

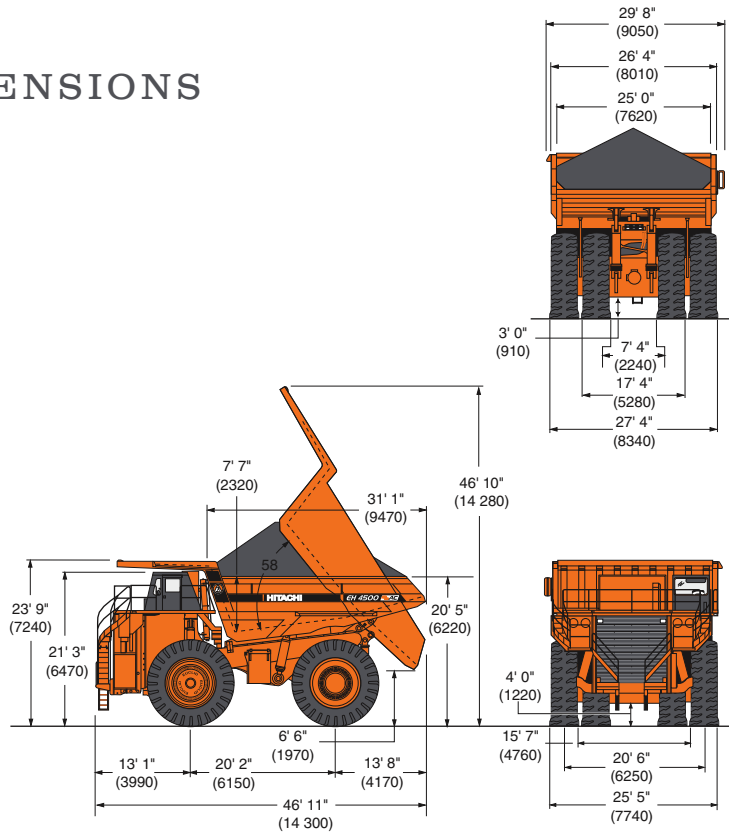
EH4500-2 SPECIFICATIONS

15
Eh
Truck
EH4500-2

AC

HITACHI

EH4500-2 DIMENSIONS



STANDARD EQUIPMENT

General

Access ladders
 Air conditioning
 Air-cleaner protection
 All-hydraulic braking
 Automatic lubrication system
 Battery box, ground level
 Battery isolation switch
 Body-down indicator, mechanical
 Body prop pins
 Centralized service panel
 Continuous heated body
 Cruise control, propel/retard
 Electric horn, dual
 Electric start
 Electronic hoist control
 Engine access ladders (2)
 Engine self-load test
 Extended body canopy
 Fan guard
 Fast-fueling system, on tank
 Fuel gauge on tank
 Ground-level engine shutdown switch
 Guardrails around platform
 HAULTRONIC II load-weighing system
 HID headlights
 Hoist kickout
 Ladder lights
 Mirrors, right and left
 Mud flaps
 NEOCON suspension struts
 Operator arm and grid box guards
 Propulsion interlock, body up
 Radiator grille guard
 Retard speed control
 Retarder grid package, 16 element
 Reverse alarm
 Rock-ejector bars
 Supplementary steering system, accumulator

Thermatic fan
 Tow hooks, front and rear
 Wiggins fast-fueling system

Cab

Acoustical lining
 Air filtration/replaceable element
 Air-suspension seat, 6 position
 Ashtray
 Auxiliary outlet, 12 volt
 Cab-interior light
 Cigarette lighter
 Door locks
 Engine starter/shutdown switch
 Full trainer seat
 Heater and defroster, 26,000 Btu
 Integral ROPS/FOPS cab
 ISO driver envelope
 Load-and-hold switch
 Modular instrumentation
 Operator seat belt
 Roll-down windows
 Rubber floor mat
 Safety glass
 Sun visor
 Tilt/telescopic steering
 Tinted glass, all windows
 Trainer seat belt
 Windshield washer
 Windshield wiper

Indicator Lights and Gauges

CONTRONIC II monitoring and alarm system, multifunction indicator lights

- Air-filter restriction
- Alternator
- Blower loss
- Body-up indicator
- Brake-supply pressure
- Brake temperature

Central warning
 Engine oil pressure
 Engine coolant temperature
 High-beam indicator
 Hoist filter restriction
 Hoist oil temperature
 Hoist-supply pressure
 Parking brake applied
 Rear axle oil leak indicator
 Steering filter restriction
 Steering oil temperature
 Traction-system fault
 Turn signals/hazard
 Wheel-motor temperature

