

# Technical data



## Engine

|                                                                               |                                                                                                                                      |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Liebherr Diesel engine</b>                                                 | D 9512 A7<br>Emission regulations according to 2016/1628 EU Stage V, EPA Tier 4 Final or Tier 0                                      |
| <b>Rated power (net)</b><br>ISO 9249<br>FDW / REV<br>SAE J1349<br>FDW/REV     | 440 / 565 kW / 598 / 768 HP<br>440 / 565 kW / 590 / 757 HP                                                                           |
| <b>Maximum power (net)</b><br>ISO 9249<br>FDW / REV<br>SAE J1349<br>FDW / REV | 506 / 565 kW / 687 / 768 HP<br>506 / 565 kW / 678 / 757 HP                                                                           |
| <b>Rated speed</b>                                                            | 1,600 rpm                                                                                                                            |
| <b>Displacement</b>                                                           | 24.2 l / 1,477 in <sup>3</sup>                                                                                                       |
| <b>Design</b>                                                                 | 12 cylinder V-engine, water-cooled, turbocharged, air-to-air intercooler                                                             |
| <b>Injection system</b>                                                       | Direct fuel injection, Common Rail, electronic control                                                                               |
| <b>Lubrication</b>                                                            | Pressurised lube system, engine lubrication guaranteed for inclinations up to 35° (lateral slope) and up to 45° (longitudinal slope) |
| <b>Operating voltage</b>                                                      | 24 V                                                                                                                                 |
| <b>Alternator</b>                                                             | 24 V / 140 A                                                                                                                         |
| <b>Starter</b>                                                                | 24 V / 2 x 8.4 kW / 11 HP                                                                                                            |
| <b>Batteries</b>                                                              | 4 x 180 Ah / 12 V                                                                                                                    |
| <b>Air cleaner</b>                                                            | Dry-type air cleaner with pre-cleaner, main and safety elements, control light in the operator's cab                                 |
| <b>Cooling system</b>                                                         | Combi radiator, comprising a radiator for coolant and charge air. Hydrostatic fan drive                                              |



## Hydraulics

|                         |                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------|
| <b>Hydraulic system</b> | Load sensing (demand-controlled)                                                    |
| <b>Pump type</b>        | Swash plate piston pump                                                             |
| <b>Max. Pump flow</b>   | 352 l/min. / 92.9 gpm                                                               |
| <b>Max. Pressure</b>    | 260 bar / 3,770 psi                                                                 |
| <b>Control valve</b>    | 4 segments, expandable                                                              |
| <b>Filter system</b>    | Return filter with magnetic rod in the hydraulic tank                               |
| <b>Control</b>          | Single joystick for all blade functions<br>Single joystick for all ripper functions |



## Travel drive

|                                                         |                                                                                                             |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Transmission system</b>                              | Infinitely variable hydrostatic travel drive, independent closed loop system for each track                 |
| <b>Travel speed</b><br>max. speed FWD<br>max. speed REV | Continuously variable<br>10.5 km/h<br>10.5 km/h                                                             |
| <b>Electronic control</b>                               | The electronic system automatically adjusts travel speed and drawbar pull to match changing load conditions |
| <b>Steering</b>                                         | Hydrostatic                                                                                                 |
| <b>Service brake</b>                                    | Hydrostatic (self-locking), wear-free                                                                       |
| <b>Parking brake</b>                                    | Multi-disk brake, wear-free, automatically applied with neutral joystick position                           |
| <b>Cooling system</b>                                   | Two separate hydraulic oil coolers, hydrostatic fan drives                                                  |
| <b>Filter system</b>                                    | Micro cartridge filters in replenishing circuit                                                             |
| <b>Final drive</b>                                      | Combination spur gear with planetary gear, double-sealed (duo cone seals), temperature controlled           |
| <b>Control</b>                                          | Single joystick for all travel and steering functions                                                       |



