

KOMATSU®

PC850-8R1 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

PC
850

HYDRAULIC EXCAVATOR



Photo may include optional equipment.

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.
- **Removed Water and Contamination in Fuel**
 - Fuel pre-filter with water separator
 - High efficiency fuel filter
 - Water separator
- **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.

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****Ecology and Economy Features**

- **High Power Komatsu SAA6D140E-5 Engine**

A powerful, turbocharged and air-to-air aftercooled Komatsu SAA6D140E-5 provides **363 kW** 487 HP. This engine is U.S. EPA Tier 2 and EU Stage 2 emissions equivalent.

- **Economy Mode Four-level Setting**

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

- **Low 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
- Operator seat and console with armrest that enables operations in the appropriate operational posture.
- OPG top guard level 2 (By ISO 10262 standard) capable with bolt-on top guard

See pages 8, 9.

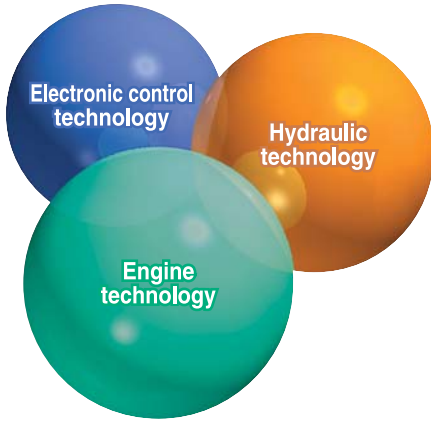
- **Large Liquid Crystal Display (LCD) Monitor**

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

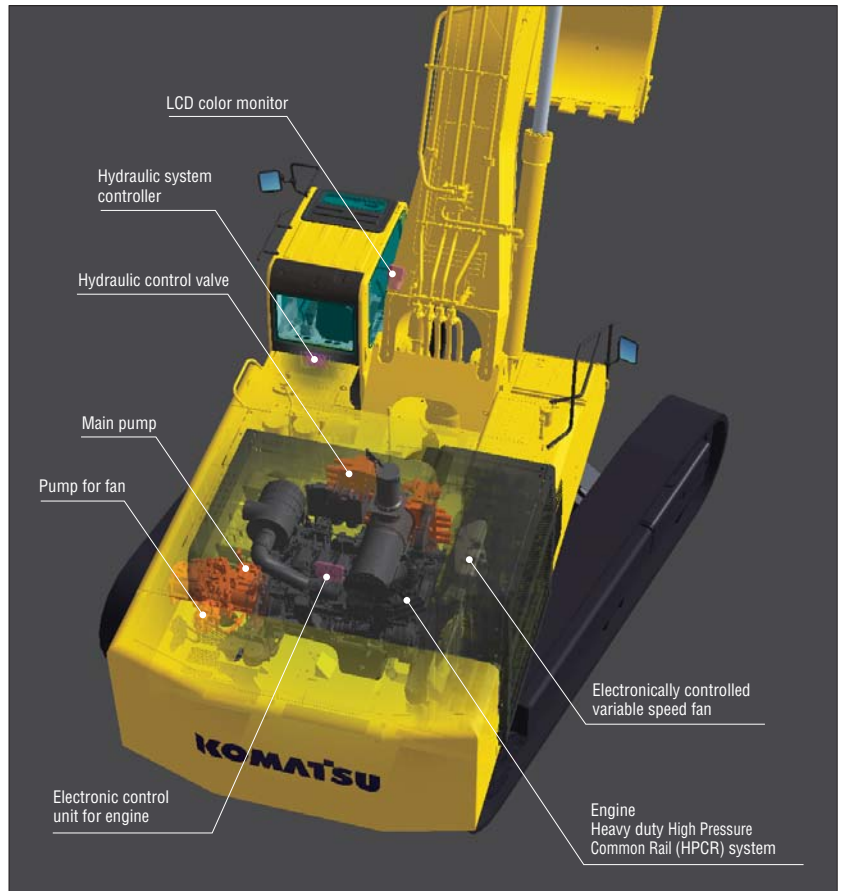
See page 10.

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.



High Power Komatsu SAA6D140E Engine

Powerful turbocharged and air-to-air aftercooled Komatsu SAA6D140E-5 engine provides **363 kW 487 HP**. This engine is U.S. EPA Tier 2 and EU Stage 2 emissions equivalent.

