

PC220-3 PC220LC-3

HYDRAULIC EXCAVATOR



Model shown may include optional equipment

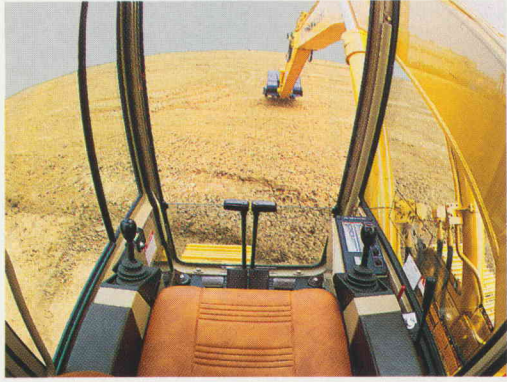
FLYWHEEL HORSEPOWER: 148HP @ 2100 RPM. BUCKET CAPACITY: 0.5-1.2m³ (0.6-1.6 yd³).
OPERATING WEIGHT: 22300kg (49,160 lb)/WITH LC UNDERCARRIAGE: 23190kg (51,120 lb).

- Operating mode selection switch saves fuel by reducing pump output during light duty applications
- EOLSS system conserves fuel by preventing neutral, fine control and relief losses
- Large tinted glass area and wrist control levers add to the operator's comfort and productivity
 - Additional fuel savings from the autodeceleration system which automatically lowers engine speed whenever the work equipment and travel controls are in neutral
- Variable displacement hydraulic pumps modify the rate of oil flow to match any application
- Arm merge circuit reduces cycle time
- Straight travel circuit assures straight travel even during simultaneous operations
 - Quiet, fuel-efficient Komatsu S6D105 turbodiesel
 - Optional extra-long track for greater stability and increased lifting capacity
 - Electronic display/monitor panel continuously monitors all systems

Advanced Hydraulic System

...Minimized Fuel Consumption

Switchable mode selection system — If the driving power of the hydraulic pump is always set to 100% of engine output (the case in most excavators) there is a lot of wasted energy when the machine is only doing light duty work such as slope-finishing. The PC220/220LC-3 allows the operator to match the force of the pumps to the application. The Standard Mode should be selected for general digging and loading. While the Heavy Duty Mode should be used when maximum force is required, the Light Duty Mode makes it possible to maintain cycle times and save fuel by reducing the driving power of the pumps.



Designed for Maximum Operator Productivity

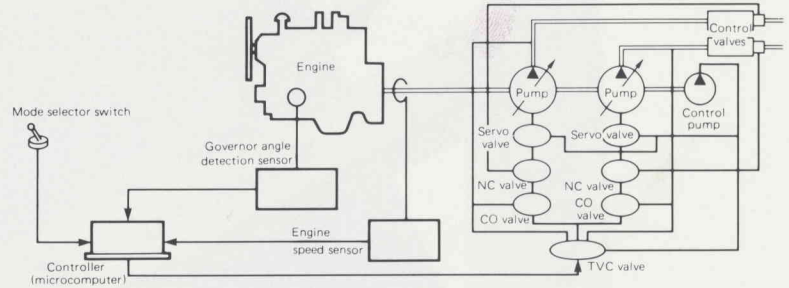
Human engineered cab — is both roomy and efficient. The large area of tinted glass allows the operator excellent visibility. Five-way seat with armrests, short stroke wrist-control levers, pull-up front window and travel pedals with levers work together to help your operator maximize production.

Low-noise operation — Advanced OLSS hydraulics, a closed engine room and rubber-mounted engine all contribute to a low decibel level inside the cab.

Wrist control levers — for easy work equipment operation. The armrest-mounted wrist control levers have a maximum stroke of only 75mm (3") and Komatsu's Proportional Pressure Control System reduces operating effort, for precise control of work equipment.

Swing holding brake — automatically prevents hydraulic drift of the machine even when it's parked on a slope. The operator is no longer required to physically maintain a braking device during work equipment operation. Also, the swing control valve is equipped with a closed center spool valve for smooth starts and stops.

Travel/steering controls — are foot pedals with detachable lever controls. Either can be used depending on application and operator preference.



EOLSS System (Electronic Open-Center Load Sensing System) — is built into the hydraulic system to reduce unnecessary hydraulic losses.

The negative control valves (pump neutral control and pump fine control) and cutoff valve sense and provide the hydraulic force required for operation, minimizing unnecessary pump action and oil flow. Pump neutral control and pump fine control utilize the negative control valve to divert oil flow when the machine is in neutral or doing fine control work such as pipe-laying or slope finishing. The cutoff valve saves fuel by reducing pump flow during relief loss.

