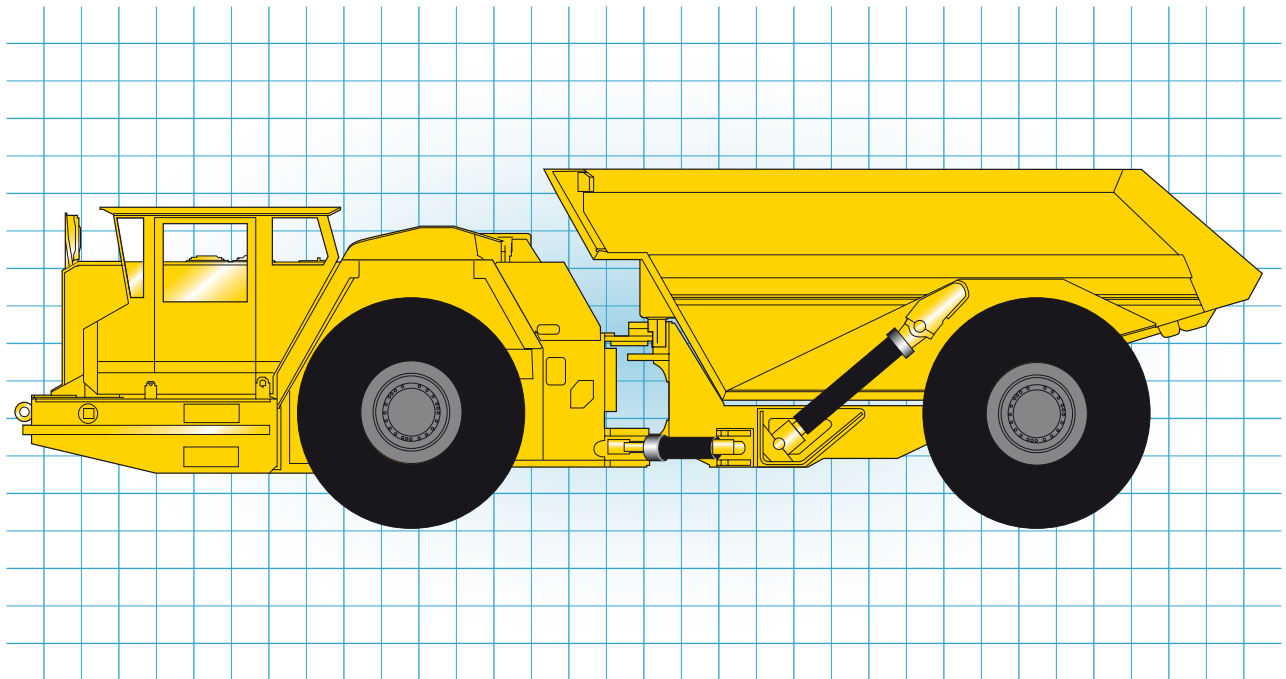


Minetruck MT5020

Technical specification



The Minetruck MT5020 is a fast 50 metric ton capacity underground truck, with an ergonomically designed operator's compartment for unparalleled productivity in demanding underground mines.

Features

Dump box

- Optimun box profile for clean and fast dumping.
- Box support and lock for safe work under box.

Operator's compartment

- Ergonomically and spacious designed compartment for maximum safety and minimal operator fatigue with:
 - Forward seating enclosed cabin.
 - ROPS and FOPS certified for maximum safety.
 - Air conditioning for convenient working conditions.
 - Tilt-telescopic steering wheel.
 - Trainer seat.
 - Compliant with sound regulations to minimize operator's fatigue; reduced noise level to 83 dB(A) inside the cab.
 - Wide windows for safety and enhanced operator's visibility.
 - 3 point mounting points for entry and exit from operator's compartment.
 - Back up camera and monitor for operator assistance.

Power frame

- Front axle suspension, a gas-hydraulic system for improved operator comfort and vehicle handling.

