

# KOMATSU®

## PC850-8E0 BACKHOE

**HORSEPOWER**  
Gross: 370 kW 496 HP / 1800 rpm  
Net: 363 kW 487 HP / 1800 rpm

**OPERATING WEIGHT**  
78600 – 79800 kg  
173,280 – 175,930 lb

ecot3

PC  
850



Photo may include optional equipment.

HYDRAULIC EXCAVATOR

# WALK-AROUND

## Productivity Features

- **High Work Equipment Speed**  
Arm quick return circuit enables loading work to be quicker than ever, by reducing hydraulic pressure loss of arm dumping.
- **Heavy Lift Mode**  
The heavy lift mode increases lifting force by 10%.
- **Large Digging Force**  
Pressing the Power Max. function button temporarily increases the digging force.
- **Two-mode Setting for Boom**  
Switch selection allows either powerful digging or smooth boom operation.
- **Large Drawbar Pull and Steering Force**  
provide excellent mobility.
- **Swing Priority Mode**  
The swing priority mode improves efficiency for loading dump trucks.
- **Shockless Boom Control**  
Switch selection reduces chassis vibration after sudden stops.

See page 5.

## Excellent Reliability and Durability

- **Strengthened Boom and Arm**
- **KMAX Bucket Teeth** offer superior penetration and long-term sharpness.
- **Fuel Pre-filter** with water separator and **High Efficiency Fuel Filter** equipped as standard.
- **O-ring Face Seals**, which have excellent sealing performance, are used for the hydraulic hoses.
- **High-pressure In-line Filtration**  
The cool-running hydraulic system is protected with the most extensive filtration system available, including a high pressure in-line filter for each main pump.



## Maintenance Features

- **Easy Cleaning of Cooling Unit**  
Fan reverse-rotation function facilitates clogged radiator cleaning.
- **Easy Checking and Maintenance of Engine**
- **Large Handrail, Step and Catwalk**  
provide easy access to the engine and hydraulic equipment.

See page 11.

- **Highly Reliable Electronic Devices**  
Exclusively designed electronic devices have passed severe testing.
  - Controllers • Sensors • Connectors
  - Heat resistant wiring • Circuit breaker
- **Boom Foot Hoses** are arranged under the boom foot, improving hose life and safety.

See pages 6, 7.

## Ecology and Economy Features

### • Low Emission Engine

A powerful, turbocharged and air-to-air aftercooled Komatsu SAA6D140E-5 provides **363 kW** 487 HP. This engine is U.S. EPA Tier 3 and EU Stage 3A emissions certified, without sacrificing power or machine productivity.

### • Economy Mode Four-level Setting

Enables operator to select the appropriate Economy mode level to match production requirement with lowest fuel consumption.

### • Reduction of Ambient Noise

- Electronically controlled variable speed fan drive
- Large hybrid fan
- Low-noise muffler

### • Mode Selection

- Economy mode improves fuel consumption.
- ECO gauge for energy-saving operations
- Extended idling caution for fuel conservation
- Auto deceleration and auto idling system reduce fuel consumption.

See pages 4, 5.



Photo may include optional equipment.

## Working Environment

### • Large Comfortable Cab

- Low-noise cab
- Low vibration with cab damper mounting
- Highly pressurized cab with optional air conditioner (A/C)
- Operator seat and console with armrest that enables operations in the appropriate operational posture.
- OPG top guard level 2 (ISO 10262) capable with bolt-on top guard

See pages 8, 9.

### Large Liquid Crystal Display (LCD) Monitor

- Easy-to-see and use 7" large multi-function color monitor
- Can be displayed in 12 languages for global support.

See page 10.

### HORSEPOWER

Gross: 370 kW 496 HP / 1800 rpm

Net: 363 kW 487 HP / 1800 rpm

### OPERATING WEIGHT

Backhoe

78600 – 79800 kg

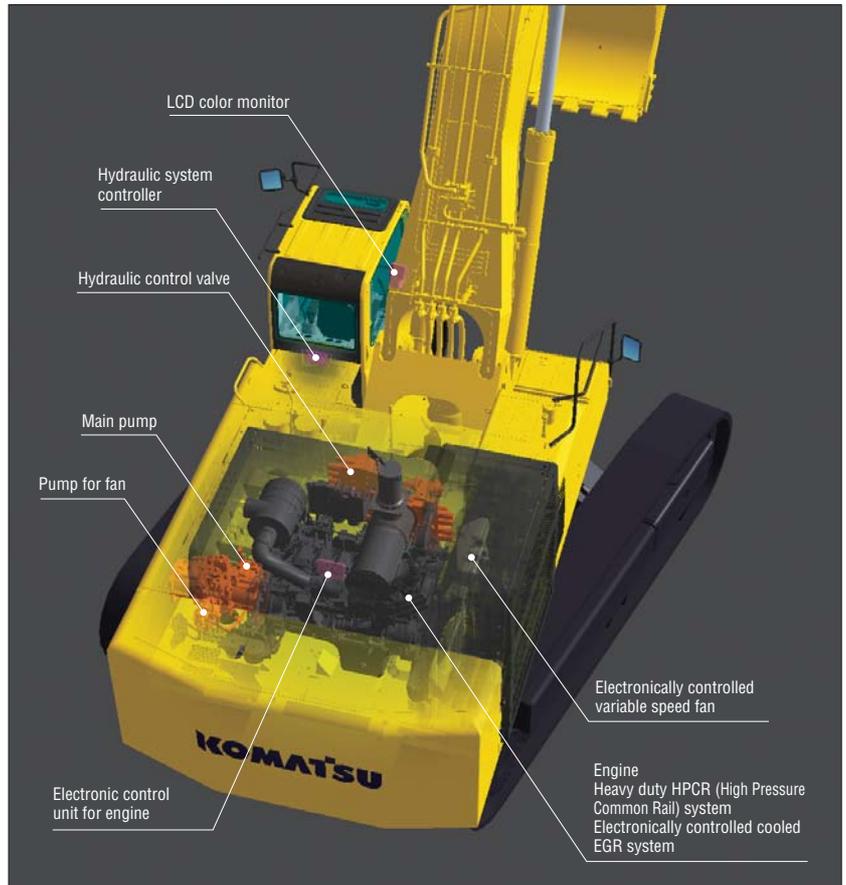
173,280 – 175,930 lb

# PRODUCTIVITY & ECOLOGY FEATURES

## Komatsu Technology



Komatsu develops and produces all major components, such as engines, electronics and hydraulic components, in house. With this "Komatsu Technology" and adding customer feedback, Komatsu is achieving great advancements in technology. To achieve both high levels of productivity and economical performance, Komatsu has developed the main components with a total control system. The result is a new generation of high performance and environment friendly excavators.



