Technical Description Wheel Loader

L 564 2plus2

Tipping Load Bucket Capacity Operating Weight 22,4 t

15285 kg 4,0-8,5 m³

183 kW (249 HP) **Engine Output**





LIEBHERR

lechnical Data



Engine

Liebherr diesel engine D 926 TI-E A2 6-cylinder, inline engine, water-cooled exhaust-

turbo charged with intercooler

Power output

according to ISO 9249 _ 183 kW (249 HP) at 2000 RPM 1074 Nm at 1200 RPM Max. torque 9,96 litres Displacement Bore/Stroke 122/142 mm

Air cleaner Dry type with main and safety element, pre-

cleaner, service indicator on LCD display

Electrical system

Operating voltage Battery

2 x 143 Ah/12 V Three-phase AC, 28 V/55 A Alternator

24 V/5,4 kW Starter motor



Travel Gear

Stepless hydrostatic travel drive Type "2plus2" Variable-pitch swashplate pump and two axial

piston motors in closed circuit with one axle

transfer case

Filtering system Suction-side filter for the closed circuit Control

By travel and inching pedal. The inching pedal makes it possible to control the tractive and thrust forces steplessly at full engine speed. The

Liebherr joystick is used to control forward and reverse travel

Stage 1 0 - 10.0 km/hStage 2 and A2_ 0-20.0 km/h

0-40,0 km/h Stage A3 Forwards and in reverse with tyre size 26.5R25



Travel speeds

All-wheel drive Front axle Fixed

Rear axle Centre pivot, with 13° oscillating angle to each side. Obstacles up to 560 mm in height can be driven over (with all four wheels remaining in con-

tact with the ground) Differentials Automatic limited-slip differentials with 45 % lok-

king action in both axles

Planetary final drive in the wheel hubs Final drive 2230 mm with all types of tyres Track width



Brakes

Wear-free service brake Self-locking of the hydrostatic travel drive (acting on all four wheels) and additional pump-accumulator brake system with wet multi-disc brakes

located in the wheel hubs. Two separate brake

circuits

Electro-hydraulically actuated spring-loaded Parking brake

brake system on the transmission.

Braking system complies with German road-vehicle construction and use regulations.

23.5R25 Available sizes

26.5R25

Tubeless radial or cross-ply tyres on well-base

rims

Special tyres By arrangement with the manufacturer



Steering

"Load-sensing" variable axial piston pump. Design Central pivot with two double-acting, damped

steering cylinders

Angle of articulation 40° (to each side)

Emergency steering Electro-hydraulic emergency steering system



Attachment Hydraulics

Design	_ "Load-sensing" variable axial piston pump with output control and pressure cutoff
Max. flow	_290 l/min.
Max. operating pressure	_325 bar
Cooling	_ Hydraulic oil cooling using thermostatically
_	controlled fan and oil cooler
Filtering	Return-line filter in the hydraulic reservoir
Control	_ "Liebherr-Joystick" with hydraulic servo control
Lift circuit	_ Lifting, neutral, lowering
	and float positions controlled by Liebherr joystick
	with detent; automatic lifting-limit circuit
Tilt circuit	_Tilt back, neutral, dump
	automatic bucket positioning



Attachments

Geometry	Powerful Z-pattern linkage cast steel cross-tube	with tilt cylinder and
Bearings	Sealed	
Cycle time at nominal load	Lifting	5,6 sec.
•	Dumping	2,0 sec.
	Lowering (empty)	3,5 sec.



Operator's Cab

ROPS/FOPS cab resiliently mounted on rear Design.

section of vehicle and noise-damped; lockable door with sliding window and 180° opening angle; emergency exit; toughened safety glass windows, tinted; adjustable steering column and

joystick bracket as standard equipment; ROPs roll-over protection according to DIN/ISO 3471/EN 474-3 and FOPS falling objects protection according to DIN/ISO 3449/EN 474-1

Operator's seat 6 way adjustable seat with seat belt, adjustable

for operator's weight

With defrosting, fresh-air filter, air-recirculated-air Cab heating and ventilation

mode and heater supplied from engine's cooling system. Air conditioning is standard equipment



