EH series

HITACHI

Reliable solutions

# EH1100



## DUMP TRUCK

**Model Code : EH1100-5**
**Nominal Payload with Standard Equipment : 63.5 tonnes (70.0 tons)**
**Target Gross Machine Operating Weight : 108 950 kg**
**Engine Rated Power : 567 kW (760 HP)**

# Hitachi Cutting Edge Technology Brings Best Performance and Comfort.

### Hitachi Technology

Hitachi Trucks, like Hitachi Excavators are designed and manufactured using cutting edge technology.  Hitachi truck monitoring and control is performed by Hitachi electronic components and software, resulting in excellent machine reliability and operator comfort.

### High-Powered Engine Selection

Strong, reliable power is provided in by a choice of diesel powered engines. The EPA Tier 2 emission certified engines maintain a low fuel consumption level.

### Long Frame Life

Frame rails are tapered from front to rear to distribute the load evenly over the entire length of the chassis.  In place of castings, hot rolled steel is used as it is known to be more homogeneous and easier to repair. Weld joints are oriented longitudinally to the principal flow of stress for strength and long life. Proven design and manufacturing methods with state-of-the-art ultrasonic testing ensure a quality product.

### Unique Body Design

The single sloped floor evenly distributes material shedding during dumping. Horizontal floor and side rail stiffeners distribute load shocks evenly over the entire body length, minimizing stress concentrations in any one area. Closely spaced floor stiffeners reduce wear due to impact loading.

### Well Matched: EH1100-5 & Excavators

| Excavator | ZX870LCH-5 (BH) | | EX1200-6 (BH) | | EX1200-6 (LD) |
|---|---|---|---|---|---|
| **Boom** | 7.1 m - BE Boom | 8.4 m - H Boom | 9.0 m - Boom | 7.55 m - BE Boom | – |
| **Arm** | 2.95 m - BE Arm | 3.7 m - H Arm | 3.6 m - Arm | 3.4 m - BE Arm | – |
| **Bucket Capacity** | *4.3 $m^3$ | *3.5 $m^3$ | *5.2 $m^3$ | *6.7 $m^3$ | 6.5 $m^3$ |
| **Passes** | 8 or 9 | 10 or 11 | 7 | 5 or 6 | 5 or 6 |

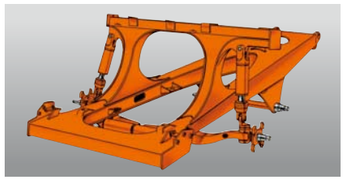
BH : Backhoe  LD : Loading shovel  *SAE, PCSA heaped capacity



# Rugged Construction

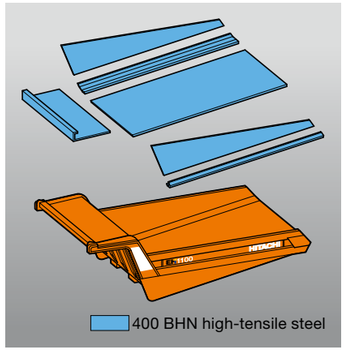
## Technologically Advanced

The EH1100-5 is designed to develop low cycle times and extra efficiency in the heavy duty applications of quarrying and mining. This truck provides low operating costs, unparalleled productivity and overall quality through its superior structure and systems design.



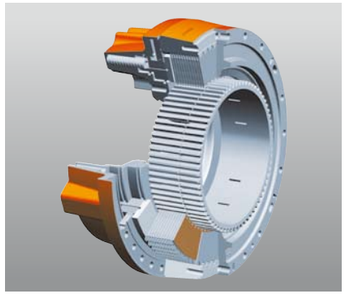
## Robust Frame

Full fabricated box section main rails with section height tapered from front to rear. Narrow at the rear to support the load and wider at the front allowing truck stability and excellent engine access for servicing. 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 at frame junctions are blended and ground to minimize stress concentrations. Weld joints are oriented longitudinally to the principal flow of stress for greater durability and more strength. Frame utilizes 345 MPa yield high strength low alloy steel that is robotically welded to ensure consistently high quality welds.




