



# Komatsu Tight Quarters Excavators

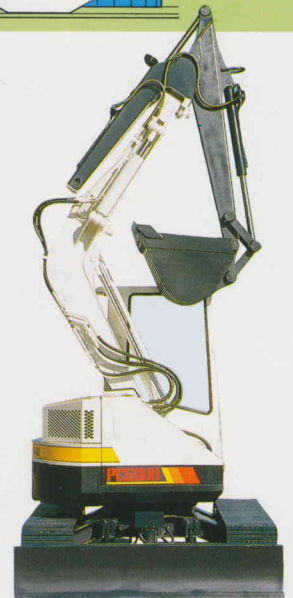
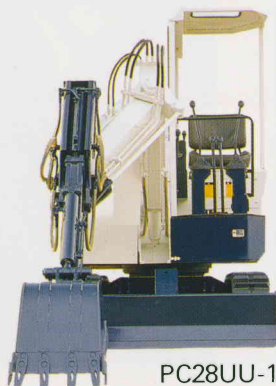
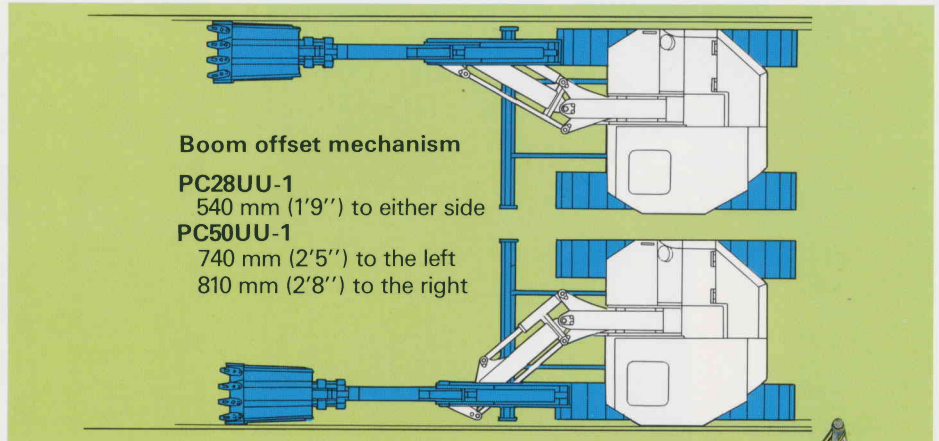
## PC28UU-1 PC50UU-1

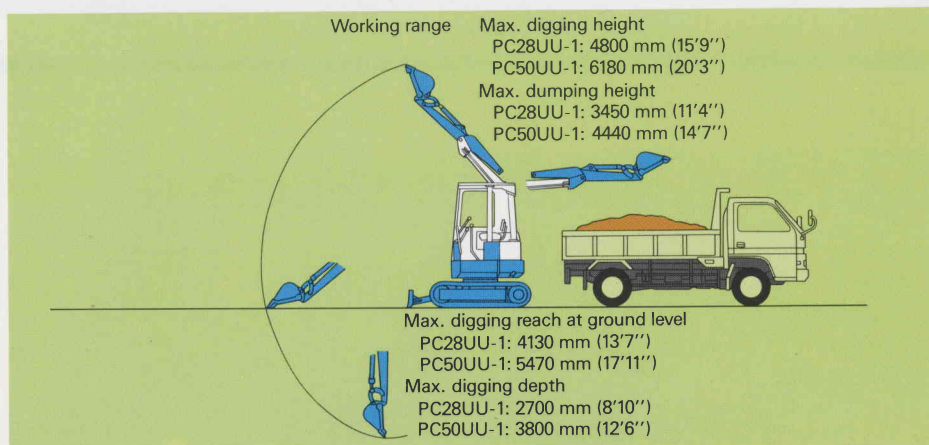


# Greater Efficiency in Confined Urban Worksites



Komatsu's unique tight quarters excavators, the PC28UU and PC50UU, were designed to meet the need for equipment to operate in narrow worksites in urban areas. With their mini size and smaller swing radius, the PC28UU/PC50UU can perform any light or heavy-duty job, like road work, underground cable laying or foundation work, even in narrow areas. And the adoption of a wide boom offset mechanism facilitates side digging work near walls. Their wide working range and powerful digging force increase the possible applications. In addition, their low-noise design means they can perform in housing areas and on hospital grounds, even at night, without causing a disturbance. The PC28UU/PC50UU are the right machines for any job in the city.





