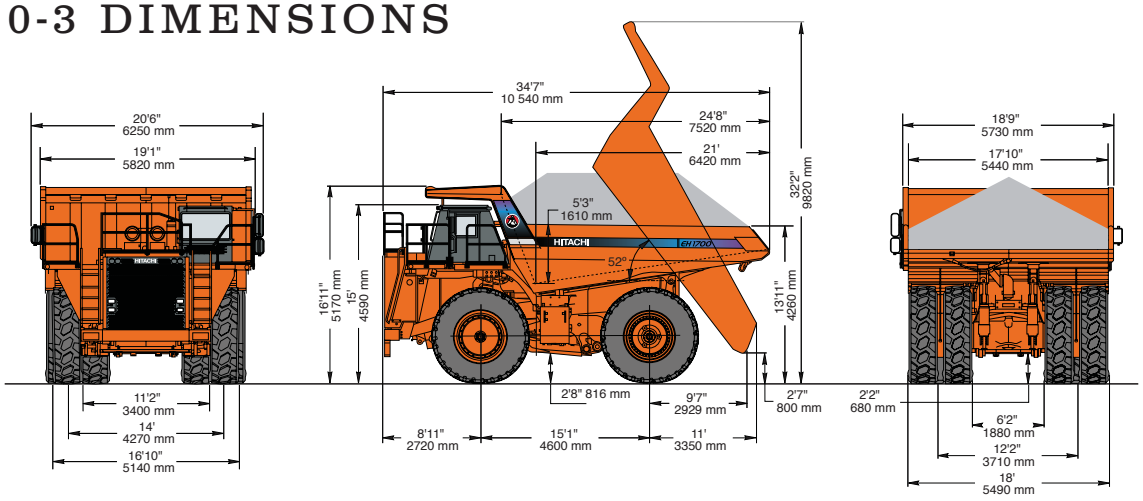
EH1700-3 SPECIFICATIONS

TARGET GMOW: 360,008 LB (163 300 KG)

RATED POWER: 1,050 HP (783 KW)

HITACHI

EH1700-3 DIMENSIONS



STANDARD EQUIPMENT

General

- All-hydraulic braking
- Allison H8610A transmission
- Automatic transmission shifting
- Battery disconnect switch
- Body-down indicator
- Body prop cable
- Body-up and -down cushioning
- Body-up speed restriction, with light
- Canopy arm guard
- Canopy spill guard
- Circuit port, fuse
- Continuous-heated body
- Cooling system surge tank
- Dagger clamps (rear wheels)
- DC/DC converter, 25 amp
- Driveline guard, front
- Electric horns
- Electric start
- Electronic hoist control
- Engine access ladders
- Engine belt protection
- Engine compartment light
- Fan guard
- Fenders
- Fixed steering stops
- Fluid sampling port
- Front brake cut-off switch
- Fuel/water separator
- Guardrails
- Hitachi Independent Trailing Arm Suspension (front)
- Hoist interlock
- Load/dump brake
- Lube system, centralized
- Mirrors, right and left
- Hand adjustable mud flaps
- NEOCON-E suspension struts
- Park brake, dry disc
- Park-brake interlock
- Radiator grill guard
- Radiator, premium core
- Radiator shutters, engine ECM-controlled
- Rimex MES rims for 27.00 R49
- Reverse alarm and light
- Rock-ejector bars
- Sight gauges for hoist tank, steering tank, and transmission
- Steering accumulator
- Tire guards, bolt-on
- Tow points, front
- Transmission guard
- Water-to-oil transmission cooler
- Wet disc brake wear indicators
- 24 volt to 12 volt converted

Cab

- 12-volt 20-amp circuit
- 12-volt accessory connection
- Air conditioning
- Air-filtration/replaceable element
- Cab interior light
- Cigarette lighter and ashtray
- Climate center with air conditioner and heat
- Door locks
- Footrest (left)
- Trainer seat
- Heater and defroster, 40,000 Btu
- Integral ROPS/FOPS cab
- ISO driver envelope
- Liquid crystal display
- Hitachi CCU
  - Clutch pressure
  - Distance traveled
  - Engine oil pressure
  - Fuel gauge
  - Gear selection
  - Intergrated transmission diagnostics
  - Load counter
  - Total engine hours
  - Total idle hours
  - Voltmeter
- Modular instrumentation
- Quick-connect hydraulic test ports
- Rear-view camera
- Rubber floor mat
- Seat, air ride
- Seat belts, retractable (operator/trainer)
- Speakers, antenna, and wiring
- Tilt/telescopic steering wheel
- Tinted safety glass
- Windshield washer, intermittent wiper