## Reinforced Body

Built for quarry and mining applications, the EH1100-5 body uses an 18 mm floor plate and 8 mm side plates made of 400 BHN high-tensile steel.  This provides high resistance to wear and impact. A low loading height and large target area allow easy, quick loading by a variety of loading tools.



## Hydraulic Brake

The rear wet disc brake assemblies have been upgraded to include spring applied pistons that function to provide a strong, reliable and low maintenance integral parking brake. The Hitachi hydraulic braking system is durable and provides maximum available braking under tough ground conditions for best control.

# Ease of Operation


## Hi-Tech ROPS / FOPS Cab

The new Hi-TECH (Hitachi Technology) ROPS/FOPS cab features a 265 mm (10.4") LCD screen positioned to the right of the steering wheel to provide better visibility of the road ahead.
The cab uses double-wall construction and a 3-point rubber isolation-mount to absorb shocks and noise. The high powered heater and air conditioning unit provides operator comfort in all environments and working conditions.
The central controller, built by Hitachi and also used in excavators, will perform its function of processing input and output information with reliability during the most rigorous haul cycle.


## Auto-Lubrication System

A ground level accessible grease pump assembly automatically feeds lubricant to grease points throughout the truck via plumbing. The lubricant is delivered in time controlled and metered quantities to all connected lube points in the system. Hitachi equips the EH1100-5 with a Lincoln Auto-Lubrication system. Control, timing and monitoring of the Lincoln system is a function of the Hitachi central controller.

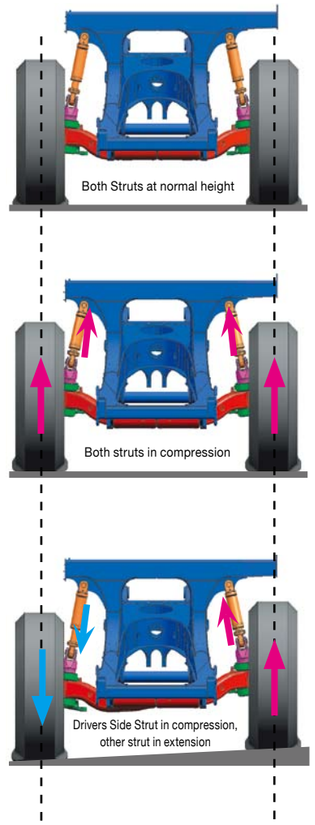



## Superior Suspension

The Hitachi ACCU-TRAC suspension system delivers excellent maneuverability, even at higher speeds. The trailing arm lay-out 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 in 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 (silicon based, non-petroleum) 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.




**With no horizontal deflection**

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 labour required to perform the repair, which aims to reduce the amount of hauler downtime, increasing productivity.

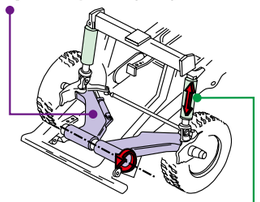
**Spindle**
Each spindle is controlled by a hydraulic steering cylinder, rotates around the king-pin and the outer end of the trailing arm to position the wheels for steering. The spindles are attached by one tie-rod.

**King-Pin**
Retains the spindle to the trailing arm. Spindle rotates around the king-pin, which is locked in position. The Neocon-E strut attaches to the top.

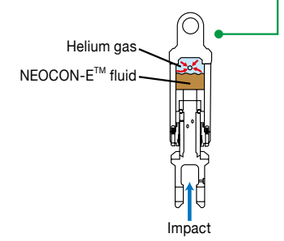
**Trailing Arm**
Main suspension member to which other suspension components are attached. The trailing arms hinge on a torque tube that is clamped to the front of the frame.

**Neocon Strut**
The energy absorption and release component of the ACCU-TRAC suspension system. Pinned to ball bushings at the frame and at the top of the king-pin to prevent bending moments from transferring to the strut. Receives only axial input.

