



Battery Electric 50 Tonne Haul Truck



• Zero-Emission Battery Electric Powertrain

Traction Motors

Torque, Peak	8400 Nm	6196 ft-lb
Torque, Continuous	6400 Nm	4720 ft-lb
Power		
Peak Combined	1432 kW	1974 hp
Continuous Combined	980 kW	1332 hp

Auxiliary Motor

Torque, Peak	700 Nm	516 ft-lb
Power	125 kW	167 hp

Batteries (LiFePO₄)

Primary Pack	
Nominal Energy	354 kWh
Nominal Capacity	576 Ah
Tramming Pack	
Nominal Energy	22 kWh
Nominal Capacity	72 Ah

• Z50 FEATURES

High Performance Powertrain

The Z50 is powered by 4 electric motors generating 560 kW and 8200 Nm of torque. We use Lithium-Iron Phosphate chemistry (LiFePO_4) for our patented battery system. Our power is not constrained by ventilation limitations and therefore we use the most powerful electric motors available which directly improves productivity.

Regenerative Braking

SAHR with electric regeneration allows for the battery to recharge during the braking process by converting mechanical energy into electrical energy. This feature is making the industry rethink their mine designs in order to support this valuable technology. In the right environment, a battery electric vehicle could potentially operate for an entire shift on a single charge. This directly translates to added production and increased revenue for the mine.

Zero Diesel Emissions

All of our vehicles have zero diesel emissions which provide a healthier environment for the operator. The implementation of battery electric vehicles will have a significant reduction in ventilation, heat and overall operating cost resulting in a positive impact on the mine's bottom line.

Comfortable Cab

Designed for all-day comfort, control and productivity.

- Sealed Cab with Windows
- Air suspended Grammer seat upgrade
- Accessories (dome light, bluetooth, speakers, USB port)
- Air conditioning
- Cab pressurizer and filter

The Z50 Haul Truck ushers in a new era in underground hard rock mining. Artisan Vehicles has packaged the best in technology and design to bring you the smallest 50 tonne truck on the market. This battery electric haul truck generates twice the peak horsepower and 1/8 the heat of its diesel equivalent. Artisan has optimized the recharging process, to ensure that the Z50 will outperform its rivals on tonnes hauled per day and the direct impact on mine operations is a game changer!



The Z50 reduces demand on the mine's ventilation and cooling systems to enable deep underground mining. It improves overall working conditions and creates a healthier environment for everyone underground.

• Z50 HAUL TRUCK FEATURES



• Z50 HAUL TRUCK DUMP BOX



- 10 second dump time
- 50 tonne hauling capacity
- Ejection box option

The Z50 seamlessly integrates the most capable and proven battery electric powertrain available in the mining industry with the latest and most coveted features of any haul truck on the market today. This haul truck raises the bar of what is possible and enables an all new level of production and cost reduction for underground hard rock mine companies.

● Z50 HAUL TRUCK SPECIFICATIONS

General Information

Main Dimensions

Overall Length	10,745 mm	423 in
Overall Width	3,327 mm	131 in

Turning Radius

Inner	4,454 mm	175.3 in
Outer	9376 mm	369.1 in

Load Distribution - Unloaded

Total Operating Weight	48,148 kg	106,052 lb
Front Axle	11078 kg	11078 lb
Rear Axle	37070 kg	37070 lb

Load Distribution - Loaded

Total Loaded Weight	98,192 kg	216,283 lb
Front Axle	43,242 kg	95,246 lb
Rear Axle	54,951 kg	121,037 lb

Capacities

Tramming Capacity	50,000 kg	110,231 lb
Dump Bed	22.7 m³ struck	29.7 yd³ struck
	27.9 m³ heaped	30.5 yd³ heaped

Motion Times

Dump Time	10 sec.
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Other Specifications

Max. Speed	14 km/h	9 mph
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Frame