Monitor Panel

- Gauges
  - Engine Coolant Temperature
  - Speedometer (mph & km/hr)
  - Tachometer
  - Fuel Gauge
- Lights w/ ISO Symbols
  - Active Traction Control (optional)
  - Battery charge
  - Body up
  - Brake system oil pressure
  - Central warning (stop)
  - Central warning (yellow caution)
  - Electronic downhill speed control (optional)
  - Engine coolant level
  - Engine oil pressure
  - Filter restrictions
  - High beam
  - Parking brake
  - Payload red (optional)
  - Payload yellow (optional)
  - Retarder temperature
  - Seat belt disconnected
  - Steering oil pressure
  - Transmission oil pressure
  - Transmission oil temperature
  - Turn signal/ hazard
- LCD (Liquid Crystal Display)
  - Adjustable units of measure
  - Brake oil pressure
  - Brake oil temperature
  - Date and time
  - Distance travelled
  - Engine coolant temperature
  - Engine oil pressure
  - Engine RPM
  - Hourmeter
  - Load Count
  - Odometer
  - Park brake applied
  - Service intervals
  - Steering oil pressure
  - Steering oil temperature
  - System diagnostics
  - Transmission oil pressure
  - Transmission oil temperature
  - Transmission range selection
  - Travel speed
  - Voltmeter

Machine Lights

- Backup lights (1)
- Clearance lights (LED) (4)
- High-intensity headlights (HID) (4)
- Stop and tail (2)
- Turn signals and 4-way flashers

OPTIONAL EQUIPMENT

Engine

- 1,205 hp (899 kW)

Transmission

- Allison H9610A

Cab

- Active Traction Control (ATC) w/ Electronic Downhill Speed Control (EDSC)
- AM/FM radio with CD/MP3 player
- Power cab window
- Satellite radio
- Semi-active suspension operator seat

Chassis

- Automatic lube system, Lincoln or Groeneveld
- Auxuliary backup light
- Body liner (400 BHN) plates, standard or heavy duty
- Body side extension with rock cap
- Canopy spill guard extension
- Cold start - mild (coolant warming and circulation type)
- Cold start - extreme (coolant warming and circulation type and other additions
- Driveline guard, rear
- Engine compartment lights
- Engine ground level shut-off
- Exhaust system, deck mounted
- Fire suppression system, Ansul manual
- Fire suppression system, deck mounted
- Fluid service center with or without fast fueling
- Fog lights
- HAULTRONIC III-payload monitoring system
- Heated mirrors
- Hill hold brake
- Rock cap
- Sound suppression package

Miscellaneous

- 82-cubic-yard body (for lighter materials only
- Extra operator's manual
- Extra parts manual — hard copy or CD
- Service manuals — hard copy or CD

EH1700-3 SPECIFICATIONS

ENGINE

	Standard	Optional	Optional
Model	Detroit Diesel MTU 16V - 2000	Detroit Diesel MTU 16V - 2000	Cummins QST30
Configuration	4-cycle diesel, 16 cylinders	4-cycle diesel, 16 cylinders	4-cycle diesel, 16 cylinders
Emission Certification	U.S. E.P.A. Tier-2	U.S. E.P.A. Tier-2	U.S. E.P.A. Tier-2
Aspiration	Turbocharged/Aftercooled	Turbocharged/Aftercooled	Turbocharged/Aftercooled
Rated Output @ 2,100 rpm			
Gross (SAE J1995)	1,050 hp (783 kW)	1,205 hp (899 kW)	1,200 hp (895 kW)
Net (SAE J1349)	953 hp (710 kW)	1,108 hp (826 kW)	1,121 hp (836 kW)
Maximum Torque	3,292 ft/lb (4461 N•m) @ 1,350 rpm	3,905 ft/lb (5296 N•m) @ 1,500 rpm	3,751 ft/lb (5086 N•m) @ 1,400 rpm
Bore and Stroke	5.12 in. x 5.91 in. (130 mm x 150 mm)	5.12 in. x 5.91 in. (130 mm x 150 mm)	5.51 in. x 6.50 in. (140 mm x 165 mm)
Piston Displacement	1,944 cu. in. (31.9 liters)	1,944 cu. in. (31.9 liters)	1,861 cu. in. (30.5 liters)
Torque Rise	25%	30%	25%
Starting	Electric	Electric	Electric

