

# Technical Description Wheel Loader

# L 580

**Tipping load** 17850 kg  
**Bucket capacity** 5,0 m<sup>3</sup>  
**Operating weight** 24,7 t  
**Engine output** 195 kW/265 HP

**Liebherr  
Norm Test**  
**2,7 l/100 t**  
18,2 l/h



# LIEBHERR

The Better Machine.



## Engine

Liebherr diesel engine	D 926 TI-E A2	
	6-cylinder, inline engine, watercooled exhaust-turbo charged with inter-cooler	
Power output according to ISO 9249	195 kW (265 bhp)	at 2000 RPM
Max. torque	1170 Nm	at 1200 RPM
Displacement	9,96 litres	
Bore/stroke	122/142 mm	
Air cleaner	Dry type with main and safety element, pre-cleaner, service indicator on LCD display	
Operating voltage	24 V	
Battery	2 x 143 Ah/12 V	
Alternator	Three-phase AC, 28 V/55 A	
Starter motor	24 V/5,4 kW	



## Travel gear

Hydrostatic travel transmission	All-wheel drive
Design	Variable-displacement swashplate pump and axial piston motor in a closed-loop circuit with a 3-stage planetary transmission. Direction of travel is reversed by changing the flow-direction of the variable displacement pump
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 and select the travel stages
Travel speeds	Stage 1 - 8,0 km/h Stage 2 - 18,0 km/h Stage 2A (automatic) - 18,0 km/h Stage 3A (automatic) - 38,0 km/h Forwards and in reverse with tyre size 26.5R25



## Axles

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 contact with the ground)
Differentials	Automatic limited-slip differentials with 45% locking action in both axles
Final drive	Planetary final drive in the wheel hubs
Track width	2230 mm with all types of tyres



## Brakes

Wear-free service brake	Self-locking of the hydrostatic travel drive (acting on all four wheels) and additional pumpaccumulator brake system with wet multi-disc brakes located in the wheel hubs. Two separate brake circuits
Parking brake	Electro-hydraulically actuated spring-loaded brake system on the transmission
Braking system complies with	German road-vehicle construction and use regulations.



## Tyres

Available sizes	26.5R25
	Tubeless radial or cross-ply tyres on well-base rims
Special tyres	By arrangement with the manufacturer



## Steering

Design	"Load-sensing" variable axial piston pump Central pivot with two doubleacting, 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	350 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 with tilt cylinder and cast steel crosstube
Bearings	sealed
Cycle time at nominal load	Lifting 5,6 sec Dumping 2,0 sec Lowering (empty) 3,5 sec



## Operator's cab

Design	ROPS/FOPS cab resiliently mounted on rear 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 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	Air-suspensioned seat with lap belt
Cab heating and ventilation	With defrosting, fresh-air filter, air-recirculated-air mode and heater supplied from engine's cooling system. Air conditioning is standard equipment



