

# KOMATSU

## PC33MR-5 PC38MR-5



Mini-excavator

**Engine power**  
18.2 kW / 24.4 HP @ 2200 rpm

**Operating weight**  
PC33MR-5: 3290 kg  
PC38MR-5: 3725 kg

**Bucket capacity**  
PC33MR-5: 0.03 - 0.10 m<sup>3</sup>  
PC38MR-5: 0.04 - 0.12 m<sup>3</sup>

PC33/38MR-5

Increased fuel efficiency and  
**environmental performance**



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### Powerful and environmentally friendly

- Low consumption EU Stage V engine
- Komatsu fuel-saving technology
- 6 selectable working modes
- Auto-deceleration and idle shutdown
- Dial type fuel control

### First-class comfort

- Newly designed cab
- Improved operator convenience
- Multi-function monitor with high resolution 3.5" LCD color display
- Multiple accessories around the operator's seat

### Maximized efficiency

- Powertilt option (PC38MR-5)
- Many configurations to suit the job at hand

### Safety first

- Rear-view camera system
- Neutral position detection system
- Emergency engine stop switch
- Seat belt caution indicator
- Large transport tie down points

### Easy maintenance

- Tilting cab
- Wide opening engine hood
- Maintenance information displayed on the monitor

### Komtrax

- Komatsu Wireless Monitoring System
- 4G mobile communications
- Integrated communication antenna

## Powerful and environmentally friendly



### Work in tight spaces

The new short-tail PC33/38MR-5 delivers optimal power and digging speed, even in confined spaces where traditional machines can't work: yards, road works, demolition sites, sewers, etc. Sturdy and very stable, it guarantees maximum safety and offers complete operator confidence in any working conditions.

### Komatsu CLSS

The CLSS (Closed-centre Load Sensing System) hydraulic circuit guarantees power, speed and perfect control to all movements, including simultaneous ones. The combination of the variable displacement pump and of CLSS allows operators to perform all required movements with maximum efficiency, regardless of the load or rpm.

### 6 working modes

Depending on the load, operators can conveniently choose between 6 working modes designed to match engine speed, pump delivery and system pressure. Priority can be given either to speed, for more productivity, or to fuel consumption for lighter applications.

## Maximized efficiency



### Customisation

Many configurations are available, so you can choose the perfect machine for the job: long or short arm, rubber, steel or roadliner shoes. The 1/2 way auxiliary hydraulic circuit allows the use of a wide range of working tools such as a hammer, a clamshell bucket, an auger etc.

### Electronic control system

Fuel consumption on the PC33/38MR-5 is lower by up to 5%. The engine and hydraulic system are optimally controlled according to the operating conditions. The hydraulic loss reductions also help reduce both fuel consumption and environmental impact.

### Auto deceleration and auto idle shutdown

Both these functions are provided as standard. Auto-deceleration reduces the engine speed automatically a few seconds after the work equipment lever is moved to the neutral position. The auto idle shutdown automatically stops the engine after a preset time to reduce unnecessary fuel consumption.

### Power tilt option (PC38MR-5)

The machine features a dedicated piping for power tilt operation and a single effect hydraulic quick-coupler line. The power tilt installation enhances the versatility of the machine by providing a flexible tool of proven reliability. Piping is routed over the arm for better protection and long lasting design.



## First-class comfort

### An optimal work environment

Despite its compact size, the PC33/38MR-5 offers unequalled comfort. The spacious cab was developed with exceptional care to details, and the work environment is quiet and comfortable. Special attention is given to the operator: ergonomic and dedicated PPC controls, and, in option, an efficient air conditioning and ventilation system to guarantee optimal thermal comfort. A much larger cab door makes cab access a lot easier.

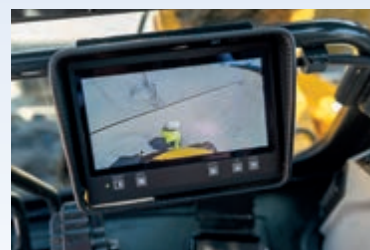
### Perfect operator convenience

Proportional controls are fitted as standard for safe and precise operation of attachments. The dial type fuel control makes operation and engine speed adjustment simple. The automatic travel speed shift function allows smooth and efficient operation. Pressing a speed selector button on the blade lever chooses auto 2-speed or fixed 1st speed travel for easy shifting during blade operation. A 12-volt power port is also included in the cab.



