KOMATSU
THE QUALITY IS STANDARD

KOMATSU Vanguard SERIES

PC60-5

HYDRAULIC EXCAVATOR

Model shown may include optional equipment.

KOMATSU VANGUARD SERIES

High operating versatility

- *Optional two-mode selection system for high excavation efficiency.*
- *Wide working range and powerful digging force facilitate efficient excavation.*
- *Smallest swing radius in its class makes the machine highly maneuverable in extremely tight quarters.*
- *Rational hydraulic system not only assures smooth, compound work equipment action but also saves energy for increased operating efficiency.*
- *Optional swing holding brake increases operating safety on an incline.*

Enhanced fuel economy

- *Komatsu 4D95L direct-injection diesel engine assures low fuel consumption.*
- *Komatsu OLSS system minimizes hydraulic loss (optional).*
- *Advanced PC hydraulic system efficiently converts engine power to hydraulic power.*
- *Optional auto-deceleration system further decreases hydraulic loss while the work-equipment is in the stand-by status.*

Operating comfort

- *Newly designed cab offers greater comfort.*
- *Flat front face cab design assures an uninterrupted front view.*

Operating weight: 6300 kg (13,890 lb)
Bucket capacity (SAE heaped): 0.09 ~ 0.36 m^3 (0.11 ~ 0.47 cu.yd)

High operating versatility

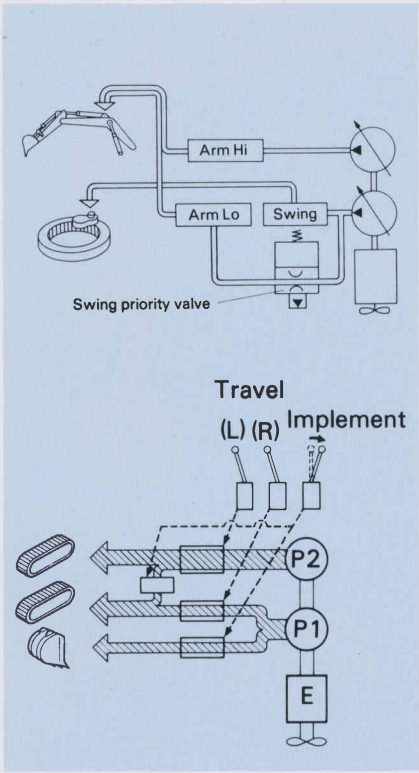
An optional two-mode selection system for high excavation efficiency. Selection of either STANDARD or LIGHT-DUTY digging mode. When strong excavating force is required, select the STANDARD mode. During light-duty work which does not need so much hydraulic power, such as loading operation or slope finishing, select the LIGHT-DUTY mode. Unlike the common partial engine controlling method, the same engine speed is maintained to supply a sufficient quantity of oil. As a result, high productivity is assured while fuel consumption is significantly reduced.

A wide working range and powerful digging force facilitate efficient excavation. With the largest working range and strongest digging force (at bucket and arm cylinders) in its class, the PC60 outproduces competitive machines.

The smallest swing radius in its class makes the machine highly maneuverable in extremely tight quarters. The PC60 is ideal for any kind of civil engineering operations including water/drainage pipe laying, electric wire and gas pipe laying works, in restricted areas and on narrow roads. Due to the employment of a control valve-type swing hydraulic system, the swinging speed and braking force are proportional to the lever stroke. This assures smooth, precise swinging action.

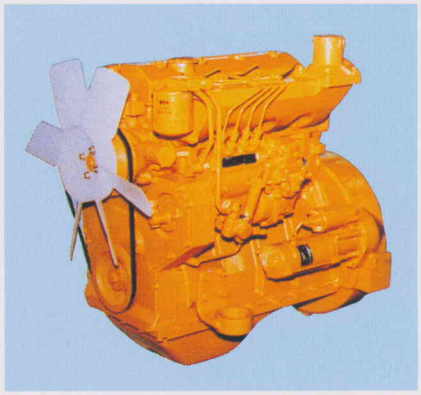
A rational hydraulic system not only assures smooth, compound work equipment action but also saves energy for increased operating efficiency.

