Nominal payload: Up to 375 t / 413 ton
Gross Vehicle Weight (GVW): 617 t / 680 ton

Engine power:
- 2,400 - 3,000 kW
- 3,218 - 4,023 HP

Speed on grade:
- Diesel 13.5 km/h / 8.4 mph
- Trolley 24.1 km/h / 15 mph
*Effective grade 10%
Overview

T 284

Unmatched cycle time
- Class-leading payload
- Perfect match with Liebherr excavators
- High speed on grade
- Fast dump cycle times

Experienced reliability
- Proven design
- Solid Liebherr AC drive system
- Extended component lifetime

Engine Power
2,400 - 3,000 kW / 3,218 - 4,023 HP

Gross Vehicle Weight
617 tonnes / 680 tons

Nominal Payload
375 tonnes / 413 tons

Perfect truck shovel match

Backhoe
6 pass loading of 600t class excavator
5 pass loading of 800t class excavator

Face Shovel
7 pass loading of 600t class excavator
6 pass loading of 800t class excavator
User-centric design
- Enhanced driving comfort
- Safe work environment
- Ground level service access

Versatile for all applications
- Autonomous solutions
- High altitude kit
- Cold climate
- Sound attenuation kit

Sustainable Performance
- US EPA Tier 4F engine option
- Complete Liebherr powertrain solution
- Trolley Assist System option
Performance & sustainability
Powertrain

up to 3,000 kW
**Liebherr D9816 engine**

The Liebherr D9816 engine is highly responsive and reactive by design, providing superior performance and required horsepower for increased productivity. By utilizing in-house key components the D9816 delivers outstanding performance and fuel consumption.

2,700 kW / 3,621 HP at 1,800 RPM
16 cylinder V-engine
Displacement 83 l / 5,065 in³

**Litronic Plus AC Drive System**

Designed, developed and built by Liebherr, the Litronic Plus AC Drive system maximizes the electrical power conversion into mechanical torque, increasing the acceleration and minimizing energy consumption.

**High performance**
- Maximised electrical power conversion into mechanical torque
- Lower weight vs mechanical drive
- High speed on grade and higher rim pull forces

**Electric drive vs mechanical drive**
- Reduced maintenance costs and total oil consumption
- Reduced cost of additional cooling system for downhill loaded operations
- Less service time

**Complete Liebherr powertrain**

With the integration of the Liebherr D98 engine series, Liebherr provides complete vertical integration of the powertrain for its large and ultra-class trucks.
Productivity

Hauling capacity

Class leading payload
The T 284 has the largest payload capacity in its class, moving more tonnes per hauling cycle. Pairing the 375 t / 413 ton Liebherr T 284 with the Liebherr R 9800 hydraulic excavator offers a versatile and productive mining fleet. The fast swing of the R 9800 and perfect bucket pass match to the T 284 will load it with five bucket passes providing quick loading times that lead to higher productivity.

Unmatched cycle times
The Liebherr T 284 offers consistent performance, powered by the most powerful engine in its class at 3,000 kW/ 4,023 HP along with the efficient Liebherr Litronic Plus AC Drive System. With the advanced hydraulic design and fast cycle times, the T 284 moves more material in less time. Designed with safety in mind, the T 284 is equipped with 4,500 kW/6,035 HP dynamic braking power to operate efficiently on downhill hauls.

High speed on grade
Speed on grade is a major contributor to fast cycle times. The Liebherr Litronic Plus AC Drive System improves cycle time efficiency by providing continuous uphill speed, differing from traditional mechanical drive trucks that require shifting of gears.