## Operator's cab

|                                                    |                                                                                                                                                                                                                                        |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Design</b>                                      | Resiliently mounted cab with positive pressure ventilation, can be tilted with hand pump 40° to the rear. With integrated ROPS Rollover Protective Structure (EN ISO 3471) and FOPS Falling Objects Protective Structure (EN ISO 3449) |
| <b>Operator's seat</b>                             | Air-suspended and heated comfort seat, fully adjustable                                                                                                                                                                                |
| <b>Monitoring</b>                                  | Touch screen: display of current machine information, automatic monitoring of operating conditions. Individual setting of machine parameters                                                                                           |
| <b>Display</b>                                     | Color LCD-display with low and high brightness settings                                                                                                                                                                                |
| <b>Rear view camera</b>                            | Camera installation on the back of the dozer, displayed over the LCD-display                                                                                                                                                           |
| <b>Heating system / Air conditioning</b>           | Standard air conditioning, combined cooler / heater, additional dust filter in fresh air / recirculated                                                                                                                                |
| <b>Vibration emission</b><br>Hand / arm vibrations | < 2.5 m/s <sup>2</sup> , according with ISO 5349-1:2001 or ISO 5349-2:2015-12                                                                                                                                                          |
| Whole-body vibrations                              | 0.24–1.31 m/s <sup>2</sup> , complies with technical report ISO/TR 25398:2006                                                                                                                                                          |
| Measuring inaccuracy                               | According with standard EN 12096:1997                                                                                                                                                                                                  |

## Undercarriage

|                                     |                                                                                            |
|-------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Design</b>                       | Undercarriage with oscillating idlers and rollers                                          |
| <b>Mounting</b>                     | Via separate pivot shafts and equalizer bar                                                |
| <b>Track chains</b>                 | Lubricated, single-grouser track shoes, tensioning via a steel spring and grease tensioner |
| <b>Links, each side</b>             | 44                                                                                         |
| <b>Track rollers, each side</b>     | 8                                                                                          |
| <b>Sprocket segments, each side</b> | 5                                                                                          |
| <b>Track shoes, standard</b>        | 610 mm / 24"                                                                               |
| <b>Track shoes, optional</b>        | 710 mm / 28"<br>762 mm / 30"                                                               |
| <b>Track shoe type</b>              | SESS (Super Extrem Service Shoes)                                                          |

## Sound levels

|                                           |           |
|-------------------------------------------|-----------|
| <b>Operator sound exposure ISO 6396</b>   |           |
| $L_{pA}$ (in the cab)                     | 75 dB(A)  |
| <b>Exterior sound pressure 2000/14/EC</b> |           |
| $L_{WA}$ (to the environment)             | 116 dB(A) |

## Electric system

|                                |                                                                                                                                      |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Electric isolation</b>      | Lockable battery isolator switch                                                                                                     |
| <b>Working lights</b>          | - 4 on the lifting cylinders (LED)<br>- 4 on the cabin front (LED)<br>- 2 on the rear console (LED)<br>- 1 in the engine compartment |
| <b>Emergency stop switches</b> | In the cab and on the ripper                                                                                                         |