This Komatsu SAA6D140E engine actualizes high-power to low fuel consumption with the optimum fuel injection by electronic heavy duty HPCR fuel injection system.



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 the lowest fuel consumption.



Low 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. Operation in the green range allows reduction of CO₂ 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

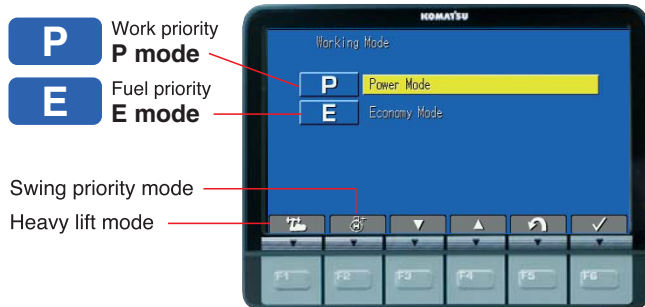
Auto deceleration system is equipped to reduce fuel consumption and operating noise. Also, engine idling speed can be reduced on the monitor with the auto idling system.

Working Modes Selectable

P and E 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 work equipment speed for light duty work.



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

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)

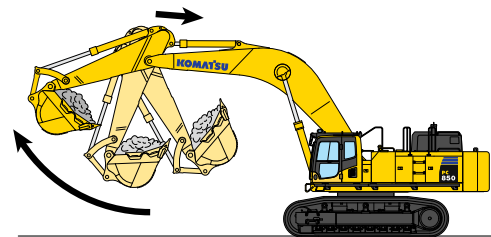
Maximum arm crowd force (ISO):
298 kN (30.4 tonf) ➔ **327 kN (33.3 tonf)** **9.4% UP**
(with Power Max.)

Maximum bucket digging force (ISO):
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 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.

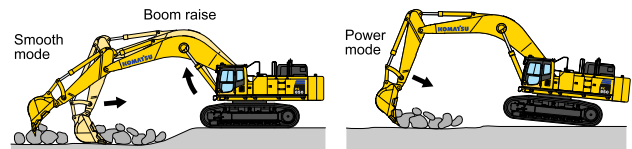


Large Drawbar Pull and Steering Force

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

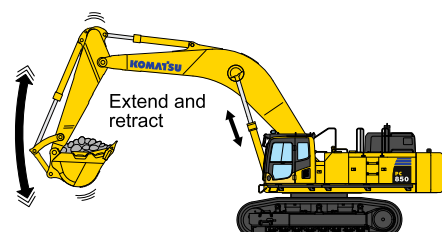
Two-mode Setting for Boom

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 PC850-8R1 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

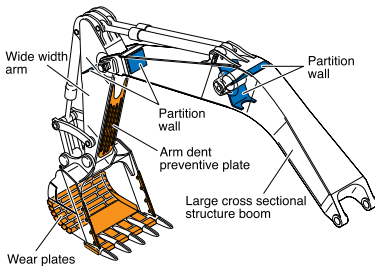
Boom Foot Hoses

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.



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.

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.

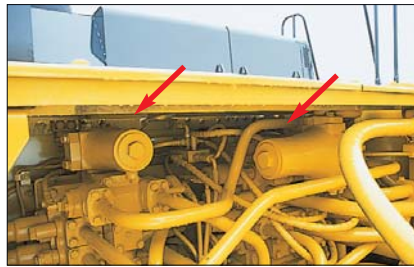
Fuel Pre-filter (With Water Separator)

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



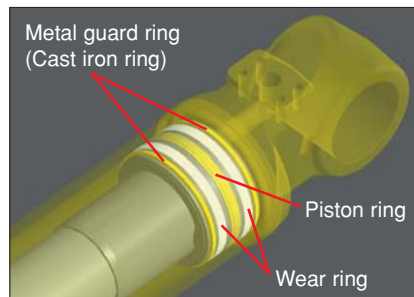
High-pressure In-line Filtration

The PC850-8R1 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.



High Efficiency Fuel Filter

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



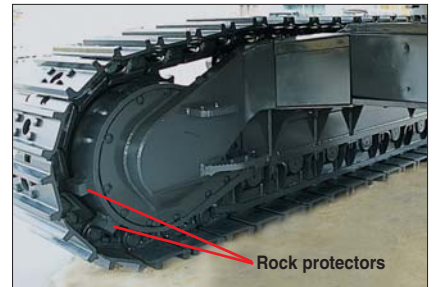
Water Separator

Removes water from the fuel and improves the reliability of fuel systems.



