UK-50
Underground Mining Truck

The UK-50 is a high performance 50 tons articulated underground dump truck for use in wide meter haulage ways. The truck's performance is based on proven design, high engine power and high payload related to own weight.

This robust and intelligent truck delivers benefits in safety, productivity and profitability. Safety, health and comfort are enhanced with enclosed and vibration isolated cabin. Volvo low emission engine will further help reducing the fuel consumption and emissions without sacrificing the high productivity.

100% free maintenance central articulated design, completely sealed connection device, and continuous lubrication bearings could ensure that the front and rear frames swing freely and that they are connected favourable to the ground under harsh working conditions.

MAIN SPECIFICATIONS	
Dimensions mm	11465×3150×3200
Rated capacity	50000 kg
Maximum traction force	431kN
Standard bucket	25.0m³

SPEEDS FORWARD & REVERSE(with VOLVO TAD1643VE)	
1st gear	6.2km/h
2nd gear	9.2 km/h
3rd gear	12.2 km/h
4th gear	18.2 km/h
5th gear	24.6 km/h
6th gear	36.7km/h
The reverse gears	
1st gear	4.8km/h
2nd gear	7.1km/h

BUCKET UNLOADING ANGLE & APPROACHING ANGLE	
Bucket unloading angle	62°
Approaching angle	15°

EMPTY LOAD*	
EMPTY LOAD*	41500 kg
Front axle	28500 kg
Rear axle	13000 kg

LOADED WEIGHTS*	
Total loaded weight	91500 kg
Front axle	41200 kg
Rear axle	50300 kg

* Equipment weight is dependent on the selected options

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http://www.liononemining.com

OPERATIONAL CONDITIONS AND LIMITS	
Environmental temperature	-15°C～+45°C
Standard operating altitude	With engine Volvo TAD1643VE No power loss below 3000 meters above sea level

REQUIREMENTS AND COMPLIANCE
JB/T8436 Underground mining truck with tire
JB/T5501 Underground loader testing method
GB21500 Safety requirements for railless tire-type underground mining trucks
XY12.1-2011Underground mining truck

POWER TRAIN

ENGINE	
Diesel engine	Volvo TAD1643VE
Output	565 kW @ 1900rpm
MAX torque	3260Nm @ 1260rpm
Number of cylinders	In-line 6
Displacement	16.1 L
Cooling system	Liquid cooled
Combustion system	Integrated hand pump, Remotely located fuel filter
Intake system	turbocharger Two stage filtration, dry type
Control System	Fuel electronically controlled injection system
Starting system	24Vstarting motor
Emissions	Tier 3, Euro Stage III
Exhaust system	DOC+POC+Silencer
Average fuel consumption at 50% load	50.0 L/h
Fuel tank capacity	850 L

TRANSMISSION	
Allison 6620	With torque converter lock-up Electronically controlled automatic shift Hydraulic retarder auxiliary braking function 6 forward gears & 2 reverse gears

TRANSFER	
W2250	1：1

AXLE	
Front axle SAHR Rigid axle	Kessler D106 Standard differential
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TIRE	
Model	35/65-R33 ETNT

HYDRAULICS	
The equipment will brake and cannot move when the cabin door is not locked	Standard
Hydraulic oil radiator Transmission oil radiator	Capability up to 45°C ambient temperature
Fittings	JIC
Hoses	GB3683
Hydraulic oil tank capacity	250L

STEERING HYDRAULICS	
Full hydraulic, centre-point articulation, power steering with two double acting cylinders.	Steering controlled by steering wheel
Steering main valve	Open circuit type
Steering hydraulic cylinders	2 pcs
Steering pump	Gear pump

BUCKET AND BOOM HYDRAULICS	
The oil flow from Steering hydraulic pump is directed to Bucket hydraulics when steering is not used.	Joystick controlled
Lifting cylinder	2 pcs
Main valve	Open circuit type
Working pump	Gear pump

BRAKES	
Service brakes are SAHR multi-disc wet brakes on all wheels.； Integrate service brake, park brake and emergency brake in a whole system. Brake system performance complies with requirements oGB/T33921、JB/T13003.	
Automatic brake activation system, ABA	Standard
Manual driven emergency brake release pump	Standard
Brake oil tank capacity	100L

OPERATOR'S COMPARTMENT

The UK-50 cab offers a spacious ergonomic operating space with temperature control and ventilation system; a spacious front windshield with wide view, push-pull glazing and large mirrors; operator-friendly console layout for added comfort and production efficiency.

The UK-50 cabin is ROPS/FOPS certified to protect the operator in case of roll over or falling objects. The interior side of the cab adopts 25mm flame-proof and noise-reducing materials and the external covering has flame-proof ABS material, which is not only beautiful and comfortable, but also effective in dust-proof and noise-reducing functions. The cab has laminated safety glass windows, emergency exits which adopts sealing strip to remove the glass inside and outside for emergency escape.