**Trailing Arm Suspension (Front)**



**NEOCON Strut (Front/Rear)**



# SPECIFICATIONS

## ENGINE

| | |
|---|---|
| Model | Cummins QSK23 |
| Type | 4 Cycle Inline 6, diesel injection |
| Emission Certification | U.S. E.P.A Tier 2 |
| Aspiration | Turbocharged / Aftercooled |
| Rated Power | |
| SAE J1995, gross | 567 kW (760 HP) at 2 100 $min^{-1}$(rpm) |
| SAE J1349, net | 520 kW (698 HP) at 2 100 $min^{-1}$(rpm) |
| ISO 9249, net | 520 kW (698 HP) at 2 100 $min^{-1}$(rpm) |
| EEC 80/1269, net | 520 kW (698 HP) at 2 100 $min^{-1}$(rpm) |
| Maximum Torque | 3 091 N·m (315 kgf·m) at 1 300 $min^{-1}$(rpm) |
| Piston Displacement | 23.0 L |
| Bore and Stroke | 170 x 170 mm |
| Torque Rise | 20 % |
| Starting | Electric |

| | |
|---|---|
| Model | MTU Detroit Diesel 12V Series 2000 |
| Type | 4 Cycle, V12, diesel injection |
| Emission Certification | U.S. E.P.A Tier 2, E.U. Stage II* |
| Aspiration | Turbocharged / Aftercooled |
| Rated Power | |
| SAE J1995, gross | 567 kW (760 HP) at 2 100 $min^{-1}$(rpm) |
| SAE J1349, net | 520 kW (698 HP) at 2 100 $min^{-1}$(rpm) |
| ISO 9249, net | 520 kW (698 HP) at 2 100 $min^{-1}$(rpm) |
| EEC 80/1269, net | 520 kW (698 HP) at 2 100 $min^{-1}$(rpm) |
| Maximum Torque | 3 091 N·m (315 kgf·m) at 1 350 $min^{-1}$(rpm) |
| Piston Displacement | 23.9 L |
| Bore and Stroke | 130 x 150 mm |
| Torque Rise | 20 % |
| Starting | Electric |

*Fuel optimized version is available.

## TRANSMISSION

The transmission employs Shift Energy Management (SEM) which reduces engine torque during transmission shifts resulting in longer drivetrain life and increased operator comfort.
Additionally an Optimum Start Range feature has been engineered for the EH1100-5. This feature provides reduced fuel use, less noise and more operator comfort during unloaded truck operation. When the automatic onboard payload weighing system identifies an unloaded body, the transmission is activated to start the upshifting sequence from 3rd gear.

| | |
|---|---|
| Model | Allison H6620A |
| Design | Fully automatic, planetary type with integral lock-up converter |
| Mounting/Position | Remote from engine and rear axle for serviceability |
| Ranges | 6 forward, 2 reverse |
| Control | Allison CEC3 electronics shift system with SEM (Shift Energy Management) and OSR (Optimum Start Range) |

| Gear | Ratio | km/h |
|---|---|---|
| 1 | 4.00 | 9.7 |
| 2 | 2.68 | 14.5 |
| 3 | 2.01 | 19.4 |
| 4 | 1.35 | 28.9 |

| Gear | Ratio | km/h |
|---|---|---|
| 5 | 1.00 | 39.0 |
| 6 | 0.67 | 58.2 |
| R1 | 5.12 | 7.6 |
| R2 | 3.46 | 11.3 |

## DRIVE AXLE

| | |
|---|---|
| Model Differential | 2354 |
| Axle Design | Full floating axle shafts using a model 2354 differential and single reduction planetaries at each wheel |
| Traction Control | An optional electronic feature that includes the Electronic Downhill Speed Control feature |

Differential and Final Drive Ratios

| | |
|---|---|
| **Ratios** | |
| Differential | 3.64 : 1 |
| Planetary | 5.80 : 1 |
| Total Reduction | 21.11 : 1 |
| **Maximum Speeds** | |
| with 24.00R35 tires | 58.2 km/h |

## TIRES

| | |
|---|---|
| Front | 24.00 R35(**) E4 (Radial) [Standard] |
| Rear | 24.00 R35(**) E4 (Radial) [Standard] |
| Rim Width | 432 mm (17 in) |

Alternative tires and tread patterns may be available.

Note:
Certain job conditions may require higher rated TKPH (TMPH) tires in order to maintain maximum production. Hitachi recommends evaluating the job conditions and consulting the tire manufacturer to make proper tire selection.