## Low Emission Engine

Komatsu SAA6D140E-5 engine is U.S. EPA Tier 3 and EU Stage 3A emissions certified, without sacrificing power or machine productivity.



## Electronically Controlled Variable Speed Fan Contributes to Low Fuel Consumption and Low Noise

The electronic control system sets the revolution speed of the cooling fan according to the coolant, hydraulic oil, and ambient temperature; effectively uses the engine output to prevent wasteful fuel consumption; and reduces noise during low-speed fan revolution.

## Lower and Economical Fuel Consumption Using Economy Mode

Enables operator to set the Economy mode to four levels according to working conditions so that production requirement is achieved at lowest fuel consumption.



## Reduction of Ambient Noise

Reduced noise by adoption of an electronically controlled variable speed fan drive, large hybrid fan and low-noise muffler.

## ECO gauge that Assists Energy-saving Operations

ECO gauge is equipped for environment friendly energy-saving operations. Focus on operation in the green range allows reduction of CO<sub>2</sub> emission and fuel consumption.



ECO gauge

**Idling Caution**

To prevent unnecessary fuel consumption, an idling caution is displayed on the monitor, if the engine idles for 5 minutes or more.



**Auto Deceleration and Auto Idling System**

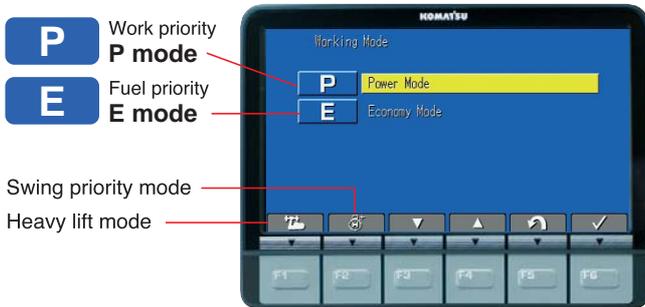
Auto deceleration system is equipped to reduce fuel consumption and operating noise. Also, engine idling speed can be set at a lower speed on monitor with auto idling system.

**Working Modes Selectable**

P and E modes established work modes are further improved.

**P mode** – Power or work priority mode has low fuel consumption, but fast equipment speed and maximum production and power are maintained.

**E mode** – Economy or fuel saving mode further reduces fuel consumption, but maintains the P-mode-like working equipment speed for light duty work.



You can select Power or Economy modes using a one-touch operation on the monitor panel depending on workloads.

**Heavy Lift Mode**

Gives 10% more lifting force when needed for handling rock or heavy lifting applications.

**Swing Priority Mode**

The swing priority mode allows the operator to use the same easy motion for 180° loading as 90° loading operations. By altering the oil flow, this setting allows you to select either boom or swing as the priority for increased production.

Selection	Result
ON	Oil flow to the swing motor is increased. 180° loading operations are most efficient.
OFF	Oil flow to the boom is increased. 90° loading operations are most efficient.

**Large Digging Force**

With the one-touch Power Max. function digging force is further increased. (8.0 seconds of operation)

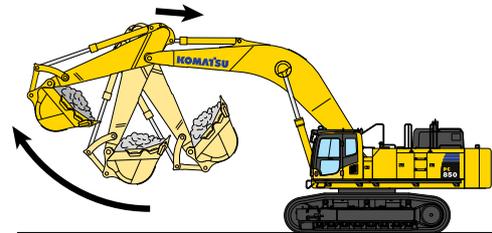
**Maximum arm crowd force (ISO 6015):**  
 298 kN (30.4 tonf) ➔ **327 kN (33.3 tonf)** **9.4% UP**  
 (With Power Max.)

**Maximum bucket digging force (ISO 6015):**  
 363 kN (37.0 tonf) ➔ **397 kN (40.5 tonf)** **9.4% UP**  
 (With Power Max.)

\*Measured with Power Max. function, 3600 mm 11'10" arm and ISO 6015 rating

**Work Equipment Speed**

An arm quick return circuit is provided for arm dumping. This returns a portion of oil flow directly to the hydraulic tank at arm dumping to reduce the hydraulic pressure loss. Speedier loading work can be accomplished by work equipment with quicker movement.

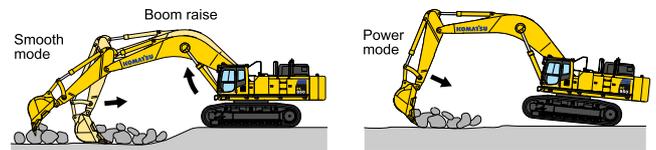


**Large Drawbar Pull and Steering Force**

Since the machine has a large drawbar pull and a high steering force, it demonstrates excellent mobility even when it is on inclined sites.

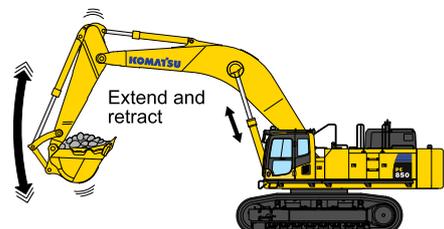
**Two-mode Setting for Boom**

**Smooth mode** provides easy operation for gathering blasted rock and scraping operations. When maximum digging force is needed, switch to **power mode** for more effective excavating.



**Shockless Boom Control**

The PC850-8E0 boom circuit features a shockless valve (Double-check slow return valve) to automatically reduces the amount of vibration present when operating the boom. Operator fatigue is reduced (Which can improve safety and productivity), and spillage caused by vibration is minimized.



# RELIABILITY & DURABILITY FEATURES

## Excellent Reliability and Durability

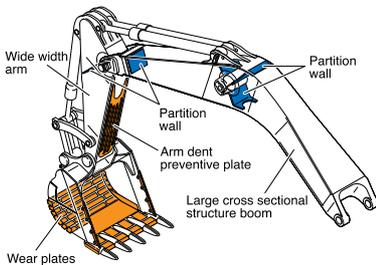
### Boom Foot Hoses

The boom foot hoses are arranged under the boom foot to reduce hose bend during operation, extending hose life and improving operator safety.



### Strengthened Boom and Arm

Thanks to the large cross-sectional structure employing a high tensile strength steel with a thick plate, partition wall, etc., the boom and arm exhibit excellent durability and are highly resistant to bending and torsional stress.



### Strengthened Revolving Frame Underguard

Guards the machine pipings against being hit by rocks from below and prevents hydraulic components and the engine from being damaged.

### Frame Structure

The revolving frame mount and center frame mount on the swing circle are no welding structure so that force is transmitted directly to the thick plate of the frame without passing through any welding.

### Fuel Pre-filter (With Water Separator)

Removes water and contaminants from fuel to enhance the fuel system reliability.

