



Elphinstone Underground Support Solutions
www.elphinstone.com

ELPHINSTONE

UNDERGROUND RELIABILITY



TECHNICAL SPECIFICATIONS

Engine

| | | |
|----------------------------------|----------------------|---------------------|
| Engine Model | Cat C11 ACERT Tier 3 | |
| Gross Power SAE J1995 | 242 kW | 325 hp |
| Net Power ISO9249 | 239 kW | 321 hp |
| Net Power SAE J1349 | 237 kW | 317 hp |
| Displacement | 11.15 L | 680 in ³ |
| Bore | 130 mm | 5.1 in |
| Stroke | 140 mm | 5.5 in |
| Number of Cylinders | 6 | |
| Max Torque @ Rated Speed | 1430 Nm @ 1300rpm | |
| Derating Altitude 3048 m 9843 ft | 3048 mn | 9843 ft |

- These ratings apply at 1,800 rpm when tested under the specified standard conditions
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator. No derating required up to 3,000 m (9,843 ft) altitude
- Based on standard air conditions of 25° C (77° F) and 99 kPa (29.32 in Hg) dry barometer. Used 35 API gravity fuel having an LHV of 42,780 kJ/kg (18,390 BTU/lb) when used at 30° C (86° F) [ref. A fuel density of 838.9 g/L (7.001 lb/gal)]

Electrical

| | |
|--------------------|-----------------|
| Alternator | 100 amp |
| Electrical System | 24 V |
| Battery - Quantity | 2 |
| Battery - Volts | 12 V |
| Battery - Capacity | 1400CCA |
| Starting System | Direct Electric |

Powertrain

| | | |
|------------------------------|--|----------|
| Travel Speed - Fwd. 1st | 5.5 km/h | 3.4 mph |
| Travel Speed - Fwd. 2nd | 10.4 km/h | 6.5 mph |
| Travel Speed - Fwd. 3rd | 15.8 km/h | 9.8 mph |
| Travel Speed - Fwd. 4th | 24.2km/h | 15.0 mph |
| Travel Speed - Rev. 1st | 6.1 km/h | 3.8 mph |
| Transmission | 4 fwd / 1 rev powershift | |
| Transmission Cooler Type | Tube and Bund | |
| Steering, Frame Articulation | +/- 42.5° | |
| Brakes - Service Type | Multiple WET disc enclosed Spring applied wheel ends | |
| Brakes - Parking Type | Multiple WET disc enclosed Spring applied wheel ends | |
| Tyres | 18.00 R25 | |

Hydraulic System

| | | |
|----------------------------------|-----------------------------|------------|
| Circuit Type | Closed centre variable flow | |
| Pump Type | Axial piston | |
| Pump Output | 174 L/min | 46 gal/min |
| Relief Valve Setting | 21,000 kPa | 3,045 psi |
| Steering Valve | Direct link, non follow | |
| Steering Cylinder - Bore | 101.6 mm | 4 in |
| Steering Cylinder - Stroke | 437.5 mm | 17.22 in |
| Steering Cylinder - Rod Diameter | 50.8 mm | 2 in |

Service Refill

| | | |
|--------------------------------|-------|----------|
| Fuel Tank | 361 L | 94 gal |
| Cooling System | 67 L | 18 gal |
| Differential, Final Drive - F | 55 L | 14.5 gal |
| Differential, Final Drive - R | 55 L | 14.5 gal |
| Engine Oil | 41 L | 11 gal |
| Transmission, Torque Converter | 36 L | 9.5 gal |
| Hydraulic Tank | 151 L | 49 gal |
| Brake Cooling Tank | 67 L | 18 gal |

Weights

| | | |
|----------------------------|-----------|-----------|
| Gross Vehicle Weight (GVM) | 42,200 kg | 93,035 lb |
| Tare Weight | 23,060 kg | 50,839 lb |

*Tare weight includes one operator and a full tank of fuel.

