

EX-6 series

HITACHI

EX  
2500



## HYDRAULIC EXCAVATOR

- **Model Code** : EX2500-6
- **Engine Gross Power** : 1 044 kW (1 400 HP)
- **Operating Weight** : Loading Shovel : 249 000 kg  
Backhoe : 248 000 kg
- **Loading Shovel Bucket** : PCSA Heaped : 15.0 m<sup>3</sup>  
16.5 m<sup>3</sup>
- **Backhoe Bucket** : PCSA Heaped : 15.0 m<sup>3</sup>  
CECE Heaped : 13.2 m<sup>3</sup>

# Ultra Large Sized Production from the Hitachi Gigantic Excavators

The Hitachi Giants Yield  
Amazing Mining Production...  
Setting a New Standard



# SOLUTION GIANT

## Giant-Sized Productivity Based on Hitachi's Theory of Evolution.

Each Hitachi generation listens to the needs of the work site and gives birth to an even-better new generation.



Bucket Passes to Dump Trucks

	HITACHI EH1700	HITACHI EH3500
Maximum Payload	108.4 ton	173.0 ton
Load Capacity (SAE 2:1 Heaped)	60.3 m <sup>3</sup>	115.1 m <sup>3</sup>
Loading Shovel 15.0 m <sup>3</sup> (19.6 yd <sup>3</sup> )	4	7 or 8
Backhoe 15.0 m <sup>3</sup> (19.6 yd <sup>3</sup> )	4	7 or 8



### Powerful Single Engine— Ready for the task.

Time-proven Cummins diesel engine produces a total of 1 044 kW (1 400 HP) for handling the big excavation jobs.

- 1 044 kW (1 400 HP)

### Emission Control Engine— Helping to protect our environment.

Conforms to U.S. EPA Tier II emission regulations.

### Efficient E-P Control— Adjusts power output to the work being performed.

Hitachi's computer-aided Engine-Pump Control (E-P Control) coaxes optimum efficiency from the engine and hydraulic pumps. This innovative system senses load demand and controls engine and pump output for maximum operating efficiency.

### Larger Bucket Provides High Work Capacity.

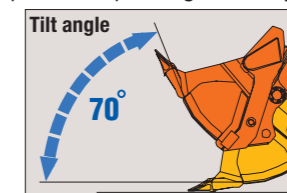
- Loading shovel bucket : 15.0 m<sup>3</sup>
- Backhoe bucket : 15.0 m<sup>3</sup>

### Maximum Excavating Force.

- Loading shovel : Arm crowding force : 918 kN (93 600 kgf)  
Breakout force : 843 kN (86 000 kgf)
- Backhoe : Arm crowd force (ISO) : 825 kN (84 100 kgf)  
(SAE : PCSA) : 745 kN (76 000 kgf)  
Bucket digging force (ISO) : 832 kN (84 800 kgf)  
(SAE : PCSA) : 751 kN (76 600 kgf)

### Large Bucket— Designed to enhance efficiency.

The large bucket has been shaped specifically to enhance scooping and loading operations. Its sharp tilt angle helps boost operating efficiency.



### Productivity-Boosting Auto-Leveling Mechanism— One-lever leveling control.

This is another unique Hitachi function developed exclusively for more efficient leveling operations.

*Note: Photos in this catalog may include optional equipment.  
They may also include custom-made options to meet specific user needs.*

# SOLUTION GIANT

## More Than Durable — Just Plain Tough

Built-in toughness means the Hitachi will continue to get giant-sized jobs done fast.



### Strategically Positioned Oil Coolers— Helps keep oil temperatures



Two oil coolers are used for optimal cooling efficiency. They are positioned far from the engine radiator for even better cooling potential.

### High-Mounted Compact Travel Motors and Optional Travel Motor Guard— Help to boost durability at rugged work sites.

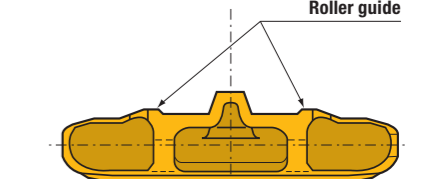


This design helps protect the travel motors from damage by rocks.

