

Technical data



Diesel engine

Rating per SAE J1349 / ISO 9249	161 HP (I) (120 kW) at 1,900 rpm
Model	D924 - FPT motor designed for Liebherr
Type	4 cylinder in-line
Bore / Stroke	4.1 / 5.2 in
Displacement	274.6 in³
Engine operation	4-stroke diesel Common-Rail Turbo-charged and after-cooled Reduced emissions
Air cleaner	Dry-type air cleaner with pre-cleaner, primary and safety elements
Engine idling	Sensor controlled
Electrical system	
Voltage	24 V
Batteries	2 x 135 Ah / 12 V
Alternator	Three-phase current 28 V / 140 A
Stage V	
Harmful emissions values	According to regulation (EU) 2016/1628
Emission control	Liebherr-SCRT technology
Fuel tank	66 gal
Urea tank	12 gal
Tier 4 Final	
Harmful emissions values	In accordance with 40CFR1039 (EPA) / 13CCR (CARB)
Emission control	Liebherr-SCR technology
Fuel tank	66 gal
Urea tank	12 gal



Cooling system

Diesel engine	Water-cooled Compact cooling system consisting cooling unit for water, hydraulic oil and charge air with stepless thermostatically controlled fan, fans for radiator cleaning can be completely folded away
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Hydraulic controls

Power distribution	Via control valves with integrated safety valves, simultaneous and independent actuation of chassis, swing drive and equipment
Servo circuit	
Equipment and swing	With electro-proportional joystick levers
Chassis	Electro-proportional via foot pedal, dedicated control and display unit for rail undercarriage operation
Additional functions	Via switch or electro-proportional foot pedals
Proportional control	Proportionally acting transmitters on the joysticks for additional hydraulic functions



Hydraulic system

Hydraulic pump	For equipment and travel drive	2 Liebherr axial piston variable displacement pumps (double construction)
Max. flow		2 x 58 gpm
Max. pressure		5,076 psi / PowerLift 5,439 psi
Hydraulic pump regulation and control		Liebherr-Synchron-Comfort-system (LSC) with electronic engine speed sensing regulation, pressure and flow compensation, torque controlled swing drive priority
Hydraulic tank		34 gal
Hydraulic system		max. 90 gal
Hydraulic oil filter		1 main return filter with integrated partial micro filtration (5 µm)
MODE selection		Adjustment of engine and hydraulic performance via a mode pre-selector to match application, e.g. for especially economical and environmentally friendly operation or for maximum digging performance and heavy-duty jobs
S (Sensitive)		Mode for precision work and lifting through very sensitive movements
E (Eco)		Mode for especially economical and environmentally friendly operation
P (Power)		Mode for high performance with low fuel consumption
P+ (Power-Plus)		Mode for highest performance and for very heavy duty applications, suitable for continuous operation
Engine speed and performance setting		Stepless alignment of engine output and hydraulic power via engine speed Tool Control: 20 pre-adjustable pump flows and pressures for add-on attachments



Swing drive

Drive	Liebherr axial piston motor with integrated brake valve and torque control, Liebherr planetary reduction gear
Swing ring	Liebherr, sealed race ball bearing swing ring, internal teeth
Swing speed	0 - 9.0 rpm stepless
Swing torque	39,828 lbf ft
Holding brake	Wet multi-disc (spring applied, pressure released) Pedal controlled positioning swing brake



Cab

Double cabin	ROPS safety cab structure (roll-over protection system for complete operator's cab), shock-absorbing suspension, sound damping insulating, electrically unlockable door, two-piece retractable front windscreen, tinted laminated safety glass, separate window shades for the sunroof window and windscreen, roof window and front windscreen wipers, work headlights integrated in the ceiling, ambient lighting for night operations in addition to interior lighting, access lighting outside, operator's door with a sliding window (can be opened on both sides), large stowing and depositing possibilities, 12 V / 24 V electrical connections
Operator's seat Standard	Air cushioned operator's seat with 3D-adjustable armrests, headrest, lap belt, seat heater, manual weight adjustment, adjustable seat cushion inclination and length and mechanical lumbar vertebrae support
Operator's seat Comfort (Option)	In addition to operator's seat standard: lockable horizontal suspension, automatic weight adjustment, adjustable suspension stiffness, pneumatic lumbar vertebrae support and passive seat climatization with active coal
Operator's seat Premium (Option)	In addition to operator's seat comfort: active electronic weight adjustment (automatic readjustment), pneumatic low frequency suspension and active seat climatization with active coal and ventilator
Two-man operation	Ergonomical co-operator's seat with lap belt as well as signal horn and emergency stop
Arm consoles	Joysticks with control consoles and swivel seat, folding left control console
Operation and displays	Large high-resolution operating unit with touchscreen control, self-explanatory, numerous settings, control and monitoring options, e.g. air conditioning control, fuel consumption, machine and attachment parameters as well as safety functions such as load display, load torque limitation, lift and swivel limitation or virtual wall, separate display for rear view and side view monitoring, dedicated control and display unit for rail undercarriage operation with emergency stop function
Air-conditioning	Complete air-conditioning for operator and co-operator, automatic air-conditioning, recirculated air function, fast de-icing and demisting at the press of a button, air vents can be operated via a menu; recirculated air and fresh air filters can be easily replaced and are accessible from the outside; heating-cooling unit, designed for extreme outside temperatures, sensors for solar radiation, inside and outside temperatures