Speed on Grade

| Grade | Vehicle Speed (km/h) | | | | |
|-----------------------------|----------------------|---------|---------|---------|---------|
| | 1st Fwd | 2nd Fwd | 3rd Fwd | 4th Fwd | 1st Rev |
| 1:7 (14%) Empty (23,060 kg) | 5.5 | 10.4 | 15.8 | 20.8 | 6.1 |
| 1:7 (14%) GVM (42,200 kg) | 5.5 | 10.4 | - | - | 6.1 |

*Note: 2% rolling resistance

Agitator

| Drum Volume | | | | | | |
|----------------------------|------|------|------|------|---------|--------|
| Mixing / Carrying Capacity | | | | | 8 m³ | |
| 100% Drum Volume | | | | | 12.4 m³ | |
| Bowl Capacities | | | | | | |
| Material SG (kg/m³) | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 |
| Max. Fill Capacity (m³) | 8 m³ | 8 m³ | 8 m³ | 8 m³ | 8 m³ | 7.6 m³ |

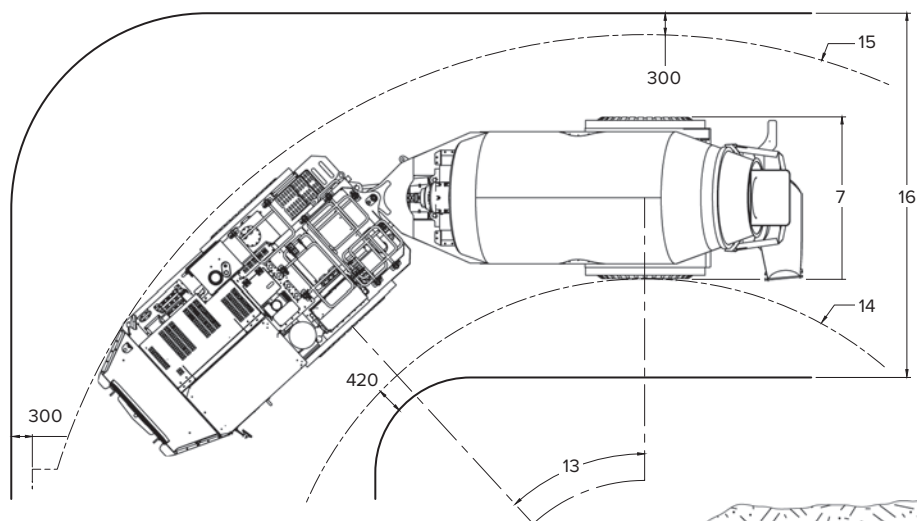
Standards

| | |
|-----------|-------------------------------|
| ROPS/FOPS | ISO 3471:2008 / ISO 3449:2005 |
| Steering | ISO 5010:2007 |
| Braking | ISO 3450-2011/CSA-M424.3-M90 |

