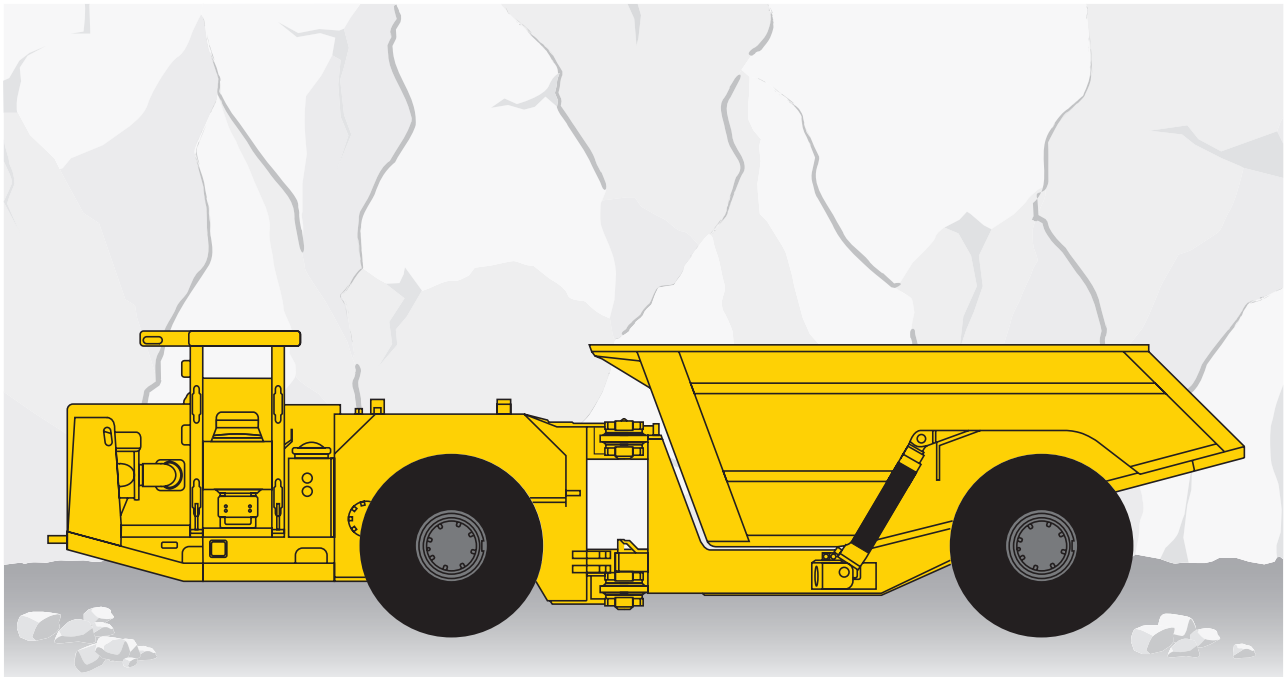


Atlas Copco Underground trucks

Minetruck 431B

Technical specification



The Minetruck MT431B is a 28.1 metric ton capacity underground truck, for large operations, in mining and construction.

Features

- ROPS/FOPS canopy with back protection
- Jacobs engine brake increase brake life, automatic engine overspeed protection, and reduced heat from breaking
- Electric transmission shift control for convenient shifting
- Converter lockup offers better power transfer, less heat and longer component life
- Centralized lubrication simplifies maintenance
- SAHR brake system offers long component life and very reliable breaking

Atlas Copco

Specifications

Capacity	
Tramming	28 125 kg

Motion times	
Dump box	
Dumping	14 seconds

Engine

- Detroit Diesel engine Series 60, EPA Tier 2/EU Stage II
- Power rating at 2 100 rpm 298 kW/400 hp
- Maximum torque at 1 350 rpm 1 898 Nm
- MSHA Part 7 ventilation rate 793 m³/min
- MSHA Part 7 particulate index 241 m³/min
- Dry type air cleaner
- Exhaust heat protection
- Remote engine oil drain
- Cooling package with V-core radiator

Transmission

- Full power shift, 4 speed forward/reverse
- Dana 6000 Series

Converter

- Single stage with Lock Up
- Dana CL-8000 Series

Axles

- Spiral bevel differential, full floating, planetary wheel end drive
- Rock Tough 508
- Conventional front differential
- Rear axle, trunnion mounted, self-lubricating bushings
- Degree of oscillation 18° (9° each side)

Brakes

- Fully enclosed, force cooled, multiple wet discs at each wheel end
- Service/parking/emergency SAHR

Tyres

Tubeless, nylon, smooth tread design for underground mine service, on demountable rims