## ELECTRICAL SYSTEM

24 volt starting, lighting and accessories system. 75 ampere alternator with integral transistorized voltage regulator. Two 12 V heavy duty batteries capable of 1425 cold cranking amps, each, at -18 degree C (0 degree F). 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 CAPACITY

| | $m^3$ |
|---|---|
| Struck (SAE) | 32.7 |
| Heap 3 : 1 | 38.2 |
| Heap 2 : 1 (SAE) | 41.5 |

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

## WEIGHTS (Approximate)

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

| | |
|---|---|
| Chassis with Hoist | 34 260 kg |
| Body | 11 190 kg |
| Net Machine Weight | 45 450 kg |
| The Net Machine Weight specification includes operator and 100 % fuel. | |
| Nominal Payload | 63.5 tonnes |
| Target GMOW | 108 950 kg |

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 configuration which will match your haulage application.

Major Options
The following list of options are examples which will change the Nominal Payload.
- Automatic Fire Suppression
- Body Liner, heavy duty and partial
- Deck Mounted Muffler

| Weight Distribution | Front | Rear |
|---|---|---|
| Empty | 50 % | 50 % |
| Loaded | 34 % | 66 % |

## STEERING SYSTEM

Closed-center, full-time hydrostatic steering system using two double-acting cylinders, pressure limit with unload piston pump and brake actuation/ steering system reservoir. An accumulator provides supplementary steering in accordance with ISO 5010 (SAE J1511). The Operators steering wheel offers 35 degrees of tilt and 47.7 mm of telescopic travel.

| | |
|---|---|
| Steering Angle | 39 degrees |
| Turning Diameter: (SAE) | 19.85 m |
| Steering Pump Output (at 2 100 $min^{-1}$(rpm) | 94.7 L/min |
| System Pressure | 19.0 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 | 59 degrees |
| Body Raise Time (at 2100 $min^{-1}$(rpm)) | 11.4 seconds |
| Body Down Time (at idle) | 14.2 seconds |
| Brake Cooling Pump Output (at 2100 $min^{-1}$(rpm)) | 176 L/min |
| Hoist Pump Output (at 2100 $min^{-1}$(rpm)) | 468 L/min |
| System Relief Pressure (Hoist) | 17.2 MPa |

## BRAKE SYSTEM

Brake system complies with ISO 3450 (SAE J1473).

All-hydraulic actuated braking system providing 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.

**Service**
All-hydraulic actuated front dry disc brakes and rear oil-cooled wet disc brakes are equipped.

**Wet Disc Brake**
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, retarding and parking. The brakes are a multi-plate design, and continuously oil-cooled. The sealed design protects against environmental contamination for prolonged service life. The wet disc brake is designed with automatic retraction to prevent drag and with spring activation for parking. Separate pedals activate the service braking and retarding functions.

**Front Axle - Dry Disc**

| | |
|---|---|
| Disc diameter each (2 discs/axle) | 686 mm |
| Brake surface area per axle | 7 316 $cm^2$ |
| Lining area per axle | 2 787 $cm^2$ |
| Brake pressure (Max.) | 15.9 MPa |

**Rear Axle - Oil-Cooled Wet Disc**

| | |
|---|---|
| Brake surface area per axle | 64 605 $cm^2$ |
| Brake pressure (Max.) | 4.8 MPa |

**Secondary**
Two independent circuits within the service brake system provide back-up stopping capability. Manually application of this system will stop the machine within prescribed braking distance. Automatic application will result if supply pressure is low and the operator has failed to react to indicators and alarms.

**Wet Disc Parking Brake**
The parking brake is internal to the rear wet disc brakes.

**Retarder**
Foot-operated valve controls all-hydraulic actuation of oil-cooled wet disc brakes on rear axle. System provides modulated pressure to rear brakes for constant speed control.

| | | |
|---|---|---|
| Continuous | 656 kW | (880 HP) |
| Intermittent | 1 270 kW | (1 700 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

## HI-TECH ROPS / FOPS CAB

**Hi-Tech ROPS / FOPS Cab**

The EH1100-5 ROPS system complies to ISO 3471: 2008 for the rigid dump truck and tractor configurations. The cab also complies with FOPS ISO 3449: 2005. Multilayered floor mats and wall panels act to absorb sound and control interior temperature.

