

Technical Data

Diesel Engine

Diesei Engine			
Liebherr diesel engine	D 924-A7 Emissions limits in accordance with 97/68/EG, 2016/1628/EU Stage V, EPA/CARB Tier 4 Final		
Nominal power (net)			
ISO 9249	110 kW / 150 hp		
SAE J1349	110 kW / 147 hp		
Maximum power (net)			
ISO 9249	125 kW / 170 hp		
SAE J1349	125 kW / 167 hp		
Rated engine speed	2,100 ¹/min.		
Displacement	4.5 l/1.19 gal		
Bore / stroke	104 mm (4.1 in) / 132 mm (5.2 in)		
Model	4 cylinder in-line engine, water-cooled, turbocharger,		
	air-to-air intercooler		
Fuel injection system	Direct injection,		
	Common Rail, electronic control		
Engine lubrication	Pressurised lube system, for inclinations up to 40°		
Operating voltage	24V		
Alternator	140A		
Starter	5.5 kW / 7.37 hp		
Batteries	2 x 180 Ah/12 V		
Air filter	Dry-type air cleaner with under pressure indicator and		
	automatic dust ejector, main and safety elements		
Cooling system	Combination cooler, with single cooling units for water, hydraulic fluid and intake charge air		
Cooling fan	Hydrostatically driven fan with thermostatic control		

Hydraulics

Hydraulic system	Load-sensing demand control			
Pump type	Variable displacement pump in swashplate design			
Flow max.	189 l/min. / 49.9 gpm / 41.6 lmp. gpm			
Pressure relief	260 bar / 3,771 psi			
Filter system	Return filter with magnetic rod in hydraulic tank			
Control	Single joystick for all movements of the loading bucket and 4 in 1 bucket; control of the floating position lift and lower shutoff and bucket return			

Travel Drive, Control

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Transmission system	Infinitely variable hydrostatic travel drive, consisting of 2 axial piston variable displacement pumps and 2 axial piston variable displacement motors in swashplate design, independent drive for left and right track		
Travel speed	Infinitely variable electronic speed control, V-max adjustable via step switch on the throttle (V1, V2, V3)		
forwards and backwards	2.5 - 6.0 km/h (1.6 - 3.7 mph)		
V1-max:	4.0 - 8.0 km/h (2.5 - 5.0 mph)		
V2-max:	6.5 - 10.0 km/h (4.0 - 6.2 mph)		
V3-max:			
Load limit control	The load limit control electronically monitors the speed of the diesel engine and regulates the diesel engine torque according to the required driving force		
Steering	Hydrostatic, manoeuvrability up to turning on the spot (counterrotation of the tracks)		
Service brake	Hydrostatic, dynamic self-locking effect		
Parking /	Multi-disc brake, wear-free, automatically applied with		
emergency brake	neutral joystick position		
Cooling system	Hydraulic fluid cooler in combination cooler		
Filter system	Micro cartridge filter in replenishing circuit		
Final drive	Spur gear in combination with planetary gear		
Control	Single joystick for all travel and steering functions, as well as turning on the spot		
	Optional: Throttle with steering pedals		

Operator's Cab

Cab	Closed cab with positive pressure ventilation, can be tilted 40° using hand pump, integrated ROPS roll-over protection (EN ISO 3471) and FOPS stone chip protection (EN ISO 3449)			
Heating and air conditioning	Air conditioning meets requirements according to ISO 10263, air is distributed over 12 air vents and 10 blower levels, 6 air routing modes can be set on the control panel			
Driver's seat	Air-sprung comfort seat or premium seat, fully adjust- able, drive and operating hydraulics control mounted on armrest Optional: Air conditioned seat cushion			
Glazing	Windscreen: Laminated safety glass Optional: Polycarbonate Side window: Tempered safety glass Optional: with sliding window (individually selectable on each side) Rear window: Tempered safety glass Optional: Polycarbonate			
Monitoring	Touch display: Display of current machine information, automatic monitoring of operating conditions and individual setting of machine parameters			
Work lights	LED standard (1,200 lm each) 4 on the front, 2 on the rear Optional: 4 on the front, 4 on the rear LED-HD (4,200 lm each) 4 on the front, 2 on the rear Optional: 4 on the front, 4 on the rear			
Vibration emission	, i			
Hand and arm vibrations	< 2.5 m/s², in accordance with ISO 5349-1:2001			
Whole-body vibrations	0.26 - 1.18 m/s², complies with technical report ISO/ TR 25398:2006			
Measuring inaccuracy	In accordance with EN 12096:1997			

