DUMP TRUCK

- **Model Code**: EH5000ACII
- **Nominal Payload with Standard Equipment**: 287 tonnes (316 tons)
- **Target Gross Machine Operating Weight**: 500 000 kg
- **Engine**: MTU Detroit Diesel 16V-4000 C23R
  - Rated Power: 2,914 kW (2,700 HP)

Notes: This picture includes optional Dual ladder system, with upper ladder.
Refined engineering and New Generation AC Drive system technology has created hauling capability well recognized in the surface mining industry.

The EH5000ACiI continues to prove itself as an exceedingly capable and reliable solution to mine applications worldwide.

AC Drive Proven Performance & Economic Advantages
Siemens “state of the art” IGBT AC Drive System makes 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
The U.S. EPA Tier 2 certified MTU Detroit Diesel 16V Series 4000 engine with 2,014 kW (2,700 HP) and 11,307 N·m torque provides excellent reliability and unparalleled fuel efficiency. Additionally, optional higher power setting of 2,240 kW (3,000 HP) and 12,582 N·m is available.

New Comfort Cab
The new HI-TECH ROPS/FOPS Cab has been newly equipped with a Hitachi controller and a large color Liquid Crystal Display (LCD) which clearly details machine functions similar to those used on large sized Hitachi excavators.

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-tie member tie-in joints and provide a larger exposed center area for access to major components.

Note: Photos in this brochure may include optional equipment. They may also include custom-made options to meet specific user needs.
AC Drive Advantage

Hitachi IGBT AC drive technology, developed in conjunction with Siemens, provides superior performance with higher top speeds, better gradability and stronger retardation due to the higher switching frequency and better component cooling in comparison to the conventional GTO system. These features increase productivity and availability, and reduce operating and maintenance cost. Lower maintenance costs are achieved with the use of a brushless alternator, brushless cooling* and drive motors, dual channeled air flow through wheel motors and water cooled components such as IGBT inverter modules, alternator rectifier and blower motors. The Siemens AC motors do not have commutators, reducing costs and allowing the truck to achieve higher speeds. Less downtime and higher speeds result in more production and lower cost per tonne.

Full Retarding Capability

Hitachi AC drive systems provide more rimpull than a comparable DC system. Full retarding capability means the truck can be almost fully stopped without applying the service brakes.

* Channeled Air Flow through the AC Wheel Motors is a Siemens Patented Design.

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 - longer lubricant life, better component life.

The AC Drive Traction Motors

Grid Box & Siemens Control Unit

A low profile grid box arrangement has been designed in consideration for operator visibility. The new control cabinet is compact yet accommodates blower assemblies that cool the IGBT cabinet, drive system alternator and wheel motors.
Ease of Operation

The Hitachi ACCU-TRAC 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 ACCU-TRAC 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 ACCU-TRAC 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, environmentally friendly) 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 with payload in a wide range of ambient temperatures.

The ACCU-TRAC suspension design allows the front struts to be removed and installed without removing the trailing arms, brakes or tires. This relates to fewer tools and less labor required to perform this service, which aims to reduce the amount of hauler downtime, increasing productivity.

New HI-TECH ROPS/FOPS CAB
This is the latest mining truck cab developed by Hitachi. A new Hitachi LCD has been engineered onto the dashboard of the EH5000ACII to eliminate separate lights and gauges. The LCD is positioned slightly to the right of center, allowing for a lower dashboard. This concept prevents the steering wheel from obstructing the operator’s view of the LCD and results in better operator visibility of the ground area immediately ahead of the truck. An analog display has been mounted to the overhead console to display the view of up to 4 cameras simultaneously. Three cameras mounted to the rear, right side and front of the truck are available as standard for improving visibility.

