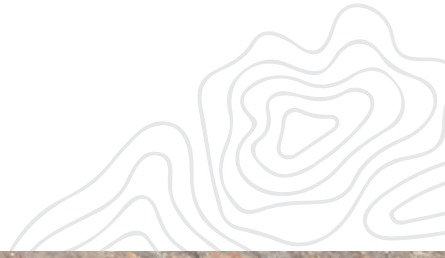




**E10**  
DELIVERY



Elphinstone Underground Support Solutions  
[elphinstone.com](http://elphinstone.com)

**ELPHINSTONE**

**UNDERGROUND RELIABILITY**



## TECHNICAL SPECIFICATIONS

### Engine

Engine Tier	Tier 3 - Standard		Tier 4 Final (Low Power)		Tier 4 Final (High Power)	
Engine Model	Cat C7.1 ACERT (TA)		Cat C7.1 ACERT (TA)		Cat C7.1 ACERT (TA)	
Gross Power SAE J1995	168 kW	225 hp	129 kW	173 hp	151 kW	202 hp
Displacement	7.0131 L	428 in <sup>3</sup>	7.0131 L	428 in <sup>3</sup>	7.0131 L	428 in <sup>3</sup>
Bore	105 mm	4.1 in	105 mm	4.1 in	105 mm	4.1 in
Stroke	135 mm	5.3 in	135 mm	5.3 in	135 mm	5.3 in
Number of Cylinders	6		6		6	
Max Torque @ Rated Speed	1028 Nm @ 1400 rpm		842 Nm @ 1400 rpm		870 Nm @ 1400 rpm	
Derating Altitude	3000 m	9843 ft	3000 m	9843 ft	3000 m	9843 ft
Emission Certification	EPA Tier 3		EPA Tier 4 Final		EPA Tier 4 Final	
Alternator	150 amp		150 amp		150 amp	
Electrical System	24 V		24 V		24 V	
Battery - Quantity	2		2		2	
Battery - Volts	12 V		12 V		12 V	
Battery - Capacity	1000CCA		1000CCA		1000CCA	
Starting System	Direct Electric		Direct Electric		Direct Electric	

- Power ratings apply at 2200 rpm when tested under the specified standard conditions.
- 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 (860 F) [ref. A fuel density of 838.9 g/L (7.001 lb/gal)].

### Powertrain

Travel Speed - Fwd. 1st	5.7 km/h	3.5 mph
Travel Speed - Fwd. 2nd	9.4 km/h	5.8 mph
Travel Speed - Fwd. 3rd	15.0 km/h	9.3 mph
Travel Speed - Fwd. 4th	20.0 km/h	12.4 mph
Travel Speed - Fwd. 5th	32.2 km/h	20.0 mph
Travel Speed - Rev. 1st	5.7 km/h	3.5 mph
Travel Speed - Rev. 2nd	9.4 km/h	5.8 mph
Travel Speed - Rev. 3rd	20.0 km/h	12.4 mph
Torque Converter Type	Lock-up clutch	
Transmission	5 fwd / 3 rev countershaft powershift	
Steering, Frame Articulation	42.5 degrees	
Brakes - Service Type	Hydraulic applied inboard WET disc enclosed	
Brakes - Parking Type	Internal Spring Applied Hydraulically Released wheel ends (SAHR)	
Tyres	14.00 R20	

### Service Refill

Fuel Tank	340 L	89.8 gal
Cooling System	50 L	13.2 gal
Differential, Final Drive - F	18.5 L	4.9 gal
Differential, Final Drive - R	18.5 L	5.4 gal
Engine Oil	13.5 L	3.6 gal
Transmission, Torque Converter	31 L	8.2 gal
Hydraulic Tank	150 L	39.6 gal
Diesel Exhaust Fluid (DEF) (Tier 4 Final Only)	16 L	4.2 gal