### Minimum swing radius and wide boom offset mechanism

Minimum swing radius of 0.79 m (2'7") for the PC28UU, and 0.99 m (3'3") for the PC50UU allow a wide range of work in narrow urban sites. This means that the PC28UU/PC50UU perform efficient digging/loading work in confined spaces, even in alleys only 1.6 m (5'3") wide for PC28UU or 2.0 m (6'6") wide for PC50UU.

And with their wide boom offset ranges, the PC28UU/PC50UU show their muscle in side digging: adjacent to walls. They have parallel-linkage-type boom offset mechanisms for side digging in extra-tight quarters without swinging the upper structure, so the operator can concentrate on the work

in front without worrying about the back end hitting walls, poles, etc. The PC28UU has a boom offset of 540 mm (1'9") to either side, while the PC50UU can be offset 740 mm (2'5") to the left, or 810 mm (2'8") to the right, assuring the most efficient side digging near walls.

### Large working range and powerful digging force

Since the PC28UU/PC50UU have wide working ranges (PC28UU: maximum digging depth 2700 mm [8'10"]; PC50UU: maximum digging depth 3800 mm [12'6"]), they can reach farther with their buckets to increase digging/loading efficiency. With tenacious Komatsu diesel engines, they

boast bucket digging forces of 2140 kg (4,720 lb) for the PC28UU, and 3500 kg (7,720 lb) for the PC50UU, which means efficient excavating even in hard terrain. And their large bucket capacities further increase productivity. They also feature large blades with reinforced cutting edge for smooth refilling and leveling.

### Unique low-noise design

Designed to minimize noise, the PC28UU/PC50UU incorporate noise absorbing materials, a machine cab and suction fan. This means that the PC28UU/PC50UU can efficiently perform any job without disturbing their surroundings, even at night in housing areas.

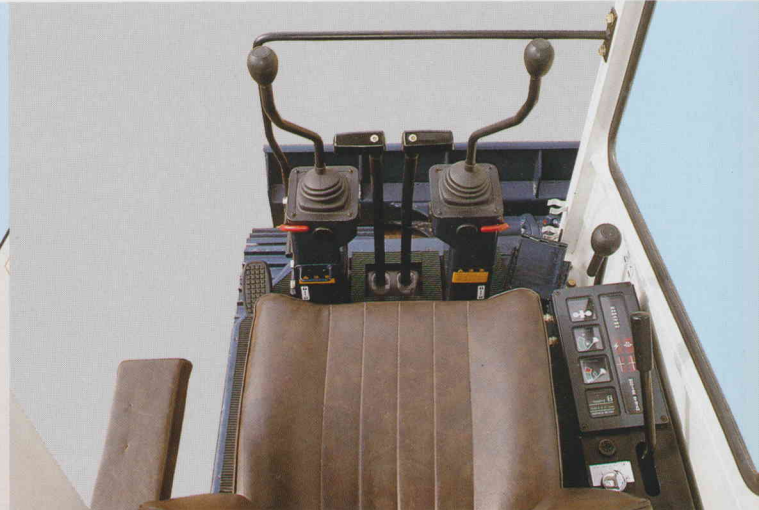
# Control Arrangement Reduces Operator Fatigue

Since all controls, meters and gauges are arranged ergonomically, operator fatigue is greatly reduced. The controls also provide quick response and fine control of the work equipment. The boom offset mechanism is controlled by a pedal operation. Work

equipment control levers and boom offset pedal can be locked to prevent accidental movement. With ample work space and excellent visibility, the operator can perform safer work.



