

# Technical data



## Engine

|                              |                                                                        |
|------------------------------|------------------------------------------------------------------------|
| <b>Rating</b>                |                                                                        |
| per SAE J1349                | 161 HP (120 kW) at 1,800 rpm                                           |
| per ISO 9249                 | 163 HP (120 kW) at 1,800 rpm                                           |
| <b>Torque</b>                | 682 Nm at 1,400 rpm / <b>503 lbf ft at 1,400 rpm</b>                   |
| <b>Model</b>                 | D924 A7-04 – FPT motor designed for Liebherr                           |
| <b>Type</b>                  | 4 cylinder in-line                                                     |
| <b>Bore</b>                  | 104 mm / <b>4.1 in</b>                                                 |
| <b>Stroke</b>                | 132 mm / <b>5.2 in</b>                                                 |
| <b>Displacement</b>          | 4.5 l / <b>275 in³</b>                                                 |
| <b>Engine operation</b>      | 4-stroke diesel<br>Common-Rail<br>Turbo-charged and after-cooler       |
| <b>Exhaust gas treatment</b> | Tier 4 Final<br>DOC + SCR<br>Passive regeneration by thermo management |
| <b>Cooling system</b>        | Water-cooled and oil cooler, after-cooled and fuel cooled              |
| <b>Air cleaner</b>           | Dry-type air cleaner with pre-cleaner                                  |
| <b>Fuel tank</b>             | 400 l / <b>106 gal</b>                                                 |
| <b>Urea tank</b>             | 46 l / <b>12 gal</b>                                                   |
| <b>Electrical system</b>     |                                                                        |
| Voltage                      | 24 V                                                                   |
| Batteries                    | 2 x 135 Ah / 12 V                                                      |
| Alternator                   | Three-phase current 28 V / 140 A                                       |
| Engine idling                | Sensor controlled                                                      |



## Hydraulic controls

|                               |                                                                                                        |
|-------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Power distribution</b>     | Via control valves, simultaneous and independent actuation of undercarriage, swing drive and equipment |
| <b>Electric servo circuit</b> | Electro-hydraulic control                                                                              |
| <b>Equipment and swing</b>    | Proportional via joystick levers                                                                       |
| <b>Travel</b>                 | – Proportional control via foot pedals or removable levers<br>– Automatic or manual speed adjustment   |
| <b>Additional functions</b>   | Proportional regulation via foot pedals or mini-joystick                                               |



## Hydraulic system

|                                             |                                                                                                                                                                                                                           |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hydraulic system</b>                     | Positive Control hydraulic system. Demand-based, double independent pump flows<br>Features high system dynamics and sensitivity provided by integrated system controlling                                                 |
| <b>Hydraulic pump</b>                       |                                                                                                                                                                                                                           |
| For equipment and travel drive              | Liebherr, variable displacement, swashplate double pump                                                                                                                                                                   |
| Max. flow                                   | 2 x 210 l/min. / <b>2 x 55 gpm</b>                                                                                                                                                                                        |
| Max. pressure                               | 380 bar / <b>5,511 psi</b>                                                                                                                                                                                                |
| <b>Pump management</b>                      | Electronic management synchronous to the control block. Open circuit for the rotation                                                                                                                                     |
| <b>Hydraulic tank</b>                       | 155 l / <b>41 gal</b>                                                                                                                                                                                                     |
| <b>Hydraulic system</b>                     | max. 320 l / <b>max. 85 gal</b>                                                                                                                                                                                           |
| <b>Filtration</b>                           | 1 main return filter with integrated partial micro filtration (10 µm / <b>1,250 mesh</b> )                                                                                                                                |
| <b>Cooling system</b>                       | Compact cooler, consisting of a water cooler, sandwiched with hydraulic oil cooler and fuel and after-cooler cores and hydro-statically driven fan                                                                        |
| <b>MODE selection</b>                       | 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 |
| <b>Engine speed and performance setting</b> | Stepless adjustment of engine output and hydraulic power via engine speed                                                                                                                                                 |



