EH series

HITACHI

Reliable solutions

EH5000AC-3

Aerial Angle





RIGID DUMP TRUCK

Model Code : EH5000AC-3
Nominal Payload with Standard Equipment : 296 tonnes (326 tons)
Target Gross Machine Operating Weight : 500 000 kg (1,102,311 lb.)
Engine : Standard : Cummins QSKTTA60-CE
Rated Power 2 125 kW (2 889 PS, 2 850 HP)
Optional : MTU 16V4000 C31
Rated Power 2 125 kW (2 889 PS, 2 850 HP)

Hitachi EH AC-3 Promotion Movie.

Refined engineering and advanced Hitachi AC Drive system technology have created hauling capability well recognized in the surface mining industry.

The EH5000AC-3 continues to prove itself as an exceedingly capable and reliable solution to mine applications worldwide.



Note: Photo may include optional equipment, accessories,and all standard equipment with some differences in color and features.

AC Drive Proven Performance & Economic Advantages

Hitachi engineered AC drives make your hauler a more valuable asset in your mining operation. Better performance, higher availability, and significant reductions in maintenance and operating costs - result in a lower cost per tonne and a higher return on your investment.

High-Powered Engine Selection

Standard Cummins QSKTTA60-CE engine or optional MTU 16V4000 C31 engine is selectable.

Long Frame Life

A fabricated box section and rectangular frame rail construction provides superior resistance to bending and torsional loads. One-piece top and bottom flanges eliminate cross member tie-in joints and provide a larger exposed center area for access to major components.

Tough Body

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

Well Matched: EH5000AC-3 & Excavators

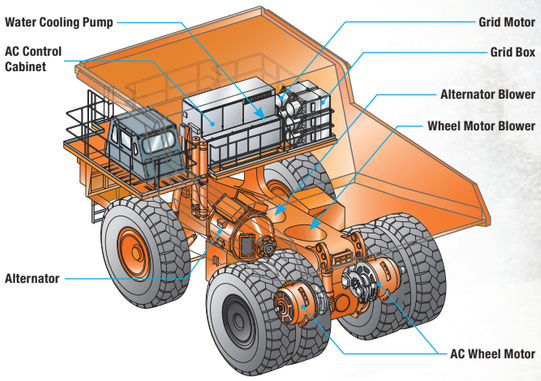
Excavator	EX3600-7		EX5600-7		EX8000-7	
Front	BH	LD	BH	LD	BH	LD
Bucket	*22.0 m^3 (28.0 cu. yd.)	22.0 m^3 (28.0 cu. yd.)	*34.0 m^3 (44.5 cu. yd.)	29.0 m^3 (38.0 cu. yd.)	*43.0 m^3 (56.2 cu. yd.)	40.0 m^3 (52.3 cu. yd.)
Passes	8	8	5	7	4	4

BH : Backhoe LD : Loading shovel * : SAE heaped capacity

AC Drive Advantage

Hitachi Drive Control System Movie.

Hitachi AC drive technology provides superior truck performance with higher top speeds, better gradeability and stronger electric braking. Hitachi inverter modules provide high rigid truck controllability and efficiency. The Hitachi AC wheel motors do not have commutators and brushes, which improves truck performance by providing reduced maintenance costs, higher truck availability and higher travel speeds. These advantages result in more productivity and lower costs per tonne. Hitachi AC drive systems also power electric train locomotives world wide.



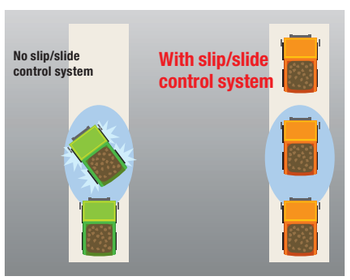


Hitachi Drive Control System

New Hitachi drive control system for optimal operational stability and performance as follows.

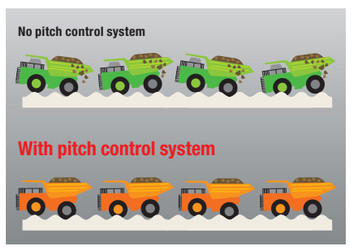
1. Slip / Slide Control System

If the system senses slipping or locking of rear wheels when traveling on slippery or frozen roads, it adjusts the torques of the wheel motors accordingly, bringing the truck more stable traveling.



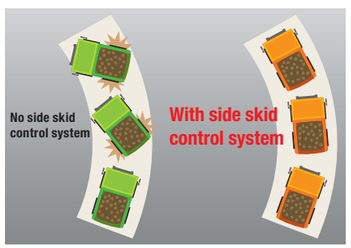
2. Pitch Control System

If the system senses pitching when traveling on bumpy roads or stopping abruptly, it adjusts the torques of the wheel motors accordingly to reduce pitching of the truck, resulting in better operating comfort and fewer load spillage.



3. Side Skid Control System

If the system senses oversteer or understeer from the newly equipped sensors, it adjusts the torques of the wheel motors accordingly to control the side skidding. This brings the truck smoother movements and more stable traveling and steering.



Note: This system is designed originally to enhance pleasant driving, so please drive at a safety speed or lower, and make periodic maintenance of the haul road.

AC Drive Control

Superior Electric Braking enables the driver to stop the truck using the electric brake pedal only with the exception of emergencies, because the AC drive control system applies the service brakes automatically just before the stopping, resulting in easy machine operation and longer time between service brake maintenance intervals.

Auto Cruise Control keeps vehicle speed constant within the set range by limiting the minimum vehicle speed.

Auto Retarding Control keeps vehicle downhill speed constant within the set range by limiting the maximum vehicle speed.

The AC Drive Wheel Motors

The Hitachi Dual Path Epicyclic Planetary design provides high efficiency and easy maintenance. Allowing the 1st (outer) planetary carrier to travel at wheel speed provides lower operating temperatures. Better component and lubricant life is the result of an inverter controlled lubricant circulation system that includes lubricant cooling and filtration.





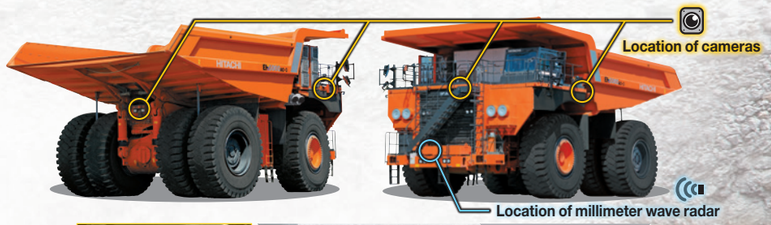
System to Improve Safety

Aerial Angle (Optional for Dump Truck)

Hitachi Dump Truck with Object Detect Assist

Aerial Angle Movie.