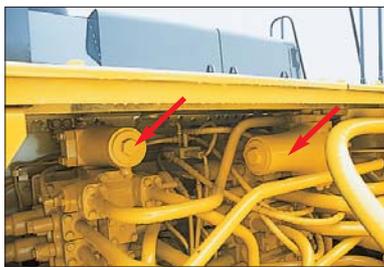


### High Efficiency Fuel Filter

Fuel system reliability is even better with high efficiency fuel filter.

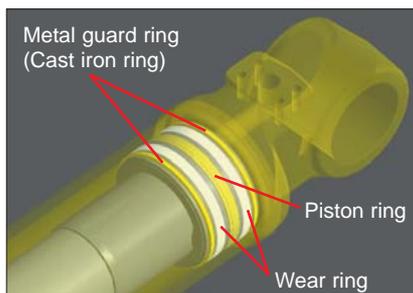
### High-pressure In-line Filtration

The PC850-8E0 has the most extensive filtration system available, providing in-line filters as standard equipment. An in-line filter in the outlet port of each main hydraulic pump reduces failures caused by contamination.



### Metal Guard Rings

Metal guard rings protect all the hydraulic cylinders and improve reliability.



### Circuit Breaker

With circuit breaker, the machine can be easily restarted after repair.



### Sturdy Undercarriage

The undercarriage is strengthened to provide excellent reliability and durability when working on rocky ground or blasted rock.



Sturdy guards shield the travel motors and pipings against damage from rocks.



### O-ring Face Seal

The hydraulic hose seal method has been changed from a conventional taper seal to an O-ring seal. This provides improved sealing performance during operation.

### Heat-resistant Wiring

Heat-resistant wiring is used for the engine electric circuit and other major component circuit.

## Strengthened Quarry Bucket Provides Outstanding Wear-resistance

The PC850-8E0 has the bucket for specific use in quarry, that is strong in impact and wear, and providing high performance and long life. Komatsu KVV's hard materials\* provide excellent wear resistance. Combined with adoption of long-life KMAX teeth, durability of bucket is drastically enhanced.

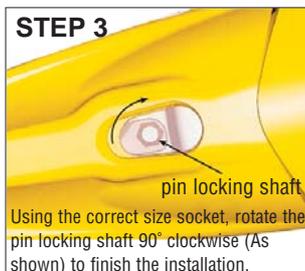
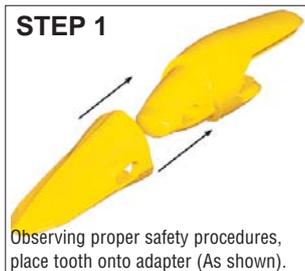
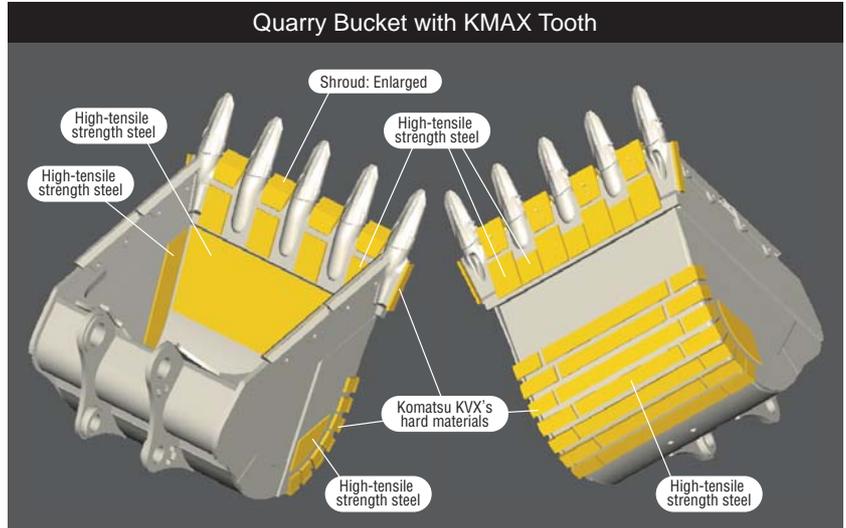
\* Komatsu KVV's hard materials:

Komatsu KVV developed, wear-resistant, reinforced materials.

Brinell hardness: 500 or more (180kgf/mm<sup>2</sup> class). Features high wear-resistance and little quality change from the heat generated during rock loading, maintaining long term hardness.

### KMAX Tooth

- Unique bucket tooth shape, superior digging performance
- Long-term high sharpness
- Great penetration performance
- Hammerless, safe, and easy tooth replacement  
(Tooth replacement time: Halves the conventional machine.)



# WORKING ENVIRONMENT



Photo may include optional equipment.

## Low Noise Design Cab

The newly-designed cab is highly rigid and has excellent sound absorption ability. Through improvement of noise source reduction and use of low noise engine, hydraulic equipment, and air conditioner allows the operator to work in quiet condition.

**Operator ear's noise      2 dB(A) reduced**

Compared with the current model

## Rigid and Safe Operator's Cab

### OPG top guard level 2 (ISO 10262)

The OPG top guard securely protects the operator's cab and conforms to the ISO 10262.

### Additional head lamp

Night operation is safe.

### Single sheet fixed glass

The glass installed in the machine has excellent visibility since it is laminated to prevent shortening and has less vibration.

### See-through skylight equipped with a sun shade

The upward visibility is excellent.



**Wide Newly-designed Cab**

Newly-designed wide spacious cab includes seat with reclining backrest. The seat height and longitudinal inclination are easily adjusted using a pull-up lever. You can set the appropriate operational posture of armrest together with the console. Reclining the seat further enables you to place it into the fully flat state with the headrest attached.



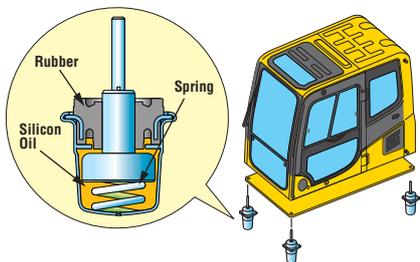
Seat with headrest reclined full flat

**Pressurized Cab**

Optional air conditioner, air filter and a higher internal air pressure (+6.0 mm Aq +0.2"Aq) prevent external dust from entering the cab.

**Low Vibration with Cab Damper Mounting**

PC850-8E0 uses viscous damper mounting for cab that incorporates longer stroke and the addition of a spring. The cab damper mounting combined with high rigidity deck aids vibration reduction at operator seat.



**Multi-position Controls**

The multi-position, Pressure Proportional Control (PPC) levers allow the operator to work in comfort while maintaining precise control. A double-slide mechanism allows the seat and control levers to move together or independently, allowing the operator to position the controls for maximum productivity and comfort.