- **Arm merge circuits**
  The PC60 has an arm merge circuit for smooth, compound bucket movement and high-speed bucket/arm action, resulting in shortened cycle time. This feature makes the PC60 one of the most productive excavators—especially in leveling and slope-finishing where frequent arm action is required.
  When arm and swing actions 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.



- **Smooth compound travel and work-equipment movement**
  Thanks to the automatically controlled straight-traveling valve in the hydraulic system, swing and other work-equipment action can be made while the machine is traveling in a straight line, making relocation or excavation in confined spaces easy and efficient.
- **Swing holding brake (optional)**
  It automatically goes into action as soon as the machine comes to a complete halt after the swing control lever has been returned to neutral: this effectively prevents swinging caused by hydraulic drifting even when the machine is on an incline.

Enhanced fuel economy



The Komatsu 4D95L direct-injection diesel engine assures low fuel consumption. Water-cooled, in-line, overhead valve, 4-stroke diesel engine employs the direct-injection system; greatly improving combustion efficiency. In addition, the light weight design and reduction of friction of moving parts further boost fuel economy.

Komatsu OLSS system minimizes hydraulic loss. This optional hydraulic sub-system can be integrated into the hydraulic circuits, reducing various types of hydraulic loss and making full use of engine output. OLSS consists of NC (negative control) valves, CO (cut-off) valves, and a TVC (torque variable control) valve. By sensing the changing status of hydraulic oil flow and oil pressure, these valves control oil output from two piston pumps, minimizing the flow of unused oil.

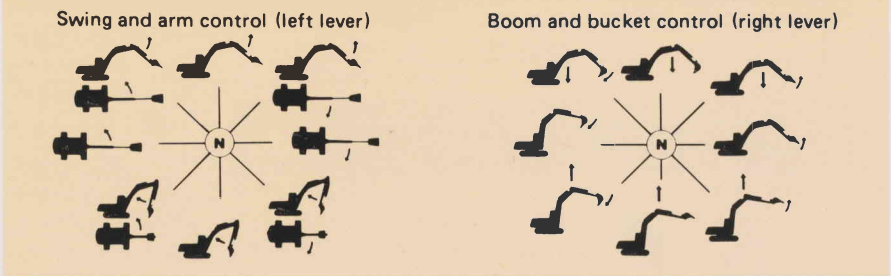
The advanced PC hydraulic system efficiently converts engine power to hydraulic power. Two variable-capacity piston pumps are employed to power the implement and travel hydraulic circuits. Since the oil discharge flow from these two pumps is automatically changed according to the hydraulic pressure change from the load, the optimum velocity to force relationship can be obtained. This means that even a smaller engine can sufficiently operate the PC60 since engine power is efficiently converted into hydraulic power.

The optional auto-deceleration system further decreases hydraulic loss during the stand-by status. When the work-equipment control levers are returned to neutral, the engine speed is automatically lowered in several seconds (by electric timer), thus significantly reducing fuel consumption. With the auto-deceleration cancel switch off, the engine speed can be set to any desired value with the fuel control lever.

Operator comfort

The newly designed cab offers greater comfort. The roomy, 940 mm (3'11") wide cab meets the international standards, and provides ample work space so that any operator of any physique can stretch out for relaxation. In addition, it provides excellent visibility through tinted glass windows that not only soften strong sunlight but also increase the cooling efficiency of the air conditioner. The cab is installed on the revolving frame through rubber pads. This, together with a fully-enclosed engine room reduce noise and vibration inside the cab.

Flat-front face cab design assures an uninterrupted front view. Perfect uninterrupted front and downward views, obtained by simply pulling up the front lattice window, facilitate efficient deep ditch excavation.

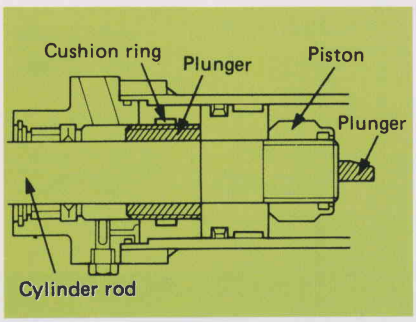


Travel/steering controls can be made with either the hand levers or foot pedals for convenient operating conditions.