- Dimension 18.00R33
- Ply rating MS

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

Operator's compartment

- Canopy; MSHA-ISO ROPS/FOPS approved
- Side seated operator for bi-directional operation
- Grammer seat with retractable seat belts
- Two pilot operated joysticks for steering and dump control

Hydraulic system

- System pressure 15.8 MPa
- Hydraulic tank capacity 238 litres
- Filtration, return line 4.0 µm
- Heavy duty gear type pumps
- Cylinders, double acting, chrome plated stems, diameter:
 - Steer cylinders (2) 152 mm
 - Dump cylinder 228 mm

Electrical system

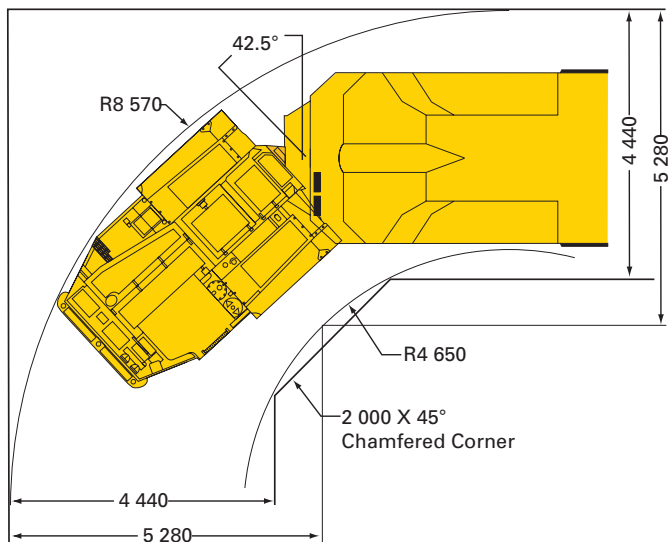
- Voltage, system start & accessories 24 V
- Alternator, high output 140 A
- Hydraulic warning system level, hyd. temp.
- Hella protection lights
- Isolation switch lockout

Fuel

- Fuel tank capacity 439 litres
- Fuel consumption, full load 35.5 litres/hour
- Fuel filtration 8.0 µm
- Anti-siphon fuel supply



Turning radius



- Turning angle +/- 42.5°
- Turning radius left and right are symmetrical
- Dimensions shown are based on standard vehicle configuration with 25 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)	5.72	5.70	5.69	5.68	5.66	5.65	5.63	5.62	5.61	5.59	5.58
2nd gear (km/h)	10.22	10.17	10.13	10.08	10.03	9.99	9.94	9.90	9.85	9.80	9.76
3rd gear (km/h)	18.05	17.90	17.76	17.61	17.47	17.32	16.65	15.27	13.56	11.54	
4th gear (km/h)	32.0	31.5	31.0	28.4	23.0						

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)	5.70	5.67	5.64	5.61	5.59	5.56	5.53	5.50	5.47	5.45	5.42
2nd gear (km/h)	10.15	10.06	9.97	9.88	9.79	9.65	8.77	7.77	6.51		
3rd gear (km/h)	17.84	17.55	17.27	14.85	10.95						
4th gear (km/h)	31.36	26.70									

Optional equipment

Main frame

- Shipping covers, cabin
- Wheel chocks
- Tele dump

Ergonomic

- Forward facing cab
- KAB 555 seat with retractable seatbelts cabin
- Heater
- Air condition, cabin
- Side seated with steering wheel, canopy

System

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

Electrical system

- Amber strobe light - power on
- 24/12 V power converter, cabin
- Load lights

- Side light opposite operator, cabin
- Tail and brake lights
- Front and rear red lights 2 each

Controls and instruments

- Blockout 3rd and/or 4th gears
- Load man, cabin
- Speedometer
- Automatic transmission control
- Back up camera and monitor

Power unit

- Epoxy coated radiator

Documentation

- LinkOne parts catalogue, CD
- Parts and service manual - plasticized
- Extra DDEC manual kit