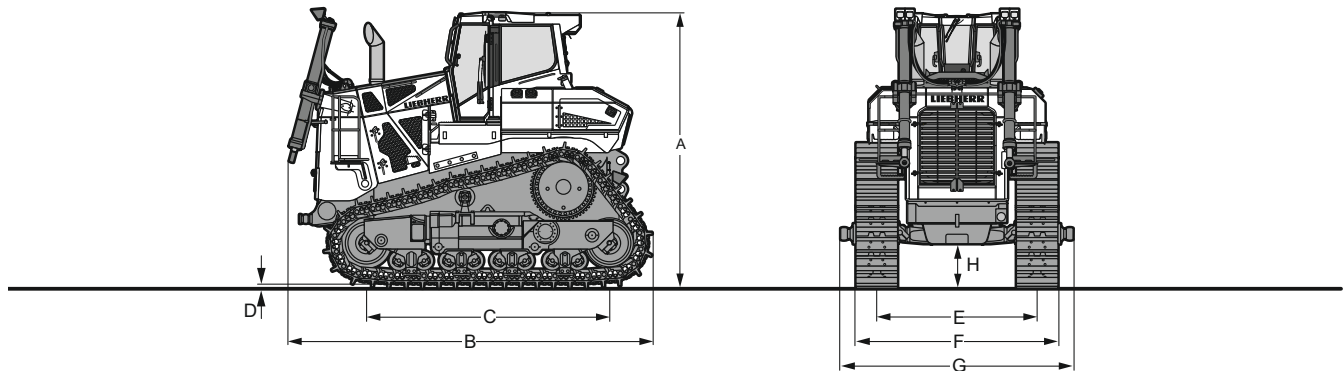
## Refill capacities

|                                        |                     |
|----------------------------------------|---------------------|
| <b>Fuel tank</b>                       | 1,224 l / 323.3 gal |
| <b>Diesel Exhaust Fluid (DEF) tank</b> | 132 l / 34.9 gal    |
| <b>Cooling system</b>                  | 110 l / 29 gal      |
| <b>Engine oil with filter</b>          | 93 l / 24.6 gal     |
| <b>Splitter box</b>                    | 16 l / 4.2 gal      |
| <b>Hydraulic tank</b>                  | 320 l / 84.5 gal    |
| <b>Final drive, each side</b>          | 43 l / 11.4 gal     |

## Drawbar pull

|                              |        |
|------------------------------|--------|
| <b>Max.</b>                  | 955 kN |
| <b>at 1.5 km/h / 0.9 mph</b> | 842 kN |
| <b>at 3.0 km/h / 1.9 mph</b> | 452 kN |
| <b>at 6.0 km/h / 3.7 mph</b> | 226 kN |
| <b>at 9.0 km/h / 5.6 mph</b> | 151 kN |

# Dimensions



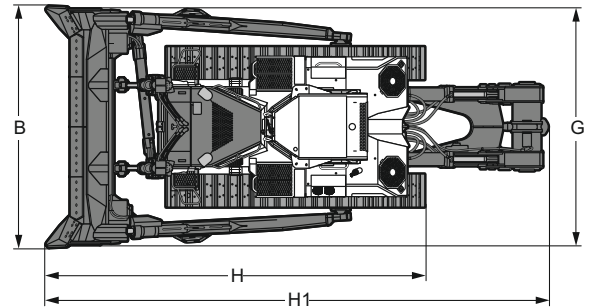
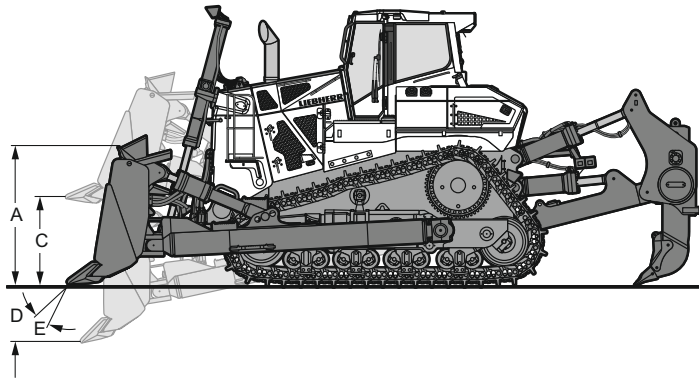
## Dimensions

|                                             |            |                     |
|---------------------------------------------|------------|---------------------|
| <b>A Height over cab</b>                    | mm         | 4,350 <sup>2)</sup> |
|                                             | ft in      | 14'3"               |
| <b>B Overall length without attachments</b> | mm         | 5,770               |
|                                             | ft in      | 18'11"              |
| <b>C Length of track on ground</b>          | mm         | 3,867               |
|                                             | ft in      | 12'8"               |
| <b>D Height of grousers</b>                 | mm         | 93                  |
|                                             | ft in      | 3.6"                |
| <b>H Ground clearance</b>                   | mm         | 703                 |
|                                             | ft in      | 2'4"                |
| <b>E Track gauge</b>                        | mm         | 2,550               |
|                                             | ft in      | 8'4"                |
| <b>G Width over trunnions</b>               | mm         | 3,715               |
|                                             | ft in      | 12'2"               |
| <b>F Track shoes 610 mm / 24"</b>           |            |                     |
| Width over tracks                           | mm / ft in | 3,160 / 10'4"       |
| Tractor shipping weight <sup>1)</sup>       | kg / lb    | 53,100 / 117,065    |
| <b>F Track shoes 710 mm / 28"</b>           |            |                     |
| Width over tracks                           | mm / ft in | 3,260 / 10'8"       |
| Tractor shipping weight <sup>1)</sup>       | kg / lb    | 53,744 / 118,485    |
| <b>F Track shoes 762 mm / 30"</b>           |            |                     |
| Width over tracks                           | mm / ft in | 3,310 / 10'10"      |
| Tractor shipping weight <sup>1)</sup>       | kg / lb    | 54,066 / 119,195    |