The dump truck Aerial Angle system is designed to assist in preventing collisions with obstacles. Aerial Angle has been newly implemented as an advancement and addition to the previous Peripheral Vision system. Obstacles within the front and surrounding areas of the machine are detected with warnings being activated by the system. The dump truck Aerial Angle has two modes. Stationary Mode detects any obstacles within the vicinity when the machine is stationary during dumping, loading, or when it is parked. Forward Mode warns the operator of the possibility of collisions during forward travel.







Blue frame photos : Stationary Mode

Orange frame photos : Forward Mode

Warning:
- When driving the vehicle, be sure to perform a direct visual check all around the vehicle with your eyes.
- This System is an auxiliary system to assist the operator in driving, and its use should never substitute the use of common sense safety measures, direct visual observation, and professional judgment. Never solely rely upon this System to operate the vehicle.
- Failure to understand or correctly interpret the images displayed and the alert features of this System may lead to accidents involving serious personal injury or property damage. Operate this System properly by thoroughly reading Aerial Angle Operator's Manual and getting a good understanding of this System before using it.
- The images projected by this System from above are processed, synthesized camera images; therefore, the surroundings may not continuously appear on the monitor, objects may appear upside down or may not appear, or otherwise appear differently from visual observation.
- Depending on the surrounding environment or the subject of detection, the detection function of this System may not work properly.
- The brightness of the surroundings, weather, road surface conditions, and shape and material of objects detected may cause the alarm of this System to become non-operational or malfunction.
- Do not operate the monitor when you are driving the vehicle.

Note: There are countries the system cannot be used in due to local laws and regulations etc.

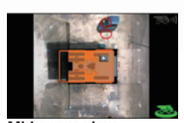
Stationary Mode

Screen Changeover Switch - Check the operating area with the choice of six different screens

The display layout of the previous Peripheral Vision system has been improved and now includes an additional screen (a total of six screens). This provides greater convenience allowing views to the sides as well as a birds-eye view of the machine itself.

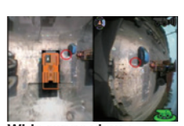

Wide range view + Rear view


Wide range view


Mid-range view


Close range view

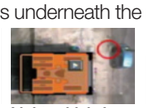

Left view + Wide range view


Wide range view + Right view

Obstacle Detection (When Stationary) - Supports safer checks before operating

The camera places markers on the screens as it detects obstacles. Red markers indicate any obstacles in the immediate vicinity of the machine, whereas yellow markers indicate obstacles further away. The markers will continue to follow obstacles until they no longer appear on the screen and have been avoided. This system enables the operator to check for outside obstacles on-screen without having to leave machine. The color of the machine's icon will change red when an obstacle comes underneath the machine to warn the operator.


Light vehicle is far away


Light vehicle is getting closer


Shape of the light vehicle will be transformed in screen composition


Light vehicle is underneath the dump truck


If Light vehicle is gone out of the right side range, Screen will be changed to Close Range Views. And then, the red-bar will be displayed.

Note: For obstacles underneath the machine, the camera is only able to detect obstacles within its range.

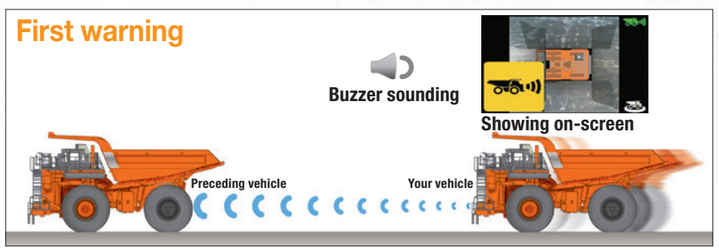
Forward Mode

Obstacle Detection (While Traveling) - Reduces collision risks during forward travel

Obstacles to the front and their distance from the machine are detected by a millimeter-wave radar. A warning will be activated when another machine in front comes too close. This warning notifies the operator by a buzzer sounding as well as being showing on-screen. Warnings are set at two distance ranges depending on the position of the machine in relation to obstacles.

The system adjusts the warning activation distance depending on the current gross laden weight of the vehicle.

The system detects the wheel rotation direction and enables or disables the warning accordingly. (This is activated only during forward travel.)



Ease of Operation



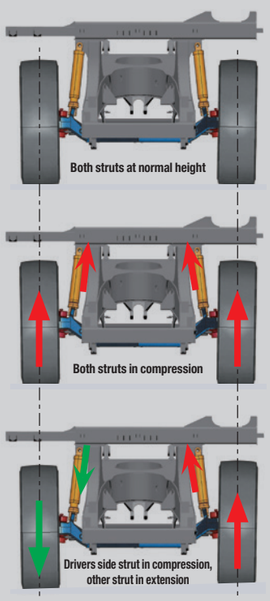
Superior Suspension

The Hitachi trailing arm suspension system delivers excellent maneuverability, even at higher speeds. The trailing arm layout offers greater ease of servicing while improving truck performance compared to suspended king-pin designs. The pivot mounting of the trailing arm design allows only axial input to the strut and allows wheel movement to the vertical plane only.

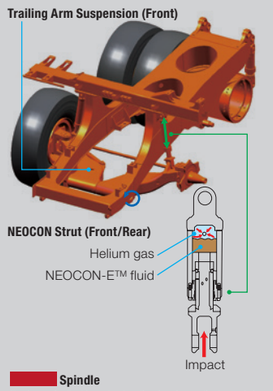
Features:

- Lateral forces that act on the front wheels are minimized, resulting in reduced tire scuffing.
- Dynamic friction (side-wall force) within the strut is low due to the features of the trailing arm suspension design, allowing the use of a lighter strut engineered to a smaller diameter and longer stroke.
- The necessary frame bulk (horse-collar structure) needed to mount a suspended king-pin is non-existent.
- The elimination of the “horse-collar” member provides greater engine access.
- The NEOCON strut used with the trailing arm suspension, improves operator and component isolation, provides better hauler stability and predictable operational control.
- Locating the king-pin close to the wheel assembly and at a slight angle results in low “Dry Park Steering” effort.
- Development of the compressible media, NEOCON-E™ fluid (proprietary, silicone based) for use in the suspension strut with Helium gas, results in an improved energy absorption (isolation) system and an improved energy release (stability) system that responds favorably whether traveling empty or loaded in a wide range of ambient temperatures.

