



# WR820

AGITATOR 8M<sup>3</sup>

Elphinstone Underground Support Solutions  
[www.elphinstone.com](http://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 <sup>3</sup>
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	150 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 m <sup>3</sup>
100% Drum Volume						12.4 m <sup>3</sup>
Bowl Capacities						
Material SG (kg/m <sup>3</sup> )	2000	2100	2200	2300	2400	2500
Max. Fill Capacity (m <sup>3</sup> )	8 m <sup>3</sup>	8 m <sup>3</sup>	8 m <sup>3</sup>	8 m <sup>3</sup>	8 m <sup>3</sup>	7.6 m <sup>3</sup>

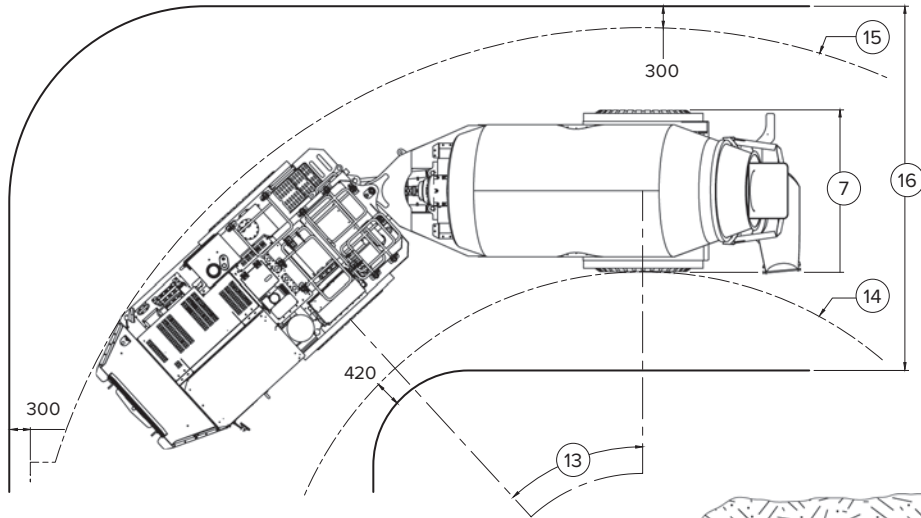
### Standards

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

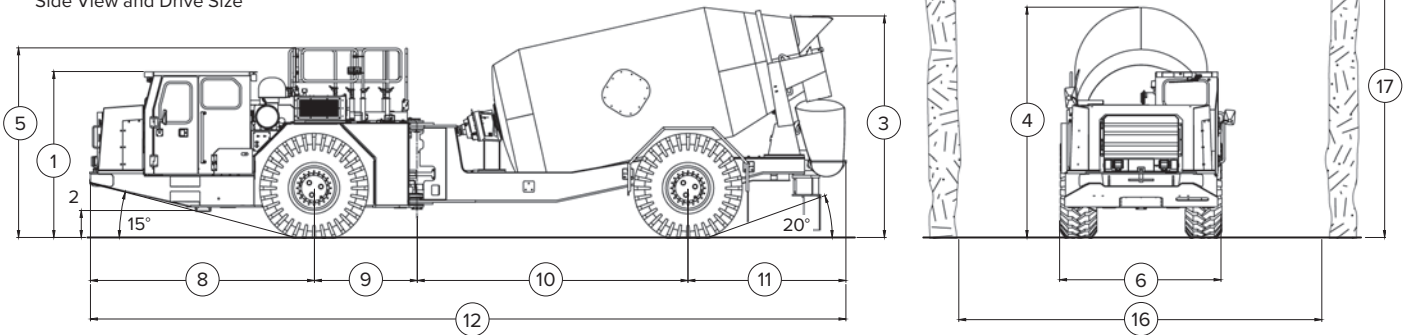


## MACHINE DIMENSIONS

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	●
<b>Fast-fill systems</b>	
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	●●
<b>Instrumentation, Guages</b>	
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	●
<b>Instrumentation, Warning Indicators</b>	
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	●
<b>Instrumentation, Digital Data</b>	
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:e 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.

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