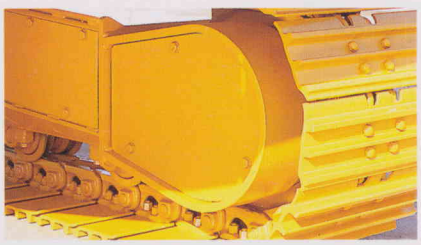
Work-equipment control levers: Two long levers are provided for controlling the bucket, arm, boom and swing action, which assure a light-touch, short-stroke and responsive lever manipulation.

Simple maintenance and high durability features

Full-open-type machine cover: The machine cover can be conveniently released from within the cab. The cover is easily opened through the aid of the torsion bar, thereby making all internal components accessible for simplified maintenance.



Cushion mechanism adopted in the arm cylinder absorbs shocks due to arm retraction or extension; this adds to operating comfort and extends component life.



Travel motors are the in-shoe type, with hydraulic piping built into the X-leg type center frame; this prevents damage due to external obstructions.

Backhoe bucket is made of high tensile-strength steel for maximum rigidity to withstand wear. Side cutters are optionally available.

SPECIFICATIONS

ENGINE

Komatsu 4D95L, 4-cycle, water-cooled diesel engine. 4 cylinders, 95 mm (3.74") bore x 115 mm (4.53") stroke and 3.26 ltr. (199 cu.in) piston displacement.
Flywheel horsepower:
54 HP (40 kW) at 2100 RPM (SAE J1349)
55 PS (40 kW) at 2100 RPM (DIN 6270 NET)
Direct-injection fuel system. All-speed mechanical governor. Force-lubrication driven by gear pump. Full-flow filter for lube purification. Dry-type air cleaner with automatic dust evacuator and dust indicator. 24 V/2.8 kW electrical starter motor. 24 V/15 A alternator. 2 x 12 V/65 Ah batteries.

HYDRAULIC SYSTEM

Two variable-capacity piston pumps
Hydraulic pumps
- Two variable-capacity piston pumps power boom, arm, bucket, swing and travel circuits.
  Capacity (discharge flow) at engine 2100 RPM
  Maximum flow . . . . . 2 x 66 ltr. (17.4 U.S. gal)/min.

Hydraulic motors
Travel . . . . . Two axial piston motors with counterbalance valve and parking brake
Swing . . . . . One axial piston motor
Relief valve setting
Implement circuits . . . . 300 kg/cm^2 (4,270 PSI/29.4 MPa)
Bucket circuits . . . . . 230 kg/cm^2 (3,270 PSI/22.5 MPa)
Travel circuits . . . . . 300 kg/cm^2 (4,270 PSI/29.4 MPa)
Swing circuits . . . . . 230 kg/cm^2 (3,270 PSI/22.5 MPa)
Pilot circuits . . . . . 30 kg/cm^2 (430 PSI/ 2.9 MPa)
Control valves
Two 5-spool control valves with a service valve.
Hydraulic cylinders

Cylinder	Numbers	Bore x stroke
Boom	1	100 mm x 910 mm (3.94" x 35.8")
Arm	1	90 mm x 870 mm (3.54" x 34.3")
Bucket	1	90 mm x 710 mm (3.54" x 28.0")

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 type. Each track is independently driven by an axial-piston motor. Power goes through planetary eccentric single-reduction gear to track. Travel motors are neatly installed within track shoe's width (in-shoe design).
Max. drawbar pull . . . . . 4600 kg (10,140 lb/45.1 kN)
Max. travel speed . . . . . 3.8 km/h (2.4 MPH)

BRAKES

Hydraulic lock type travel motors equipped with counterbalance valve. When travel/steering levers are positioned in neutral, brakes automatically lock. Counterbalance valve limits travel speed during descent. Spring applied and hydraulically released oil disc parking brakes are built into each travel motor.

