# Specialist machines for scrap handling

Material handling machines, electric material handling machines, mobile harbour cranes, wheel loaders, telescopic handler



Material handling machines













# Liebherr specialist machines for scrap handling

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
- Electric 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

The existing generation of material handling machines are powerful and efficient. Liebherr achieves this difficult balancing act with its own engine technology manufactured in-house and optimised to meet the requirements of controlled hydraulics. 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 efficiency. Liebherr-Power Efficiency (LPE) enables machine operation in the area of the lowest specific fuel use. Combined with the innovative Liebherr Energy Recovery Cylinder (ERC), which is a standard feature from machine class LH 40 upward, fuel consumption is reduced to a minimum. At the same time material handling is significantly increased thanks to faster and more homogeneous work 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 operator the necessary space and comfort to make the best possible use of his or her machine's capability. Large glass panels, different types of cab elevations and rear and side area monitoring enable optimum viewing of the working area and the area around the machine at all times for the operator. In addition, the Comfort driver's seat, the intuitive touchscreen colour display and central lubrication systems for the machine and its attachment provide the necessary comfort for the operator to allow him to concentrate 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

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### 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 fuel 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
- Optimized servicing concept and cleverly designed maintenance access points guarantees minimum machine downtime

### Undercarriage

- Optimised hydraulics with closed slewing mechanism circuit for greater fuel 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	М
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	m²	0.40-0.60	0.40 - 0.60

		LH 26 Industry Litronic	LH 30 Industry Litronic
Variants		М	M/C
Reach	m	13	14
Operating weight*	kg	approx. 24,200 - 24,500	approx. 26,500 - 30,200
Engine output	kW/HP	115/157	140/190
System performance	kW	-	-
Emission stage	Stage	V/Tier 4 Final/IIIA (compliant)	V/Tier 4 Final/IIIA (compliant)
Multi-tine grab capacity	m²	0.40-0.60	0.40 - 0.60

		LH 35 Industry Litronic	LH 40 Industry Litronic
Variants		М	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	155/211
System performance	kW	-	237
Emission stage	Stage	V/Tier 4 Final/IIIA (compliant)	V/Tier 4 Final/IIIA (compliant)
Multi-tine grab capacity	M²	0.40-0.60	0.40-1.10

M = MobileC HR = CC = CrawlerC G = CrM HR = Mobile High Rise\* withoutM G = Mobile Gantry

C HR = Crawler High Rise C G = Crawler Gantry \* without attachment

		LH 50 Industry Litronic	LH 60 Industry Litronic
Variants		M/M HR/C HR	M/MHR/C/CHR
Reach	m	18	20
Operating weight*	kg	approx. 40,000-54,900	approx. 52,000 - 75,800
Engine output	kW/HP	155/211	190/258
System performance	kW	269	334
Emission stage	Stage	V/Tier 4 Final/IIIA (compliant)	V/Tier 4 Final/IIIA (compliant)
Multi-tine grab capacity	m²	0.40-1.10	1.10-1.70

		LH 80 Industry Litronic	LH 110 Industry Litronic
Variants		M/MHR/C/CHR/CG	M/MHR/C/CHR/CG
Reach	m	22	24
Operating weight*	kg	approx. 66,500-112,500	approx. 95,000-128,000
Engine output	kW/HP	230/313	300/408
System performance	kW	437	492
Emission stage	Stage	V/Tier 4 Final/IIIA (compliant)	V/Tier 4 Final/IIIA (compliant)
Multi-tine grab capacity	m²	1.10-3.00	1.10-3.00

		LH 150 Industry Litronic
Variants		M/MHR/MG/C/CHR/CG
Reach	m	28
Operating weight*	kg	approx. 130,000-175,000
Engine output	kW/HP	400/543
System performance	kW	661
Emission stage	Stage	V/Tier 4 Final/IIIA (compliant)
Multi-tine grab capacity	m²	1.10-3.00

















# Electric material handling machines

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#### Performance

The electrically-powered material handling range has been specially developed to deal with the arduous demands of industrial material handling. A large spectrum of equipment and an uppercarriage optimised for extensive reach makes it possible to cater to all waste and cargo handling requirements. With all of its major components manufactured inhouse and combined with the power of an electric motor, the drive train output maximises the machine's performance in terms of lift capacity, precision and work pace. The scope of this high performing equipment is enhanced considerably due to a tracked undercarriage.

#### Economy

Investing in an electric material handling design pays dividends in the long term. Continually rising costs from conventional energies are a burden on operating costs and considerably reduce profit margins. Environmental factors and CO<sub>2</sub> emissions, in particular, are growing in importance with the choice of engines / motors and working methods. With the electric drive system, Liebherr offers an economically beneficial alternative to conventional machines and, moreover, an eco-friendly solution. Furthermore, the material handling machine is always available because refuelling is unnecessary as are particulate filters and AdBlue.