Noise Emission

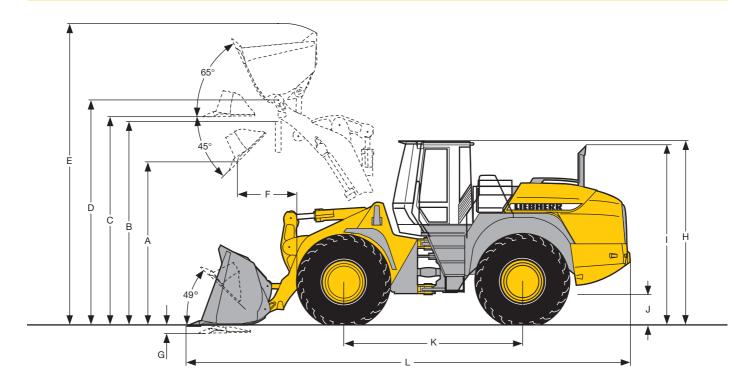
	in the operator's cab	
	Without blower	69 dB(A)
ISO 6396	_ Max. blower output	71 dB(A)
2000/14/EC	_Outside cab	105 dB(A)



Capacities

Fuel tank	330 I
Engine oil (including filter change)	18 I
Pump distributor gears	2,5 I
Transmission "2plus2"	11,5 I
Front axle/wheel hubs	51 I
Rear axle/wheel hubs	51 I
Hydraulic tank	120 I
Hydraulic system, total	240 I
Air condition system (R134a)	1800 g

Dimensions



			Pm						
В	ucket Type				Loading	Bucket			Rock Bucket
	Cutting tools		Т	T	Е	Т	Е	Т	Т
	Bucket capacity	m ³	4,0	4,0	4,0	4,5	4,5	5,0	3,5
	Bucket width	mm	3000	3000	3000	3000	3000	3000	3000
	Specific material weight	t/m³	1,8	1,8	1,8	1,6	1,6	1,4	2,0
Α	Dumping height at max. lift height and 45° discharge	mm	3150	3220	3210	3160	3155	3080	3330
В	Dump-over height	mm	3900	3900	3900	3900	3900	3900	3900
С	Max. height of bucket bottom	mm	4025	4025	4025	4025	4025	4025	4025
D	Max. height of bucket pivot point	mm	4355	4355	4355	4355	4355	4355	4355
Е	Max. operating height	mm	6010	5855	5855	5945	5945	6025	5745
F	Reach at max. lift height and 45° discharge	mm	1250	1180	1190	1240	1245	1325	1095
G	Digging depth	mm	100	100	100	100	100	100	100
Н	Height above cab	mm	3540	3540	3540	3540	3540	3540	3540
1	Height above exhaust	mm	3450	3450	3450	3450	3450	3450	3450
J	Ground clearance	mm	550	550	550	550	550	550	550
K	Wheelbase	mm	3450	3450	3450	3450	3450	3450	3450
L	Overall length	mm	8730	8630	8450	8710	8530	8830	8510
	Turning circle radius over outside bucket edge	mm	6990	6930	6890	6955	6915	6990	6895
	Lifting force (SAE)	kN	245	245	245	245	245	245	245
	Breakout force (SAE)	kN	170	185	185	172	172	156	206
	Tipping load,straight*	kg	16800	17410	17190	17290	17090	17190	17490
	Tipping load,articulated at 37°*	kg	15020	15500	15290	15400	15180	15280	15580
	Tipping load,articulated at 40°*	kg	14750	15285	15095	15180	15005	15095	15335
	Operating weight*	kg	22480	22450	22700	22600	22800	22700	22400

^{*} The figures shown here are valid with Michelin XHA 26.5R25 tyres and include all lubricants, a full fuel tank, the ROPS/FOPS cab and the operator.

Different tyres and optional equipment will change the operating weight and overturning loads.



Е

= Rehandling bucket

= Loading bucket with back grading edge

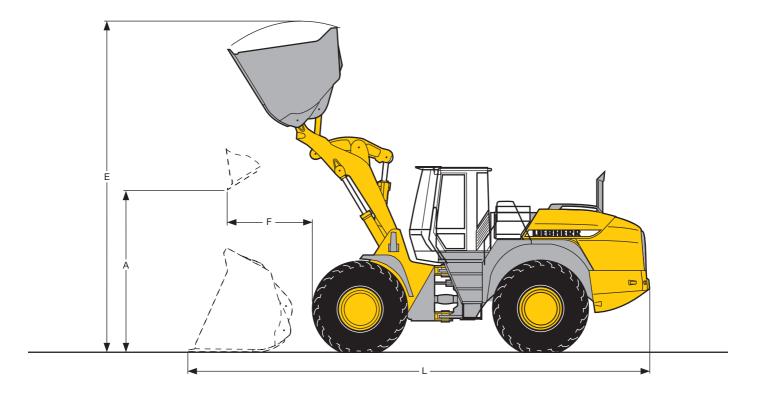
= Welded-on tooth holder with add-on teeth

= Four-piece, bolt-on reversible cutting edge

The attachments are secured directly to the lifting arms.

