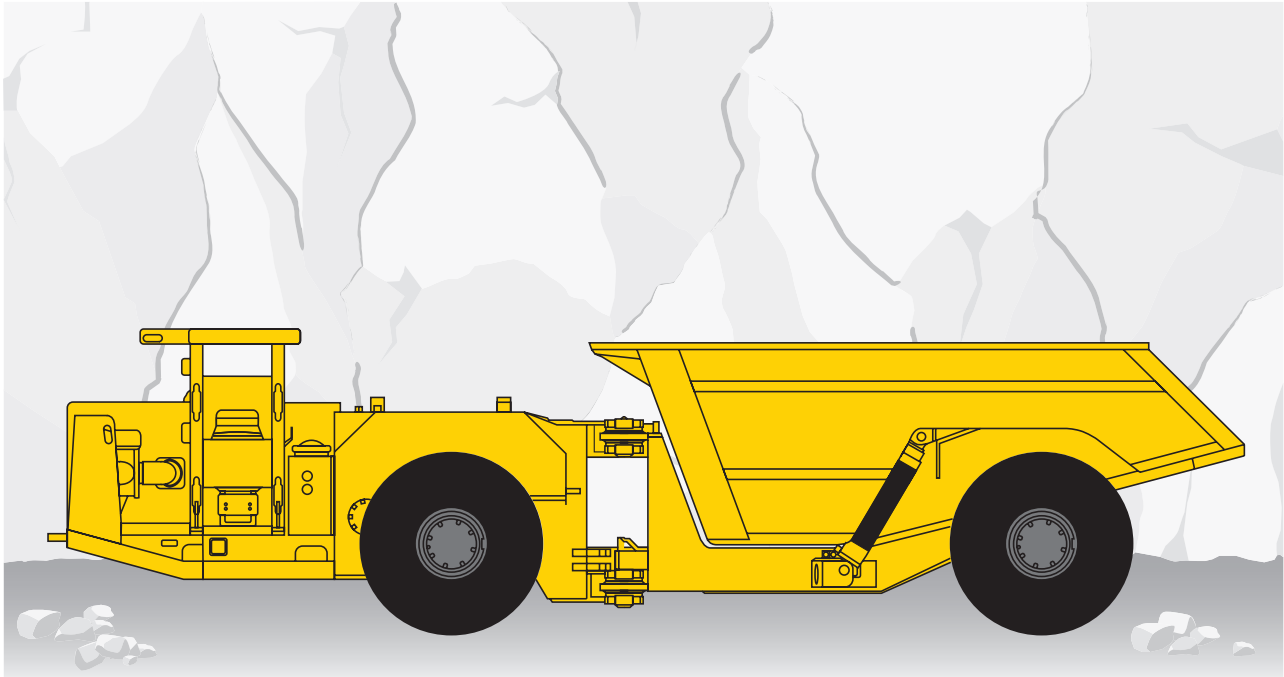


**Atlas Copco** Underground trucks

# **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

# 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 m<sup>3</sup>/min
- MSHA Part 7 particulate index ..... 241 m<sup>3</sup>/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

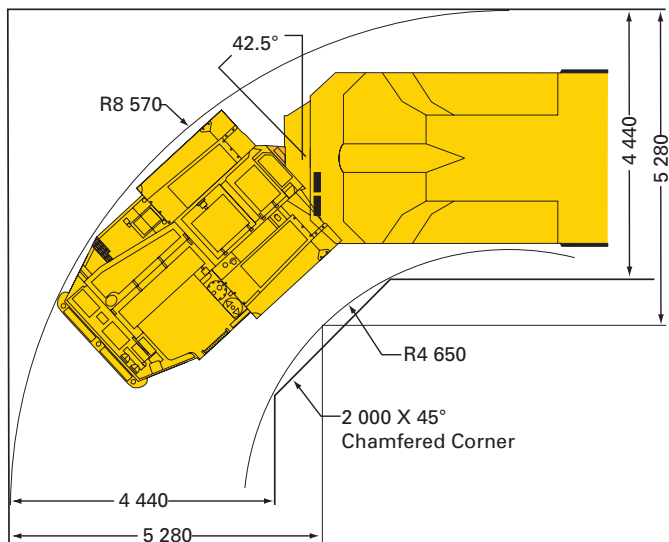
- Voltage, system start & accessories ..... 24 V
- Alternator, high output ..... 140 A
- Hydraulic warning system ..... level, hyd. temp.
- Hella protection lights
- Isolation switch lockout

