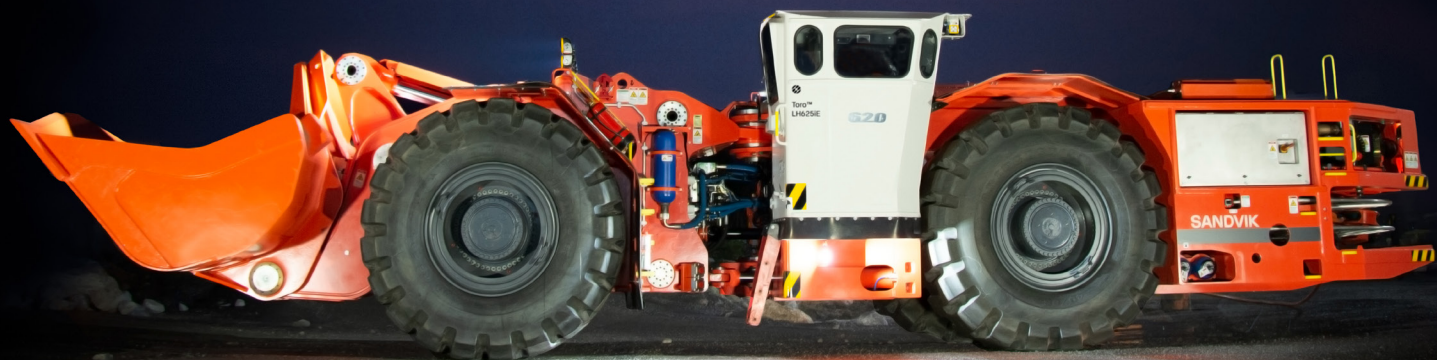


Toro® LH625iE

Safer.
Stronger.
Smarter.



Technical specification

Toro® LH625iE

Toro® LH625iE is an electric loader with a 25 tonne payload capacity. Equipped with an energy efficient, IE4 classified electric motor, the giant loader offers low cost per loaded tonne. With no exhaust emissions, less heat and lower noise levels, the electric motor contributes to better working conditions underground, and helps to reduce mine ventilation costs.

The cabin offers incomparable space and roomy layout for the operator, including one-of-a-kind seating arrangement with 180 degrees turning seat, operated on the steering joystick. A 7" color display with advanced touch screen functionality has all the needed information and alarms on one large display, giving the operator more time to keep eyes on the road.

In the area of digitalization and intelligence, the Toro® LH625iE loader features smart solutions such as Sandvik Intelligent Control System and My Sandvik Digital Services Knowledge Box™ on-board hardware as standard. For production monitoring, the loader can be equipped with Sandvik's Integrated Weighing System (IWS) as well as OptiMine® solution.



Capacities	
Maximum tramming capacity	25 000 kg
Break out force, lift	55 000 kg
Break out force, tilt	53 000 kg
Standard bucket	10 m ³

Speeds forward & reverse (level/loaded)	
1st gear	3.6 km/h
2nd gear	6.3 km/h
3rd gear	10.5 km/h
4th gear	16.2 km/h

Bucket motion times	
Raising time	9.0 sec
Lowering time	6.2 sec
Dumping time	2.5 sec

Operating weights	
Total operating weight	77 500 kg
Front axle	36 650 kg
Rear axle	39 950 kg

Loaded weights	
Total loaded weight	101 600 kg
Front axle	74 900 kg
Rear axle	26 700 kg

Operational conditions and limits	
Environmental temperature	From -20°C to +50°C
Standard operating altitude	With standard unit from -1500 m to +2000 m at 25 °C

Requirements and compliance
Compliance with 2006/95/EC Low voltage directive
Compliance with 2004/108/EC Electromagnetic compatibility directive
Compliance with 2006/42/EC Machinery directive (Equipment for EU area, achieved with relevant options)

Design based on EN 1889-1. Machines for underground mines. Mobile machines working underground. Safety. Part 1: Rubber tyred vevehicles.