## Swing drive

|                      |                                                                          |
|----------------------|--------------------------------------------------------------------------|
| <b>Drive</b>         | Liebherr swashplate motor with integrated brake valve and torque control |
| <b>Transmission</b>  | Liebherr compact planetary reduction gears                               |
| <b>Swing ring</b>    | Liebherr, sealed race ball bearing swing ring, internal teeth            |
| <b>Swing speed</b>   | 0–12.9 rpm stepless                                                      |
| <b>Swing torque</b>  | 74.3 kNm / <b>54,801 lbf ft</b>                                          |
| <b>Holding brake</b> | Wet multi-disc (spring applied, pressure released)                       |



## Cab

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cab</b>                    | ROPS safety cab structure (roll-over protection system according to ISO 12117-2:2008) with windscreen, totally or partially retractable (only upper part), under cab roof, LED headlights integrated in the ceiling, a door with a sliding window (can be opened on both sides), large storing box and several stowing possibilities, shock-absorbing suspension, laminated right hand side and roof windows, all windows tinted, separate extensible window shades for the sunroof window and windscreen, cigarette lighter and 24 V plug, 12 V plug, cup holder, mobile phone storage net |
| <b>Operator's seat</b>        | Liebherr-Comfort seat, airsprung with automatic weight adjustment, vertical and longitudinal seat damping including consoles and joysticks. Seat and armrests adjustable separately and in combination (adjustable in length, height and inclination), seat heating as standard                                                                                                                                                                                                                                                                                                             |
| <b>Arm consoles</b>           | Oscillating consoles with seat, tiltable console left                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Operation and displays</b> | Large high-resolution operating unit, intuitive, color display with touchscreen, video-compatible, numerous setting, control and monitoring options, e.g. air conditioning control, fuel consumption, machine and attachment parameters                                                                                                                                                                                                                                                                                                                                                     |
| <b>Air-conditioning</b>       | 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                                                                                                                                                                                                         |
| <b>Noise emission</b>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ISO 6396                      | 70 dB(A) = $L_{pA}$ (inside cab)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2000/14/EC                    | 102 dB(A) = $L_{WA}$ (surround noise)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