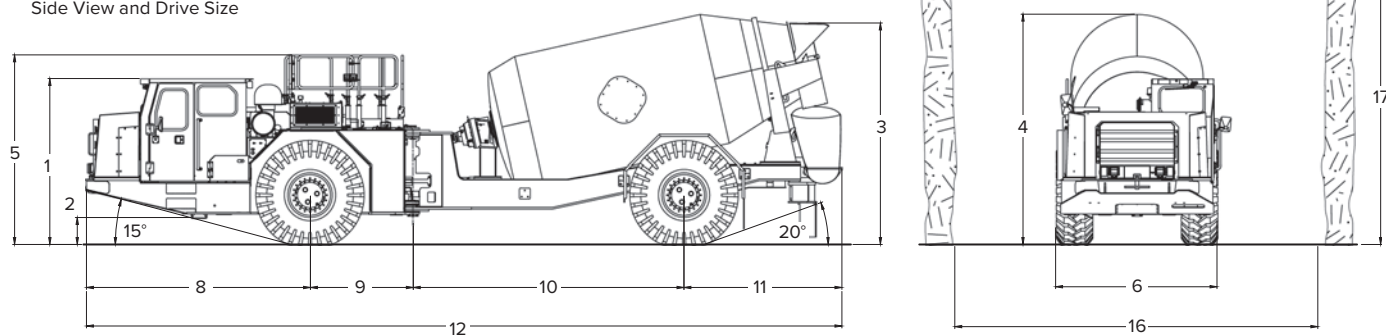


MACHINE DIMENSIONS

Turning Radius



Side View and Drive Size



Dimensions

| | | | |
|----|-------------------------------|----------|--------------|
| 1 | Height - Top of Cab | 2515 mm | 8 ft 3 in |
| 2 | Height - Ground Clearance | 410 mm | 1 ft 4.1 in |
| 3 | Height - Top of Feed Chute | 3355 mm | 11 ft 0.9 in |
| 4 | Height - Top of Agitator | 3490 mm | 11 ft 5.4 in |
| 5 | Height - Top of Rails | 2870 mm | 9 ft 4.9 in |
| 6 | Width - Machine Front Frame | 2445 mm | 8 ft 0.3 in |
| 7 | Width - Machine Rear Frame | 2445 mm | 8 ft 0.3 in |
| 8 | Length - Front Axle to Bumper | 3390 mm | 11 ft 1.5 in |
| 9 | Length - Front Axle to Hitch | 1560 mm | 5 ft 1.4 in |
| 10 | Length - Hitch to Rear Axle | 4100 mm | 13 ft 5.4 in |
| 11 | Length - Rear Axle to Chute | 2395 mm | 7 ft 10.3 in |
| 12 | Length - Overall | 11445 mm | 37 ft 6.6 in |
| 13 | Articulation | 42.5° | |

Drive Size

| | | | |
|----|-------------------------------|---------|--------------|
| 14 | Radius - Inside Clearance | 5555 mm | 18 ft 2.7 in |
| 15 | Radius - Outside Clearance | 9275 mm | 30 ft 5.2 in |
| 16 | Width - Drive Clearance | 5500 mm | 18 ft 0.5 in |
| 17 | Typical Minimum Height Portal | 5000 mm | 16 ft 4.8 in |



STANDARD AND OPTIONAL EQUIPMENT

● Standard ● Optional ● Safety

Powertrain

| | |
|--|----|
| 4WD Transfer Box | ● |
| Air Cleaner, 2-Stage with Rain Cap | ● |
| Axle Breathers, Remote Mounted | ● |
| Brakes - Parking, Four Wheel Spring Applied, Pressure Release, Enclosed Disc | ● |
| Brakes - Service, Four Wheel Spring Applied Pressure Release, Enclosed Disc | ● |
| Coolant, Arctic Extended Life -52°C Protection | ● |
| Coolant, Extended Life -37°C Protection | ● |
| Cooling Package, Radiator And Aftercooler | ● |
| Driveline Slip-Joint, Lubricated for Life | ● |
| Engine, Exhaust Manifold, Shielded and Insulated | ●● |
| Engine, Cat C11, ACERT Technology, ATAAC | ● |
| Engine, Exhaust, Diesel Particulate Filter With Back Pressure Monitoring | ● |
| Engine, Overspeed Inhibitor | ● |
| Engine, Shutdown System to Idle/Stop | ● |
| Fan, Hydraulic, Sucker, Temperature Controlled | ● |
| Filters, Fuel (Primary/Secondary)/Engine Air, Hydraulic Oil, Pump Case Drain, Brake Cooling Oil, Implement | ● |
| Final Drives, Inboard Planetary | ● |
| Fire Resistant Sheathing on Fuel Lines, External | ● |
| Front Axle, Oscillating | ● |
| Fuel Tank, High Capacity | ● |
| Fuel Transfer Pump (Mechanical) | ● |
| Lock-Up Torque Converter | ● |
| Low Transmission Oil Pressure Monitoring | ● |
| Manual Fuel Shutoff Valve at the Tank | ● |
| Muffler/Catalytic Converter | ● |
| Stainless Steel Braided Fuel Lines, External | ● |
| Steering, Rotary Metering Pump | ● |
| Transmission, Power-Shift (4F/1R) With Auto-Shift Function | ● |
| Universal Joints with Lube Points | ● |
| Fast-fill systems | |
| Coolant, Engine Oil, Hydraulic Oil, Transmission Oil, Brake Cooling Oil | ● |
| Fuel | ● |
| Fuel with Machine Isolation | ● |

Operator Environment

| | |
|---|----|
| Brake Retarder Control, Automatic | ●● |
| Brake Retarder Control, Manual | ● |
| Brakes, Park, Onboard - Push to Engage | ●● |
| Brakes, Park, Onboard - Pull to Engage | ●● |
| Cabin, Open, ROPS/FOPS | ●● |
| Cabin, Enclosed, ROPS/FOPS, Climate Controlled Air Conditioning System, Window Sliding Operator, Windshield Wiper Washer, Window Emergency Egress Seals | ●● |
| Camera, Agitator Discharge Chute | ●● |
| Camera, Off-side | ●● |
| Camera/Monitor, Reversing | ●● |
| Door Pocket | ●● |
| Fire Extinguisher, 4.5 kg, Hand Held Dry Chemical Powder 4A:60B:E LH Side | ●● |
| Heated Mirrors, Rear View | ● |
| Holder, Water Bottle | ●● |