- Atlas Copco unique powertrain includes an upbox and a combined transmission and converter for improved visibility and accessibility to components.
- Electronic transmission and engine control system for smooth and precise shifting.
- A high power-to-weight ratio.

General

- Great serviceability with centralized service points.
- Long-life roller bearing centre hinge.
- Anti skid material at service access points.
- Maximum operating ambient temperature 52°C (125F).
- Central manual lubrication.
- Hydraulic hoses, electric cables and hot surfaces are well routed and protected.
- Carries the highest speed per ton.

Specifications

Capacities		Motion times	
SAE regulations		Dump box	
Tramming capacity	50 000 kg	Dumping	15 seconds

Engine

- Cummins..... QSK19-C650, Tier/Stage 1
- Power Rating at 2100 rpm.....485 kW/650 hp
- Maximum torque at 1300 rpm.....3 084 Nm
- MSHA Part 7 ventilation rate 1 274 m³/min
- Ventilation particulate index..... 934 m³/min
- Rock Tough purifier and silencer.
- Dry type air cleaner.
- Exhaust heat protection.
- Remote engine oil drain.
- Cooling package with flat, round, mechanical radiator.

Transmission and converter

- Planetary, automatic 6 speeds forward/2 speeds reverse with integral single stage converter with automatic lock up.
- Allison.....M6610AR
- Up box: Power transmitted through a 1:1 gear ratio box.
- Drop box: Power transmitted through a 1:1 gear ratio box.

Axles

- Kessler 106
- Conventional front and rear differential.
- Front-axle oscillating suspension "A" frame with hydraulic suspension cylinders and accumulator cushioning.
- All wheel drive.

Brakes

Fully enclosed, force cooled, spring applied hydraulic release multiple wet discs at each wheel end.

- Service/parking/emergency SAHR
- Hydraulic retarder.



The MT5020 is standard equipped with a rear vision camera. A small detail, but definitely worth viewing - is the standard equipped camera for improved operator's visibility.

Tyres

Tubeless, steel radial, lug tread design for underground mine service.

- Dimension..... 35/65, R33*
- Ply rating MS

* As applications and conditions vary, Atlas Copco recommends that the user consults with tyre suppliers to obtain the optimum tyre selection.

Suspension

The suspension is a gas-hydraulic system for improved operator comfort and vehicle handling while minimizing frame stress.

- Suspension, max: 140 mm
- Individual self leveling suspension.

Operator's compartment

- Forward facing seat.
- Cabin ISO ROPS/FOPS approved.
- Grammer seat with retractable seat belts.
- Air conditioner.
- Trainer seat.
- Back up video monitor.

Hydraulic system

- System pressure 20.7 MPa
 - Hydraulic tank capacity 238 litres
 - Filtration, return line.....4.0 micron
 - Heavy duty gear type pumps
- Cylinders diameter:
- Steer cylinders (2) 160 mm
 - Dump cylinders (2) 177.8 mm
 - Suspension cylinders (2) 125 mm

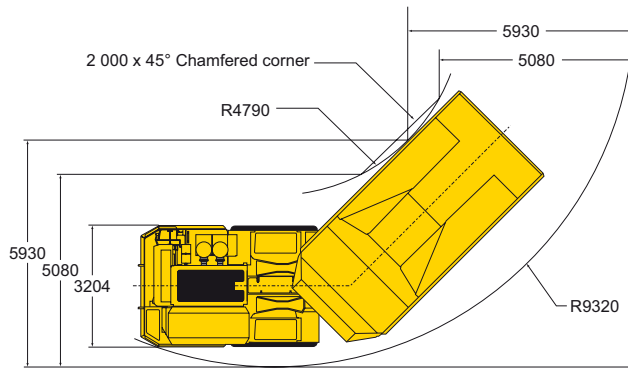
Electrical system

- Voltage, system start & accessories 24 V
- Alternator, high output..... 100 A
- Hydraulic warning system; level, hyd. temp. oil.
- Hella projection lights.
- Isolation switch lockout.

