

Sandvik LH621

Technical Specification



APPLICATIONS

Sandvik LH621 is a 21 tonne underground loader for massive underground production and large scale development with state of the art performance and cutting edge technology. It has a unique fast and efficient way to fill the bucket, compact lightweight design and high capacity. For excellent reliability LH621 has onboard Vehicle Control and Maintenance system (VCM) for easy operation and fast maintenance.

Capacities

Tramming capacity	21 000 kg	46 300 lb
Break out force, lift	38 500 kg	84 880 lb
Break out force, tilt	35 100 kg	77 380 lb
Tipping load	47 700 kg	105 160 lb
Standard bucket	8,0 m ³	10,5 yd ³

Main dimensions

Total length	11 993 mm	472"
Maximum width	3 100 mm	122"
Height with safety cabin	2 957 mm	116"

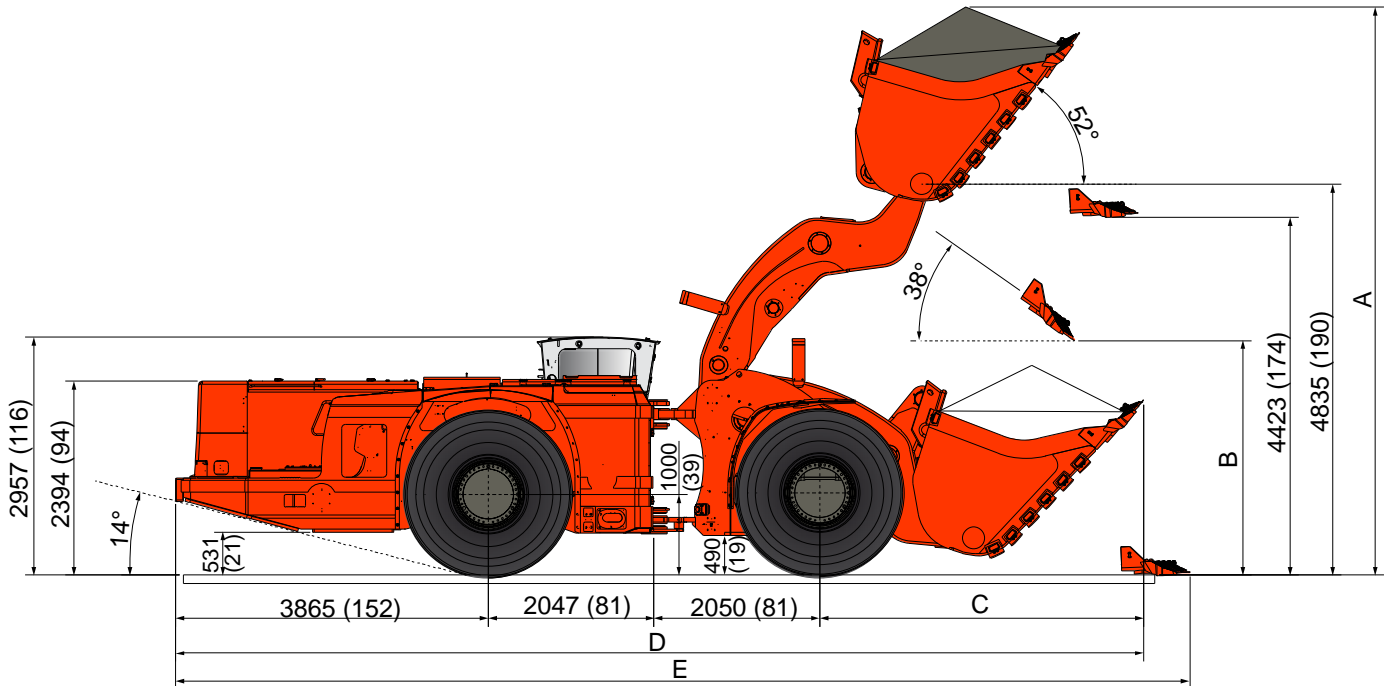
Bucket Motion Times

Raising time	8,4 sec
Lowering time	4,5 sec
Dumping time	1,8 sec

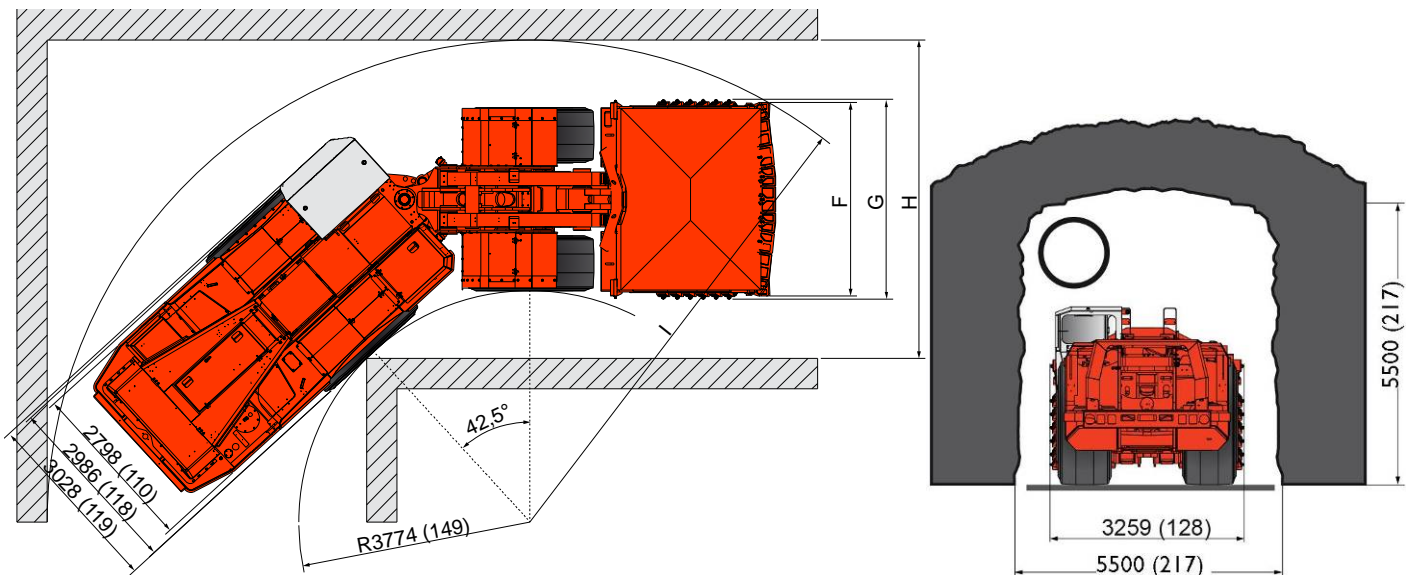
Speeds Forward & Reverse (Level / Loaded)

1st gear	6,1 km/h	3,8 mph
2nd gear	10,9 km/h	6,8 mph
3rd gear	19,0 km/h	11,8 mph
4th gear	33,9 km/h	21,1 mph

DIMENSIONS (SIDE VIEW)



DIMENSIONS (TOP AND REAR VIEW)



Bucket size	A	B	C	D	E	F	G	H	I
8 m ³	6716	3005	3842	11665	na	na	3100	5060	R7638
9 m ³	7023	2897	4002	11964	12533	3156	3259	5200	R7872
10,7 m ³	7147	2790	4121	12083	12705	3356	3459	5346	R8018

Sandvik Mining and Construction Reserves the right to change this specification without further notice.

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POWER TRAIN

Engine

Diesel engine	Volvo TAD1344VE, Tier 2
Output	352 kW (479 hp) @ 2 100 rpm
Torque	2 215 Nm @ 1 260 rpm
Number of cylinders	In-line 6
Displacement	12,78 l
Cooling system	Liquid cooled Piston pump driven cooler fan
Combustion principle	4-stroke, direct injection, turbo with intercooler
Air filtration	Donaldson Power Core
Electric system	24 V
Exhaust system	Catalytic purifier and muffler, double wall exhaust pipe