### Rugged Track Links— Shoes include roller guides for extended service life.



Roller guide

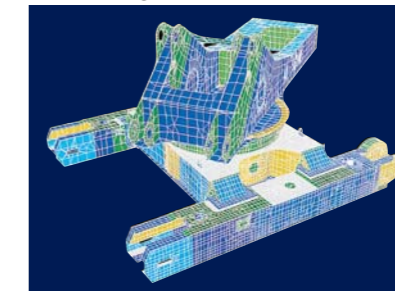


This design has proven itself on Hitachi's popular Giant EX Series. The roller guides have been added to help extend service life.

### Constant Correct Track Tension— Nitrogen gas accumulators absorb abnormal track tension.

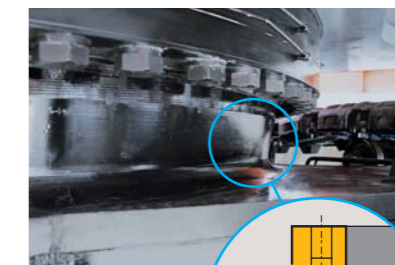
Helps prevent abnormal track tension from causing damage. Travel is automatically stopped if accumulator pressure exceeds a preset level.

### Rigid Box Design— Resists bending and twisting forces.

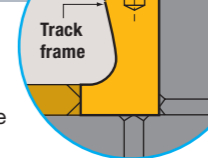


Computer-assisted analysis was used to check that the frame box can withstand heavy-duty excavation work.

### Solid Cast Track Frame— More strength for this key area.



The track frame is cast as a solid unit and includes a flange for improved reliability. This non-welded design is used exclusively on large Hitachi models.



Track frame





# SOLUTION GIANT

## Designed to Offer Comfort and Intelligence

Comfortable operator space and simplified maintenance, backed by Hitachi technologies and experience.

### High Visibility 6.4 Meter Cab Height— Providing a clear view of the work area.

Gives the operator a clear view, even when a large 200 US ton class dump truck is being loaded. This high height and forward-sloping cab provides a view that boosts productivity.

### Rugged Comfortable Cab— Protects the operator from falling objects.

Fluid filled elastic mounts help absorb vibration to provide durability and a comfortable ride. The top guard, conforming to OPG\* level II (ISO), is provided on the cab roof.

\*Operator Protective Guard

### Efficient Cab Layout— All controls within natural reach of operator.

The ergonomic layout of the cab means the operator will do less stretching and reaching when operating the controls. This adds up to less operator fatigue and greater operating efficiency.

### Electric Joystick Levers— Provides pleasant control with less fatigue.

Electric joystick control levers have a feather-touch allowing long periods of effortless operation. Its stroke is much shorter than that of hydraulic control.

### Air Suspension Seat with Auto Operator Weight Adjuster.

The operator seat cushion can automatically be adjusted according to the operator weight. This is convenient for a machine operated by two or more operators.

### Adjustable Sliding Cockpit— Moves to the best position for the operator.

The operator can adjust the position of the levers and the seat to custom fit his size and operating style.



### Constant-Cab-Comfort Air Conditioner— Keeps the cab pressurized to keep out dust while maintaining comfortable temperature.

### Intelligent Multi-Display Monitor provides machine data and operating status at a glance.

The operator can monitor machine conditions and operating status with a 10.5-inch color LCD. The controller provides instant fault diagnosis through all sensors, displaying warnings and countermeasures if failure arises.

#### Major Functions:

- Multiple meters, and alert symbols indication
- Alert/failure status, and countermeasures indication
- Snap-shot function that stores operating data, including five-minute operating data immediately before alerting, and succeeding one-minute data (temperatures, pressures, and more)
- Setting oil change intervals with alerting

Much more functions are provided to ease maintenance and servicing.