CABIN

ROPS certification according to ISO 3471
FOPS certification according to ISO 3449
Enclosed Cabin with Air Conditioner
Laminated glass windows
Air conditioning and cab installed separately
Sound absorption and noise reduction flame-retardant material interior decoration
Adjustable work handle and armrest
Emergency escape exit
Washable cab floor to reduce dust
Three-point access to the cab

DASHBOARD AND DISPLAYS

A new 7 inch color display with advanced screen functionality has all the needed information and alarms on one large display giving the operator more time to keep eyes on the road. New background graphics with clear symbols are designed for the underground mining environment to reduce eye fatigue	
XINGYE Standard Intelligent Control System	
Critical warnings and alarms	Displayed with sound and light
Instrument Panel	IFM 7" Color display Full-featured rocker switch control

OPERATOR'S SEAT

The UK-50 driver's seat features an adjustable mechanical suspension seat with a three-point seat belt. The seat is adjustable up and down, and is equipped with a cushioned arm to rest in the cab.
Mechanical suspension
Height adjustment
Adjustment according to the operator's weight
Adjustable arm rest
Adjustable lumbar support
Three-point seat belt

FRAME

REAR AND FRONT FRAME

The rear frame adds a heavy-duty design that better stabilizes the equipment when transporting and loading ore. The heavy-duty front frame and cab minimize the damage to the impact and collision to the roadway wall High-strength Q460C alloy steel plate is used to optimize material thickness, reduce self-weight, and improve overall transportation capacity, high structural reliability and long service life. The carriage adopts a box-shaped structure and optimized designed,which could minimize the damage to the impact and collision to the roadway wall and prolong its service life.	
Central hinge	Rotary connection (patent)
Tanks	Welded to the frame

ELECTRICAL SYSTEM

MAIN COMPONENTS	
Alternator	28 V，150A
Batteries	2×12 V，120Ah
Starter	24V/5.5kW
Driving and working lights	2PCS on front frame 2PC in cabin 2PCS on rear frame
Sensor	Diesel, hydraulic oil level sensor, working, steering, braking system pressure sensor
Alarm	Low oil level alarm / oil pressure alarm Rotating warning light
Control system	Controller Built-in diagnostic and alarm system
Dual horn	Standard
Buzzer	Standard
Reverse camera system	Standard

SAFETY FEATURES INCLUDED

FIRE PREVENTION	
Portable fire extinguisher	4kg 2pcs
Fire protection heat source isolation cover	Standard
Exhaust pipe insulation cotton protection	Standard
Turbocharger shroud	Standard
ENERGY ISOLATION	
Main power switch can be locked	Standard
Emergency brake button	1 pc on front frame/ 1 pc in cabin
Engine water tank manual pressure release box cover	Standard
Accumulator manual pressure relief device	Standard
Front and rear frame locking device	Standard

DOCUMENTATION

STANDARD MANUALS	
Operator’s Manual	English
Maintenance Manual	English
Parts Manual	English or Chinese
Service and Repair Manual	English or Chinese
Decals	English or Chinese

OPTIONS

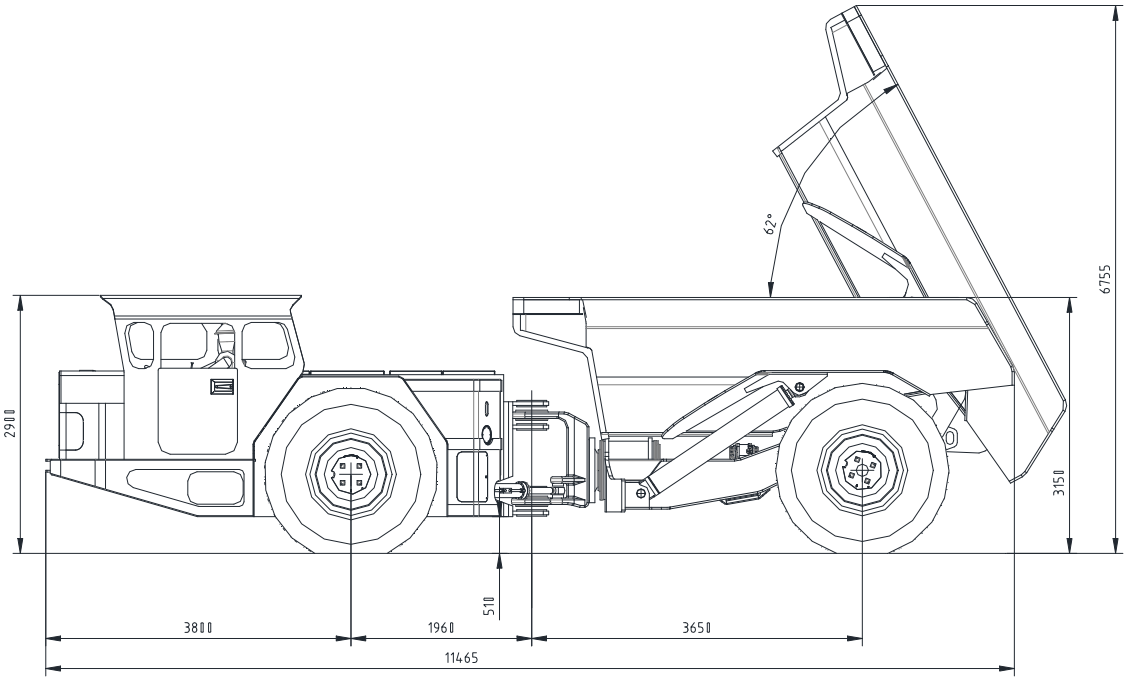
SAFETY OPTIONS
Transmission 6th gear disabled
Manual / automatic Fire suppression system with auto shutdown
Emergency steering
Automatic centralized lubrication system

