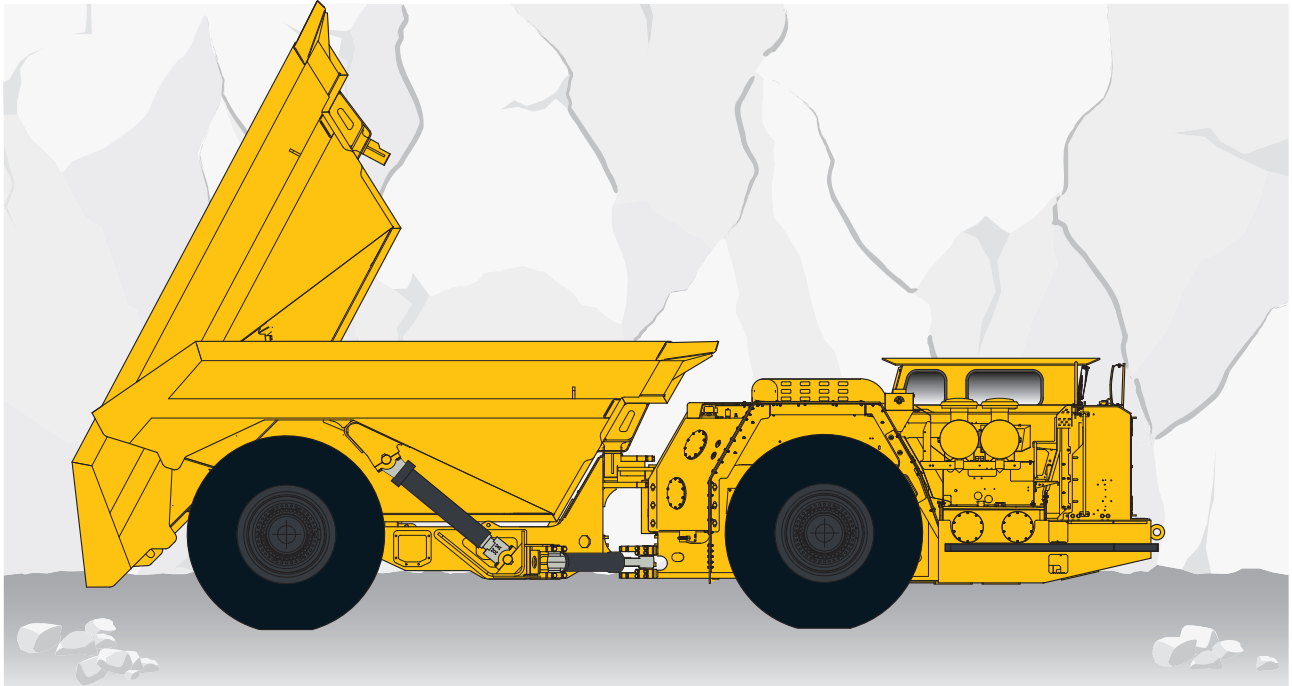


Minetruck MT5020

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

- Optimum 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 85 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 tonne

Specifications

CAPACITIES

| | | |
|-----------|----------------------------------|--------|
| kg | Tramming capacity | 50 000 |
| m³ | Standard box volume (SAE heaped) | 23.5 |

MOTION TIMES

| | | |
|------------|---------|----|
| sec | Dumping | 15 |
|------------|---------|----|

WEIGHTS

| Standard equipped vehicle (empty weight) | | |
|--|--------------------|--------|
| kg | Approximate weight | 42 900 |
| | Front axle load | 30 800 |
| | Rear axle load | 12 100 |

Engine

- Cummins Diesel Engine, QSK19-C650, EPA Tier 1/EU Stage I
- 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
- MSHA Parts 7 particulate index 934 m³/min
- Catalytic exhaust purifier and silencer
- Dry type air cleaner
- Exhaust heat protection
- Remote engine oil drain

Transmission and converter

- Planetary, automatic 6 speeds forward/2 speeds reverse with integral single stage converter with automatic lock up
- Up box: Power transmitted through a 1:1 gear ratio box
- Drop box: Power transmitted through a 1:1 gear ratio box
- Allison M6620AR

Axles

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

Brakes

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

- Hydraulic retarder
- Service/parking/emergency SAHR

Tyres

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

- Dimension 35/65, R33*

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

****MSHA = Mine Safety and Health Administration, USA**
Ventilation rate = quantity of additional ventilation air required to dilute raw exhaust emission to a respective level per engine.

Particulate Index = Calculated air flow for minimum diesel particulate matter (DPM) dilution to a safe level per engine.

