protection of piston rods of the cylinder and other safety devices have been developed especially for tough scrap handling operations and guarantee maximum reliability even in the toughest of conditions. Long service life along with maximum machine availability are assured thanks to the in-house production of all key components: diesel engine, hydraulic and electronic components, slew ring, swivel drive and steel structure, developed, tested and produced by Liebherr all at the high level of quality one would expect.

## Comfort

The Liebherr cab gives the operators the necessary space to make the best possible use of the machine's capability. Large glass panels, different types of cab elevations and rear and side area monitoring enable the operator an optimum view of the working area and the area around the machine at all times. Thanks to the low sound emissions and the lack of vibrations, the electric handling machines are particularly quiet and increase the working comfort significantly. Additionally, the Comfort driver's seat, the intuitive touch-screen colour display, and central lubrication systems for the machine and its attachments offer the necessary convenience for operators to focus on what is important – the handling capacity.

## Maintainability

The service-based machine design guarantees short servicing times, thus minimising maintenance costs. All the maintenance points are easily accessible due to the large, wide-opening service doors. The enhanced service concept places the maintenance points close to each other and reduces their number to a minimum. This means that service work can be completed even more quickly and efficiently.

# Material handling machines overview

## Equipment

- High load capacities and extensive reach due to optimised kinematic properties and robust construction for greater handling performance
- Energy recovery cylinder filled with nitrogen for maximum efficiency through less fuel consumption at more handling capacity from machine class LH 40 Industry
- Pipe fracture safety valves on hoist and stick cylinders and retract stick shut-off for maximum safety during every application
- Quick coupling systems and attachments made by Liebherr for maximum machine capacity utilisation and greater handling performance



## Cab

- Joystick steering without steering column to facilitate convenient operation, greater legroom and clear view of the working area
- Less strain on the operator, workers and reduced environmental pollution due to lower noise emissions
- Optimum visibility thanks to large glass surfaces and standard rear and side area monitoring with camera
- Standard proportional control with 4-way mini joystick for greater precision, high precision control and functions





## Uppercarriage

- Greater energy efficiency due to the latest engine technology with intelligent machine control
- Optimal engine output and high pump flow for fast work cycles, convincing dynamics and maximum handling performance
- Reversible fan and large-meshed cooler as a reliable, sealed unit for high machine availability
- Optimised servicing concept and cleverly designed maintenance access points guarantees minimum machine downtime

## Undercarriage

- Optimised hydraulics with closed slewing mechanism circuit for greater energy efficiency and faster work cycles from machine class LH 30
- Central lubrication system manual or fully automatic for more productive working time
- Standard load holding valves fitted on all support cylinders for maximum stability in every application
- Less downtime thanks to maintenance free support cylinders

# Technical data

		LH 22 Industry Litronic	LH 24 Industry Litronic
Variants		M/C	M
Reach	m	11	12
Operating weight*	kg	approx. 19,200–22,200	approx. 22,700–23,200
Engine output	kW/HP	105/143	110/150
System performance	kW	–	–
Emission stage	Stage	V/Tier 4 Final/IIIA (compliant)	V/Tier 4 Final
Multi-tine grab capacity	m <sup>2</sup>	0.40–0.60	0.40–0.60

		LH 26 Industry Litronic	LH 30 Industry Litronic
Variants		M/C	M/C
Reach	m	13	14
Operating weight*	kg	approx. 24,200–27,900	approx. 26,500–30,200
Engine output	kW/HP	115(90 <sup>1)</sup> /157	140/190
System performance	kW	105 <sup>1)</sup>	–
Emission stage	Stage	V/Tier 4 Final/IIIA (compliant)/electric	V/Tier 4 Final/IIIA (compliant)
Multi-tine grab capacity	m <sup>2</sup>	0.40–0.60	0.40–0.60

		LH 35 Industry Litronic	LH 40 Industry Litronic
Variants		M	M/C
Reach	m	15	16
Operating weight*	kg	approx. 30,700–31,900	approx. 36,400–40,900
Engine output	kW/HP	140/190	155 (145 <sup>1)</sup> /211
System performance	kW	–	237 / 227 <sup>1)</sup>
Emission stage	Stage	V/Tier 4 Final/IIIA (compliant)	V/Tier 4 Final/IIIA (compliant)/electric
Multi-tine grab capacity	m <sup>2</sup>	0.40–0.60	0.40–1.10

M = Mobile  
C = Crawler

\* without attachment  
<sup>1)</sup> only with electric

		<b>LH 50 Industry Litronic</b>	<b>LH 60 Industry Litronic</b>
Variants		M/M High Rise / C High Rise	M/M High Rise / C / C High Rise
Reach	m	18	20
Operating weight*	kg	approx. 40,000–54,900	approx. 52,000–79,800
Engine output	kW / HP	155 / 211	190 (180 <sup>31</sup> ) / 258
System performance	kW	269	334 / 324 <sup>31</sup>
Emission stage	Stage	V / Tier 4 Final / IIIA (compliant)	V / Tier 4 Final / IIIA (compliant) / electric
Multi-tine grab capacity	m <sup>2</sup>	0.40–1.10	1.10–1.70