A properly maintained cab from Hitachi, tested with doors and windows closed per work cycle procedures in ISO 6394: 2008 (dBA), results in an operator sound exposure Leq (Equivalent Sound Level) of 75 dB(A).

A three-point rubber iso-mount 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 operators' seat provides easy access to electrical and electronic system components.

**Comfort and Ease of Operation**

A 265 mm (10.4") LCD screen is positioned slightly to the right of steering wheel to provide better visibility through the front cab window and to prevent the steering wheel spokes from causing visual obstruction. The LCD is pleasant to view in all lighting conditions and incorporates large interactive buttons to toggle to various monitor selections within close reach of the operator. Conventional gauges and lights are replaced by computer generated graphics that perform the same purpose of providing truck system performance information with trouble conditions supported by messages in text as secondary. The pass-through cab offers a spacious environment. The interior design allows the operator to exit through the left or right side doorway, making either one of the access stairways easily available to the operator. Multiple position adjustable seat, tilt/telescopic steering wheel, filtered cab ventilation and high ground visibility all contribute to convenience, control and comfort.

## SUSPENSION

**Front and Rear Suspension**

For years, Hitachi 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 EH1100-5. To make sure it was fine tuned to the limit, Lotus Engineering, a world leader in suspension design, was contracted to review the entire system to assure optimized ride and handling performance.

The 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 axle housing has an A-frame mounting. The rear NEOCON struts are mounted in a more vertical position which allows a more pure axial loading and reduces the tractive and braking 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 increased productivity. Improved stability means more consistent dynamic response of the machine to fluctuating load energy, resulting in predictable machine performance. Improved control means better machine maneuverability.

The Hitachi 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.

## BODY

The body has been made to the single slope, flat floor design.

The rear hinge has been designed to allow 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.

**Plate Thickness (Standard Body):**

| | mm | (in) |
|---|---|---|
| Floor | 18 | (0.69) |
| Front | 10 | (0.38) |
| Sides | 8 | (0.31) |
| Canopy | 6 | (0.25) |
| Valley | 8 | (0.31) |

**Options for Standard Body:**

| | | |
|---|---|---|
| Body Liners (Medium Duty) | | |
| Floor & Valley | 10 | (0.38) |
| Sides & Front | 6 | (0.25) |
| End Protection | 10 | (0.38) |
| Body Liners (Heavy Duty) | | |
| Floor & Valley | 13 | (0.50) |
| Sides & Front | 8 | (0.31) |
| End Protection | 10 | (0.38) |
| Partial Liner (Heavy Duty) | | |
| Floor & Valley | 13 | (0.50) |
| End Protection | 10 | (0.38) |
| Rock Cap | | |
| Top of the Body Side Plate | 10 | (0.38) |

**Plate Thickness (Optional Quarry Body):**

| | | |
|---|---|---|
| Floor | 25 | (1.00) |
| Front | 16 | (0.63) |
| Sides | 14 | (0.55) |
| Canopy | 8 | (0.31) |
| Valley | | |
| 16 (0.63) | | |

The horizontal stiffener design of the Hitachi body minimizes stress concentrations in any one area. Load shocks are dissipated over the entire body length.

The closely spaced floor stiffeners provide additional protection by minimizing distance between unsupported areas.

## 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.*

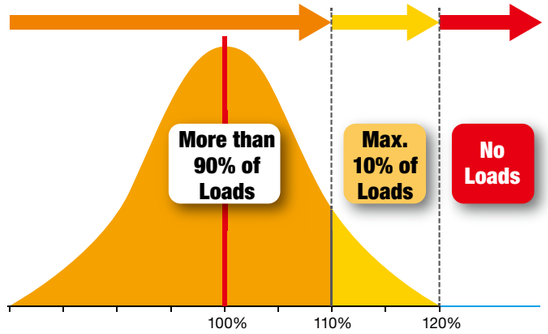
**Efficient Productivity**

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)