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 piping against damage from rocks.



Strengthened Revolving Frame Underguard

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

Sealed Connectors

Sealed connectors seal tight and have higher reliability.

Heat-resistant Wiring

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

Circuit Breaker

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



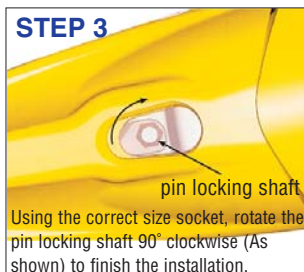
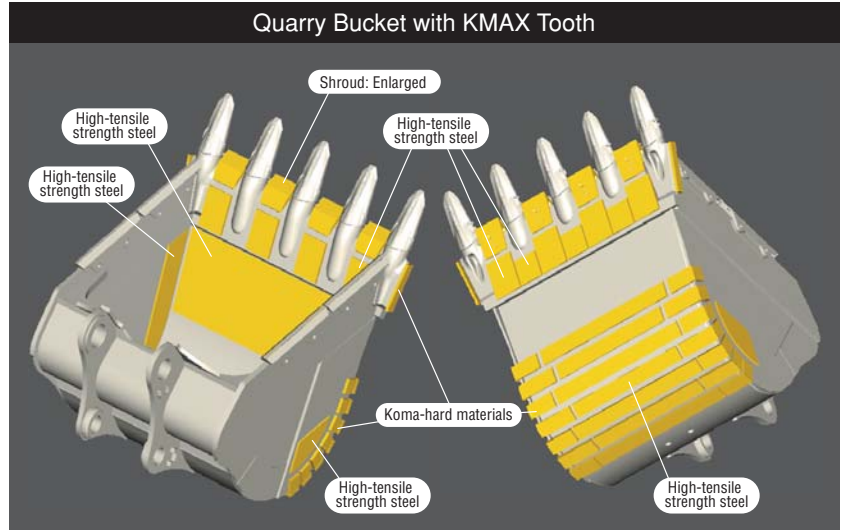
Strengthened Quarry Bucket Provides Outstanding Wear-resistance

The bucket for specific use in quarry is impact and wear resistant, providing high performance and long life. Koma-hard materials* provide excellent wear resistance. Combined with adoption of long-life KMAX teeth, durability of bucket is drastically enhanced.

* Koma-hard materials (KVX materials):
 Komatsu developed, wear-resistant, reinforced materials. Brinell hardness: 500 or more (180kgf/mm² 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 for superior digging performance
- Long-term high sharpness
- Great penetration performance
- Hammerless, safe, and easy tooth replacement
 (Tooth replacement time: Half of 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. Thorough 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 (ISO 10262) level 2

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

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 position of the armrest and the console. The reclining seat further enables you to place it into the fully flat state with the headrest attached.



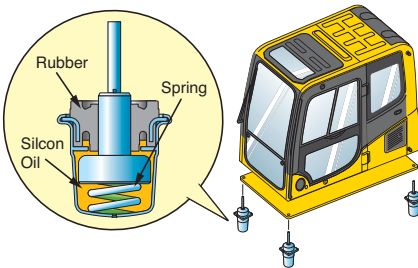
Seat with headrest reclined full flat

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

PC850-8R1 uses viscous damper mounts for the cab that incorporates longer stroke and the addition of a spring. The cab damper mounting combined with high rigidity deck aids vibration reduction at the operator's seat.



Multi-position Controls

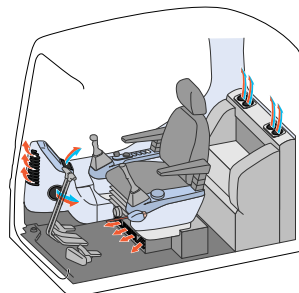
The multi-position, Pressure Proportional Control (PPC) levers allow the operator to work in comfort while maintaining precise control. A double-slide mechanism allows the seat and control levers to move together or independently, allowing the operator to position the controls for maximum productivity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



Seat sliding amount: 340 mm 13.4"

Automatic Air Conditioner (Optional)

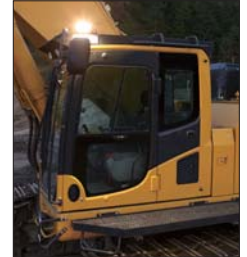
Enables you to easily and precisely set cab atmosphere with the instruments on the large LCD. The bi-level control function keeps the operator's head and feet cool and warm respectively. This improved air flow function keeps the inside of the cab comfortable throughout the year. Defroster function keeps front glass clear.