Average Fuel Consumption	45,0 l/h (at 50% load)
Fuel Tank Capacity	620 l (164 gal)

Converter

Dana C9000	With lock-up
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Transmission

Dana 8000	Power shift transmission with modulation, four gears forward and reverse, automatic gear shift control
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Axles

Front axle	Kessler series D111, Posi-Stop brakes, Posi-Torque differentials with springs, fixed
Rear axle	Kessler series D111, Posi-Stop brakes, Posi-Torque differentials without springs, oscillating $\pm 8^\circ$

Tires

Tire size	35/65 R33 L5**
Brand and type subject to availability	

VEHICLE WEIGHTS

Operating weights

Total operating weight	56 800 kg	125 220 lb
Front axle	23 600 kg	52 030 lb
Rear axle	33 200 kg	73 190 lb

Loaded weights

Total loaded weight	77 800 kg	171 520 lb
Front axle	56 600 kg	124 780 lb
Rear axle	21 200 kg	46 740 lb

STANDARD OPERATORS COMPARTMENT

ROPS/FOPS tested & certified, rubber mounted, pressurized, air-conditioned and noise proofed		
Height	2 957 mm	116"

FRAME

Rear and front frame	Welded steel construction
Central hinge	Adjustable upper bearing

Hydraulic tank and cabin base are both bolted and welded to frame

STEERING HYDRAULICS

Full hydraulic, centre-point articulation, power steering with two double acting cylinders. Steering controlled by electric joystick. Interlock protection. Emergency steering is optional

Turning Radius

Turning angle	$\pm 42,5^\circ$	
Inner right	3 773 mm	148"
Outer	7 860 mm	309"

Main Components

Main valve		
Steering hydraulic cylinders	2 pcs, 125 mm (4,9")	
Steering pump	Piston type	

BUCKET HYDRAULICS

Joystick bucket and boom control (electric), equipped with piston pump that delivers oil to the bucket hydraulic main valve. The oil flow from steering hydraulic pump is directed to bucket hydraulics when steering is not used.