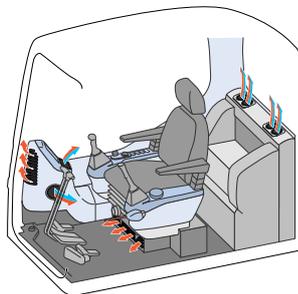
Seat sliding amount: 340 mm 13.4"

**Automatic A/C (Optional)**

Enables you to easily and precisely set cab atmosphere with the instruments on the large LCD.



The bi-level control function keeps the operator's head and feet cool and warm respectively. This improved air flow function keeps the inside of the cab comfortable throughout the year. Defroster function keeps front glass clear.



**Safety Features**

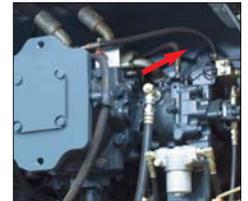
**Step Light with Timer**

provides light for about one minute to allow the operator to get off the machine safely.



**Pump/Engine Room Partition**

prevents oil from spraying on the engine if a hydraulic hose should burst.



**Thermal and Fan Guards**

are placed around high-temperature parts of the engine and fan drive.

**Slip-resistant Plates**

Spiked plates on working areas provide slip-resistant plates performance.

**Horn Interconnected with Warning Light (Optional)**

gives visual and audible notice of the excavator's operation when activated.

**Lower Wiper (Optional)**

Lower windshield wiper improves visibility in rain.

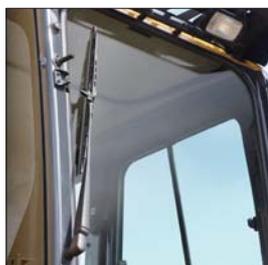


**Rear View Monitoring System (Optional)**

The operator can view the rear of the machine with a color monitor screen.



Defroster (Optional)



Cab frame mounted wiper



Bottle holder and magazine rack

## Large LCD Color Monitor

### Large Multi-lingual LCD Monitor

A large user-friendly color monitor enables safe, accurate and smooth work. Improved screen visibility is achieved by the use of LCD that can easily be read at various angles and lighting conditions. Simple and easy to operate switches. Function keys facilitate multi-function operations. Displays data in 12 languages to support operators around the world.



#### Indicators

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| 1 Auto-decelerator               | 5 Hydraulic oil temperature gauge |
| 2 Working mode                   | 6 Fuel gauge                      |
| 3 Travel speed                   | 7 ECO gauge                       |
| 4 Engine water temperature gauge | 8 Function switches menu          |

#### Basic operation switches

- |                                    |                     |
|------------------------------------|---------------------|
| 1 Auto-decelerator (& auto idling) | 4 Buzzer cancel     |
| 2 Working mode selector            | 5 Wiper             |
| 3 Traveling selector               | 6 Windshield washer |

### Mode Selection

The multi-function color monitor has Power mode and Economy mode (Four levels).

Working Mode	Application	Advantage
<b>P</b> (P0,P1)	Power Mode	<ul style="list-style-type: none"> <li>Maximum production/power</li> <li>Fast cycle time</li> </ul>
<b>E</b> (E0,E1,E2,E3)	Economy Mode	<ul style="list-style-type: none"> <li>Good cycle time</li> <li>Good fuel economy</li> </ul>

Additionally, it is possible to select "Heavy lift mode" or "Swing priority mode" for each Power mode and Economy mode.

Selection	Display on the monitor
Heavy lift mode	
Swing priority mode	

### Equipment Management Monitoring System

#### Monitor Function

Controller monitors engine oil level, coolant temperature, battery charge and air clogging, etc. If controller finds any abnormality, it is displayed on the LCD.



#### Maintenance Function

Monitor informs replacement time of oil and filters on LCD when the replacement interval is reached.

#### Trouble Data Memory Function

Monitor stores abnormalities for effective troubleshooting.



# MAINTENANCE FEATURES

## Easy Checking and Maintenance of Engine

Engine check points are concentrated on one side of the engine to facilitate daily checks. Thermal guards are placed around high-temperature parts such as turbocharger.



## One-touch Drain Cock

Easier, cleaner engine oil changes.

## Easy Cleaning of Cooling Unit

Reverse-rotation function of the hydraulic driven fan facilitates cleaning of the cooling unit. In addition, this function contributes to reducing warming-up run time in low temperature and discharging hot air from the engine room to keep appropriate heat balance.



## Long-life Oil, Filter

Uses high-performance filtering materials and long-life oil. Extends the oil and filter replacement interval.



Hydraulic oil filter (Eco-white element)

Engine oil & Engine oil filter	every 500 hours
Hydraulic oil	every 5000 hours
Hydraulic oil filter	every 1000 hours

## Dust Indicator with 5-step Indication

Informs of air cleaner clogging in 5 steps to warn of filter condition.



## Wide Catwalk

Easier, safer operator cab access and maintenance checks.



## Steps Connected to the Machine Cab

Steps allows access from left hand catwalk to top of machine for engine check and maintenance.



## Convenient Utility Space

Utility space provides great convenience to store tools, spare parts, etc.



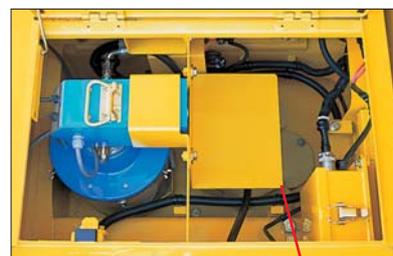
## Washable Cab Floor Mat

Cab floor mat is easy to keep clean. The gently inclined surface has a flanged floor mat and drainage holes to facilitate runoff.



## Electric Pump, Grease Gun with Indicator (Optional)

Greasing is made easy with the electric pump, grease gun with indicator.



Grease can drum storage location



Grease gun  
The grease gun can be reached from ground level.

Indicator

## Divided Type Engine Cover

The divided engine cover allows easily access to inspection points around the engine.



Photo may include optional equipment.

# SPECIFICATIONS



## ENGINE

Model ..... Komatsu SAA6D140E-5  
 Type ..... 4-cycle, water-cooled, direct injection  
 Aspiration ..... Turbocharged, aftercooled, cooled EGR  
 Number of cylinders ..... 6  
 Bore ..... **140 mm** 5.51"  
 Stroke ..... **165 mm** 6.50"  
 Piston displacement ..... **15.24 ltr** 930 in<sup>3</sup>  
 Governor ..... All-speed, electronic  
 Horsepower:  
   SAE J1995 ..... Gross **370 kW** 496 HP  
   ISO 9249 / SAE J1349\* ..... Net **363 kW** 487 HP  
 Rated rpm ..... 1800 rpm  
 Fan drive type ..... Hydraulic

\*Net horsepower at the maximum speed of radiator cooling fan is **338 kW** 454HP. U.S. EPA Tier 3 and EU Stage 3A emissions certified.