Undercarriage

Mounting Cushion m	ounted via nivot chafte and equalizer har			
	Cushion mounted via pivot shafts and equalizer bar			
pression s	Sealed and oil-lubricated, chain tension through com- pression spring and grease clamping cylinder, optional oil-lubricated sleeve chain with FTB available			
Chain links on each side 38				
Sprocket segments, each side 5				
Track rollers, each side 6				
Carrier rollers, each side 1				
Track shoes, standard 508 mm/	20", double grouser			
Track shoes, optional 457 mm/	18", double grouser			
560 mm/	22", double grouser			
610 mm/	24", double grouser			
660 mm/	26", double grouser			
Wider trac	k shoes available on request			
Grouser height 35 mm/1	3"			

${\mathfrak H}$ Sound Levels

Operator sound exposure	
to ISO 6396	
L _{pA} (in the cab)	75 dB(A)
External sound power level	
to 2000/14/EG	
Lwa (to surroundings)	109 dB(A)

Refill Capacities

Fuel tank	320 l / 84.53 gal / 70.4 Imp. gal
Diesel Exhaust Fluid (DEF) tank	49 l / 12.94 gal / 10.8 lmp.gal
Cooling system	31 l / 8.19 gal / 6.8 lmp.gal
Engine oil with filter	19 l / 5.01 gal / 4.2 Imp.gal
Hydraulic tank	93 l / 24.56 gal / 20.5 Imp. gal
Pivot shaft, each side	4.3 l/1.14 gal
Final drive, each side	8.5 l / 2.25 gal / 1.9 lmp.gal



Cycle Times

,	
Lifting	5.6 s
Dumping (maximum cylinder stroke)	1.6 s
Dumping (at maximum height)	1.0 s
Tilting back (maximum cylinder stroke)	2.3 s
Tilting back (at maximum height)	1.5 s
Lowering ¹	3.3 s

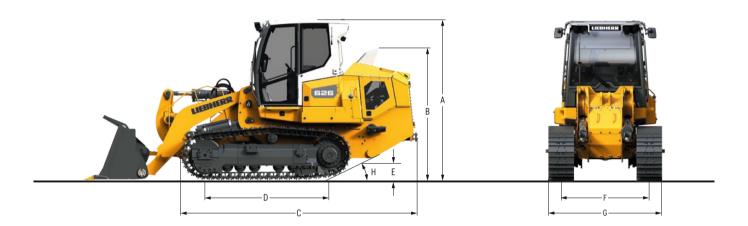
¹⁾ Float position and empty bucket



Drawbar Pull

Maximum	195 kN
at 1.5 km/h (0.9 mph)	193 kN
at 3.0 km/h (1.8 mph)	114 kN
at 6.0 km/h (3.7 mph)	56 kN
at 9.0 km/h (5.6 mph)	37 kN

Dimensions

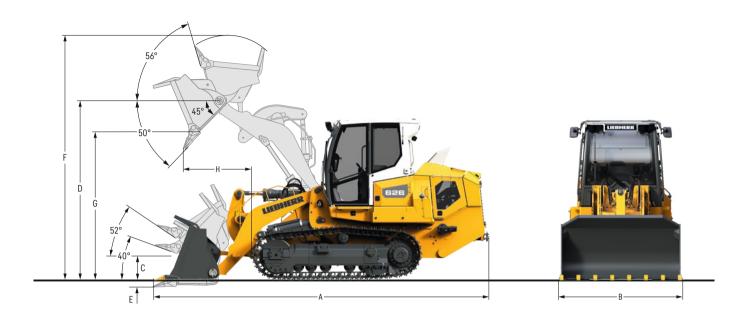


Dimensions

A Height over cab	mm	3,160
A noight ovoi oub	ft in	10'4.4"
B Height over exhaust pipe	mm	2,590
b Height over exhaust pipe	ft in	8'6"
C Length to front track	mm	4,610
C Length to Hollt track		· ·
5.51	ft in	15'1.5"
D Distance idler/sprocket centre	mm	2,450
	ft in	8'0.5"
E Ground clearance	mm	420
	ft in	1'4.5"
F Track gauge	mm	1.7401)
	ft in	5'8.5"
G Track shoes 457 mm	mm	2,197
Machine width	ft in	7'2.5"
G Track shoes 508 mm	mm	2,248
Machine width	ft in	7'4.5"
G Track shoes 560 mm	mm	2,300
Machine width	ft in	7'6.5"
G Track shoes 610 mm	mm	2,452 ²⁾
Machine width	ft in	8'0.5" ²⁾
G Track shoes 660 mm	mm	2,5022)
Machine width	ft in	8'2.5" ²⁾
H Approach angle		30°

