

KOMATSU

Utility

PC
20R-8



PC20R-8

PC20R-8

MINI-EXCAVATOR

NET POWER
SAE J1349
17,4 kW - 23,3 HP

OPERATING WEIGHT
From 2.535 kg
to 2.675 kg

SHAPING TECHNOLOGY

Fruit of KOMATSU technology and experience, the PC20R-8 miniexcavator responds perfectly to all requirements for compactness, easy handling and high performance. Ruggedness and excellent stability guarantee safety and confidence in all conditions. The design of the frame and the undercarriage enhance the machine's high resistance to stress. A wide range of possible configurations and the possibility to use the machine with various different attachments make it the best and indeed often the only solution for many difficult applications.

Engine

The PC20R-8 miniexcavator is fitted with a KOMATSU engine that guarantees all the power required and low fuel consumption. The advanced technology applied means minimum levels of noise and emissions (STAGE 2).

Hydraulic System

The PC20R-8 uses the famous **CLSS** (*Closed Load Sensing System*) hydraulic circuit, that is, a closed-centre circuit with load sensing, fed by a main, variable delivery pump that ensures smooth and perfectly synchronized combined movements. All this guarantees maximum productivity and minimum consumption.



Total comfort

Designed with the utmost care in every minimum detail, the driving position offers the maximum operating comfort. Easy access, comfort, ergonomic controls, an efficient monitor for controlling the main functions and visibility in all directions. The cab offers excellent comfort and visibility on the work area. The innovative design of the sliding door permits operation in all conditions, minimizing the risks of accidental contact.





“PPC” Proportional Servocontrols

The ease of use that characterizes the PC20R-8 allows even less expert operators to get the most out of their work.

The dedicated controls for every movement are easy to understand and ergonomic. A smooth and constant response of the hydraulic system and perfect visibility on the work area are the features that ensure maximum output even in the most difficult situations.

Versatility

The PC20R-8 features two forward gears for faster transfers, to be selected using a special pedal in the cab. At the same time, the considerable traction force ensures that the machine can move easily even in the most demanding conditions. The wide boom swing angle allows the PC20R-8 to work without difficulty even in the presence of obstacles or along walls. Large rear guards protect the body of the machine from accidental impacts and improve stability during work. The hydraulic hoses are protected inside the structure of the arms and are screwed onto the jacks to simplify replacement.

Maintenance

Routine maintenance takes just a few minutes and is extremely simple to perform, without requiring any special tool. The design of the engine allows all the maintenance operations to be performed from one side only. The counterweight can be easily opened to clean the radiators. The use of special bushings on the arms has made it possible to extend the greasing intervals.



SPECIFICATIONS



ENGINE

New generation engine developed to comply with the strictest emission controls (STAGE 2).

Model	Komatsu 3D78AE-3FA
Type	low emissions 4-cycle diesel engine
Displacement	1.204 cm ³
Cyl. bore x stroke	78 x 84 mm
Number of cylinders	3
Combustion	direct injection
Aspiration	natural aspiration
Max power	19,9 kW – 26,7 HP
Rated power:	
(SAE J 1349)	17,4 kW - 23,3 HP – 2.600 rpm
(80/1269/EC)	17,0 kW - 22,8 HP – 2.600 rpm
Max torque	72,5 Nm – 1.600 rpm
Cooling system	water
Dry system	dry
Starting	electric motor with pre-heating air system for cold climate



OPERATING WEIGHT

Operational mass with standard bucket, fully serviced + 80 kg. Operator (ISO 6016).

Operating weight with rubber shoes	2.535 kg
Operating weight with steel shoes	2.675 kg
Canopy	-135 kg (optional)



HYDRAULIC SYSTEM

Type	Komatsu CLSS
Main pumps	Variable displacement pump + 1 gear pump
Max delivery	53 + 6,6 l/min
Operating pressure:	
working equipment	MPa 21,0 (210 bar)
travel	MPa 21,0 (210 bar)
swing	MPa 15,5 (155 bar)

Hydraulic cylinders	bore x stroke
boom65 x 455 mm
arm65 x 490 mm
bucket55 x 480 mm
boom rotation70 x 445 mm
blade65 x 135 mm

Bucket breakout force (ISO 6015):	
Arm 1.070 mm	1.960 daN (2.000 kg)
Arm 1.320 mm	1.960 daN (2.000 kg)
Arm breakout force (ISO 6015):	
Arm 1.070 mm	1.362 daN (1.390 kg)
Arm 1.320 mm	1.182 daN (1.206 kg)

Digging equipment are fully controlled by PPC servo-controls. All movements are stopped by lifting the safety levers on the tiltable cases.