## HYDRAULIC SYSTEM

Type ..... Open-center load-sensing system  
 Number of selectable working modes ..... 2

### Main pump:

Type ..... Variable-capacity piston pumps  
 Pumps for ..... Boom, arm, bucket, swing, and travel circuits  
 Maximum flow ..... **2 x 494 ltr/min** 2 x 130.5 U.S. gal/min

Fan drive pump ..... Variable capacity piston type

### Hydraulic motors:

Travel ..... 2 x axial piston motor with parking brake  
 Swing ..... 2 x axial piston motor with swing holding brake

### Relief valve setting:

Implement circuits	<b>31.4 MPa</b>	320 kg/cm <sup>2</sup>	4,550 psi
Travel circuit	<b>34.3 MPa</b>	350 kg/cm <sup>2</sup>	4,980 psi
Swing circuit	<b>28.4 MPa</b>	290 kg/cm <sup>2</sup>	4,120 psi
Heavy lift circuit	<b>34.3 MPa</b>	350 kg/cm <sup>2</sup>	4,980 psi
Pilot circuit	<b>2.9 MPa</b>	30 kg/cm <sup>2</sup>	430 psi

### Hydraulic cylinders:

(Number of cylinders—bore x stroke x rod diameter)  
 Boom . . . **2 – 200 mm x 1950 mm x 140 mm** 7.9" x 76.8" x 5.5"  
 Arm . . . **2 – 185 mm x 1610 mm x 120 mm** 7.3" x 63.4" x 4.7"  
 Bucket  
   Std. . . . **1 – 185 mm x 1820 mm x 130 mm** 7.3" x 71.7" x 5.1"  
   SE . . . . **1 – 225 mm x 1420 mm x 160 mm** 8.9" x 55.9" x 6.3"



## SWING SYSTEM

Driven method ..... Hydraulic motors  
 Swing reduction ..... Planetary gear  
 Swing circle lubrication ..... Grease-bathed  
 Swing lock ..... Oil disc brake  
 Swing speed ..... 6.8 rpm



## DRIVES AND BRAKES

Steering control ..... Two levers with pedals  
 Drive method ..... Fully hydrostatic  
 Travel motor ..... Axial piston motor, in-shoe design  
 Reduction system ..... Planetary triple reduction  
 Maximum drawbar pull ..... **559 kN** 57000 kgf 125,660 lb  
 Gradeability ..... 70%  
 Maximum travel speed  
   Low ..... **2.8 km/h** 1.7 mph  
   High ..... **4.2 km/h** 2.6 mph  
 Service brake ..... Hydraulic lock  
 Parking brake ..... Oil disc brake



## UNDERCARRIAGE

Center frame ..... H-leg frame  
 Track frame ..... Box-section  
 Seal of track ..... Sealed  
 Track adjuster ..... Hydraulic  
 No. of shoes ..... 47 each side  
 No. of carrier rollers ..... 3 each side  
 No. of track rollers ..... 8 each side



## COOLANT AND LUBRICANT CAPACITY (REFILLING)

Fuel tank	<b>980 ltr</b>	258.9 U.S. gal
Radiator	<b>100 ltr</b>	26.4 U.S. gal
Engine	<b>53 ltr</b>	14.0 U.S. gal
Final drive, each side	<b>20 ltr</b>	5.3 U.S. gal
Swing drive	<b>24.5 x 2 ltr</b>	6.5 x 2 U.S. gal
Hydraulic tank	<b>470 ltr</b>	124.2 U.S. gal



## OPERATING WEIGHT (APPROXIMATE)

PC850-8E0: Operating weight, including **8040 mm** 26'5" boom, **3600 mm** 11'10" arm, SAE heaped **3.4 m<sup>3</sup>** 4.45 yd<sup>3</sup> backhoe bucket, operator, lubricant, coolant, full fuel tank, and the standard equipment.

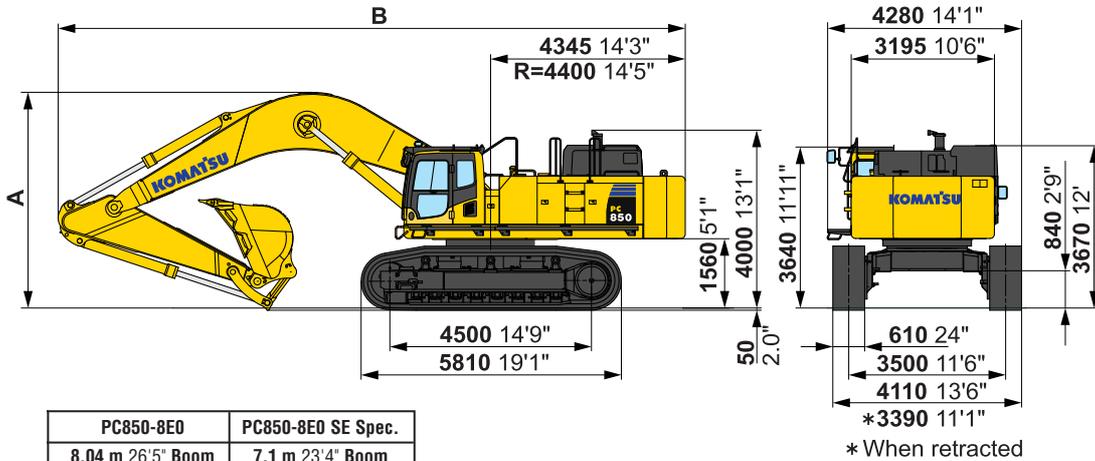
PC850-8E0 Super Earth mover (SE) spec.: Operating weight, including **7100 mm** 23'4" boom, **2945 mm** 9'8" arm, SAE heaped **4.3 m<sup>3</sup>** 5.62 yd<sup>3</sup> backhoe bucket, operator, lubricant, coolant, full fuel tank, and the standard equipment.