SWING SYSTEM

Hydraulic motor-driven through spur and planetary reduction gears. Single-row shear type ball bearings with induction-hardened internal gears are built into swing circle. Grease-bathed swing pinion. Pin-lock type swing lock is provided. Swing speed is proportional to swing control lever stroke.
Swing speed . . . . . 14 RPM
Tail swing radius . . . . . 1750 mm (5'9")
Min. swing radius . . . . . 2150 mm (7'1")
(work equipment fully retracted)

UNDERCARRIAGE

Sealed track. Lubricated rollers and idlers. Hydraulic track adjusters with shock absorbing springs. Assembled track-type tractor shoes with triple grousers.
Shoe width . . . . . 450 mm (17.7")
Grouser height . . . . . 20 mm (0.79")
Number of shoes . . . . . 42 each side
Number of carrier rollers . . . . . 1 each side
Number of track rollers . . . . . 5 each side
Ground pressure . . . . . 0.31 kg/cm^2 (4.41 PSI/30.4 kPa)

COOLANT & LUBRICANT CAPACITY (refilling)

	Liter	U.S. gallon
Fuel tank	155	41.0
Radiator	9	2.4
Engine	7.5	2.0
Pump drive	0.9	0.2
Final drive, each side	1.5	0.4
Swing drive	2.2	0.6
Hydraulic tank	88	23.2

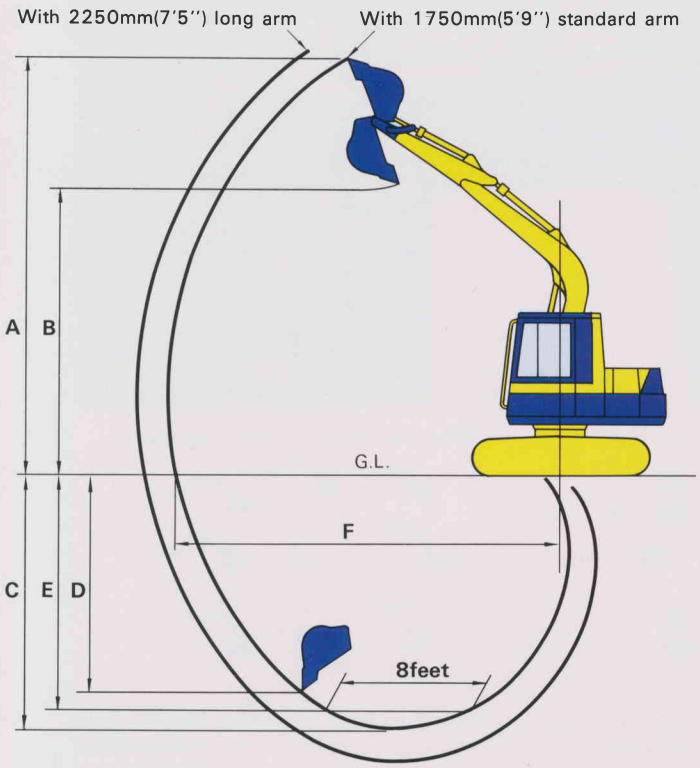
OPERATING WEIGHT (approximate)

Operating weight including 3620 mm (11'11") one-piece boom, 1750 mm (5'9") arm, SAE heaped 0.28 m^3 (0.37 cu.yd) backhoe bucket, operator, lubricant, coolant and full fuel tank . . . . . 6300 kg (13,890 lb)

STANDARD EQUIPMENT

24 V/2.8 kW electric starting motor. 24 V/15 A alternator. Dry type air cleaner. 450 mm (17.7") triple-grouser shoes. Hydraulic track adjusters. Full hydrostatic drive. Suction fan. 2 x 12 V/65 Ah batteries. Front lights (2). 520 kg (1,146 lb) counterweight. Electric horn. All-weather steel cab (with safety glass windows, pull-up type front window, lockable door, window wiper, room lamp and adjustable pillow-type operator's seat with reclining device). Engine water temperature gauge. Warning lamp for engine oil pressure. Service meter. Alternator charging lamp. Air cleaner service indicator. Fuel level sight gauge. Hydraulic oil level sight gauge. Tool kit and ordinary spare parts.