Lowest EVV
resulting in faster cycle times
Perfect pass match with Liebherr excavators

**R 9800**

- Backhoe: 47.5 m³ / 62.1 yd³
- 5 passes

- Face shovel: 42 m³ / 54.9 yd³
- 5 passes

**R 9600**

- Backhoe: 37.5 m³ / 49.1 yd³
- 6 passes

- Face shovel: 37 m³ / 48.4 yd³
- 6 passes

resulting in faster cycle times

Lowest EVW
Comfort

Operator environment

User-centric design

Liebherr is committed to designing mining trucks that operators want to drive. The ergonomic design of the T 284 cab creates a safe, comfortable, and productive environment for operators. The cab provides maximum visibility utilizing tinted safety glass windows, and is certified to protect against roll-over and falling-object incidents. The integrated HVAC system provides comfort in all temperature extremes.

Liebherr mining trucks are equipped with ladders and platforms that allow easy engine access. The ground level maintenance areas provide safe and efficient service access.

Cab features
- Spacious interior
- Ergonomic layout
- Large panoramic windshield
- Integrated color touchscreen
- Pressurized cab to prevent dust penetration
Active intelligent control systems

The Liebherr active intelligent control systems provide safety for the operator:
- Four wheel speed-sensing to optimize traction performance
- Slip / slide control to reduce torque on wheels which rotate faster and provide on-demand torque requirements
- Traction control in which torque is automatically adjusted to the rear wheels to maximize traction when cornering accelerating from a standstill, or traveling on wet or icy roads
- Anti-roll back operable in forward and reverse
- Operator adjustable dynamic braking speed limit control for downhill operations
- Configurable speed limits for loaded/unloaded states
- Configurable speed inhibitors for truck overload, reverse and dump body raise

Double A-arm suspension
- Keep optimal ground contact of the tire within the whole suspension stroke
- Reduce tread and wear with optimized camber and toe angle
- Improve operator ride quality and reduce overall body vibration exposure
Next generation mine automation

Get the best out of your Liebherr Mining truck fleet

Liebherr autonomous solutions deliver the next generation of onboard intelligence, with reduced dependency on site infrastructure and centralized supervisory systems. Together with vehicle-to-vehicle technologies, our smart autonomous solutions provide onboard obstacle avoidance and load area path planning capabilities for optimization of traffic flow.

- Higher level of safety
- More flexibility with seamless integration
- Smart autonomous solutions
- Liebherr autonomous solutions provide production advantages
Flexible scope of supply

**Autonomy Ready kit**
Machine designed and configured with drive-by-wire capability

**Autonomy kit**
Autonomous Machine equipped with onboard perception and robotics - capable of integration via an “open protocol” to traffic management solutions

**Complete solution**
Complete autonomous haulage solution integrated with traffic and fleet management systems

Interoperability with other autonomous assets

In terms of Automation, Liebherr supports and promotes the development of an Open and Interoperable Mine Autonomy Platform that enables:

- Vendor agnostic control of mixed fleets of OEM robotic machines
- Use of multiple onboard autonomous solution options across multiple OEM models
- Trucks with different autonomous solutions working together supported by a single central control systems via the use of standardized “Open Protocols”

Interoperable Mine Autonomy will provide customers the freedom to choose preferred combinations of equipment, onboard autonomous solutions and central control platforms.
Efficiency

Trolley Assist System

1.8x faster
Trolley vs Diesel speed on grade (10%)

35 - 70%
Less kt CO₂ emissions and fuel consumption*

*Based on 1-3 km / 0.6-1.9 mi trolley line (25 - 80% of entire cycle)
Low emissions solution

The Liebherr Trolley Assist System is an effective first step on the road to zero emission mine sites of the future. Utilizing an overhead pantograph to connect the electric-drive system to the electrical network. The Trolley Assist System offers:

- Increased truck fleet productivity, or reduction in fleet size while maintaining yearly production, versus standard trucks
- Reduction of fuel consumption from 50 l / 13.2 gal to 2.5 l / 0.7 gal of diesel for a 1 km / 0.6 mi trolley run
- Reduction of carbon footprint by decreasing the truck fleet CO₂ emissions

Increased productivity

Liebherr has developed the Trolley system in which trucks are able to operate at higher speed on grade, and reduce cycle times. By augmenting speed on grade up to 24 km/h / 15 mph, the Trolley Assist System maximizes productivity offering a higher production per hour.