Shoes	PC850-8E0		PC850-8E0 SE Spec.	
	Operating Weight	Ground Pressure	Operating Weight	Ground Pressure
<b>610 mm</b> 24"	<b>79000 kg</b> 174,160 lb	<b>128 kPa</b> 1.31 kgf/cm <sup>2</sup> 18.6 psi	<b>78600 kg</b> 173,280 lb	<b>128 kPa</b> 1.31 kgf/cm <sup>2</sup> 18.6 psi
<b>710 mm</b> 28"	<b>79800 kg</b> 175,930 lb	<b>112 kPa</b> 1.14 kgf/cm <sup>2</sup> 16.2 psi	<b>79400 kg</b> 175,050 lb	<b>111 kPa</b> 1.13 kgf/cm <sup>2</sup> 16.1 psi



## BACKHOE DIMENSIONS

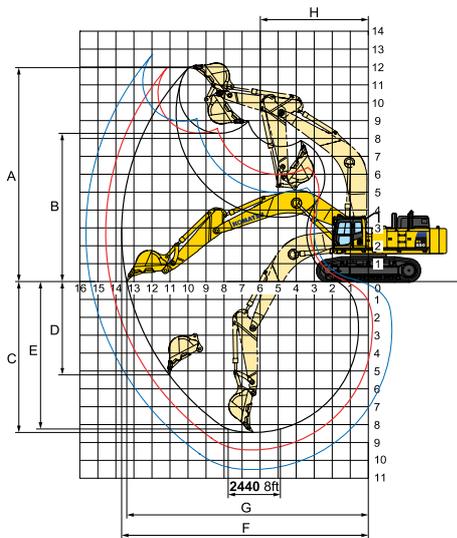
Unit: mm ft in



	PC850-8E0	PC850-8E0 SE Spec.
	8.04 m 26'5" Boom	7.1 m 23'4" Boom
	3.6 m 11'10" Arm	2.9 m 9'8" Arm
A Overall Height	4850 mm 15'11"	4615 mm 15'2"
B Overall Length	13995 mm 45'11"	13130 mm 43'1"



## WORKING RANGE



	PC850-8E0	PC850-8E0 SE Spec.	
Boom length	8040 mm 26'5"	7100 mm 23'4"	
Arm length	3600 mm 11'10"	2945 mm 9'8"	3600 mm 11'10"
A Max. digging height	11955 mm 39'3"	11330 mm 37'2"	11055 mm 36'3"
B Max. dumping height	8235 mm 27'0"	7525 mm 24'8"	7430 mm 24'5"
C Max. digging depth	8445 mm 27'8"	7130 mm 23'5"	7790 mm 25'7"
D Max. vertical wall digging depth	5230 mm 17'2"	4080 mm 13'5"	4260 mm 14'0"
E Max. digging depth of cut for 8' level	8310 mm 27'3"	6980 mm 22'11"	7680 mm 25'2"
F Max. digging reach	13660 mm 44'10"	12265 mm 40'3"	12710 mm 41'8"
G Max. digging reach at ground level	13400 mm 44'0"	11945 mm 39'2"	12400 mm 40'8"
H Min. swing radius	5985 mm 19'8"	5645 mm 18'6"	5440 mm 17'10"
Bucket digging force (SAE J 1179) at power max.	345 kN 35200 kgf / 77,600 lb	428 kN 43600 kgf / 96,120 lb	345 kN 35200 kgf / 77,600 lb
Arm crowd force (SAE J 1179) at power max.	312 kN 31800 kgf / 70,110 lb	363 kN 37000 kgf / 81,570 lb	312 kN 31800 kgf / 70,110 lb
Bucket digging force (ISO 6015) at power max.	397 kN 40500 kgf / 89,290 lb	471 kN 48000 kgf / 105,820 lb	397 kN 40500 kgf / 89,290 lb
Arm crowd force (ISO 6015) at power max.	327 kN 33300 kgf / 73,410 lb	374 kN 38100 kgf / 84,000 lb	327 kN 33300 kgf / 73,410 lb



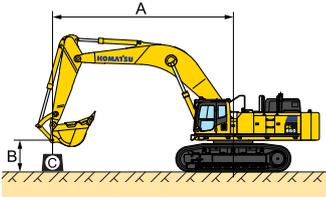
## BACKHOE BUCKET, ARM, AND BOOM COMBINATION

Bucket Capacity (Heaped)		Width		Weight (With Side Cutters) kg lb	Arm Length m ft in
SAE J 296, PCSA m³ yd³	CECE m³ yd³	Without Side Shrouds mm in	With Side Shrouds mm in		
PC850-8E0 (Use with 8.04 m 26'5" Boom)				3990 8,800	3.6 11'10"
3.4 4.45	3.0 3.92	1820 71.7"	1870 73.6"		○
PC850-8E0 SE Spec. (Use with 7.1 m 23'4" Boom)				4230 9,330 4260 9,390 3730 8,230 3940 8,690 4030 8,890	2.9 9'8"
4.0* 5.23	3.5 4.58	2000 78.7"	2050 80.7"		○
4.0* 5.23	3.5 4.58	2000 78.7"	2050 80.7"		○
4.0 5.23	3.5 4.58	2000 78.7"	2100 82.7"		○
4.3 5.62	3.8 4.97	2150 84.6"	2250 88.6"		○
4.5 5.89	4.0 5.23	2230 87.8"	2330 91.7"		□

These charts are based on over-side stability with fully loaded bucket at maximum reach.

○ : General purpose use, density up to 1.8 t/m³ 3,000 lb/yd³ □ : General purpose use, density up to 1.5 t/m³ 2,500 lb/yd³  
— : Not useable

\*For heavy duty



### PC850-8E0

Equipment:

- Boom: **8.04 m 26'5"**
- Arm: **3.6 m 11'10"**
- Bucket: **3.4 m³ 4.45 yd³**
- Shoe: **610 mm 24"**
- Counterweight: **11.85 ton 26,120 lb**

- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ☉: Rating at maximum reach

#### HEAVY LIFT "OFF"

Unit: kg lb

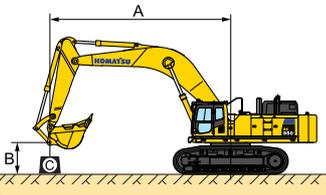
B \ A	☉ Maximum		9.0 m 29'		7.5 m 24'		6.0 m 19'		4.5 m 14'		3.0 m 9'	
	Cf	Cs										
6.0 m 19'	*9300 *20,500	8650 19,000	*11050 *24,400	*11050 *24,400	*12800 *28,200	*12800 *28,200						
3.0 m 9'	9850 21,700	7250 16,000	*13250 *29,200	12300 27,100	*16450 *36,300	*16450 *36,300	*22050 *48,600	*22050 *48,600				
0 m 0'	9850 21,900	7150 15,800	*14800 *32,600	10950 24,100	*18700 *41,200	14750 32,500	*20950 *46,200	*20950 *46,200	*19850 *43,800	*19850 *43,800		
-3.0 m -9'	*11800 *26,100	8600 19,000	*14350 *31,600	10550 23,200	*18150 *40,000	14250 31,400	*21250 *46,800	20750 45,700	*21150 *46,600	*21150 *46,600	*24450 *53,900	*24450 *53,900
-6.0 m -19'	*12550 *27,700	*12550 *27,700			*12900 *28,400	*12900 *28,400	*17050 *37,600	*17050 *37,600	*21300 *47,000	*21300 *47,000		