Parts kit

- 1 000 hour consumables
- Articulation repair kit
- Maintenance kit

Other

- Tool box, cabin

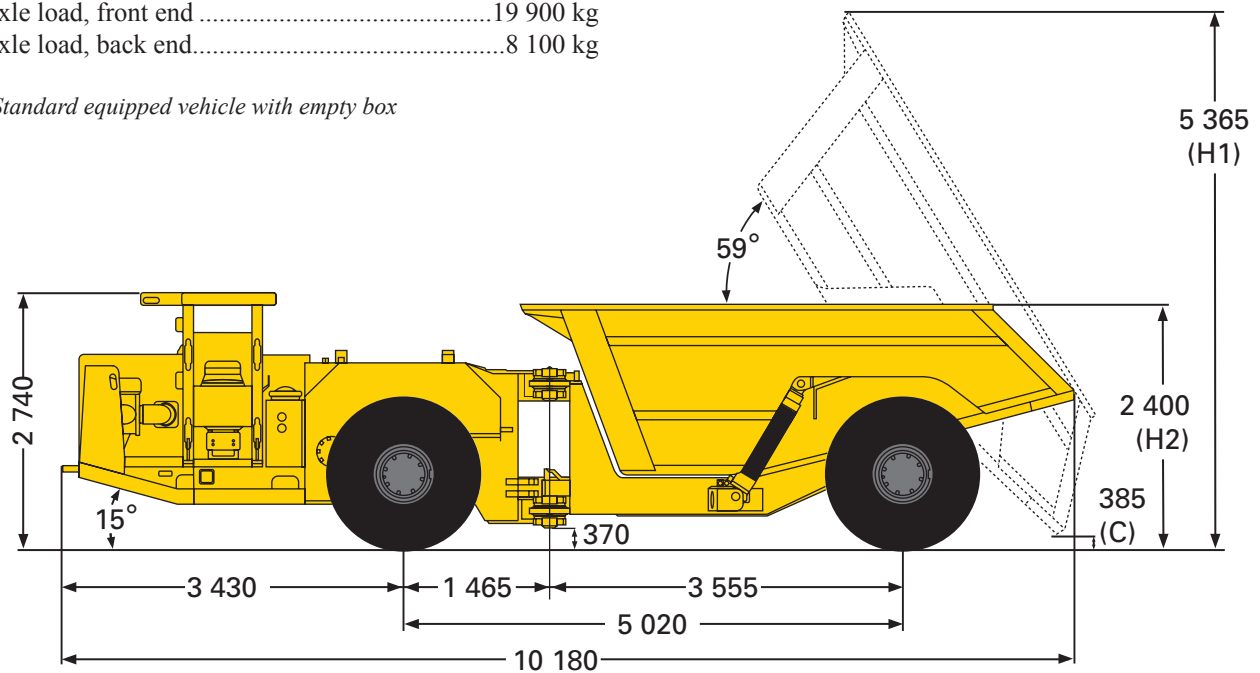
Dump boxes

Dump box data		STD			
Material density (t/m ³)		1.6	1.8	2.0	2.4
Volume, SEA struck (m ³)		16.2	13.7	12.3	9.8
Volume, Semi-heaped (m ³)		17.3	15.2	13.9	11.5
Volume, SAE heaped (m ³)		18.5	16.7	15.5	13.2
Width, dump box (mm)	W	3 050	2 795	2 795	2 795
Dump position: Box height, max (mm)	H1	4 650	5 420	5 365	5 200
Tramming position: Dump box height (mm)	H2	2 600	2 445	2 400	2 175
Dump position: Clearance (mm)	C	350	300	385	-

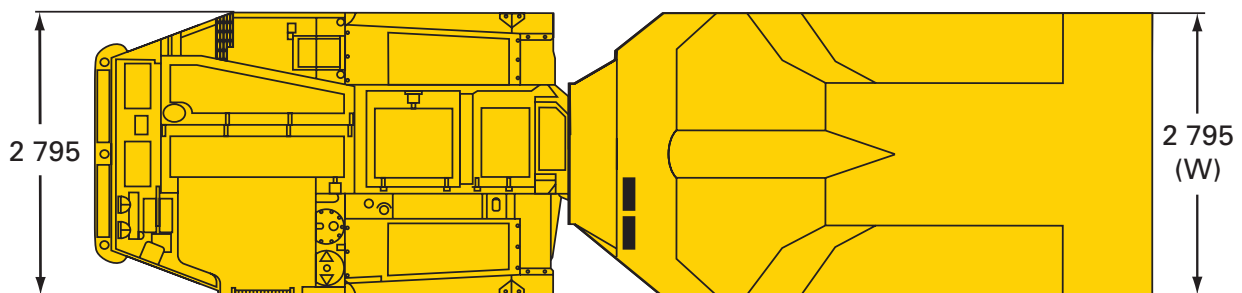
Dimensions and weights*

Approximate net weight.....28 000 kg
 Axle load, front end19 900 kg
 Axle load, back end.....8 100 kg

*Standard equipped vehicle with empty box



Side view



Top view

- Dimensions shown are based on standard vehicle configuration with 25 mm tyre deflection
- All dimensions are shown in millimetres