KOMATSU
THE QUALITY IS STANDARD

PC90-1

HYDRAULIC EXCAVATOR

Model shown may include optional equipment

KOMATSU: The Quality is Standard.

FLYWHEEL HORSEPOWER: 64 HP @ 2300 RPM. BUCKET CAPACITY: .09-.52 m³ (.11-.60 yd³)
OPERATING WEIGHT: 8380 kg (18,470 lb)

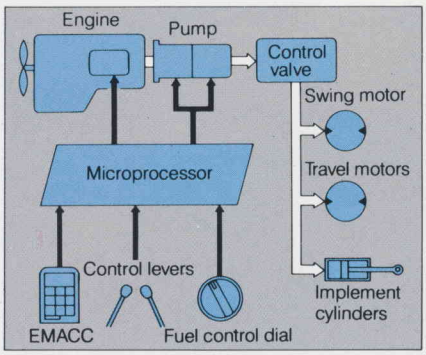
- Power Mode Selection System matches machine performance to actual job conditions
- Total control hydraulic system controls pump output and engine speed for lower fuel consumption and higher productivity
- Autodecelerator lowers engine speed whenever the work equipment and travel controls are in neutral for additional fuel savings
- Two speed travel system matches machine speed to ground conditions
- Straight travel circuit assures straight travel, even during simultaneous operations
- Swing holding brake prevents swing drift, even while working on slopes
- Merged circuits reduce cycle times
- Automatic engine warm-up, and engine overheat prevention systems provide safe and effective warming up and overheat prevention
- Spacious, well ventilated cab, excellent visibility and adjustable wrist controls add to the operator's comfort and productivity
- Adjustable electronic monitor and control console puts all control and monitoring functions at your fingertips

The New Frontier of Technology

UNEQUALLED PERFORMANCE AND FUEL ECONOMY

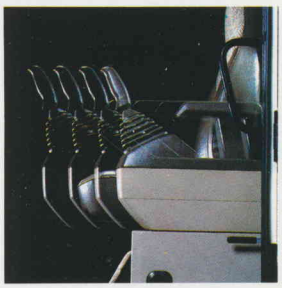
Power Mode Selection System
This system allows the operator to match machine performance and economy to the task at hand. Just simply select the appropriate working mode and the microcomputer does the rest. The STANDARD mode is for general operations, such as digging and loading. The Light Duty mode is ideal for controlled performance, such as lifting and leveling.

Pump and Engine Mutual Control System
A microprocessor automatically varies engine speed and pump output for maximum fuel efficiency without sacrificing productivity.



Electronic Monitor and Control Console (EMACC)
The EMACC puts all system controls and display functions within easy view and reach of the operator. The console can also be rotated through three positions to provide the best, glare-free viewing angle.

The EMACC Consists of:
- Power Modes: Two modes (S and L) are available.
- Autodeceleration
- Monitor: constantly checks machine's condition
  Pre-start level checks
  Fuel gauge
  Coolant temperature gauge
- Caution items: coolant temperature, fuel level, oil pressure, and charge system
- Hi-Lo travel speed selector
- Swing lock indicator
- Wiper controls: intermittent or continuous
- Heater fan control


Adjustable wrist control lever

Adjustable Wrist Control Levers
Unitized wrist control levers and arm rests can be adjusted through three work positions for maximum operator comfort. The proportional pressure wrist controls reduce operating effort while assuring precise work equipment operations.

The New Frontier of Quality

Quality Improvements Include:
- Added filters and radiator dust-resistant screening to keep the hydraulic system clean and cool.
- Double lock electronic connectors and in-cab mounted electronic microprocessor provide increased reliability and protection from the elements.

Automatic Warm-Up System
Engine speed is automatically controlled by the microprocessor when coolant temperature is low for fast, fuel efficient and reliable engine warm-up.

Engine Overheat Prevention
Should the coolant temperature rise above desired levels, pump output and engine speed are reduced, preventing damage to the engine.

