

# **Cat**<sup>®</sup> 7295

ELECTRIC ROPE SHOVEL

# **Specifications**

### **Dimensions**

45.4 tonnes	50 tons
18.4-39.0 m <sup>3</sup>	24-51 yd <sup>3</sup>
18.0 m	59 ft 0 in
9.45 m	31 ft .25 in
12.65 m	41 ft 6 in
	18.4-39.0 m <sup>3</sup> 18.0 m 9.45 m

# 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 m³ (33 yd³)	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

Welded, impact-resistant steel

Length

Width

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	20.81 m <sup>2</sup>	224 ft <sup>2</sup>
(139.7 cm/55 in treads)	371.6 kPa	53.9 psi
Total effective bearing area	27.2 m <sup>2</sup>	293 ft <sup>2</sup>
(182.88 cm/72 in treads)	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		
<ul> <li>Dual-motor independent drive.</li> </ul>		
Revolving Frame		

6.92 m

3.20 m

22 ft 8.37 in

10 ft 6 in

# Main Structures (cont'd)

# Turntable

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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 nower	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**

Boomwelded, impact-resistant steelBoom point sheavestwin-grooved, flame-hardenedBoom point sheave diameters2.08 m6 ft 10 inHandle diameter86.36 cm34 inWall thickness (nominal)4.45 cm1.75 in

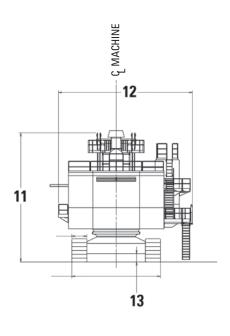
## Front End (cont'd)

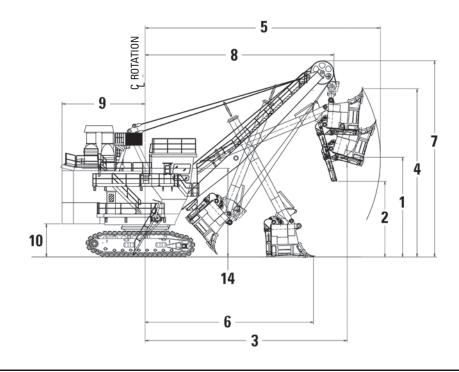
# Rope Data

	No.	Diameter	Туре	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
2 Dumping height at maximum electric crowd limit	7.0 m	23 ft 0 in
3 Dumping radius (maximum)	18.69 m	61 ft 4 in
4 Cutting height (maximum)	15.56 m	51 ft 1 in
5 Cutting radius (maximum)	21.78 m	71 ft 5 in
6 Radius of level floor	15.58 m	51 ft 1 in
7 Clearance height (boom point sheaves)	18.15 m	59 ft 7 in

8 Clearance radius (boom point sheaves)	17.48 m	57 ft 4 in
9 Clearance radius (revolving frame)	7.98 m	26 ft 2 in
10 Clearance under frame (to ground)	3.07 m	10 ft 1 in
11 Height of A-frame	11.94 m	39 ft 2 in
12 Overall width	12.39 m	40 ft 8 in
13 Clearance under lowest point in truck		
frame/propel gearcase	0.78 m	30 in
14 Operator's eye level	8.20 m	26 ft 11 in

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