STANDARD EQUIPMENT

GENERAL

Access ladders Air conditioning Air cleaner protection All-hydraulic braking Automatic lubrication system Battery box, on deck Battery isolation switch Body down indicator, mechanical Body prop pins Centralized service panel Continuous heated body Cruise control, propel/retard Electric horn, dual Electronic hoist control Electric start 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

Propulsion interlock, body up Radiator grille guard Retarder grid package, 14 element Reverse alarm Rock ejector bars Supplementary steering system, accumulator Thermatic fan Tires, 50/80 R57(**)E4 Tow hooks front and rear Two-speed overspeed setting Wiggins fast fueling

Guard rails around platform

load weighing system

Neocon suspension struts

HAULTRONIC II

HID headlights

Hoist kickout

Ladder lights

Mud flans

Gauges:

Brake temperature Engine coolant temperature

HAULTRONIC II

Hourmeter (LCD)

(LCD) gauge

Voltmeter (LCD)

20'11

Speedometer

Tachometer

7 040

23'1"

Fuel gauge in cab (LCD)

Steer/brake supply pressure

Wheel motor temperature

Steer accumulator pre-charge 2 440

13'1"

Mirrors, right and left

Operator arm guard

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

GAUGES AND INDICATORS Contronic II monitoring and

alarm system, multi-function indicator lights: Air filter restriction Alternator Body up indicator Blower loss

Brake supply pressure Central warning Engine oil pressure Engine coolant temperature High beam indicator Hoist filter restriction Hoist oil temperature

Hoist supply pressure Parking brake applied Payload monitoring Steering filter restriction Steering oil temperature Traction system fault

Turn signals/hazard Wheel motor temperature

Back-up lights, (2) Dual combination stop and tail lights, LED (2) Dynamic retarding light, LED (1)

OPTIONAL EQUIPMENT

Ansul centralized fire extinguishing Engine heater system (12 nozzle) Hubodometer Auxiliary dump Auxiliary steer Body liners (400 BHN) Body side extensions Cab, acoustic package Canopy spillguard extension Engine coolant and oil heater (220 V AC)

Note: Dimensions shown are

for empty machine with 50/80 R57 tires.

9 450

13'2"

Keyless starter switch Kim Hotstart Mufflers Oil sampling connections Radiator shutters Tires (size, type & rating)

unit:mm

ft in

Standard and optional equipment may vary from country to country. Special options provided on request. All specifications are subject to change without notice.

3'9"

16'3"

14 250

46'9"

2'10"

6 220 20'5"

7 420

24'4"

7 850

25'9"

7 370

24'2"

6 960

22'10"

ີ 8'3" ີ

5 380

17'8"

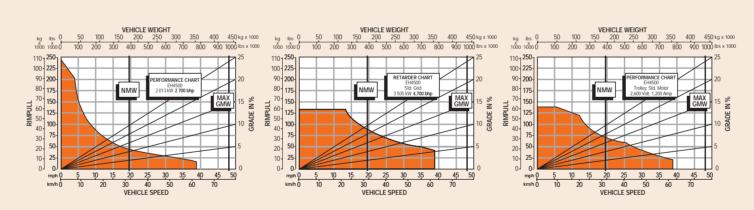
8 150

26'9"

Trolley assist configuration

design without prior notice. The illustrations do not necessarily show the standard version of the machine.

Performance Data: EH4500



INSTRUCTIONS:

Diagonal lines represent total resistance (Grade % plus rolling resistance %). Charts based on 0% rolling resistance, standard tires and gearing unless otherwise stated.

- 1. Find the total resistance on diagonal lines on right-hand border
- of performance or retarder chart.
- 2. Follow the diagonal line downward and intersect the NMW or

NOTE: Photos and illustrations throughout may show optional equipment.

Under our policy of continuous product improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

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EH4500 AC WHEEL MOTOR System efficiency is significantly higher than DC · Full retarding capability, down to zero speed, equal to or greater than the starting rimpull · Higher operating speed · Increased retarding capability reduces brake wear · AC motors are brushless, and essentially maintenance free Performance Advantages Productivity **Operating Costs** Under our policy of continuous product improvement, we reserve the right to change specifications and

EH4500 HITACHI EH 4500 **Maximum Payload** 255.4 m tons (281.6 U.S. tons) **Maximum Payload** with Standard Liners 241.8 m tons (266.6 U.S. tons) **Maximum GMW** 435 456 kg (960 000 lb) Cummins QSK60-L Detroit Diesel 16V-4000 Rated Power 2 013 kW (2 700 hp) HITACHI

Clearance lights, LED (4) Engine compartment lights, (2)

MACHINE LIGHTS

Payload monitoring lights, LED Rear axle light, (1) Turn signals and four-way flashers

20'2"