Gauges

- Brake temperature
- Engine coolant temperature
- Fuel gauge in cab (LCD)
- HAULTRONIC II
- Hourmeter (LCD)
- Speedometer
- Steer/brake supply pressure
- Steer accumulator pre-charge (LCD) gauge
- Tachometer
- Voltmeter (LCD)
- Wheel motor temperature

Machine Lights

- Backup lights (2)
- Clearance lights, LED (4)
- Dual-combination stop and taillights, LED (2)
- Dynamic retarding light, LED (1)
- Engine-compartment lights (2)
- HID headlights (4)
- Payload monitoring lights, LED
- Rear axle light (1)
- Turn signals and 4-way flashers

OPTIONAL EQUIPMENT

Ansul centralized fire-extinguishing system (12 nozzle)
 Auxiliary dump
 Auxiliary steer
 Body liners (400 BHN)
 Body side extensions
 Cab, acoustic package
 Canopy spill-guard extension (12" total)
 Engine coolant and oil heater (220 V AC)
 Engine heater
 Keyless starter switch
 Kim Hotstart
 Load-weight displays
 Mufflers
 Radiator shutters
 Tires (50/80R57)
 Trolley-assist configuration

EH4500-2 SPECIFICATIONS

ENGINE

Make	Detroit Diesel w/DDEC IV	Cummins
Model	16V-4000	QSK60-L
Type	4 cycle	4 cycle
Aspiration	Turbocharged and low-temperature aftercooled	Two-stage turbocharged intercooled and low-temperature aftercooled
Emission Certification	U.S. EPA Tier I	U.S. EPA Tier I
Gross Power @ 1900 rpm (SAE J1995)	2,700 hp (2014 kW)	2,700 hp (2014 kW)
Net Power @ 1900 rpm (SAE J1349)	2,600 hp (1939 kW)	2,575 hp (1920 kW)
Maximum Torque @ 1500 rpm (SAE 1995)	8,062 lb-ft (10 930 N-m)	7,840 lb-ft (10 630 N-m)
No. Cylinders	16	16
Bore & Stroke	6.5 x 7.48 in. (165 x 190 mm)	6.26 x 7.48 in. (159 x 190 mm)
Displacement	3.967 cu. in. (65.0 liters)	3.674 cu. in. (60.2 liters)
Starting	24-volt electric	24-volt electric

ELECTRIC DRIVE

Controls and Alternator

Hitachi AC-drive technology uses Siemens controls and proven GTO inverter-phase modules; dynamic retarding capacity to zero speed using solid-state technology; alternator direct mounted to engine.

Wheel Motors

Hitachi AC-drive technology, developed in conjunction with Siemens, provides superior performance with higher top speeds, better gradeability, and stronger retardation; brushless operation reduces maintenance and running costs; long life to overhaul means less downtime and reduced running costs.

	Standard	Optional
Planetary Ratio	35.816:1	40.789:1
Maximum Speed	41.6 mph (66.9 km/h)	34.9 mph (56.2 km/h)

TIRES

Standard – Front and Rear	Rim Width
50/90 R57 E4 Radials	34 in. (863.6 mm)

Certain job conditions may require higher TKPH (TMPH) in order to maintain maximum production; Hitachi recommends evaluating the job conditions and consulting the tire manufacturer to make proper tire selection; optional rims available.

ELECTRICAL SYSTEM

Twenty-four volt system; 260-amp battery charger; eight 12-volt, heavy-duty batteries connected in series.

BODY CAPACITY

	yd ³	m ³
Struck (SAE)	142	108
Heap 3:1	187	143
Heap 2:1 (SAE)	208	159

This body is for 50/90 R57 tires use only.

Body capacity and payload subject to change based on customer specific material density and application.