Operator's compartment

- Forward facing seat
- Cabin ISO ROPS/FOPS approved
- KAB 555 seat with retractable seat belts
- Air conditioner
- Trainer seat
- Back up video monitor
- External sound level according to ISO 6393 LwA 124.5 dB(A)
- Sound level in Cabin according to ISO 6394 LpA 85 dB(A)
- Whole body vibration value according to below
- EN14253 A(8) w - maximum 0.65+/-0.2m/s²

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

Suspension

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

- Individual self levelling suspension
- Suspension, max: 140 mm

Electrical system

- Voltage, system start & accessories 24 V
- Alternator, high output 100 A
- Hydraulic warning system; level, hyd. temp. oil
- Isolation switch lockout
- LED lights standard
- Driving lights LED 11 X 40W

Fuel

- Fuel tank capacity 844 litres
- Fuel consumption, full load 57 litres/hour
- Fuel filtration 10 µm
- Anti-siphon fuel supply

Grade performance

STANDARD CONFIGURATION, BOX EMPTY

| % | Grade | 0.0 | 2.0 | 4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 |
|-------|----------|------|------|------|------|------|------|------|-------|------|------|------|
| Ratio | Grade | – | – | – | – | 1:12 | 1:10 | 1:8 | 1:7 | – | – | 1:5 |
| km/h | 1st gear | 6.9 | 6.9 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.7 | 6.7 |
| | 2nd gear | 10.2 | 10.2 | 10.2 | 10.1 | 10.1 | 10.1 | 10.0 | 10.0 | 10.0 | 9.9 | 9.9 |
| | 3rd gear | 13.6 | 13.6 | 13.5 | 13.5 | 13.4 | 13.3 | 13.3 | 13.2 | 13.1 | 13.1 | 13.0 |
| | 4th gear | 19.8 | 19.7 | 19.5 | 19.4 | 19.3 | 19.2 | 19.0 | 18.9 | 17.6 | 16.3 | 15.1 |
| | 5th gear | 27.2 | 27.0 | 26.7 | 26.5 | 26.2 | 25.4 | 22.7 | 20.05 | 17.2 | | |
| | 6th gear | 40.4 | 39.8 | 39.3 | 37.0 | 31.4 | | | | | | |

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

STANDARD CONFIGURATION, BOX LOADED

| % | Grade | 0.0 | 2.0 | 4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 |
|-------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Ratio | Grade | – | – | – | – | 1:12 | 1:10 | 1:8 | 1:7 | – | – | 1:5 |
| km/h | 1st gear | 6.8 | 6.8 | 6.8 | 6.7 | 6.7 | 6.7 | 6.6 | 6.6 | 6.6 | 6.5 | 6.3 |
| | 2nd gear | 10.2 | 10.1 | 10.0 | 9.9 | 9.8 | 9.8 | 9.6 | 8.7 | 8.0 | 7.3 | |
| | 3rd gear | 13.5 | 13.4 | 13.2 | 13.1 | 12.9 | 11.5 | 10.2 | | | | |
| | 4th gear | 19.5 | 19.2 | 18.9 | 16.6 | 14.0 | | | | | | |
| | 5th gear | 26.7 | 26.1 | 21.6 | | | | | | | | |
| | 6th gear | 39.2 | 30.5 | | | | | | | | | |

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

Optional equipment

Operator's Compartment

- Grammer seat with retractable seat belts
- Heater

System

- Ansul dual bottle fire suppression with engine shutdown
- Electric hydraulic tank fill pump
- Lincoln auto lube with timer
- Wiggins fast fuel-, transmission-, hydraulic- oil fill

Controls and instruments

- Blockout 5th and/or 6th gears
- Emergency steering- accumulator type
- Extended data gauge package
- Brake apply after 3 sec.

Power unit

- Corrosion resistant radiator

Main frame

- Wheel chocks and chock brackets
- Tele dump

Electrical system

- Amber strobe light - power on
- Load lights
- 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
- Diesel Filter with heater and water separation (7 micron)
- Fire extinguisher (8 kg)