Other Performance-Proven Features
- OLSS (Open-Center Load Sensing System) reduces hydraulic losses.
- Autodeceleration boosts fuel economy.
- Swing holding brake makes working on slopes much easier.
- Car-like operator's cab
- X-leg frame for excellent stability.
- Merged circuits shorten cycle times.
- Straight travel circuits facilitate simultaneous work equipment/ travel operations.

EASY AND COMFORTABLE OPERATION

Automatic Hi-Lo Travel Speed
A "Hi" or "Lo" travel speed can be selected depending on operator preference.

Fuel Control Dial
The easy to use dial makes adjusting the engine speed quick and effortless.

Engine Key Stop
To stop the engine, simply turn the ignition key to off.

Spacious Cab
The roomy, efficient cab design has a large glass area for excellent visibility, as well as sliding front and side windows for cross ventilation.

Swing Lock
The swing can be locked for transport simply by flicking a switch.

Adjustable Operator's Seat
The fully adjustable suspension seat provides outstanding comfort.


Adjustable operator seat

SPECIFICATIONS

ENGINE

Komatsu 4D95L 4-cycle, water-cooled, diesel engine with 4 cylinders, 95 mm **(3.74″)** bore × 115 mm **(4.53″)** stroke and 3.26 ltr **(199 in³)** piston displacement
Flywheel horsepower . . . . . **64 HP @ 2300 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/2.8 kW starting system with 25A alternator, 2 x 12V/65 Ah batteries.

HYDRAULIC SYSTEM

Two variable capacity piston pumps and independent swing operation assure smooth compound movements of the work equipment. The Pump and Engine Mutual Control (PEMC) system controls the engine speed and pump output for maximum fuel efficiency and productivity. The Open-center Load Sensing System (OLSS) controls the pumps for efficient use of engine power, reduced hydraulic losses 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 @ 2300 engine RPM):
Piston. . . . . .77 ltr **(20 U.S. gal)** min × 2
Gear. . . . . .34 ltr **(9 U.S. gal)** min

Hydraulic motors:
Travel . . . . . .Two axial piston motors with parking brake
Swing . . . . .One axial piston motor with swing holding brake

Relief valve settings:
Implement circuits. . . . . .320 kg/cm² **(4,550 psi)**
Swing circuit . . . . . .210 kg/cm² **(2,990 psi)**
Pilot circuit. . . . . .30 kg/cm² **(430 psi)**
Travel circuit . . . . . .350 kg/cm² **(4,980 psi)**

Control valves:
5-spool and 6-spool valves with a service valve

No. of cylinders — bore × stroke:
Boom . . . . . .1-110 mm × 1000 mm **(4.3″ x 39.4″)**
Arm . . . . . .1-105 mm × 910 mm **(4.1″ x 35.8″)**
Bucket. . . . . .1-90 mm x 710 mm **(3.5″ x 28.6″)**

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 a double-reduction planetary gear to the track.
Maximum drawbar pull. . . . . .7400 kg **(16,310 lb)**
Maximum travel speed . . . . . .5.0 km/h **(3.1 MPH)**

BRAKES

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

SWING SYSTEM

The swing system is powered by a hydraulic driven motor through planetary and helical gears. Single-row, shear type ball bearings with induction-hardened internal gears are built into the swing circle. Grease-bathed swing pinion, electric lock type swing lock and swing holding brake are provided. Swing speed is proportional to swing control lever stroke.
Max. swing speed . . . . . .13.5 RPM
Tail-swing radius . . . . . .1850 mm **(6′1″)**
Min. swing radius . . . . . .1900 mm **(6′3″)**
(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 . . . . . .480 mm **(18.9″)**
Grouser height . . . . . .23 mm **(.9″)**
Number of shoes (each side). 41
Number of carrier rollers (each side) 1
Number of track rollers (each side) 5
Ground pressure . . . . . .0.31 kg/cm²/ **(4.6 psi)**