Design based on MDG 15. Guideline for mobile and transportable equipment for use in mines. (Equipment for Australia, achieved with relevant options)

Electrical system based on IEC 60204-1. Safety of machinery – Electrical equipment of machines – Part 1: General requirements

CONTAINS FLUORINATED GREENHOUSE GASES
Refrigerant R134a under pressure max 38 bar/550 PSI:
Filled weight: 2.1 kg
CO₂e: 3,003 tons
GWP: 1430
Information based on the F Gas Regulation (EU) No 517/2016

Electric motor	
Three phase squirrel-cage drive motor	Siemens
Drive motor output	315 kW, IE4
Drive motor voltage	1 000 V
Drive motor frequency	50 Hz
Drive motor speed	1 500 rpm
Drive motor insulation class	B
Drive motor degree of protection	IP 55
Three phase squirrel-cage pump motor	Siemens
Pump motor output	2 × 75 kW
Pump motor voltage	1 000 V
Pump motor frequency	50 Hz
Pump motor speed	1 500 rpm
Pump motor insulation class	B
Pump motor degree of protection	IP 55
Three phase squirrel-cage fan motor	3 pcs
Fan motor output	2,2 kW
Fan motor voltage	400 V
Fan motor frequency	50 Hz
Fan motor speed	3 000 rpm
Fan motor insulation class	F
Total electric power	471,6 kW

Converter
DANA 9000 series

Transmission	
Power shift transmission with modulation	Dana 8000 series, four gears forward and reverse

Axles	
Front axle, spring applied hydraulic operated brakes. Fixed.	Kessler D116, limited slip differentials
Rear axle, spring applied hydraulic operated brakes. Oscillating ± 8°.	Kessler D116, limited slip differentials

Tires	
Tire size (Tires are application approved. Brand and type subject to availability.)	40/65-39 L5, 56 ply

Hydraulics	
Door interlock for brakes, boom bucket, and steering hydraulics	
Filling pump for hydraulic oil with quick coupling for filling	
Oil cooler for hydraulic and transmission oil with capability up to 50°C ambient temperature	
ORFS fittings	
MSHA approved hoses	
Hydraulic oil tank capacity 595 l	
Sight glass for oil level, 2 pcs	

Steering hydraulics	
The oil flow from steering hydraulic pump is directed to bucket hydraulics when steering is not used	Joystick bucket and boom control (electric), equipped with piston pump that delivers oil to the bucket hydraulic main valve
Steering main valve	Closed center type, LS controlled
Steering hydraulic cylinders	160 mm, 2 pc
Steering pump	-
Steering and servo hydraulic pumps	Piston type, LS controlled

Bucket hydraulics	
The oil flow from steering hydraulic pump is directed to bucket hydraulics when steering is not used	Joystick bucket and boom control (electric), equipped with piston pump that delivers oil to the bucket hydraulic main valve
Boom system	Z link
Lift cylinders	250 mm, 2 pcs
Dump cylinder	320 mm, 1 pc
Main valve	Closed center, LS valve
Pump for bucket hydraulics	Piston type, LS controlled

Brakes
Service brakes are spring applied; hydraulically operated multidisc wet brakes on all wheels. Two independent circuits: one for the front and one for the rear axle. Service brakes also function as an emergency and parking brake. Brake system performance complies with requirements of EN ISO 3450, AS2958.1 and SABS 1589.
Automatic brake application, ABA
Electrically driven emergency brake release pump
Brake oil tank capacity 100l

Cabin
ROPS certification according to EN ISO 3471
FOPS certification according to EN ISO 3449
Sealed, air conditioned, over pressurized, noise suppressed closed cabin
Sound absorbent material to reduce noise
Laminated glass windows
Cabin mounted on rubber mounts to the frame to reduce vibrations
Air conditioning unit located outside the cabin to reduce noise inside the cabin
Cyclone pre-filter for A/C device
Adjustable joysticks
No high pressure hoses in the cabin
Inclinometers to indicate operating angle
Emergency exit
Floor washable with water to reduce dust
Three-point contact access system with replaceable and colour coded handles and steps
12 V output
Remote circuit breaker switch

Operator's seat
180 degrees turning operator seat
Low frequency suspension
Height adjustment
Adjustment according to the operator's weight
Fore-aft isolation
Padded and adjustable arm rests
Adjustable lumbar support
Selectable damping
Two-point seat belt

Measured vibration level	
Whole body vibration was determined while operating the loader in a simulated working cycle consisting of loading, unloading and driving with and without load. The value is determined applying standards EN 1032 and ISO 2631-1.	
Maximum r.m.s.value a _w [m/s²]	0,68
VDV _w over 15 min period [m/s ^{1.75}]	6,79