WORKING RANGE



With 1750 mm (5'9") standard arm and SAE heaped 0.28 m³ (0.37 cu.yd) backhoe bucket

A	Max. digging height	6.54 m (21'5")
B	Max. dumping height	4.45 m (14'7")
C	Max. digging depth	4.06 m (13'4")
D	Max. vertical wall digging depth	3.46 m (11'4")
E	Max. digging depth of cut for 2440 mm (8') level bottom	3.74 m (12'3")
F	Max. digging reach at ground level	6.23 m (20'5")
Bucket digging force		4500 kg (9,920 lb/44 kN)
Arm crowd force		3500 kg (7,720 lb/34 kN)

With 2250 mm (7'5") long arm and SAE heaped 0.28 m³ (0.37 cu.yd) backhoe bucket

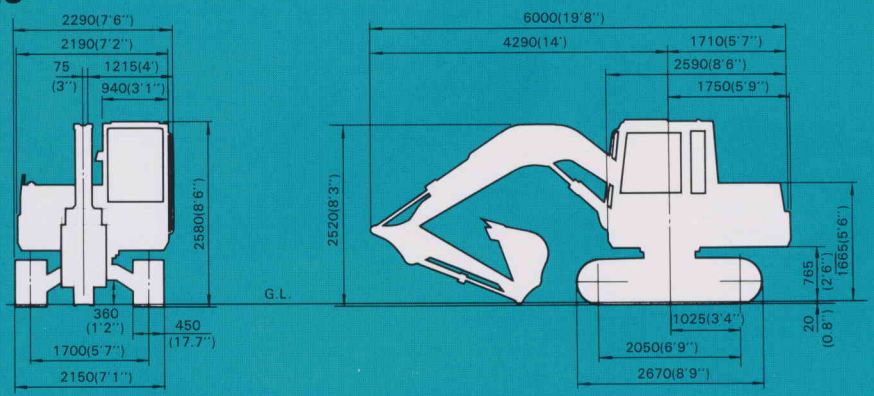
A	Max. digging height	6.54 m (21'5")
B	Max. dumping height	4.52 m (14'10")
C	Max. digging depth	4.56 m (15')
D	Max. vertical wall digging depth	3.65 m (12')
E	Max. digging depth of cut for 2440 mm (8') level bottom	4.26 m (14')
F	Max. digging reach at ground level	6.61 m (21'8")
Bucket digging force		4500 kg (9,920 lb/44 kN)
Arm crowd force		3060 kg (6,750 lb/30 kN)

BACKHOE BUCKETS

Bucket capacity : m³ (yd³)					
JIS, CECE heaped	0.08 (0.10)	0.11 (0.14)	0.18 (0.24)	0.25 (0.33)	0.32 (0.42)
SAE, PCSA heaped	0.09 (0.11)	0.13 (0.17)	0.20 (0.26)	0.28 (0.37)	0.36 (0.47)
Struck	0.07 (0.09)	0.09 (0.12)	0.15 (0.20)	0.23 (0.30)	0.27 (0.35)
Bucket width : mm (in.)					
without side cutters	350 (13.8)	450 (17.7)	550 (21.7)	650 (25.6)	725 (28.5)
with side cutters	450 (17.7)	550 (21.7)	650 (25.6)	750 (29.5)	825 (32.5)
Bucket weight : kg (lb) (with teeth)					
without side cutters	133 (290)	145 (320)	169 (373)	195 (430)	205 (452)
with side cutters	148 (330)	161 (355)	184 (406)	210 (460)	220 (485)
No. of bucket teeth	3	3	3	4	4

DIMENSIONS

Unit: mm (ft.in)



With 3620 mm (11'11") one-piece boom, 1750 mm (5'9") arm, SAE heaped 0.28 m³ (0.37 cu.yd) backhoe bucket.