Operator Environment

| | |
|---|----|
| Light, Dome | ● |
| Light, Entry | ●● |
| Mirrors, Rear View | ● |
| Rear Window Guard | ● |
| Seat Cover | ● |
| Seat, Suspension - Active Air | ● |
| Seat, Suspension - Air | ● |
| Seat, Suspension - Mechanical | ● |
| Seatbelt, 2-point, Retractable Lap | ●● |
| Seatbelt, 2-point, Retractable Lap, Occupancy Indicator | ●● |
| Steering Wheel, Tilt and Telescoping | ● |
| Storage Compartment | ●● |
| Instrumentation, Guages | |
| Brake, Accumulator Pressure | ● |
| Brake, Parking, Pressure | ● |
| Brake, Service, Pressure | ● |
| Engine, Coolant Temperature | ● |
| Engine, Oil Pressure | ● |
| Fuel Level | ● |
| Speedometer | ● |
| Steering System Pressure | ● |
| Tachometer | ● |
| Transmission, Oil Temperature | ● |
| Instrumentation, Warning Indicators | |
| Brake, Accumulator Oil Pressure | ● |
| Brake, Cooling Filter Back Pressure | ● |
| Brake, Cooling Oil Level | ● |
| Brake, Cooling Oil Temperature | ● |
| Brake, Fault | ● |
| Brake, Parking, Application | ● |
| Charging System | ● |
| Door Open | ● |
| Emergency Stop, Activation | ● |
| Engine, Coolant Level | ● |
| Engine, Coolant Temperature | ● |
| Engine, Fault | ● |
| Engine, Oil Pressure | ● |
| Hydraulic, Oil Level | ● |
| Hydraulic, Oil Temperature | ● |
| Lights, Work - Bowl | ● |
| Lockup Clutch | ● |
| Primary Steering Pressure | ● |
| Retarder On | ● |
| Seat Belt | ● |
| Secondary Steering Pressure | ● |
| Stabilizers Down | ● |
| Torque Converter, Oil Temperature | ● |
| Transmission Fault | ● |
| Transmission Filter Bypass | ● |
| Instrumentation, Digital Data | |
| Computerised Diagnostics and Monitoring | ● |
| Gear and Direction | ● |
| Odometer | ● |
| Service Hour Meter | ● |



STANDARD AND OPTIONAL EQUIPMENT

● Standard ● Optional ● Safety

Electrical

| | |
|--|----|
| Accessory Power Port (12 V) | ● |
| Alarm, Back-up | ●● |
| Alternator, 100 amp | ● |
| Alternator, High Output, 150 amp (Part of Enclosed operator station (FOPS/ROPS)) | ● |
| Auxiliary Start Receptacle | ● |
| Batteries, Maintenance Free (2x 1400 CCA) | ● |
| Battery Isolation, Lockable Disconnect Switch (2 Pole) | ●● |
| Battery Isolation, (4 Pole) | ●● |
| Beacon, Flashing, LED, Front/Rear of Cab (Amber) | ●● |
| Beacon, Flashing, LED, Front/Rear of Cab (Blue) | ●● |
| Beacon, Flashing, LED, Rear (Amber) | ●● |
| Beacon, Flashing, LED, Rear (Blue) | ●● |
| Beacon, Rotating, Cab, Mounted (Various Colours Available) | ●● |
| Diagnostic Connector | ● |
| Digital Inclinometer Display, Dashboard | ●● |
| Electrical Connectors, Sealed | ● |
| Electronic Monitoring System | ● |
| Emergency Stop - Cabin | ●● |
| Emergency Stop - Ground Level, RH Side, Engine Bay | ●● |
| Emergency Stop - Ground Level, LH Side Front | ●● |
| Emergency Stop - Ground Level, Rear Bowl Control Panel | ●● |
| Emergency Stop - Ground Level, Rear Cab Side with or without Platform | ●● |
| Horn, Warning | ●● |
| Lights, Stop/Tail/Turn | ● |
| Lights, Brake and Tail | ● |
| Lights, Headlights with Dip Switch | ● |
| Lights, Bowl, Rear - Sides of Bowl | ● |
| Lights, Work, Rear - Cab Mounted | ● |
| Lights, Work, Rear - Chute and Control Panel | ● |
| Lights, Work, Rear - Offside/Stair Access | ● |
| Lights, Work, Rear - Top of Bowl Support | ● |
| Lights, Reversing | ● |
| Operator Presence | ●● |
| Starter Isolator, Lockable | ●● |
| Starter Isolator, (4 Pole) | ●● |
| Starter, Electric, Heavy Duty | ● |
| Starting and Charging System (24 V) | ● |
| USB Charger Outlet (5 V) | ● |