PC28UU-1



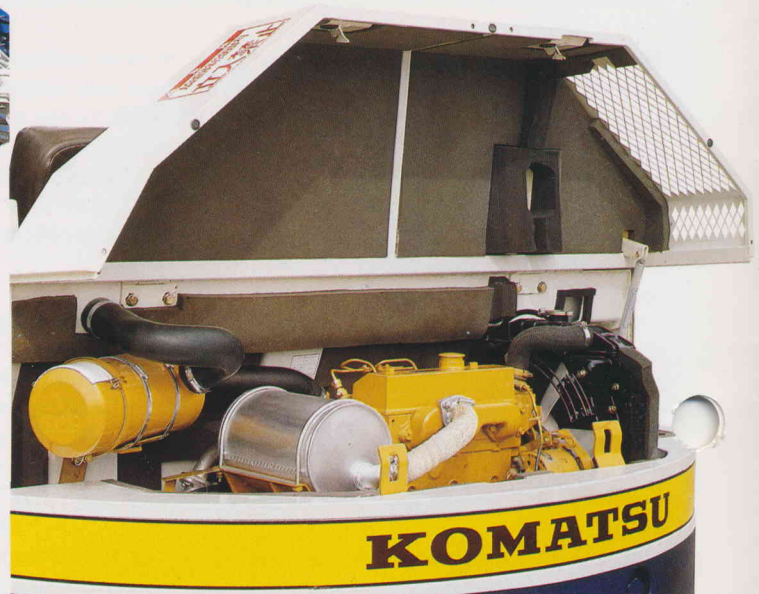
PC50UU-1

## Time- and cost-saving maintenance

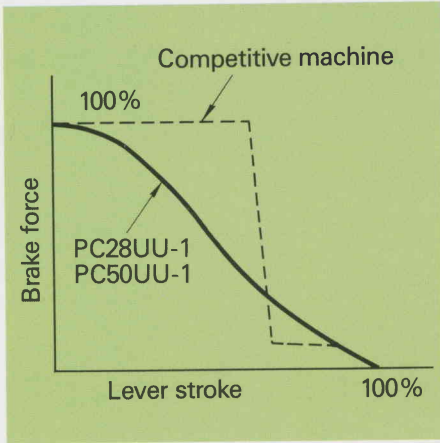
The operator can release the machine cover lock from inside the cab. And the full-open machine cover allows quick access to the engine and hydraulic equipment for quick checks and repairs. This minimizes maintenance time.



PC28UU-1

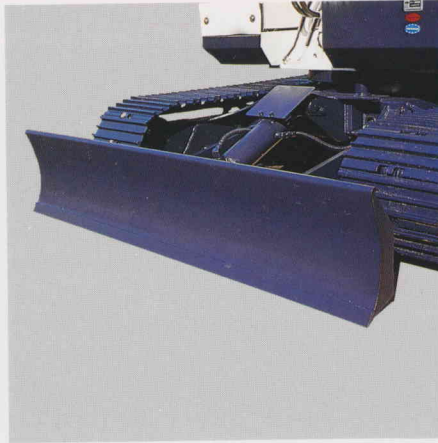


PC50UU-1



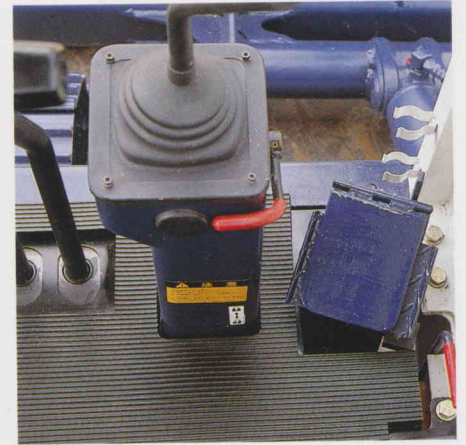
**Smooth swing action**

Swing action is performed with a control valve-operated swing system. Stopping and starting is smooth, precise and firm. This not only minimizes operator fatigue, but increases productivity as well.



