

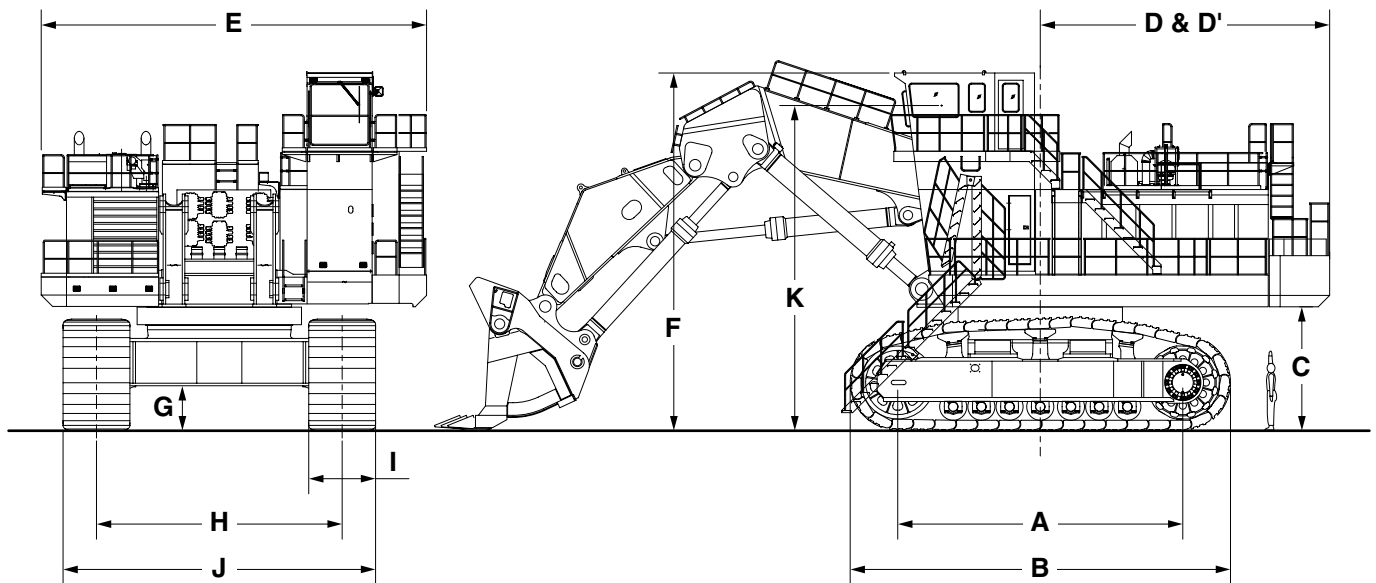
# EX8000

■Engine Rated Power ..... 2 × 1 400 kW (2 × 1 900 PS)

■Operating Weight ..... Loading Shovel: 780 000 kg (1 720 000 lb)

■Loading Shovel Bucket ..... SAE, PCSA (2:1) Heaped: 40.0 m<sup>3</sup> (52.3 yd<sup>3</sup>)

## Specifications



<b>A</b>	<b>Distance between tumblers</b>	7 900 mm (25'11")
<b>B</b>	<b>Undercarriage length</b>	10 500 mm (34'5")
<b>C</b>	<b>Counterweight clearance</b>	3 430 mm (11'3")
<b>D</b>	<b>Rear-end swing radius</b>	8 280 mm (27'2")
<b>D'</b>	<b>Rear-end length</b>	8 010 mm (26'3")
<b>E</b>	<b>Overall width of upperstructure</b>	10 670 mm (35'0")
<b>F</b>	<b>Overall height of cab</b>	9 900 mm (32'6")
<b>G</b>	<b>Min. ground clearance</b>	1 250 mm (4'1")
<b>H</b>	<b>Track gauge</b>	6 800 mm (22'4")
<b>I</b>	<b>Track shoe width</b>	1 850 mm (6'1")
<b>J</b>	<b>Undercarriage width</b>	8 650 mm (28'5")
<b>K</b>	<b>Operator's view</b>	9 000 mm (29'6")

# TECHNICAL DATA

## ENGINE

Model .....	Hitachi S16R-Y1TAA2
Type .....	Water-cooled, 4-cycle, 16-cylinder, turbo-charged and air-cooled, inter-cooler, direct injection chamber-type diesel engine
Rated power	
DIN 6271, net .....	2 × 1 400 kW (2 × 1 900 PS) at 1 600 min <sup>-1</sup> (rpm)
SAE J1349, net .....	2 × 1 400 kW (2 × 1 880 HP) at 1 600 min <sup>-1</sup> (rpm)
SAE J1995, gross .....	2 × 1 400 kW (2 × 1 880 HP) at 1 600 min <sup>-1</sup> (rpm)
Maximum torque .....	2 × 10 050 N·m (2 × 1 025 kgf·m, 2 × 7 410 lbf·ft) at 1 300 min <sup>-1</sup> (rpm)
Piston displacement .....	2 × 65.4 L (2 × 3 990 in <sup>3</sup> )
Bore and stroke .....	170 mm × 180 mm (6.7" × 7.1")
Starting system .....	24 V electric motor
Batteries .....	8 × 12 V, 8 × 220 AH
Cold starting .....	Air heater