### Speed on Grade

Cat C7.1 ACERT, 168kW Tier 3

Grade	Vehicle Speed (km/h)				
	1st Fwd	2nd Fwd	3rd Fwd	4th Fwd	5th Fwd
1:7 (14%) Empty (17,470 kg)	5.7	9.4	15	19.1	-
1:7 (14%) GVM (28,760 kg)	5.7	9.4	11.6	-	-

Cat C7.1 ACERT, 151kW Tier 4 Final (High Power)

Grade	Vehicle Speed (km/h)				
	1st Fwd	2nd Fwd	3rd Fwd	4th Fwd	5th Fwd
1:7 (14%) Empty (17,470 kg)	5.7	9.4	15	17.3	-
1:7 (14%) GVM (28,760 kg)	5.7	9.4	-	-	-

Cat C7.1 ACERT, 129kW Tier 4 Final (Low Power)

Grade	Vehicle Speed (km/h)				
	1st Fwd	2nd Fwd	3rd Fwd	4th Fwd	5th Fwd
1:7 (14%) Empty (17,470 kg)	5.7	9.4	15	-	-
1:7 (14%) GVM (28,760 kg)	5.7	8.9	-	-	-

\*Note: 2% rolling resistance

### Weights

Gross Vehicle Weight (GVM)	28,760 kg	63,401 lb
Tare Weight	17,470 kg	38,513 lb
HIAB Crane Rated Lift Capacity	8.8 TM	
Maximum Payload	11,130 kg	24,537.5 lb

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

### Standards

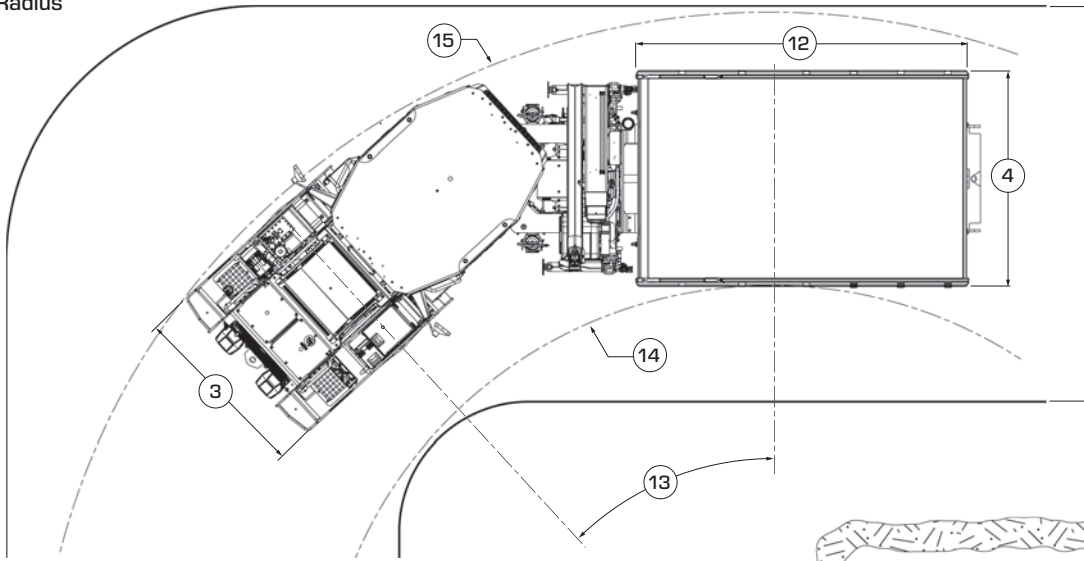
ROPS/FOPS	ISO 3471:2008 / ISO 3449:2005
Steering	ISO 5010:2007
Braking	ISO 3450-2011/CSA-M424.3-M90
HIAB Crane	AS 1418.11-2014