¹⁾ Track gauge at 610 mm and 660 mm track shoes: 1,842 mm ²⁾ minimum bucket width 2,650 mm required

Front Attachments

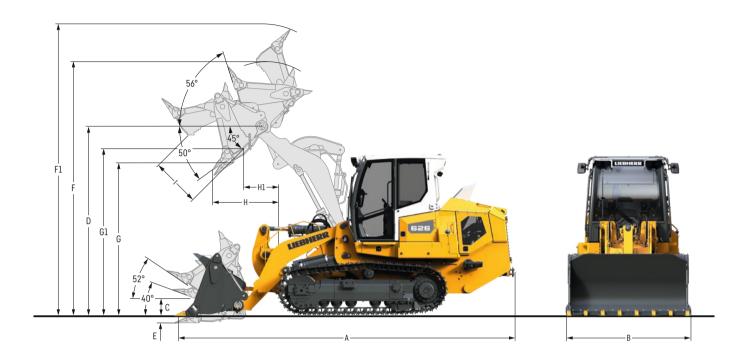




Version with		Bolt-on adapters, shanks and segments	Flush weld-on adapters, shanks	Bolt-on cutting edge
Nominal rated bucket capacity, heaped, ISO 7546	m³	1.8	1.7	1.8
	yd³	2.35	2.22	2.35
Nominal rated bucket capacity, heaped, SAE J742	m³	1.8	1.7	1.8
	yd ³	2.35	2.22	2.35
Breakout force, ISO 14397	kN	127	138	127
	lb	28,550	31,023	28,550
Static tipping load, ISO 14397	kg	11,519	11,752	11,619
	lb	25,395	25,908	25,615
A Overall length bucket on ground with rear bumper	mm	6,523	6,545	6,362
	ft in	21'4.8"	21'5.7"	20'10.5"
B Bucket width ²⁾	mm	2,482	2,450	2,420
	ft in	8'1.7"	8'0.5"	7'11.3"
C Height, hinge pin transport position	mm	541	541	541
	ft in	1'9.3"	1'9.3"	1'9.3"
D Height, hinge pin max.	mm	3,663	3,663	3,663
	ft in	12'0.2"	12'0.2"	12'0.2"
E Digging depth max.	mm	136	111	136
	ft in	5.4"	4.4"	5.4"
F Overall height with bucket at full lift	mm	5,007	5,007	5,007
	ft in	16'5.1"	12'0.2"	12'0.2"
G Dumping clearance at full lift and 45° tipping angle, ISO 7131	mm	2,849	2,917	2,849
	ft in	9'4.2"	9'6.8"	9'4.2"
H Reach at full lift and 45° tipping angle, ISO 7131	mm	1,051	1,018	1,051
	ft in	3'5.4"	3'4.1"	3'5.4"
Bucket weight	kg	1,219	1,090	1,119
	lb	2,687	2,403	2,467
Operating weight ¹⁾	kg	16,589	16,458	16,487
	lb	36,572	36,283	36,347
Ground pressure , ISO 167541)	kg/cm²	0.59	0.59	0.59
	psi	8.56	8.56	8.56

 $[\]label{eq:psi} \begin{array}{c|c} \textbf{psi} & 8 \\ \text{1}^{11} \text{ Incl. coolant and lubricants, full fuel tank, ROPS/FOPS cab, operator, bucket, and track shoes with 508 mm.} \\ \text{2}^{12} \text{ With 508 mm track shoes. With alternative track shoes on request.} \end{array}$