### Multi-function and rear-view monitors

A high-definition 3.5" LCD monitor provides excellent visibility. The high-definition LCD panel is less affected by the viewing angle and surrounding brightness, ensuring excellent visibility. Various alerts and machine information are displayed in a simple format. Useful information such as operation records, machine setting and maintenance data are also provided. A separate rear-view monitor gives the operator a constant clear view of the area behind the machine, greatly improving safety.



## Information & communication technology



### Knowledge

You get quick answers to basic and critical questions about your machines – what they're doing, when they did it, where they're located, how they can be used more efficiently and when they need to be serviced. Performance data is relayed by wireless communication technology (satellite, GPRS or 4G depending on model) from the machine to a computer and to the local Komatsu distributor – who's readily available for expert analysis and feedback.

### Convenience

Komtrax enables convenient fleet management on the web, wherever you are. Data is analysed and packaged specifically for effortless and intuitive viewing in maps, lists, graphs and charts. You can foresee eventual maintenance issues and required spare parts, and troubleshoot a problem before Komatsu technicians arrive on site.



### The way to higher productivity

Komtrax uses the latest wireless monitoring technology. Compatible on PC, smartphone or tablet, it delivers insightful and cost saving information about your fleet and equipment, and offers a wealth of information to facilitate peak machine performance. By creating a tightly integrated web of support it allows proactive and preventive maintenance and helps to efficiently run a business.

### Power

The detailed information that Komtrax puts at your fingertips 24 hours a day, 7 days a week gives the power to make better daily and long-term strategic decisions – at no extra cost. Problems can be anticipated, maintenance schedules customised, downtime minimised and machines kept where they belong: working on the jobsite.



## Easy maintenance



### Tilting cab

The wide opening engine bonnets provide a quick access to daily inspection points. The fuel and the hydraulic oil tanks are located under the side bonnet, in a safe and easy-to-reach position. In addition, the cab easily tilts back for major maintenance tasks.

### Easier repairs

ORFS hydraulic face seal connectors and DT electrical connectors enhance the machine's reliability and make repairs faster and easier. High durability bushings and a 500 hours engine oil change interval further lower operating costs.



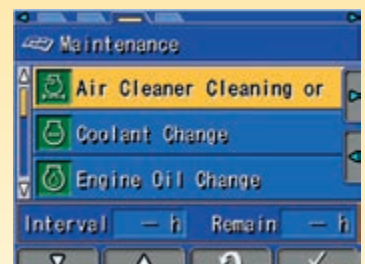
Rear bonnets for quick engine checks, simple inspections, cleaning of the radiators and easy access to the battery



Convenient and save fuel and oil refilling under the front bonnet



Large fuel filter and fuel pre-filter with water separator protect the engine



The multifunction monitor panel provides the operator with maintenance and service information



## Highest reliability and safety

### X-frame

The X-frame ensures maximum stress resistance and optimal stress distribution. Its shape makes the machine a lot more rigid and reliable. In addition, it facilitates the regular undercarriage cleaning operations and the spoils removal process.

### Smallest swing radius

The extra-small swing radius with minimum rear protrusion from the tracks (95 mm for PC33MR-5 and 80 mm for PC38MR-5) allows the operator to concentrate on work in confined areas.

### Maintenance monitoring

Maintenance and service activities are tracked on the monitor. When the time before a maintenance interval dips below 30 hours, a maintenance reminder light shows on the display.



Secondary engine shutdown switch



Seat belt caution and neutral position detection system caution



Hose burst valves on boom and arm cylinders

# Specifications

## Engine

Model	Komatsu 3D88E-7
Type	Water-cooled, 4-cycle direct injection
Engine power	
at rated engine speed	2200 rpm
ISO 14396	18.2 kW / 24.4 HP
ISO 9249 (net engine power)	17.4 kW / 23.3 HP
No. of cylinders	3
Bore × stroke	88 × 90 mm
Displacement	1642 cm <sup>3</sup>
Max. torque / engine speed	105.1 Nm / 1440 rpm
Air filter type	Dry
Fuel	Diesel fuel, conforming to EN590 Class 2/Grade D. Paraffinic fuel capability (HVO, GTL, BTL), conforming to EN 15940:2016