Measured sound level	
The sound pressure level and sound power level at the operator's compartment have been determined in stationary conditions on high idle and at full load.	
Sound pressure level L _{pa} [dB re 20 µPa]	74 dB
Sound power level L _{WA} [dB re 1 p W]	109 dB

Control system, dashboard and displays
Sandvik Intelligent Control system
Critical warnings and alarms displayed as text and with light
7” color display with touch screen functionality and adjustable contrast and brightness
Instrument panel with illuminated switches
My Sandvik Digital Services Knowledge Box™ on-board hardware

Rear and front frame	
High strength structure with optimized material thicknesses. Reduced own weight for higher overall hauling capacity and long structural lifetime. Welded steel construction.	
Central hinge with adjustable upper bearing	
Rear tanks welded to frame, hydraulic tank and cabin base are both bolted and welded to frame	
Automatic central lubrication	

Main components	
Batteries 2 × 12V, 75Ah	
Cable reeling electronically controlled, closed hydraulic circuit	
Cable anchoring unit	
Cable shock absorber	
Driving lights	LED lights: 4 pcs in front 4 pcs in rear 7 pcs in cabin area
Working lights	LED light, 1 pc under boom
Parking, brake and indicator (blinkers) lights	LED lights: 2 pcs in front 2 pcs in rear
Control system	7” color display, 6 modules, inbuilt system diagnostic
Reverse alarm (CE)	
Flashing beacon	

Illumination	
Illuminance Eav with 5 pieces of LED lights at a distance of 20 m in front of the loader:	
Head lights, high beam E _{av}	127 lx
Head lights, low beam E _{av}	15 lx
Illuminance Eav with 5 pieces of LED lights at a distance of 20 m behind the loader:	
Reversing lights, high beam E _{av}	205 lx
Reversing lights, low beam E _{av}	31 lx

Toro® LH625iE is compliant with the South African Mine health and safety act 29 of 1996, as the average light intensity in the direction of travel is more than 10 lux at a distance of 20 m.

Fire safety
Portable fire extinguisher, 12 kg (CE)

Energy isolation
Lockable main switch, ground level access
Emergency stop push buttons according to EN ISO 13850: 1 pcs in the cabin, 2 pcs in the rear
Automatic discharge for pressure accumulators (brake system and pilot circuit)
Frame articulation locking device
Mechanical boom locking device
Wheel chocks and brackets

Grade performance										
AC 315 kW / 1500 rpm										
Empty										
Percent grade	0.0	2.0	4.0	6.0	8.0	10.0	12.5	14.3	17.0	20.0
Ratio					1:12	1:10	1:8	1:7	1:6	1:5
1st gear (km/h)	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.1
2nd gear (km(h)	6.3	6.2	6.0	6.0	5.8	5.5	5.2	4.9	4.3	3.8
3rd gear (km/h)	10.9	10.5	9.8	9.0	7.8	6.6	4.8			
4th gear (km/h)	18.9	16.2	12.3							
Loaded										
Percent grade	0.0	2.0	4.0	6.0	8.0	10.0	12.5	14.3	17.0	20.0
Ratio					1:12	1:10	1:8	1:7	1:6	1:5
1st gear (km/h)	3.6	3.5	3.5	3.4	3.4	3.3	3.2	3.1	2.9	2.8
2nd gear (km(h)	6.3	6.2	6.0	5.7	5.3	4.9	4.2	3.8	3.0	
3rd gear (km/h)	10.7	10.0	8.8	7.2	5.5					
4th gear (km/h)	17.7	13.0								

Standard manuals	
Operator's Manual	English and other EU languages
Maintenance Manual	English and other EU languages
Parts Manual	English
Service and Repair Manual	English
E-manuals	2 × USB stick in pdf format, includes all manuals
Decals	English, Swedish

Options
Automine® Loading: Onboard Package
CE Declaration of conformity
Driving direction lights (red / green)
Emergency steering (CE)
Integrated weighing system (IWS) for loaders
Monitoring camera system
Neutral brake
Round cable, NEXANS RHEYCORD, 4×95 mm², 350 m
Spare rim 32.00-39/4.0
VICTOR plugs for supply cable

Dimensions with 10 m³ bucket

The dimensions are indicative only