## SERVICE CAPACITIES

| | L |
|---|---|
| Crankcase (includes filters) for MTU | 83.3 |
| Crankcase (includes filters) for Cummins | 70.0 |
| Cooling System for MTU | 335 |
| Cooling System for Cummins | 147 |
| Transmission, Cooler and Lines | 93.3 |
| Fuel Tank | 700 |
| Hydraulics | |
| Hoist Tank and System | 265 |
| Steering Tank and System | 112 |
| Drive Axle (2 wheels and differential) | 103 |
| Windshield Washer Fluid | 5.7 |

# EQUIPMENT

## STANDARD EQUIPMENT

### GENERAL

Access system, step ladder drivers side and service side
ACCU-TRAC suspension system
All-hydraulic braking
Allison H6620A transmission
Battery disconnect switch, ground level
Body down cushioning
Body down indicator
Body up, reverse inhibit
Body up speed restriction
Canopy spill guard
Continuous heated body
Cooling system sight gauge
Cooling system surge tank
DC -DC , 24 to 12V converter
Driveline guard, front
Electric horns
Electric start
Electronic hoist
Engine belt protection
Engine idle timer
Fan guard
Fenders
5 piece rims
Fluid drain valves
Fluid sampling ports
Fixed steering stops
Front brake cut-off switch
Front corner mirrors
Fuel tank level gauge
Ground level auxiliary start (boost) receptacle
Ground level engine shutdown
Guard rails
Hoist interlock
Hoist tank sight gauge
ISO decals
Load/dump brake
Lube system, Lincoln automatic
Mirrors, left and right, hand adjustable
Mud flaps
NEOCON-E suspension struts
Park brake interlock
Payload weighing system, automatic
Radiator grille guard
Rear view camera system
Reverse alarm and light
Rock ejector bars
Steering accumulator
Steering tank sight gauge
Tires 24.00 R35
Tow points, front
Transmission oil level sensor
Transmission oil level sight gauge
Two speed reverse
Water separator included in fuel filter

### CAB

Access, left and right side doors
Air conditioning
Air filtration/replaceable element
Air suspension seat *
Cab interior light
Camera monitor, within operators LCD
Comfort shift, Optimum Start Range, when empty
Cup holders x 4
Data logging unit (DLU)
Door locks
Foot rest, left
Fuses
GPS communication
Heater and defroster
Hill Hold
Integral ROPS/FOPS cab
Integrated engine diagnostics connector
Integrated transmission diagnostics connector
ISO driver envelope
LCD operator information screen, 265 mm (10.4")
Mechanical RHS and LHS windows
Parking brake test feature, automatic
Quick connect hydraulic test ports
Rubber floor mat
Safety glass
Seat belts, retractable (operator and trainer)
Speakers, antenna and wiring only
Sunvisor, pull-down
Tilt/telescoping steering wheel
Tinted glass, all windows
Trainers seat
12V power port
12 volt accessory connection
Windshield washer
Windshield wiper, intermittent

* Features
Parking brake alarm: Audible when parking brake not applied and operator is not seated
Seat belt alarm: Audible and visible when truck is running and seat belt is not buckled
3 point seat belt : Standard

### ELECTRONIC DISPLAY (Hitachi Monitoring Information)

**Lights with ISO symbols**

Active Traction Control with Speed Limiter
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 meter and number
Retarder temperature
Seat belt disconnected
Steering oil pressure
Transmission oil temperature
Turn signal/ hazard

**LCD Screen Information**

Brake oil pressure
Brake oil temperature
Date and time
Engine coolant temperature
Engine oil pressure
Filter restrictions
Fuel gauge
Haultronics III payload information
Hourmeter
Load Count
Odometer
Parking brake applied
Selectable units of measure
Speedometer
Steering oil pressure
Steering oil temperature
System diagnostics
Tachometer
Transmission oil temperature
Transmission range attained
Transmission range selection
Trip Odometer
Voltmeter

### MACHINE LIGHTS

LED amber turn signals and four-way flashers
LED back-up light
LED head lights (4)
LED brake/retarder lights (2)