Attachments

Light Material Bucket



Light Material Bucket with Bolt-On Cutting Edge			
Bucket capacity	m ³	6,5	8,5
Bucket width	mm	3200	3500
Specific material weight	t/m³	1,0	0,8
A Dumping height at max. lift height	mm	2950	2810
E Max. operating height	mm	6210	6410
F Reach at maximum lift height	mm	1380	1530
L Overall length	mm	8840	9070
Tipping load, straight*	kg	15770	15360
Tipping load, articulated at 40°*	kg	13840	13480
Operating weight *	kg	23000	23300

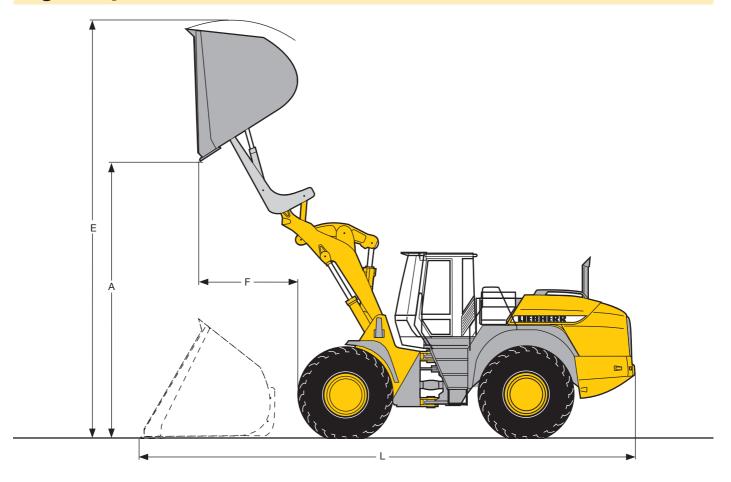
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Different tyres and optional equipment will change the operating weight and overturning loads.

The attachments are secured directly to the lifting arms.

Attachments

High-Dump Bucket



	ith Bolt-On Cutting Edge			
	Bucket capacity	m ³	6,5	
	Bucket width	mm	3200	
	Specific material weight	t/m³	0,8	
Α	Dumping height at max. lift height	mm	5300	
Ε	Max. operating height	mm	7600	
F	Reach at maximum lift height	mm	1840	
L	Overall length	mm	9370	
	Tipping load, straight*	kg	12100	
	Tipping load, articulated at 40°*	kg	10600	

kg

24500

Different tyres and optional equipment will change the operating weight and overturning load.

The attachments are secured directly to the lifting arms.

High-Dump Bucket

Operating weight*

^{*} The figures shown here are valid with Michelin XHA 26.5R25 tyres and include all lubricants, a full fuel tank, the ROPS/FOPS cab and the

Tipping Load



What is tipping load?

Load at centre of gravity of working equipment, so that the wheel loader just begins to tip over the front axle.

This the most unfavourable static-load position for the wheel loader.

Liftings arms horizontal, wheel loader fully articulated at centre pivot.

Pay load.

The pay load must not exceed 50 % of the tipping load when articuladed.

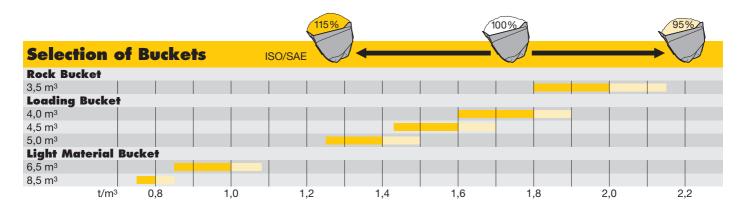
This is equivalent to a static stability-margin factor of 2,0.

Bucket capacity.

The bucket volume is determined from the pay load.