Proven field experience

Liebherr delivers proven field experience with T 284 units fitted with the Trolley Assist System already in operation on different sites.

Zero emission ready

All Liebherr trucks purchased now are compatible with the future Zero Emission technologies. Our approach is aligned with the Liebherr Company values, to be environmentally responsible by having a strong Zero Emission Strategy built on Liebherr embedded core competencies. Liebherr can offer today a solution to their mining customers to start their Zero Emission Journey.

One-stop-shop

Liebherr has developed strategic partnership agreements to support their customers with a complete solution.

Trolley Assist System

- Option for new truck units, all models
- Compatible and performance-enhancing in combination with diesel powertrain
- Compatible with all future zero emission powertrains

Agnostic approach on power supply and storage

- Diesel engine, batteries, hydrogen, ammonia, and methanol

Liebherr AC Drive System

- Maximize electrical power conversion into mechanical torque
- Deliver high speed on grade and higher rim pull forces
Protecting your most important assets

Safety

**Operator safety**
The T 284 is fitted with an ergonomic cab that creates a safe and comfortable environment for the operator. The cab provides maximum visibility utilizing tinted safety glass windows and is certified for roll-over and falling-object protection.

**Safety in maintenance**
The T 284 is equipped with ladders and platforms allowing easy engine access. The working heights of maintenance areas provide safe and efficient access.

**Fire prevention features**
Lower fire risk by:
- Routing piping and hosing away from hot areas and ignition points
- Encapsulating and insulating exhaust pipes as standard
- Insulating Turbos and exhaust manifolds as standard
**Stability and control**
The innovative Traction Control System is designed and developed exclusively for Liebherr mining trucks. This advanced system improves steering and truck stability, extending tire life even in the most challenging conditions.

**LED lightning system**
The truck is easily visible at night or in extremely dusty working conditions thanks to the LED lights located throughout the truck.

**Safety in operation**
A safe work environment is critical for every mine site, thus the T 284 offers:
- Payload overload warnings
- Certified steering and braking accumulators
- Engine shutdown switches in cab and at ground level
Easy & safe operations

Maintenance
Ground level access

The T 284 has been designed for easier maintenance and quicker servicing. The central service station is located on the fuel tank and provides easy accessibility for maintenance as standard equipment. Refill and separate drain points of the T 284 are easily accessed from the ground with fast couplings and depressurized valves.

Lubrication system
- Test mode allows all injectors to be easily checked to verify they are working properly
- Automatic grease system allows sufficient lubrication of critical pivot points
- System controller offers programmable (5-30 min) lubrication of critical pivot points

Digital Services
- Connectivity enabled services utilize data generated on the machine to provide insights and recommendations required to drive fleet performance
- Enables the integration of Liebherr’s technologies, engineering knowledge, and mining expertise with customer technology landscape

Easy and fast service
- Easy access to check brake component wear
- Service door on axle box for inspections
- Control box with multiple access doors and swing out modules
Long-lasting performances
Reliability

Superior structure
- Durable, lightweight frame with class leading payload capability
- Designed according to international weld fatigue guidelines
- Fabricated according to American Welding Society standards
- Strategically located cast components and hollow box rails with fully welded internal stiffeners

1 million operating hours experience
Solid state AC drive system
- Liquid cooled for reduced footprint and maintaining optimum component temperatures
- Complete drive system designed and manufactured by Liebherr for use in the most demanding mining environments.

Quality: the Liebherr Trademark
Providing reliable machines for customer mine sites is the highest priority for Liebherr Mining. The engineering expertise and commitment to continuous improvement combine to make Liebherr mining equipment industry-leading machines. The T 284 is a robust solution with proven design, with 1 million operating hours.