## Noise emission

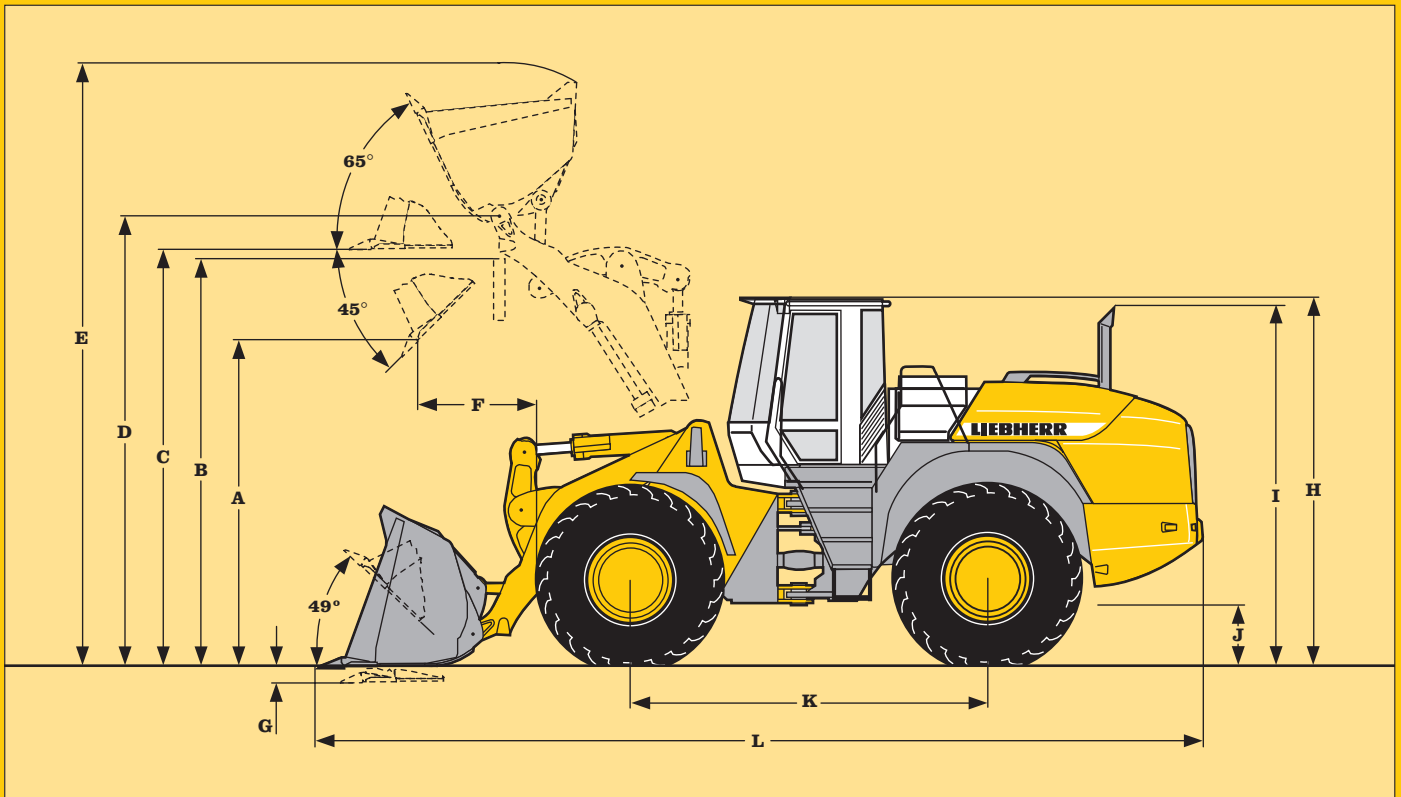
(86/662/EWG)	In the operator's cab	
	Without blower	69 dB(A)
	Max. blower output	73 dB(A)
	Outside cab	106 dB(A)



## Capacities

Fuel tank	330 l
Engine oil (including filter change)	18 l
Pump distributor gears	2,5 l
Transmission	21 l
Front axle/wheel hubs	36/20 l
Rear axle/wheel hubs	24/11 l
Hydraulic tank	160 l
Hydraulic system, total	240 l

# Technical Data



Bucket type	Cutting tools	RHB *				ROB **
		T	E	T	E	T
Bucket capacity	m <sup>3</sup>	5,0	5,0	5,5	5,5	4,0
Bucket width	mm	3300	3300	3300	3300	3200
Specific material weight	t/m <sup>3</sup>	1,8	1,8	1,6	1,6	2,1
A Dumping height at max. lift height and 45° discharge	mm	3300	3300	3230	3230	3250
B Dump-over height	mm	4100	4100	4100	4100	4100
C Max. height of bucket bottom	mm	4250	4250	4250	4250	4250
D Max. height of bucket pivot point	mm	4560				
E Max. operating height	mm	6320	6320	6420	6420	6160
F Reach at max. lift height and 45° discharge	mm	1150	1150	1225	1225	1180
G Digging depth	mm	110	110	110	110	110
H Height above cab	mm	3540				3590
I Height above exhaust	mm	3450				3500
J Ground clearance	mm	550				600
K Wheelbase	mm	3570				3570
L Overall length	mm	9000	8820	9100	8930	9130
Turning circle radius over outside bucket edge	mm	7250	7230	7300	7280	7250
Lifting force (SAE)	kN	250	250	250	250	250
Breakout force (SAE)	kN	175	175	160	160	170
Tipping load, straight *	kg	20260	19995	20040	19735	20030
Tipping load, articulated at 37°*	kg	18180	17940	18000	17730	17995
Tipping load, articulated at 40°*	kg	17850	17640	17680	17410	17660
Operating weight*	kg	24740	24940	24850	25090	25930

\* The figures shown here are valid with 26.5R25 Michelin XHA tyres and includes 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.