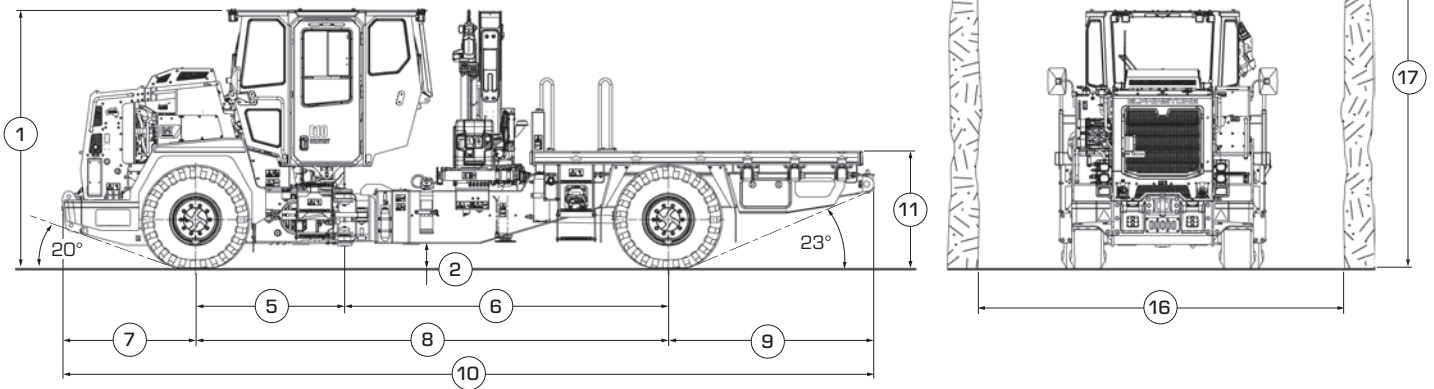


# MACHINE DIMENSIONS

Turning Radius



Side View and Drive Size



## Dimensions

1	Height - Top of Cabin	3000 mm	9 ft 10.1 in
2	Height - Ground Clearance	305 mm	1 ft
3	Width - Machine Front Frame	2100 mm	6 ft 10.6 in
4	Width - Machine Rear Frame	2490 mm	8 ft 2 in
5	Length - Front Axle to Hitch	1725 mm	5 ft 7.9 in
6	Length - Hitch to Rear Axle	3750 mm	12 ft 3.5 in
7	Length - Front Axle to Bumper	1545 mm	5 ft 1 in
8	Length - Wheel Base	5475 mm	17 ft 11.6 in
9	Length - Rear Axle to Tow Point	2385 mm	7 ft 9 in
10	Length - Overall	9405 mm	30 ft 10.3 in
11	Height - Ground to Deck Surface	1365 mm	4 ft 5.7 in
12	Length - Deck	3685 mm	12 ft 1 in
13	Articulation	42.5 deg	

## Drive Size

14	Radius - Inside Clearance - By design	5400 mm	17 ft 11.4 in
15	Radius - Outside Clearance - By design	8600 mm	28 ft 2.6 in
16	Minimum Width Portal (90° corner)	4500 mm	14 ft 9.1 in
17	Typical Minimum Height Portal	4500 mm	14 ft 9.1 in