Vertical Integration
As an Original Equipment Manufacturer (OEM), Liebherr has built an Industry reputation as strong as the high quality mining components and truck that we develop and produce. The T 284 haul truck has a proven design with the integration of the robust and reliable mining-optimized components developed and manufactured by Liebherr, ensuring the highest reliability and best performance.

Mining Know-How
Liebherr mining trucks are conceptualized, designed and built for the mining industry. Our mining equipment and customer service are dedicated to our customers; their success is our success.

To meet customer and industry requirements, Liebherr engineers use specific 3D simulation solutions such as Finite Element and Fatigue Life Analysis.
**Technical Data**

### Engine

<table>
<thead>
<tr>
<th>Standard</th>
<th>MTU 20V4000 C22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Liebherr D9816</td>
</tr>
<tr>
<td>Type</td>
<td>Vee configuration, 4-cycle, water-cooled</td>
</tr>
<tr>
<td>Aspiration</td>
<td>Two-stage: turbocharged and aftercooled</td>
</tr>
<tr>
<td>Air cleaner</td>
<td>2 x dry-type, double element, pre-cleaner, automatic dust ejector, electronic restriction monitor</td>
</tr>
<tr>
<td>Lubrication system (method)</td>
<td>Pressurized system by internal pump</td>
</tr>
<tr>
<td>Lubrication system (filtration)</td>
<td>Centrifugal oil filtration</td>
</tr>
<tr>
<td>Tier rating</td>
<td>Available in fuel-optimized (FO) modes</td>
</tr>
<tr>
<td>Engine speed</td>
<td>1,800 rpm</td>
</tr>
<tr>
<td>Gross power – ISO 3046-1</td>
<td>2,700 kW / 3,621 HP</td>
</tr>
<tr>
<td>Number of cylinders</td>
<td>16</td>
</tr>
<tr>
<td>Bore</td>
<td>175 mm / 69&quot;</td>
</tr>
<tr>
<td>Stroke</td>
<td>215 mm / 8.5&quot;</td>
</tr>
<tr>
<td>Displacement</td>
<td>831 / 5,065 in³</td>
</tr>
<tr>
<td>Starting</td>
<td>Electric</td>
</tr>
</tbody>
</table>

*Option A*

<table>
<thead>
<tr>
<th>Electric Drive System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control system</td>
</tr>
<tr>
<td>Control box</td>
</tr>
<tr>
<td>Traction control</td>
</tr>
<tr>
<td>Main alternator</td>
</tr>
<tr>
<td>Wheel motors</td>
</tr>
<tr>
<td>Gear ratio</td>
</tr>
<tr>
<td>Max. travel speed</td>
</tr>
<tr>
<td>Cooling system</td>
</tr>
<tr>
<td>System voltage level</td>
</tr>
<tr>
<td>Final drive type</td>
</tr>
</tbody>
</table>

### Electric Braking Systems

Electric dynamic braking, forced air over quiet stainless steel grid resistors with dry disc service and secondary braking system.

- Electric dynamic braking capacity: 4,500 kW / 6,035 HP
- Dynamic braking type: Electric
- Dynamic braking speed control: Operator-adjustable, automatically limits truck speed on downhill grade when set
- Service brake type – front: Inboard single disc, 5 x calipers per disc, wheel speed
- Service brake type – rear: Dual discs per side, single caliper per disc, armature speed
- Parking brake type: Spring-applied, pressure-released, single caliper per each rear disc
- Adjustable speed limits: Configurable speed limits for empty and loaded, adjustable for site requirements
- Brakes standards: ISO 3450:1996
- Filtration cleanliness level: 15/15/11 per ISO 4406:2017

### Steering

Ackermann center point lever system, full hydraulic power steering with accumulator safety backup. Isolated from dump hydraulic system. Two double-acting hydraulic cylinders.