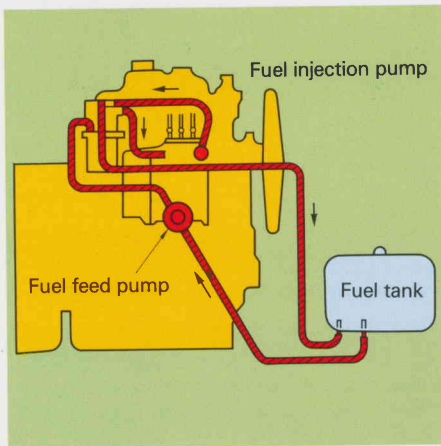
**Tough, productive dozer blade**

This toughly constructed blade is ideal for filling and leveling. The advanced control valve mechanism provides smooth, simultaneous blade action and machine travel.



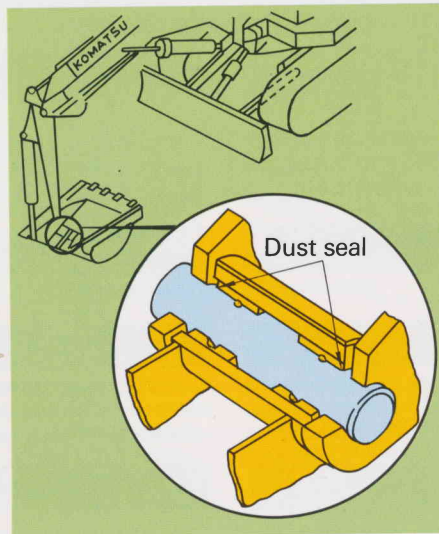
**Safe lock lever**

By just pulling up the lock lever on the side of the lever console, all work levers are locked. This way all fore/aft and right/left movements of the work equipment are stopped. This prevents misoperation of work equipment during downtime or when removing the seat.



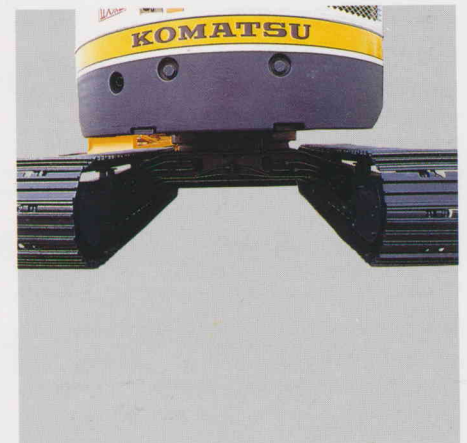
**Automatic air bleeding**

Bleeding the air out of the fuel lines is done automatically when the starting motor turns over.



**Extended service**

Unique dust seals prevent dirt from getting into the pin-to-bushing clearances for longer bushing life.