WARNING

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.

Undercarriage

Drive	Oversized two speed power shift transmission with additional creeper speed, Liebherr axial piston motor with functional brake valve on both sides
Pulling force	26,300 lbf
Travel speed	0 - 2.2 mph stepless (creeper speed off-road) 0 - 4.3 mph stepless (off-road) 0 - 8.1 mph stepless (creeper speed on-road) 0 - 12.4 mph stepless (road travel) 0 - max. 15.5 or 18.6 mph Speeder (option)
Driving operation	Automotive driving using accelerator pedal, cruise control function: storage of variable accelerator pedal positions, both off-road, on-road and on-rail (country-dependent)
Axles	Manual or automatic hydraulically controlled front axle oscillation lock (country-dependent)
Service brake	Two circuit travel brake system with accumulator; road axle wet and backlash-free disc brake; rail wheels with disc brake (spring applied, pressure released)
Holding brake	Wet multi-disc (spring applied, pressure released)
Wagon braking system	1 circuit compressed air brake for railway wagon
Option	2 circuit compressed air brake for trailer 2 circuit hydraulic brake for trailer
Rail undercarriage	Standard gauge 4'8"
Stabilization	Without outriggers



Equipment

Type	High-strength steel plates at highly-stressed points for the toughest requirements. Complex and stable mountings of equipment and cylinders
Hydraulic cylinders	Liebherr cylinders with special sealing and guide system and, depending on cylinder type, shock absorption
Bearings	Sealed, low maintenance



Complete machine

Lubrication	Liebherr central lubrication system for uppercarriage and equipment, automatically
Noise emission	
ISO 6396	70 dB(A) = L _{pA} (inside cab)
2000/14/EC	101 dB(A) = L _{WA} (surround noise)