Auto-Lubrication System
A pump fed system automatically applies grease to lube points via plumbing. The lubricant is automatically delivered in time controlled and metered quantities to all connected lube points in the system.
**SPECIFICATIONS**

### ENGINE

**Standard:**
- **Rated power** SAE J1995, gross: 2,014 kW (2,700 HP) at 1,900 rpm
- **Net** 1,886 kW (2,542 HP) at 1,800 rpm

**Optional:**
- **Maximum Torque** 11,307 Nm (1,523 kgf-m) at 1,700 rpm
- **Bore & Stroke** 170 x 210 mm
- **Displacement** 7.63 L
- **Starting** 24 Volt Electric

### ELECTRICAL DRIVE

**Standard Grade Application:**
- **Type** 4 Cycle Diesel w/ ADEC
- **Aspiration** Turbocharged & low temperature aftercooled
- **Emission Certification** U.S. EPA Tier 2

**Optional - Medium Grade Application:**
- **Type** Siemens IGBT Liquid Cooled Dual Inverter

**Optional - Deep Pit Application:**
- **Type** Siemens IGBT Liquid Cooled Dual Inverter

**BODY CAPACITIES**
- **Number of Pads per Axle** 2

### HYDRAULIC SYSTEM

A dual tank assembly prevents cross contamination between the steering/brake apply system and the hoist/drake cooling system. Two (2) Hitachi three-stage, double-acting cylinders, with improved control in extension, containing dual rod seats and urethane energized scrapers, inverted and outboard mounted. The cylinders are connected to a tandem gear pump through a four position electronically piloted hoist control valve. An electric controller is mounted to operator's seat.

- **Body Raise Time** 22 s
- **Body Down Time (Float)** 22 s
- **Idler Pump Output Total** 1,032 L/min at 1,900 rpm

**ELECTRICAL SYSTEM**

**Standard Planetary Ratio** 35.8:1

**Optional Planetary Ratio** 40.8:1

**Max Speed (optional)** 58.3 km/h

**Tires**
- **Front & Rear** 965 mm (38 in)

### WEIGHTS

**Nominal Payload**
- **Net Machine Weight** 213,360 kg
- **Nominal Payload specification includes operator and 100% fuel" Nominal Payload" 287 tons

**Load/Dump Brake Apply**
- **Load** 4,612 kW

**Comfort and Ease of Operation**

The enhanced cab adequately fits a full-size trainable’s seat and provides more overall comfort. Ample visibility is provided by large glass sections in doors and windows. An ergonomic shift lever that is positioned for ease of operation also increases operator comfort. Heating capability of 40,000 BTU/hr, and cooling capability of 30,500 BTU/hr to provide comfort in a wide range of ambient. Improved cab air flow has increased pressurization. The cab air filter element is easily accessible from behind the front cab cover. The heating/cooling conditioning system provides an LCD display with push button control. A new parking brake alarm will sound if the parking brake switch is not in the applied position while the engine is running and the operator is not sitting in the drivers seat. Optional electric windows are available for both cab windows. The window control is available to the operator and rider as the switches are mounted to the center console. Cab interior sound pressure level measured according to ISO6954/ISO3096 at 79.3 dBA.

**WEIGHT DISTRIBUTION**
- **Front** 49.51 %
- **Rear** 50.49 %
- **Loaded** 67 %

**HI-TECH ROPS / FOPS CAB**

New Hi-Tech ROPS / FOPS Cab

ROPS and FOPS comply with ISO6947. SAE J1540 May 94 and ISO3489. A triple-rubber iso-mount arrangement to the high-air-cross member minimizes vibration transfer to the operator compartment.

**Drive Monitoring System**

A new color LCD has been engineered onto the dashboard of the EH5000AC. All lights, gauges and indicators are provided in one location, bringing ease of operation to the operator.

**Camera Monitoring System**

Included as standard visibility equipment, an analog monitor has been mounted to the upper console to display live camera information of the rear, front bumper, and right front tire area.

**Comfort and Ease of Operation**

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**EQUIPMENT**

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

- Floor: 19 mm (0.75 in)
- Front: 12.7 mm (0.50 in)
- Sides: 10 mm (0.39 in)
- Canopy: 6 mm (0.24 in)
- Corners: 19 mm (0.75 in)

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

**FRAME**
Full fabricated box section main rails with section height tapered from rear to front. Wider at the rear to support the loads and narrow at the front to allow for easier access. 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.