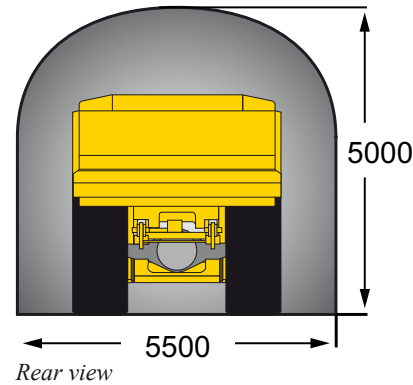
Fuel

- Fuel tank capacity 644 litres
- Fuel consumption, full load..... 57 litres/hour
- Fuel filtration 10 µm
- Anti-siphon fuel supply.

Turning radius



Recommended drift size



- Turning angle +/-42.5°.
- Dimensions shown are based on standard vehicle configuration with 27 mm tyre deflection.
- All dimensions are shown in millimetres.

Grade performance

NB. 3% rolling resistance assumed. Actual performance may vary depending on the application.

Standard configuration, box empty

Percent grade	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
Ratio					1:12	1:10	1:8	1:7			1:5
1st gear (km/h)	6.6	6.5	6.5	6.4	6.4	6.3	6.3	6.2	6.2	6.1	6.1
2nd gear (km/h)	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.7	8.7
3rd gear (km/h)	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.6	11.4	11.3	11.2
4th gear (km/h)	19.1	18.6	18.2	17.7	17.3	17.0	16.7	16.4	16.1	15.8	15.3
5th gear (km/h)	25.4	24.6	23.8	23.1	22.6	22.0	21.5	20.7	18.9	17.3	
6th gear (km/h)	37.0	35.2	33.9	32.7	31.5	27.7					

Standard configuration, box loaded

Percent grade	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
Ratio					1:12	1:10	1:8	1:7			1:5
1st gear (km/h)	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5
2nd gear (km/h)	9.5	9.3	9.0	8.8	8.6	8.4	8.2	8.1	7.9	7.5	6.9
3rd gear (km/h)	12.6	12.1	11.7	11.3	11.0	10.7	10.3	9.3	8.5		
4th gear (km/h)	18.2	17.2	16.6	15.9	14.3	12.4					
5th gear (km/h)	23.9	22.5	21.3	17.8							
6th gear (km/h)	34.0	31.0									

Optional equipment

Main frame

- Wheel chocks and chock brackets.

Ergonomic

- KAB 555 seat W/retractable seatbelts.

System

- Ansul dual bottle fire suppression with Engine kill.
- Electric hydraulic tank fill pump.
- Dual fuel filter.

- Lincoln auto lube with timer.
- Wiggins fast fuel-, transmission-, hydraulic- oil fill.

Electrical system

- Amber strobe light - power on.
- Load lights.
- Side light opposite operator.
- Tail and brake lights.
- Turn signals, front and rear.
- 24/12 V power converter.
- Loading camera.
- Battery heater, 120 V.

- Block heater, 120 V.

- Hydraulic oil heater, 120 V.
- Engine oil heater, 120 V.
- Fuel heater.

Drive train

- Neutral brake apply.

Controls and instruments

- Blockout 5th and/or 6th gears.
- Emergency steering- accumulator type.
- Extended data gauge package.

Power unit

- Epoxy coated radiator.

Documentation

- LinkOne parts catalogue, CD.
- Parts and service manual - plasticised.

Parts kit

- 1 000 hour consumables.

Other

- Tool box.