- Filtration cleanliness level: 15/15/11 per ISO 4406:2017
- Turning radius – tire centerline: 17.2 m / 56.5" (ISO 5010)
- Vehicle clearance radius: 19.95 m / 65.5" (ISO 5010)
- Steering angle, left or right: +/- 18 degrees

*Consult factory for other engine options*
**Hoist System**

Two double-stage, double-acting hoist cylinders with inter-stage and end cushioning in both directions. Electronic joystick with integrated engine high-idle switch and full modulating control in both extend and retract.

- **Dump angle**: 49° (45° with optional kick-out switch)
- **Dump cycle time**: 50 sec.
- **Body raise time** – high idle: 32 sec.
- **Body power down** – high idle: 18 sec.
- **Remote dump**: standard – quick disconnects for external power dumping accessible from ground level
- **Filtration cleanliness level**: 15/13/11 per ISO 4406:2017

**Suspension System**

**System**

- **Front**: Double A-arm with inclined king pin pivot, spindle, and nitrogen over oil suspensions with integral damping
- **Rear**: three bar linkage comprised of triangular upper link plus two bottom drag links and nitrogen over oil suspensions with integral damping
- **Rear axle oscillation**: 9°

**Tire / Rims**

- **Tires**: 59/80 R63
- **Rims**: 44" x 63" bolt on rims

**Frame**

Closed box structure with multiple torque tube cross-members, internal stiffeners and integrated front bumper. Steel castings are used in high stress areas.

- **Welding**: frame girders welded inside and out with ultrasonic inspection aligned with AWS D1.1

**Operator’s Cab**

Deluxe cab with integrated ROPS, FOPS, and double wall design for optimum insulation. Fully adjustable air suspension operator seat with double lumbar support and full-size second seat for training requirements. Operator comfort controls include a tilt steering wheel, heater, defroster and standard AC. Real-time vital truck information is easily displayed to the operator and also recorded for download.

- **HVAC capacity**: 8.4 kW

**Weights**

<table>
<thead>
<tr>
<th>Nominal payload</th>
<th>Standard</th>
<th>363 t / 400 ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional</td>
<td>375 t / 413 ton</td>
<td></td>
</tr>
<tr>
<td>Gross vehicle weight (GVW)</td>
<td>Standard</td>
<td>605 t / 667 ton</td>
</tr>
<tr>
<td>Optional</td>
<td>617 t / 680 ton</td>
<td></td>
</tr>
<tr>
<td>Empty vehicle weight (EVW)</td>
<td>242 t / 267 ton</td>
<td></td>
</tr>
<tr>
<td>Chassis weight</td>
<td>200 t / 220 ton</td>
<td></td>
</tr>
<tr>
<td>Body</td>
<td>42 t / 46 ton</td>
<td></td>
</tr>
<tr>
<td>Front axle weight distribution</td>
<td>Empty (%)</td>
<td>50%</td>
</tr>
<tr>
<td>Loaded (%)</td>
<td>55%</td>
<td></td>
</tr>
<tr>
<td>Rear axle weight distribution</td>
<td>Empty (%)</td>
<td>50%</td>
</tr>
<tr>
<td>Loaded (%)</td>
<td>67%</td>
<td></td>
</tr>
</tbody>
</table>

- Subject to tire capacity, LMD installation and customer application approval
- Standard truck (less options), tires and rims, 100% fluids (fuel tanks, hydraulic tank, gears, suspensions, crankcase, coolant, grease and charged accumulators)
- Actual dump body weight will vary based on customer application and supplier design