The trailing arm suspension design allows the front struts to be removed and installed without removing the front brakes or tires. This means fewer tools and less labor time are required, resulting in less downtime and higher productivity.



With no horizontal deflection



Spindle
Each controlled by a hydraulic steering cylinder, rotates around the king-pin and the outer end of the trailing arm to position the wheels for steering. The spindles are attached by one simple tie-rod.

Trailing Arm
Main suspension member to which other suspension components are attached. The trailing arms hinge on a cross tube that is clamped to the front of the frame.

Neocon Strut
The energy absorption and release component of the trailing arm suspension system. Pinned to ball bushings at the frame and at the top of each trailing arm to prevent bending moments from transferring to the strut. Receives only axial input.

The Fast Filling System

The fast filling system, provided standard on the left side of the radiator, allows direct access at ground level for fast feeding of coolant, grease, hydraulic oil and engine oil. (Couplers are optional.)





1 **Hydraulic oil**
2 **Coolant 1**
3 **Coolant 2**
4 **Grease**
5 **Engine oil**

Electric Drive Enables Lower Diesel Fuel Consumption

Trolley System (Optional)

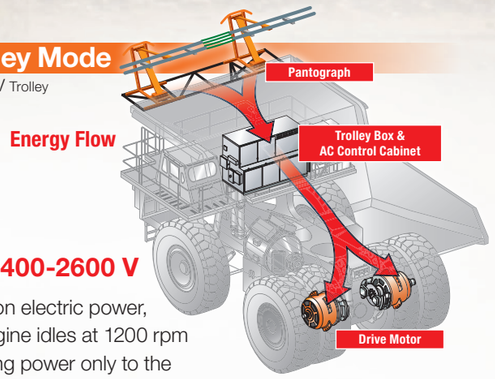
Hitachi Trolley Movie.

**Power supply from an overhead line provides powerful and relentless travel on slopes.
Switch between the on-board power source and an external power line smoothly and easily.
Comfortable, stress-free operation.**

Difference of Energy Flow between Trolley and Diesel Truck

Trolley Mode

V DC = V Trolley

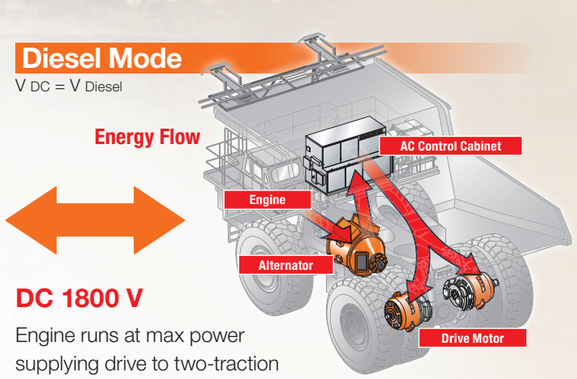


DC 2400-2600 V

While on electric power, the engine idles at 1200 rpm directing power only to the auxiliaries and the hydraulic pump - even when the machine is being driven uphill under load.

Diesel Mode

V DC = V Diesel



DC 1800 V

Engine runs at max power supplying drive to two-traction motors, all auxiliaries, and the hydraulic pump when being driven uphill under load.

Benefits of the Trolley System

- Higher speeds during loaded hill climbing - faster than in Diesel mode (Travels at approx. twice the speed of a large-motor vehicle in Diesel mode) ➤ **Shorter cycle times, higher productivity**
- Lower diesel fuel consumption
  High-efficiency trolley travel thanks to the high-voltage DC (2400-2600 V) system ➤ **Lower running costs, greater economy**
- Less engine stress leads to longer engine life ➤ **Lower running costs and greater economy and productivity due to less frequent engine overhauls**
- Lower exhaust emissions and lower engine noise ➤ **Environmental friendliness**
- Development of pantographs specifically for dump trucks ➤ **Reduces risk of damage due to vibrations and uses carbon-metallic contact strips**
- Body raising prohibited during trolley travel ➤ **Safer operation (electric shock prevention)**
- Low engine RPM during trolley travel (1,200 RPM) ➤ **Reduces noise inside cab**



Note: The model in this picture is EH3500AC-3.

TLA (Trolley Line Assist : Optional)

Operators can check the overhead trolley wire and pantograph from the Aerial Angle monitor.

1. Positioning Assist



Before entering the trolley section, this function assists the operator in aligning the truck with the trolley line.

2. Trolley Line Assist



During trolley mode, this function assists the operator to drive within the contact range of the pantograph and trolley line.

These functions make driving the trolley trucks easier.

Comfortable Space

Ample legroom

Drink holder

Foot rest

Net pocket

Front pocket

Front tray with edge block

Drink holder

Net pocket

Drink holder

Document holder







Note: Photo may include optional equipment, accessories,and all standard equipment with some differences in color and features.

HI-TECH ROPS/FOPS Cab

The HI-TECH ROPS/FOPS cab has been equipped with a Hitachi controller and a large centrally mounted, color Liquid Crystal Display (LCD) as used in Hitachi large sized excavators. Double wall construction of 11 gauge inner and outer steel panels produces a more structurally sound cab. A three-point rubber isolation-mount arrangement minimizes vibration to the operator compartment.





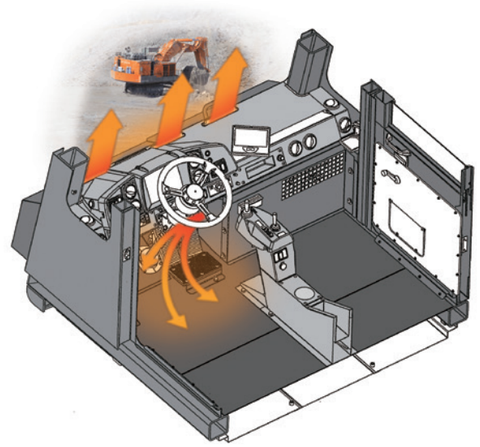


Excellent Vision with Air Conditioning Maintains a Comfortable Operating Environment

Additional A/C leg room vents are provided within the cab. These help to keep the lower leg room areas warm or cool depending on conditions providing a more comfortable working environment for the operator.



A new vent positioned for the lower legs.