SERVICE REFILL CAPACITIES

Fuel tank. . . . . .200 ltr **(52.8 U.S. gal)**
Coolant . . . . . .10 ltr **(2.6 U.S. gal)**
Engine. . . . . .7 ltr **(1.8 U.S. gal)**
Final drive (each side). . . . . .3 ltr **(.8 U.S. gal)**
Swing drive . . . . . .2.4 ltr **(.6 U.S. gal)**
Hydraulic oil . . . . . .67 ltr **(17.7 U.S. gal)**

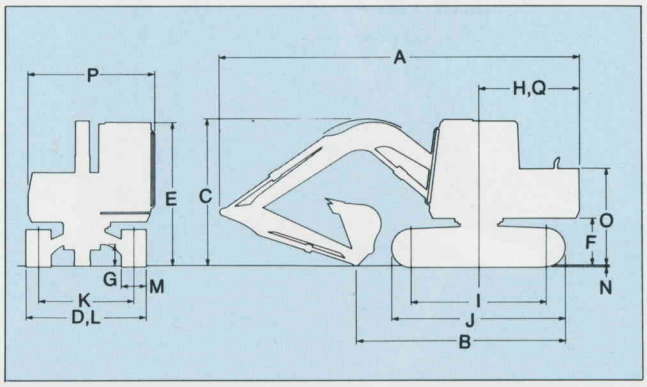
OPERATING WEIGHT

Including 4100 mm **(13′5″)** one-piece boom, 2010 mm **(6′7″)** arm, .40 m³ **(.52 yd³)** backhoe bucket, operator, lubricant, coolant and full fuel tank . . . . . .8380 kg **(18,470 lb)**

DIMENSIONS

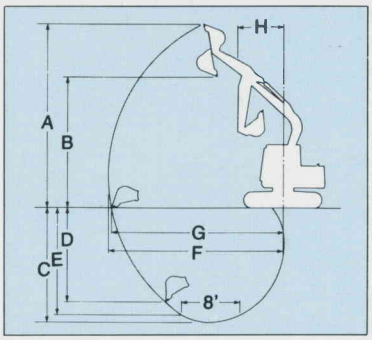
		2.01 m **6'7"** arm	2.51 m **8'3"** arm
A	Overall length	6555 mm **21'6"**	6600 mm **21'8"**
B	Length on ground (transport)	3845 mm **12'7"**	3680 mm **12'1"**
C	Overall height (to top of boom)	2705 mm **8'11"**	3030 mm **9'11"**

D	Overall width	2330 mm **7'8"**
E	Overall height (to top of cab)	2640 mm **8'8"**
F	Ground clearance, counterweight	825 mm **2'8"**
G	Min. ground clearance	400 mm **1'4"**
H	Tail swing radius	1850 mm **6'1"**
I	Length of track on ground	2480 mm **8'2"**
J	Track length	3145 mm **10'4"**
K	Track gauge	1850 mm **6'1"**
L	Width of crawler	2330 mm **7'8"**
M	Shoe width	480 mm **1'7"**
N	Grouser height	**23 mm 0.9"**
O	Machine cab height	1725 mm **5'8"**
P	Machine cab width	2255 mm **7'5"**
Q	Distance, swing center to rear end	1800 mm **5'11"**



WORKING RANGE

		2.01 m **6'7"** arm	2.51 m **8'3"** arm
A	Max. digging height	7535 mm **24'9"**	7955 mm **26'1"**
B	Max. dumping height	5315 mm **17'5"**	5715 mm **18'9"**
C	Max. digging depth	4635 mm **15'2"**	5135 mm **16'10"**
D	Max. vertical wall digging depth	3845 mm **12'7"**	4580 mm **15'**
E	Max. digging depth of cut for 8' level	4340 mm **14'3"**	4850 mm **16'**
F	Max. digging reach	7095 mm **23'3"**	7605 mm **24'11"**
G	Max. digging reach at ground	6965 mm **22'10"**	7480 mm **24'7"**
H	Min. swing radius	1900 mm **6'3"**	2135 mm **7'**
Bucket digging force		5800 kg **12790 lb/56.9 kN**	5800 kg **12790 lb/56.9 kN**
Arm crowd force		4600 kg **10140 lb/45.1 kN**	3900 kg **8600 lb/38.2 kN**