## Hydraulic system

Type	Komatsu CLSS
Main pump	2 × variable displacement pump
Maximum pump flow	35.7 × 2 + 18.7 + 9.9 l/min
Max. operating pressure	27.0 MPa (270 bar)
Hydraulic motors	
Travel	2 × variable displacement motor
Swing	1 × fixed displacement motor
Hydraulic cylinders (bore × stroke)	
Boom	
PC33MR-5	80 × 550 mm
PC38MR-5	80 × 585 mm
Arm	
PC33MR-5	75 × 495 mm
PC38MR-5	75 × 595 mm
Bucket	65 × 490 mm
Boom swing	
PC33MR-5	80 × 500 mm
PC38MR-5	95 × 482 mm
Blade	95 × 140 mm
Bucket digging force (ISO 6015)	
PC33MR-5	2942 daN (3000 kg)
PC38MR-5	2990 daN (3050 kg)
Arm crowd force (ISO 6015)	
PC33MR-5	
1240 mm arm	1765 daN (1800 kg)
1610 mm arm	1491 daN (1520 kg)
PC38MR-5	
1370 mm arm	2058 daN (2100 kg)
1720 mm arm	1637 daN (1670 kg)

## 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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\* Swing speed with optional air condition: 6.6 rpm

## Drives and brakes

Steering control	2 levers with pedals giving full independent control of each track
Drive method	Hydrostatic
Hydraulic motors	2 × axial piston motor
Reduction system	Planetary gear
Max. travel speeds Lo / Hi	2.6 / 4.6 km/h
Maximum drawbar pull	3335 daN (3400 kgf)

## Undercarriage

Construction	X-frame centre section with box section track frames
Track rollers (each side)	4
Carrier rollers (each side)	1
Shoe width	300 mm
Ground pressure (standard)	
PC33MR-5	0.30 kg/cm <sup>2</sup>
PC38MR-5	0.36 kg/cm <sup>2</sup>

## Environment

Engine emissions	Fully complies with EU Stage V exhaust emission regulations
Noise levels - LwA external	
PC33MR-5	94 dB(A) (2000/14/EC Stage II)
PC38MR-5	96 dB(A) (2000/14/EC Stage II)
Noise levels - LpA operator ear	
PC33MR-5	75 dB(A) (ISO 6396 dynamic test)
PC38MR-5	77 dB(A) (ISO 6396 dynamic test)
Vibration levels (EN 12096:1997)	
Hand/arm	≤ 2.5 m/s <sup>2</sup> (uncertainty K = 0.58 m/s <sup>2</sup> )
Body	≤ 0.5 m/s <sup>2</sup> (uncertainty K = 0.22 m/s <sup>2</sup> )
Contains fluorinated greenhouse gas HFC-134a (GWP 1430). Quantity of gas 0.6 kg, CO <sub>2</sub> equivalent 0.86 t.	

## Operating weight (appr.)

	PC33MR-5	PC38MR-5
Rubber shoes	3290 kg	3725 kg
Roadliner shoes	3420 kg	3855 kg
Steel shoes	3400 kg	3835 kg

Operating weight, including cabin, specified work equipment, operator, lubricant, coolant, full fuel tank and the standard equipment.  
Canopy (optional): - 150 kg

## Service refill capacities

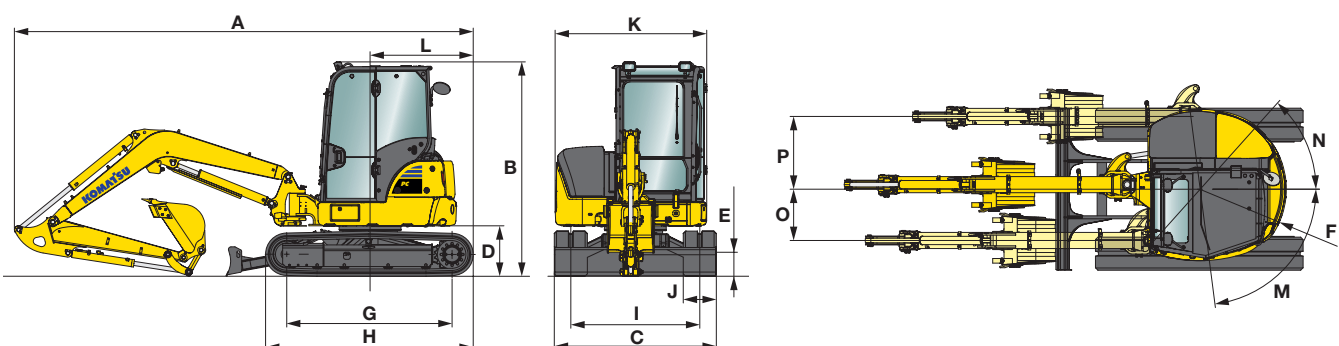
Fuel tank	41 l
Radiator	3.3 l
Engine oil (refill)	7.2 l
Hydraulic system	39 l