### Outside Cameras (Option)— Enhances operating safety.

The operator can monitor around the machine, using four cameras (option) to eliminate blind spots.



\* Illustration shows a sample of the Emergency Switch.



# SOLUTION GIANT

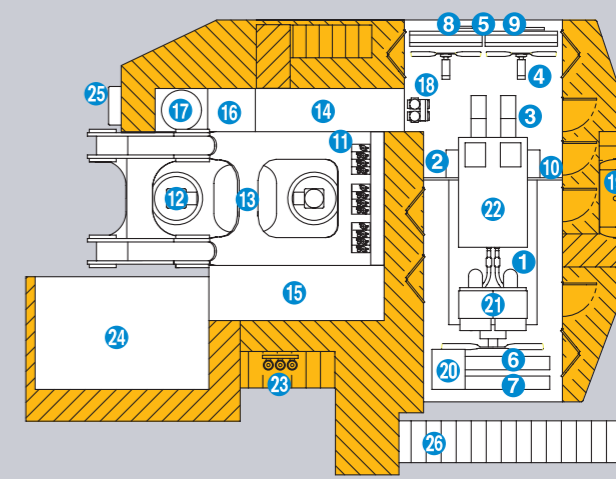
## Designed to be Maintenable

Carefully engineered to allow  
full 24-hour operation.



### Easy Access and Maintenance— Easy access speeds inspections and maintenance.

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| 1 Diesel Engine                       | 13 Center Joint                  |
| 2 Pump Drive Unit                     | 14 Hydraulic Tank                |
| 3 Hydraulic Pump x 6                  | 15 Fuel Tank                     |
| 4 Hydraulic Oil Cooling Fan Motor x 2 | 16 Battery Unit                  |
| 5 Hydraulic Oil Cooler x 2            | 17 Lubricator                    |
| 6 Engine Radiator                     | 18 High Pressure Strainer x 6    |
| 7 LTA Radiator                        | 19 Reserve Tank (Engin Oil)      |
| 8 Fuel Cooler                         | 20 Reserve Tank (Coolant)        |
| 9 Pump Transmission Oil Cooler        | 21 Air Filter x 2 (Outer/Inner)  |
| 10 Engine-Pump Bulkhead               | 22 Muffler                       |
| 11 Control Valve x 3                  | 23 Fuel Filter (Water Separater) |
| 12 Swing Device x 2                   | 24 Cab                           |
|                                       | 25 Ladder                        |
|                                       | 26 Folding Stairs                |



### Counterweight with Walkway— Easier access for maintenance.



A walkway around the entire counterweight provides easy access to key rear areas. This means faster and safer inspection and maintenance.

### Folding Stairs with Wide Steps.



Folding stairs is designed for easy access to the machine for servicing and maintenance.

### Wide-Open Service Area— Provides the space needed for quick and easy inspection and maintenance.



This area is conveniently located at the center of the body and provides access to the engine as well as the hydraulic and electrical systems.

### Auto Lubrication System Eliminates the need for manual lubrication.

This system automatically lubricates the front joint pins and swing circle. This eliminates cumbersome daily lubrication.

### Easy-to-Replace Grease Drum Can— Designed to provide quick and easy grease drum can changes.

The compartment floor slides down to lower a drum for simple, easy replacement.



### Convenient Centralized Filter System— Designed to make filter inspection and maintenance easier.

Centralized position means that inspection and maintenance can be performed quickly and easily.



### The Centralized Lubrication System: Fast Filling System



### Low Maintenance Dust Ejector— Automatically expels dust from the air cleaner.

This is one less time-consuming task during routine maintenance.