**SERVICE CAPACITIES**

<table>
<thead>
<tr>
<th>Engine Oil Pan</th>
<th>Includes filters</th>
<th>Standard 2 700 HP Engine</th>
<th>Optional 3 000 HP Engine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Tank</td>
<td>4 732 L</td>
<td>240 L</td>
<td>240 L</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>965 L</td>
<td>291 L</td>
<td>213 L</td>
</tr>
<tr>
<td>Steering System</td>
<td></td>
<td>223 L</td>
<td>27 L</td>
</tr>
<tr>
<td>Planetary Drives</td>
<td></td>
<td>257 L</td>
<td>213 L</td>
</tr>
<tr>
<td>Front Wheels</td>
<td></td>
<td>8 600 L</td>
<td>8 000 L</td>
</tr>
<tr>
<td>Windshield Washer</td>
<td></td>
<td>7.6 L</td>
<td>7.6 L</td>
</tr>
</tbody>
</table>

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Unit</th>
<th>mm</th>
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</table>

**EQUIPMENT**

**FUEL TANK**
Fuel tank, 4732 L.
Fuel water separator.
Grid box guard, mounted to right side of canopy.
Ground level engine shutdown switch.
Guard rails around platform.
Haldor Topf loadweighing system.
HD headlights.
Host kickout, adjustable.
Mirrors, left and right.
Mud flaps.
NECON suspension shunts.
Solenoid, indicator, mechanical.
Body prop pins.
Controlled "fast fill" service panel w/ fast fuel, panel mounted under hydraulic tank.
Continuous heater body.
Override control, prop/retard.
Diagonal stairway, right side escape.
Electric horn (4).
Electronic host control.
Electronic start.
Engine-access ladder (2).
Engine-oil spinner filters.
Engine pre-filter.
Engine oil cool test.
Engine water blanket.
Extended body canopy.
Fan and belt guards.
Fast fill, fuel tank side.

**DASHBOARD INDICATORS**

- Air conditioning
- Air cleaner
- All hydraulic braking
- Arm guard, mounted to left side of canopy.
- Auto Lubrication System
- Batteries, 6 x G11 series, maintenance free, right front mounted for ground level access.
- Battery boost receptacle.
- Battery storage switch.
- Body drive axis, mechanical.
- Body prop pins.
- Canopy controls, prop/retard.
- Diagonal stairway, right side escape.
- Electric horn (4).
- Electronic host control.
- Electronic start.
- Engine-access ladder (2).
- Engine-oil spinner filters.
- Engine pre-filter.
- Engine oil cool test.
- Engine water blanket.
- Extended body canopy.
- Fan and belt guards.
- Fast fill, fuel tank side.
- BICO driver envelope.
- LCD operators display.
- Load and dump switch.
- Modular instrumentation.
- Roll down windows.
- Rubber floor mat.
- Safety glass.
- Seat with 75 mm lap belt.
- Air suspension seat, 6 position.
- Trainer's seat, full size mechanical.
- Tilt and telescopic steering wheel.
- Windshield washer.
- Windshield wipers, dual arm.

**STANDARD EQUIPMENT**

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<td>Nav-Trac front suspension</td>
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<td>Air cleaner</td>
<td>All hydraulic braking</td>
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<td>Battery boost receptacle</td>
<td>Battery storage switch</td>
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**GENERAL**

- Engine compartment lights (2).
- HD headlights (4).
- Payload monitoring lights, LED (2).
- Dual combination stop and tail lights, LED (2).
- Dynamic retarder light, LED (1).

**OPTIONAL EQUIPMENT**

- Extended front bumper.
- Fluid sampling ports.
- Fog lights.
- Fuel level sensor, ultrasonic.
- Fuel tank, 3 765 L.
- Heated mirrors.
- High altitude grid box.
- High pressure auto lubrication pump.
- Hydraulic oil level sensor, ultrasonic.
- Hydraulic tank shut-off valves w/ disable switches.
- Keyless starter switch.
- LED Headlights.
- Linear kits.
- Loadweighing indicators (numerical display x 2).
- Operator training seat choices.
- Air ride seat with 50 mm shoulder and lap belts, heated cushions.
- Semi-active seat with 50 mm shoulder and lap belts, heated cushions.
- Radio.
- AM/FM receiver, CD and auxiliary input.
- No radio, speakers with antenna only.
- Rear exhausting mufflers, non-heated body.
- Rims, speedometers.
- Sound attenuation (meets Australia's NSW, Hunter Valley regulations).
- Spare rims available on request.
- Tire valves, mag cover.
- Tool kit.
- Tow Package.
- Trolley assist configuration.
- Various drive system configurations.
- Video camera for the left side.
- Wheel chocks.
- Work lights, HID.
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.