OTHER OPTIONS
Customized Bucket Capacity

PERFORMANCE
Volvo TAD1643VE,Tier 3 emissions (3 % rolling resistance)
With converter lock-up
OPERATING SPEED AT NO LOAD AND FULL LOAD

FULL LOAD

Grade（%）	0	5	10	15	20
1st gear（km/h）	6.2	6.2	6.0	6.0	5.8
2nd gear （km/h）	9.2	9.0	9.0	8.7	7.0
3th gear（km/h）	12.2	12.0	11.5	9.1	
4th gear（km/h）	18.2	17.2	10.0		
5th gear（km/h）	24.6	22.0			
6th gear（km/h）	36.7	11.0			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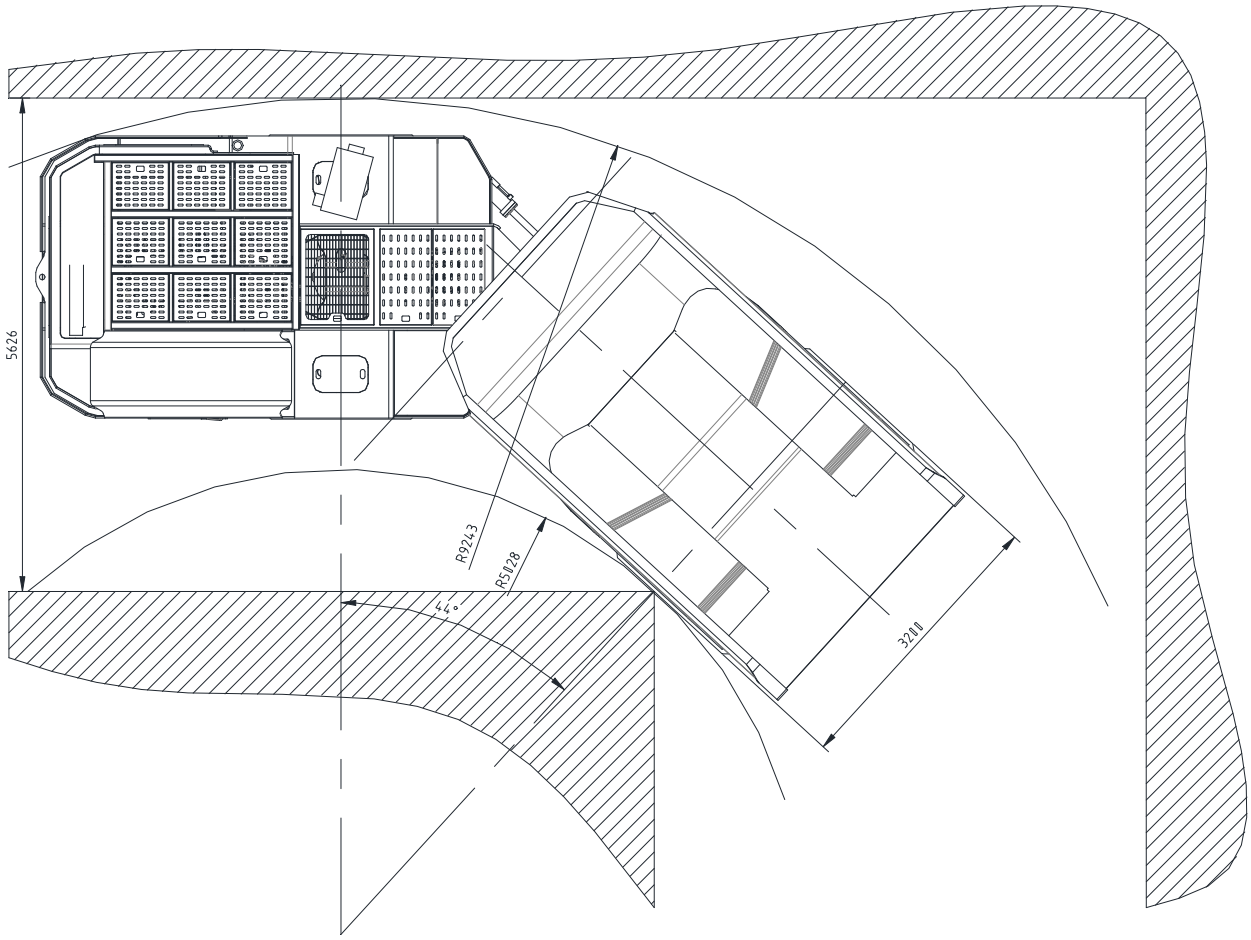
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