ATTACHMENTS

Backhoe bucket and arm combination

Bucket capacity (heaped) SAE, PCSA	Width: Without side cutters	Width: With side cutters	Weight (with side cutters)	No. of teeth	Arm: 2.01 m 6'7"	Arm: 2.51 m 8'3"
0.09 m³ **0.11 yd³**	350 mm **13.8"**	450 mm **17.7"**	148 kg **326 lb**	3	○	○
0.13 m³ **0.17 yd³**	450 mm **17.7"**	550 mm **21.7"**	161 kg **355 lb**	3	○	○
0.20 m³ **0.26 yd³**	550 mm **21.7"**	650 mm **25.6"**	184 kg **406 lb**	3	○	○
0.33 m³ **0.37 yd³**	650 mm **25.6"**	750 mm **29.5"**	212 kg **467 lb**	4	○	○
0.40 m³ **0.52 yd³**	790 mm **31.1"**	890 mm **35"**	236 kg **520 lb**	4	○	△
0.52 m³ **0.60 yd³**	885 mm **34.8"**	—	—	4	△	×

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

○ Material weight up to 1.8 t/m³ **1.52 U.S. ton/cu.yd.**
△ Material weight up to 1.2 t/m³ **1.01 U.S. ton/cu.yd.**
× Not usable

STANDARD EQUIPMENT

- Air cleaner, dry type with dust indicator
- Alternator, 25-ampere
- Autodeceleration
- Automatic engine warm-up system
- Automatic de-airation system for fuel line
- Batteries (2 x 12-volt), 65 Ah
- Boss for cab protector
- Cab, all-weather sound suppression type with safety glass windows, pull-up type front window with lock device, removable lower windshield, lockable door, floor mat, windshield washer and wiper, room light, heater and defroster.
- Lattice guard
- Control levers (wrist control, adjustable)
- Cooling fan, suction type
- Counterweight, 1400 kg **(3,087 lb)**
- Drive system: hydrostatic, high-low travel system
- Engine overheat prevention system
- Fan guard
- Fuel control dial
- Hydraulics, power mode selection system
- Horn, electric
- Instrument panel, electronic monitor and control console (EMACC)
- Light, 1 front (RH)
- Radiator and oil cooler with dustproof net
- Rearview mirror (RH)
- Revolving frame underguards
- Suspension seat, fully adjustable with seat belt
- Service valve
- Straight travel circuit
- Starting motor, 24-volt/2.8 kW direct electric
- Swing holding brake
- Total-control hydraulic system
- Track frames: 5-track/1-carrier rollers (each side), 480 mm **(18.9″)** triple-grouser shoes and hydraulic track adjusters
- Vandalism protection locks

OPTIONAL EQUIPMENT

- Hydraulic piping for additional actuator
- Pressure regulator valve
- Breaker arrangement
- Track guiding guards center section
- Under cover for track frame
- Swing flasher
- Tool kit

OPTIONAL SHOES

Shoe width mm **(in)**	610 **(23.6)** triple grouser	700 **(27.6)** triple grouser
Machine ground pressure kg/cm² **(psi)**	0.32 **(4.60)**	0.24 **(3.38)**
Additional weight kg **(lb)**	+430 **(950)**	+608 **(1,340)**
Shoe application code	Y	Z

X - Rocky terrain, river banks & general terrain
Y - General or soft terrain
Z - Extremely soft terrain (swamps)

- 480 mm **(18.9″)** flat shoes
- 750 mm **(29.5″)** circular arc shoes

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.

KOMATSU
KOMATSU MARKETING DIVISION

AESS325-01 8/89

Printed in USA