

KOMATSU

PC50MR-5 PC55MR-5



Mini-excavator

Engine power
29.1 kW / 39.0 HP @ 2400 rpm

Operating weight
PC50MR-5: 4950 kg
PC55MR-5: 5280 kg

Bucket capacity
PC50MR-5: 0.055 - 0.16 m³
PC55MR-5: 0.055 - 0.18 m³

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

- 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
- Increased operational data and reports



Powerful and environmentally friendly



Work in tight spaces

The new short-tail PC50/55MR-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 PC50/55MR-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.

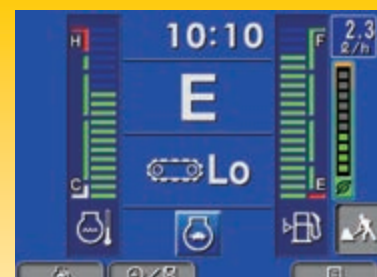


Komatsu EU Stage V

The Komatsu EU Stage V engine is productive, dependable and efficient. With ultra-low emissions, it provides a lower environmental impact and a superior performance to help reduce operating costs and lets the operator work in complete peace of mind.



Komatsu 4D88E-7 engine with High-Pressure Common Rail (HPCR) injection system and Diesel Particulate Filter (DPF)



Eco-gauge and fuel consumption gauge further encourage efficient operations

First-class comfort

An optimal work environment

Despite its compact size, the PC50/55MR-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.

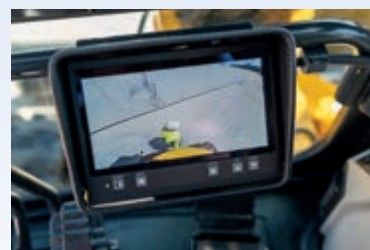
Perfect operator convenience

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.



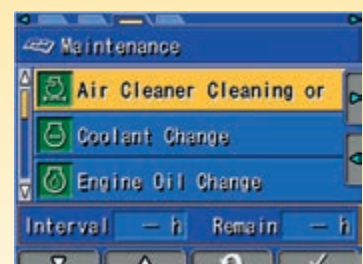
Rear bonnets for quick engine checks, simple inspections, cleaning of the radiators and easy access to the battery



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 (60 mm for PC50MR-5 and 140 mm for PC55MR-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 4D88E-7
Type	Water-cooled, 4-cycle direct injection
Engine power	
at rated engine speed	2400 rpm
ISO 14396	29.1 kW / 39.0 HP
ISO 9249 (net engine power)	27.7 kW / 37.2 HP
No. of cylinders	4
Bore × stroke	88 × 90 mm
Displacement	2189 cm ³
Max. torque / engine speed	137 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	53.5 × 2 + 33.8 + 12 l/min
Max. operating pressure	26.5 MPa (265 bar)
Hydraulic motors	
Travel	2 × variable displacement motor
Swing	1 × fixed displacement motor
Hydraulic cylinders (bore × stroke)	
Boom	90 × 691 mm
Arm	
PC50MR-5	80 × 649 mm
PC55MR-5	85 × 733 mm
Bucket	
PC50MR-5	70 × 580 mm
PC55MR-5	75 × 580 mm
Boom swing	
PC50MR-5	90 × 630 mm
PC55MR-5	95 × 630 mm
Blade	110 × 140 mm
Bucket digging force (ISO 6015)	
PC50MR-5	3390 daN (3460 kg)
PC55MR-5	3900 daN (3980 kg)
Arm crowd force (ISO 6015)	
PC50MR-5	
1375 mm arm	2160 daN (2220 kg)
1770 mm arm	2010 daN (2050 kg)
PC55MR-5	
1640 mm arm	2392 daN (2440 kg)
2000 mm arm	2226 daN (2270 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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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	4200 daN (4280 kgf)

Undercarriage

Construction	X-frame centre section with box section track frames
Track rollers (each side)	4
Carrier rollers (each side)	1
Shoe width	400 mm
Ground pressure	0.28 kg/cm ²

Environment

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

Operating weight (appr.)

	PC50MR-5	PC55MR-5
Rubber shoes	4950 kg	5280 kg
Roadliner shoes	5020 kg	5350 kg
Steel shoes	5020 kg	5350 kg

Operating weight, including cabin, specified work equipment, operator, lubricant, coolant, full fuel tank and the standard equipment.

