



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 lb
Net weight, domestic, without ballast or dipper	579 691 kg	1,278,000 lb
General purpose dipper 25.2 m ³ (33 yd ³)	49 895 kg	110,000 lb
Ballast (furnished by customer)	159 665 kg	352,000 lb

- 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/55 in treads)	20.81 m ²	224 ft ²
	371.6 kPa	53.9 psi
Total effective bearing area (182.88 cm/72 in 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

Main Structures (cont'd)

Turntable

Cast alloy steel swing rack pitch diameter	4.37 m	14 ft 4 in
Teeth external cut (face)	20.32 cm	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.

Electrical

Drive

- IGBT Acutrol drive system.

Power Requirements

Voltage	3 phase, 50/60 Hz, 7,200V
Average 15-minute demand	538-753 kW
Peak power	2152 kW

- Other voltages available to suit customer requirements.

Distribution System Requirements

Machine on separate system	2000 kVA
Machine on large system	1320 kVA

Main Electrical Systems

System voltage (nominal)	50/60 Hz, 7,200V
Trail cable (furnished by customer)	SHD-3-#4 at 8,000V
Transformer, auxiliary	250 kVA, 7,200V primary 480V secondary
Lighting transformer	1 × 25 kVA, 120/240V secondary

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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

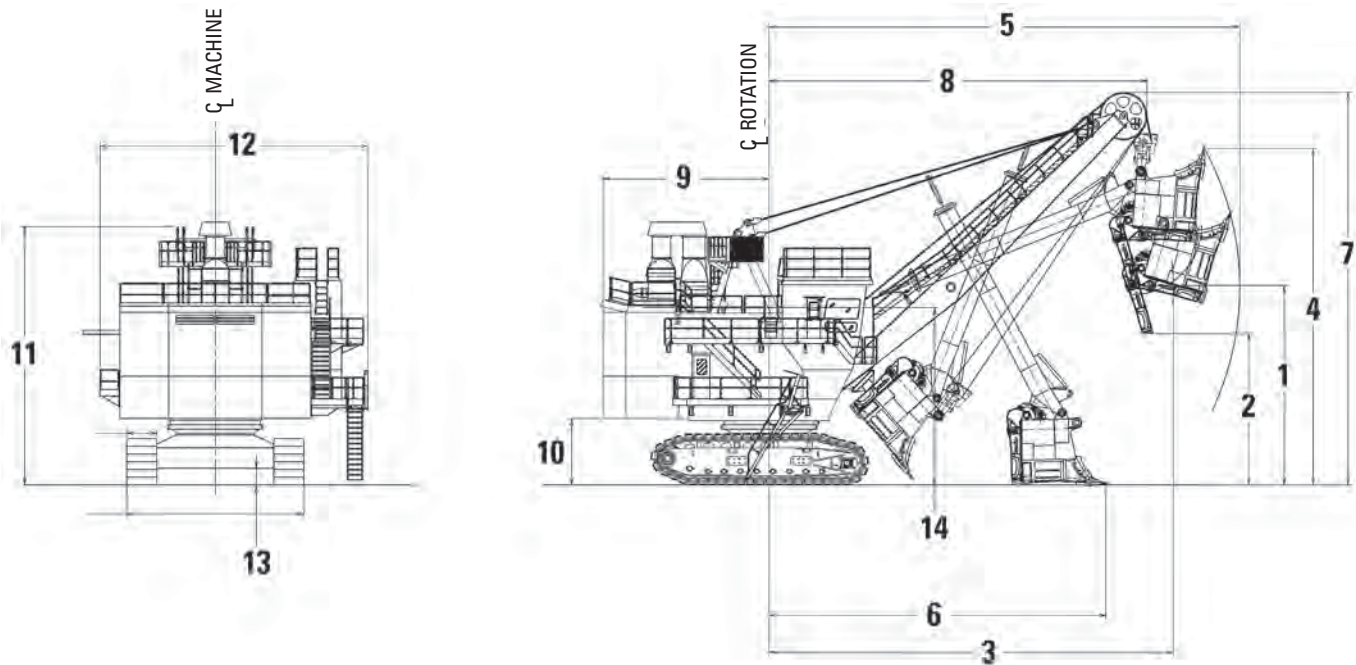
Front End (cont'd)

Rope Data

	No.	Diameter	Type	Construction
Hoist	2	57.2 mm (2.25 in)	twin dual	6 × 41
Crowd	1	60.3 mm (2.38 in)	single dual	8 × 37
Retract	1	60.3 mm (2.38 in)	single dual	8 × 37
Boom susp.	4	69.9 mm (2.75 in)	equalized	struct. strand
Dipper trip	1	16.0 mm (0.63 in)	single	7 × 25

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.



Optimal Working Ranges

1 Dumping height	9.22 m	30 ft 3 in	8 Clearance radius (boom point sheaves)	17.48 m	57 ft 4 in
2 Dumping height at maximum electric crowd limit	7.0 m	23 ft 0 in	9 Clearance radius (revolving frame)	7.98 m	26 ft 2 in
3 Dumping radius (maximum)	18.69 m	61 ft 4 in	10 Clearance under frame (to ground)	3.07 m	10 ft 1 in
4 Cutting height (maximum)	15.56 m	51 ft 1 in	11 Height of A-frame	11.94 m	39 ft 2 in
5 Cutting radius (maximum)	21.78 m	71 ft 5 in	12 Overall width	12.39 m	40 ft 8 in
6 Radius of level floor	15.58 m	51 ft 1 in	13 Clearance under lowest point in truck frame/propel gearcase	0.78 m	30 in
7 Clearance height (boom point sheaves)	18.15 m	59 ft 7 in	14 Operator's eye level	8.20 m	26 ft 11 in

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