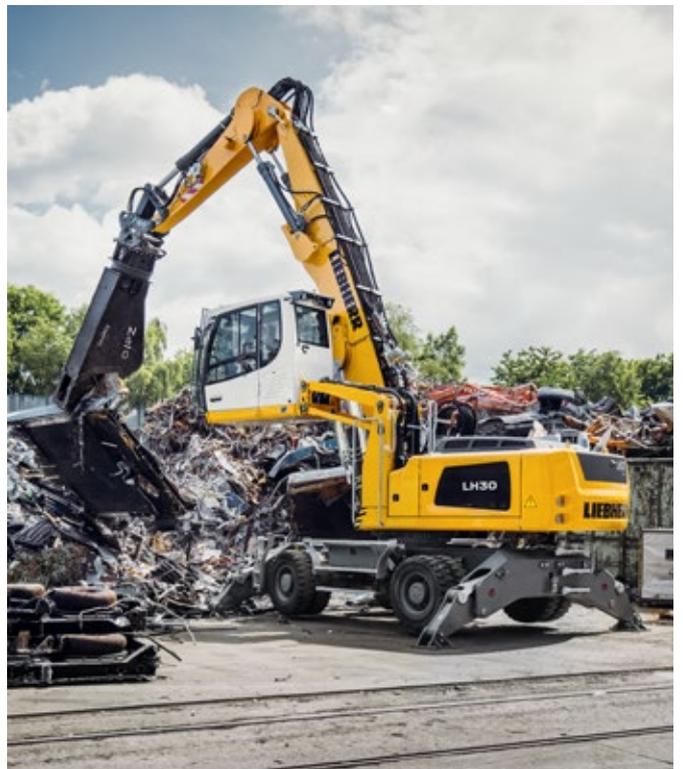
		<b>LH 80 Industry Litronic</b>	<b>LH 110 Industry Litronic</b>
Variants		M/M High Rise / C / C High Rise / C Gantry	M/M High Rise / C / C High Rise / C Gantry
Reach	m	22	24
Operating weight*	kg	approx. 66,500–120,500	approx. 95,000–138,000
Engine output	kW / HP	230 (220 <sup>31</sup> ) / 313	300 / 408
System performance	kW	437 / 427 <sup>31</sup>	492
Emission stage	Stage	V / Tier 4 Final / IIIA (compliant) / electric	V / Tier 4 Final / IIIA (compliant) / electric
Multi-tine grab capacity	m <sup>2</sup>	1.10–3.00	1.10–3.00

		<b>LH 150 Industry Litronic</b>
Variants		M/M High Rise / M Gantry / C / C High Rise / C Gantry
Reach	m	28
Operating weight*	kg	approx. 130,000–185,000
Engine output	kW / HP	400 / 543
System performance	kW	661
Emission stage	Stage	V / Tier 4 Final / IIIA (compliant) / electric
Multi-tine grab capacity	m <sup>2</sup>	1.10–3.00

# Examples of use

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# Mobile harbour cranes

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## Performance

Maritime scrap handling sets tough requirements for modern machines. The robust handling equipment in Liebherr's mobile harbour crane portfolio efficiently meets such challenges. Experience from various business sectors flows directly into the development of our portfolio. Whether large or small quantities of scrap metal, Liebherr manufactures a wide range of products for the handling of all vessel sizes.

## Economy

In port management, versatility is just as important as specialisation. Liebherr mobile harbour cranes combine these factors for all types of cargo in practically any kind of port environment. Comprehensive, basic equipment, easy transport and high flexibility underline the effectiveness of the cranes as an investment. Efficient design and innovative technologies ensure that Liebherr's solutions master the tasks of scrap handling with economy in mind. This ensures a high level of productivity and low fuel consumption at the same time.

## Reliability

Stability and robustness are very important criteria in scrap handling. Due to the interlocking of the material, enormous forces are exerted on the crane, which can exhaust the lifespan of the equipment very quickly. Liebherr mobile harbour cranes create optimum conditions for use in scrap handling, even in their basic design. The 4-chord lattice boom ensures maximum stability and precise crane movement. The X-shaped supporting base reduces the torsional stress on the steel structure, and the tubular tower design evenly transfers the forces to the steel structure and the slewing ring. These design principles significantly increase the service life of the crane.

## Comfort

Operator comfort is just as important as a reliable machine. Liebherr mobile harbour cranes are designed to support the driver in terms of safety, comfort and control. The forward facing position of the tower cabin made of 70% glass (safety glass) ensures an excellent and unobstructed view of the working area. Ergonomically arranged monitors and controls can be conveniently operated from an adjustable comfortable driver's seat. Air conditioning and swing compensation further improve the cab conditions. Vibrations are reduced to an imperceptible minimum. Also, the cab is soundproofed.