## 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

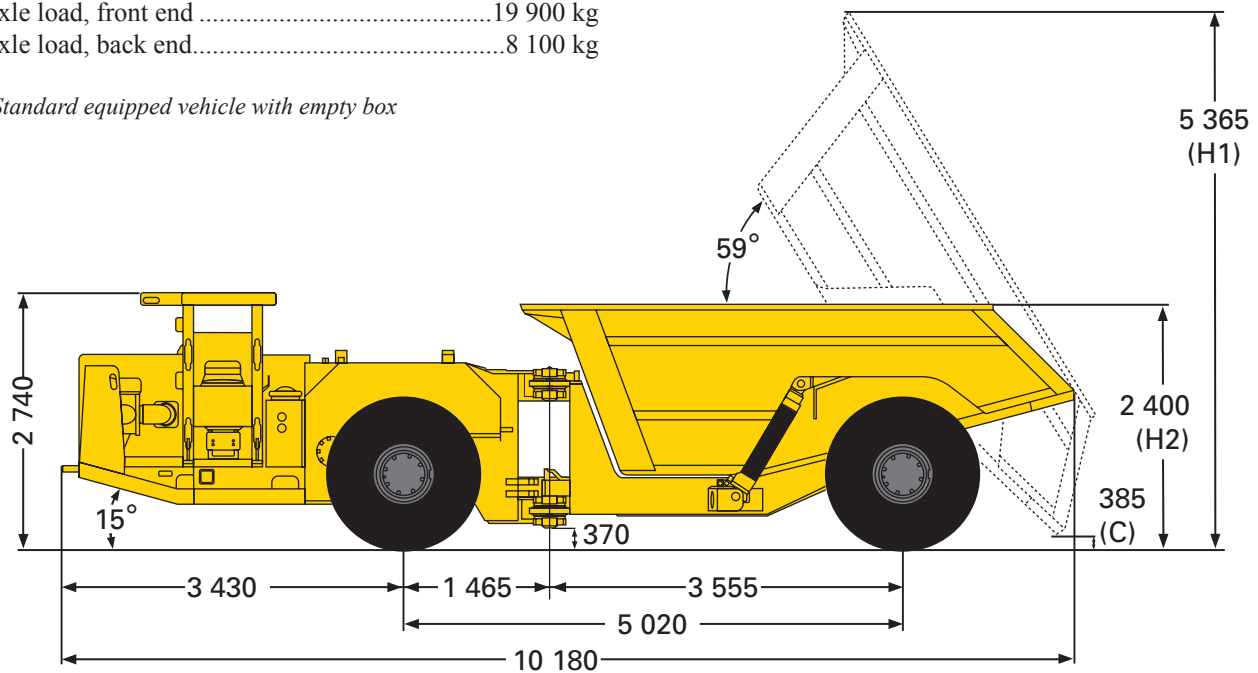
## Dump boxes

| Dump box data                           |    | STD   |       |       |       |
|---|----|-------|-------|-------|-------|
| Material density (t/m <sup>3</sup> )    |    | 1.6   | 1.8   | 2.0   | 2.4   |
| Volume, SEA struck (m <sup>3</sup> )    |    | 16.2  | 13.7  | 12.3  | 9.8   |
| Volume, Semi-heaped (m <sup>3</sup> )   |    | 17.3  | 15.2  | 13.9  | 11.5  |
| Volume, SAE heaped (m <sup>3</sup> )    |    | 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   | -     |

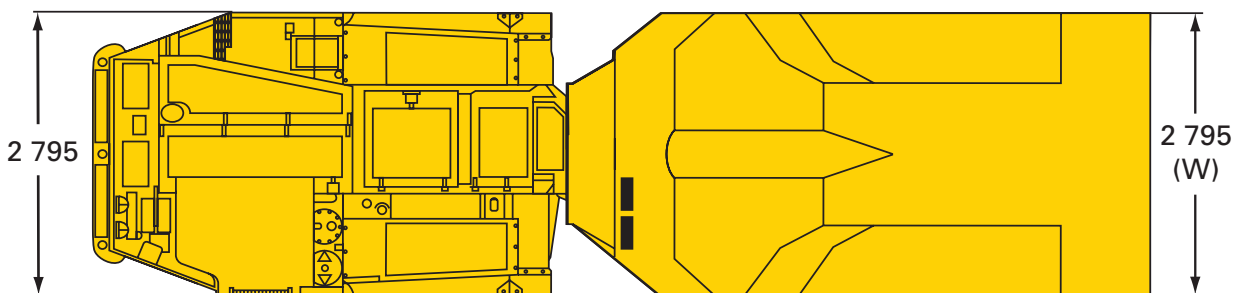
## Dimensions and weights\*

Approximate net weight.....28 000 kg  
 Axle load, front end .....19 900 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