**Fluid capacities**

| Fuel tank | Standard | 5,351 l / 1,414 gal |
| Optional | 6,397 l / 1,690 gal |
| Brake / Steering tank (steering, brake system tank) | Tank | 924 l / 244 gal |
| System | 1,060 l / 280 gal |
| Hoist hydraulic tank (hoist, hoist oil cooling) | Tank | 1,302 l / 344 gal |
| System | 1,534 l / 400 gal |
| Cooling System | Standard engine | 719 l / 190 gal |
| Option A engine | 694 l / 183 gal |
| Option B engine | 666 l / 176 gal |
| Engine oil / crankcase | Standard engine | 380 l / 100 gal |
| Option A engine | 520 l / 137 gal |
| Option B engine | 335 l / 88 gal |
| Final drives | 2 x 280 l / 74 gal |
| Front wheels | 2 x 60 l / 16 gal |
| Grease tank | 55 kg / 120 lb |
| Pump drive box | 8.5 l / 2.2 gal |

**Body**

Body sizes are custom designed to fit customer requirements and specific applications. Please contact factory for options.
Dimensions

**A** Overall canopy width*  | 8,891 / 29' 2"
**B** Overall truck width (operating width)* | 9,679 / 31' 8"
**C** Front track width | 7,366 / 24' 2"
**D** Bumper to ground clearance | 1,240 / 4' 1"
**E** Overall rear dual tire width | 9,011 / 29' 7"
**F** Rear track width | 5,766 / 18' 11"
**G** Rear axle clearance | 1,057 / 3' 6"
**H** Overall front tire width | 8,833 / 29' 7"

**I** Front canopy height* | 7,787 / 25' 7"
**J** Overall truck length* | 15,690 / 51' 6"
**K** Wheelbase | 6,553 / 21' 6"
**L** Loading height* | 7,033 / 23' 1"
**M** Dump clearance* | 1,249 / 4' 1"
**N** Overall height – body raised* | 15,526 / 50' 11"
**D** Dual spacing | 1,779 / 5' 10"

*dump body specific
Performance Curves

Performance Chart Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standard</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross power</td>
<td>2,720 kW / 3,648 HP</td>
<td>2,700 kW / 3,620 HP</td>
<td>3,000 kW / 4,000 HP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(A):</td>
<td>(B):</td>
<td>(C):</td>
<td></td>
</tr>
<tr>
<td>Net power</td>
<td>2,574 kW / 3,452 HP</td>
<td>2,551 kW / 3,422 HP</td>
<td>2,852 kW / 3,825 HP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(A):</td>
<td>(B):</td>
<td>(C):</td>
<td></td>
</tr>
<tr>
<td>Tire size</td>
<td>59/80 R63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gear ratio</td>
<td>43.7 to 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference curves</td>
<td>Propulsion 2,720 W / 3,648 HP</td>
<td>Propulsion 2,700 kW / 3,620 HP</td>
<td>Propulsion 3,000 kW / 4,023 HP</td>
<td>Dynamic Braking</td>
</tr>
<tr>
<td></td>
<td>(A):</td>
<td>(B):</td>
<td>(C):</td>
<td></td>
</tr>
</tbody>
</table>

Note: The propulsion curve is calculated using net horsepower, therefore site specific and climatic variables will have an effect on the parasitic loss estimations.

Truck Match

<table>
<thead>
<tr>
<th>Liebherr excavator and configuration</th>
<th>R 9600 BH</th>
<th>R 9600 FS</th>
<th>R 9800 BH</th>
<th>R 9800 FS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard bucket*</td>
<td>m³</td>
<td>m³</td>
<td>m³</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>58.3</td>
<td>49</td>
<td>47.5</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>78.3</td>
<td>60</td>
<td>62.1</td>
<td>54.9</td>
</tr>
<tr>
<td>Number of passes</td>
<td>Standard/Optional</td>
<td>Standard/Optional</td>
<td>Standard/Optional</td>
<td>Standard/Optional</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

* for 1.8 t / m³ material density
Loading Charts

T 284 Mining Truck
loaded by the Liebherr R 9600 hydraulic excavator in face shovel configuration