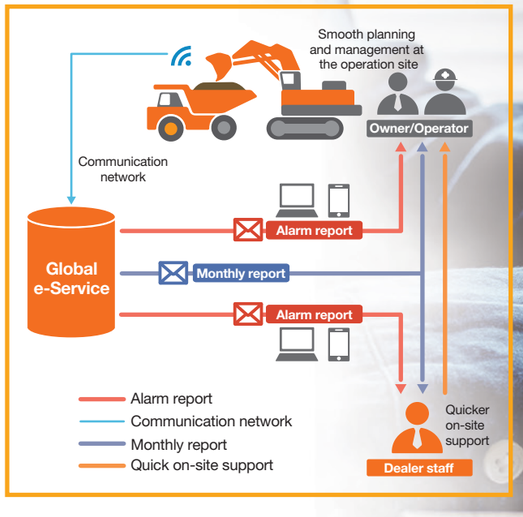


Machine Condition Monitoring

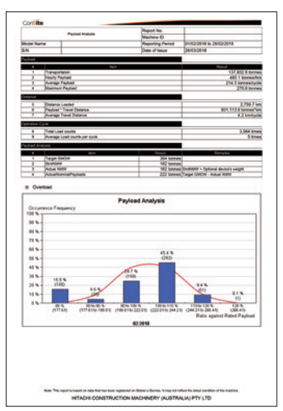
ConSite
Consolidated Solution for Construction Sites

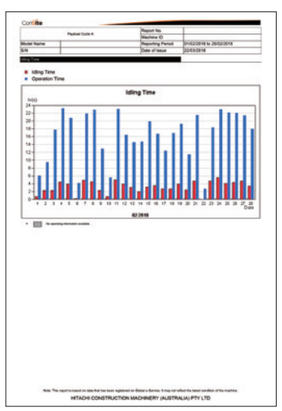
- **“Every month” Receive operation reports with advice via e-mail**
- **“Machine emergency” Receive Emergency Alarm notifications via e-mail**

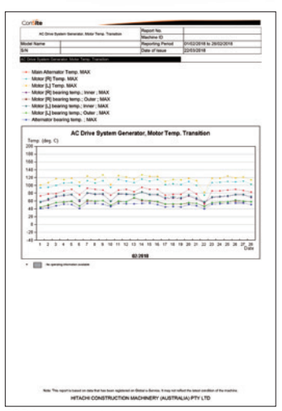
ConSite is a consolidated solution service that links you to your machines on the construction site.



Data Report Service - Monitor Your Machines Closely with ConSite


Payload analysis


Idling time


AC Drive components temperature



The report can be viewed on laptops, desktop computers, smartphones and tablets.

Warning:
· The data report service is available on machines equipped with the communication terminal.
· Contact Hitachi authorized dealers for the details of Data Report Service and machine models that are supported.
· The communication ability may depends on the situation of the worksite. Please confirm if your machine is currently communicating before having this service.
Under no circumstances shall Hitachi Construction Machinery Co., Ltd. and or Subsidiaries and its Dealers be held responsible or liable for any communication line failure, interruption, delay in operation or transmission or any other cause of action.

A. Monthly Report

A detailed report of the operational status for each machine will be sent to the registered e-mail addresses every month.

Benefits:

1. Monthly operational information helps you to analyse the operational efficiency of your machine and improve overall machine-operation status.
2. Each machine’s operational information can be shared with Hitachi authorized dealers, enabling a stable operation for your machine.

Key items included in the report

- Truck payload summary
- Truck cycle summary
- AC drive components temperature
- Fuel consumption & operation efficiency
- Major components oil temperature
- Various advice & comments

B. Alarm Report

If the machine’s alarm goes off and the problem requires urgent attention to prevent downtime, an emergency alarm report will be sent to the registered e-mail addresses.

Benefits:

1. Information of an alarm requiring urgent attention can be shared by the operator and owner, so that the necessary measures can be taken.
2. Alarm information can be shared with your dealer as well, to enable smoother coordination and reduce your machine’s downtime.

Key items included in the report

- Model name / S/N
- Hour meter
- Alarm code / name
- Recommended action
- Position

Simplified Maintenance



Low Maintenance Air filters with Evacuator Valves

Four Air filters with evacuator valves bring easy maintenance.



Ground Level Battery Box and Relay Box

The battery box door with gas cylinders allows the operator safe and easy maintenance.



Collapsible Step for Maintenance inside Rear Axle

The collapsible step and flat service stage inside rear axle bring higher serviceability and safety.



MEMO

SPECIFICATIONS

ENGINE

Standard

Model	Cummins QSKTTA60-CE
Type	4 Cycle Diesel w/ MCR fuel system
Aspiration	2 stage Turbocharged & Low Temperature Aftercooled
Emission Certification	U.S. EPA Tier 2
Rated power @1900 min^{-1} (rpm)	
ISO 14396	2 125 kW (2 889 PS, 2 850 HP)
Maximum Torque @1 500 min^{-1} (rpm)	
	11 218 N.m (1 144 kgf.m)
No. of Cylinders	16
Bore & Stroke	159 x 190 mm (6.26 in. x 7.48 in.)
Displacement	60 L (3,661 cu. in.)
Starting	24 Volt Electric

Optional

Model	MTU 16V4000 C31
Type	4 Cycle Diesel w/ DDEC
Aspiration	1 stage Turbocharged & Low Temperature Aftercooled
Emission Certification	Not Certified
Rated power @1900 min^{-1} (rpm)	
ISO 14396	2 125 kW (2 889 PS, 2 850 HP)
Maximum Torque @1 800 min^{-1} (rpm)	
	11 136 N.m (1 136 kgf.m)
No. of Cylinders	16
Bore & Stroke	165 x 190 mm (6.50 in. x 7.48 in.)
Displacement	65 L (3,967 cu. in.)
Starting	24 Volt Electric

Consult your Hitachi dealer for U.S. EPA Tier 4 Final / Euro Stage V engine options.

ELECTRIC DRIVE

HITACHI AC-Drive System

AC Control Cabinet

Rectifier

Number of units	1
Rated capacity	1 680 kW (2 284 PS, 2 253 HP)

IGBT Inverter

Number of units	2
Rated capacity per unit	1 200 kVA

Chopper

Number of units	2
Rated capacity per unit	1 950 kW (2 651 PS, 2 615 HP)

Equipped with reliable water cooling system. Pressurized cabinet to reduce dust. Equipped with lockable doors for safety. Equipped with small inverters to provide Grid motors and Blower motors with adequate AC current. Uniquely constructed for the Rigid Truck application

Alternator

Number of units	1
Capacity	2 050 kVA @ 1 900 min^{-1} (rpm)

Equipped with an auxiliary alternator that provides AC current to Grid motors, Blower motors, Control cabinet coolant pump and Final dlive oil cooling & filtrating pump. Air cooled by an AC drive blower.