<sup>1)</sup> Including coolant and lubricants, 20% fuel, ROPS / FOPS cab.

<sup>2)</sup> Transport shipping height increases with optional equipment: Trimble® Earthworks Grade control ready kit +120 mm, amber beacon/beacon +190 mm, dust filter overpressure system for cab +555 mm, protective cover for air conditioning condenser +80 mm, other equipment on request.

# Front attachments



## Semi-U-Schild

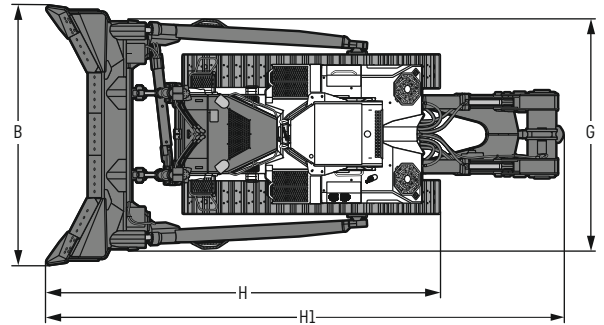
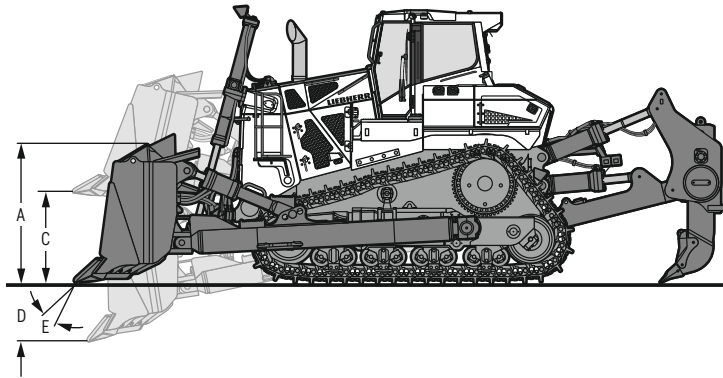
|                                                          |       |                          |                  |
|----------------------------------------------------------|-------|--------------------------|------------------|
| Blade capacity, ISO 9246                                 |       | m <sup>3</sup>           | 18.5             |
|                                                          |       | yd <sup>3</sup>          | 24.2             |
| A Height of blade                                        | mm    | 2,125                    |                  |
|                                                          | ft in | 7'                       |                  |
| B Width of blade                                         | mm    | 4,830                    |                  |
|                                                          | ft in | 15'10"                   |                  |
| C Lifting height <sup>1)</sup>                           | mm    | 1,565                    |                  |
|                                                          | ft in | 5'2"                     |                  |
| D Digging depth <sup>2)</sup>                            | mm    | 670                      |                  |
|                                                          | ft in | 2'2"                     |                  |
| E Blade pitch adjustment<br>Max. blade tilt              | mm    | 1,245                    |                  |
|                                                          | ft in | 4'1"                     |                  |
| G Width over push frame                                  | mm    | 4,674                    |                  |
|                                                          | ft in | 15'4"                    |                  |
| H Overall length, without ripper                         | mm    | 7,625                    |                  |
|                                                          | ft in | 25'                      |                  |
| H1 Overall length, with ripper in max. extended position | mm    | 10,094                   |                  |
|                                                          | ft in | 33'1"                    |                  |
| F Track shoes 610 mm / 24"                               |       |                          |                  |
| Operating weight <sup>3)</sup>                           |       | kg / lb                  | 71,800 / 158,292 |
| Ground pressure <sup>3)</sup>                            |       | kg/cm <sup>2</sup> / psi | 1.52 / 21.61     |
| F Track shoes 710 mm / 28"                               |       |                          |                  |
| Operating weight <sup>3)</sup>                           |       | kg / lb                  | 72,444 / 159,711 |
| Ground pressure <sup>3)</sup>                            |       | kg/cm <sup>2</sup> / psi | 1.32 / 18.77     |
| F Track shoes 762 mm / 30"                               |       |                          |                  |
| Operating weight <sup>3)</sup>                           |       | kg / lb                  | 72,766 / 160,421 |
| Ground pressure <sup>3)</sup>                            |       | kg/cm <sup>2</sup> / psi | 1.24 / 17.63     |