\*\* The figures shown here are valid with Michelin XLD-D2 26.5R25 tyres.

RHB = Rehandling bucket

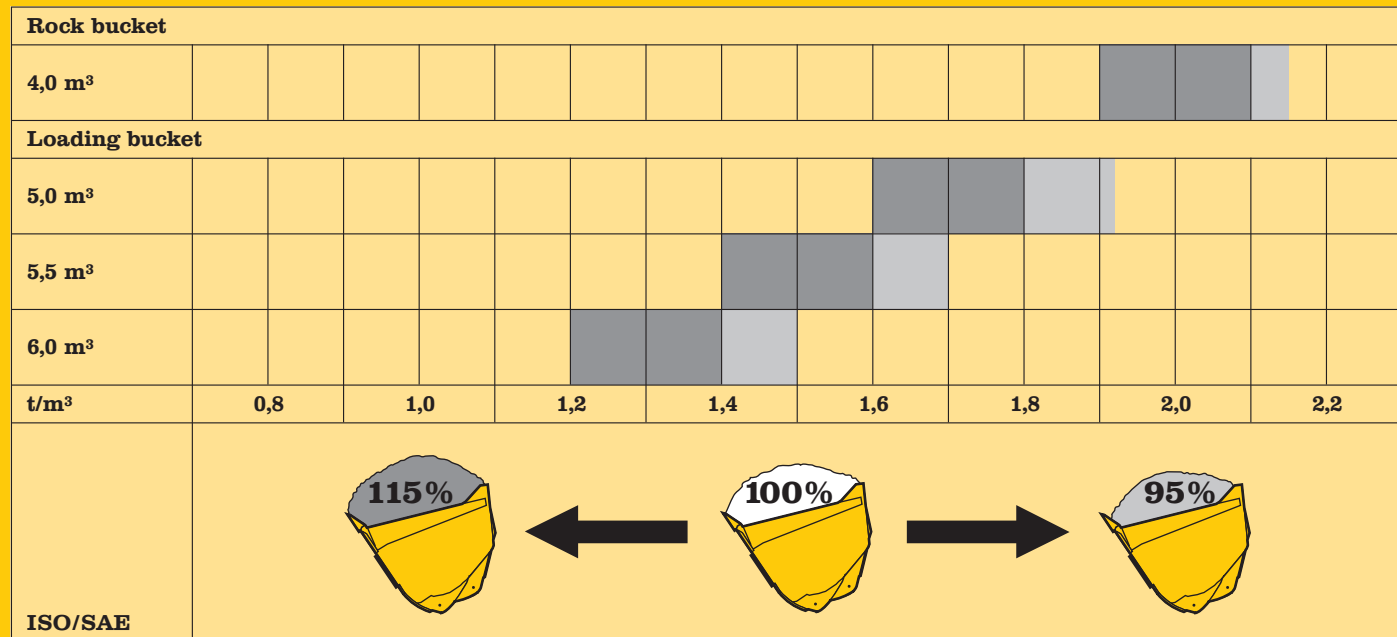
ROB = Rock bucket with delta-cutting edge and spill guard

T = Welded-on tooth holder with add-on teeth

E = Four-piece, bolt-on reversible cutting edge

# Dimensions

## Selection of buckets



### Bulk material densities (t/m<sup>3</sup>)

Gravel, moist _____ 1,9	Clay and gravel, dry _____ 1,4	Sandstone _____ 1,6
dry _____ 1,6	wet _____ 1,6	Slate _____ 1,75
wet, 6 - 50 mm _____ 2,0	Earth, dry _____ 1,3	Bauxite _____ 1,4
dry, 6 - 50 mm _____ 1,7	wet excavated _____ 1,6	Gypsum, broken _____ 1,8
crushed stone _____ 1,5	Topsoil _____ 1,1	Coke _____ 0,5
Sand, dry _____ 1,5	Weathered rock 50 % rock, 50 % earth _____ 1,7	Slag, broken _____ 1,8
moist _____ 1,8	Basalt _____ 1,95	Coal _____ 1,1
wet _____ 1,9	Granite _____ 1,8	
Gravel and sand, dry _____ 1,7	Limestone, hard _____ 1,65	
wet _____ 2,0	soft _____ 1,55	
Sand and clay _____ 1,6		
Clay, natural _____ 1,6		
dry _____ 1,4		
wet _____ 1,65		

