



Cat[®] 7295

Electric Rope Shovel

Specifications

Dimensions

Dipper payload	45.4 tonnes (50 tons)
Dipper capacity	18.4-39.0 m ³ (24-51 yd ³)
Length of boom	18.0 m (59 ft 0 in)
Effective length of dipper handle	9.45 m (31 ft .25 in)
Overall length of dipper handle	12.65 m (41 ft 6 in)

Weights

Working weight, with dipper and standard links	789 251 kg (1,740,000 lbs)
Net weight, domestic, without ballast or dipper	579 691 kg (1,278,000 lbs)
General-purpose dipper 25.2 m ³ (33 yd ³)	49 895 kg (110,000 lbs)
Ballast (furnished by customer)	159 665 kg (352,000 lbs)

- These weights will vary slightly depending upon dipper and optional equipment selection

Main Structures

Crawler Mounting

Overall width 139.7 cm (55 in) treads, standard	8.2 m (26 ft 11 in)
Overall width 182.88 cm (72 in) treads	8.63 m (28 ft 4 in)
Overall length of mounting	10.26 m (33 ft 8 in)
Total effective bearing area (139.7 cm treads)	20.81 m ² (224 ft ²) 371.6 kPa (53.9 Psi)
Total effective bearing area (182.88 cm treads)	27.2 m ² (293 ft ²) 284.1 kPa (41.2 Psi)
Number and diameter of rollers	Lower: 16, 71 cm (28 in) Lower rear: 2, 89 cm (35 in) Upper: Slides
Take-up tumblers diameter	120.7 cm (47.5 in)
Number and pitch of treads	96, 45 cm (17.8 in)