## Blade

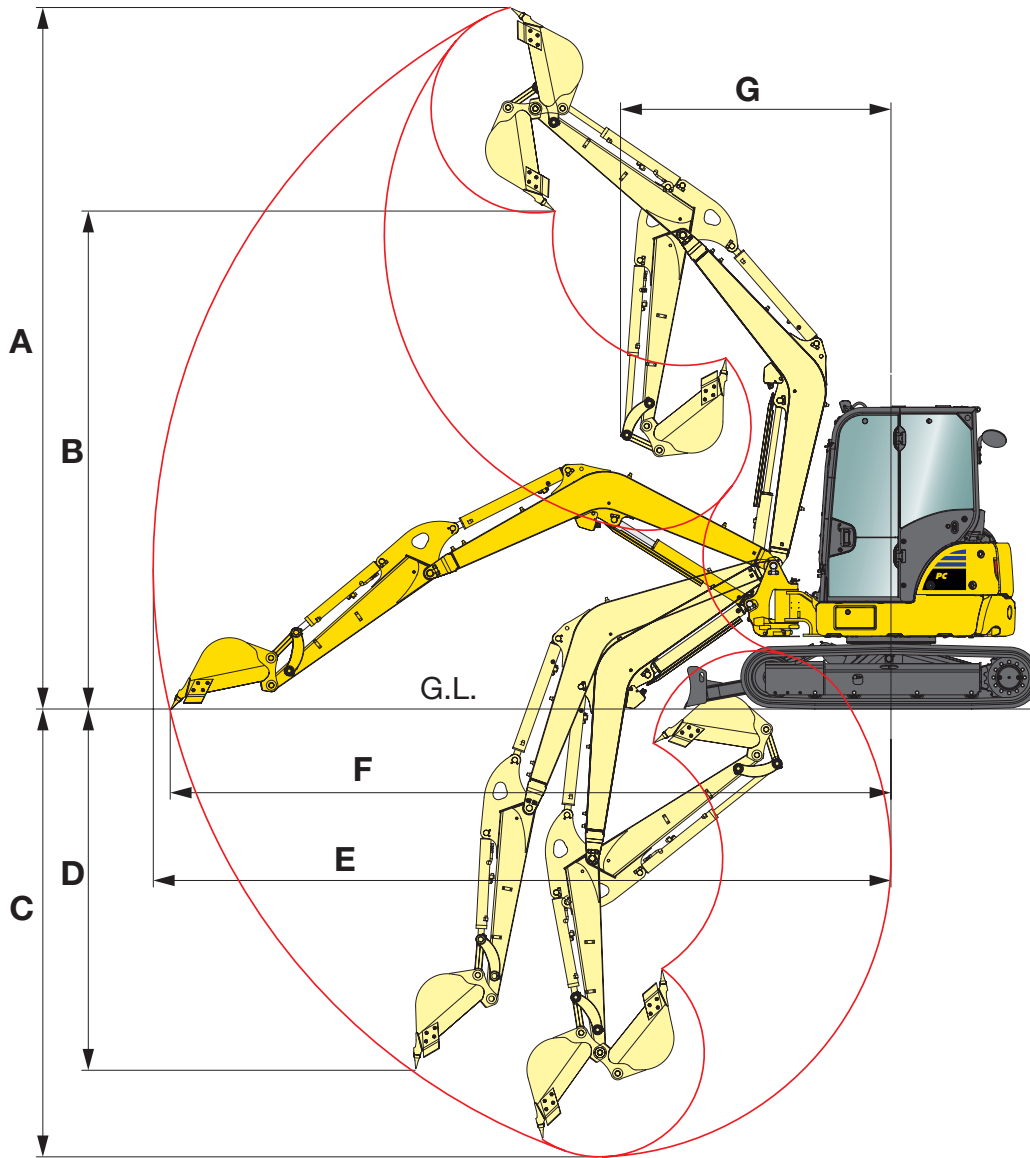
Type	Electro-welded, single unit structure
Width × height	
PC33MR-5	1550 × 355 mm
PC38MR-5	1740 × 355 mm
Blade, max. lifting height	360 mm
Blade, max. digging depth	
PC33MR-5	310 mm
PC38MR-5	390 mm