AC Wheel Motor

Number of units	2
Capacity per unit	920 kW (1 251 PS, 1 234 HP)

Grid Box (Electric Brake)

Number of modules	6
Capacity per unit	625 kW (850 PS, 838 HP) (short time)

Equipped with inverter controlled variable speed cooling fan.

Axle

Planetary Ratio	41.0 : 1
Maximum Speed (Continuous)	56 km/h (35 mph)

TIRES

Front and Rear	Rim Width (Standard)
53/80R63	914 mm (36 in.)
	Rim Width (Optional)
	965 mm (38 in.)

Tire manufacturers offer tires having a range of capabilities suitable for a variety of applications. For high performance hauling it is important to consult with the tire manufacturer to choose a tire that is best matched to truck TGMOW, travel speed and customer specific jobsite conditions. Jobsite condition severity, may result in a reduced truck payload and travel speed recommendation.

ELECTRICAL SYSTEM

Twenty-four volt system. 140 ampere Cummins engine driven or 260 ampere MTU engine driven alternator. Four 245H52, 12 volt, heavy duty batteries connected in series/parallel.

BODY CAPACITIES

Struck (SAE)	148 m^3 (193.6 cu. yd.)
Heaped 3:1	185 m^3 (242 cu. yd.)
Heaped 2:1 (SAE)	202 m^3 (264.2 cu. yd.)

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

STEERING SYSTEM

Closed-center, full time hydrostatic power steering system using two double-acting cylinders and a variable displacement piston pump. Hitachi accumulators provide supplementary steering in accordance with ISO 5010 (SAE J1511), supplying a constant steering rate under all conditions. A tilt/telescopic steering wheel with 35 degrees of tilt and 57 mm (2.24 in.) telescopic travel is standard.

Turning Diameter (ISO 7457)	29.9 m (98 ft. 1 in.)

HYDRAULIC SYSTEM

Two (2) Hitachi three-stage, double-acting cylinders, with electronic controlled cushioning in retraction and extension, containing dual rod seals and urethane energized scrapers, inverted and outboard mounted. A tandem piston pump conbines with four position electronic pilot controlled hoist valve. The electrical controller is mounted to the shift tower.

Body Raise Travel	58 degrees
Body Raise Time	24 sec
Body Down Time (Float)	22 sec

BRAKE SYSTEM

Brake system complies with ISO 3450 (SAE J1473).

Service Brake

Service braking for the EH5000AC-3 is made up of front and rear hydraulically applied brakes and the electric brake.

Front Axle – Dry Disc

Disc Diameter Each (2 discs/axle, 4 calipers/disc)... 133.3 cm (4 ft. 4 in.)

Rear Axle – Oil-cooled Wet Disc

Total Friction Area per Brake..... 75 760 cm^2 (81 sq. ft.)

Secondary

Two of front hydraulic, rear hydraulic and electric brake within the service brake system provide modulated reserve braking capability. Both front and rear hydraulic brakes are automatically applied when loss of pressure is detected.

Parking Brake

This system is designed to use spring applied, hydraulically released brake calipers to hold the truck stationary.

Electric Brake

The Electric Brake is used for usual operating brake for the EH5000AC-3. The Hitachi AC Drive system provides all necessary truck speed control, including speed reduction to 0 km/h (0 mph) travel speed when the electric brake pedal is depressed. Also, the rear service brakes automatically apply at speeds below 0.5 km/h (0.3 mph) if this pedal is depressed.

Maximum dynamic braking (Standard)..... 3 750 kW (5 099 PS, 5 029 HP)

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.

SPECIFICATIONS

WEIGHTS (Approximate)

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

Chassis with Hoist & Body Parts	174 000 kg (383,604 lb.)
Body	30 000 kg (66,139 lb.)
Net Machine Weight	204 000 kg (449,743 lb.)

The Net Machine Weight specification includes operator and 100 % fuel.

Note:
Body parts mean assembled standard parts to the body, such as mud guards, body pads, rock ejector bars, arm guard and fasteners.

Nominal Payload	296 tonnes (326 tons)
Target GMOW	500 000 kg (1,102,311 lb.)

Note:
The Nominal Payload specification is calculated using the Hitachi Loading Policy. Specific job site requirements may result in an adjustment to the Nominal Payload weight. Consult your Hitachi dealer for a truck configuation which will match your haulage application.

Weight Distribution	Front	Rear
Empty	48 %	52 %
Loaded	33 %	67 %

HI-TECH ROPS/FOPS CAB

New HI-TEC ROPS/FOPS Cab
ROPS complies with ISO3471 and FOPS complies with ISO3449. A three-point rubber isolation mount arrangement to the high-arch cross member minimizes vibration transfer to the operator compartment. New wider cab with double full size seat available and enough trainer's leg space brings comfortable operating and training.

Monitoring System
A new Hitachi system monitor provides display information and diagnostics of all onboard systems and controls which include the engine and Hitachi AC drive. Data links offer complete integration, while a color Liquid Crystal Display (LCD) clearly details machine functions. Downtime is minimized with faster and more reliable troubleshooting and analysis. A new Hitachi load monitoring 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 as information that can help in developing higher productivity. The Hitachi load monitoring system is fully integrated with the Hitachi vehicle monitoring system and display interface, avoiding potential failure or error common in aftermarket systems.



1 Model
2 Drive related warning indicators
3 Turn signal indicator
4 Engine stop warning indicator
5 Central warning indicator
6 Tachometer
7 Shift lever position indicator
8 Hour meter
9 Hydraulic related warning indicators
10 Light indicators
11 Fuel gauge
12 Load meter
13 Brake /steering hydraulic oil pressure gauge
14 Wheel motor temperature gauge
15 Coolant temperature gauge
16 Engine oil pressure gauge
17 Indicate message
18 Indicate SAE code
19 Indicate HCM code
20 Clock
21 Speedometer (with odometer)
22 Engine related warning indicators
23 Stop valve warning indicator
24 AC drive system maintenance required warning indicator
25 Body angel indicator
26 Drive control status indicator
27 Ambient temperature

Camera Monitoring System
Included as standard safety support equipment, an analog monitor has been mounted to the dashboard to display live camera information of the rear and right front area.