Rear and Front Frame	Welded Pate Construction
Material	High-strength Low Alloy (HSLA) steel
Central Hinge	Tapered Roller Bearing Articulation

Powertrain

Traction Motors (x4)

Torque, Continuous	8400 / 6400 Nm	6196 / 4720 ft-lb
Power Peak (combined) / Continuous	1432 / 980 kW	1947 / 1332 hp

Auxillary Motor

Torque, Continuous	700 / 400 Nm	516 / 295 ft-lb
Power	125 kW	167 hp

Batteries

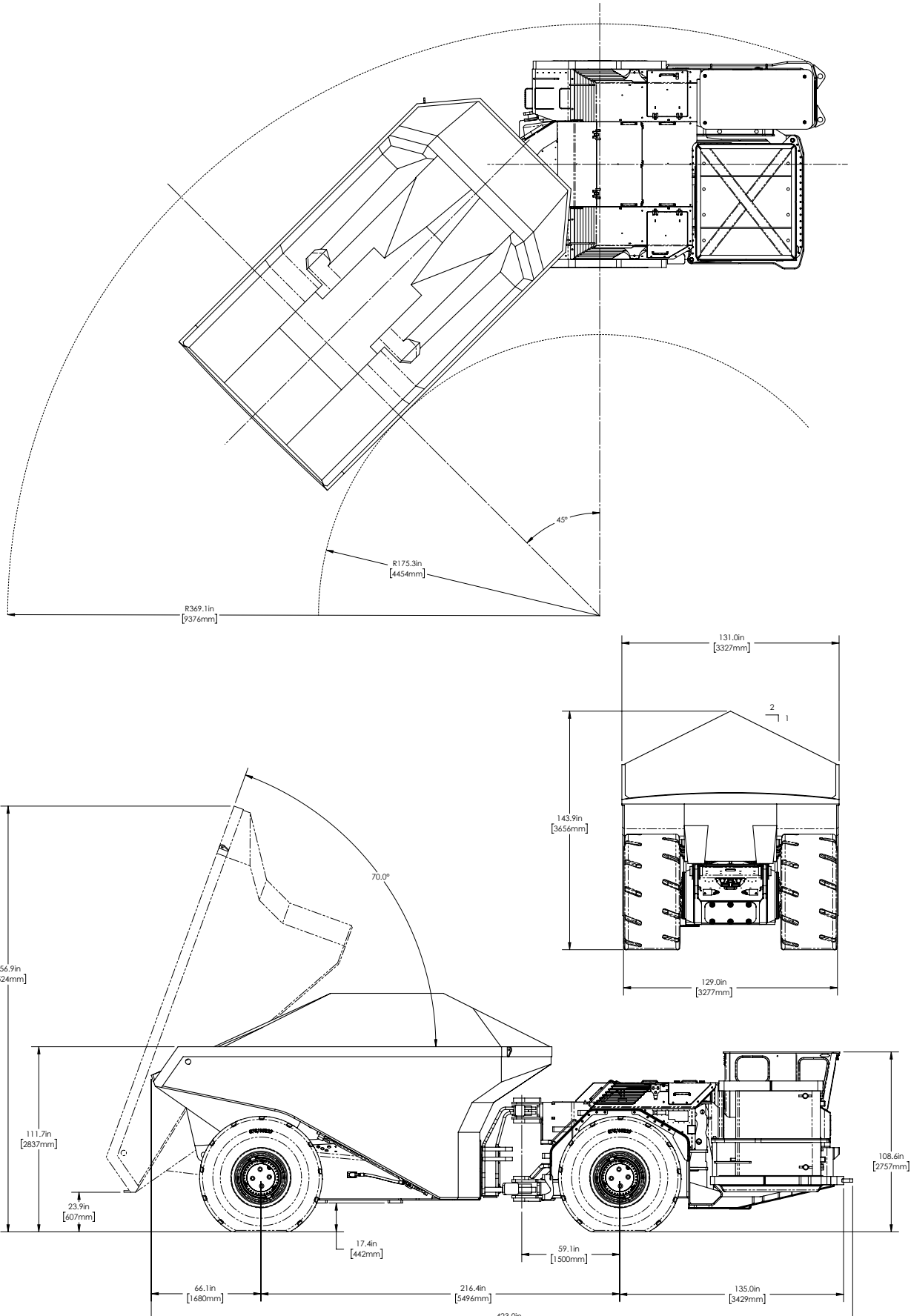
Primary Battery (Skid consisting of 2 battery packs)		
Nominal Energy	354 kWh	
Nominal Capacity	576 Ah	
Continuous Power	480 kW	
Dimensions (L x W x H)	180 x 213 x 168 cm	71 x 84 x 66 in
Approx. Weight	8255 kg	18,200 lb
Tramming Battery		
Nominal Energy	22 kWh	
Nominal Capacity	72 Ah	
Dimensions (L x W x H)	27 x 64 x 125 cm	10.5 x 25 x 49 in
Approx. Weight	277 kg	610 lb