Front Attachments





Version with		Bolt-on adapters, shanks and segments	Bolt-on adapters, shanks
Nominal rated bucket capacity, heaped, ISO 7546	m³/yd³	1.6/2.1	1.5/1.96
Nominal rated bucket capacity, heaped, SAE J742	m³/yd³	1.6/2.1	1.5/1.96
Breakout force, ISO 14397	kN/lb	113/25.403	123/27.651
Static tipping load, ISO 14397	kg/lb	10,199/22,485	10,410/22,950
A Overall length bucket on ground	mm	6,623	6,623
	ft in	21'8.7"	21'8.7"
B Bucket width ²⁾	mm	2,482	2,482
	ft in	8'1.7"	8'1.7"
C Height, hinge pin transport position	mm	541	541
	ft in	1'9.3"	1'9.3"
D Height, hinge pin max.	mm	3,663	3,663
	ft in	12'0.2"	12'0.2"
E Digging depth max.	mm	186	186
	ft in	7.3"	7.3"
F Overall height with bucket at full lift (bucket closed)	mm	5,015	5,015
	ft in	16'5.4"	16'5.4"
F1 Overall height with bucket at full lift (bucket open)	mm	5,591	5,591
	ft in	18'4.11"	18'4.11"
G Dumping clearance at full lift and 45° tipping angle (bucket), ISO 7131	mm	2,743	2,811
	ft in	8'12"	9'2.7"
G1 Dumping clearance at full lift and 45° tipping angle (blade), ISO 7131	mm	3,253	3,253
	ft in	10'8"	10'8"
H Reach at full lift and 45° tipping angle (bucket), ISO 7131	mm	1,086	1,053
	ft in	3'6.8"	3'5.5"
H1 Reach at full lift and 45° tipping angle (blade), ISO 7131	mm	625	625
	ft in	2'0.6"	2'0.6"
I Width of opening	mm	1,201	1,201
Duralist underla	ft in	3'11.3"	3'11.3"
Bucket weight	kg/lb	1,820/4,012	1,731/3,816
Operating weight ¹⁾	kg/lb	17,239/38,005	17,150/37,809
Ground pressure , ISO 16754 ¹⁾	kg/cm² psi	0.62 8.99	0.61 8.85

 $^{^{1\!\!1}}$ Incl. coolant and lubricants, full fuel tank, ROPS/FOPS cab, operator, bucket, and track shoes with 508 mm. $^{2\!\!1}$ With 508 mm track shoes. With alternative track shoes on request.

Rear Attachments





3-Shank Ripper Radial

· · · · · · · · · · · · · · · · · · ·		
A Beam width	mm	2,096
	ft in	6'10.5"
B Ripping width	mm	1,800
•	ft in	5'10.9"
C Distance between shanks	mm	870
	ft in	2'10.3"
D Penetration max.	mm	348
	ft in	1'1.7"
E Ground clearance max. below shanks	mm	715
	ft in	2'4.1"
F Reach, rear ripper raised	mm	638
	ft in	2'1.1"
G Reach, rear ripper in transport position	mm	769
	ft in	2'6.3"
H Approach angle, rear ripper raised		21°
Weight of rear ripper	kg	867
	lb	1,911
Change in operating weight	kg	830
	lb	1,830
Change in ground pressure	kg/cm²	0.03
	psi	0.42
Change in static tipping load	kg	1,8061)
	lb	3,9811)

¹⁾ Change in static tipping load for standard bucket 1.8m³: 1,787 kg; for 4-in-1 bucket: 1,682 kg

Equipment

Base Machine

Dage Flacillic	
Equipment operating temperature - 30°C to + 55°C	+
Waste handling equipment	+
Auto idle	+
Tank guard	+
Refuelling pump	+
Vehicle tool kit, basic	•
Vehicle tool kit, extended	+
Corrosion protection package	+
Fuel filter with water separator	•
Heated fuel filter with water separator	+
Radiator coarse mesh	•
Reinforced radiator guard, hinged	•
LiDAT - data transmission system	•
Liebherr Diesel engine emission stage IV / tier 4 final	•
Cooling fan, reversible	+
Cooling fan, hinged	•
Cooling fan, hydraulically driven	•
Air pre-filter	+
Automatic engine shutdown	+
Engine compartment doors, lockable	•
Lugs for crane lift, front and rear	+
Customised paint finish, single and multiple colours	+
Spade holder	+
Rear step, right	+
Air filter, dry type with pre-filter and automatic dust ejector	•
Lashing eyes front and rear	•
Central lubrication system	+
Towing hitch, rear	•

Hydraulics System

•	
Demand control, flow rate distribution	•
Electronic pilot controls for operating hydraulics	•
Return filter (in tank)	•
Bucket quick drop function	•
Bucket float function	•
Additional operating circuit, front and rear	+



3-range speed control	•
Automatic parking brake	•
Electronic load limit control	•
Proportional drive hydraulic joystick	•
V-pattern drive hydraulic control with steering pedals	+
Hydrostatic drive	•
Inch brake pedal	+
Machine-release switch	•
Emergency stop switch	•
Planetary gear final drive	•
Seat contact switch	•