Main Components

Boom system	Z-link
Lift cylinders	2 pcs., \varnothing 200 mm (7,9")
Dump cylinder	1 pc., \varnothing 250 mm (9,9")
Servo control valve	Toro
Main valve	
Pump for pilot hydraulics	Piston type
Pump for bucket hydraulics	Piston type
Fittings	ORFS, SAE-flange
Hydraulic oil tank capacity	450 l

Oil cooler for hydraulic and transmission oil, capability up to 52°C ambient temperature.

BRAKES

Service brakes are spring applied, hydraulically operated multidisc wet brakes (Posi-Stop) 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.

Electrically driven brake release pump.

Automatic brake activation system, ABA.

Separate oil tank for brake circuit.

Main Components

Pressure accumulator	
Brake pedal valve	
Brake / Charging valve	
Brake fluid tank capacity	75 l (20 gal)

ELECTRICAL EQUIPMENT

Alternator	150 A, Bosch
Batteries	2 x 12V, 180 Ah
Starter	24 V
Driving and working lights	4 pcs in front, rear & cabin
Parking and indicator (blinkers) lights	4 pcs in front, LED lights
Brake lights	4 pcs in rear, LED lights
Control system	5,7" display, 5 modules, with built-in system diagnostics

SAFETY AND ERGONOMICS

ROPS/FOPS certified operators compartment
Seat belt
Lockable main switch
Reverse alarm (CEN)
External shutdown, 2 pcs in rear
Decals in EU-languages
Door interlock for boom, bucket and steering hydraulics
Low frequency suspension seat
Adjustable armrests

STANDARD MANUALS

Instructions Manual	
- Operator's Manual	Hard copy, EU-languages
- Maintenance Manual	Hard copy, EU-languages
Parts Manual	Hard copy, English
Service and Repair Manual	Hard copy, English
ToolMan CD (2pcs)	in pdf. format, includes all the above manuals

OTHER STANDARD EQUIPMENT

Cyclone pre-filter for A/C device
Electrical filling pump for hydraulic oil
Fire extinguisher, 12 kg (CEN)
Flashing beacon
Neutral brake
Wheel chocks and brackets

OPTIONAL EQUIPMENT

Replaces standard equipment

- Engine Volvo TAD1363VE, 345kW (463 hp) / 1900 r/min, Torque 2380 Nm / 1200 rpm, Euro Stage 3B / Tier 4i (for EU & Japan)
- Safety cabin with swivel seat (high backrest) & controls $\pm 25^\circ$ degrees, ROPS/FOPS, incl. A/C and radio/MP3-player, height 2990 mm, width 3200 mm without bucket

Alternative buckets

Material density (t/m ³)	2,3	2,3	1,95
Volume, heaped (m ³)	9,0	9,0	10,7
Width(mm)	3 100	3 300	3 300

All buckets are available with Sandvik GET

Additional options

- Cabin heater
- Cabin lift kit (150mm) available for standard cabin only
- Gear limit
- Spare rim (35/65-33)
- Boom suspension (ride control) with boom floating
- Driving direction lights (red / green)
- Emergency steering (CEN)
- Fire suppression system ANSUL, two tanks, 8 nozzles (CEN), incl. auto engine shutdown
- Fire suppression system ANSUL, two tanks, 8 nozzles (CEN), CHECKFIRE, incl. auto engine shutdown
- Fire suppression system Sandvik FS1000 with auto engine shutdown
- RRC HBC CAN, complete
- RRC interface for HBC
- RRC recovery kit (brake release by radio signal), hook included
- RRC recovery kit (brake release by pulling the hook)
- Sandvik Integrated Scale for load weighing
- Monitoring camera system
- Accordance with CE-norms (CEN)
- Safety rails
- Wiggins fill set (hydr., transmission and engine oil)
- Wiggins fuel fill system
- Tyre Pressure Monitoring System
- LinkOne spare part manual
- CatBase spare part manual
- Pressure accumulator certificates
- Jump start

GRADE PERFORMANCE

Volvo TAD1344VE, Tier 2 352 kW
 Calculated with 2% rolling resistance
 With lock-up