## OPTIONAL EQUIPMENT

### CAB

Air suspension seat, semi-active, w/ heat, w/ lumbar*
AM-FM radio w/ CD & Aux. input
Circuit Breakers in place of fuses
Electric RHS and LHS power windows
Orbcomm communication

* Features
Parking brake alarm: Audible when parking brake not applied and operator is not seated
Seat belt alarm: Audible and visible when truck is running and seat belt is not buckled
3 point seat belt : Standard

### CHASSIS

Body liners (400BHN) plates, medium, heavy duty or partial
Canopy spill guard extension
Cold weather package
Mild cold weather package (0 deg C to -20 deg C) (32 deg F to -4 deg F)
Extreme cold weather package (-20 deg C to -35 deg C) (-4 deg F to -31 deg F)
Custom bodies available
Electrically heated mirrors
Engine access step
Engine side panels, for dust / dirt protection
GPS communication, e-Service
LHS arm guard
Lube system, Groeneveld
Muffler, frame mounted, exhaust flow to rear of chassis
Rear driveline guard
Rock cap
Service center with fast fuel
Service center without fast fuel
Service lighting, engine, transmission, service deck (4)
Side extensions
Side Mudguards, mounted to cab deck
Side view camera (RHS)
Spare rim
Steering accumulator, region Canada
Tires (type & rating)
TranSynd™ transmission fluid
Variable pitch fan (Cummins)
Wheel chocks
Work lights, forward facing –LED
Work lights, rear facing –LED

### MISCELLANEOUS

Extra operators manual
Extra parts manual - CD
Extra parts manual - hardcopy
Service Manual - CD
Service Manual - hardcopy

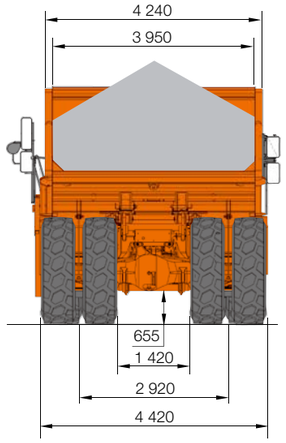
## OPTIONAL EQUIPMENT WEIGHT

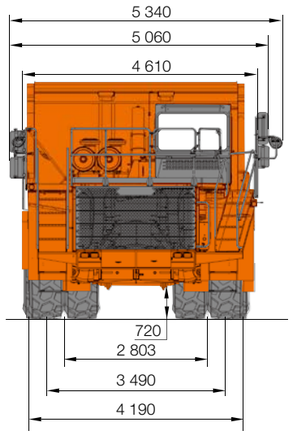
| | kg |
|---|---|
| LHS arm guard | 56 |
| Body liners (400BHN) plates, medium | 2 850 |
| Body liners (400BHN) plates, heavy duty | 3 680 |
| Body liners (400BHN) plates, partial | 2 430 |
| Lube system, Groeneveld | 100 |
| Rock Cap | 269 |
| Side Extensions | 485 |
| Canopy spill guard extension | 99 |

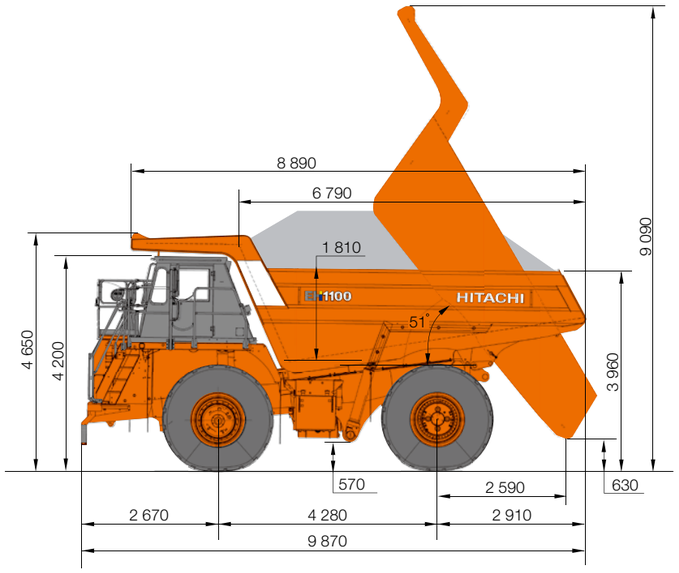
Standard and optional equipment may vary from country to country. Special options provided on request. All specifications are subject to change without notice.

