

# **Cat**<sup>®</sup> 7495 HD

ELECTRIC ROPE SHOVEL

# **Specifications**

#### **Dimensions**

Dipper payload	81.8 tonnes	90 tons
Dipper capacity	19.1-61.2 m <sup>3</sup>	25-80 yd <sup>3</sup>
Length of boom	20.4 m	67 ft 0 in
Effective length of dipper handle	10.9 m	35 ft 10 in
Overall length of dipper handle	14.3 m	47 ft 0 in

# Weights

Working weight, with dipper and standard links	1 306 346 kg	2,880,000 lb
Net weight, domestic, without ballast or dipper	972 502 kg	2,144,000 lb
General purpose dipper 49.78 m³ (65 yd³)	73 482 kg	162,000 lb
Ballast (furnished by customer)	260 362 kg	574,000 lb

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

#### **Main Structures**

Crawler Mounting		
Overall width 213.36 cm		
(84 in) treads, standard	9.98 m	32 ft 9 in
Overall length of mounting	10.41 m	34 ft 2 in
Overall width 274.32 cm (108 in) treads	10.44 m	34 ft 3 in
Total effective bearing area (213.36 cm/84 in treads)	32.0 m² 401 kPa	344 ft² 58.1 psi
Total effective bearing area (274.32 cm/108 in treads)	41 m² 311 kPa	442.3 ft² 45.2 psi
Number and diameter of rollers		
Lower (8)	139.70 cm	55 in
Upper (10)	60.96 cm	24 in
Take-up tumblers diameter	157.48 cm	62 in
Number and pitch of treads (74)	61.91 cm	24.375 in
Planetary Propel		
<ul> <li>Dual-motor independent drive.</li> </ul>		
Revolving Frame (Center Section)		
Welded, impact-resistant steel		
Length	8.38 m	27 ft 6 in
Width	4.29 m	14 ft 1 in

#### Main Structures (cont'd)

urntable		
Forged rim, alloy steel swing rack pitch diameter	5.18 m	17 ft 0 in
Teeth external cut (face)	24.13 cm	9.5 in
Tapered, forged alloy steel roller rails diameter	4.5 m	14 ft 9 in
Number of tapered rollers	56	
Tapered rollers diameter	20.96 cm	8.25 in

#### **Swing**

 Two planetary gearboxes, each driven by a vertically mounted motor, are mounted on either side of the revolving frame. Dual-output pinion shafts from each gearbox engage the swing rack.

#### Hoist

 A planetary gearbox with dual-output pinions provides the hoist torque transfer from the electric motor to the hoist drum gear.

### **Lube System**

- · Single-line system applies lubricant and grease via the PLC.
- 6 pumps (4 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	832-1165 kW
Peak power	3330 kW

• Other voltage options available to suit customer requirements.

# **Distribution System Requirements**

Machine on separate system 3500 kVA Machine on large system 2000 kVA

#### **Main Electrical Systems**

System voltage (nominal) 50/60 Hz, 7,200V
Trail cable (furnished by customer) SHD-3-#1/0 at 8,000V
Transformer, auxiliary 350 kVA, 7,200V primary
Lighting transformer 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**

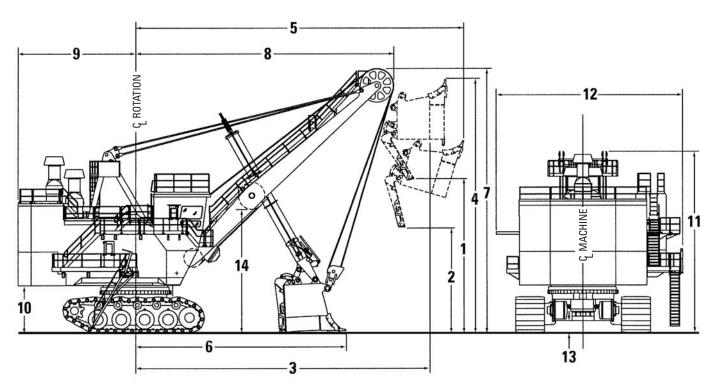
#### **Boom**

Boomwelded, impact-resistant steelBoom point sheavestwin-grooved, flame-hardenedBoom point sheave diameters243.84 cm96 inHandle diameter86.36 cm34 inWall thickness (nominal)7.62 cm3 in

# Front End (cont'd)

# Rope Data

	No.	Diameter	Туре	Construction
Hoist	2	69.8 mm (2.75 in)	twin dual	8 × 37
Crowd	1	63.5 mm (2.5 in)	single dual	8 × 37
Retract	1	63.5 mm (2.5 in)	single dual	8 × 37
Boom susp.	4	82.6 mm (3.25 in)	equalized	struct. strand
Dipper trip	1	15.9 mm (0.625 in)	single	7 × 25



**Optimal Working Ranges** 

1 Dumping height	10.6 m	34 ft 10 in
2 Dumping height at maximum electric crowd limit	8.45 m	27 ft 9 in
3 Dumping radius (maximum)	21.0 m	69 ft 0 in
4 Cutting height (maximum)	17.3 m	56 ft 10 in
5 Cutting radius (maximum)	23.97 m	78 ft 8 in
6 Radius of level floor	16.92 m	55 ft 6 in
7 Clearance height (boom point sheaves)	20.1 m	65 ft 10 in

8 Clearance radius (boom point sheaves)	19.74 m	64 ft 9 in
9 Clearance radius (revolving frame)	8.67 m	28 ft 5 in
10 Clearance under frame (to ground)	3.45 m	11 ft 4 in
11 Height of A-frame	13.3 m	43 ft 8 in
12 Overall width	13.01 m	42 ft 8 in
13 Clearance under lowest point in truck frame/propel gearcase	0.86 m	34 in
14 Operator's eve level	8.64 m	28 ft 4 in

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