TRANSMISSION

Model	Allison H8610A, remote-mounted, fully automatic, planetary type, with integral lockup converter	Allison H9610A, remote-mounted, fully automatic, planetary type, with integral lockup converter
Ranges	Six forward, one reverse	Six forward, two reverse
Control	Allison commercial CEC2 electronic shift system with Shift Energy Management (SEM)	Allison commercial CEC2 electronic shift system with Shift Energy Management (SEM)

Maximum Speeds @ Governed Engine Speed with Standard 27.00 R49(**) E4 Tires

Differential	3.15:1			
Planetary	8.00:1			
Gear	Ratio	mph (km/h)	Ratio	mph (km/h)
1	4:24	6.0 (9.6)	4.24	6.0 (9.6)
2	2.32	10.9 (17.5)	3.05	8.3 (13.3)
3	1.69	15.0 (24.1)	2.32	10.9 (17.5)
4	1.31	19.3 (31.1)	1.67	15.0 (24.4)
5	1.00	25.3 (40.7)	1.00	25.3 (40.7)
6	0.73	34.6 (55.7)	0.72	35.1 (56.5)
R1	5.75	4.4 (7.1)	5.75	4.4 (7.1)
R2	—	—	4.13	6.2 (9.9)

DRIVE AXLE

Model Differential	2657
Axle Design	Full floating axle shafts, Model 2657 differential and single reduction planetary at each wheel.
Traction Control	Optional electronic downhill speed control feature
Differential and Final-Drive Ratios	
Differential	3.15:1
Planetary	8.00
Total Reduction	25.2:1
Maximum Speeds	
With 27.00 R49(**) E4 tires	34.6 mph (55.7 km/h)

TIRES

Standard – Front and Rear	Rim Width
27.00 R49(**) E4 (standard)	19.5 in (495 mm)

Optional tire brands and tread patterns available.

ELECTRICAL SYSTEM

24-volt starting, lighting, and accessories system. 75-ampere alternator with integral transistorized voltage regulator. Two 12-volt heavy-duty batteries capable of 1300 cold cranking amps, each, at 0 deg. F (–18 deg. C). A Hitachi solid-state reprogrammable controller controls and monitors hauler systems, provides output information to control gauges and lights, and incorporates connections for diagnostic tools.

BODY

Struck (SAE)	51.7 yd^3 (39.5 m^3)
Heap 3:1	70.8 yd^3 (54.1 m^3)
Heap 2:1 (SAE)	79 yd^3 (60.4 m^3)

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

WEIGHTS

The net machine weight stated below includes standard equipment. Net machine weight changes will directly affect the Nominal Payload.

Chassis with Hoist	116,120 lb. (52 672 kg)
Body	34,094 lb. (15 465 kg)
Net Machine Weight	150,214 lb. (68 137 kg)

WEIGHTS (CONTINUED)

Target GMOW		
with Standard Tires 27.00 R49(**) E4	360,008 lb. (163 300 kg) — includes operator and 100% fuel	
Nominal Payload	95.2 metric tons (104.9 tons) (The Nominal Payload specification is calculated using the Hitachi Loading Policy.)	
Load Weight Distribution	Empty	Loaded
Front	48%	33%
Rear	52%	67%

STEERING SYSTEM

Closed-center, full-time hydrostatic power steering system using two double-acting cylinders, pressure-limit with unload piston pump, and brake actuation/steering system reservoir. Accumulator provides supplementary steering in accordance with SAE J1511 and ISO 5010. Tilt/telescopic steering wheel with 35 deg. of tilt and 1.88 in. (47.7 mm) telescopic travel is standard.