Operator's Cab

Armrests connected to driver's seat	•
Access and exit step lighting	+
9 inch colour touch display	•
Pressure ventilation	•
Comfort driver's seat, air-cushioned	•
Premium driver's seat, air-cushioned	+
Fire extinguisher, 6kg	+
Radio key with central locking	+
Sound proof cab mounts	•
Interior lighting	•
Cab tiltable 40°	•
Automatic AC with heating	•
Radio key for cab door	•
Polycarbonate windscreen	+
Polycarbonate rear window	+
Radio pre-installation	+
Comfort Radio with Bluetooth	+
Standard Radio with Bluetooth	+
Integrated ROPS / FOPS	•
Reversing camera	•
Rear view interior mirror	•
Windscreen wash/wipe system	•
Windscreen wipers front and rear, with intermittent setting	•
Sliding window, left	+
Sliding window, right	+
Guard grille for windscreen	+
Guard grille for rear window	+
Side mirrors, left and right	+
3-Point safety belt	+
3-Point safety belt, wide	+
4-Point safety belt	+
Tinted safety glass	•
Sun visor, front	•
12V socket outlet	•
24V socket outlet	•
External cab sun visor	+

^{• =} Standard + = Optional

Equipment

Electrical System

-	
LED units for all work lights	•
Work lights on cab, 4 units front, 2 units rear, each 1,200 lm	•
Work lights on cab, 4 units front, 2 units rear, each 4,200 lm	+
Work lights on cab, 4 units front, 4 units rear, each 1,200 lm	+
Work lights on cab, 4 units front, 4 units rear, each 4,200 lm	+
Main battery switch	•
On-board voltage 24 V	•
Engine compartment lighting	•
Reverse warning device acoustic and visual with broadband signal	+
Amber beacon	+
Guard grille for front work lights on cab	+
Horn	•
Electronic immobiliser	+

Undercarriage

Track shoes with mud holes	+
Track shoes, moderate service	•
Undercarriage with rotary bushings FTB	+
Track frame, closed	•
Bolt-on sprocket segments	•
Two-piece master chain link	•
Centre track guide	+
Track guide front and rear	•
Tracks, oil lubricated	•
Track guard full length	+
Guide wheel deflector	•
Custom track width	+
Sprocket deflector	•
Sprocket segments with recesses	•

Rear Attachments

Rear scraper bar	+
Draw bar, rigid – SAE J749	+
3-shank rear ripper	+

Fro

Front Attachments

Tiont Attachments	
4-in-1 bucket – 1.5 und 1.6 m ³	+
Bolt-on teeth adapters	+
Weld-on teeth adapters	+
Trash rack for 4in1 bucket	+
Trash rack for standard bucket	+
Guard for lift cylinder	+
Guard for tilt cylinder	+
Guard for clamping cylinder, 4in1 bucket	+
Standard bucket - 1.7 und 1.8 m ³	+
Overrun plate for standard bucket	+
Reversible bolt-on cutting edge	+
Reversible bolt-on cutting segment	+
Z-kinematics	•

Technology

10011101097	
Automatic rear ripper lift	+
CAN data interface J1939	+
End position damping	•
Automatic lift and lower shut-off	•
Undercarriage wear indication	+
Automatic dump and return function	•
Bucket shake function	•

- = Standard
- + = Optional

 $\label{thm:continuous} \textbf{Equipment and special attachments from third-party suppliers may only be installed with the explicit permission of Liebherr.}$

All illustrations and data may differ from the standard version. Subject to change without notice. RG-BK \cdot LWT/VM-12281088-web-11.21_enUS-6B

The Liebherr Group of Companies



Diverse Product Range

The Liebherr Group is one of the largest construction equipment manufacturers in the world. Liebherr's quality products and services hold a high reputation in many industries. The wide range includes domestic appliances, aerospace and transportation systems, machine tools and maritime cranes.

Exceptional Customer Benefit

Every product line provides a complete range of models in many different versions. With both their technical excellence and superior quality, Liebherr products offer customers the highest benefits in practical applications.

State-of-the-art Technology

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

Worldwide and Family-Owned

Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a group of more than 140 companies with nearly 48,000 employees located on all continents. The corporate head-quarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.

www.liebherr.us



Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.



This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information go to www.P65warnings.ca.gov.

Liebherr-Werk Telfs GmbH