## Undercarriage

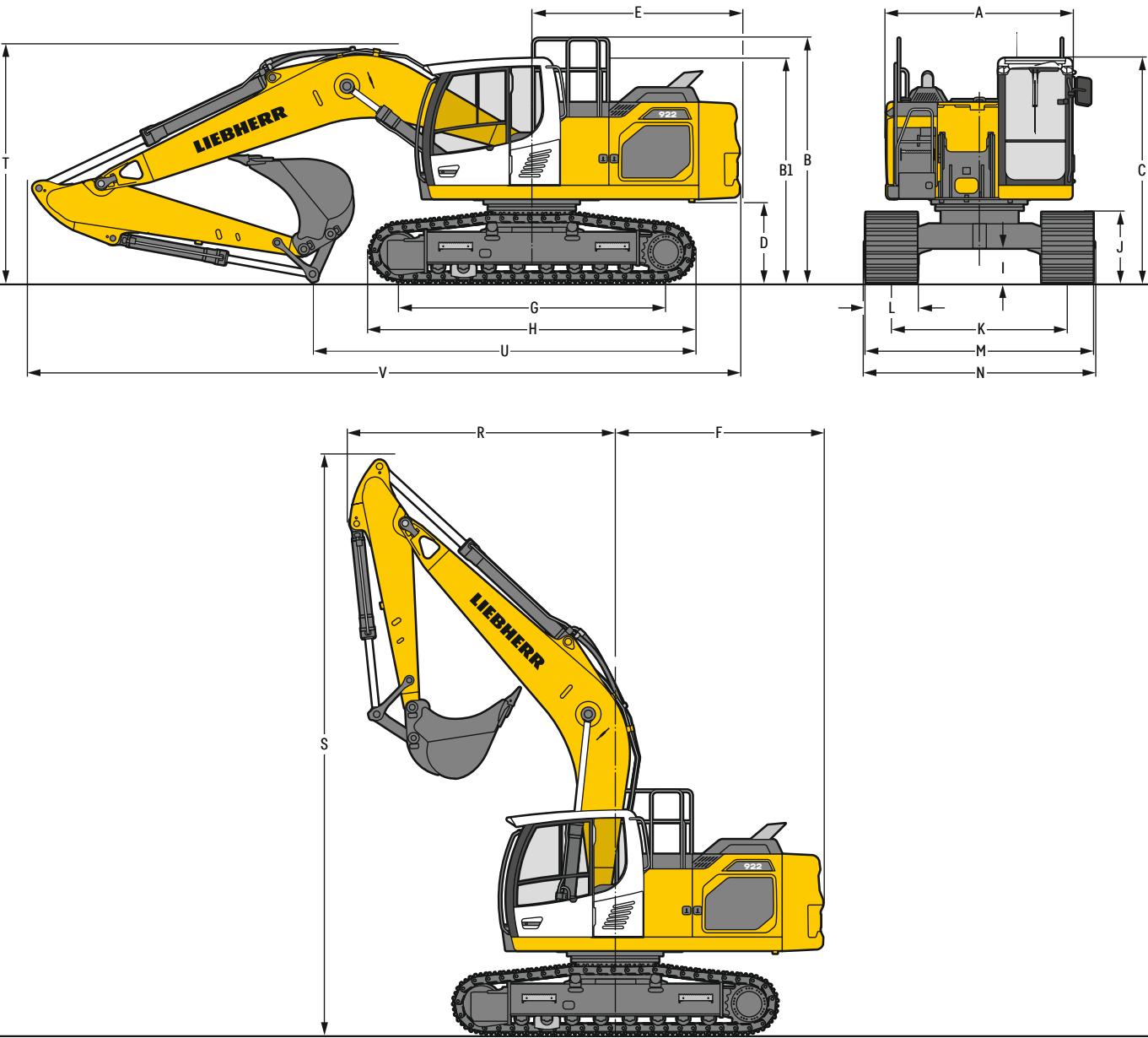
|                                        |                                                                             |
|----------------------------------------|-----------------------------------------------------------------------------|
| <b>LC</b>                              | Gauge 2,390 mm / 7'10"                                                      |
| <b>Drive</b>                           | Liebherr swashplate motor with brake valves on both sides                   |
| <b>Transmission</b>                    | Liebherr planetary reduction gear                                           |
| <b>Maximum travel speed</b>            | 3.1 km/h / <b>1.9 mph</b> low range<br>5.9 km/h / <b>3.7 mph</b> high range |
| <b>Drawbar pull on crawler</b>         | 236 kN / <b>53,060 lbf</b>                                                  |
| <b>Track components</b>                | B60, D6C, maintenance-free                                                  |
| <b>Track rollers / Carrier rollers</b> | 8/2                                                                         |
| <b>Tracks</b>                          | Sealed and greased                                                          |
| <b>Track pads</b>                      | Triple grouser                                                              |
| <b>Holding brake</b>                   | Wet multi-disc (spring applied, pressure released)                          |
| <b>Brake valves</b>                    | Integrated into travel motor                                                |
| <b>Lashing eyes</b>                    | Integrated                                                                  |



## Equipment

|                              |                                                                 |
|------------------------------|-----------------------------------------------------------------|
| <b>Type</b>                  | Combination of resistant steel plates and cast steel components |
| <b>Hydraulic cylinders</b>   | Liebherr cylinders with seal and guidance systems               |
| <b>Bearings</b>              | Sealed, low maintenance                                         |
| <b>Lubrication</b>           | Liebherr central lubrication system                             |
| <b>Hydraulic connections</b> | Pipes and hoses equipped with SAE split-flange connections      |
| <b>Buckets</b>               | Standard equipped with Liebherr tooth system                    |