14 150

46'5"

Specifications: EH4500



Make Model Type Aspiration	16V- 4 Cy Turb low	4000	ged & rature	DDEC IV	QSk 4 Cy Two turbo temp	stage ocharg	ed & low re afterco	
Gross Power @ (SAE J1995)	kW	hp	2 013	2 700	kW	hp	2 013	2 700
Net Power @ 1 (SAE J1349) Maximum Torque	kW	hp		2 646		hp 500 rp	1 963 mß	2 633
(SAE 1995) No. Cylinders Bore & Stroke	16		190	8 064	N-m 16		10 629 190	7 840
Displacement Starting	L Elec	in ³ tric	65.0	3 966	L Elec	in³ tric	60.2	3 672



ELECTRIC DRIVE

Controls and Alternator

Euclid 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.

Euclid 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.

Planetary Ratio	Standard 35.816:1	Optional 40.789:1
Maximum Speed	km/h 62.0	km/h 54.4



Standard - Front and Rear		Rim W	idth .	
50/80 R57(**)E4 Radials	mm	in	864	34
Optional - Front and Rear				
50/90 R57	mm	in	864	34

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



ELECTRICAL SYSTEM

Twenty-four volt system. 250 amp battery charger. Eight 12-volt, heavyduty batteries connected in series/parallel.



BODY CAPACITY

	m ³	yd³
Struck (SAE)	105.4	137.9
Heap 3:1	134.3	175.6
Heap 2:1 (SAE)	147.6	193.1



WEIGHTS

	Detroit Diesel		Cummins	
Chassis with Hoist Body Vet Machine Weight Empty Axle Weights Front Axle	kg 148 017 31 996 180 014 90 391	396 862 199 278	kg 149 512 31 996 181 508	400 157 199 764
Rear Axle Maximum GMW [50/80 R57(**)E4] Including Options, 50% Fuel, Operator & Payload Not to Exceed oad Weight Distribution Front - 34% Rear -		960 000	90 897 435 456	200 393 960 000
Maximum Payload	255 442	563 138	253 948	559 843

Note: Maximum GMW subject to EUCLID-HITACHI approval for a given application.

Options: Approximate change in Net Machine Weight:

Body Liners, Complete	kç 13 60	•	3	lb 0 000
ax. Payload with Body Liners Complete	241 834	533 138	240 340	529 843
Floor Sides and front Corners Canopy Top Rails	mm mm mm mm	in in in in in	19 10 19 6 10	0.75 0.39 0.75 0.24 0.39



STEERING SYSTEM

Flow-amplified, closed-center hydrostatic power steering system using two double-acting cylinders with pressure unloading type compensated piston pump and a brake actuation/steering system reservoir. Accumulators provide supplementary steering in accordance with J/ISO 5010 and constant steering rate under all conditions. A tilt/telescopic steering wheel with 350 of tilt and 57,15 mm 2.25" telescopic travel is standard.

Steering Angle				42°
Turning Diameter (SAE)	m	ft in	28.47	93.4
Steering Pump Output				
(@ 1900 rpm)	L/min	gpm	249.0	65.8
System Pressure	kPa	psi	20 685	3 000
Filtration - Pressure line Beta G	rating = 1	200		
Beta 10 ratio = 800				



HYDRAULIC SYSTEM

Two (2) Euclid three-stage, 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	S		22.2	
Hoist Pump Output				
@ 1900 rpm	L/min	gpm	969.0	256.0
System Relief				
Pressure	kPa	psi	18 961	2 750
Filtration - Pressure lin	e Beta G rati	ng = 200		
Beta 10 ratio = 800		_		



BRAKE SYSTEM

Brake systems meet or surpass SAE J/ISO 3450.

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

The Euclid 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 oilcooled

Front Axle - Dry Disc

Disc Diameter Each				
(2 discs/axle)	cm	in	122.0	48
Brake Surface Area Per Axle	cm ²	in ²	17 032	2 640
Lining Area Per Axle	cm ²	in ²	6 194	960
Brake Pressure (Max.)	kPa	psi	20 685	3 000
Rear Axle - Oil-Cooled Wet D	isc			
Brake Surface Area Per Axle	cm ²	in ²	149 993	23 248
Brake Pressure (Max.)	kPa	psi	15 170	2 200

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

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

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 air flow provided by a blower driven by a single electric motor.

Maximum dynamic reta	arding with co	ntinuous ra	ted blown	grids:
Standard	kW	hp	3 505	4 7
Optional	kW	hp	4 474	6 00



COMMAND CAB III

Integral ROPS/FOPS Command Cab III integral ROPS (Rollover

Protective Structure) is standard in accordance with J/ISO 3471.