Hydraulics

| | |
|-------------------------------------|----|
| Bowl Motor with Quick-Connect Lines | ● |
| Brakes, Cooling Filters | ● |
| Brakes, Cooling Oil Coolers | ● |
| Brakes, Separate Cooling Tank | ● |
| Burst Protection, Hoses | ●● |
| Closed Centre, Load Sensing System | ● |
| Hydraulic Oil Cooler | ● |
| Line Filter, Full Flow Return | ● |

Agitator

| | |
|-------------------------------|---|
| Additive Bottle Mount 1x 20 L | ● |
| Additive Bottle Mount 2x 20 L | ● |
| Additive Pump, Manual | ● |

Agitator

| | |
|---|----|
| Bowl Fill - Rear Load to Suit Conveyor | ● |
| Bowl Fill - Top Chute Load to Suit Hopper | ● |
| Bowl, Access Platform/Ladder | ● |
| Bowl, Auxiliary Motor Discharge Hose Kit, Emergency | ● |
| Bowl, Guards (Hitch to Bowl Support) | ●● |
| Bowl, Spray Nozzle, Fixed | ● |
| Bowl, Trunion Guards | ● |
| Chute Extension | ● |
| Chute Extension, Placement | ● |
| Rear Stabilisers | ● |
| Tank, Chemical Dosing with Pneumatic Pump, 265 L | ● |
| Tank, Water, 235 L | ● |
| Water Pump, High Pressure, Hose, Reel | ● |
| Water Pump, High Volume, Hose, Reel | ● |

Other

| | |
|---|----|
| Anti-Corrosion Protection Spray | ● |
| Articulation Lock Link | ●● |
| Centralised Service Centre (Grouped Filters, Transmission Fill and Engine Fill) | ● |
| Ecology Drains (Hydraulic Tank) | ● |
| Engine, Enclosures, Hinged | ● |
| Film, Gp Reflective, Flourescent Orange | ●● |
| Film, Gp Reflective, Flourescent Yellow | ●● |
| Fire Extinguisher, 9 kg, Hand Held Dry Chemical Powder 6A:80B:c LH and RH Side | ●● |
| Fire Suppression System, Ansul A101 Dry Chemical Powder, Engine Shutdown | ●● |
| Fire Suppression System, Sandvik Aqueous-Film Forming Foam, Engine Shutdown | ●● |
| Firewall | ●● |
| Grease Lubrication System, Automatic | ● |
| Grease Lubrication System, Centralised, Manual | ● |
| Guards, Pivoting, Under Engine And Transmission | ● |
| Handrails, Fixed for Top Covers | ● |
| Handrails, Folding for Top Covers | ● |
| Handrails, Painted Contrasting High-visibility Green | ●● |
| Ladder, Folding, Engine Access | ●● |
| Lift, Tie Down and Retrieval Points (Front and Rear) | ● |
| Mudguards | ● |
| Oil Sampling Ports, SOS™ | ● |
| Radiator Ap, Manual, Anti-scald Pressure Release | ●● |
| Rim Identification | ● |
| Rim, Spare (18.00R25) | ● |
| Steering Lockout, Park Brake Engaged | ●● |
| Steering, Secondary | ●● |
| Tank, Coolant Make Up | ● |
| Tooling - Empty Bowl Lifting | ●● |
| Tooling - Engine Timing | ● |
| Tyre and Rim, Spare (18.00R25) | ● |
| Tyres and Tubeless Rims (18.00R25) | ● |
| Wheel Chocks 2x (Checkers, MC3010) | ●● |
| Wheel Chocks 2x (Checkers, UC1210) | ●● |
| Wheel Nut Retention Indicators | ●● |

UNDERGROUND RELIABILITY.

Over 40 years' experience in the mining industry.

ELPHINSTONE

WR820 Agitator 8m³

For more complete information on Elphinstone products, dealer services, and industry solutions, visit www.elphinstone.com or contact your local Cat dealer.

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