## HYDRAULIC SYSTEM

Hitachi's ETS (Electronic Total control System) can achieve maximum job efficiency by reducing fuel consumption and noise levels, while maximizing productivity through the optimization of engine-pump functions with excellent controllability increasing operator comfort.

- E-P Control (Computer-aided Engine-Pump Control system)  
Main pumps regulated by electric engine-speed sensing control system.
- I-OHS (Integrated Optimum Hydraulic System)  
16 main pumps and 6 control valves and 2 set of flow-assisting valves enable both independent and combined operations of all functions.
- FPS (Fuel-saving Pump System)  
FPS minimizes energy loss with superior performance in fine control.
- Auto-Idling system for saving fuel and reducing noise.
- Hydraulic drive cooling-fan system for oil cooler.
- Hydraulic drive cooling-fan system for radiator.
- Forced-lubrication and forced-cooling pump drive system.

Main pumps .....	16 variable-displacement, axial piston pumps for front attachment, travel and swing
Pressure setting .....	29.4 MPa (300 kgf/cm <sup>2</sup> , 4 270 psi)
Max. oil flow .....	16 × 500 L/min (16 × 132 US gpm, 16 × 110 Imp gpm)

Pilot pumps .....	2 gear pumps
Pressure setting .....	4.4 MPa (45 kgf/cm <sup>2</sup> , 640 psi)
Max. oil flow .....	2 × 110 L/min (2 × 29.1 US gpm, 2 × 24.2 Imp gpm)

### Relief Valve Settings

Implement circuit .....	29.4 MPa (300 kgf/cm <sup>2</sup> , 4 270 psi)
Swing circuit .....	29.4 MPa (300 kgf/cm <sup>2</sup> , 4 270 psi)
Travel circuit .....	29.4 MPa (300 kgf/cm <sup>2</sup> , 4 270 psi)
Pilot circuit .....	4.4 MPa (45 kgf/cm <sup>2</sup> , 640 psi)

### Hydraulic Cylinders

High-strength piston rods and tubes adopted. Cylinder cushion mechanisms are provided for boom, arm, bucket and dump cylinders. Stroke-end control system is provided for arm, bucket cylinders.

Bucket cylinder is provided with protector.

### Cylinder Dimensions

#### Loading shovel

	Qty.	Bore	Rod diameter
Boom	2	480 mm (18.9")	340 mm (13.4")
Arm	2	390 mm (15.4")	270 mm (10.6")
Bucket	2	390 mm (15.4")	270 mm (10.6")
Dump	2	310 mm (12.2")	180 mm (7.1")

### Hydraulic Filters

All hydraulic circuits have high-quality hydraulic filters for protection against oil contamination and longer life of hydraulic components.

	Qty.
Full flow filter	10 10 μm
High pressure strainer (In main & swing pump delivery line)	16 80 meshes
Drain filter (For all plunger type pumps & motors)	1 10 μm
By-pass filter (In oil cooler by-pass line)	1 5 μm
Pilot filter	2 10 μm