Pay load = Tipping load, articulated

Bucket capacity = Pay load (kg)
Specific bulk weight of material (t/m³)



Bulk Material	Densil	ies c	ınd Bucket Filling	Facto	ors			
	t/m³	%	_	t/m³	%		t/m³	%
Gravel, moist	1,9	105	Clay, natural	1,6	110	Granite	1,8	95
dry	1,6	105	dry	1,4	110	Limestone,		
wet, 6-50 mm	2,0	105	wet	1,65	105	hard	1,65	95
dry, 6-50 mm	1,7	105	Clay and gravel,			soft	1,55	100
crushed stone	1,5	100	dry	1,4	110	Sandstone	1,6	100
Sand, dry	1,5	110	wet	1,6	100	Slate	1,75	100
moist	1,8	115	Earth, dry	1,3	115	Bauxite	1,4	100
wet	1,9	110	wet excavated	1,6	110	Gypsum, broken	1,8	100
Gravel and sand,			Topsoil	1,1	110	Coke	0,5	110
dry	1,7	105	Weathered rock			Slag, broken	1,8	100
wet	2,0	100	50 % rock, 50 % earth	1,7	100	Coal	1,1	110
Sand and clay	1,6	110	Basalt	1,95	100			

Tyre Sizes		Width over tyres	Change in vertical dimensions	Use
		mm	mm	
23.5R25 Dunlop PG 120	L5	2837	+ 5	Stone
26.5R25 Dunlop T7 LD	L3	2910	+ 35	Gravel
26.5R25 Michelin XHA	L3	2930	0	Gravel
23.5R25 Michelin X-MINE	L5	2870	+ 10	Scap material/Waste
23.5R25 Michelin XLD D2	L5	2850	– 15	Stone/Mining spoil
705/70R25 Michelin XLD	L3	2950	- 70	Gravel
23.5R25 Good Year GP2B	L2	2850	- 20	Sand
26.5R25 Good Year RL2+	L2	2930	+ 35	Gravel
26.5R25 Good Year RL2+	L2	2930		Grav

Equipment

Liebherr-2plus2-travelgear Ride control •	ı
Ride control Liebherr shock absorbing element Automatic travel mode Kick-Down 20 km/h speed limiting Electronical theft protection Creep speed/Cruise control Electronic crowding force control Combined inching-braking system Multi-disc limited slip differentials in both axles Air cleaner system with pre-filter Particle protection for radiator Reversible fan drive Emergency steering system Bio degredable hydraulic oil Headlights Tail lights Working area lights at front Working area lights at rear Battery master switch Pre-heat system for cold starting Towing hitch	0
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Battery master switch Pre-heat system for cold starting Towing hitch •	
Pre-heat system for cold starting Towing hitch •	
Towing hitch •	
•	
Lockable doors, service flap an engine hood	
Toolbox with toolkit	
Dust filter system	•
Protective ventilation system	•
Amber beacon	•
Acustical warning device for travel in reverse	•
Exhaust pipe – special steel •	
Noise suppression package "101"	•
Automatic central lubrication system	•
Road ballast	Х

Operator's Cab	S	0
Driver's cab with reduced overall height – 90 mm		•
Noise-damped ROPS/FOPS cab with tinted safety glass	•	
Joystick steering		•
2in1 steering system – changeable		•
Hot-water heater with defroster and recirculated-air system	•	
Adjustable steering column	•	
Liebherr joystick control – adjustable	•	
Air conditioning system	•	
Liebherr operator's seat – adjustable in 6 ways	•	
Air sprung operator's seat with seat belt		•
Sliding window	•	
Emergency exit	•	
Floor mat	•	
Wash/wipe system for windscreen and rear window	•	
Interior rear-view mirror	•	
Sun visor	•	
Bottle holder	•	
Clothes hook	•	
Storage box with cooling funktion	•	
Storage compartment	•	
Plug	•	
Ashtray	•	
Horn	•	
Provision for radio including loudspeaker		•
Radio set		•
Tool kit	•	
Operator's package	•	

Instruments for:	S	0
Diesel engine pre-heat	•	
Engine oil temperature	•	
Fuel reserve	•	
Timer for hours of operation	•	
Travel speed ranges and gear selected	•	
Forward – reverse travel	•	
Forward travel	•	

S = Standard, O = Option, X = not available

Reverse travel	•	
Speedometer	•	
Rev. counter	•	
Clock	•	
Safety belt		Х
Flashing turn indicators	•	
High-beam headlights	•	
Diagnosis system	•	

Warning Lights for:	S	0
Engine oil pressure	•	
Engine overheat	•	
Parking brake	•	
Hydraulic oil temperature	•	
Air cleaner blockage	•	
Battery charge	•	
Flow through emergency steering system	•	
Road travel		Х