Tyre sizes		Width over tyres mm	Change in vertical dimensions mm	Use
26.5R25 Dunlop SP T7 LD	L3	2910	+ 35	Gravel
26.5R25 Michelin XHA	L3	2930	0	Gravel
26.5R25 Michelin X-MINE D2	L5	2950	+ 80	Scrap material/waste
26.5R25 Michelin XLD D2	L5	2920	+ 40	Stone/mining spoil
26.5R25 Good Year GP2B	L2	2920	+ 25	Sand/Gravel
26.5R25 Good Year RL2+	L2	2930	+ 35	Gravel

## Basic Machine

	Standard	Optional
Liebherr travel gear	●	
Ride control	●	
Liebherr shock absorbing element		X
Automatic travel mode	●	
20 km/h speed limiting		●
Electronical theft protection		●
Creep speed	●	
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		●
Emergency steering system	●	
Headlights	●	
Tail lights	●	
Working area lights at front	●	
Working area lights at rear	●	
Battery master switch	●	
Pre-heat system for cold starting	●	
Towing hitch	●	
Lockable doors, service flap an engine hood	●	
Toolbox with toolkit	●	
Dust filter system		●
Protective ventilation system		●
Amber beacon		●
Warning device for travel in reverse		●
Exhaust pipe - special steel	●	
Automatic central lubrication system		●

## Operator's cab

	Standard	Optional
Noise-damped ROPS/FOPS cab with tinted safety glass	●	
Hot-water heater with defroster and recirculated-air system	●	
Adjustable steering column	●	
Liebherr-joystick control	●	
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	●	
Storage compartment	●	
Plug	●	
Ashtray	●	
Horn	●	
Provision for radio including Loudspeaker		●
Radio set		●
Operator's package	●	

## Instruments and displays for:

	Standard	Optional
Diesel engine pre-heat	●	
Engine oil temperature	●	
Fuel reserve	●	
Timer for hours of operation	●	
Speedometer	●	
Travel speed ranges and gear selected	●	
Forward travel	●	
Reverse travel	●	
Speedometer	●	
Rev. counter	●	
Clock	●	
Safety belt		X

	Standard	Optional
Flashing turn indicators	●	
High-beam headlights	●	
Diagnosis system	●	

## Warning lights for:

	Standard	Optional
Engine oil pressure	●	
Engine overheat	●	
Parking brake	●	
Hydraulic oil temperature	●	
Air cleaner blockage	●	
Battery charge	●	
Flow through emergency steering system	●	
Road travel		X

## Audible warnings for:

	Standard	Optional
Engine oil pressure	●	
Engine overheat	●	
Overheat of hydraulic fluid	●	
Emergency steering system		X

## Function keys for:

	Standard	Optional
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	●	

## Rotary switches for:

	Standard	Optional
Blower	●	
Heater	●	
Fresh air or recirculated air	●	
Adjusting the crowding force counter	●	















## Equipment

	Standard	Optional
Z-bar linkage	●	
Parallel linkage		X
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	Standard	Optional
		●