## Machine dimensions

		PC33MR-5		PC38MR-5	
Boom length	mm	2285		2540	
Arm length	mm	1240	1610	1370	1720
A Overall length	mm	4560	4600	4825	4905
B Overall height	mm	2560		2560	
C Overall width	mm	1550		1740	
D Clearance under counterweight	mm	545		545	
E Ground clearance	mm	305		290	
F Tail swing radius	mm	870		950	
G Track length on ground	mm	1650		1650	
H Track length	mm	2105		2105	
I Track gauge	mm	1250		1440	
J Shoe width	mm	300		300	
K Overall width of upper structure	mm	1500		1500	
L Distance, swing center to rear end	mm	1050		1050	
M/N Boom swing angle	°	80 / 50		75 / 55	
O Boom offset LH	mm	580		580	
P Boom offset RH	mm	845		770	



## Working range




Working range		PC33MR-5		PC38MR-5	
Arm length	mm	1240	1610	1370	1720
A Max. digging height	mm	4840	5070	5000	5270
B Max. dumping height	mm	3350	3580	3530	3790
C Max. digging depth	mm	2760	3130	3110	3455
D Max. vertical wall digging depth	mm	2400	2770	2690	3210
E Max. digging reach	mm	5050	5390	5300	5640
F Max. digging reach at ground level	mm	4910	5215	5170	5520
G Min. swing radius	mm	2055	2190	2030	2140
Min. swing radius at boom swing	mm	1560	1665	1600	1700


# Lifting capacity

**A** Reach from swing centre

**B** Bucket hook height

Lifting capacities, including bucket, bucket linkage and bucket cylinder

 Rating over front

 Rating over side

## PC33MR-5, with cab, rubber shoes, blade down, over front, 63 kg bucket

Arm length	A		4.0 m	3.0 m	2.0 m
	Max.	B			
1240 mm	3.0 m kg	760	-	760	-
	2.0 m kg	730	830	920	-
	1.0m kg	790	920	1260	-
	0.0 m kg	890	990	1490	1480
	-1.0 m kg	930	-	1420	2350
1610 mm	3.0 m kg	590	650	-	-
	2.0 m kg	580	720	730	-
	1.0m kg	620	850	1110	-
	0.0 m kg	720	960	1430	1670
	-1.0 m kg	850	950	1480	2320

## PC33MR-5, with cab, rubber shoes, blade down, over side, 63 kg bucket

Arm length	A		4.0 m	3.0 m	2.0 m
	Max.	B			
1240 mm	3.0 m kg	480	-	670	-
	2.0 m kg	370	400	650	-
	1.0m kg	330	390	610	-
	0.0 m kg	330	370	580	1070
	-1.0 m kg	390	-	570	1070
1610 mm	3.0 m kg	400	410	-	-
	2.0 m kg	320	410	670	-
	1.0m kg	290	390	620	-
	0.0 m kg	290	370	580	1080
	-1.0 m kg	330	360	560	1060

## PC38MR-5, with cab, rubber shoes, blade down, over front, 80 kg bucket

Arm length	A		4.0 m	3.0 m	2.0 m
	Max.	B			
1370 mm	3.0 m kg	720	720	-	-
	2.0 m kg	740	760	870	-
	1.0m kg	780	890	1230	-
	0.0 m kg	830	990	1480	1540
	-1.0 m kg	890	960	1480	2600
1720 mm	3.0 m kg	620	590	-	-
	2.0 m kg	620	660	690	-
	1.0m kg	670	810	1080	-
	0.0 m kg	740	940	1410	1700
	-1.0 m kg	800	980	1490	2330

## PC38MR-5, with cab, rubber shoes, blade down, over side, 80 kg bucket

Arm length	A		4.0 m	3.0 m	2.0 m
	Max.	B			
1370 mm	3.0 m kg	530	530	-	-
	2.0 m kg	430	520	840	-
	1.0m kg	390	510	790	-
	0.0 m kg	400	430	750	1430
	-1.0 m kg	450	480	740	1440
1720 mm	3.0 m kg	450	530	-	-
	2.0 m kg	380	520	690	-
	1.0m kg	350	500	800	-
	0.0 m kg	350	480	750	1440
	-1.0 m kg	390	470	730	1430