Steering Angle	38 deg.
Turning Diameter (SAE)	71 ft. 6 in. (21.8 m)
Steering Pump Output	41.8 gpm (158.1 L/min.)
System Operating Pressure	2,755 psi (19 MPa)

HYDRAULIC SYSTEM

Two 2-stage, double-acting cylinders, with cushioning in retraction, inverted and outboard mounted. Separate Hoist/Brake Cooling reservoir and independent tandem gear pump. Control valve mounted on reservoir.

Body Raise Travel	60 deg.
Body Raise Time (at 2,100 rpm)	12.8 sec.
Body Float Time	15.5 sec.
Brake Cooling Pump Output (at 2,100 rpm)	124.7 gpm (472 L/min)
Hoist Pump Output (at 2,100 rpm)	124.7 gpm (472 L/min)
System Relief Pressure	2,944 psi (20.3 MPa)

HI-TECH ROPS/FOPS CAB

ROPS complies with ISO 3471 and SAE J1040-May 94. FOPS complies with ISO 3449. Double-wall construction of 11-gauge inner and outer steel panels, lends itself to a more structurally sound cab. Multiple layered floor mats act to absorb sound and control interior temperature. A three-point rubber isomount arrangement to the deck surface minimizes vibration to the operator compartment.

EXCELLENT SERVICEABILITY

A removable front panel allows easy access to service brake valves, retarder valve and heater assembly. A removable cover located behind the operator's seat provides easy access to the Transmission Controller (TCU), Central Controller (CCU) and all electrical junction points.

COMFORT AND EASE OF OPERATION

A flat-panel-style dashboard positions controls within easy reach and visual contact. A full complement of easy-to-read gauges, automobile-type monitor with warning system, a spacious environment, multiple position adjustable seat, tilt/telescopic steering wheel, filtered cab ventilation, and door locks all contribute to operator convenience, control, and comfort.

BODY

The body has been made to the flat-floor, flat-tail-chute design. The rear hinge has been designed to cause the hinge pin to float when the body is in the fully lowered position. The weight of the body and payload is distributed across rubber body pads that are evenly spread across the length of the body rail-box that rests on the truck frame.

Thickness:	
Floor	.69 in. (18 mm)
Front Plate	.31 in. (8 mm)
Sides	.31 in. (8 mm)
Canopy	.19 in. (5 mm)

The Hitachi horizontal stiffener design minimizes stress concentrations. Load shocks are dissipated over the entire body length. Closely spaced stiffeners provide additional protection by minimizing distances between unsupported areas.

Optional Body Liners

Body Liners – Medium-Duty	
Floor & Corners	.38 in. (10 mm)
Sides & Front	.25 in. (6 mm)
End Protection	.25 in. (6 mm)
Body Liners – Heavy-Duty	
Floor & Corners	.63 in. (16 mm)
Sides & Front	.31 in. (8 mm)
End Protection	.25 in. (6 mm)
Partial Liner – Heavy-Duty	
Floor & Corners	.63 in. (16 mm)
End Protection	.25 in. (6 mm)
Rock Cap	
Top of Body Side Plate	.38 in. (10 mm)

SERVICE CAPACITIES

Engine, Oil Pan, and Filters	31.3 gal. (118.3 L)
Transmission and Cooler (including Lines)	26 gal. (99 L)
Cooling System	131 gal. (497 L)
Fuel Tank	300 gal. (1136 L)
Hydraulics	
Hoist System Fill Capacity	118.2 gal. (448 L)
Steering System Fill Capacity	44.9 gal. (170 L)
Drive Axle (2 Wheels and Differential)	85 gal. (322 L)
Windshield Washer Fluid	1.5 gal. (5.7 L)

BRAKE SYSTEM

Complies with SAE J1473/ISO 3450. All-hydraulic actuated braking system provides precise braking control and quick system response. The Hitachi brake controller has a unique variable front-to-rear brake proportioning that maximizes the stopping performance under all road conditions. 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, secondary braking, and retarding. The wet-disc brake is designed with automatic retraction to prevent drag. The brakes are a multi-plate design and continuously oil-cooled. The sealed design protects against environmental contamination for prolonged service life. Separate pedals activate the service braking and retarding functions. Two independent circuits within the service brake system provide backup stopping capability. System is manually or automatically applied to stop machine within prescribed braking distance. The parking brake is a dry-disc mounted on differential input shaft and controlled by a toggle switch on the dash. Brakes apply automatically if hydraulic pressure is lost.