## STANDARD AND OPTIONAL EQUIPMENT

● STANDARD ● OPTIONAL ● SAFETY

### Powertrain

Air Cleaner, 2-Stage With Integral Pre-Cleaner	●
All Wheel Drive with Lock-up Torque Converter	●
Axle Breathers, Remote Mounted	●
Brakes - Parking, Four Wheel Spring Applied, Enclosed Disc	●
Brakes - Service, Four-Wheel Pressure Applied Enclosed Disc	●
Brake - Driveline, Electromagnetic Retarder	●
Clean Emission Module (Tier 4 Final Only)	●
Driveline Slip-joint, Lubed for Life	●
Engine, Cat C7.1, ACERT Technology, ATAAC - Tier 3	●
Engine, Cat C7.1, ACERT Technology, ATAAC - Tier 4 Final	●
Fan, Sucker	●
Filters, Engine Air, Primary/Secondary	●
Filters, Fuel, Primary/Secondary	●
Final Drives, Outboard Planetary	●
Fuel Transfer Pump (Electric)	●
Fuel Lines - Double Wire Braided	●
Fuel Shutoff Valves Supply & Return	●
Lock - Wheel Nut (Torque Retention)	●
Muffler/Catalytic Converter (Tier 3 Only)	●
Oscillating Hitch	●
Radiator	●
Steering, Rotary Metering Pump	●
Suspension, Front Axle	●
Transmission, Countershaft Powershift (5F/3R)	●
Universal Joints, Lubed for Life	●
<b>Fast-Fill Systems</b>	
Coolant, Engine Oil, Hydraulic Oil, Transmission Oil	●
Fuel, Non-pressurised	●

### Antifreeze

Coolant, Extended Life for -35°C (-30°F)	●
Coolant, Arctic Extended Life for -50°C (-58°F)	●

### Operator Environment

300 mm (12 in) Touch Screen Operator Display	●
Brake Retarder Control	●
Cabin, Open, FOPS/ROPS	●
Cabin, Enclosed, FOPS/ROPS, Climate Control Modular 24 V HVAC System, Sliding Door Window	●
Cabin, Pressuriser	●
Cabin, Rear Window Wiper and Washer	●
Cabin, Tilt Supports	●
Cabin, Tilt Supports, Reduced Height	●
Cabin, Window Guard, Rear	●
Camera/Monitor, Reversing	●
Diagnostic Connector	●
Engine Idle Timer	●
Fire Extinguisher 2.5 kg, Hand Held Dry Chemical Powder 3A:40B:E LH Side	●
Fire Extinguisher 2.5 kg, Hand Held Dry Chemical Powder 3A:40B:E RH Side	●
Interior Lamps (LED)	●
Mirrors, Rear View	●
Occupancy Indicator, Operator	●
Seat Belt, 3x Retractable	●

### Operator Environment

Seat, T-Seat, Air Suspension, Operator	●
2x Seat, T-Seat, Air Suspension, Companion	●
Seat Covers, Operator and Companion	●
Steering Wheel, Tilt and Telescoping	●
<b>Instrumentation, Gauges</b>	
Brake, Accumulator Pressure	●
Brake, Oil Pressure	●
Diesel Exhaust Fluid (DEF) (Tier 4 Final Only)	●
Engine, Coolant Temperature	●
Engine, Oil Pressure	●
Fuel, Level	●
Hydraulic, Oil Temperature	●
Pressuriser Air Filter, High Efficiency Particulate Air	●
Pressuriser Air Filter, Activated Charcoal	●
Speedometer	●
Steering, System Pressure	●
Tachometer	●
Torque Converter, Oil Temperature	●
<b>Instrumentation, Warning Indicators</b>	
Brake, Accumulator Oil Pressure	●
Brake, Fault	●
Brake, Park Indicator	●
Cabin, Door Open	●
Electrical System	●
Emergency Stop	●
Engine, Coolant Temperature	●
Engine, Fault	●
Engine, Oil Pressure	●
Hydraulic, Oil Level	●
Hydraulic, Oil Temperature	●
Steering, Primary	●
Steering, Secondary	●
Torque Converter, Oil Temperature	●
Transmission, Fault	●
Transmission, Oil Filter Bypass	●
<b>Instrumentation, Digital Data</b>	
Gear and Direction	●
Driveline Retarder, Braking Percentage	●
Service Hour, Meter	●
<b>Electrical</b>	
Accessory Power Port (12 V) & (24 V)	●
Alarm, Back-up	●
Alternator, 150 amp	●
Auxiliary Start Receptacle	●
Batteries, Maintenance Free (2x1000 CCA)	●
Battery Isolation, Lockable Disconnect Switch (4 Pole)	●
Camera / Monitor, Reversing	●
Diagnostic Connector	●
Emergency Stop - Cabin	●
Emergency Stop - Ground Level, LH Side Front	●
Emergency Stop, Adjacent to Manual Crane Controls LH Side Rear	●
Emergency Stop, Adjacent to RH Deck Access	●
Emergency Crane Stop, Manual Crane Controls	●
Emergency Crane Stop, Remote Crane Controls	●