# DIMENSIONS

unit : mm



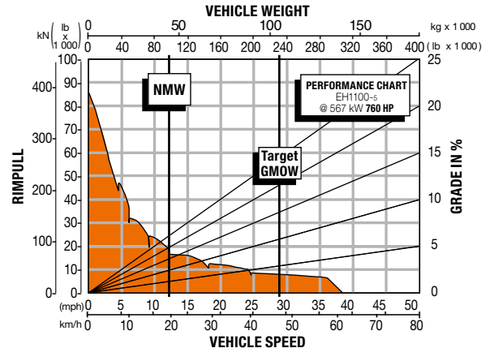



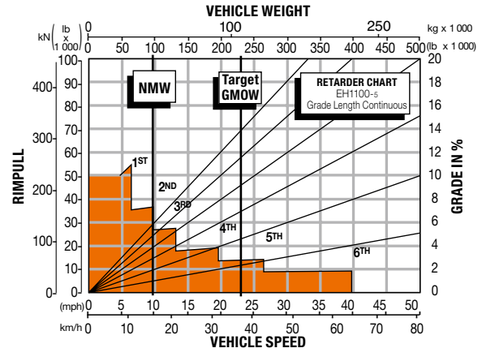



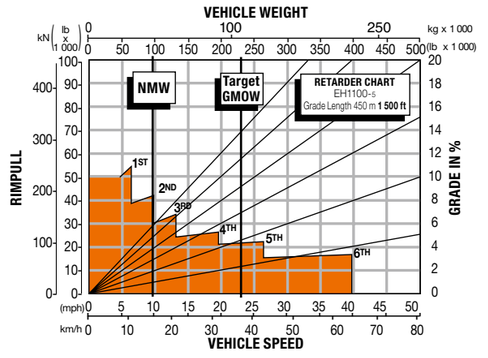

Note: Dimensions shown are for empty machine with standard body and 24.00R35(**)E4 tires.
Exact dimensions may vary due to tire make, type, and inflation pressure.

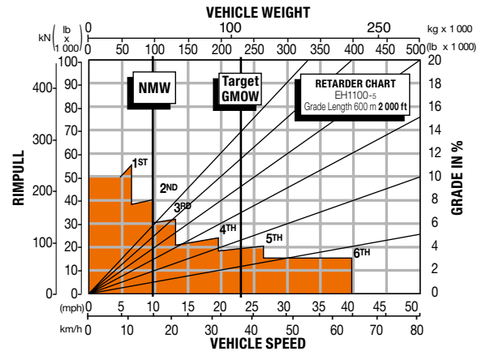


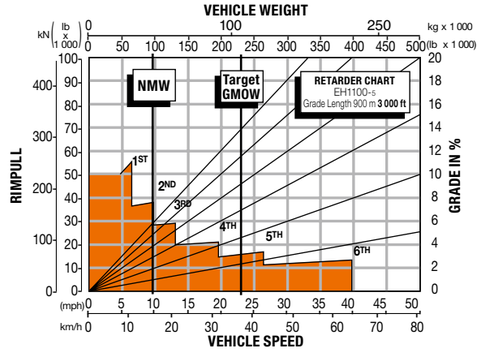
# PERFORMANCE DATA

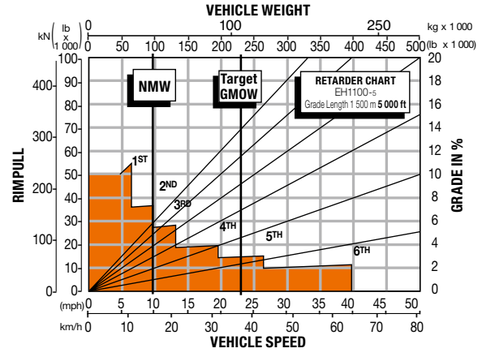



## NOTES:

**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.


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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