Safety Features

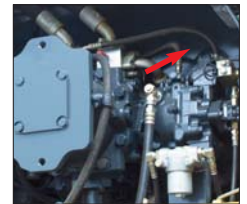
Step Light with Timer

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 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.



Defroster (Optional)



Cab frame mounted wiper



Bottle holder and magazine rack

Rear View Monitoring System (Optional)

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



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. The switches are simple and easy to operate. 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
P (P0,P1)	Power Mode	<ul style="list-style-type: none"> Maximum production/power Fast cycle time
E (E0,E1,E2,E3)	Economy Mode	<ul style="list-style-type: none"> Good cycle time Good fuel economy

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 for oil and filters 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 simplifies cleaning out 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.



Divided Type Engine Cover

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

Washable Cab Floormat

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



Electric Pump, Grease Gun with Indicator (Optional)

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



Grease can drum storage location



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



Photo may include optional equipment.

SPECIFICATIONS



ENGINE

Model Komatsu SAA6D140E-5
 Type 4-cycle, water-cooled, direct injection
 Aspiration Turbocharged, aftercooled,
 Number of cylinders 6
 Bore **140 mm** 5.51"
 Stroke **165 mm** 6.50"
 Piston displacement **15.24 ltr** 930 in³
 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 2 and EU Stage 2 emissions equivalent.



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 **31.4 MPa** 320 kgf/cm² 4,550 psi
 Travel circuit **34.3 MPa** 350 kgf/cm² 4,980 psi
 Swing circuit **28.4 MPa** 290 kgf/cm² 4,120 psi
 Heavy lift circuit **34.3 MPa** 350 kgf/cm² 4,980 psi
 Pilot circuit **2.9 MPa** 30 kgf/cm² 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 gear 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 **980 ltr** 258.9 U.S. gal
 Radiator **100 ltr** 26.4 U.S. gal
 Engine **53 ltr** 14.0 U.S. gal
 Final drive, each side **20 ltr** 5.3 U.S. gal
 Swing drive **24.5 x 2 ltr** 6.5 x 2 U.S. gal
 Hydraulic tank **470 ltr** 124.2 U.S. gal



OPERATING WEIGHT (APPROXIMATE)

PC850-8R1: Operating weight, including **8040 mm** 26'5" boom, **3600 mm** 11'10" arm, SAE heaped **3.4 m³** 4.45 yd³ backhoe bucket, operator, lubricant, coolant, full fuel tank, and the standard equipment

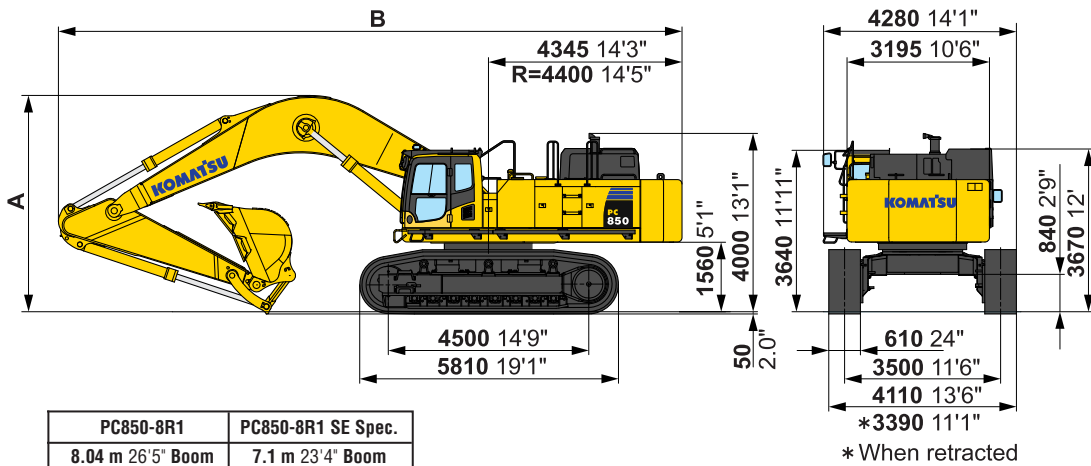
PC850-8R1 SE spec.: Operating weight, including **7100 mm** 23'4" boom, **2945 mm** 9'8" arm, SAE heaped **4.3 m³** 5.62 yd³ backhoe bucket, operator, lubricant, coolant, full fuel tank, and the standard equipment