<sup>1)</sup> With fully retracted tilt / pitch cylinders, the mechanical pitch adjustment bolted in the rear position and including the grouser height, the lifting height is 1,863 mm (6'1").

<sup>2)</sup> With mechanical pitch adjustment bolted in the rear position and including the grouser height, the digging depth is 501 mm (19.7").

<sup>3)</sup> Including coolant and lubricants, 100 % fuel, ROPS / FOPS cab, operator, Semi U-blade with 1-shank ripper.

# Front attachments



## U-Blade

|                                                               |                          |                  |       |
|---------------------------------------------------------------|--------------------------|------------------|-------|
| Blade capacity, ISO 9246                                      |                          | m <sup>3</sup>   | 22.0  |
|                                                               |                          | yd <sup>3</sup>  | 28.77 |
| A Height of blade                                             | mm                       | 2,125            |       |
|                                                               | ft in                    | 7'               |       |
| B Width of blade                                              | mm                       | 5,270            |       |
|                                                               | ft in                    | 17'3"            |       |
| C Lifting height <sup>1)</sup>                                | mm                       | 1,565            |       |
|                                                               | ft in                    | 5'2"             |       |
| D Digging depth <sup>2)</sup>                                 | mm                       | 670              |       |
|                                                               | ft in                    | 2'2"             |       |
| E Blade pitch adjustment<br>Max. blade tilt                   |                          | 11°              |       |
|                                                               | mm                       | 1,360            |       |
| G Width over push frame                                       | ft in                    | 4'6"             |       |
|                                                               | mm                       | 4,674            |       |
| H Overall length, blade straight                              | ft in                    | 15'4"            |       |
|                                                               | mm                       | 7,971            |       |
| H1 Overall length, with rear ripper in max. extended position | ft in                    | 26'2"            |       |
|                                                               | mm                       | 10,440           |       |
| F Track shoes 610 mm / 24"                                    | ft in                    | 34'3"            |       |
|                                                               | mm                       |                  |       |
| F Track shoes 710 mm / 28"                                    | kg / lb                  | 72,223 / 159,224 |       |
|                                                               | kg/cm <sup>2</sup> / psi | 1.53 / 21.76     |       |
| F Track shoes 710 mm / 28"                                    | kg / lb                  | 72,867 / 160,644 |       |
|                                                               | kg/cm <sup>2</sup> / psi | 1.32 / 18.77     |       |
| F Track shoes 762 mm / 30"                                    | kg / lb                  | 73,189 / 161,354 |       |
|                                                               | kg/cm <sup>2</sup> / psi | 1.24 / 17.63     |       |

<sup>1)</sup> With fully retracted tilt / pitch cylinders, the mechanical pitch adjustment bolted in the rear position and including the grouser height, the lifting height is 1,863 mm (6'1").

<sup>2)</sup> With mechanical pitch adjustment bolted in the rear position and including the grouser height, the digging depth is 501 mm (19.7").

<sup>3)</sup> Including coolant and lubricants, 100 % fuel, ROPS / FOPS cab, operator, Semi U-blade with 1-shank ripper.