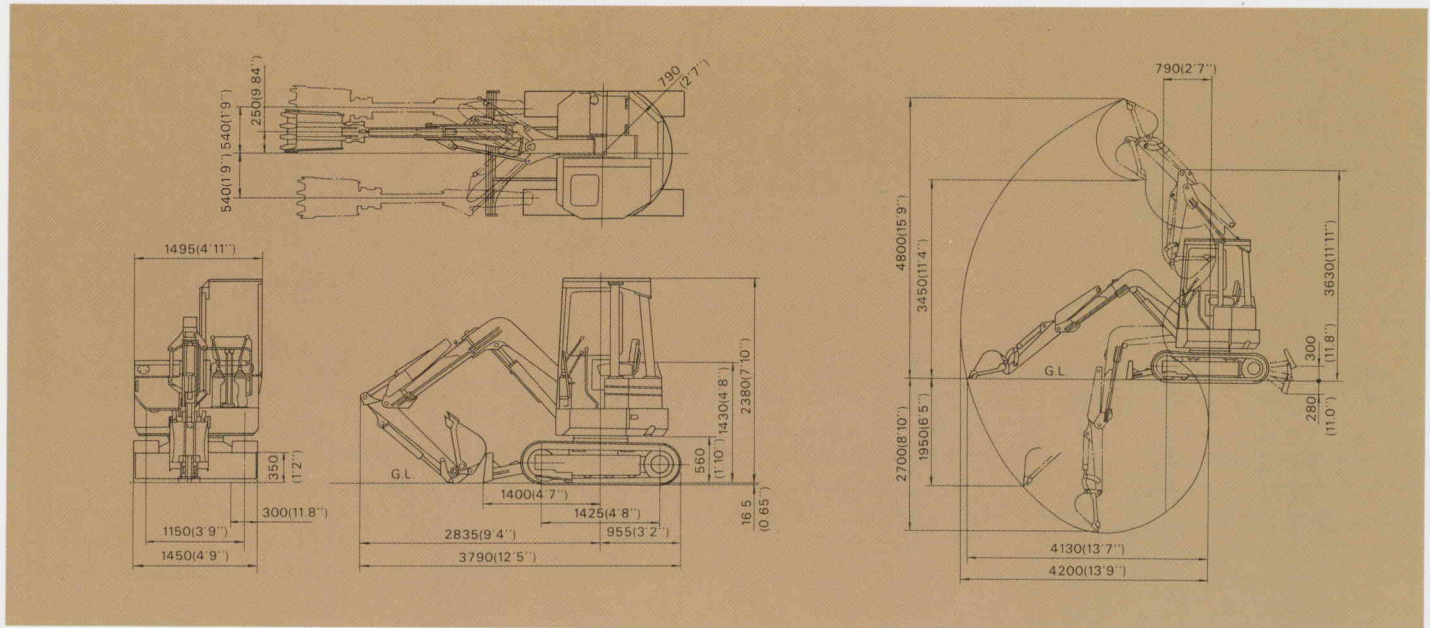


PC50UU-1

**Tough undercarriage**

The welded-construction double grouser prevents damage and extends wear. Track tension is easily adjusted by pumping grease into or out of the idler-adjusting cylinder with a conventional grease gun. The hydraulic piping for the in-shoe-type travel motors is built into the center frame to assure smooth travel on soft terrain and prevent damage from external objects.

# PC28UU-1 SPECIFICATIONS



## ENGINE

Komatsu 3D78-1D 4-cycle, water-cooled, overhead-valve diesel engine. 3 cylinders 78 mm (3.07") bore × 86 mm (3.39") stroke and 1.232 ltr. (75 cu.in) piston displacement.  
 Flywheel horsepower: 22.7 HP (16.7 kW) at 2500 RPM (SAE J1349)  
 23 PS (16.7 kW) at 2500 RPM (DIN 6270 NET)

## HYDRAULIC SYSTEM

### •Hydraulic pumps

Tandem gear pumps power the boom, arm, bucket, travel, swing, blade and boom offset circuits.  
 Capacity (discharge flow) at engine 2500 RPM

..... 23 ltr. (6.1 U.S. gal)/min × 2  
 ..... 20 ltr. (5.3 U.S. gal)/min. × 1

### •Hydraulic motors

Travel..... Two axial-piston motors.  
 Swing..... One axial-piston motor.

### •Relief valve setting

Implement circuits..... 200 kg/cm<sup>2</sup> (2,840 PSI/19.6 MPa)  
 Travel circuits..... 200 kg/cm<sup>2</sup> (2,840 PSI/19.6 MPa)  
 Swing circuits..... 120 kg/cm<sup>2</sup> (1,710 PSI/11.8 MPa)

## STEERING

Steering/traveling controls are activated by hand levers.

## DRIVES

Full hydrostatic type. Each track is independently driven by an axial-piston motor.