STEERING SYSTEM

Steering Angle	40°
Turning Diameter (SAE)	97 ft. 8 in. (29.8 m)
Steering Pump Output @ 1900 rpm	65.8 gpm (249.0 l/m)
System Pressure	3,000 psi (20 685 kPa)
Filtration – Pressure Line Beta 6 ratio	200

WEIGHTS

	Detroit Diesel	Cummins
Chassis with Hoist	345,548 lb. (156 783 kg)	349,471 lb. (163 137 kg)
Body	91,179 lb. (41 358 kg)	91,179 lb. (41 358 kg)
Net Machine Weight	436,727 lb. (198 096 kg)	440,650 lb. (199 878 kg)
Empty Axle Weights		
Front Axle	219,256 lb. (99 453 kg)	222,779 lb.(101 053 kg)
Rear Axle	217,471 lb. (98 643 kg)	217,870 lb. (98 826 kg)
Maximum GMW		
Including Options, 50% Fuel, Operator and Payload Not to Exceed	1,059,000 lb. (480 362 kg)	1,059,000 lb. (480 362 kg)
Weights given are for standard options, standard body and tires. Net machine weight changes will directly effect the payload. Material density will determine body design/volume figures.		
Load Weight Distribution		
Front (34%)		
Rear (66%)		
Payload with Standard Equipment	311 tons (282 tonnes)	

HYDRAULIC SYSTEM

Two (2) Hitachi three-state, double-acting cylinders with cushioning in retraction, containing dual rod seals and urethane energized scrapers, inverted and outboard mounted; separate reservoir and tandem gear pump connects with a four-position electronic pilot-controlled hoist valve; electric controller is mounted to operator's seat.

Body-Raise Time	22 seconds
Body-Down Time	24 seconds
Hoist Pump Output @ 1900 rpm	256 gpm (969 L/min)
System Relief Pressure	3,050 psi (21 030 kPa)
Filtration – Pressure Line Beta 6 ratio	200

BRAKE SYSTEM

Brake systems meet or surpass SAE J/ISO 3450.

Service

All-hydraulic actuated braking system provides precise braking control and quick system response; the system is pressure proportioned, front to rear, for improved slippery road control.

The Hitachi wet-disc brake is engineered for long service life, even in the most extreme environments; the wet-disc brakes are located on the rear axle and provide service braking and secondary braking functions; the brakes are of a multi-plate design and continuously oil cooled.

Front Axle – Dry Disc

Disc Diameter Each (2 discs/axle)	47.75 in. (121.3 cm)
Brake Surface Area per Axle	2,640 in. ² (17 032 cm ²)
Lining Area Per Axle	960 in. ² (6194 cm ²)
Brake Pressure (Max.)	3,000 psi (20 700 kPa)

Rear Axle – Oil-Cooled Wet Disc

Brake Surface Area Per Axle	28,015 in. ² (180 741 cm ²)
Brake Pressure (Max.)	2,300 psi (15 860 kPa)

Secondary

Dual independent hydraulic circuits within the service brake system provide fully modulated reserve braking capability; both front dry disc and rear wet disc are automatically applied when loss of pressure is detected.

Parking

Four spring-on, hydraulic-off armature disc brake heads provide parking capabilities; the braking system complies with J/ISO 3450.

Retarder

Superior retardation to zero speed on grades is achieved through AC wheel motors in conjunction with the Siemens resistor grid package;

a recessed grid box, located on the service deck, enhances operator visibility; cooling for the grid package is achieved with forced airflow provided by a blower driven by a single electric motor.

Maximum Dynamic Retarding with Continuous-Rated Blown Grids

Standard	4,704 hp (3508 kW)
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Load/Dump Brake Apply

Through activation of a switch by the operator, a solenoid is energized, sending full brake pressure to apply the rear Wet Disc brakes. For use during the load and dump cycles.

COMMAND CAB III

Excellent Serviceability

A removable front closure allows easy access to the service-brake valve and heater connections; the upper dash utilizes four (4) removable panels that house gauges and customer options, each individually accessible; a removable closure located behind the seat provides easy access to the shifting control, CONTRONIC II, and all electrical-junction points.

BODY

Flat chute type, sloped floor, continuously exhaust heated; extended canopy protects service deck area; high tensile strength 400 BHN abrasion-resistant alloy steel is used in thicknesses of:

Floor	.75 in. (19 mm)
Front	.1 in. (10 mm)
Sides	.39 in. (10 mm)
Canopy	.25 in. (6 mm)
Corners	.50 in. (13 mm)

High strength 100,000 psi (690 N/mm²) alloy steel is also used for the canopy side members and floor stiffeners. The body is rubber cushioned on the frame.

Note: This body is for 50/90R57 tires use only.