Audible Warnings for:	S	0		
Engine oil pressure	•			
Engine overheat	•			
Overheat of hydraulic fluid	•			
Emergency steering system				

Function Keys for:	s	0			
Speed range selection	•				
Air conditioning	•				
Hazard warning flashers	•				
Parking brake	•				
Electronic tractive force adaptation	•				
Creep speed	•				
Ride control	•				
Automatic bucket positioner	•				
Hoist kick-out					
Additional hydraulics	•				
Float position	•				
Headlights	•				
Working lights front	•				
Working lights rear	•				
Road travel	•				
Wash/wipe system for rear window	•				
Amber beacon	•				
Mode switch	•				
Blower	•				
Heater	•				
Adjusting the crowding force counter	•				

<u>6-1-5</u>		
Equipment	s	o
Z-bar linkage	•	
Z-bar linkage "High Lift"		Х
Industrial Z-bar linkage		•
Parallel linkage		Х
Hydraulic servo control of working hydraulics	•	
Automatic bucket positioner – adjustable	•	
Automatic hoist kick out – adjustable	•	
Float position	•	
Loading buckets with and without teeth, or bolt-on cutting edge		•
High-dump bucket		•
Light material bucket		•
Fork carrier and lift forks		•
Hydraulic quick-change device		•
3rd hydraulic control circuit		•
3rd and 4th hydraulic control circuits		•
Comfort control		•
Country-specific versions		•

The Liebherr Wheel Loaders

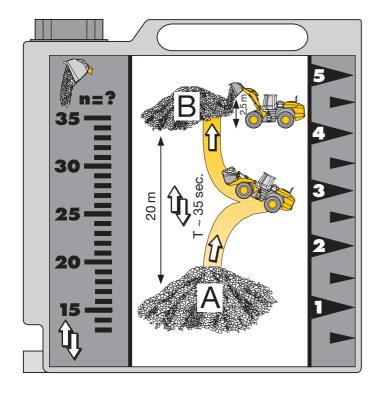
Stereoloader						D 0	79 O
		L 506	L 507	L 508	L 509	L 512	L 514
Tipping load	kg	3215	3465	3895	4440	4615	5305
Bucket capacity	m ³	0,8	0,9	1,0	1,1	1,3	1,5
Operating weight	kg	4810	4930	5310	5740	7000	7700
Engine output	kW/HP	44/60	46/63	49/67	52/71	59/80	72/98

Wheel Loader		DO			
		L 524	L 534	L 538	L 544 2plus2
Tipping load	kg	7005	8625	9000	10600
Bucket capacity	m³	2,0	2,4	2,5	3,0
Operating weight	kg	10100	12100	12380	15300
Engine output	kW/HP	81/110	100/136	100/136	121/165

		DOME			
		L 554 2plus2	L 564 2plus2	L 574 2plus2	L 580 2plus2
Tipping load	kg	12270	15285	16690	17850
Bucket capacity	m ³	3,5	4,0	4,5	5,0
Operating weight	kg	17300	22450	24220	24740
Engine output	kW/HP	145/198	183/249	195/265	195/265

01.03

Environmental protection can help you earn money!



The Liebherr Standard Consumption Test - easy to reproduce and practical.

Every Liebherr dealer will provide you with this measuring-tank kit free of charge or, on request, will carry out the standard fuel consumption test on your premises. It's so easy: you simply determine the number of loading cycles that can be carried out with 5 litres of diesel. The material is taken from pile A and carried over a distance of 20 metres to point B. The time needed for each working cycle should be 35 seconds. Discharge at point B should take place from a height of 2,5 m. The working cycles continue until the 5 litres of diesel in the external measuring tank have been used up. The loader's fuel consumption per operating hour is calculated as follows:

 $\frac{400}{\text{Number of loading cycles}} = \frac{\text{consumption}}{\text{per hour}}$

Values for t	he Liebherr Whe	el Loaders	
	Numbers of working cycles	Litres/ 100 tons	Litres/ hour
L 524: 2,0 m ³	n = 48	2,9	8,3
L 534: 2,4 m ³	n = 40	2,8	10,0
L 538: 2,5 m ³	n = 40	2,8	10,0
L 544: 3,0 m ³	n = 35	2,6	11,4
L 554: 3,5 m ³	n = 33	2,4	12,1
L 564: 4,0 m ³	n = 24	2,9	16,7
L 574: 4,5 m ³	n = 23	2,7	17,4
L 580: 5,0 m ³	n = 22	2,7	18,2