<table>
<thead>
<tr>
<th></th>
<th>12.4 m / 40' 8&quot;</th>
<th>7.033 m / 23' 1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum dump height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck loading height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passes to fill</td>
<td>6 passes</td>
<td></td>
</tr>
<tr>
<td>(given 1.8 t/m³ material density)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

T 284 Mining Truck
loaded by the Liebherr R 9600 hydraulic excavator in backhoe configuration

<table>
<thead>
<tr>
<th></th>
<th>10.6 m / 34' 9&quot;</th>
<th>7.033 m / 23' 1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum dump height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck loading height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passes to fill</td>
<td>6 passes</td>
<td></td>
</tr>
<tr>
<td>(given 1.8 t/m³ material density)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
T 284 Mining Truck
loaded by the Liebherr R 9800 hydraulic excavator in face shovel configuration

<table>
<thead>
<tr>
<th></th>
<th>ft</th>
<th>m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum dump height</td>
<td>20.2</td>
<td>6.16</td>
</tr>
<tr>
<td>Truck loading height</td>
<td>13.8</td>
<td>4.52</td>
</tr>
<tr>
<td>Passes to fill</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

(given 1.8 t/m³ material density)

T 284 Mining Truck
loaded by the Liebherr R 9800 hydraulic excavator in backhoe configuration

<table>
<thead>
<tr>
<th></th>
<th>ft</th>
<th>m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum dump height</td>
<td>32.1</td>
<td>10.1</td>
</tr>
<tr>
<td>Truck loading height</td>
<td>13.8</td>
<td>4.52</td>
</tr>
<tr>
<td>Passes to fill</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

(given 1.8 t/m³ material density)
## Standard Equipment

### General
- Access – 45° diagonal stair (drivers side access) with two side ladders with flexible steps
- Accumulators – certified – steering (1 x 174 l / 46 gal), front brakes (1 x 27 l / 7 gal and 1 x 4 l / 1 gal), rear brakes (1 x 76 l / 2 gal) and steering unloader (1 x 7.6 l / 2 gal)
- Axle box – dual entry service access and rear air exhaust
- Centralized service station – ground level, driver side, with fuel gauge and pressure less fast fill system
- Color – white / gray
- Fall protection – multiple personnel harness anchor points
- Fluid sampling – multi-sampling ports close to component
- Grease system – automatic lubrication system
- Hydraulic filters – high pressure and return line brake, steering and hoist w/ electronic monitoring
- LED payload display – 2 x superstructure mounted
- Liebherr Mining Data (LMD)
- Mud guards – front and rear of hydraulic and fuel tanks and battery control box
- Oil coolers – 1 x hoist system, 2 x final drive, 1 x fuel
- Park brake – spring applied pressure release
- Recovery system – auxiliary connectors for brake, steering and hoist “buddy system”
- Reverse alarm (2)
- Rims – bolt on, 6 x single gutter
- Rock ejectors – bar type
- Service access ladders – right and left engine bay ladders w/ cable steps
- Shut off valves – brake and steering and hoist w/ electronic monitoring
- Sight gauges – brake, steering, hoist and radiator tanks and front wheel hub
- Towing points – front and rear, labeled

### Engine
- Air cleaner dust ejectors – automatic
- Air cleaners – two units with 2 elements per unit with electronic restriction monitoring in cab
- Engine “roll over” protection switch
- Exhaust – side-mounted mufflers with insulated exhaust pipes
- Fan clutch – variable speed, temperature controlled
- Fuel / water separator
- Multi-point exhaust temperature monitoring system (ETMS)
- Oil centrifuge filter
- Prelube – pre-start engine oil pressurization to reduce dry engine turnover
- Primary and secondary fuel filters
- Radiator – L & H (Mesabi) flexible core, with center-mounted level gauge on front face of s urge tank
- Roll out power module – radiator, engine and main alternator mounted on roll out sub frame
- Turbo thermal protection
- Starter – electric