# Dimensions



|           |                                         | LC            |                                            |                                            |                                            | mm / ft in                                |
|-----------|-----------------------------------------|---------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|-------------------------------------------|
| <b>A1</b> | Uppercarriage width                     |               |                                            |                                            |                                            | 2,555 <sup>2)</sup> / 8' 5" <sup>2)</sup> |
| <b>B</b>  | Uppercarriage height                    |               |                                            |                                            |                                            | 3,335 / 10'11"                            |
| <b>B1</b> | Uppercarriage height (handrails folded) |               |                                            |                                            |                                            | 3,060 / 10'                               |
| <b>C</b>  | Cab height                              |               |                                            |                                            |                                            | 3,060 / 10'                               |
| <b>D</b>  | Counterweight ground clearance          |               |                                            |                                            |                                            | 1,100 / 3' 7"                             |
| <b>E</b>  | Rear-end length                         |               |                                            |                                            |                                            | 2,830 / 9' 3"                             |
| <b>F</b>  | Tail swing radius                       |               |                                            |                                            |                                            | 2,880 / 9' 5"                             |
| <b>G</b>  | Wheelbase                               |               |                                            |                                            |                                            | 3,640 / 11'11"                            |
| <b>H</b>  | Undercarriage length                    |               |                                            |                                            |                                            | 4,435 / 14' 7"                            |
| <b>I</b>  | Undercarriage ground clearance          |               |                                            |                                            |                                            | 485 / 1' 7"                               |
| <b>J</b>  | Track height                            |               |                                            |                                            |                                            | 960 / 3' 2"                               |
| <b>K</b>  | Track gauge                             |               |                                            |                                            |                                            | 2,390 / 7'10"                             |
| <b>L</b>  | Track pad width                         | 600 / 24"     | 700 / 28"                                  | 800 / 31"                                  | 900 / 35"                                  |                                           |
| <b>M</b>  | Width over tracks                       | 2,990 / 9'10" | 3,090 / 10' 2"                             | 3,190 / 10' 6"                             | 3,290 / 10'10"                             |                                           |
| <b>N</b>  | Width over steps                        | 2,925 / 9' 7" | 3,125 <sup>1)</sup> / 10' 3" <sup>1)</sup> | 3,125 <sup>1)</sup> / 10' 3" <sup>1)</sup> | 3,225 <sup>1)</sup> / 10' 7" <sup>1)</sup> |                                           |

<sup>1)</sup> width with removable steps

<sup>2)</sup> without door stop device and spacer

|          |                     | Stick length | Mono boom 5.70 m / 18'8"                   |  |  |  |
|----------|---------------------|--------------|--------------------------------------------|--|--|--|
|          |                     | m / ft in    | direct mounting                            |  |  |  |
|          |                     |              | mm / ft in                                 |  |  |  |
| <b>R</b> | Front swing radius  | 2.50 / 8'2"  | 3,650 / 12'                                |  |  |  |
|          |                     | 2.90 / 9'6"  | 3,650 / 12'                                |  |  |  |
|          |                     | 3.50 / 11'6" | 3,600 / 11'10"                             |  |  |  |
| <b>S</b> | Height with boom up |              | 7,900 / 25'11"                             |  |  |  |
| <b>T</b> | Boom height         | 2.50 / 8'2"  | 3,250 / 10' 8"                             |  |  |  |
|          |                     | 2.90 / 9'6"  | 3,250 / 10' 8"                             |  |  |  |
|          |                     | 3.50 / 11'6" | 3,150 / 10' 4"                             |  |  |  |
| <b>U</b> | Length on ground    | 2.50 / 8'2"  | 6,200 / 20' 4"                             |  |  |  |
|          |                     | 2.90 / 9'6"  | 5,900 / 19' 4"                             |  |  |  |
|          |                     | 3.50 / 11'6" | 4,450 / 14' 7"                             |  |  |  |
| <b>V</b> | Overall length      |              | 9,700 / 31'10"                             |  |  |  |
|          | Bucket              |              | 1.15 m <sup>3</sup> / 1.50 yd <sup>3</sup> |  |  |  |

# Transport dimensions

## removable elements disassembled

|                 | Mono boom 5.70 m / 18'8" |                |                |                |
|-----------------|--------------------------|----------------|----------------|----------------|
|                 | mm / ft in               |                |                |                |
| Pad width       | 600 / 24"                | 700 / 28"      | 800 / 31"      | 900 / 35"      |
| Transport width | 2,990 / 9'10"            | 3,090 / 10' 2" | 3,190 / 10' 6" | 3,290 / 10'10" |

|                  | Stick        |                                            |
|------------------|--------------|--------------------------------------------|
|                  | m / ft in    | mm / ft in                                 |
| Transport length |              | 9,700 / 31'10"                             |
|                  | 2.50 / 8'2"  | 3,250 / 10' 8"                             |
| Transport height |              | 3,250 / 10' 8"                             |
|                  | 2.90 / 9'6"  | 3,150 / 10' 4"                             |
|                  | 3.50 / 11'6" |                                            |
| Bucket           |              | 1.15 m <sup>3</sup> / 1.50 yd <sup>3</sup> |