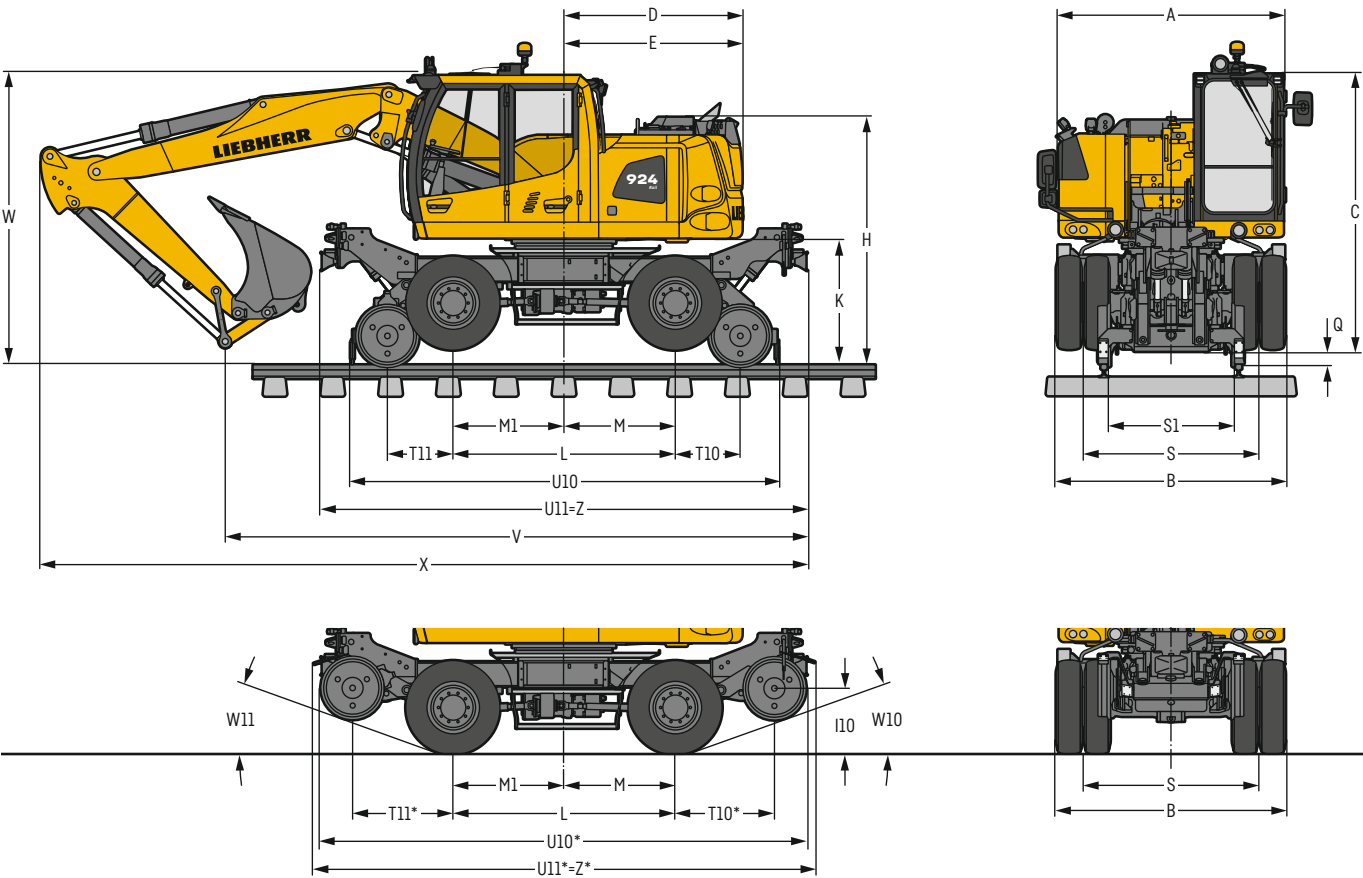
WARNING

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.

Dimensions



	on tires	ft in	on rail	ft in
A		8' 3"		8' 3"
B		8' 5"		8' 5"
C		10' 1"		10' 8"
D		6'7" / 6'11"		6'7" / 6'11"
E		6'7" / 6'11"		6'7" / 6'11"
H		8' 6"		9' 2"
K		4' 1"		4' 8"
L		8' 2"		8' 2"
M		4' 1"		4' 1"
M1		4' 1"		4' 1"
I10		2' 5"		-
Q		1' 2"		6"
S		6' 6"		6' 6"
S1		-		4' 8"
T10		-		2' 5"
T10*		3' 8"		-
T11		-		2' 5"
T11*		3' 8"		-
U10		-		15' 4"
U10*		17'11"		-
U11		-		18'
U11*		18' 6"		-
W10		20°		-
W11		20°		-
Z		-		18'
Z*		18' 6"		-

* Execution required for acceptance Network Rail

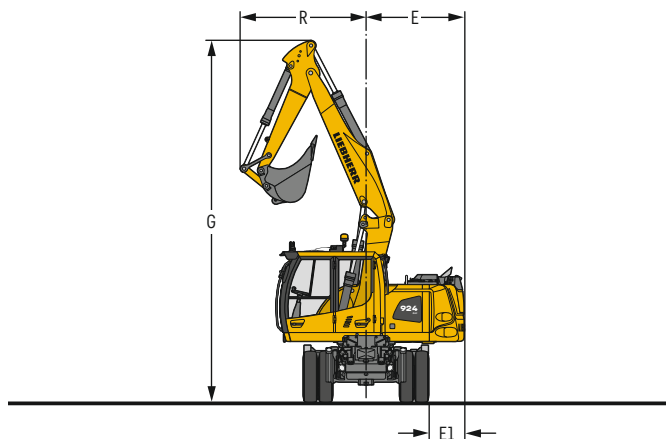
E = Tail radius

Tires 10.00-20

	Stick	Two-piece boom 16'7"
	ft in	ft in
V	6'1"	22' 8"
	6'9"	21'10"
	7'5"	21' 4"
W	6'1"	9'10"
	6'9"	10'
	7'5"	10' 2"
X	6'1"	29' 2"
	6'9"	28' 8"
	7'5"	28' 8"

Dimensions are with equipment over steering axle

W = Max. ground clearance including approx. 6" piping



Boom	Stick	G	R	E	E1
	ft in	ft in	ft in	ft in	ft in
Two-piece boom 16'7"	6'1"	24'3"	8'5"	6'7" / 6'11"	2'4" / 2'9"
Two-piece boom 16'7"	6'9"	24'3"	8'5"	6'7" / 6'11"	2'4" / 2'9"
Two-piece boom 16'7"	7'5"	24'3"	8'5"	6'7" / 6'11"	2'4" / 2'9"