## Maintainability

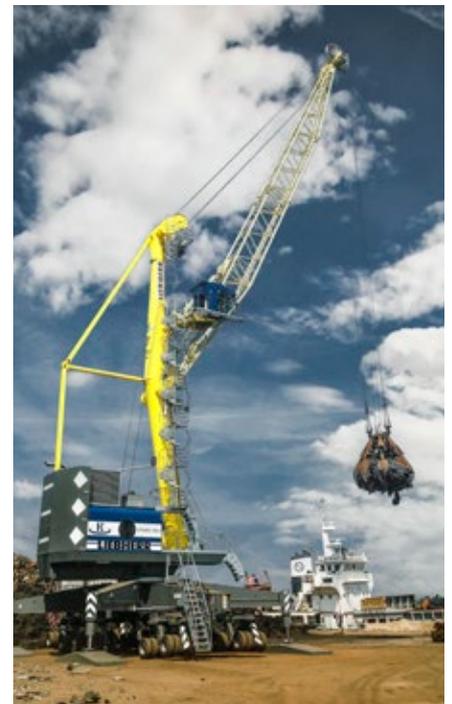
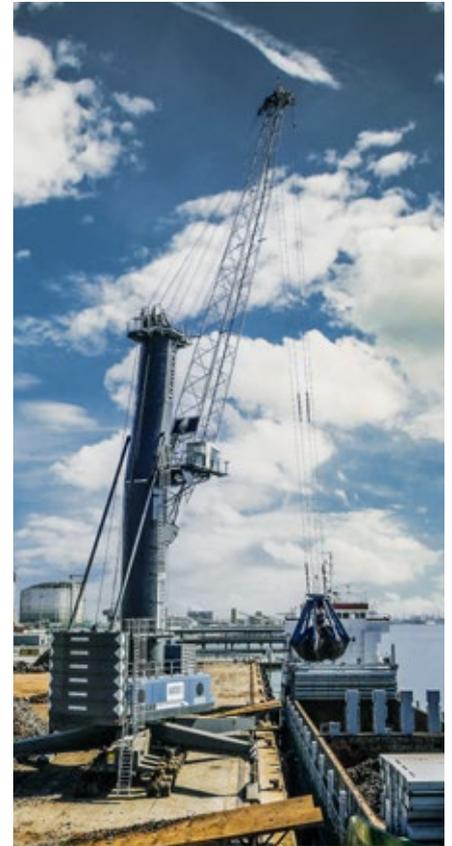
Based on many years of experience, Liebherr provides its customers with effective service and support presently and in the future. The constant enhancement and expansion of the service network is part of Liebherr's commitment to providing the best possible support to our customers worldwide. A team of more than 600 experienced, versatile and factory-trained service technicians work in more than 50 service centres around the globe. Their availability is ad hoc or on a contractual basis.

# Technical data

		<b>LHM 280</b>	<b>LHM 420</b>	<b>LHM 550</b>
Reach	m	10-40	11-48	11-54
Operating weight	kg	241,000	342,000	400,000
Lifting capacity	t	84	124	154
Engine output (with Pactronic)	kW	390 (700)	750 (1,450)	750 (1,450)
Slewing speed	rpm	0-1.6	0-1.6	0-1.6
Hoisting/lowering speed	m/min	0-90	0-120	0-120

# Examples of use

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# Wheel loaders

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## Performance

A wide range of products ensures the versatile and universal use of Liebherr wheel loaders in the field of scrap handling. In addition to the different models, you can choose between industrial and Z-bar kinematics within the L 550 – L 566 XPower wheel loaders and the L 580 XPower. This means the right machine is always available for the specific application such as transporting and loading steel and metal scrap or loading the shredder systems. The new L 507 E battery-electric wheel loader is ideal for indoor applications. This machine gives off zero emissions on-site and is extremely quiet while still maintaining its usual high working efficiency. The tried and tested stereo steering ensures a very small turning radius and a great versatility in everyday work.

## Economy

The innovative drive concepts of the Liebherr wheel loaders reduces fuel consumption by up to 30%. In addition there is minimal tyre wear and hardly any brake wear, at maximum handling capacity and efficiency, thus reducing operating costs and also protecting the environment.

## Reliability

Liebherr wheel loaders satisfy Liebherr's exacting standards in even the toughest conditions. They feature many components which are produced in-house and are therefore perfectly tailored to work in synergy. This ensures machine reliability and availability.

## Comfort

The modern, ergonomic cab design provides the operator with maximum comfort enabling them to concentrate on their work without fatigue, which once again means more safety and productivity. The Liebherr control lever allows precise and sensitive control of the machine. This ensures accurate and safe handling. The generous glass surfaces of the cab offer excellent all-round visibility thus ensuring maximum safety for people, the machine and the load.