### Reliability

With more than 30 years of experience in designing electric material handling equipment, Liebherr developed the existing models EP 934 C, EP 944 C and EP 954 C to comply with every demand from the market. The layout of the machines were completely revised due to the components of the electric drive system, which means the unit is more than just a conversion of a conventional diesel drive machine. All of the important components of the electric drive system have been integrated within the existing exterior dimensions of the uppercarriage. Liebherr electric material handling machines offer a high level of reliability so that they can consistently fulfil their key functions when deployed in industrial areas. The already long service life of the hydraulic components is further enhanced by the low noise electric drive system. The drive concept, with just one electric motor, ensures that the high voltage is limited to the range of the switch cabinet and drive system, the low voltage functions are capable of being enclosed in one terminal box.

### Comfort

To allow the operator to focus fully on his or her work and utilise the machine's maximum performance, all electric material handling machines feature an ergonomically designed driver's cab with a high level of comfort and good all-around vision. The new electric material handling machines offer the same level of comfort as conventionally-driven material handling machines (layout of control elements, operator's seat, climate control, large glazed surfaces, etc.). Thanks to low noise generation and the elimination of vibrations, the electric drive system provides greater comfort. For Liebherr, comfort also means easily accessible service and check points for all daily maintenance tasks on the machine in order to keep downtime to a minimum.

### Maintainability

The large, wide-opening service hatch allows optimal service access. All service points can be accessed conveniently and safely resulting in short servicing times for more productivity.

# Electric material handling machines overview

### Large range of equipment

- Designed for all requirements in scrap handling
- Special equipment upon request



### Large range of attachments

- Multi-Tine grab
- Sorting grapple
- Quick-change system

### Cab elevation

- Large range of fixed and hydraulically adjustable elevations
- Perfect view of the working area and surrounding area of machine

### Spring base

- Absorption of dynamic loads in order to be able to operate the machine safely on one pillar over the long term
- Number of absorbing dampers based on size of machine
- Assembly kit for customer (for concrete, steel)



### **Electric motor**

- Designed to withstand even extreme environmental conditions
- Constant speed independent of the load
- Integrated sensors for maximum availability

### Integrated switchgear cabinet

- Designed to withstand even extreme environmental conditions
- Overpressure system to prevent ingress of dust
- Fastenings with standard padlocks
- Robust and durable

#### Access

- Safe and comfortable acces to the working station
- Secure and non-slip access system

### Freestanding undercarriage with 4-point outrigger

- Consistent machine performance on interchangeable undercarriage
- Reduced ground space
- Modular and upgradeable

## **Technical data**

		EP 934 C Handling	EP 944 C Handling
Reach	m	13-20	15-22
Operating weight*	kg	39,100	51,900
Engine output	kW/HP	160/218	200/272
Capacity	m³	0.80-1.10	1.10-1.70
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		EP 954 C Handling	ER 934 C Handling
Reach	m	16-24	12-16
Operating weight*	kg	64,500	38,050
Engine output	kW/HP	250/340	160/218
Capacity	m³	1.10-1.70	0.80 - 1.10
		ER 944 C Handling	ER 954 C Handling
Reach	m	15-18	15-20
Operating weight*	kg	52,050	75,400
Engine output	kW/HP	200/272	250/340
Capacity	m³	1.10-1.70	1.10-1.70
		ER 934 C High Rise	ER 944 C High Rise
Reach	m	13-20	15-22
Operating weight*	kg	56,200	73,400
Engine output	kW/HP	160/218	200/272
Capacity	m³	0.80-1.10	1.10-1.70
		ED OF/ C High Dieg	
Devel		ER 954 C High Rise	
Reach	m	16-24	
Operating weight*	kg	95,800	

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		LH 26 Industry Litronic	LH 110 Industry Litronic	LH 150 Industry Litronic
Variants		M/C	C/CHR/CG	MG/C/CHR/CG
Reach	m	13	25	28
Operating weight*	kg	approx. 26,200 - 27,900	approx. 105,000 - 138,000	approx. 135,000–185,000
Engine output	kW	90	300	400
System performance	kW	105	492	661
Multi-tine grab capacity	M3	0.40-0.60	1.10 - 3.00	1.10 - 3.00

M = Mobile	C HR = Crawler High Rise
C = Crawler	C G = Crawler Gantry
M HR = Mobile High Rise	* without attachment
M G = Mobile Gantry	

kW/HP

m³

250/340

1.10-1.70

Engine output

Capacity

## **Examples of use**











### 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 centers around the globe. Their availability is ad hoc or on a contractual basis.

# **Technical data**

		LHM 280	LHM 420	LHM 550
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	0-115	0-120	0-120

### **Examples of use**











### **Wheel loaders**



### 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. This increases the utilisation of the machine and increases productivity.