#### HEAVY LIFT "ON"

Unit: kg lb

B \ A	☉ Maximum		9.0 m 29'		7.5 m 24'		6.0 m 19'		4.5 m 14'		3.0 m 9'	
	Cf	Cs										
6.0 m 19'	*10550 *23,200	8650 19,000	*12850 *28,300	*12850 *28,300	*14750 *32,500	*14750 *32,500						
3.0 m 9'	9850 21,700	7250 16,000	*15400 *33,900	12300 27,100	*18950 *41,800	*16800 *37,000	*23400 *51,600	*23400 *51,600				
0 m 0'	9850 21,700	7150 15,700	14800 32,600	10950 24,100	19950 43,900	14750 32,500	*20950 *46,200	*20950 *46,200	*22100 *48,700	*22100 *48,700		
-3.0 m -9'	11800 26,000	8600 19,000	14350 31,700	10550 23,200	19400 42,800	14250 31,400	*21250 *46,800	20750 45,700	*21150 *46,700	*21150 *46,700	*24450 *53,900	*24450 *53,900
-6.0 m -19'	*14850 *32,700	*14850 *32,700			*15250 *33,600	*15250 *33,600	*20000 *44,100	*20000 *44,100	*21300 *46,900	*21300 *46,900		

\* Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.



### PC850-8E0 Super Earth mover (SE) spec.

Equipment:

- Boom: **7.1 m 23'4"**
- Arm: **2.9 m 9'8"**
- Bucket: **4.3 m³ 5.62 yd³**
- Shoe: **610 mm 24"**
- Counterweight: **11.85 ton 26,120 lb**

- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ☉: Rating at maximum reach

#### HEAVY LIFT "OFF"

Unit: kg lb

B \ A	☉ Maximum		9.0 m 29'		7.5 m 24'		6.0 m 19'		4.5 m 14'		3.0 m 9'	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
6.0 m 19'	*12150 *26,800	11100 24,500	*12650 *27,900	*12650 *27,900	*14250 *31,400	*14250 *31,400						
3.0 m 9'	12400 27,300	9250 20,400	*14500 *32,000	12350 27,200	*17700 *39,000	17100 37,700	*23250 *51,300	*23250 *51,300				
0 m 0'	12700 28,000	9400 20,700	15250 33,600	11350 25,000	*19700 *43,400	15450 34,100	*26050 *57,400	22250 49,100	*28450 *62,700	*28450 *62,700		
-3.0 m -9'	*14400 *31,700	12350 27,200			*17850 *39,400	15300 33,700	*23350 *51,500	22200 48,900	*30850 *68,000	*30850 *68,000	*31850 *70,200	*31850 *70,200

#### HEAVY LIFT "ON"

Unit: kg lb

B \ A	☉ Maximum		9.0 m 29'		7.5 m 24'		6.0 m 19'		4.5 m 14'		3.0 m 9'	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
6.0 m 19'	*14100 *31,000	11100 24,500	*14650 *32,300	13600 30,000	*16350 *36,000	*16350 *36,000						
3.0 m 9'	12400 27,300	9250 20,400	16300 35,900	12350 27,300	*20350 *44,800	17100 37,800	*26550 *58,600	24850 54,700				
0 m 0'	12700 28,000	9400 20,800	15250 33,600	11350 25,100	20650 45,600	15450 34,000	*29800 *65,700	22250 49,000	*31350 *69,100	*31350 *69,100		
-3.0 m -9'	16500 36,400	12350 27,200			20550 45,300	15300 33,700	*26850 *59,200	22200 49,000	*32100 *70,800	*32100 *70,800	*31850 *70,200	*31850 *70,200

\* Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.

Transportation specifications (Length x height x width)

## Backhoe

Specs shown include the following equipment:

STD spec.: Boom **8040 mm** 26'5", Arm **3600 mm** 11'10", Bucket **3.4 m<sup>3</sup>** 4.45 yd<sup>3</sup>, Shoes **610 mm** 24" double grouser

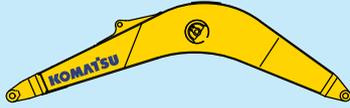
SE spec.: Boom **7100 mm** 23'4", Arm **2945 mm** 9'8", Arm **3600 mm** 11'10", Bucket **4.3 m<sup>3</sup>** 5.62 yd<sup>3</sup>, Shoes **610 mm** 24" double grouser

### 3 Kits Transportation

#### Work equipment assembly (Backhoe)

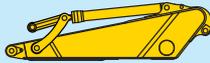
Weight : STD spec. : **18.9 t** 20.8 U.S.ton  
SE spec. : **18.5 t** 20.5 U.S.ton

#### Boom



STD spec. : **8.1 t : 8370 x 2695 x 1500**  
8.9 U.S.ton : 27'6" x 8'10" x 4'11"  
SE spec. : **7.3 t : 7430 x 2480 x 1500**  
8.0 U.S.ton : 24'5" x 8'2" x 4'11"

#### Arm



STD spec. : **4.5 t : 4765 x 1450 x 710**  
5.0 U.S.ton : 15'8" x 4'9" x 2'4"  
SE spec. : **4.9 t : 4075 x 1690 x 715 (2.9m 9'8" SE arm)**  
5.4 U.S.ton : 13'4" x 5'7" x 2'4"  
**4.5 t : 4765 x 1450 x 710 (3.6m 11'10" SE arm)**  
5.0 U.S.ton : 15'8" x 4'9" x 2'4"

#### Bucket



STD spec. : **3.8 t : 2470 x 1880 x 2070**  
4.2 U.S.ton : 8'1" x 6'2" x 6'9"  
SE spec. : **3.8 t : 2280 x 1950 x 2250 (2.9m 9'8" arm)**  
4.2 U.S.ton : 7'6" x 6'5" x 7'5"

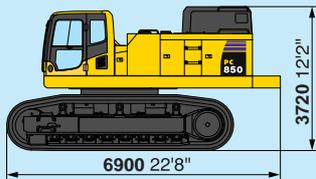
#### Boom & Arm cylinder



Total **2.5 t** 2.8 U.S.ton

#### Base machine

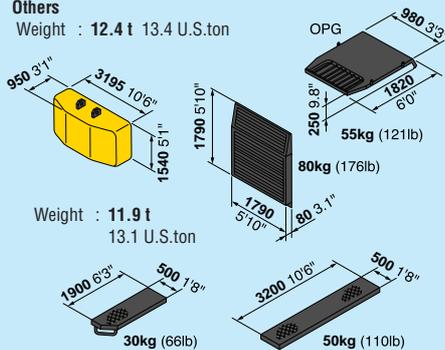
(Both PC850-8E0 and PC850-8E0 SE spec. are designed with the same weight and dimensions.)