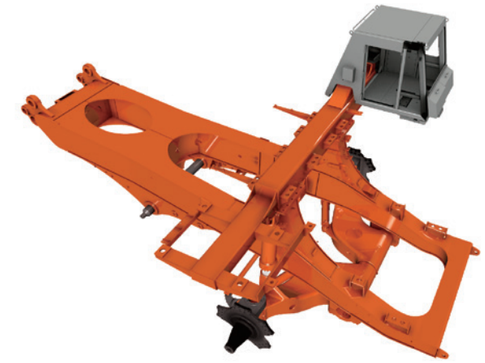
SUSPENSION

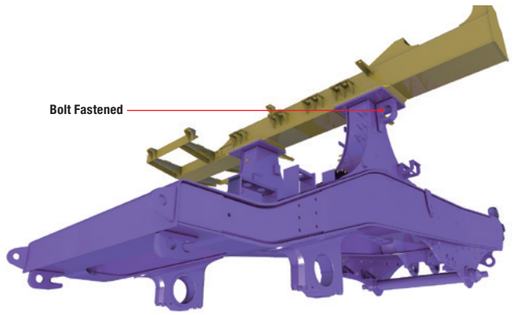
Front Suspension
Independent trailing arms make up the front axle. NEOCON struts containing energy-absorbing gas and compressible NEOCON-E™ fluid are mounted between the trailing arms and frame. Inherent in the NEOCON strut design is a variable damping and rebound feature.

Rear Suspension
"A" frame structure, integral with axle housing, links the drive axle to the frame at forward center point with pin and spherical bushing. A track rod provides lateral stability between the frame and drive axle. Heavy-duty rear-mounted NEOCON struts containing energy-absorbing gas and compressible NEOCON-E™ fluid suspend the drive axle from the frame. Integral variable damping and rebound feature included.

FRAME

Full fabricated box section main rails with section height tapered from rear to front. Narrow at the rear to support the loads and wider 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. New High Arch Desigh with bolt fastened cab support brings less assembling time and higher serviceability during engine overhaul.

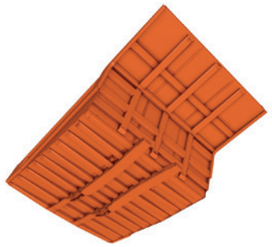




SPECIFICATIONS

BODY

An extended canopy protects service deck area. High tensile strength 400 BHN abrasion resistant alloy steel is used in thicknesses indicated below:



Floor	16 mm (0.63 in.)
Front	9 mm (0.35 in.)
Sides	9 mm (0.35 in.)
Canopy	6 mm (0.24 in.)
Corners	12 mm (0.47 in.)

High strength 690 N/mm^2 (100 000 psi) alloy steel is also used for the canopy side members and floor stiffeners. The body is rubber cushioned on the frame.

Optional Body Liners

Floor & Corners	12 mm (0.47 in.)
Sides & Front	6 mm (0.24 in.)
Canopy drop edge	6 mm (0.24 in.)

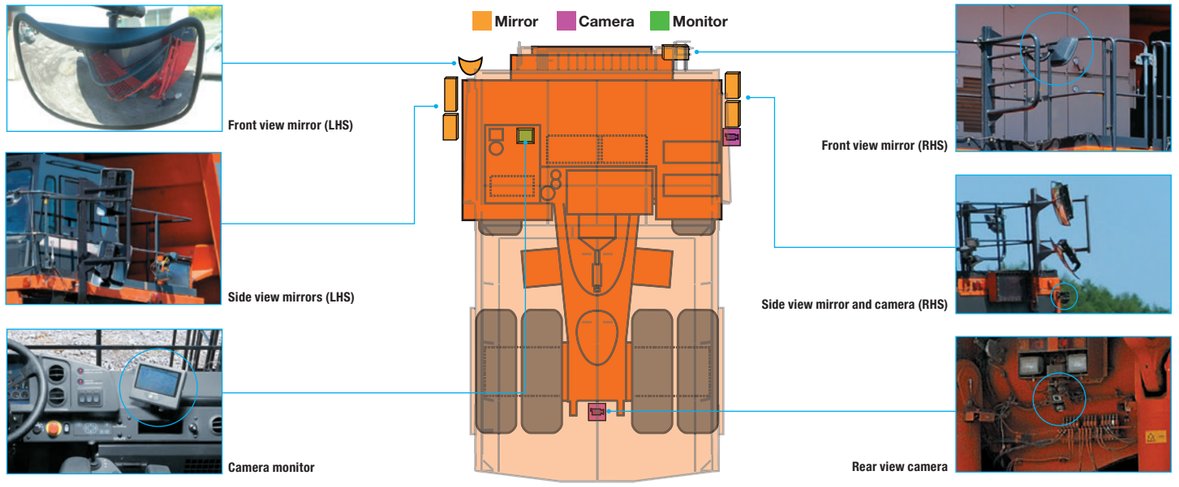
Special plate thicknesses and partial plates are available.

SERVICE CAPACITIES

Crankcase (Includes Filters): Cummins	260 L (68.7 gal.)
Crankcase (Includes Filters): MTU	250 L (66.0 gal.)
Engine Cooling System: Cummins	725 L (191.5 gal.)
Engine Cooling System: MTU	667 L (176.2 gal.)
Fuel Tank (Standard)	2 900 L (766.1 gal.)
Fuel Tank (Optional)	4 950 L (1 308 gal.)
Hydraulic System	950 L (251 gal.)
Rear Brake Cooling System	170 L (44.9 gal.)
Planetary Drives (L & R)	360 L (95.1 gal.)
Front Wheels (L & R)	24 L (6.3 gal.)
Control Cabinet Cooling System	59 L (15.6 gal.)
Main Accumulator	2 X 70 L (2 x 18.5 gal.)
Windshield Washer	20 L (5.3 gal.)

PERIMETER VISIBILITY (STANDARD)

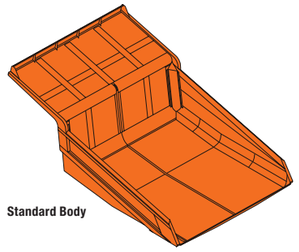
The addition of mirrors and cameras to the base model make the truck compliant to the perimeter viewing requirement of standards ISO 5006 and ISO 14401.

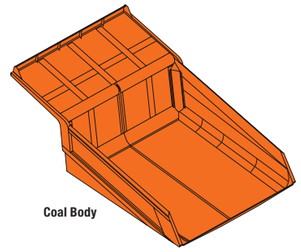


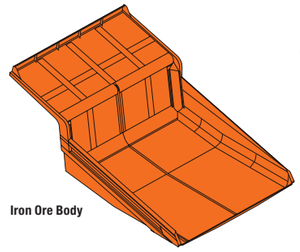
HITACHI BODIES

Tough Body Structure

Designed by Hitachi for long lasting strength and productivity. Hitachi offers customized solutions to match specific load and haul applications. Optional bodies and parts are engineered on request.