## Maintainability

The Liebherr wheel loaders offer excellent service accessibility. All points for daily maintenance can be reached safely and conveniently. A clear benefit which saves time and money!

# Wheel loaders L 526 – L 580 XPower overview

## Maximum operator comfort for greater productivity

- Automatic central lubrication system \*
- Liebherr control lever with mini joystick \*
- Joystick steering \*
- Operator's cab without steering wheel / steering column – joystick steering only \*
- Liebherr weighing system with "Truck Payload Assist" \*
- Ride control  
(L 526 – L 546 optional / L 550 – L 580 as standard)
- Preparation for protective ventilation and dust filtration device \*
- Stroke limit damping \*

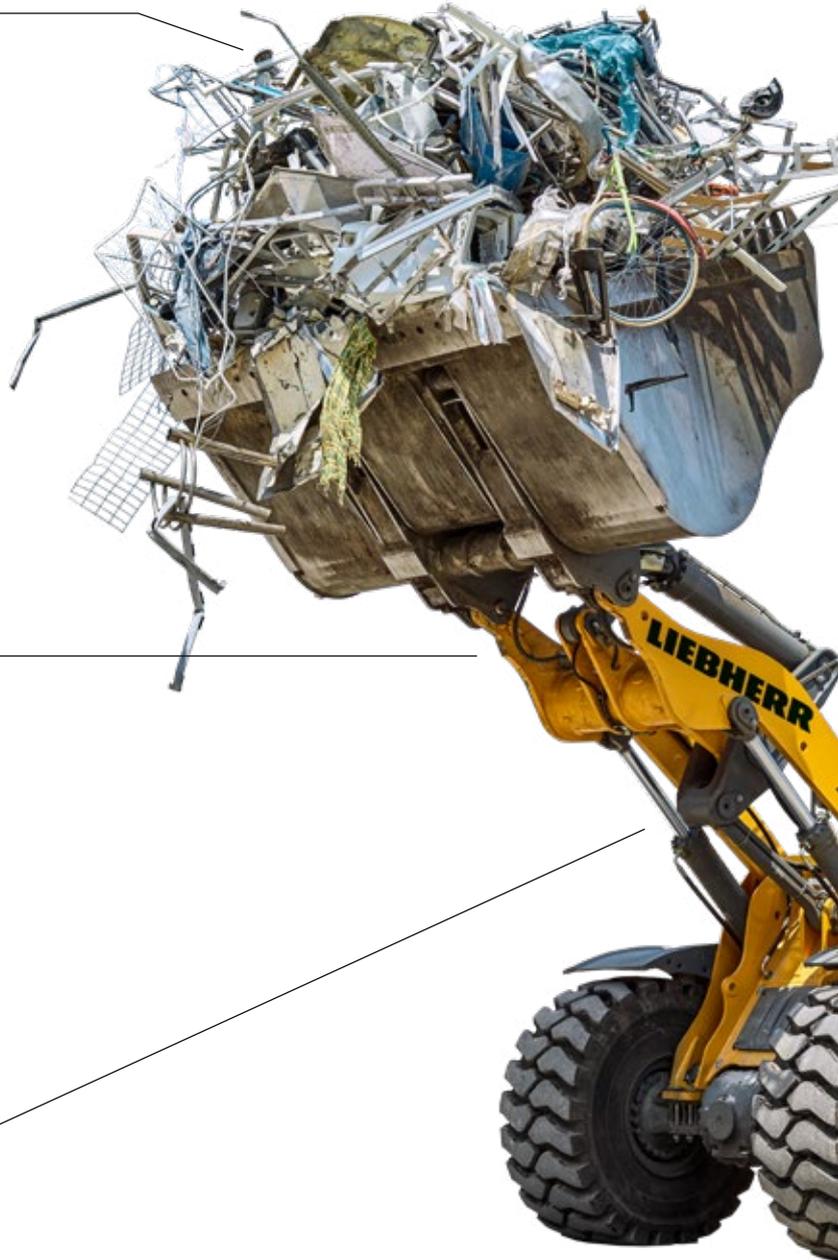
## Highest level of performance

- Industrial lift arm or Z-bar linkage  
(L 550 – L 566 and L 580 \*)
- High Lift arms \*
- Solidlink quick hitch \*
- Programmable automatic bucket return
- Programmable automatic lift and lowering arm position
- Comprehensive range of special equipment for scrap handling \*
- Electronic tractive force regulation

## Robustness and quality for durable machines

- Tilt cylinder protection \*
- Lamp carrier in steel design  
(L 526 – L 546 as standard / L 550 – L 580 \*)
- Guard for headlights \*
- Integral tyre pressure monitoring system \*
- Special tyres for scrap handling \*