SWING SYSTEM

The rotation is operated by means of an orbital hydraulic motor. Single ball - bearing ring with internal induction hardened toothring. Centralised lubrication of the unit.

Swing speed	9,0 rpm
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TRANSMISSION

Type

hydrostatic transmission, with 2 speeds controlled and steered by means of two levers and two pedals

Hydraulic motors	2 x axial pistons
Reduction system	epicyclic reduction gear
Max traction force	1.930 daN - (1.970 kg)
Travel speed	2,2 - 4,3 km/h



BLADE

Type	electrowelded, single unit structure
Width x height	1.430 x 280 mm
Max. lifting above ground level	250 mm
Max depth below ground level	250 mm



UNDERCARRIAGE

Central lower frame and carriage frame with boxed section.	
Shoes	n. 38 each side
Track rollers	n. 3 each side
Shoes width (steel/rubber)	300/250 mm
Ground pressure (steel/rubber)	0,30/0,34 kg/cm ²



ELECTRIC SYSTEM

Operating voltage	12 V
Battery80 Ah
Alternator	40 A
Starter	1,2 kW

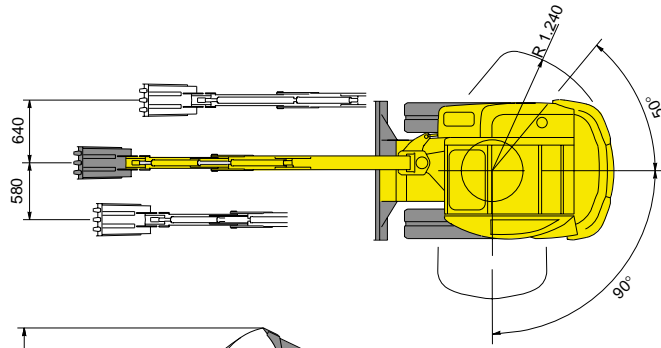


REFILLS

Fuel tank35 l
Radiator and system	4,0 l
Engine oil	3,6 l
Final reduction gears (for each side)	0,7 l
Hydraulic oil tank29 l

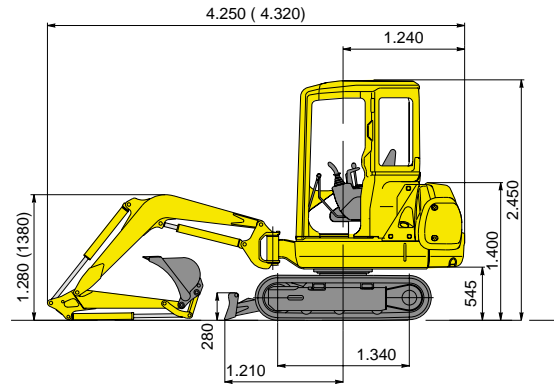
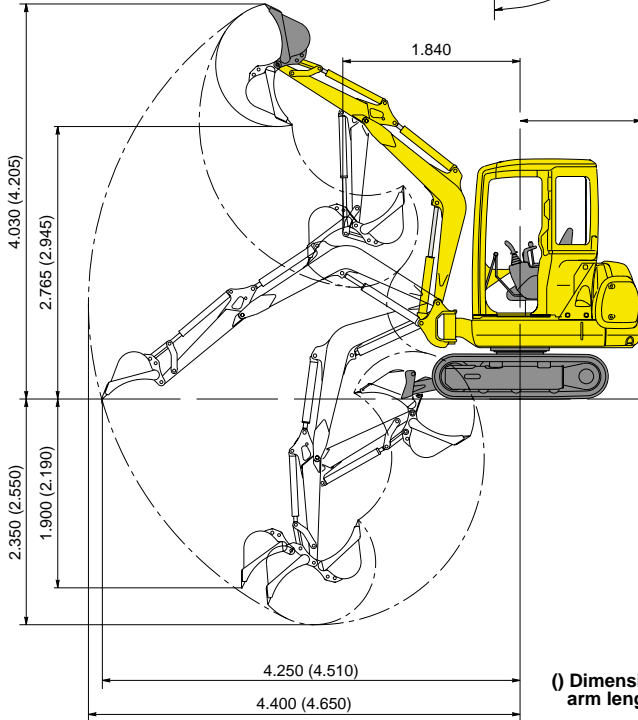
PC20R-8 MINI-EXCAVATOR