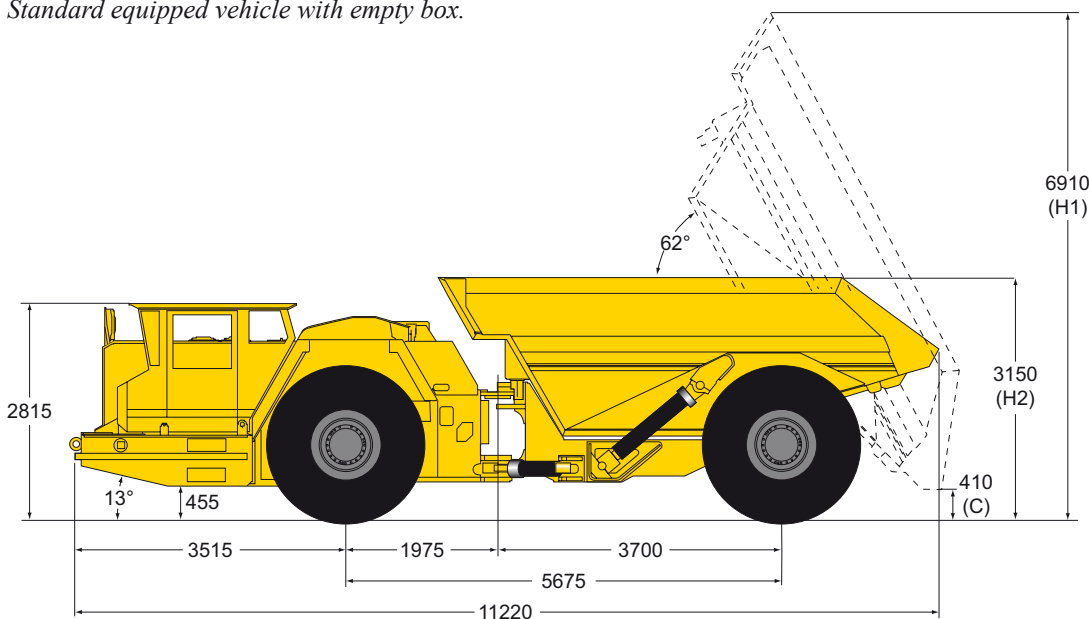
Dump boxes

Dump box data		STD			
Material density (t/m ³)	1.8	2.0	2.2	2.4	
Volume, SEA struck (m ³)	26.2	23.1	20.3	18.5	
Volume, Semi-heaped (m ³)	27.8	25.5	22.7	20.8	
Volume, SAE heaped (m ³)	31.3	27.8	25.0	23.4	
Width, dump box (mm)	W	3 400	3 200	3 200	3 200
Dump position: Box height, max (mm)	H1	7 015	6 910	6 800	6 720
Tramming position: Dump box height (mm)	H2	3 255	3 150	3 000	2 885
Dump position: Clearance (mm)	C	410	410	410	410

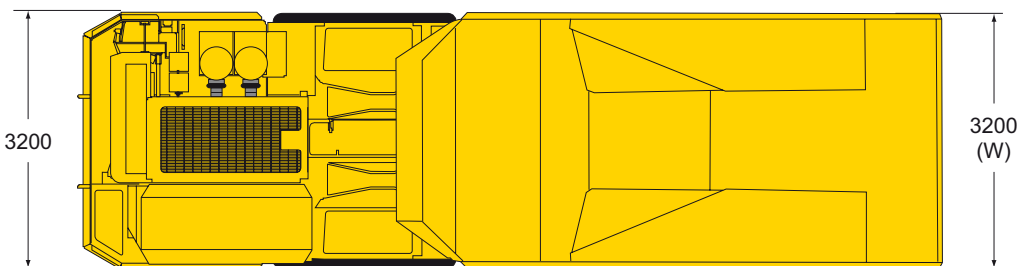
Dimensions and weights

Approximate weight.....	42 000 kg
Axle load, front end.....	29 700 kg
Axle load, back end.....	12 300 kg

Standard equipped vehicle with empty box.



Side view



Top view

- Dimensions shown are based on standard vehicle configuration with 27 mm tyre deflection.
- All dimensions are shown in millimetres.