Standard Body

The Hitachi standard body is designed to accommodate the needs of popular mid-range material densities and the most popular loading machines. Various options, such as liners, spill guard, extended canopy are available.

Coal Body (Optional)

The Hitachi coal body has been designed for low material density, small fragmented, low abrasive material. This coal body offers excellent material shedding, low empty weight and large capacity.

Iron Ore Body (Optional)

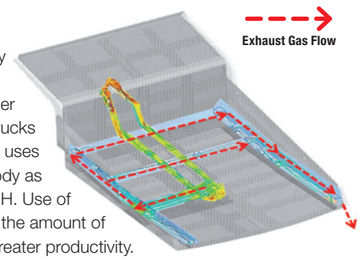
The Hitachi iron ore body has been designed for use in rugged iron ore mining applications. The body has been designed for high density material and optimized loading and dumping.

Customized Body (Optional)

Upon request and approval, Hitachi will design bodies to suit special mining applications.

Heated Body
(Optional feature)

Heated Body is an optionally available feature for the STD, Coal, Iron Ore and other Customized Hitachi AC-3 Trucks Bodies. The heating system uses exhaust gas to warm the body as shown in the illustration in RH. Use of the heated body decreases the amount of carry backs that results in greater productivity.



HITACHI LOADING POLICY

Operational Benefits

Haulroad Safety

Truck loading within the limitations of the Hitachi Loading Policy will result in designed and certified operational performance of the steering, brake and ROPS systems of the truck.*

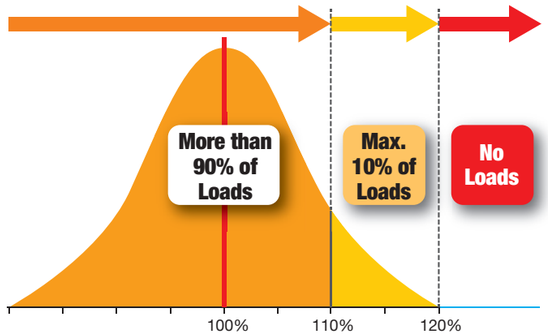
Efficient Productivity

Truck loading within the limitations of the Hitachi Loading Policy will result in optimizing the fuel economy and travel speed performance to which the truck was designed to.*

Availability and Maintenance

Lower maintenance costs and higher availability can be achieved if truck loading is within the limitations of the Hitachi Loading Policy.*

*Hitachi recommended maintenance is required.



Percent of Nominal Payload

1: More than 90% of all loads must fall below 110% area (Orange area).
2: If necessary due to excessive variation in material density, loader bucket fill-factors or bucket sizes, loading the truck to between 110% and 120% of Nominal Payload is allowed if it accounts for less than 10% of all loads (Yellow area).
3: Loading above 120% of Nominal Payload is not allowed. (Red Area)

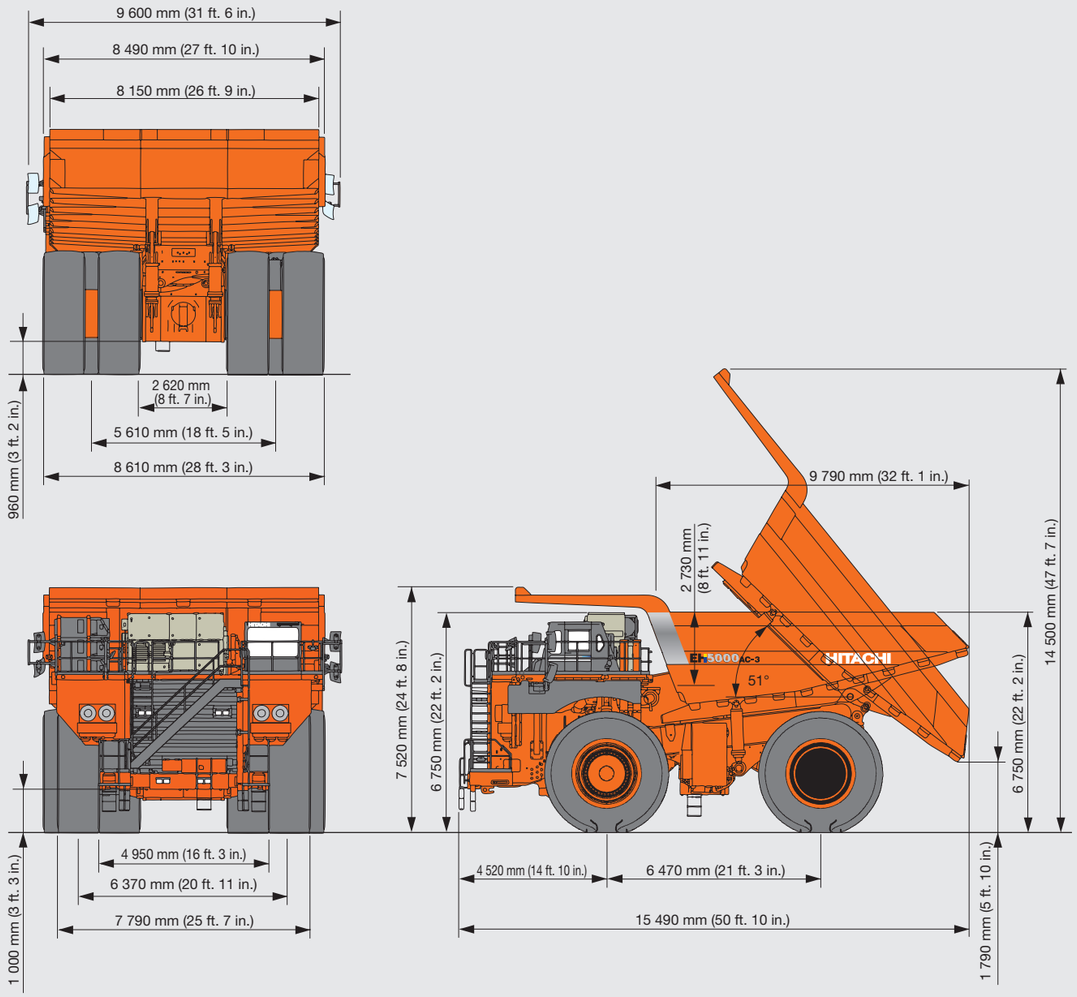
SOUND LEVEL

Sound level in cab according to ISO 6396 .....LpA 73 dB(A)

ENVIRONMENT

Air conditioner contains fluorinated greenhouse gases,
Refrigerant type: HFC-134a, GWP: 1430, Amount: 1.0 kg (2.2 lb.), CO_2e: 1.43 tonnes (1.58 tons).