Shoes	PC850-8R1		PC850-8R1 SE Spec.	
	Operating Weight	Ground Pressure	Operating Weight	Ground Pressure
610 mm 24"	79000 kg 174,160 lb	128 kPa 1.31 kgf/cm ² 18.6 psi	78600 kg 173,280 lb	128 kPa 1.31 kgf/cm ² 18.6 psi
710 mm 28"	79800 kg 175,930 lb	112 kPa 1.14 kgf/cm ² 16.2 psi	79400 kg 175,050 lb	111 kPa 1.13 kgf/cm ² 16.1 psi



BACKHOE DIMENSIONS

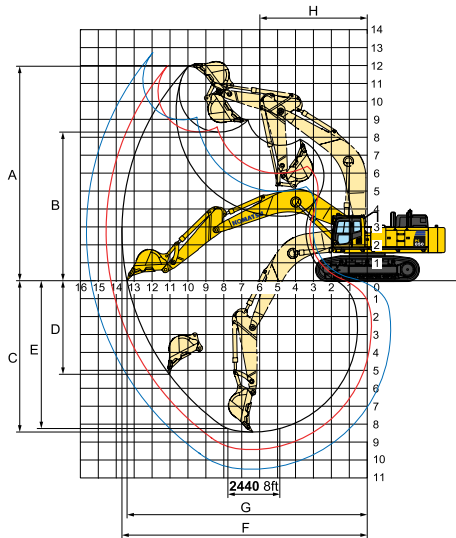
Unit: mm ft in



	PC850-8R1	PC850-8R1 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



	PC850-8R1	PC850-8R1 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) 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) 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) 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) at power max.	327 kN 33300 kgf / 73,410 lb	374 kN 38100 kgf / 84,000 lb	327 kN 33300 kgf / 73,410 lb	



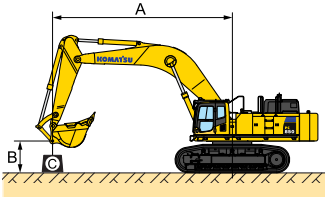
BACKHOE BUCKET, ARM, AND BOOM COMBINATION

Bucket Capacity (Heaped)				Width				Weight		Arm Length	
SAE, PCSA m ³ yd ³		CECE m ³ yd ³		Without Side Shrouds, Side Cutters mm in		With Side Shrouds, Side Cutters mm in		(With Side Shrouds, Side Cutters) kg lb		m ft in	
PC850-8R1 (Use with 8.04 m 26'5" Boom)											
3.4	4.45	3.0	3.92	1820	71.7"	1870	73.6"	3990	8,800	3.6 11'10"	
PC850-8R1 SE spec. (Use with 7.1 m 23'4" Boom)											
4.0*	5.23	3.5	4.58	2000	78.7"	2050	80.7"	4230	9,330	○	—
4.0*	5.23	3.5	4.58	2000	78.7"	2050	80.7"	4260	9,390	—	○
4.0	5.23	3.5	4.58	2000	78.7"	2100	82.7"	3730	8,230	○	—
4.3	5.62	3.8	4.97	2150	84.6"	2250	88.6"	3940	8,690	○	—
4.5	5.89	4.0	5.23	2230	87.8"	2330	91.7"	4030	8,890	□	—

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/ycd³ □ : General purpose use, density up to 1.5 t/m³ 2,500 lb/ycd³
 — : Not useable

*For heavy duty



PC850-8R1

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

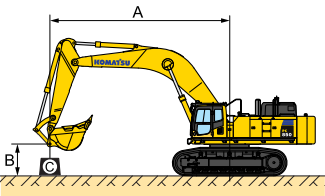
B \ A	☉ Maximum		9.0 m 29'		7.5 m 24'		6.0 m 19'		4.5 m 14'		3.0 m 9'	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
6.0 m 19'	*9300 *20,500	8650 19,000	*11050 *24,400	*11050 *24,400	*12800 *28,200	*12800 *28,200						
3.0 m 9'	9850 21,700	7250 16,000	*13250 *29,200	12300 27,100	*16450 *36,300	*16450 *36,300	*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	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	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 standard No.10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.