Double wall construction of 11 gauge inner and outer steel panels produces a more structurally sound cab. Foam rubber lining material along with foam rubberbacked carpeting and multiple

layered floor mat act to absorb sound and control interior temperature. A properly maintained cab from Euclid, tested with doors and windows closed per work cycle procedures in SAE J1166, results in an operator sound exposure Leq (Equivalent Sound Level) of 81 dB(A). A three-point rubber iso-mount arrangement to the deck surface minimizes vibration to the operator compartment.

Monitoring System

CONTRONIC II monitors and diagnoses all onboard systems including Siemens drive system and engine. Data links offer complete integration, while a single multi-language Liquid Crystal Display (LCD) clearly details machine functions. Downtime is minimized with faster and more reliable troubleshooting and analysis.

HAULTRONIC II load weighing system offers benefits such as better equipment utilization on the jobsite, accurate unit and fleet production results, and benchmark unit statistics against fleet results. Cycle time, distance and cycle count can all be measured and recorded to further improve job productivity. HAULTRONIC II is fully integrated with CONTRONIC II vehicle monitoring system and display interface, avoiding potential failure or error common in aftermarket systems.

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.

Comfort and Ease of Operation

A wrap-around style dashboard positions controls within easy reach and visual contact. A full complement of easy-to-read gauges, CONTRONIC II monitoring and warning system, a spacious environment, six-way adjustable air seat, tilt/telescopic steering wheel, filtered ventilation, door locks, and a full size trainer seat, all contribute to operator safety and comfort.



SUSPENSION

Front and Rear Suspension

For years, Euclid haulers have enjoyed an industry-wide reputation for superior suspension systems. That experience and knowledge has now been pushed to the next level, to develop the truly advanced ACCU-TRAC suspension for the EH4500.

The new ACCU-TRAC suspension system features independent trailing arms for each front wheel with NEOCON struts, containing energy absorbing gas and compressible NEOCON-E™ fluid. mounted between the king pins and the frame. This arrangement allows a wider front track that provides a better ride, improved stability and a reduced turning circle. The rear NEOCON struts are mounted in a more vertical position which allows a more pure axial loading and reduces the tractive and breaking forces transmitted to the nose cone.



NEOCON struts outperform competitive strut designs by improving isolation, stability, and control. Improved isolation means reduced impact loading on the structural members of the machine and greater operator comfort, resulting in longer equipment life and productivity. Improved stability means more consistent dynamic response of the machine to fluctuating load energy, resulting in predictable machine performance. Improved control also means better machine maneuverability.

The Euclid frame and ACCU-TRAC suspension system are designed to work in unison to provide maximum structural integrity and operator comfort. The fabricated rectangular frame rail construction provides superior resistance to bending and torsional loads while eliminating unnecessary weight. The unique ACCU-TRAC independent trailing arm suspension absorbs haul road input, minimizing suspension-induced frame twisting while providing independent tire action. NEOCON ride struts are mounted with spherical bushings, eliminating extreme sidewall forces by ensuring a purely axial input to the ride strut. The wide track stance of the ACCU-TRAC suspension system and the long wheel base assure a more stable, comfortable ride.



FRAME

Full fabricated box section main rails with section height tapered from rear to front. Wider at the rear to support the loads and narrower at the front to allow for engine accessibility. One piece top and bottom flanges that eliminate cross member tie in joints and provide a large exposed center area for access to major components. Large radii minimize stress concentrations. Welded joints are oriented longitudinally to the principal flow of stress for greater durability and more strength. Frame utilizes 345 N/mm² 50 000 psi yield strength alloy steel that is robotically welded to ensure high quality welds.



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:							
	mm	in					
Floor	19	0.75					
Front	10	0.39					
Sides	10	0.39	A STATE OF THE PARTY OF THE PAR				
Canopy	6	0.24					
Corners	16	0.63					
High strength 690 N/mm ² 100 000 psi alloy							
steel is also	used	-					
for the cano	ру		No. of the last of				
side membe	rs						
and floor stif	feners.						
The body is	rubber	8					

The Euclid horizontal stiffener design minimizes stress concentrations, by dissipating load shocks over the entire body length. Closely spaced stiffeners provide additional protection by distances between unsupported areas.



cushioned on the frame.

SERVICE CAPACITIES

	L	U.S.gal
Accumulator	76.0	20.0
Crankcase (incl. filters)		
Detroit Diesel S-4000	220.7	58.3
Cummins QSK60-L	265.0	70.0
Cooling System		
Detroit Diesel S-4000	522.3	138.0
Cummins QSK60-L	522.3	138.0
Fuel Tank	3 785	1 000
Hydraulics		
Hoist System	780.0	206.0
Steering System	231.0	61.0
Euclid Planetary Drives	257.4	68.0
Front Wheels	27.0	7.0
Windshield washer	7.6	2.0