Empty

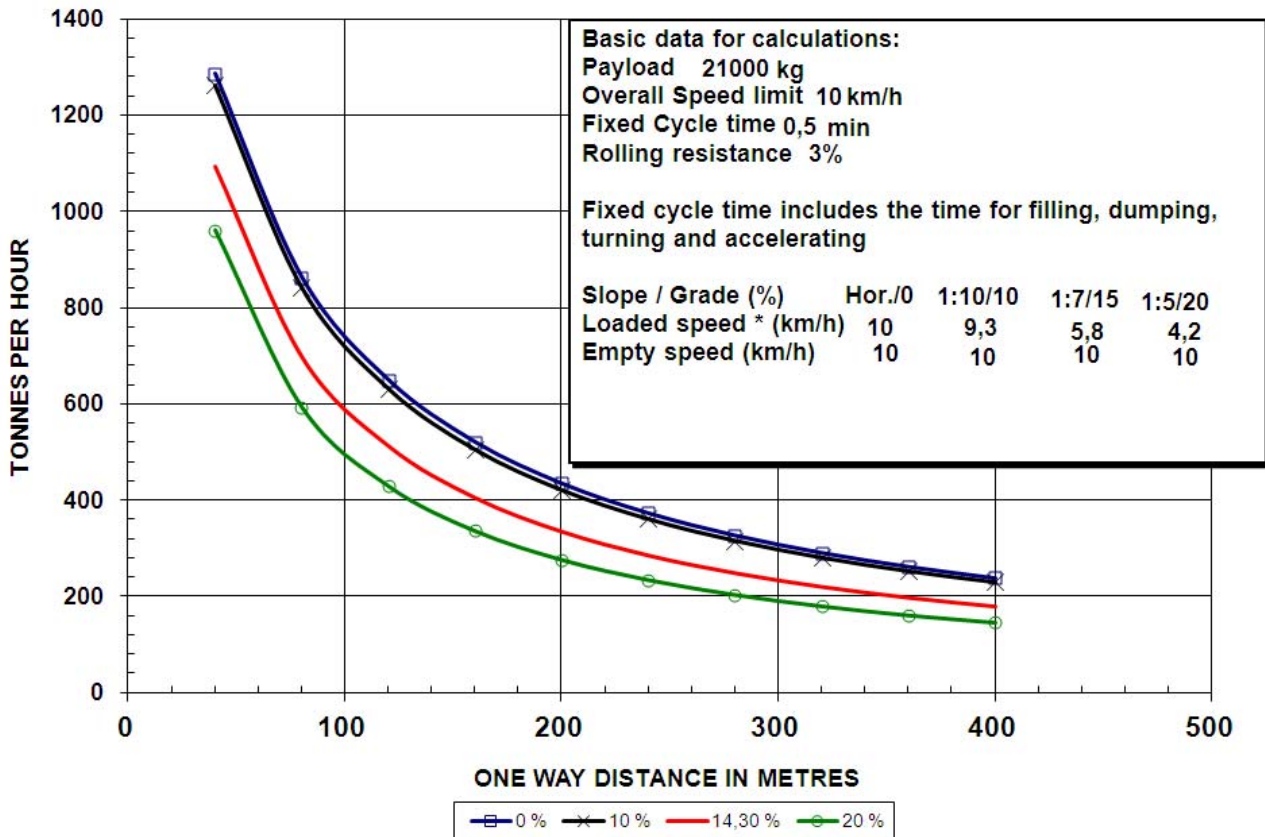
Percent grade	0	2.0	4.0	6.0	8.0	10.0	12.5	14.3	17
Ratio					1:12	1:10	1:8	1:7	
1 st gear (km/h)	6,1	6,1	6,0	6,0	6,0	6,0	5,9	5,9	5,9
2 nd gear (km/h)	10,9	10,9	10,8	10,7	10,6	10,5	10,1	9,4	8,3
3 rd gear (km/h)	19,1	18,8	18,5	18,1	15,4	13,3			
4 th gear (km/h)	34,2	33,4	26,2						

Loaded

Percent grade	0	2.0	4.0	6.0	8.0	10.0	12.5	14.3	17
Ratio					1:12	1:10	1:8	1:7	
1 st gear (km/h)	6,1	6,1	6,0	6,0	5,9	5,9	5,9	5,8	5,7
2 nd gear (km/h)	10,9	10,8	10,7	10,6	10,5	9,3	8,0		
3 rd gear (km/h)	19,0	18,6	17,8	14,4					
4 th gear (km/h)	33,9	28,1							

PRODUCTIVITY CURVE

LH621
PRODUCTIVITY CURVE



TRACTIVE EFFORT CURVE