Autodecelerator System — automatically reduces engine speed when the work equipment and travel controls are in neutral. Why waste fuel waiting on the dump-truck? Following a short time delay so fine control work will not be affected, a solenoid valve automatically slows the engine and saves you fuel.



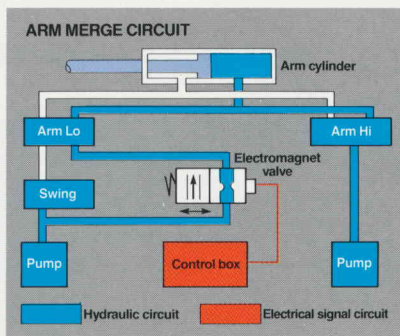
Komatsu S6D105 — provides 148 HP and 6.49 ltr. (396 in³) displacement. The S6D105 is a 6-cylinder, direct injected, water-cooled, turbo-diesel that operates both quietly and efficiently.



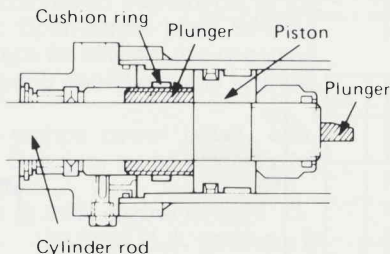
em Provides . . .

...Smooth Powerful Operation

Arm merge circuit — combines smooth bucket movement with quick cycle times. This feature is especially valuable in leveling, slope-finishing, or other applications where frequent arm action is required. When arm and swing action occur simultaneously, oil normally used in the arm's "Lo" circuit shifts to the swing system for high-speed swing action. When only the arm is actuated oil flow from two pumps is merged and sent to the arm circuit, accelerating arm speed.



Cushion mechanism — in the arm cylinder absorbs operating shocks from arm extension and retraction. This mechanism increases both operating comfort and component life.



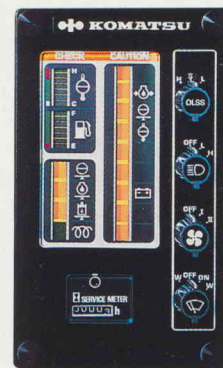
Straight travel valve — automatically interlocks the left and right hydraulic circuits allowing the machine to always travel straight, even when work equipment is being simultaneously operated.

Smooth swing action — is assured with a control valve-operated swing system. Swing stops and starts are smooth and firm.



At Komatsu the Quality is Standard

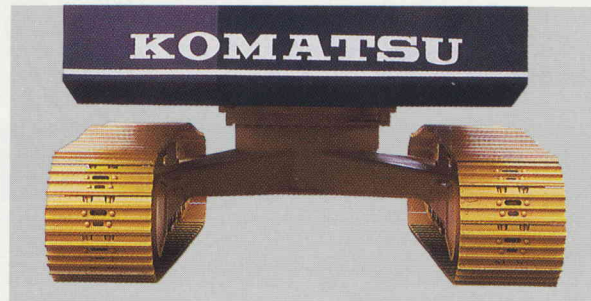
Electronic monitoring system — is a display panel which continuously monitors all operating systems. If a malfunction should occur the operator is immediately warned which system is experiencing trouble, saving valuable time lost searching for the problem. Also, gauges constantly monitor service hours, engine water temperature and fuel level.



Open-type machine covers — Hinged hood and side covers allow quick access and easy maintenance to internal components such as the engine and hydraulic equipment.



Travel motors — are always protected from external damage since they are in-shoe type motors. Also, all hydraulic piping is safely routed through the rolled box X-leg center frame.



Backhoe bucket — is manufactured of high-tensile-strength steel for maximum rigidity and extended life. Side cutters shown are available as an option.



All components are designed and manufactured by Komatsu for maximum quality and reliability.

SPECIFICATIONS



ENGINE

Komatsu S6D105 4-cycle, water-cooled, turbocharged diesel engine with 6 cylinders, 105 mm/4.13" bore x 125 mm/4.92" stroke and 6.49 ltr/396 in³ piston displacement.

Flywheel horsepower* **148 HP @ 2100 RPM**
 Maximum torque* **.56 kg-m/405 lb-ft @ 1400 RPM**

The engine features direct injection for fuel economy, a mechanical all-speed governor, forced lubrication with a full-flow filter, dry-type air cleaner with dust indicator and automatic dust evacuator, 24 V/7.5 kw starting system with 25-amp alternator.

