ELECTRIC DRIVE DUMP TRUCK

300 300t Electric Drive Dump Truck

TECHNICAL SPECIFICATION

VEHICLE PARAMETER

Drive Mode	4×2 rear axle
Empty Vehicle Weight (EVW)	210t
Rated / Nominal Payload	300t
Distribution of Axle Load	Distribution of Axle Load
Empty: Front Axle	49%
Rear Axle	51%
Full: Front Axle	33%
Rear Axle	67%
Maximum Speed	64.5km/h
Rated Gradeability	8%
Maximum Gradeability	16%
Braking Distance (in 30km/h)	≤26m

ENGINE

Model	MTU 16V4000C23R / Cummins QSK60
Fuel	Diesel
Number of Cylinders	16
Operating Cycle	4 cycle
Displacement	76.3L/60L
Rated Power	(2,013kW) 2,700hp@1,800rpm (2,013kW) 2,700hp@1,900rpm
Net Flywheel Power	(1,901kW) 2,549hp@1,800rpm (1,910kW) 2,561hp@1,900rpm
Maximum Torque	11,310N · m@1,700rpm/10,630N · m@1,500rpm
Starting Mode	electric starting
Weight (wet)	8,835kg (19,478lbs)/9,619kg (21,206lbs)/9,385kg (20,690lbs)
Emission	EPA Tire 2

(Net Flywheel Power is the rated power at the engine flywheel minus the average accessory losses. Accessories include fan and charging alternator. Rating(s) represent net engine performance in accordance with ISO3046 or SAE J1995)

ELECTRIC DRIVE SYSTEM

Alternator	5GTA41A
Electric Wheel	GDY114
Rated Power	850kW
Ratio	31.875:1
Maximum Speed	64.5km/h

HYDRAULIC SYSTEM

Brake Control Cabinet	with a diagnostic interface, easy maintenance
Steering	accumulator assisted with twin double acting cylinders provide constant rate steering emergency steering supplied by accumulator automatically
Turning Circle Diameter(According to ISO5010)	32m(105')
Filtration	in-line replaceable elements
Suction	full-flow, accuracy 100 μm
Hoist and Steering	in-line, high-pressure.
Hoist	two of dual-acting outboard cylinders, internal cushion valve, over-center damping
Hoist time	
Power-up Loaded	25 sec
Power-down	14 sec
Float-down empty	14 sec
Pumps	triple pump and engine shaft, coupling connected
Hoist	pressure compensating piston pump with output of 1,018lpm (268gpm) @1,900rpm pressure18,000kPa (2,610psi)
Steering and Brake	pressure compensating piston pump with output of 275lpm (73gpm) @1,900rpm pressure19,000kPa (2,755psi)
System Relief Pressures	
Hoist	20,000kPa (2,900psi)
Steering and Brake	23,000kPa (3,335psi)

FRAME

Full welded structure of advanced high-strength low- alloyed steel with integral ROPS supports, Integral fish-bellied longitude grider with variable cross-section, gantry, rear tubular cross members, tubular tail beam with reasonable stress distribution, advanced anti-bend, torsion resistance and high liability. Applied advanced technology of welding and integral welding stress relief to improve durability of weld and prolong fatigue life.

Plate Material	600MPa 87,023psi high tensile strength steel
Rail Width	210 mm 8.27"
Rail Depth (maximum)	1,470mm 57.87"
Rail Depth (minimum)	310mm 12.2"
Top and Bottom Plate Thickness	32 mm 1.26"
Side Plate Thickness	14 mm 0.55"
Drive Axle Mounting	pin and spherical bushing
Drive Axle Alignment	swing link

BRAKING SYSTEM

As per ISO 3450

Service brakes ····· hydraulic-actuated, circulating oil-cooled multiple disc brakes with floating piston, four-wheel

Total Friction area of each brake ····· 96,800cm2

Parking brakes ··· multiple friction plate type, spring-applied, hydraulically-released, installed on inside end of shaft pin for electric wheel traction motor, can hold on ± 15% rated grade at maximum gross vehicle weight

Brake pressure (Maximum) ····· 17,200kPa (2,500psi)

Electric brakes (Maximum) ····· 4,026kW 2677hp

Emergency brakes ····· Automatically applied prior to hydraulic system pressure dropping met with requirement of secondary parking brake

Wheel brake locks ····· Switch-activated

ELECTRIC SYSTEM

Batteries ····· 4 × 12V/195Ah- start/2 × 12V/195Ah- control

Alternator ····· 24volt, 260amp

Lighting ····· 24 volt

Cranking motors ····· two / 24 volt

SUSPENSION

Hydro-pneumatic suspension, hydro-pneumatic with variable rate, integral rebound control.