Documentation

- LinkOne parts catalogue, CD
- Parts and service manual - plastizised

Parts and Services

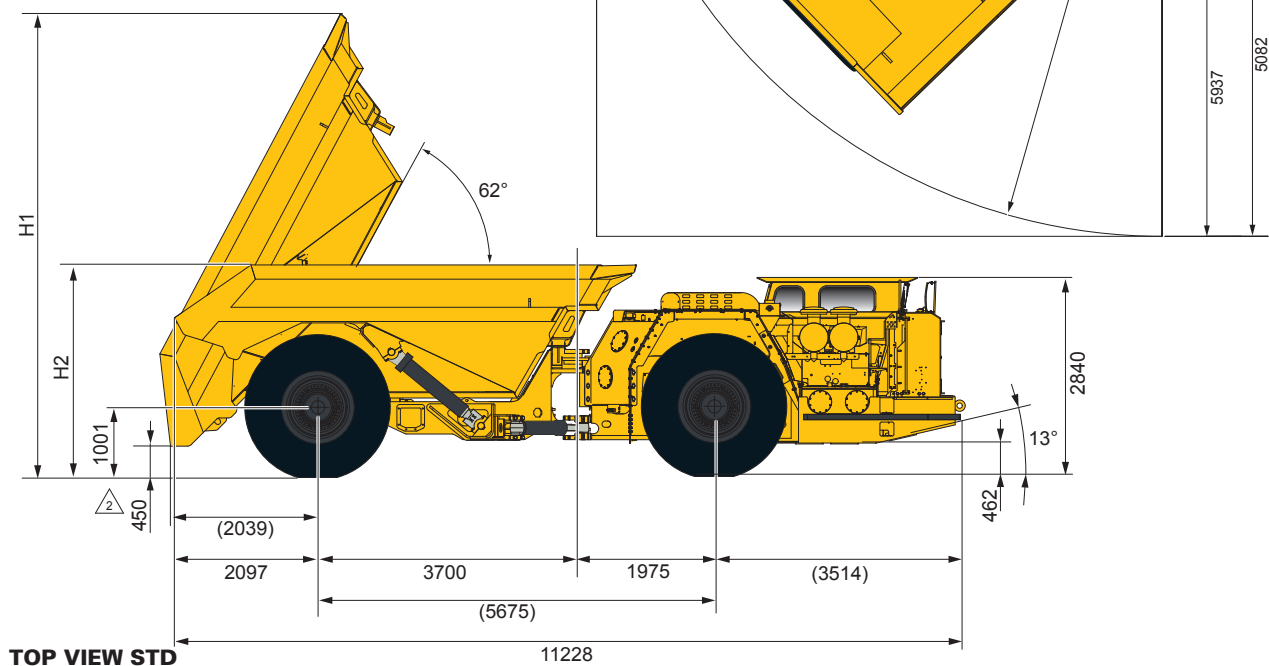
- Preventive maintenance kits
- Repair and rebuild kits
- Face mechanics tool set
- Shop mechanics tool set

Measurements and weights

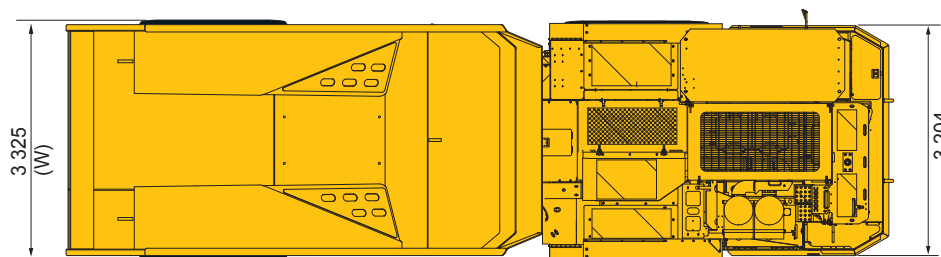
» Dimensions

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

SIDE VIEW STD



TOP VIEW STD



MT5020 DUMP BOX INFORMATION

| Dump boxes | | Tailgate | | | Tailgate | | STD |
|---------------------------------|-------|----------|-------|-------|----------|-------|-----|
| Volume, SAE heaped (m3) | 30.5 | 30.5 | 27.5 | 25.0 | 24.5 | 23.5 | |
| Volume, Semi heaped (m3) | 28.0 | 28.0 | 25.0 | 23.0 | 22.0 | 21.0 | |
| Volume, SAE struck (m3) | 25.0 | 25.5 | 23.0 | 20.5 | 19.0 | 18.5 | |
| Maximum material density (t/m3) | 1.6 | 1.6 | 1.8 | 2.0 | 2.0 | 2.2 | |
| Width, dump box (mm) | 3 200 | 3 200 | 3 200 | 3 200 | 3 200 | 3 200 | |
| Width, tires | 3 325 | 3 325 | 3 325 | 3 325 | 3 325 | 3 325 | |
| A (mm) H1 | 6 845 | 6 200 | 6 780 | 6 625 | 6 516 | 6 472 | |
| B (mm) H2 | 3 255 | 3 245 | 3 185 | 3 035 | 2 920 | 2 875 | |