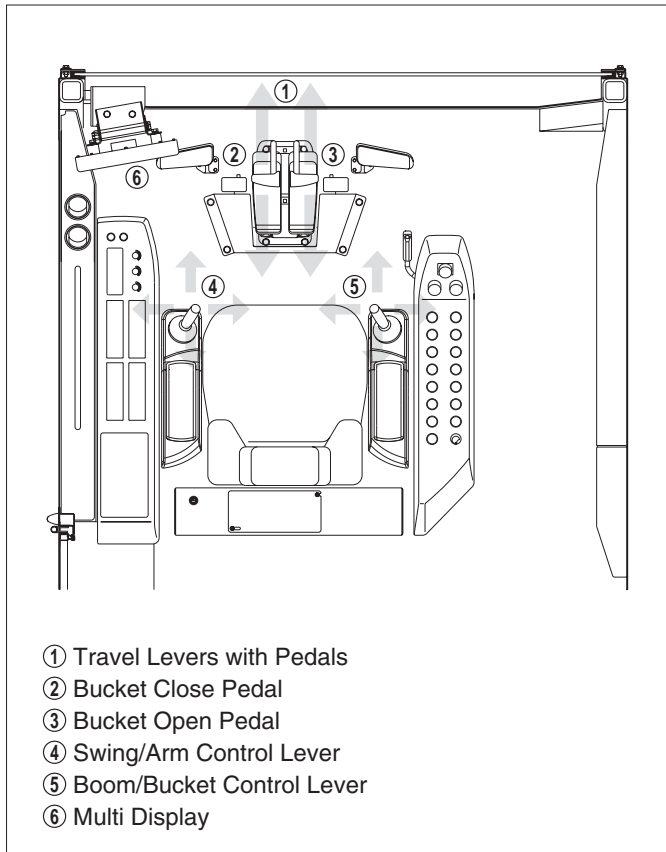
## CONTROLS

### 2 Implement Levers

Electric joystick control levers. Right lever is for boom and bucket control, left lever for swing and arm control. 2 pedals provided for opening/closing the bottom dump bucket.

### 2 Travel Levers with Pedals

Remote-controlled hydraulic servo system. Independent drive at each track allows counter rotation of tracks.



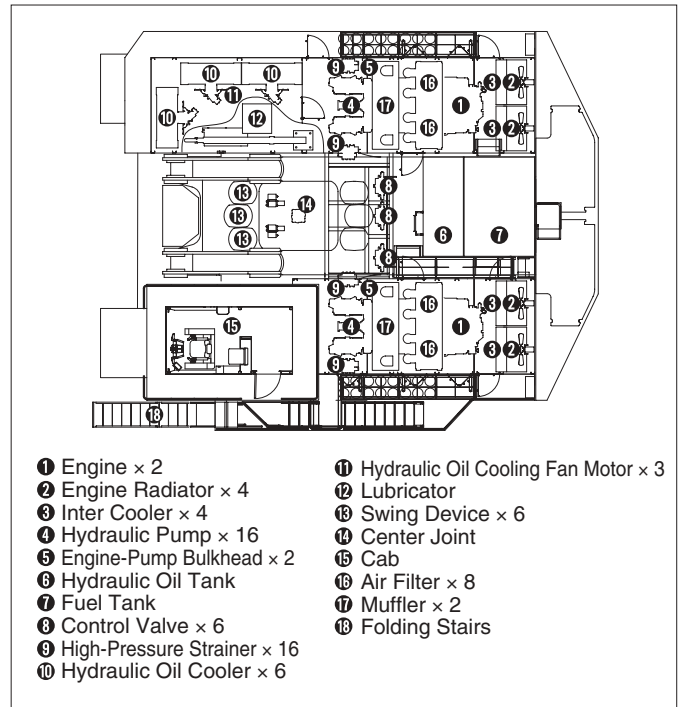
## UPPERSTRUCTURE

### Revolving Frame

A deep, full-reinforced box section. Heavy-gauge steel plates used for ruggedness.

### Deck Machinery

Maintenance accessibility is the major feature in the layout of deck machinery. Folding stairs provides easy access to the deck machinery. And also the side walk provides easy access to engine, hydraulic and electrical components.



### Swing Device

6 high-torque, axial-piston motors with two-stage planetary gear bathed in oil. Swing circle with dirt seals is a heavy-duty, triple-row, cylindrical roller bearing. Induction-hardened internal swing circle gear and pinion immersed in lubricant. Parking brake of spring-set/hydraulic-released disc type. This parking brake is manually releasable.

Swing speed ..... 3.2 min<sup>-1</sup> (rpm)

### Operator's Cab

The sturdy cab, with the top guard conforming to OPG Level II (ISO), helps protect the operator from falling objects.

1 800 mm (5' 11") width, 3 360 mm (11') length, 2 150 mm (7' 1") height, roomy cab with tinted-glass windows features all-round visibility.

Multi-Display (color LCD 10.5 inch) for centralized information of machine status. 3 Observation monitors to view sideways and rear.

Pressurized 3 air conditioning system.

Noise level ..... 75 dB(A) in the cab; on max. engine speed under no-load condition.

Operator's view ..... 9 000 mm (29' 6")

## UNDERCARRIAGE

### Tracks

Shovel-type undercarriage. Dual-flanged-type bolt linkage for side frame and X-form center frame assures durability. Heavy-duty track frame of all-welded, stress-relieved structure. Top-grade materials used for toughness. Lifetime-lubricated induction-hardened track rollers, idlers and drive tumblers with floating seals. Specially heat-treated connection pins. Hydraulic track adjuster provided with N<sub>2</sub> gas accumulator with relief valve. Track adjuster provided with protection device against abnormal tension. Travel motion alarm device.

### Shovel-Type Undercarriage

Triple grouser shoes specially heat treated cast steel.  
Shoe width ..... 1 850 mm (73")

### Numbers of Sliders, Rollers and Shoes (Each Side)

Upper sliders ..... 3  
Lower rollers ..... 7  
Track shoes ..... 39

### Travel Device

Each track driven by high-torque, axial piston motors, allowing counter rotation of tracks. 2-stage planetary gear plus spur gears reduction device. Dual-support-type traction device. Parking brake of spring-set/hydraulic-released disc type. This parking brake can be manually releasable.