FRONT AXLE (DRY DISC)	
Disc Diameter, Each (2 discs/axle)	40 in. (101.6 cm)
Brake Surface Area Per Axle	2,154 sq. in. (13 899 cm^2)
Lining Area Per Axle	640 sq. in. (4129 cm^2)
Brake Pressure (Max.)	2,755 psi (19 MPa)
REAR AXLE (OIL-COOLED WET DISC)	
Brake Surface Area Per Axle (16 discs)	12,288 sq. in. (79 277 cm^2)
Brake Pressure (Max.)	2,002 psi (13.8 MPa)
PARKING BRAKE (DRY DISC)	
Disc Diameter	27 in. (68.6 cm)

SHIPPING INFORMATION

NUMBER/CONTENTS OF LOADS	
LOAD 1	
Chassis cab S/L	57,400 lb. (26 036.2 kg)
310 in. L x 152 in. W x 152 in. H	
Double drop float with full deck — maximum 16 in. deck to keep loaded height under 14 ft., minimum 26 ft. well lenght.	
LOAD 2	
Front axle	13,200 lb. (5987.4 kg)
Rear axle	23,300 lb. (10 568.7 kg)
Crated fuel tank	740 lb. (335.6 kg)
Total, 48 ft. flat legal width	37,240 lb. (16 892 kg)
LOAD 3	
6 — Tire/rim assemblies	4,200 lb. [each] (1905 kg)
1 — Carton chassis/body parts	6,250 lb. (2834.9 kg)
Total, 1/2 of 48 ft. flat — 108 in. wide	31,450 lb. (14 266 kg)
LOAD 4	
Left-hand body half (from Westech mills, WY)	17,000 lb. [no liners] (7711 kg)
Step deck float, 115 in. wide, 79 yd³	
LOAD 5	
Right-hand body half (from Westech mills, WY)	17,000 lb. [no liners] (7711 kg)
Step deck float, 115 in. wide, 79 yd³	

EXCAVATOR MATCH

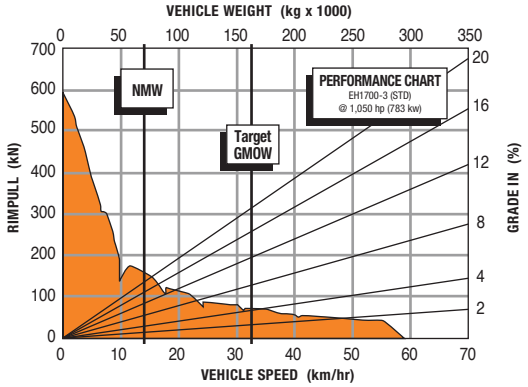
PASSES TO FILL EH1700-3**

EX1200-6 Excavator		EX1900-6 Excavator		EX2500-6 Excavator	
Shovel	**Backhoe**	**Shovel**	**Backhoe**	**Shovel**	**Backhoe**
6.5-cu.-yd. (5.0 m³) Bucket*	8.8-cu.-yd. (6.7 m³) Bucket*	14.4-cu.-yd. (11 m³) Bucket*	15.7-cu.-yd. (12 m³) Bucket*	19.6-cu.-yd. (15 m³) Bucket*	19.6-cu.-yd. (15 m³) Bucket*
11 to 12 Passes	8 to 9 Passes	5 to 6 Passes	5 to 6 Passes	4 to 5 Passes	4 to 5 Passes
		15.7-cu.-yd. (12 m³) Bucket*		21.6-cu.-yd. (16 m³) Bucket*	
		5 to 6 Passes		3 to 4 Passes	

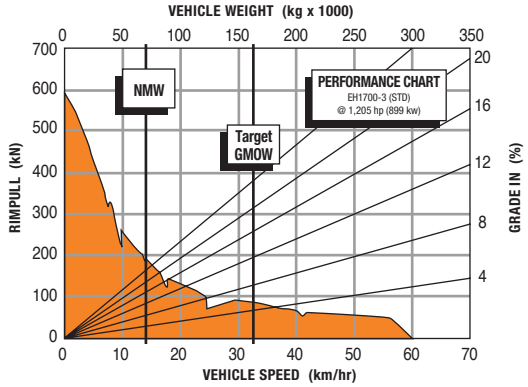
*Bucket Capacity (SAE, heaped).
** SAE 2:1 78.8-cu.-yd. (60.2 m³).