Max. drawbar pull..... 2030 kg (4,480 lb/19.9 kN)  
 Max. travel speed..... 2.0 km/h (1.2 MPH)  
 Gradeability..... 30°

## BRAKES

Hydraulic lock-type travel motors. When travel/steering levers are positioned in neutral, brakes automatically lock.

## SWING SYSTEM

Hydraulic motor driven. Pinlock-type swing lock is provided. Swing speed is proportional to swing control lever stroke.

Swing speed..... 9.5 RPM  
 Tail swing radius..... 790 mm (2'7")  
 Min. swing radius..... 790 mm (2'7")  
 (work equipment, fully retracted)  
 Boom offset distance: Left..... 540 mm (1'9")  
 Right..... 540 mm (1'9")

## BLADE

Welded, unitized construction of blade and frame.

Blade width × height..... 1458 mm (4'9") × 350 mm (1'2")  
 Max. lift above ground..... 300 mm (1')  
 Max. drop below ground..... 280 mm (11")

## UNDERCARRIAGE

Hydraulic track adjusters with shock absorbing springs. Welded track-type tractor shoes with double grousers.

Shoe width..... 300 mm (1')  
 Grouser height..... 16.5 mm (0.6")  
 Number of shoes..... 40 each side  
 Number of track rollers..... 3 each side  
 Ground pressure..... 0.3 kg/cm<sup>2</sup> (4.3 PSI/29.5 kPa)

## COOLANT & LUBRICANT CAPACITY (refilling)

	Liter	U.S. gallon
Fuel tank	32	8.5
Radiator	3.7	1.0
Engine	4.7	1.2
Final drive, each side	0.8	0.2
Swing drive	0.7	0.2
Hydraulic tank	38	10.0

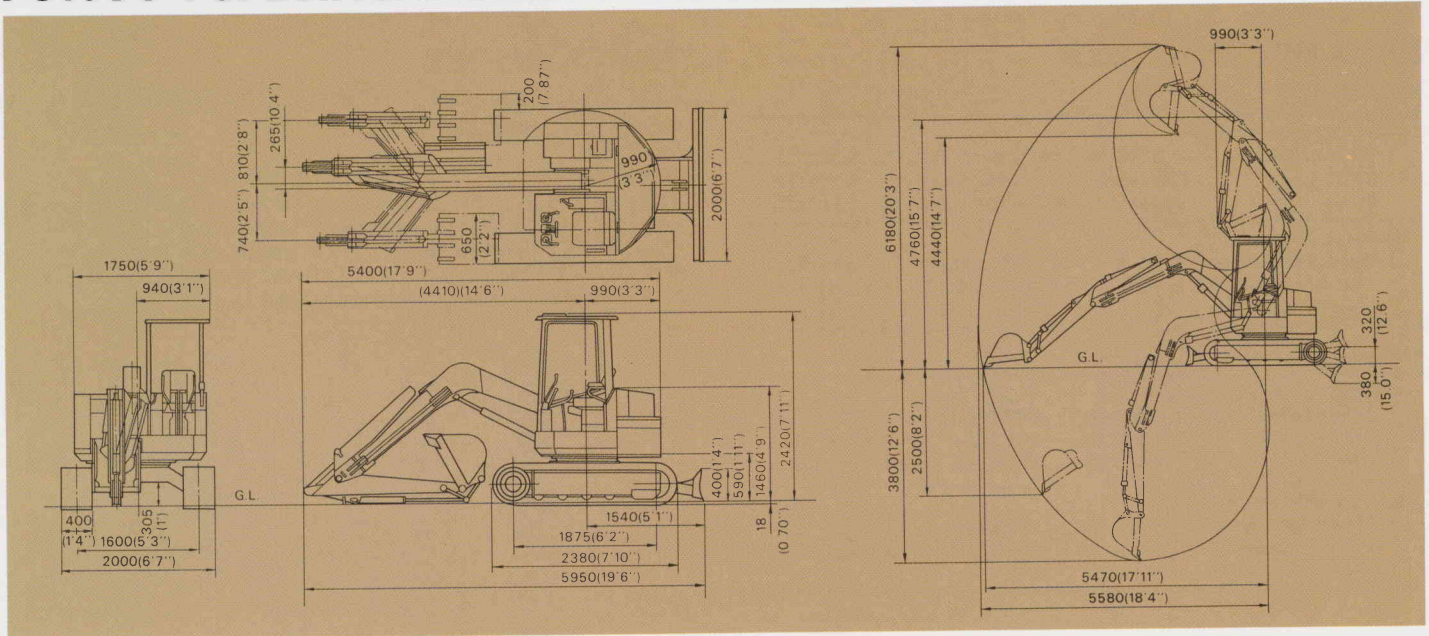
## OPERATING WEIGHT (approximate)