Travel speeds ..... High: 0 to 2.0 km/h (1.2 mph)  
Low : 0 to 1.4 km/h (0.9 mph)  
Maximum traction force ..... 3 000 kN  
(306 000 kgf, 674 000 lbf)  
Gradeability ..... 30° (60%) max.

## WEIGHTS AND GROUND PRESSURE

### Loading Shovel

Equipped with 40.0 m<sup>3</sup> (52.3 yd<sup>3</sup>) ; SAE, PCSA (2:1) bottom dump bucket.

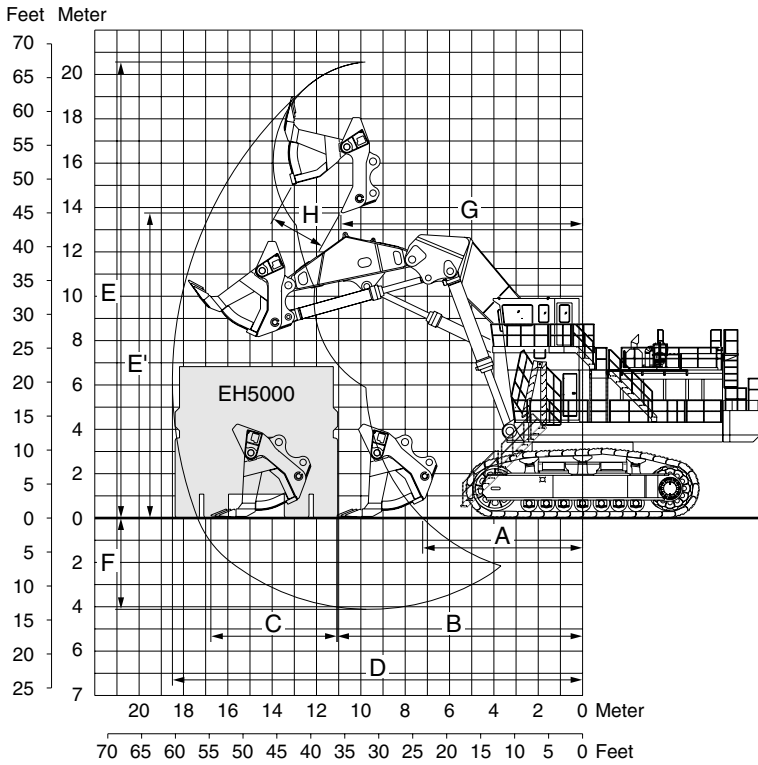
Shoe type	Shoe width	Operating weight	Ground pressure
Triple grousers	1 850 mm (73")	780 000 kg (1 720 000 lb)	235 kPa (2.4 kgf/cm <sup>2</sup> , 34.1 psi)



## SERVICE REFILL CAPACITIES

	liters	US gal	Imp gal
Fuel tank .....	14 400	3 800	3 170
Engine coolant .....	2 × 340	2 × 89.9	2 × 74.8
Engine oil .....	2 × 310	2 × 81.9	2 × 68.2
Pump transmission device ...	2 × 50	2 × 13.2	2 × 11
Swing device .....	6 × 75	6 × 20	6 × 16
Hydraulic system .....	8 000	2 110	1 760
Hydraulic oil tank .....	3 800	1 000	840
Travel device .....	2 × 475	2 × 126	2 × 105

## WORKING RANGES



<b>A Min. digging distance</b>	7 200 mm (23'6")
<b>B Min. level crowding distance</b>	11 100 mm (36'5")
<b>C Level crowding distance</b>	5 600 mm (18'4")
<b>D Max. digging reach</b>	18 500 mm (60'7")
<b>E Max. cutting height</b>	20 500 mm (67'3")
<b>E' Max. dumping height</b>	13 800 mm (45'3")
<b>F Max. digging depth</b>	4 100 mm (13'5")
<b>G Working radius at max. dumping height</b>	10 900 mm (35'9")
<b>H Max. bucket opening width</b>	2 800 mm (9'2")
<b>Crowding force (SAE)</b>	2 870 kN (293 000 kgf, 645 000 lbf)
<b>Breakout force (SAE)</b>	2 230 kN (227 000 kgf, 501 000 lbf)

### Bucket (PCSA heaped)

Capacity	Width	No. of teeth	Weight	Type
40.0 m <sup>3</sup> (52.3 yd <sup>3</sup> )	5 600 mm (18'4")	6	62 500 kg (138 000 lb)	Bottom dump type general purpose

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These specifications are subject to change without notice