Front stroke ····· 374 mm 12.9"

Rear stroke ····· 236 mm 20"

Max. rear axle oscillation ····· ± 6.5°

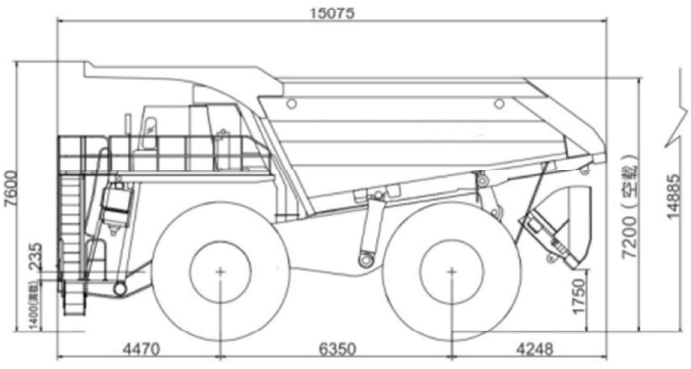
TIRES AND RIMS

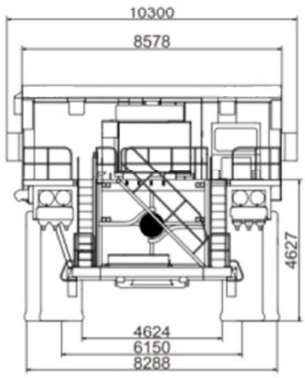
Standard tire ····· 53/80R63 Rock service, tubeless E-4

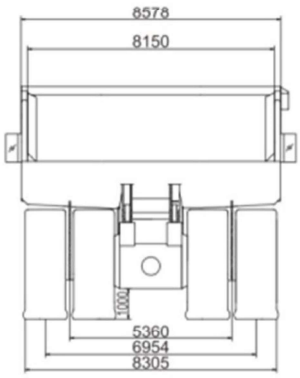
Standard rim ····· 38" × 63" × 5" Standard five (5) piece rim

Option ····· 53/80-63 Rock service, tubeless E-4

DIMENSION







BODY

All-welded structure of high-strength low-alloyed steel. arc type body included floor sheet, front sheet, side sheet, canopy sheet. Rear wheel rock ejectors, body up sling and mud flaps, fender, body down indicator mounts on frame are standard. Exhaust mode (side or rear) optional.

Floor sheet ····· 25 mm 0.79" 1400MPa 203,053 psi high strength wear steel (three-piece)

Front sheet ····· 12 mm 0.47" 1400MPa 203,053 psi high strength wear steel

Side sheet ····· 12 mm 0.47" 1400MPa 203,053 psi high strength wear steel

Canopy sheet ····· 5 mm 0.24" 800MPa 116,030 psi high strength low carbon bainitic steel

Struck (Standard) ····· 176m3 80yd3

Standard SAE heaped 2:1 ····· 203m3 114yd3

(Body can design as per volume weight of material and rated load)

COOLING SYSTEM

Exhaust expansion tank, double circulation cooling system。Four of combined fan guard

SERVICE CAPACITY

Cooling system ····· 830L/700L 149 U.S. gal

Crankcase ····· 260L/270L 59.4U.S. gal

Hydraulic system ····· 1,040 L 156 U.S. gal

Electric wheel ····· 2 x 125 L 2 × 9.2 U.S. gal

Fuel ····· 4,400 L 747.6 U.S. gal

Includes lube oil filters

CAB

Advanced Operator Environment with integral 4-post ROPS/FOPS Level2 (ISO 3471/ISO 3449 and ISO3164) adjustable air suspension seat w/lumbar support and arm rests, passenger seat, maximum R-value insulation, tilt and telescoping steering wheel, electric windshield wipers w/washer, tinted glass, power windows, XEMC Payload Weighing System,30,000 Btu/hr and defroster,18,000 Btu/hr air conditioning (HFC - 134A refrigerant).

ELECTRIC DRIVE DUMP TRUCK

300 300t Electric Drive Dump Truck

STANDARD EQUIPMENT

- Air cleaners, Donaldson SSG with dust evacuators
- Alternator (24 volt/260A)
- Auto lubrication system /
- Batteries (6 x 12V / 195Ah)
- Charging cables and sockets for batteries
- Body over center device
- Brakes: oil-cooled, multiple disc brakes (front and rear wheels)
- Electric start
- Filters, high pressure hydraulic
- Gate valves on hydraulic tank
- G.E.IGBT control cabinet
- Mirrors, LH flat and RH rectangular convex
- Mud flaps
- Muffled exhaust, right deck-mounted
- output socket, 12V and 24V
- Quick disconnects (steering and hoist)
- Radiator sight gauge
- Removable power module unit (engine, alternator, blower)
- Retard grids, continuous rated, 24 elements
- retarding controller
- Back-up reducer
- Rock ejectors
- fan clutch, Temperature Control
- Fast-Fill Fuel System (in-tank)
- anti-collision plate, body
- Hubodometer

OPERATOR ENVIRONMENT AND CONTROL:

- All-hydraulic service brakes with emergency auto apply Battery disconnect switch
- body down indicator
- Brake lock and drive system interlock
- Circuit breakers, 24 volt
- Tilting ladder on Grids, from left to right
- Dynamic retarding with continuous rated grids
- Engine shutdown at ground level
- Hoist interlock
- Horns (motor-front and rear)
- Integral roll-over protection ROPS/FOPS Level 2
- Maintenance & power lock-out
- Parking brake with warning light and speed application
- protection
- Power steering w/auto emergency steering
- Protective deck rails
- Pump drive guard
- Radiator fan guard
- Seat belts 76 mm 3" wide retractable
- Skid-resistant coating on walkways

STANDARD HIGH VISIBILITY CAB Instrumentation:

- AC drive interface
- Air conditioner HFC 134a
- Alarm System warning
  - engine shutdown
  - engine warning
  - RSC
  - emergence brake
  - low oil pressure of engine
  - high water temperature
  - Electroless brakes
  - low steering pressure
  - Without traction
- AM/FM radio, CD player
- Speedometer and digital tachometer
- Dome light
- Engine hourmeter, oil pressure gauge, coolant temperature
- gauge, hydraulic oil thermometer
- Engine shutdown, 5 min. delay timer
- Floor mat (double shield)
- Fuel gauge in cab and on tank
- Fuel low level warning
- Gauges (backlighted)
- Headlight switch
- Heater and defroster (heavy-duty)
- Horns (center of steering wheel)
- Indicator lights
  - system fault
  - Continuous brake
  - low water level
  - service brake
  - parking brake
  - engine maintenance
  - low air pressure
  - Continuous retarding
  - retarding control
- Indicator lights (green):
  - High beam
  - traction
- Operator seat, adjustable w/air suspension, lumbar
- support and arm rests
- Passenger seat
- Electric Window
- single brake/ retarding pedal
- Starter key switch
- Sunvisor (adjustable)
- Tilt and telescoping steering wheel
- Vehicle health monitoring system (VHMS)
- voltmeter
- Windshield (tinted)
- Windshield wipers and washer (electric)

LIGHTING:

- Back-up lights- rear
- Back-up lights-left and right (2)
- brake and retard lights on ceiling of cab
- Clearance lights
- Control cabinet service light
- Dynamic retarding, rear(2)
- engine maintenance light
- fog lights (2)
- Headlights—(8), LED
- Ladder lights
- Manual back-up light, switch
- loading lights (left and right)
- deck lights, left, right and middle
- Stop and tail lights (2)
- Turn signals, LED
- Under-hood service lights

OPTIONAL EQUIPMENT

(Optional equipment may change operating weight).

- Lining, body
- Fire extinguisher 9 kg 20 lb
- Pivot exhaust (heated body)
- Centralized filling (water tank, engine, hydraulic device, grease)
- Hot starts (coolant, hydraulic tank)
- (MMS) interface
- Pressurized, cab air system/fan
- Ladder in reserve
- Service center, right or left/right
- Special language decals
- XEMC Payload Weighing System-PLM
- Pressureless Oil device
- Tire monitor
- Blind Spot Detection
- Arctic protection package (suspensions, antifreeze, anti-collision)
- 360 surround view system
- Remote control system

PRODUCT FEATURES

Brake Control System: full hydraulic wet-type brake, hydraulic-actuated, brake pressure proportional actuated, multiple safety measures equipped, such as low pressure alarm and automatic implementation of emergency brake, integrated control valve applied, with accurate control, fast response, stable braking, safety, high reliability, convenient maintenance, high standardization and long service life

Steering system: full hydraulic steering, for stable and reliable normal steering, a large capacity accumulator equipped to provide enough energy while the power failure.

Hoist system: dual-acting large flow hoist cylinders, double pump applied for hoist power, down speed control and anti-pulling device equipped for safe, fast and stable hoist.

Electro-hydraulic valve applied, with stable steering, reliable operation, high standardization and excellent interchangeability.

Frame: Full welded structure of high-strength low-alloyed steel with integrated ROPS support. Main parts welded with fish-bellied longitude grider with variable cross-section, integral dragon door grider, and traction beam with circular, tail boom with circular. Reasonable stress distribution of frame though fish-bellied longitude grider with variable cross-section. Advantage anti-bend, anti-torsion and high liability applied. Durability of welding seam improved and fatigue life prolonged with advanced welding and integral de welding stress technology.

Body: All-welded structure of high-strength low-alloyed steel. Arc type body includes floor sheet, front sheet, side sheet, canopy sheet. Arc canopy applied. Arc transition designed for connecting among floor sheet, front sheet and side sheet, which can avoid material residence effectively. Rear wheel rock ejectors, body up sling and mud flaps, fender, body down indicator mounts on frame are standard. Exhaust mode (side or rear) optional. Body can design as per volume weight of material and rated load