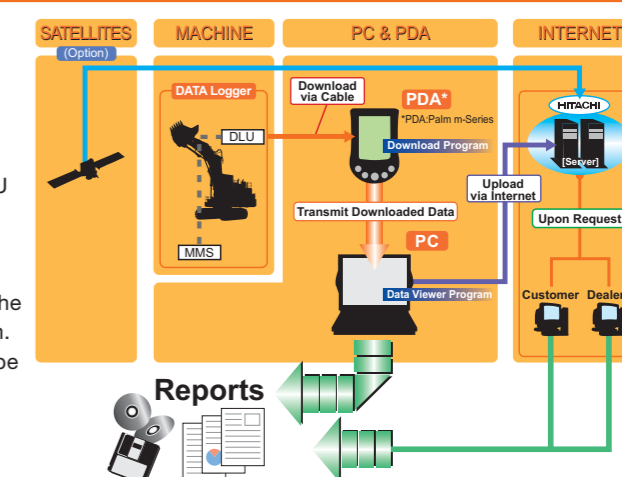
### Contamination sensor— Alerts the opera- tor of excessive contaminants in the oil.

This system detects accumulated contaminants that could cause damage and alerts the operator before trouble occurs.



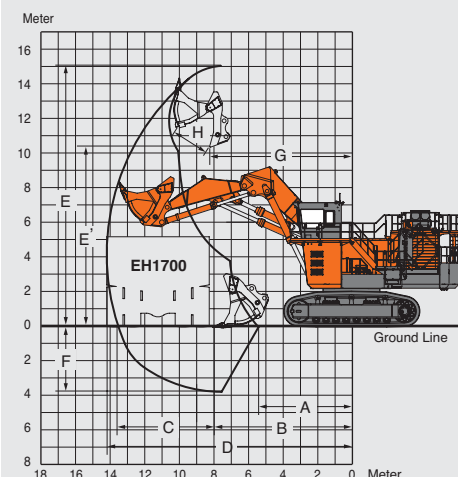
### MIC Mining

The MIC Mining comprises the DLU (Data-logging unit) on the machine DLU continuously records performance of the engine and the hydraulic system. The record can be download by PC and PDA.



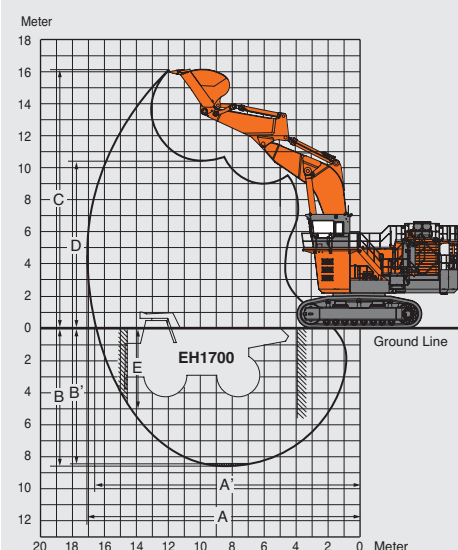
# SPECIFICATIONS

## WORKING RANGES



### Loading Shovel 15.0 m<sup>3</sup> / 16.5 m<sup>3</sup>

- A Min. digging distance  
5 340 mm / 5 200 mm
- B Min. level crowding distance  
7 980 mm / 8 240 mm
- C Level crowding distance  
4 980 mm / 4 960 mm
- D Max. digging reach  
14 060 mm / 14 300 mm
- E Max. cutting height  
15 010 mm / 15 250 mm
- E' Max. dumping height  
10 350 mm / 10 350 mm
- F Max. digging depth  
3 720 mm / 3 960 mm
- G Working radius at max.  
dumping height  
8 140 mm / 8 140 mm
- H Max. bucket opening width  
2 150 mm / 2 150 mm
- Arm crowding force  
918 kN (93 600 kgf) /  
907 kN (92 500 kgf)
- Breakout force  
843 kN (86 000 kgf) /  
784 kN (79 900 kgf)