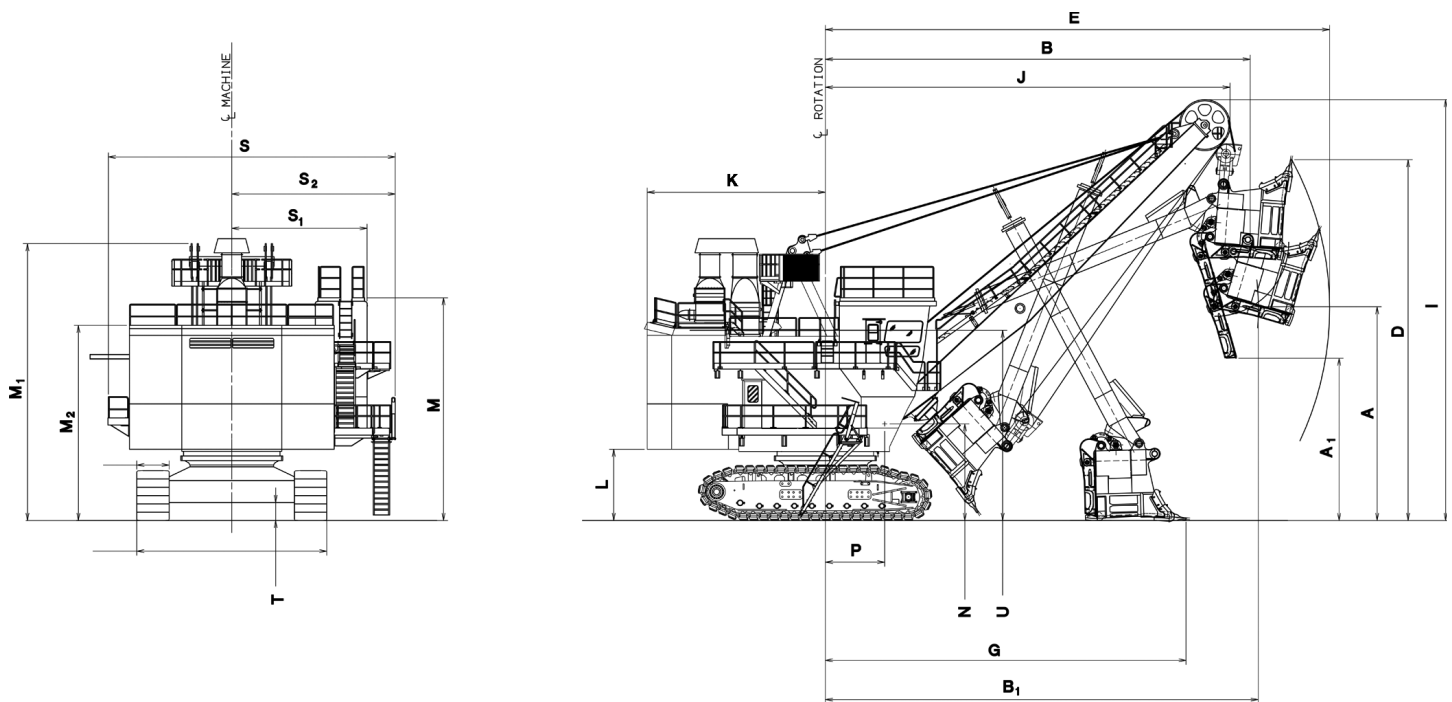
Planetary Propel

Dual-motor independent drive

Revolving Frame

Welded impact-resistant steel	Length: 6.92 m (22 ft 8.37 in) Width: 3.20 m (10 ft 6 in)
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Optimal Working Ranges

A	Dumping height	9.22 m (30 ft 3 in)
A ₁	Dumping height at maximum electric crowd limit	7.0 m (23 ft 0 in)
B ₁	Dumping radius (maximum)	18.69 m (61 ft 4 in)
D	Cutting height (maximum)	15.56 m (51 ft 1 in)
E	Cutting radius (maximum)	21.78 m (71 ft 5 in)
G	Radius of level floor	15.58 m (51 ft 1 in)
I	Clearance height (boom point sheaves)	18.15 m (59 ft 7 in)
J	Clearance radius (boom point sheaves)	17.48 m (57 ft 4 in)
K	Clearance radius (revolving frame)	7.98 m (26 ft 2 in)
L	Clearance under frame (to ground)	3.07 m (10 ft 1 in)
M ₁	Height of A-frame	11.94 m (39 ft 2 in)
S	Overall width	12.39 m (40 ft 8 in)
T	Clearance under lowest point in truck frame/propel gearcase	0.78 m (30 in)
U	Operator's eye level	8.20 m (26 ft 11 in)

Turntable

Cast alloy steel swing rack pitch diameter	4.37 m (14 ft 4 in)
Teeth external cut	20.32 cm face (8 in)
Tapered forged alloy steel roller rails diameter	3.92 m (12 ft 10 in)
Number of tapered rollers	54
Tapered rollers diameter	18.73 cm (7.38 in)

Swing

Two parallel shaft units mounted to either side of the revolving frame. Each unit is driven by a vertically mounted motor.

Hoist

Hoist machinery consists of a motor coupled to two gear reductions, which drive the 137 cm (54 in) hoist drum.

Lube System

- Single-line system applies lubricant and grease via the PLC
- 4 pumps (2 for lubricant and 2 for grease) located in an insulated, double-walled lube room

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Electrical

Drive

IGBT Acutrol drive system

Power Requirements

Voltage 3 phase, 50/60 Hz, 7200 V

Average 15-minute demand 538-753 kW

Peak power 2 152 kW

- Other voltages available to suit customer requirements

Distribution System Requirements

Machine on separate system 2 000 kva

Machine on large system 1320 kva

Main Electrical Systems

System voltage (nominal) 50/60 Hz, 7200 V

Trail cable
(furnished by customer) SHD-3-#4 at 8000 V

Transformer, auxiliary 250 kva, 7200 V primary
480 V secondary

Lighting transformer 1 x 25 kva
120/240 V secondary

Lights

- HPS lights on boom feet, top of A-frame, machinery house, lube room, control room, utility room and flood lights
- Incandescent lights on ground lights, walkways and operator's cab

Front End

Boom

Boom welded, impact-resistant steel

Boom point sheaves twin-grooved, flame-hardened

Boom point sheave diameters 2.08 m (6 ft 10 in)

Handle diameter 86.36 cm (34 in)

Wall thickness (nominal) 4.45 cm (1.75 in)

Rope Data

	No.	Diameter	Type	Construction
Hoist	2	57.2 mm (2.25 in)	twin dual	6 x 37
Crowd	1	60.3 mm (2.38 in)	single dual	6 x 37
Retract	1	60.3 mm (2.38 in)	single dual	6 x 37
Boom susp.	4	69.9 mm (2.75 in)	equalized	struct. strand
Dipper trip	1	16.0 mm (.63 in)	single	6 x 37

Crowd

Rope Crowd with crowd machinery located at the front center of the revolving frame; consisting of a motor, brake, drum and gearing. Plastic-coated crowd and retract ropes are used to move the dipper handle fore and aft.

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