\* optional





## Productive and safe working

- Soundproof ROPS / FOPS cab
- Windscreen guard \*
- Additional working lights, front / rear \*
- Adaptive working lighting \*
- Roof camera for front area monitoring (with Liebherr camera via Liebherr display) \*
- Skyview 360° \*
- Visualisation of the equipment position
- Liebherr key with remote control incl. Coming Home / Leaving Home function (L 550 – L 580 \*)

## Short service times for greater productivity

- Radiator easy to maintain
- Fluff trap for radiator \*
- Large-mesh radiator \*
- Reversible fan drive \*
- Air pre-cleaner \*
- Turbocharger insulation (L 550 – L 580 \*)
- Dust protection for alternator \*

## Productive and safe working

- Anti-slip steps and sturdy handrails
- Rear space monitoring camera via Liebherr display
- Active personnel detection at the rear \*
- Reversing obstruction detector \*
- Back-up alarm acoustic / visual \*

## Robustness and quality for durable machines

- Crash protection, rear \*
- Crash protection, rear with guard (L 526 – L 546 \*)
- Ramming guard with guard (L 550 – L 580 \*)
- Chassis protection \*
- Widening for mudguard \*

# Technical data

		L 507 Stereo	L 509 Stereo	L 514 Stereo
Tipping load	kg	3,240–3,750	3,400–4,430	3,770–5,750
Bucket capacity	m <sup>3</sup>	0.8–1.6	0.9–2.0	1.3–3.5
Operating weight	kg	5,550–5,835	6,390–6,875	8,860–9,985
Engine output	kW / HP	50 / 68	54 / 73	76 / 103
Emission stage	Stage	V	V	V

		L 518 Stereo	L 526	L 538
Tipping load	kg	3,870–6,550	5,030–8,730	6,220–9,650
Bucket capacity	m <sup>3</sup>	1.4–4.0	2.0–5.5	2.2–6.5
Operating weight	kg	9,190–10,445	13,170–14,770	14,520–16,050
Engine output	kW / HP	76 / 103	116 / 158	129 / 175
Emission stage	Stage	V	V	V

		L 546	L 550 XPower	L 556 XPower
Tipping load	kg	7,130–11,010	8,300–12,500	9,300–13,750
Bucket capacity	m <sup>3</sup>	2.6–7.5	2.6–9.5	2.8–10.0
Operating weight	kg	15,410–16,970	18,550–20,600	19,600–21,600
Engine output	kW / HP	138 / 188	163 / 222	183 / 249
Emission stage	Stage	V	V	V

		L 566 XPower	L 576 XPower	L 580 XPower
Tipping load	kg	12,100–15,900	16,250–17,600	14,800–19,500
Bucket capacity	m <sup>3</sup>	3.5–12.0	4.2–5.2	4.5–14.0
Operating weight	kg	23,900–26,900	25,650–25,800	27,650–30,100
Engine output	kW / HP	203 / 276	218 / 296	233 / 317
Emission stage	Stage	V	V	V

		L 507 E
Tipping load	kg	3,240–3,750
Bucket capacity	m <sup>3</sup>	0.8–1.6
Operating weight	kg	5,815–6,195
Battery	kWh	32.2 / 64.4
Emission stage		emission-free

		L 509 Tele
Tipping load	kg	3,600–3,800
Bucket capacity	m <sup>3</sup>	0.9–2.0
Operating weight	kg	6,800–7,150
Max. payload for fork carrier and fork	kg	2,300 <sup>1</sup>
Max. lifting height for fork carrier and fork	mm	4,800
Engine output	kW / HP	54 / 73
Emission stage	Stage	V

<sup>1</sup> Recommended payload for smooth surfaces = 80% of tipping load, articulated – according to 474-3

# Examples of use

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# Telescopic handlers

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## Performance

The tried-and-tested hydrostatic travel drive with infinitely variable acceleration without shifting gear and good manoeuvrability guarantees quick work processes even in limited spaces. The construction machine can be used universally and is solid from the ground up. It is designed for maximum performance in various applications. High load capacities, intuitive operation and high performance components allow the driver to complete his work quickly and reliably.

## Economy

The Liebherr telescopic handlers are all-rounders that make a decisive contribution to the efficiency of your vehicle fleet. Many different optional attachments allow universal use and increased utilisation of the machines. Top performance, low fuel consumption and minimum maintenance guarantee economy throughout the service life of the machine.

## Reliability

Robust and reliable: as characterised by Liebherr telescopic handlers. Advanced technology with high-quality materials and build quality guarantee maximum availability. A high level of utilisation and value is guaranteed in the long term.

## Comfort

The cab of the telescopic handler from Liebherr is an ideal workplace. It provides an excellent all-around view, has a spacious interior, provides a safe working environment, and its ergonomic controls allow relaxed and productive operation.