PERFORMANCE DATA

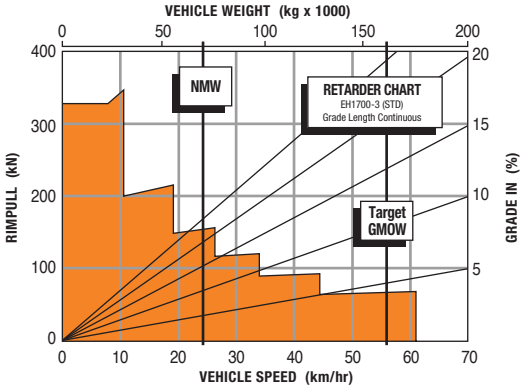
Performance Chart for EH1700-3 with Standard 1,050 hp (783 kW) Engine and Standard H8610A Transmission

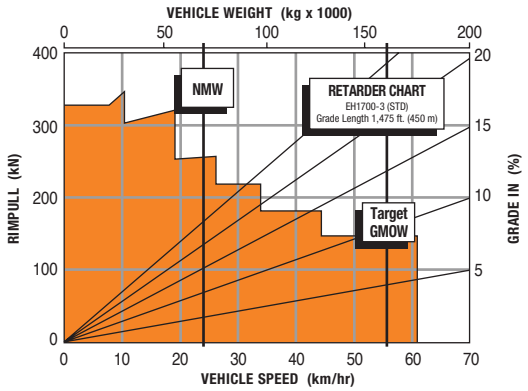


Performance Chart for EH1700-3 with Optional 1,205 hp (899 kW) Engine and Standard H8610A Transmission



Retarder Chart for EH1700-3 with Standard 1,050 hp (783 kW) Engine and Standard H8610A Transmission





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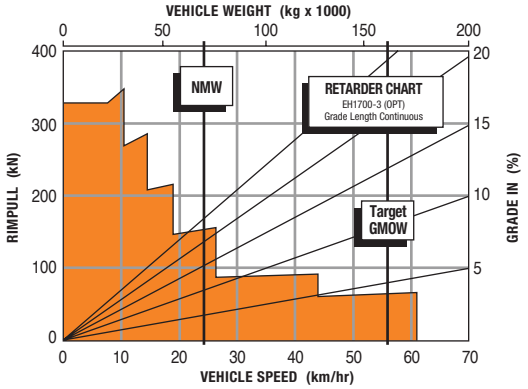

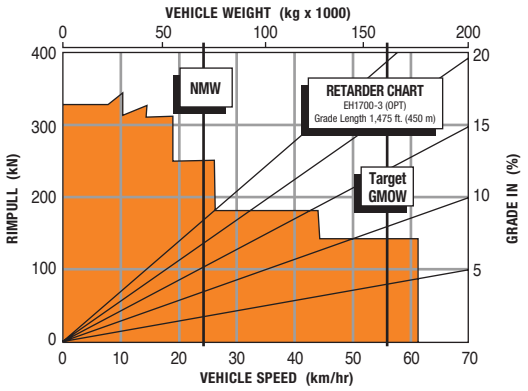

NOTES:

Diagonal lines represent total resistance (Grade % plus rolling resistance %).

Charts based on 0% rolling resistance, standard power of engine, standard tires, and gearing unless otherwise stated.

1. Find the total resistance on diagonal lines on right-hand border of rimpull or retarder chart.
2. Follow the diagonal line downward and intersect the NMW or GMOW weight line.
3. From intersection, read horizontally right or left to intersect the rimpull or retarder curve.
4. Read down for machine speed.

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Specifications and design subject to change without notice.

DKAEH1700HT Litho in U.S.A. (08-10)