*Performance of standard engine equipped with fan, air cleaner, alternator, water pump, lubricating-oil pump, muffler, and fuel pump operating at SAE standard ambient temperature (29.4°C/85°F) and barometric conditions (745 mmHg/29.38" Hg).



HYDRAULIC SYSTEM

Unique, 2 variable capacity piston pumps and independent swing operation assure smooth compound movements of the work equipment. The Electronic Open-center Load Sensing System (EOLSS) controls the pumps for efficient use of engine power, reduced hydraulic loss during operation, and low fuel consumption.

Two variable-capacity piston pumps power boom, arm, bucket swing and travel circuits. One gear pump powers pilot control circuits.

Pump capacities (discharge flow @ 2100 engine RPM):

Piston 193 ltr/51 U.S. gal/min x 2
 Gear 50 ltr/13.2 U.S. gal/min

Hydraulic motors:

Travel Two axial piston motors with counter-balance valve and parking brake

Swing One axial piston motor with swing holding brake

Relief valve settings:

Implement circuits 320 kg/cm²/4550 PSI
 Swing circuits 275 kg/cm²/3910 PSI
 Pilot circuits 30 kg/cm²/430 PSI

Control valves:

4-spool and 5-spool valves with a service valve.

No. of cylinders—bore x stroke:

Boom 2-130 mm x 1240 mm/5.12" x 4'1"
 Arm 1-140 mm x 1635 mm/5.51" x 5'4"
 Bucket 1-130 mm x 995 mm/5.12" x 3'3"



STEERING

Steering/traveling controls are activated with either hand levers or foot pedals. Pushing both levers (or pedals) moves machine forward. Pulling them back makes machine go into reverse. Setting one lever (or pedal) in neutral and the other in forward enables machine to make a pivot turn. Pushing one forward while pulling the other backward makes machine counterrotate on the spot.



DRIVES

Fully hydrostatic drive with each track powered by an axial piston motor. Power goes through planetary single-reduction gear to track.

Maximum drawbar pull 15700 kg/34,610 lb
 Maximum travel speed 3.4 km/h/2.1 mph



BRAKES

Each travel motor is equipped with a brake valve that lessens shock when applied, and limits speed during descent. The brakes automatically lock when the travel/steering levers and/or pedals are in neutral. Oil, multiple-disc parking brakes, interconnected with the travel-steering levers and/or pedals, are also automatically actuated on the final-drive input shaft.



SWING SYSTEM

The swing system is powered by a hydraulic driven motor through spur and planetary gears. Single-row, shear type ball bearings with induction-hardened internal gears are built into the swing circle. Grease-bathed swing pinion, pin-lock type swing lock and swing holding brake are provided. Swing speed is proportional to swing control lever stroke.

Swing speed 13 RPM
 Tail-swing radius 2900 mm/9'6"
 Min. swing radius 3800 mm/12'6"
 (work equipment, fully retracted)



UNDERCARRIAGE

X-leg type center frame is integrally welded with reinforced box-section track frames. The design includes sealed tracks, lubricated rollers and idlers, hydraulic track adjusters with shock absorbing springs, and assembled track-type tractor shoes with triple grousers.

STANDARD UNDERCARRIAGE

Shoe width 710 mm/28"
 Grouser height 26 mm/1"
 Number of shoes 47
 Number of carrier rollers 2
 Number of track rollers 8
 Ground pressure 0.42 kg/cm²/5.97 PSI

LC UNDERCARRIAGE

Shoe width 710 mm/28"
 Grouser height 26 mm/1"
 Number of shoes (each side) 51
 Number of carrier rollers 2
 Number of track rollers (each side) 10
 Ground pressure 0.39 kg/cm²/5.55 PSI



SERVICE REFILL CAPACITIES

Fuel tank 280 ltr/73.9 U.S. gal
 Coolant 21 ltr/5.6 U.S. gal
 Engine 25 ltr/6.6 U.S. gal
 Final drive (each side) 3.7 ltr/1.0 U.S. gal
 Swing drive 7 ltr/1.9 U.S. gal
 Hydraulic oil 150 ltr/39.6 U.S. gal