## Maintainability

At Liebherr, superior service is more than a promise, it is a guarantee to every customer. Several production facilities and an extensive service network for construction equipment means close proximity, and fast response times.

# Technical data

		<b>T 38-6</b>	<b>T 32-7</b>	<b>T 33-7</b>	<b>T 38-7</b>
Operating weight with standard fork, without operator	kg	7,420	7,350	7,500	7,540
Max. lift capacity	kg	3,800	3,200	3,300	3,800
Max. lift height	mm	6,225	6,925	6,925	6,925
Overall height <sup>1</sup>	mm	2,474	2,474	2,474	2,474
Overall width over standard tyre <sup>1</sup>	mm	2,327	2,327	2,327	2,327
Wheelbase <sup>1</sup>	mm	2,850	2,850	2,850	2,850
Rear overhang <sup>1</sup>	mm	784	784	784	784
Track gauge <sup>1</sup>	mm	1,920	1,920	1,920	1,920
Outside turning radius over tyres <sup>1</sup>	mm	4,800	4,850	3,950	4,070
Ground clearance (mid of vehicle) <sup>1</sup>	mm	405	405	405	405
Engine output	kW / HP	105 / 143	105 / 143	105 / 143	105 / 143
Emission stage	Stage	IIIA (compliant) / Tier 3 / V			

		<b>T 41-7</b>	<b>T 42-7</b>	<b>T 33-10</b>
Operating weight with standard fork, without operator	kg	7,600	7,750	8,100
Max. lift capacity	kg	4,100	4,200	3,300
Max. lift height	mm	6,925	6,925	9,747
Overall height <sup>1</sup>	mm	2,474	2,474	2,474
Overall width over standard tyre <sup>1</sup>	mm	2,327	2,327	2,327
Wheelbase <sup>1</sup>	mm	2,850	2,850	2,850
Rear overhang <sup>1</sup>	mm	784	784	784
Track gauge <sup>1</sup>	mm	1,920	1,920	1,920
Outside turning radius over tyres <sup>1</sup>	mm	4,920	4,050	5,200
Ground clearance (mid of vehicle) <sup>1</sup>	mm	405	405	405
Engine output	kW / HP	105 / 143	105 / 143	105 / 143
Emission stage	Stage	IIIA (compliant) / Tier 3 / V	IIIA (compliant) / Tier 3 / V	IIIA (compliant) / Tier 3 / V

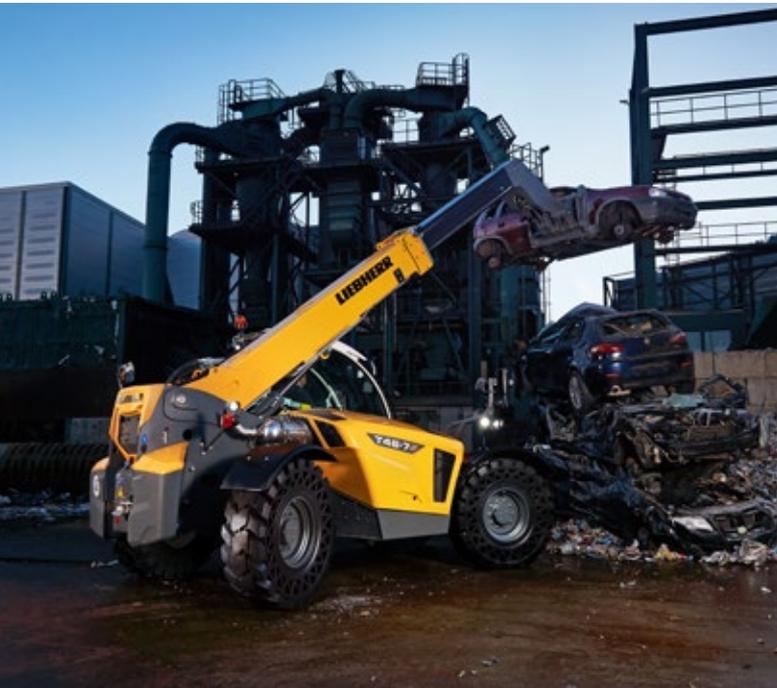
  

		<b>T 46-7</b>	<b>T 55-7</b>	<b>T 48-8</b>	<b>T 60-9</b>
Operating weight with standard fork, without operator	kg	8,995	10,600	10,600	11,700
Max. lift capacity	kg	4,600	5,500	4,800	6,000
Max. lift height	mm	7,032	7,032	8,043	8,780
Overall height <sup>1</sup>	mm	2,590	2,622	2,622	2,622
Overall width over standard tyre <sup>1</sup>	mm	2,514	2,521	2,521	2,521
Wheelbase <sup>1</sup>	mm	2,950	2,950	2,950	3,150
Rear overhang <sup>1</sup>	mm	977	1,019	1,019	1,217
Track gauge <sup>1</sup>	mm	2,040	2,040	2,040	2,010
Outside turning radius over tyres <sup>1</sup>	mm	3,833	3,902	3,902	4,090
Ground clearance (mid of vehicle) <sup>1</sup>	mm	410	410	410	438
Engine output	kW / HP	105 / 143	115 / 156	115 / 156	115 / 156
Emission stage	Stage	IIIA (compliant) / Tier 3 / V			

<sup>1</sup> All specifications with standards tyres, standard fork or standard bucket.