DIMENSIONS

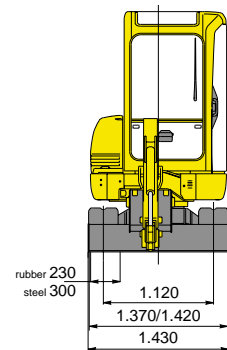


FRONT SWING RADIUS WITH 90° OFF-SET BOOM

Arm length	mm	1.070	1.320
Canopy/Cab	mm	1.400	1.440



() Dimensions with 1.320 mm arm length.



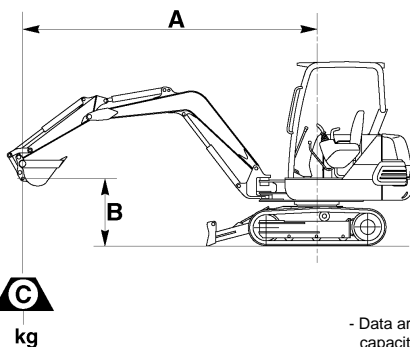
WORKING EQUIPMENT					
Bucket (ISO 7451) m ³	Width mm	Weight kg	Number of teeth	Arm	
				1.070 mm	1.320 mm
0,035	250	30	2	O	O
0,055	350	40	3	O	O
0,07	450	50	4	O	O
0,085	550	60	5	O	X

This table is based on the lateral stability at the maximum outreach with full bucket.
 - O with material density up to 1,8 t/m³; - X non usable.

LIFTING CAPACITY

Machine with canopy, rubber shoes and 50 kg bucket
 A- Distance from machine's center B- Height at bucket pin

Capacity over front Lateral or 360° capacity



LOWERED BLADE

Arm length	B	A	2 m		3 m		Full extended	
			360°	Front.	360°	Front.	360°	Front.
L=1.070 mm	2 m	*850	*860	485	*525	300	*455	
	1 m	840	*1.150	440	*675	290	*435	
	0 m	830	*1.175	440	*640	305	*440	
	-1 m	850	*1.200	450	*650	320	*445	
L=1.320 mm	0 m	780	*1.110	395	*530	260	*415	

- Data are based on ISO 10567 standard. Above lifting capacities include a 25% safety margin and don't exceed 87% of the actual capacity. Values with asterisk (*) are referred to hydraulic capacities.
 - In accordance with European norm EN 474-5, the machine is not qualified to lift loads heavier than 1.000 kg, unless it is equipped with appropriate safety devices. Lifting operations with lowered blade are allowed only with safety valve on blade cylinder.

PC20R-8 MINI-EXCAVATOR

STANDARD EQUIPMENT

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> • Rubber shoes • Two travel speeds • Blade • Swing boom • Boom cylinder protection • 1.070 mm digging arm • Hydraulic hammer circuit and 2-way attachments up to the boom • PPC servocontrols | <ul style="list-style-type: none"> • 2-way equipment circuit • TOPS cab with heat and windshield wipers • One single key • Indicators: <ul style="list-style-type: none"> - hour meter - fuel level, - engine oil level - engine oil pressure, | <ul style="list-style-type: none"> - cooling system temperature light, - engine pre-heating • Independent boom-swing control • Swing lock pin • Internal storage compartment • Working light on boom • External electric plug |
|--|---|--|

OPTIONAL EQUIPMENT

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> • Steel shoes • 1.320 mm digging arm • Completion of attachment's hydraulic circuit up to the arm with quick coupler • Clamshell bucket | <ul style="list-style-type: none"> • TOPS-FOPS canopy • Cab front protection • Cab FOPS protection • Super Deluxe seat (only for cab) • Rotating beacon | <ul style="list-style-type: none"> • Biodegradable • Digging buckets range (250 ÷ 550 mm) • Ditch cleaning bucket (1.300 mm) • Hydraulic hammer |
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 SYSTEM CERTIFIED BY DNV
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