## PC38MR-5, with cab, rubber shoes, blade up, over side, 85 kg bucket

Arm length	A		4.0 m	3.0 m	2.0 m
	Max.	B			
1370 mm with Powertilt	3.0 m kg	470	480	-	-
	2.0 m kg	390	460	750	-
	1.0m kg	330	430	700	900
	0.0 m kg	380	420	670	900
	-1.0 m kg	370	390	660	900

Ratings are based on ISO standard 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load. Excavators used in object handling operations must comply with the related local regulations and must be equipped with hose burst valves (boom & arm) and an overload warning device in compliance with EN474-5.

- The values marked with an asterisk (\*) are limited by the hydraulic capacities.
- Calculations are based on the machine resting on a uniform and firm surface.
- The lifting point is a hypothetical hook placed behind the bucket.

## Standard and optional equipment

### Engine

Komatsu 3D88E-7 water-cooled, 4-cycle direct injection diesel engine	●
EU Stage V compliant	●
Fuel control dial	●
Auto-deceleration function	●
Auto idle shutdown	●
Engine ignition can be password secured on request	●
Alternator 12 V / 55 A	●
Starter motor 12 V / 2.3 kW	●
Battery 12 V / 75 Ah	●

### Hydraulic system

6-working mode selection system; power mode, economy mode, breaker mode, attachment power and attachment economy mode, and lifting mode	●
Adjustable PPC wrist control levers for arm, boom, bucket and swing, with proportional control for attachments	●
PPC control lever and pedals for steering and travel	●
Hydraulic line for hammer and for 2-way equipment up to boom and arm (HCU-A)	●
Automatic two-speed travel control	●
Relief valves on service spool	○
Preparation for hydraulic quick-coupler	○
2nd auxiliary hydraulic circuit (HCU-C)	○
3rd auxiliary circuit for hydraulic powertilt and 4th line for hydraulic quick-coupler single effect (PC38MR-5)	○
Powertilt unit Lehnhoff (PC38MR-5)	○

### Undercarriage

300 mm rubber shoes	●
300 mm roadliner shoes	○
300 mm steel shoes	○

### Cabin

ROPS (ISO 3471) / OPG (ISO 10262) level 1 tilting cab with heating, skylight, pull-up type front window with locking device, lower window, windscreen-wiper, floor mat, sun roller blind	●
Adjustable high comfort air suspension seat with retractable seat belt	●
Monitor panel 3.5" colour display	●
12 Volt power supply	●
Beverage holder and magazine rack	●
Air conditioning	○
Radio equipment + radio	○
Canopy	○

### Service and maintenance

Multi-function video compatible colour monitor with Equipment Management and Monitoring System (EMMS) and efficiency guidance	●
Battery main switch	●
Komtrax – Komatsu wireless monitoring system (4G)	●

### Safety equipment

Rear-view camera system	●
Travel acoustic alarm	●
Electric horn	●
Rear-view mirrors (left and right side)	●
Hose burst valves on boom and arm cylinders	●
Overload warning device	●
Emergency engine stop switch	●
Neutral position detection system	●
Anti-slip cabin access	●
Mountings for OPG Level 1 front guard	●
Seat belt caution indicator	●
Bucket linkage with lifting eye	○
Blade cylinder safety valve	○
Rotating beacon	○

## LED lighting system

Working light on boom	●
Two front working lights on cab	●
Rear working light on cab	●

## Work equipment

Boom	●
Blade	●
1240 mm digging arm (PC33MR-5)	●
1370 mm digging arm (PC38MR-5)	●
Boom cylinder protection guard	●
Protection for boom safety valve	●
1610 mm digging arm (PC33MR-5)	○
1720 mm digging arm (PC38MR-5)	○
Bucket range (300 - 700 mm)	○

## Other equipment

Standard colour scheme and decals	●
Parts book and operator manual	●
Change-over valve on bucket cylinder for clamshell bucket utilization	○
Special waxing	○

Further equipment on request

- standard equipment
- optional equipment



A wide range of buckets and attachments is available. Your Komatsu distributor is ready to assist you with the selection of suitable options.

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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