## STANDARD AND OPTIONAL EQUIPMENT

● STANDARD ● OPTIONAL ● SAFETY

### Electrical

Emergency Stop, Additional, RH Side Front	●●●
Horn, Warning	●
Lights, Beacon (LED), Cab Mounted (Amber/Red/Blue)	●●●
Lights, Headlights (LED)	●
Lights, Reversing	●
Lights, Stop/Tail/Turn (LED)	●
Lights, Work, Front/Rear - Cab Mounted (LED)	●
Lights, Work, Front/Rear - Cab Mounted (LED) Additional	●
Radio, Ready, Communications	●
Radio, AM/FM/USB/Bluetooth	●
Sealed Electrical Connectors	●
Starter, Electric, Heavy Duty	●
Starter Isolator, Lockable Disconnect Switch (4 Pole)	●
Starting and Charging System, 24 V	●

### Hydraulics

Case Drain Return Screen	●
Closed Center-load Sensing System	●
Hydraulic Oil Cooler	●
Hydraulic Oil Filling System, Filtered	●
Line Filter, Full Flow Return	●
Suction Screen	●

### Deck and Work Tools

2490 mm Wide x 3685 mm Long Flat Deck	●
4x Holes to Accommodate Eyebolt Type Tie-down Points	●
12x slots (6 each side) to Accommodate Various Ratchet Style Restraint Systems (Removable Type)	●
3-Point Access System, Both Sides	●
Tool Box & Storage Compartments Both Sides	●
HIAB X-HIDUO Q92 B2 Telescoping Knuckle Boom Crane	●
Manual Lever Control	●
Wireless Joystick Remote Control for Crane	●
8.8 TM Lift Capacity	●

### Deck and Work Tools

Semi Automatic Folding (Pack-Up)	●
Automatic Speed Control (ASC)	●
Pivoting & Extendable Manual Stabiliser Legs	●

### Other

Brakes, Park, Onboard, Release for Machine Retrieval	●●●
Engine, Enclosures, Hinged (Tier 3 only)	●
Film, GP Reflective, Fluorescent Yellow	●●●
Film, GP Reflective, Fluorescent Orange	●●●
Fire Extinguisher, 4.5 kg, Hand Held Dry Chemical Powder 4A:60B:E LH and RH Side	●●●
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	●●●
Grease Lubrication System, Centralised, Manual	●
Grease Lubrication System, Automatic	●
Lift, Tie Down and Retrieval Points (Front and Rear)	●
Mudguards	●
Radiator, Cap, Manual Pressure Release	●
Scheduled Oil Sampling (SOS) ports	●
Steering, Frame Lock Link	●
Steering, Secondary	●
Tyres, Tubeless Rims (14.00 R20)	●
Tyre and Rim, Spare (14.00 R20)	●
Unit Number Placard	●
Wheel Chocks	●●●



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Elphinstone Pty Ltd is an established Caterpillar Original Equipment Manufacturer with over 45 years' experience in the mining industry. Elphinstone specialises in the design, manufacture and support of quality equipment for the global underground and surface mining industries.

The Elphinstone range of Underground Mining Support Vehicles combines practical design, the latest technology and quality manufacturing to ensure reliable performance.

The current product range includes specialised underground support vehicles, mine extraction devices, extended distance off-highway haulage trucks and water tanks customised to suit Caterpillar articulated trucks.

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