# Examples of use

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# Strong partner – strong service

**Our services are perfect for the challenges you face every day**



## **Saving time – for experts who face the challenges themselves**

Hand in hand to find the perfect solution. Do you want to maintain and service your machines yourself? Do you want to order the spare part you require quickly and flexibly regardless of your location and the time and be certain that you have selected the correct part?

The documentation available online and the spare parts shop in MyLiebherr enable you to access all the information you require with just a few clicks. Use our sophisticated logistics for fast deliveries of the parts you require, all in genuine quality of course. That will enable you to work efficiently. And if you're not sure what to do next, our experts are just a phone call away.



For further information, services and contact details, go to

## **Transparency – your payment professionals have full details of availability, costs and much more at all times**

Modular maintenance packages and Reman components to suit your company and budget. Are figures and the information they convey your strong point? Do you want to keep your current investments under review at all times and ideally be able to calculate in advance how much using the machine will cost and know all about its availability values?

Liebherr's modular CarePacks are tailored to your needs to show you in advance precisely what costs you can expect to ensure that your machine will continue to perform at its best in the future. For older machines, our Reman range delivers a smart, low cost solution for you.

## Reliability and support – for decision-makers and advance planning

You are not just interested in short term success, you want to be successful in the long term. Do you regard success not just as turnover, but also satisfied customers and helping to protect resources?

Our dense service network delivers consistency and a basis for planning, today and in the future.

If necessary, our experts are available for you 24/7. Our genuine parts and service experts able you to ensure that your machines retain their value. Our Reman range and a range of lubricants enable you to be successful at low cost whilst also protecting valuable resources.

### Some of our services for you in detail:



#### A strong partner

The safe feeling of having a strong partner by your side. Our dense service network means that our service experts are always close at hand. It is important to us that you always have a personal contact because when you need assistance, it's good to know that it's always available.



#### Reman range

The same performance and quality as a new part whilst reducing costs – that is what the replacement parts in our Reman range deliver. A wide range of components is available every day. An ideal solution, particularly for older machines, and at the same time you are helping to protect valuable resources by reusing parts.



#### Lubricants

Our portfolio of lubricants includes a series of products which enable you to actively help protect resources, including oils with longer change intervals or which are not harmful to the environment. One side-effect of these products is that they can also protect your wallet.



#### CarePacks

Our modular CarePacks can provide you with tailored packages of services at a fixed charge. That leaves you to concentrate on your work.

Liebherr Connect

# The networking of man, machine and environment

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## Networking in the digital world of Liebherr

Thanks to intelligent machine networking, Liebherr Connect enables access to digital services and comprehensive machine and process data. When using fleet and asset management systems, Liebherr Connect forms an essential basis for any type of component or machine condition monitoring. The solution also enables efficient data exchange and opens up a wide range of possibilities for further developing the machines and adapting them to individual customer requirements.

Liebherr Connect ensures that the machine is connected to the digital world via cloud applications – in almost all of the Group's product segments: earthmoving machines, material handling machines, mining, tower cranes, mobile and crawler cranes, maritime cranes and components. To help customers and partners throughout the entire life of an application, the Group provides the assurance to use all the benefits of modern technology with Liebherr Connect. This, in turn, allows users to optimise their work processes.



Further information on Liebherr Connect and digital solutions can be found here:



### MyLiebherr Portal

MyLiebherr is the portal for construction machines, mining machines, mobile and crawler cranes, maritime cranes, material handling technology, gear technology and automation systems or components.

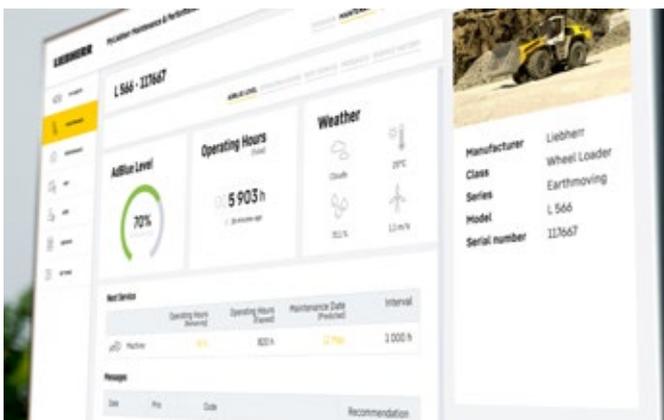
### One portal, all services

The customer portal offers comprehensive services, digital services and software solutions for efficient machine utilisation. Once registered, machines can be stored and managed, suitable spare parts can be ordered and licences can be purchased. In addition, a wide range of digital services are available for efficient machine utilisation. The range is constantly being revised and updated.