Operating weight including boom, arm, SAE heaped 0.09 m<sup>3</sup> (0.12 cu.yd) backhoe bucket, lubricant, coolant, full fuel tank, standard equipment, operator and canopy (optional)...2980 kg (6,570 lb)

## WORKING RANGE

	with 1150 mm (3'9") arm
Max. digging height	4800 mm (15'9")
Max. dumping height	3450 mm (11'4")
Max. digging depth	2700 mm (8'10")
Max. vertical wall digging depth	1950 mm (6'5")
Max. digging reach at ground level	4130 mm (13'7")
Max. digging reach	4200 mm (13'9")
Min. swing radius	790 mm (2'7")
Min. swing height	3630 mm (11'11")
Tail swing radius	790 mm (2'7")
Bucket digging force	2140 kg (4,720 lb)
Arm crowd force	1420 kg (3,130 lb)

# PC50UU-1 SPECIFICATIONS



## ENGINE

Komatsu 3D95S 4-cycle, water-cooled, overhead-valve diesel engine. 3 cylinders 95 mm (3.74") bore × 95 mm (3.74") stroke and 2.02 ltr. (123 cu.in.) piston displacement.  
Flywheel horsepower: 38 HP (28.7 kW) at 2500 RPM (SAE J1349)  
39 PS (28.7 kW) at 2500 RPM (DIN 6270 NET)

## HYDRAULIC SYSTEM

• **Hydraulic pumps**  
Tandem gear pumps power the boom, arm, bucket, travel, swing, blade and boom offset circuits.  
Capacity (discharge flow) at engine 2500 RPM  
..... 35.3 ltr. (9.3 U.S. gal)/min. × 2  
..... 24.7 ltr. (6.5 U.S. gal)/min. × 1

• **Hydraulic motors**  
Travel..... Two axial piston motors with counterbalance valve.  
Swing..... One axial piston motor with brake valve.

• **Relief valve setting**  
Implement circuits..... 210 kg/cm<sup>2</sup> (2,990 PSI/20.6 MPa)  
Travel circuits..... 210 kg/cm<sup>2</sup> (2,990 PSI/20.6 MPa)  
Swing circuits..... 200 kg/cm<sup>2</sup> (2,840 PSI/20.4 MPa)

## STEERING

Steering/traveling controls are activated by hand levers.

## DRIVES

Full hydrostatic type. Each track is independently driven by an axial-piston motor.  
Max. drawbar pull ..... 3600 kg (7,940 lb/35.3 kN)  
Max. travel speed Low ..... 1.7 km/h (1.1 MPH)  
High ..... 3.2 km/h (2.0 MPH)  
Gradeability..... 30°

## BRAKES

Hydraulic lock-type travel motors equipped with counterbalance valve. When travel/steering levers are positioned in neutral, brakes automatically lock.