DIMENSIONS



Note: Dimensions shown are for an empty machine with 53/80R63 tires.
Exact dimensions may vary due to tire make, type, and inflation pressure.

EQUIPMENT

STANDARD EQUIPMENT

GENERAL

- AC drive system
- Auto cruise control
- Auto retarding control
- Automatic lubrication system (Lincoln)
- Battery isolation switch
- Body prop cable
- Control cabinet pressurized/liquid cooled/ lockable
- Deck mounted muffler
- Deck mounted stone guards
- Diagonal front stairway
- Electric controlled hoist system
- Electric horns (4)
- Emergency ladders (2)
- Engine access ladders (2)
- Engine shutdown switch
  - Beside engine (2)
  - Ground level, on bumper (1)
  - Inside rear axle (1)
- Fan and belt guards
- Fan clutch
- Fast fluid filling system
- Fast fuel filling system provision
- Final drive lubricant cooling
- Final drive lubricant filtration
- Front view mirror, LHS/RHS
- Fuel/Water separator
- Fuel tank, 2 900 L (766 gal.)
- Ground level battery box
- Ground level relay box
- IGBT controlled blower fan motor for Alternator cooling (1)
- IGBT controlled blower fan motor for Wheel Motor cooling (1)
- IGBT controlled final drive lubricant motor (1)
- IGBT controlled grid fan motors (6)
- Load weighing system
- Maximum speed control system according to payload
- NEOCON suspension struts
- Radiator, air radiators, for the Cummins engine
- Radiator, L&M radiators
- Rear view camera
- Rear view mirrors (4)
- Rims, 36 inch
- Side view camera (RHS)
- Suction port shut off valve at hydraulic tank
- Supplementary front braking system, accumulators
- Supplementary rear braking system, accumulators
- Supplementary steering system, accumulators
- Tow hooks, front
- Tow lugs, rear

CAB

- Air conditioner
- Ashtray, cigar lighter
- Auxiliary outlet, 12 volt
- Camera monitor
- Coat hook
- Document Holder
- Drink holders (3)
- Edge blocks, on tray (3)
- Engine shutdown switch
- FM radio
- Foot rest
- Heater and defroster
- Integral ROPS/FOPS cab
- LCD system monitor
- LED room lights (2)
- Load and dump brake switch
- Net Pockets, on door (2)
- Override switch
- Seat
  - Full size air suspention operator's seat with 3-point, 50 mm (1.97 in.) width seat belt, & automatic weight adjustment
  - Regular size mechanical suspension trainer's seat with 2-point, 50 mm (1.97 in.) width seat belt
- Tinted safety glass, with roll-down windows
- Tray, front and rear
- 12 volt accessory connection

INDICATORS AND GAUGES SHOWN ON MONITOR DISPLAY

- AC drive system maintenance required warning indicator
- Ambient temperature
- Body angel indicator
- Brake/steering hydraulic oil pressure gauge
- Central warning indicator
- Clock
- Coolant temperature gauge
- Drive control status indicator
- Drive related warning indicators
- Engine oil pressure gauge
- Engine related warning indicators
- Engine stop warning indicator
- Fuel gauge
- Hour meter
- Hydraulic related warning indicators
- Indicate HCM code
- Indicate message
- Indicate SAE code
- Light indicators
- Load meter
- Model name
- Shift lever position indicator
- Speedometer (with odometer)
- Stop valve warning indicator
- Tachometer
- Turn signal indicator
- Wheel motor temperature gauge

MACHINE LIGHTS

- Backup lights (2)
- Clearance lights (4)
- Combination stop and tail lights (2)
- Deck lights (2)
- Diagonal front stairway light
- Engine compartment lights (2)
- HID headlights (8)
- Payload external indicators, 2 locations of 2 lights each
- Rear axle compartment light

OPTIONAL EQUIPMENT

- Aerial Angle
- Auxiliary dump connection
- Auxiliary steer connection
- Body liners (400BHN)
- Body prop pins
- Body sizes **
- Cold weather package **
- Communication system (alternative) *
  - GPRS communication system
  - Satellite data transmitting system
- Fast fluid filling system couplers
- Fast fuel filling system coupler
- Fuel tank, 4 950 L (1 308 gal.)
- Full size air suspension operator's seat with 3-point, 50 mm (1.97 in.) width seat belt, & semi-active suspension control
- Full size air suspension trainer's seat with 3-point, 50 mm (1.97 in.) width seat belt, & automatic weight adjustment
- Full size air suspension trainer's seat with 3-point, 50 mm (1.97 in.) width seat belt, & semi-active suspension control
- Gridbox guard **
- Halogen front tire lights (2)
- Heated mirrors
- LED headlights (6)
- Loadweight displays (2)
- Radiator, L&M radiators
- Rims, 38 inch
- Smart rim
- Sound attenuation package **
- Spare rim
- Tire guards (2) **
- Trolley Line Assist
- Trolley System
- WIU (Wireless Interface Unit) *

* : The availability of the system depends on licensing regulations in each country. Please contact Hitachi dealer for more information.

** : Engineered on request

OPTIONAL EQUIPMENT WEIGHT

Body liners (400BHN) plates including floor & corners (12 mm [0.47 in.] thicknesses), sides & front and canopy drop edge (6 mm [0.24 in.] thicknesses)	9 300 kg (20,502 lb.)
4 950 L (1 308 gal.) fuel tank with 100 % fuel (additional weight to the standard tank with 100 % fuel)	2 400 kg (5,291 lb.)
Body prop pins	80 kg (176 lb.)
L & M Radiator with Cummins engine (additional weight)	430 kg (948 lb.)
Loadweight displays (2)	150 kg (331 lb.)
Rims, 38 inch (additional weight)	780 kg (1,720 lb.)

Note: Regarding the Cummins engine, fuel optimized ratings available to meet worldwide emissions and enhanced fuel efficiency. Contact your nearest authorized Cummins Distributor for details and availability.



Before using a machine with a satellite communication system, please make sure that the satellite communication system complies with local regulations, safety standards and legal requirements. If not so, please make modifications accordingly.

These specifications are subject to change without notice.
Illustrations and photos show the standard models, and may or may not include optional equipment, accessories, and all standard equipment with some differences in color and features.
Before use, read and understand the Operator's Manual for proper operation.

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