SERVICE CAPACITIES

Accumulator	20 gal. (76 L)
Crankcase (include filters)	
Detroit Diesel 16V-4000	64 gal. (242 L)
Cummins QSK60-L	70 gal. (265 L)
Cooling System	
Detroit Diesel 16V-4000	184 gal. (697 L)
Cummins QSK60-L	170 gal. (643 L)
Fuel Tank	1,000 gal. (3785 L)
Hydraulics	
Hoist System	255 gal. (965 L)
Steering System	77 gal. (291 L)
Hitachi Planetary Drives	59 gal. (223 L)
Front Wheels	7 gal. (27 L)
Windshield Washer	2 gal. (7.6 L)

EH4500-2 SHIPPING INFORMATION

NUMBER/CONTENTS OF LOADS

LOAD 1

Chassis	107,700 lb. (48 851.9 kg)	(Cummins engine)
429 in. L x 159 in. W (tank on) x 144 in. H	104,000 lb. (47 173.6 kg)	(Detroit diesel engine)
Special double-drop float		

LOAD 2

Left-Hand Body Half	47,000 lb. (21 318.8 kg)	(no rock liner)
527 in. L x 165 in. W x 140 in. H		
22 in. H, 25 ft. L well double-drop float = approx. 14 ft. loaded height	47,000 lb. (21 318.8 kg)	

LOAD 3

Right-Hand Body Half	47,000 lb. (21 318.8 kg)	(no rock liner)
527 in. L x 165 in. W x 140 in. H		
1—Skid Body Components ¹	1,500 lb. (680.4 kg)	
22 in. H, 25 ft. L well double-drop float = approx. 14 ft. loaded height	48,500 lb. (21 999.2 kg)	

LOAD 4

Front Axle Assembly	39,500 lb. (17 916.9 kg)	
2—Skids Air Filters	996 lb. (451.8 kg)	
116 in. Wide, 48 ft. flat	40,496 lb. (18 368.7 kg)	

LOAD 5

Wheel Motor "Tarped"	34,300 lb. (15 558.2 kg)	
Grid-Box Assembly	5,030 lb. (2281.6 kg)	
Legal width, 48 ft. flat	39,330 lb. (17 839.8 kg)	

LOAD 6

Wheel Motor "Tarped"	34,300 lb. (15 558.2 kg)	
Fuel Tank	3,400 lb. (1542.2 kg)	
1—Skid Blower Assembly	2,400 lb. (1088.6 kg)	
Legal width, 48 ft. flat	40,100 lb. (18 189.0 kg)	

LOAD 7

Horse-Collar Assembly	6,840 lb. (3102.6 kg)	
1—Crate Miscellaneous PARTS (PB1) ¹	8,000 lb. (3628.7 kg)	
1—Crate Miscellaneous PARTS (PB2) ²	8,600 lb. (3900.9 kg)	
1—Crate Miscellaneous PARTS (PB3)	6,000 lb. (2721.6 kg)	
1—Skid Accumulators ¹	1,530 lb. (694.0 kg)	
Legal width, 48 ft. flat	30,970 lb. (14 047.8 kg)	

LOAD 8

1—Tire/Rim Assembly	15,200 lb. (6894.6 kg)	
1—Tire/Rim Assembly	15,200 lb. (6894.6 kg)	
Control Panel "Tarped"	8,550 lb. (2463.0 kg)	
148 in. Wide, 48 ft. flat	38,950 lb. (16 252.2 kg)	

LOAD 9

1—Tire/Rim Assembly	15,200 lb. (6894.6 kg)	
1—Tire/Rim Assembly	15,200 lb. (6894.6 kg)	
Cab Assembly	5,430 lb. (2463.0 kg)	
148 in. Wide, 48 ft. flat	35,830 lb. (17 667.4 kg)	

LOAD 10

1—Tire/Rim Assembly	15,200 lb. (6894.6 kg)	
1—Tire/Rim Assembly	15,200 lb. (6894.6 kg)	
Skid Front Struts	3,018 lb. (1368.9 kg)	
148 in. Wide, 48 ft. flat	33,418 lb. (15 158.1 kg)	

NOTE:		
Body components must be tack welded to body half or shipped on another load.		
¹ Accumulators, "Articles Pressurized, Hydraulic" Class 2.2 UN3164 2 small accumulators in PB1, "Articles Pressurized, Hydraulic" 2 larger accumulators on 1 skid Class 2.2 UN3164		
² 8 batteries included in PB2 "Batteries, Wet Filled With Acid" Class 8 UN2794, Package Group III		

OUR NAME LOOKS GOOD ON ORANGE.

It's our color. It's our brand. New product-support initiatives and our strengthened dealer network is more proof that we are as passionate as ever about this industry. We are dedicated to building the best equipment in the world and keeping it painted Hitachi Orange.

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Specifications and design subject to change without notice.