### 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

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### Maximum operator comfort for greater productivity

- Automatic central lubrication system (optional)
- Liebherr control lever with mini joystick (optional)
- Joystick steering or 2-in-1 steering (optional)
- Operator's cab without steering wheel/steering column joystick steering only (optional)
- Liebherr weighing system with "Truck Payload Assist" (optional)
- Ride control (L 526 L 546 optional / L 550 L 580 as standard)
- Preparation for protective ventilation and dust filtration device (optional)
- Stroke limit damping (optional)

### Highest level of performance

- Industrial lift arm or Z-bar linkage (L 550 L 566 and L 580 optional)
- High Lift arms (optional)
- LIKUFIX quick hitch (L 526 L 546 optional)
- Programmable automatic bucket return
- Programmable automatic lift and lowering arm position
- Comprehensive range of special equipment for scrap handling (optional)
- Electronic tractive force regulation

## Robustness and quality for durable machines

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

### Productive and safe working

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

### Short service times for greater productivity

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

#### Productive and safe working

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

### Robustness and quality for durable machines

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

# **Technical data**

		L 507 Stereo	L 509 Stereo	L 514 Stereo
Tipping load	kg	3,490-3,750	4,200-4,430	4,075-5,750
Bucket capacity	M³	0.9-1.6	1.2-2.0	1.4 - 3.5
Operating weight	kg	5,550-5,730	6,390-6,465	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	5,025-6,550	5,030-8,730	6,220 - 9,650
Bucket capacity	m³	1.5-4.0	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	9,800-12,500	11,000-13,750
Bucket capacity	M3	2.6-7.5	3.1-9.0	3.4-10.0
Operating weight	kg	15,410-16,970	18,550 - 20,500	19,600-21,500
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	17,400-17,600	14,800-19,500
Bucket capacity	m³	3.5-12.0	4.7-5.2	4.5-14.0
Operating weight	kg	23,900-26,900	25,700 - 25,800	27,650-30,100
Engine output	kW/HP	203/276	218/296	233/317
Emission stage	Stage	V	V	V

### **Examples of use**











# **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**

		Т 35-6	T 32-7	T 36-7
Operating weight with standard fork, without operator	kg	7,320	7,280	7,310
Max. lift capacity	kg	3,500	3,200	3,600
Max. lift height	mm	6,132	6,925	6,925
Overall height <sup>1</sup>	mm	2,465	2,465	2,465
Overall width over standard tyre <sup>1</sup>	mm	2,327	2,327	2,327
Wheelbase <sup>1</sup>	mm	2,750	2,750	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	3,812	3,812	3,906
Ground clearance (mid of vehicle) <sup>1</sup>	mm	405	405	405
Engine output	kW/HP	100/136	100/136	100/136
Emission stage	Stage	IIIA (compliant)/Tier 3/V	IIIA (compliant)/Tier 3/V	IIIA (compliant)/Tier 3/V

		T 41-7	T 33-10	T 46-7
Operating weight with standard fork, without operator	kg	7,460	8,050	8,995
Max. lift capacity	kg	4,100	3,300	4,600
Max. lift height	mm	6,925	9,747	7,032
Overall height <sup>1</sup>	mm	2,465	2,465	2,590
Overall width over standard tyre <sup>1</sup>	mm	2,327	2,327	2,514
Wheelbase <sup>1</sup>	mm	2,850	2,850	2,950
Rear overhang <sup>1</sup>	mm	784	784	977
Track gauge <sup>1</sup>	mm	1,920	1,920	2,040
Outside turning radius over tyres <sup>1</sup>	mm	3,906	3,906	3,833
Ground clearance (mid of vehicle) <sup>1</sup>	mm	405	405	410
Engine output	kW/HP	100/136	100/136	100/136
Emission stage	Stage	IIIA (compliant)/Tier 3/V	IIIA (compliant)/Tier 3/V	IIIA (compliant)/Tier 3/V

		T 55-7	Т 60-9
Operating weight with standard fork, without operator	kg	10,600	11,700
Max. lift capacity	kg	5,500	6,000
Max. lift height	mm	7,032	8,780
Overall height <sup>1</sup>	mm	2,622	2,622
Overall width over standard tyre <sup>1</sup>	mm	2,521	2,521
Wheelbase <sup>1</sup>	mm	2,950	3,150
Rear overhang <sup>1</sup>	mm	1,019	1,217
Track gauge <sup>1</sup>	mm	2,040	2,010
Outside turning radius over tyres <sup>1</sup>	mm	3,903	4,090
Ground clearance (mid of vehicle) <sup>1</sup>	mm	410	438
Engine output	kW/HP	115/156	115/156
Emission stage	Stage	IIIA (compliant)/Tier 3/V	IIIA (compliant)/Tier 3/V

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

### **Examples of use**



### **The Liebherr Group**



#### Global and independent: more than 70 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 business now employing nearly 50,000 people and comprising over 140 companies across every continent.

The parent company is Liebherr-International AG in Bulle, Switzerland, whose associates are exclusively members of the Liebherr family.

#### Leaders and pioneers

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 founder, sharing a passion to produce innovative products and a determination to provide world-leading equipment and machinery.

#### **Diversified portfolio**

The company is one of the world's biggest construction equipment manufacturers and provides high-quality, user-oriented products and services to sectors including: earthmoving, material handling, deep foundations, mining, mobile and crawler cranes, tower cranes, concrete production and distribution, maritime cranes, aerospace and transportation, gear technology and automation, refrigeration and freezing, components and hotels.

#### **Customised care**

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. That 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

#### Liebherr-

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