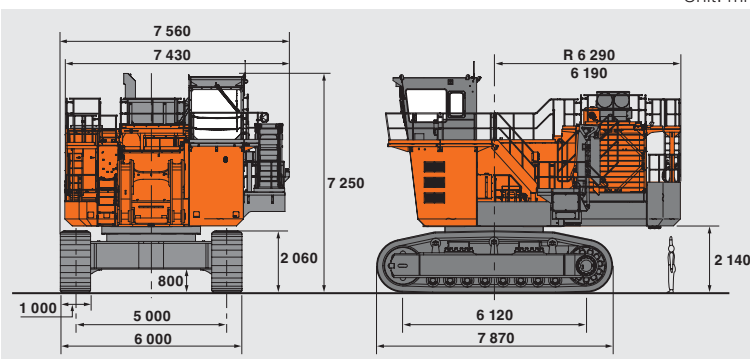


### Backhoe

- BE-boom length 9.00 m
- BE-arm length 4.20 m
- A Max. digging reach  
17 080 mm
- A' Max. digging reach (on ground)  
16 530 mm
- B Max. digging depth 8 600 mm
- B' Max. digging depth (8' level)  
8 470 mm
- C Max. cutting height  
16 060 mm
- D Max. dumping height  
10 330 mm
- E Max. vertical wall  
5 070 mm
- Bucket digging force  
ISO  
832 kN (84 800 kgf)  
SAE: PCSA  
751 kN (76 600 kgf)
- Arm crowd force  
ISO  
825 kN (84 100 kgf)  
SAE: PCSA  
745 kN (76 000 kgf)

## DIMENSIONS

Unit: mm



## ENGINE

- Model..... Cummins QSKTA50-CE
- Rated power  
DIN 6271, net..... 994 kW (1 351 PS) at 1 800 min<sup>-1</sup> (rpm)
- SAE J1995, gross ... 1 044 kW (1 400 HP) at 1 800 min<sup>-1</sup> (rpm)
- Piston displacement.... 50.0 L
- Fuel tank capacity ..... 5 000 L

## HYDRAULIC SYSTEM

- Main pumps..... 4 variable-displacement, axis piston pumps for front attachment and travel
- Pressure setting ..... 29.4 MPa (300 kgf/cm<sup>2</sup>)
- Max. oil flow ..... 4 X 375 L/min
- Swing pumps..... 2 variable-displacement, axis piston pumps for swinging
- Pressure setting ..... 29.4 MPa (300 kgf/cm<sup>2</sup>)
- Max. oil flow ..... 2 X 425 L/min

## UPPERSTRUCTURE

- Swing speed ..... 3.8 min<sup>-1</sup> (rpm)

## UNDERCARRIAGE

- Travel speeds ..... High: 0 to 2.3 km/h  
Low : 0 to 1.6 km/h
- Maximum traction force ... 1 330 kN (135 600 kgf)
- Grade ability ..... 60 % (30 degree) continuous

## WEIGHTS AND GROUND PRESSURE

### Loading Shovel

Equipped with 15.0 m<sup>3</sup> (PCSA heaped) bottom dump bucket

Shoe width	Operating weight	Ground pressure
1 000 mm	249 000 kg	181 kPa (1.85 kgf/cm <sup>2</sup> )

### Backhoe

Equipped with 9.0 m boom, 4.2 m arm, and 15.0 m<sup>3</sup> (PCSA heaped) bucket

Shoe width	Operating weight	Ground pressure
1 000 mm	248 000 kg	181 kPa (1.84 kgf/cm <sup>2</sup> )

## ATTACHMENTS

### Loading Shovel

#### Bucket Capacity (PCSA 2:1 heaped)

- 15.0 m<sup>3</sup> : Materials density 1 800 kg/m<sup>3</sup>
- 16.5 m<sup>3</sup> : Materials density 1 600 kg/m<sup>3</sup>

### Backhoe

#### Bucket Capacity (PCSA 1:1 heaped)

- 15.0 m<sup>3</sup> : Materials density 1 800 kg/m<sup>3</sup>

The number of wear plates and their installation positions on the bucket of loading shovel or backhoe vary depending on applications at job site. The installation of wear plates is indispensable. Consult your nearest Hitachi or Hitachi dealer for details.

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.