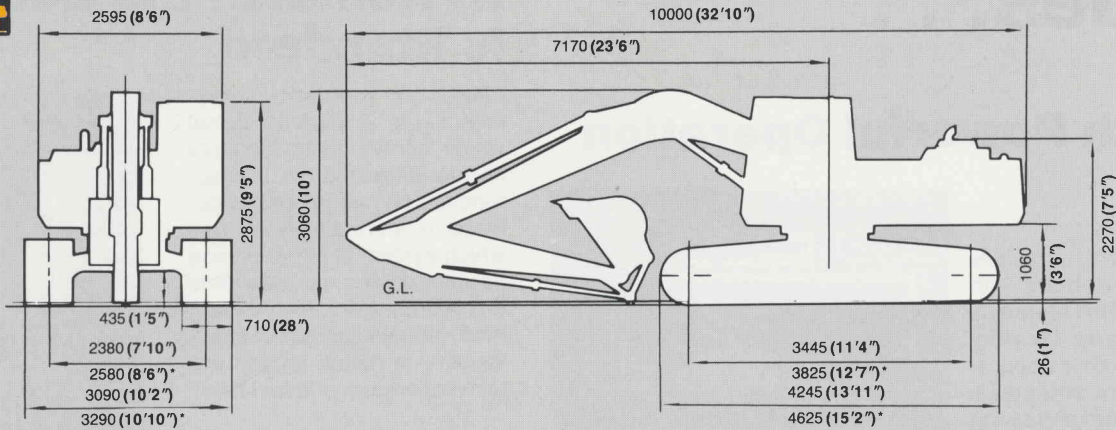
OPERATING WEIGHT

Including 5850 mm/19'2" one-piece boom, 3045 mm/10' arm, SAE heaped 1.00 m³/1.31 yd³ backhoe bucket, lubricant, coolant and full fuel tank 22300 kg/49,160 lb
 With **LC UNDERCARRIAGE** 23190 kg/51,120 lb



DIMENSIONS

Unit: mm (ft.in)



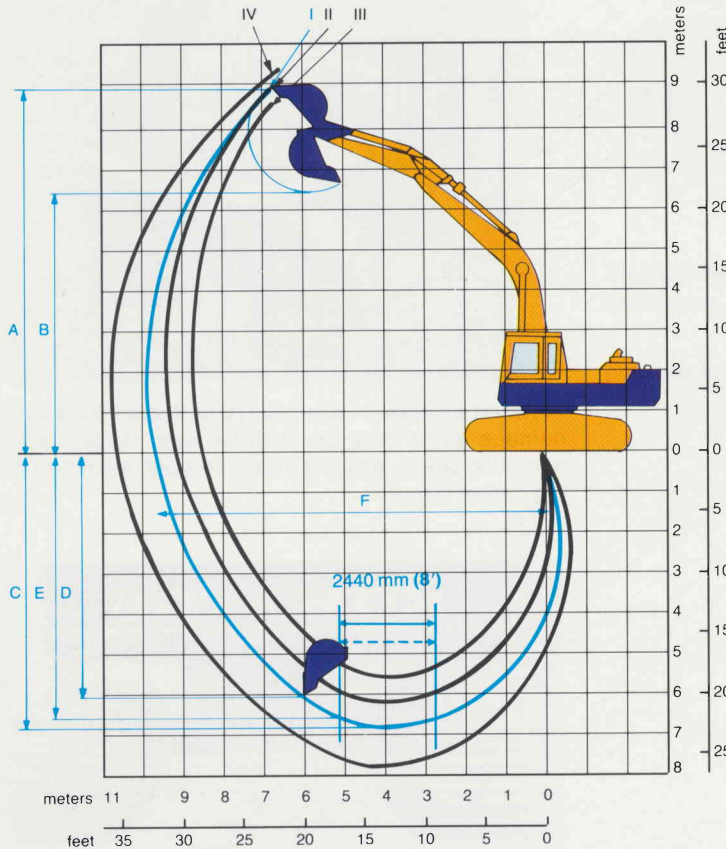
With 5850 mm (19'2") one-piece boom, 3045 mm (10') arm, SAE heaped 1.00 m³(1.31 yd³) backhoe bucket.

*LC UNDERCARRIAGE DIMENSION



WORKING RANGE

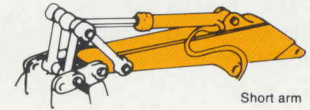
- I . . .5840 mm/19'2" boom + 3045 mm/10' arm
- II . . .5840 mm/19'2" boom + 2500 mm/8'2" arm
- III . .5840 mm/19'2" boom + 2000 mm/6'7" arm
- IV . .5840 mm/19'2" boom + 3500 mm/11'6" arm



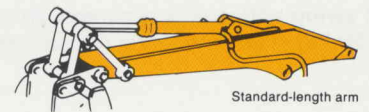
Boom Available

5850 mm (19'2")
weight 1620 kg (3564 lb)