## SWING SYSTEM

Hydraulic motor driven. Pinlock-type swing lock is provided. Swing speed is proportional to swing control lever stroke.  
Swing speed ..... 9 RPM  
Tail swing radius..... 990 mm (3'3")  
Min. swing radius ..... 990 mm (3'3")  
(work equipment, fully retracted)  
Boom offset distance: Left ..... 740 mm (2'5")  
Right ..... 810 mm (2'8")

## BLADE

Welded, unitized construction of blade and frame.  
Blade width × height ..... 2000 mm (6'7") × 400 mm (1'4")  
Max. lift above ground..... 320 mm (1'1")  
Max. drop below ground..... 380 mm (1'3")

## UNDERCARRIAGE

Hydraulic track adjusters with shock absorbing springs. Welded track-type tractor shoes with triple grousers.  
Shoe width ..... 400 mm (16")  
Grouser height..... 18 mm (0.7")  
Number of shoes ..... 37 each side  
Number of track rollers ..... 5 each side  
Ground pressure..... 0.31 kg/cm<sup>2</sup> (4.4 PSI/30.4 kPa)

## COOLANT & LUBRICANT CAPACITY (refilling)

	Liter	U.S. gallon
Fuel tank	50	13.2
Radiator	6.0	1.6
Engine	5.1	1.3
Final drive, each side	0.6	0.2
Swing drive	1.5	0.4
Hydraulic tank	52	13.7

## OPERATING WEIGHT (approximate)

Operating weight including boom, arm, SAE heaped 0.22 m<sup>3</sup> (0.29 cu.yd) backhoe bucket, lubricant, coolant, full fuel tank, standard equipment, operator and canopy (optional) ..... 5180 kg (11,420 lb)

## WORKING RANGE

	with 1620 mm (5'4") arm
Max. digging height	6180 mm (20'3")
Max. dumping height	4440 mm (14'7")
Max. digging depth	3800 mm (12'6")
Max. vertical wall digging depth	2500 mm (8'2")
Max. digging reach at ground level	5470 mm (17'11")
Max. digging reach	5580 mm (18'4")
Min. swing radius	990 mm (3'3")
Min. swing height	4760 mm (15'7")
Tail swing radius	990 mm (3'3")
Bucket digging force	3500 kg (7720 lb)
Arm crowd force	2000 kg (4410 lb)

# ATTACHMENTS

## BACKHOE BUCKETS

### PC28UU-1

Capacity: m<sup>3</sup> (cu.yd)

CECE heaped	0.03 (0.04)	0.043 (0.06)	0.07 (0.09)	0.08 (0.10)
SAE heaped	0.03 (0.04)	0.05 (0.07)	0.09 (0.12)	0.10 (0.13)
Struck	0.025 (0.03)	0.037 (0.05)	0.06 (0.07)	0.07 (0.09)

Bucket width: mm (in)

without side cutters	250 (9.8)	350 (13.8)	450 (17.7)	600 (23.6)
with side cutters	270 (11)	370 (14.6)	480 (18.9)	620 (23.6)
No. of bucket teeth	3	3	4	5

### PC50UU-1

Capacity: m<sup>3</sup> (cu.yd)

CECE heaped	0.05 (0.07)	0.13 (0.17)	0.20 (0.26 cu.yd)
SAE heaped	0.06 (0.08)	0.15 (0.20)	0.22 (0.29 cu.yd)
Struck	0.04 (0.05)	0.11 (0.14)	0.17 (0.22 cu.yd)

Bucket width: mm (in)

without side cutters	300 (11.8")	600 (23.6)	620 (24.4")
with side cutters	—	630 (24.8)	650 (25.6")
No. of bucket teeth	3	4	4

## TRACK SHOES

Choose the ideal shoes depending on your job requirement.

### PC28UU-1

- 300 mm (11.8") double-grouser shoe
- 350 mm (13.8") triple-grouser shoe
- 350 mm (13.8") swamp shoe
- 250 mm (9.8") flat shoe
- 260 mm (10.2") rubber pad shoe

### PC50UU-1

- 400 mm (15.7") triple-grouser shoe
- 480 mm (18.9") triple-grouser shoe
- 550 mm (21.7") triple-grouser shoe
- 550 mm (21.7") swamp shoe
- 400 mm (15.7") flat shoe



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