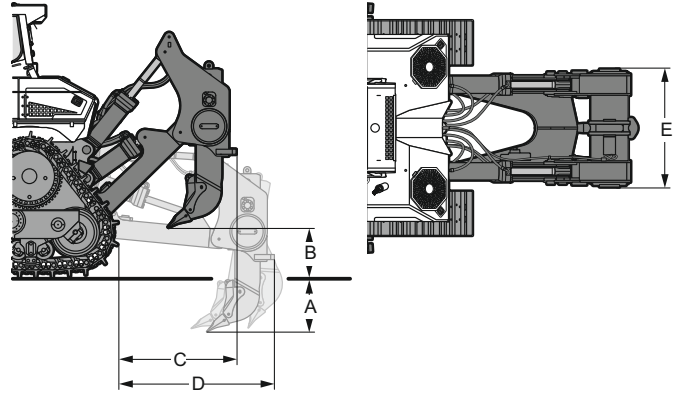
# Rear attachments



## 1-Shank ripper

| Parallelogram                           |       | hydraulic pitch adjustment |              |
|-----------------------------------------|-------|----------------------------|--------------|
|                                         |       | standard shank             | deep shank * |
| A Ripping depth (max. / min.)           | mm    | 1,445 / 705                | 1,895 / 705  |
|                                         | ft in | 4'9" / 2'4"                | 6'3" / 2'4"  |
| B Lifting height (max. / min.)          | mm    | 958 / 218                  | 959 / 364    |
|                                         | ft in | 3'2" / 9"                  | 3'2" / 1'2"  |
| C Additional length, attachment raised  | mm    | 1,949                      | 1,949        |
|                                         | ft in | 6'5"                       | 6'5"         |
| D Additional length, attachment lowered | mm    | 2,529                      | 2,529        |
|                                         | ft in | 8'4"                       | 8'4"         |
| E Overall beam width                    | mm    | 1,760                      | 1,760        |
|                                         | ft in | 5'9"                       | 5'9"         |
| Max. pitch adjustment                   |       | 30°                        | 30°          |
| Maximum penetration force               | kN    | 237                        | 237          |
|                                         | lbf   | 53,280                     | 53,280       |
| Max. pryout force                       | kN    | 441                        | 441          |
|                                         | lbf   | 99,141                     | 99,141       |
| Weight                                  | kg    | 7,194                      | 7,333        |
|                                         | lb    | 15,860                     | 16,166       |

\* Best performance to operate in loose material – deep shanks are designed for light and moderate duty.



## 3-Shank ripper

| Parallelogram                           |       | hydraulic pitch adjustment |              |
|-----------------------------------------|-------|----------------------------|--------------|
|                                         |       | standard shank             | deep shank * |
| A Ripping depth (max. / min.)           | mm    | 900 / 650                  | 1,896 / 706  |
|                                         | ft in | 2'11" / 2'2"               | 6'3" / 2'4"  |
| B Lifting height (max. / min.)          | mm    | 1,014 / 764                | 958 / 164    |
|                                         | ft in | 3'4" / 2'6"                | 3'2" / 6"    |
| C Additional length, attachment raised  | mm    | 1,904                      | 1,904        |
|                                         | ft in | 6'3"                       | 6'3"         |
| D Additional length, attachment lowered | mm    | 2,484                      | 2,484        |
|                                         | ft in | 8'2"                       | 8'2"         |
| E Overall beam width                    | mm    | 2,970                      | 2,970        |
|                                         | ft in | 9'9"                       | 9'9"         |
| F Distance between shanks               | mm    | 1,300                      | 1,300        |
|                                         | ft in | 4'3"                       | 4'3"         |
| Max. pitch adjustment                   |       | 30°                        | 30°          |
| Maximum penetration force               | kN    | 219                        | 219          |
|                                         | lbf   | 49,233                     | 49,233       |
| Max. pryout force                       | kN    | 441                        | 441          |
|                                         | lbf   | 99,141                     | 99,141       |
| Weight                                  | kg    | 9,430                      | 10,290       |
|                                         | lb    | 20,790                     | 22,686       |

\* Best performance to operate in loose material – deep shanks are designed for light and moderate duty.