Blade

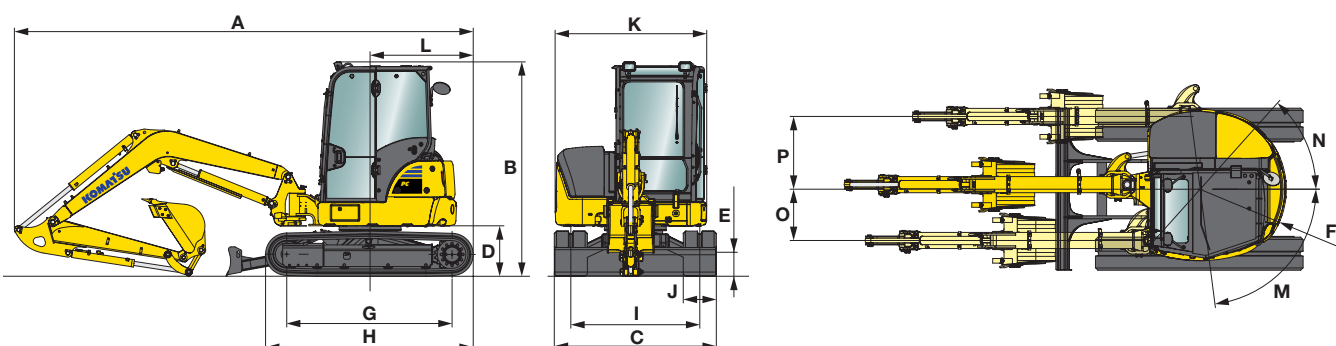
Type	Electro-welded, single unit structure
Width × height	1960 × 355 mm
Blade, max. lifting height	430 mm
Blade, max. digging depth	330 mm

Service refill capacities

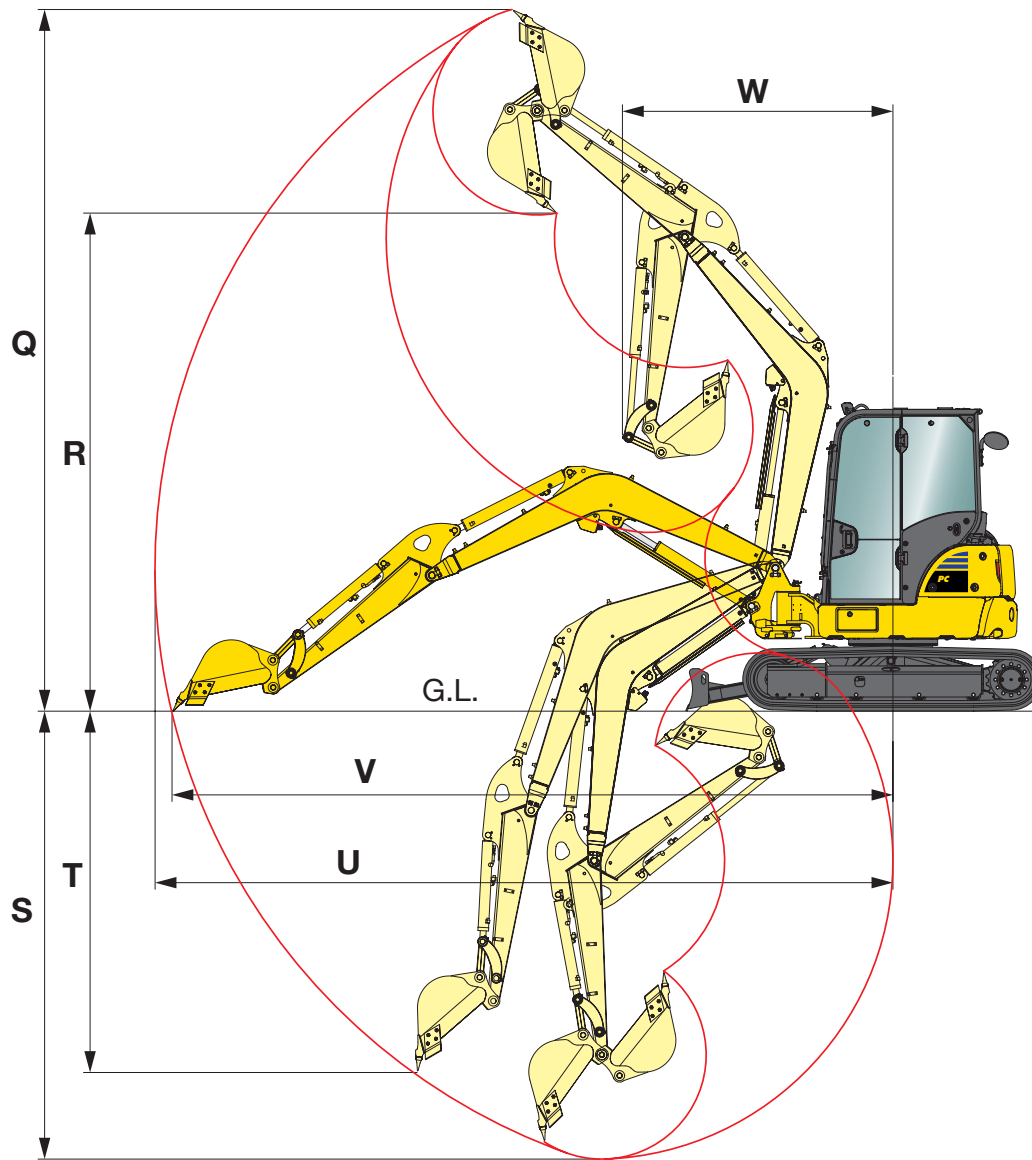
Fuel tank	65 l
Radiator	8.8 l
Engine oil (refill)	7.5 l
Hydraulic system	55 l