Axles

All Axles	Proprietary Direct Drive
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Tires

Tyre Size / Type	875/65R29
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• Z50 STANDARD EQUIPMENT

Standard equipment may vary. Contact your Artisan Vehicles dealer for details.

Electrical:

- Brake and tail light, LED
- Headlights, LED with High/Low
- Reversing rear work lights, LED
- Reversing alarm
- Blue power on indicator light
- Battery disconnect switch, ground level
- 24v AGM deep cycle battery

Powertrain:

- Traction motors (x4)
- Auxiliary motor
- LiFePO₄ Battery chemistry
- 354kWh Primary battery pack
- 24kWh Trammig pack
- Proprietary Direct Drive axles

Other Standard Equipment:

- Fire suppression
- Emergency shutdown, ground level - left & right side
- Operator occupancy system
- Electric horn
- 6 point camera system
- Electric display (HMI) with gauges & diagnostics
- Low hydraulic & cooling level warning
- Fenders with side flaps
- Front and rear tow pin
- Diagnostic connector
- Decals, international picto graphics
- Operator and Maintenance Manual, English
- Tires and rims: Base machine price includes a standard tubeless rim allowance only.

Comfort Cab Package:

- Sealed Cab with Windows
- Air suspended Grammer seat upgrade
- Accessories (dome light, radio, bluetooth, speakers, USB port)
- Air conditioning
- Cab pressurizer and filter

Advanced maintenance Package:

- Automatic Lubrication System
- Fast Fill System
- Kidney filtration loop
- Offboard hydraulic powerpack connection
- Oil quality monitor
- Brake release hand pump

Additional Options:

- Payload weighing system
- Tele-remote (operation from surface)
- Autonomy (monitored from surface)
- Custom Dump Box
- Custom Ejection Box

• Z50 OPTIONAL EQUIPMENT

Optional equipment may vary. Contact your Artisan Vehicles dealer for details.

● SERVICEABILITY

Keeping your Z50 available for continuous production



Our highly skilled Field Service Team is specifically trained to work on our moderately complex electro-mechanical and hydraulic systems to provide our customers with on-site diagnosis, maintenance, repair and all installations needed to ensure your vehicle is available for continuous production.

Comprehensive hands-on training by members of our engineering and leadership team on all computer and battery systems including:

- Powertrain Control Module (PCM)
- Artisan Control Interface (ACI)
- Battery System Controller (BSC)
- Battery Management System (BMS)
- Human Machine Interface (HMI) Systems

Artisan Vehicles delivers underground battery loaders and trucks with zero exhaust emissions. With over 300,000 operating hours underground and 10 years of experience, today, most battery loaders and trucks operating underground use Artisan Vehicles technology.



Artisan Vehicles is part of Sandvik Mining and Rock Technology, Load and Haul division.