ATTACHMENTS

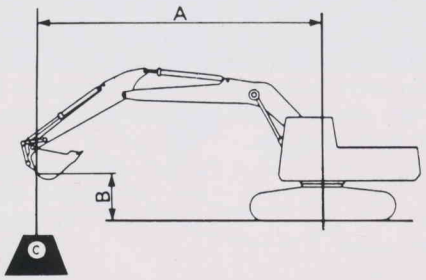
Backhoe bucket selection: Backhoe buckets of different capacities are available, so you can choose on the basis of specific job requirements.
Trapezoidal bucket is ideal for digging ditches and for drainage works. 0.22 m^3 (0.29 cu.yd) capacity.
Slope finishing bucket for scraping slopes or banks. 0.16 m^3 (0.21 cu.yd) capacity.
Ripper bucket for hard, rocky ground. 0.18 m^3 (0.24 cu.yd) capacity.
Clamshell bucket is recommended for vertical digging. 0.1 m^3 (0.13 cu.yd) or 0.17 m^3 (0.22 cu.yd) capacity.
Rippers. Choice of single-shank or three-shank ripper. For rock-digging and crushing, hard-soil digging, pavement-removal work, etc.
Ejector bucket: The ejector removes sticky materials such as clay or mud. 0.11 m^3 (0.14 cu.yd) capacity.
(Bucket capacity: JIS heaped capacity)
Track shoes: Triple-grouser shoes for all applications. Flat shoes for traveling over paved roads. Swamp shoes (circular arc shoes) for muddy or soft terrain.

Type of shoes	Ground pressure
610 mm (24.0") triple-grouser shoes	0.24 kg/cm^2 (3.41 PSI/23.5 kPa)
510 mm (20.1") swamp shoes	0.28 kg/cm^2 (3.98 PSI/27.5 kPa)
700 mm (27.6") swamp shoes	0.20 kg/cm^2 (2.84 PSI/19.6 kPa)
480 mm (18.9") flat shoes	0.29 kg/cm^2 (4.12 PSI/28.4 kPa)

1750 mm (5'9") standard arm is recommended for general digging operations.
2250 mm (7'5") long arm is recommended for extra reach and light-duty operation. Additional weight to the machine equipped with the standard arm: +50 kg (110 lb)

OTHER OPTIONS
Two-mode selection system. Swing holding brake. Auto-deceleration system. OLSS hydraulic system. Cooler for cab. Air conditioner. Heater. Ashtray. Cigarette lighter. Radio. Rearview mirror.

LIFTING CAPACITY



STD / 1750 mm ARM

A : Reach from swing center line [feet (m)]
B : Bucket hook height [feet (m)]
O : Lifting capacity [lb (kg)]
Cf : Rating over front
Cs : Rating over side or 360 degrees
MAX : Rating at maximum reach

A / B	MAX		16'5" (5)		13'1" (4)		9'10" (3)		6'7" (2)		3'3" (1)	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
16'5" (5)	*1500 (700)	*1500 (700)			*3000 (1350)	*3000 (1350)						
13'1" (4)	*1400 (650)	*1400 (650)			*2900 (1300)	*2900 (1300)						
9'10" (3)	*1300 (600)	*1300 (600)	2400 (1100)	2000 (900)	*3200 (1450)	3000 (1350)	*3700 (1650)	*3700 (1650)				
6'7" (2)	*1300 (600)	*1300 (600)	2300 (1050)	1900 (850)	3500 (1600)	2900 (1300)	*4900 (2200)	4700 (2100)				
3'3" (1)	*1400 (650)	*1400 (650)	2300 (1050)	1900 (850)	3300 (1500)	2800 (1250)	5300 (2400)	4300 (1950)				
0	*1500 (700)	1500 (700)	2200 (1000)	1800 (800)	3200 (1450)	2700 (1200)	5100 (2300)	4100 (1850)				
–3'3' (–1)	*1900 (850)	1700 (750)	2200 (1000)	1800 (800)	3100 (1400)	2600 (1150)	5000 (2250)	4000 (1800)	*8100 (3650)	8100 (3650)		
–6'7' (–2)	*2300 (1050)	2100 (950)			3100 (1400)	2600 (1150)	5000 (2250)	4000 (1800)	*9200 (4150)	8200 (3700)	*5500 (2500)	*8200 (3700)

* Load is limited by hydraulic capacity rather than tipping. Ratings are based on SAE Standard No. J1097.
Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.

This specification sheet may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require. Materials and specifications are subject to change without notice.

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