### 24 V Electrical
- Batteries – 6 x 12 Volt, (3 banks of 2), 1,425 CCA each at -18 °C (0 °F), 1,755 CA at 0 °C (32 °F)
- Battery lockouts – ground level, battery (2 pole), propel and starter (single pole)
- Electrical system – 24 VDC with circuit breaker protection
- Engine stops – in-cab and ground level

### AC Drive System and Controls
- Anti roll-back – in forward and reverse
- Brakes – dynamic braking w/ automatic hydraulic brake blending and hydraulic service brakes
- Gear assembly – Liebherr gears and wheel motors
- Gear ratio – 43.7:1
- Grid box – resistor grid control system and variable AC grid box blower motor
- Litronic Plus control cabinet – IGBT technology, liquid cooled, pressurized, filtered air inlet, ground fault warning and detection
- Traction control system with four-wheel speed sensing

### Lighting
- Access lights – 3 ladder, 1 superstructure
- Brake warning lights (cab mounted external) – forward facing dynamic brake and service brake (LED)
- Headlights – 4 x high beam, 4 x low beam (LED)
- Reverse lights – 2 x axle box, 1 x driver’s side superstructure (LED)
- Service lights – 4 x engine bay, 2 x axle box (LED)
- Truck lights – marker / clearance, tail, brake, dynamic brake and turn indicators (LED)

### Operator Environment
- Climate control – combined heater and air conditioner w/ multiple air ducts and filtered air
- Cup holder – 2 center console mounted
- Diagnostics interface – CANopen, Ethernet
- Display screen – dimmable color touch screen w/ operator information and warning
- Dual overhead LED dome lights that illuminate when the door is opened
- Mirrors – drivers side (flat), offside (convex) and access ladder (convex)
- Power outlets – 12 VDC and 115 VAC
- Power windows – driver and passenger
- Pressurized cab – with fan on
- Radio ready – wiring, speakers and DIN fitting
- Seat belt – high visibility orange, 3 point, 2 inch wide
- Seats – fully adjustable driver and passenger heated seats with air suspension
- Speedometer – km/h / mph
- Steering wheel – tilting and telescopic with horn and wiper control
- Storage shelves and storage compartment located behind seats
- Sun visors – 2 windshield sun visors and 1 driver’s door pull down blind
- Windows – tempered and tinted glass 6.3 mm
- Windshield – laminated safety glass and tinted 9.5 mm
- Wipers – two speed electric and intermittent with self park and dual wiper arms
## Optional Equipment

### General
- Access stair – powered retractable stair to main diagonal stairway
- Adjustable access ladders – engine bay
- Automatic fire suppression system
- Color – Liebherr yellow / gray
- Dump body options – liners, tailgates, rock deflectors, raise limit – 45° kick out switch
- Multiple language decals
- Rear view camera
- Rims – double gutter
- Undercarriage protection – front belly pan, fuel tank skid plates and hydraulic tank

### Operator’s cab
- Centered dashboard gauge panel in metric or imperial

### Engine
- EPA Tier 2 and Tier 4f certifications
- Optional fuel tank 6,397 l / 1,690 gal
- Quick fuel connector

### Specific Solutions
- Arctic package – diesel type engine heater, automatic control, heated mirrors, heated dump body exhaust, diesel fuel heater
- Gear ratio – 37.33:1 and 53.33:1
- High altitude package
- Sound attenuation package
- Trolley capable

### Lighting
- Berm cornering lights (LED) – forward facing, superstructure mounted (DS and ODS)
- Fog lights (LED) – 4 x bumper mounted
- Grill illumination light (LED)
- Hill cresting lights (LED) – 2 x top grill mounted
- Overspeed light – externally mounted blue light on the top of cab
- Park brake on / truck in neutral warning light (LED) – externally mounted on top of cab
- Reverse light (LED) – off driver’s side superstructure
- Truck ID light (blue LED) – diagonal staircase mounted
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 130 companies with more than 46,000 employees located on all continents. The corporate headquarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.