PC850-8R1 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 standard No.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 m³ 4.45 yd³**, Shoes **610 mm 24"** double grouser

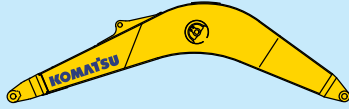
SE spec.: Boom **7100 mm 23'4"**, Arm **2945 mm 9'8"**, Arm **3600 mm 11'10"**, Bucket **4.3 m³ 5.62 yd³**, Shoes **610 mm 24"** double grouser

3 Kits Transportation

Work equipment assembly (Backhoe)

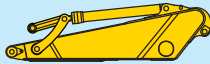
Weight : STD spec. : **18.9 t** 20.8 U.S.ton
SE spec. : **18.5 t** 20.5 U.S.ton

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



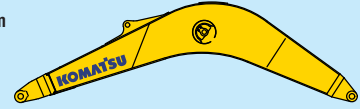
Total 2.5 t 2.8 U.S.ton

4 Kits Transportation

Work equipment assembly (Backhoe)

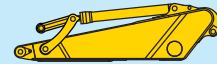
Weight : STD spec. : **18.9 t** 20.8 U.S.ton
SE spec. : **18.5 t** 20.5 U.S.ton

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"

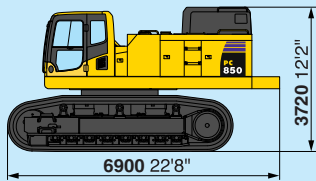
Boom & Arm cylinder



Total 2.5 t 2.8 U.S.ton

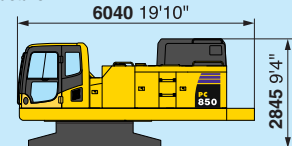
Base machine

(Both PC850-8R1 and PC850-8R1 SE spec. are designed with the same weight and dimensions.)



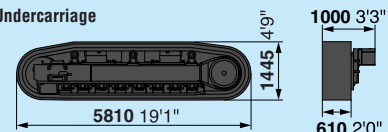
Width : **3390 11'1"**
Weight : **47.7 t** 52.6 U.S.ton

Upper structure



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

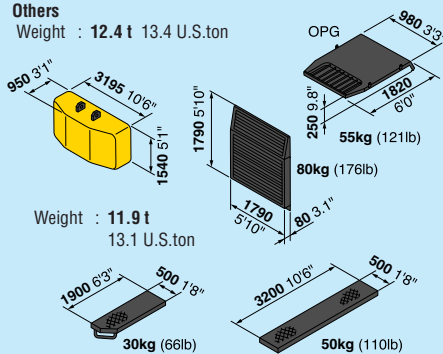
Undercarriage



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

Others

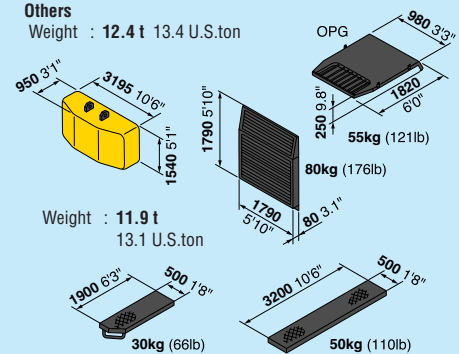
Weight : **12.4 t** 13.4 U.S.ton



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

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, 60 amp, 24 V
- Auto decelerator and auto idling system
- Batteries, 170 Ah, 2 x 12 V
- Starting motors, 11kW
- 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
- Rock protectors
- Variable track gauge

GUARDS AND COVERS:

- Dust-proof net for radiator and oil cooler
- Full length track roller guard
- OPG top guard (ISO 10262 level 2 (FOG))
- 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, floor mat, 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
- PM tune-up service connector
- Rear reflector
- Slip-resistant plates
- Travel alarm
- Water separator



OPTIONAL EQUIPMENT

- 12 V electric supply
- Air suspension seat
- Alternator, 90 amp, 24 V
- Arms (Backhoe):
PC850-8R1:
—**3600 mm** 11'10" HD arm assembly
PC850-8R1 SE spec.:
—**2945 mm** 9'8" SE arm assembly
—**3600 mm** 11'10" SE arm assembly
- Automatic air conditioner
- Booms (Backhoe):
PC850-8R1:
—**8040 mm** 26'5" boom assembly

- PC850-8R1 SE spec.:
—**7100 mm** 23'4" boom assembly
- Cab front guard (ISO 10262 level 2)
- 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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