### MyLiebherr Performance

Always be well informed about the performance of your machines and attachments. MyLiebherr Performance is available for earthmoving and material handling machines in MyLiebherr. It enables plant managers in particular to recognise inefficient machine use, save fuel and reduce idle times. In combination with our extensive knowledge as a machine manufacturer, this solution can be used to reduce operating costs by means of optimisation suggestions to make machine deployment more efficient.



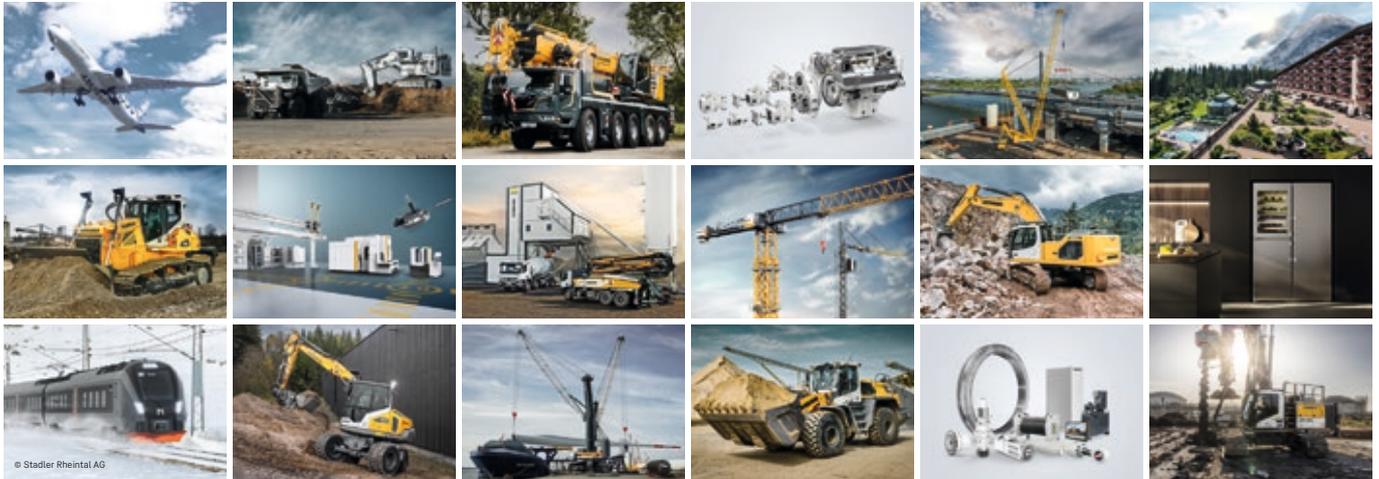
### MyLiebherr Maintenance

Stay up-to-date about the condition of your machines and attachments. MyLiebherr Maintenance is available for earthmoving and material handling machines in MyLiebherr. This service enables workshop managers to operate their fleet with maximum reliability. A particular advantage is that, in addition to proactive maintenance planning, specific recommendations for action are also provided. Customers benefit from the knowledge of an integrated technology group with expertise ranging from components to the entire machine. In short, MyLiebherr Maintenance helps to reduce or completely avoid unplanned machine downtime and reduce the time required for problem identification, assessment and resolution.





# The Liebherr Group



## Global and independent: more than 75 years of success

Liebherr was founded in 1949 when, with the development of the world's first mobile tower crane, Hans Liebherr laid the foundations for a family-run company which now has more than 50,000 employees and comprises over 150 companies across every continent. The holding company of the Group is Liebherr-International AG in Bulle, Switzerland, whose shareholders are exclusively members of the Liebherr family.

## Technology leadership and pioneering spirit

Liebherr is a pioneer and its forward-looking approach has seen it make important contributions to technology history over a wide variety of industries. Employees throughout the world continue to share the courage of the company founder, sharing a passion to produce innovative products and a determination to provide world-leading equipment and machinery.

## Diversified product programme

Liebherr is one of the world's biggest construction machine manufacturers and provides high-quality, user-oriented products and services. Its product range includes the product segments earthmoving, material handling, deep foundation, mining, mobile and crawler cranes, tower cranes, concrete technology, maritime cranes, aerospace and transportation systems, gear technology and automation systems, refrigerators and freezers, components and hotels.

## Customised solutions and maximum customer value

Liebherr solutions are characterised by precision, implementation and longevity. The company is committed to technological excellence and to providing customers with solutions that match their needs exactly. For Liebherr, customer focus does not end with delivery of a product but continues through a comprehensive range of back-up and support services.

[www.liebherr.com](http://www.liebherr.com)

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