Width : **3390** 11'1"  
Weight : **47.7 t** 52.6 U.S.ton

#### Others

Weight : **12.4 t** 13.4 U.S.ton



Weight : **11.9 t**  
13.1 U.S.ton

### 4 Kits Transportation

#### Work equipment assembly (Backhoe)

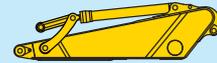
Weight : STD spec. : **18.9 t** 20.8 U.S.ton  
SE spec. : **18.5 t** 20.5 U.S.ton

#### Boom



STD spec. : **8.1 t : 8370 x 2695 x 1500**  
8.9 U.S.ton : 27'6" x 8'10" x 4'11"  
SE spec. : **7.3 t : 7430 x 2480 x 1500**  
8.0 U.S.ton : 24'5" x 8'2" x 4'11"

#### Arm



STD spec. : **4.5 t : 4765 x 1450 x 710**  
5.0 U.S.ton : 15'8" x 4'9" x 2'4"  
SE spec. : **4.9 t : 4075 x 1690 x 715 (2.9m 9'8" SE arm)**  
5.4 U.S.ton : 13'4" x 5'7" x 2'4"  
**4.5 t : 4765 x 1450 x 710 (3.6m 11'10" SE arm)**  
5.0 U.S.ton : 15'8" x 4'9" x 2'4"

#### Bucket



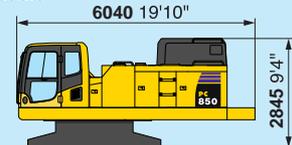
STD spec. : **3.8 t : 2470 x 1880 x 2070**  
4.2 U.S.ton : 8'1" x 6'2" x 6'9"  
SE spec. : **3.8 t : 2280 x 1950 x 2250**  
4.2 U.S.ton : 7'6" x 6'5" x 7'5"

#### Boom & Arm cylinder



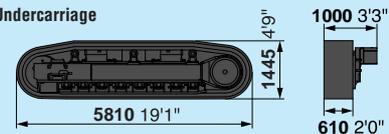
Total **2.5 t** 2.8 U.S.ton

#### Upper structure



Width : **3225** 10'7"  
Weight : **26.3 t** 29.0 U.S.ton

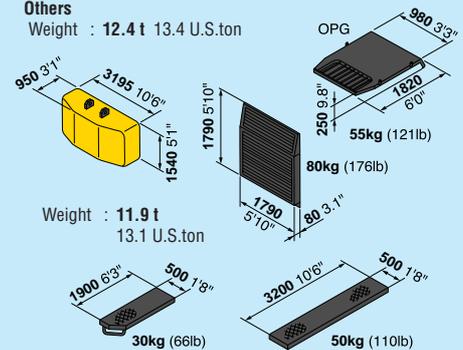
#### Undercarriage



Weight : **21.4 t** [10.7 t x 2]  
23.6 U.S.ton [11.8 U.S.ton x 2]

#### Others

Weight : **12.4 t** 13.4 U.S.ton



Weight : **11.9 t**  
13.1 U.S.ton



## STANDARD EQUIPMENT

### ENGINE AND RELATED ITEMS:

- Air cleaner, double element, dry
- Engine, Komatsu SAA6D140E-5
- Variable speed cooling fan, with fan guard

### ELECTRICAL SYSTEM:

- Alternator, 24 V/60 A
- Auto decelerator and auto idling system
- Batteries, 2 x 12 V/170 A
- Starting motors, 11 kW
- Step light with timer
- Working lights: 2 boom, 2 cab top front, 1 right front

### UNDERCARRIAGE:

- **610 mm** 24" double grouser
- 8 track/3 carrier rollers (Each side)
- Hydraulic track adjusters (Each side)
- Sealed track
- Variable track gauge

### GUARDS AND COVERS:

- Dust-proof net for radiator and oil cooler
- Full length track guard
- OPG top guard level 2 (ISO 10262)
- Pump/engine room partition cover
- Strengthened revolving frame underguard
- Travel motor guards

### OPERATOR ENVIRONMENT:

- Cab with fixed front window
- Damper mount, all-weather, sound-suppressed cab with tinted safety glass windows, lockable door, intermittent window wiper and washer, floormat, cigarette lighter and ashtray
- Multi-function color monitor, electronically-controlled throttle dials, electric service meter, gauges (Coolant temperature, hydraulic oil temperature and fuel level), caution lights (Electric charge, engine oil pressure, and air cleaner clogging), indicator lights (Engine preheating and swing lock light) level check lights (Coolant, engine oil, and hydraulic oil level), self-diagnostic system with trouble data memory
- Rear view mirror (RH and LH)
- Seat, fully adjustable with suspension

### HYDRAULIC CONTROLS:

- Control levers and pedals for steering and travel with PPC system
- Control levers, wrist control levers for arm, boom, bucket, and swing with PPC system
- Fully hydraulic, with Electronic Open-center Load Sensing System (EOLSS) and engine speed sensing (Pump and engine mutual control system)
- Heavy lift mode system
- In-line filter
- Oil cooler
- One axial piston motor per track for travel with counter balance valve
- Power max. function
- Shockless boom control
- Swing priority mode system
- Two axial piston motors for swing with single-stage relief valve
- Two control valves, 5+4 spools (Boom, arm, bucket, swing, and travel)
- Two-mode setting for boom
- Two variable capacity piston pumps

### DRIVE AND BRAKE SYSTEM:

- Brakes, hydraulic lock travel brakes, oil disc parking
- Hydrostatic two travel speed system with planetary triple reduction final drive

### OTHER STANDARD EQUIPMENT:

- Automatic swing holding brake
- Catwalk
- Counterweight, **11850 kg** 26,120 lb
- Horn, electric
- Large handrails
- Marks and plates, English
- One-touch engine oil drainage
- Paint, Komatsu standard
- Preventive Maintenance (PM) tune-up service connector
- Rear reflector
- Slip-resistant plates
- Travel alarm



## OPTIONAL EQUIPMENT

- 12 V electric supply
- Air suspension seat
- Alternator, 24 V/90 A
- Arms (Backhoe):  
PC850-8E0:  
—**3600 mm** 11'10" HD arm assembly  
PC850-8E0 SE spec.:  
—**2945 mm** 9'8" SE arm assembly  
—**3600 mm** 11'10" SE arm assembly
- Auto A/C
- Booms (Backhoe):  
PC850-8E0:  
—**8040 mm** 26'5" boom assembly

- PC850-8E0 SE spec.:  
—**7100 mm** 23'4" boom assembly
- Cab front guard level 2 (ISO 10262)
- Coolant heater
- Double flange track roller
- Electric pump, grease gun with indicator
- Fire extinguisher
- General tool kit
- Interconnected horn and warning light
- Large-capacity batteries
- Lower wiper
- Provision for fast fuel fill
- Radio AM/FM

- Rain visor
- Rear view monitoring system
- Seat belt **78 mm** 3"
- Shoes:  
—**710 mm** 28" double grouser
- Spare parts for first service
- Track frame undercover (Center)
- Vandalism protection locks

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