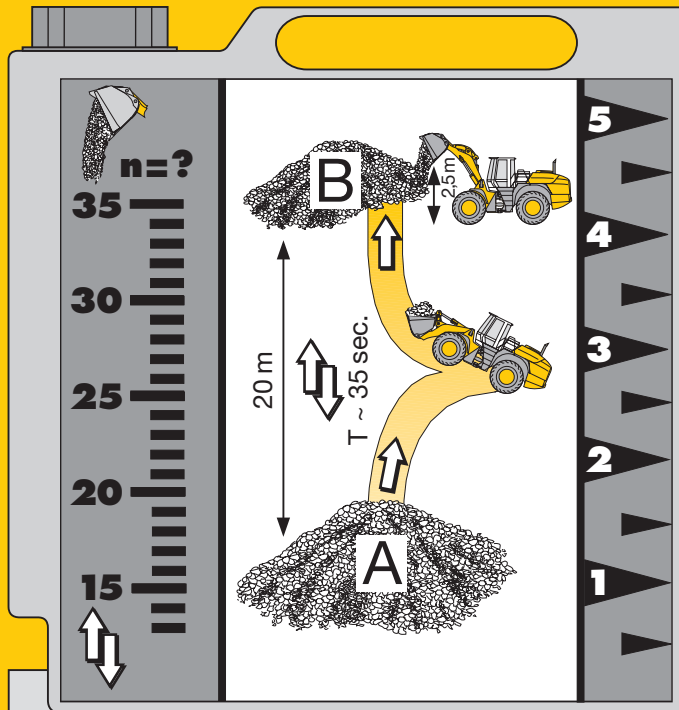
X = Not available

# Liebherr wheel loaders - principal data.

<b>Tipping load:</b> <b>Bucket capacity:</b> <b>Operating weight:</b> <b>Engine output:</b>	<b>Stereoloader L 506</b>  3215 0.8 4810 44/60	<b>Stereoloader L 507</b>  3465 0.9 4930 46/63	<b>Stereoloader L 508</b>  3895 1.0 5310 49/67	<b>Stereoloader L 509</b>  4440 1.1 5510 52/71	kg m <sup>3</sup> kg kW/hp
<b>Tipping load:</b> <b>Bucket capacity:</b> <b>Operating weight:</b> <b>Engine output:</b>	<b>Stereoloader L 512</b>  4615 1.3 7000 59/80	<b>Stereoloader L 514</b>  5305 1.5 7700 72/98			kg m <sup>3</sup> kg kW/hp
<b>Tipping load:</b> <b>Bucket capacity:</b> <b>Operating weight:</b> <b>Engine output:</b>	<b>L 524</b>  7005 2.0 10100 81/110	<b>L 534</b>  8625 2.4 12100 100/136	<b>L 538</b>  9000 2.5 12380 100/136	<b>L 544</b>  10600 3.0 15300 121/165	kg m <sup>3</sup> kg kW/hp
<b>Tipping load:</b> <b>Bucket capacity:</b> <b>Operating weight:</b> <b>Engine output:</b>	<b>L 554</b>  12270 3.5 17300 137/186	<b>L 564</b>  15285 4.0 22450 183/249	<b>L 574</b>  16690 4.5 24220 195/265	<b>L 580</b>  17850 5.0 24740 195/265	kg m <sup>3</sup> kg kW/hp

15/11/00

## Environmental protection can help you earn money!



## How economical is your wheel loader?

Measuring your wheeled loader's fuel consumption is as easy as this!

### Liebherr test method.

Determine the number of working cycles that can be carried out with 5 litres of diesel fuel. The material is picked up from Heap A and carried in a Y movement to Point B, which is 20 m away. The height of the bucket when the material is dumped at Point B should be 2.5 m. These work cycles - each of which lasts for about 35 seconds - are continued until the 5 litres of fuel in the external tank have been used up.

How do you calculate the expected fuel consumption per working hour?

$$\frac{400}{\text{No. of working cycles}} = \text{fuel consumption per working hour}$$

### Values for the Liebherr wheel loaders

	Numbers of working cycles	Litres/100 tons	Litres/hour
L 524: 2.0 m <sup>3</sup>	n = 48	2.9	8.3
L 534: 2.4 m <sup>3</sup>	n = 40	2.8	10.0
L 538: 2.5 m <sup>3</sup>	n = 40	2.8	10.0
L 544: 3.0 m <sup>3</sup>	n = 35	2.6	11.4
L 554: 3.5 m <sup>3</sup>	n = 33	2.4	12.1
L 564: 4.0 m <sup>3</sup>	n = 24	2.9	16.7
L 574: 4.5 m <sup>3</sup>	n = 23	2.7	17.4
L 580: 5.0 m <sup>3</sup>	n = 22	2.7	18.2

05/12/00

## The Liebherr measuring canister set.

Any Liebherr dealer will supply you with the measuring device free of charge or conduct the standard test for you if requested.