Machine dimensions

		PC50MR-5		PC55MR-5	
Boom length	mm	2640		2900	
Arm length	mm	1375	1770	1640	2000
A Overall length	mm	5220	5300	5550	5615
B Overall height	mm	2590		2590	
C Overall width	mm	1960		1960	
D Clearance under counterweight	mm	610		610	
E Ground clearance	mm	290		290	
F Tail swing radius	mm	1040		1120	
G Track length on ground	mm	2000		2000	
H Track length	mm	2520		2520	
I Track gauge	mm	1560		1560	
J Shoe width	mm	400		400	
K Overall width of upper structure	mm	1835		1835	
L Distance, swing center to rear end	mm	1265		1265	
M/N Boom swing angle	°	85 / 50		85 / 50	
O Boom offset LH	mm	630		630	
P Boom offset RH	mm	880		880	



Working range




Working range		PC50MR-5		PC55MR-5	
Arm length	mm	1375	1770	1640	2000
A Max. digging height	mm	5500	5780	5915	6180
B Max. dumping height	mm	3775	4060	4200	4470
C Max. digging depth	mm	3300	3705	3770	4130
D Max. vertical wall digging depth	mm	2730	3145	3030	3380
E Max. digging reach	mm	5735	6130	6220	6570
F Max. digging reach at ground level	mm	5575	5980	6075	6435
G Min. swing radius	mm	2290	2410	2285	2390
Min. swing radius at boom swing	mm	1760	1860	1760	1855


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


PC50MR-5, with cab, rubber shoes, blade down, over front, 109 kg bucket

Arm length	A		4.0 m	3.0 m	2.0 m
	Max.	kg			
B					
1375 mm	4.0 m	950	-	-	-
	3.0 m	930	920	-	-
	2.0 m	930	1060	1240	-
	1.0 m	1010	1300	1900	-
	0.0 m	1150	1480	2300	1210
	-1.0 m	1250	1500	2310	2510
1770 mm	4.0 m	780	770	-	-
	3.0 m	710	730	-	-
	2.0 m	700	890	-	-
	1.0 m	750	1160	1620	-
	0.0 m	860	1400	2160	1250
	-1.0 m	1080	1500	2320	2100


PC50MR-5, with cab, rubber shoes, blade down, over side, 109 kg bucket

Arm length	A		4.0 m	3.0 m	2.0 m
	Max.	kg			
B					
1375 mm	4.0 m	890	-	-	-
	3.0 m	640	740	-	-
	2.0 m	510	720	1160	-
	1.0 m	480	680	1060	-
	0.0 m	480	650	1000	1210
	-1.0 m	550	640	980	1900
1770 mm	4.0 m	690	750	-	-
	3.0 m	520	730	-	-
	2.0 m	440	730	-	-
	1.0 m	410	680	1080	-
	0.0 m	410	640	990	1250
	-1.0 m	460	620	960	1850

PC55MR-5, with cab, rubber shoes, blade down, over front, 110 kg bucket

Arm length	A		4.0 m	3.0 m	2.0 m
	Max.	kg			
B					
1640 mm	4.0 m	810	770	-	-
	3.0 m	830	780	-	-
	2.0 m	870	960	1170	-
	1.0 m	920	1220	1830	-
	0.0 m	980	1420	2230	1270
	-1.0 m	1050	1480	2270	2450
2000 mm	4.0 m	720	600	-	-
	3.0 m	740	630	-	-
	2.0 m	750	820	-	-
	1.0 m	800	1090	1570	-
	0.0 m	870	1330	2090	1320
	-1.0 m	930	1450	2250	2150

PC55MR-5, with cab, rubber shoes, blade down, over side, 110 kg bucket

Arm length	A		4.0 m	3.0 m	2.0 m
	Max.	kg			
B					
1640 mm	4.0 m	750	770	-	-
	3.0 m	570	780	-	-
	2.0 m	490	810	1170	-
	1.0 m	460	760	1170	-
	0.0 m	460	720	1090	1270
	-1.0 m	510	700	1070	2070
2000 mm	4.0 m	620	600	-	-
	3.0 m	490	630	-	-
	2.0 m	430	810	-	-
	1.0 m	400	760	1190	-
	0.0 m	400	710	1090	1320
	-1.0 m	430	680	1050	2020

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 4D88E-7 water-cooled, 4-cycle direct injection diesel engine	●
EU Stage V compliant	●
Diesel Particulate Filter (DPF)	●
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 / 72 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)	○

Undercarriage

400 mm rubber shoes	●
400 mm roadliner shoes	○
400 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	○

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	●
Seat belt caution indicator	●
Anti-slip cabin access	●
Mountings for OPG Level 1 front guard	●
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	●
1375 mm digging arm (PC50MR-5)	●
1640 mm digging arm (PC55MR-5)	●
Boom cylinder protection guard	●
Protection for boom safety valve	●
1770 mm digging arm (PC50MR-5)	○
2000 mm digging arm (PC55MR-5)	○
Bucket range (300 - 800 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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