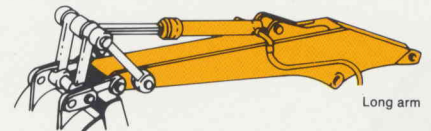
Arms Available



2000 mm (6'7")
weight: 650 kg (1430 lb)
2500 mm (8'2")
weight: 640 kg (1410 lb)



3045 mm (10')
weight: 718 kg (1580 lb)



3500 mm (11'6")
weight: 760 kg (1680 lb)

	With 2000 mm/ 6'7" arm	With 2500 mm/ 8'2" arm	With 3045 mm/ 10' arm	With 3500 mm/ 11'6" arm
A. Max. digging height (m/ft, in)	8.90/29'2"	8.97/29'5"	9.18/30'1"	9.44/31'
B. Max. dumping height (m/ft,in)	6.10/20'	6.20/20'4"	6.36/20'10"	6.61/21'8"
C. Max. digging depth (m/ft,in)	5.67/18'7"	6.17/20'3"	6.70/22'	7.16/23'6"
D. Max. vertical wall digging depth (m/ft,in)	4.61/15'2"	4.97/16'4"	5.76/18'11"	6.20/20'4"
E. Max. digging depth of cut for 2400 mm (8") level bottom (m/ft,in)	5.43/17'10"	4.97/16'4"	6.57/21'7"	6.20/20'4"
F. Max. digging reach at ground level (m/ft,in)	9.09/29'10"	9.51/31'2"	10.00/32'10"	10.46/34'4"
Bucket digging force (kg/lb)	12700/28,000	12700/28,000	12700/28,000	12700/28,000
Arm crowd force (kg/lb)	14990/33,050	12270/27,050	10200/22,490	9280/20,460

STANDARD EQUIPMENT

- Adjustable oil suspension seat with arm rest and reclining device
- Air cleaner service indicator
- All-weather steel cab, pull-up front window with wiper, safety-glass windows and floor mat
- Alternator (25A)
- Auto-decelerator
- Batteries (24V/110 Ah x 2)
- Bolt-on sprocket
- Counterweight (3940 kg/8680 lb)
- Dry-type air cleaner
- EOLSS system
- Electric horn
- Electric starting motor (24 V/7.5 kW)
- Front lights (2)
- Fuel level sight gauge
- Full hydrostatic drive
- Heater and defroster
- Hydraulic oil level sight gauge
- Hydraulic track adjusters
- Monitor system with gauges and caution lamps
- PPC (proportional pressure control) hydraulic control
- Rearview mirror
- Room lamp
- Seat belt
- Shoes—triple grouser (710 mm/28")
- Service indicator
- Suction fan
- Tool kit
- Track guiding guards (center section)
- Vandalism protection locks

BACKHOE BUCKETS AVAILABLE w/tooth adapters, tips, weld on cutting edge and weld on hook

Type	Backhoe Bucket			
Capacity: (m ³ /yd ³)				
SAE, PCSA heaped	0.72/0.94	1.0/1.31	1.14/1.49**	1.26/1.65*
SAE struck	0.55/0.72	0.76/0.99	0.83/1.09	0.90/1.18
Width (mm/in)				
with side cutters	1005/39.6	1250/49.2	1405/55.3	—
without side cutters	900/35.4	1155/45.5	1300/51.2	1400/55.1
Weight (kg/lb)				
(with teeth)				
with side cutters	610/1,345	712/1,570	760/1,675	—
without side cutters	576/1,270	678/1,495	726/1,601	770/1,698
Number of teeth	3	4	5	5

*Does not accommodate side cutters, and cannot be used with long arm.

**Cannot be used with long arm.

ESCO Heavy Duty Backhoe Buckets w/tooth adapters and tips

Capacity (m ³ /yd ³)			
SAE heaped	0.53/0.69	0.57/0.75	0.76/1.00
Width (mm/in)			
without side cutters	699/27.5	800/31.5	927/36.5

OPTIONAL SHOES

STANDARD UNDERCARRIAGE

Shoe width (mm/in)	610/24	810/31.9
Ground pressure (kg/cm ² /PSI)	0.48/6.83	0.37/5.26
Additional weight (kg/lb)	—300/—660	300/660

LC UNDERCARRIAGE

Shoe width (mm/in)	610/24	810/31.9
Ground pressure (kg/cm ² /PSI)	0.48/6.40	0.35/4.98
Additional weight (kg/lb)	—310/—684	310/684

OPTIONAL EQUIPMENT

- Air conditioner
- Windshield washer

Form No. AESS220-02

Materials and specifications are subject to change without notice

 **KOMATSU**

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