

**KOMATSU**



Product range

**Environmental data**

# Sustainability targets

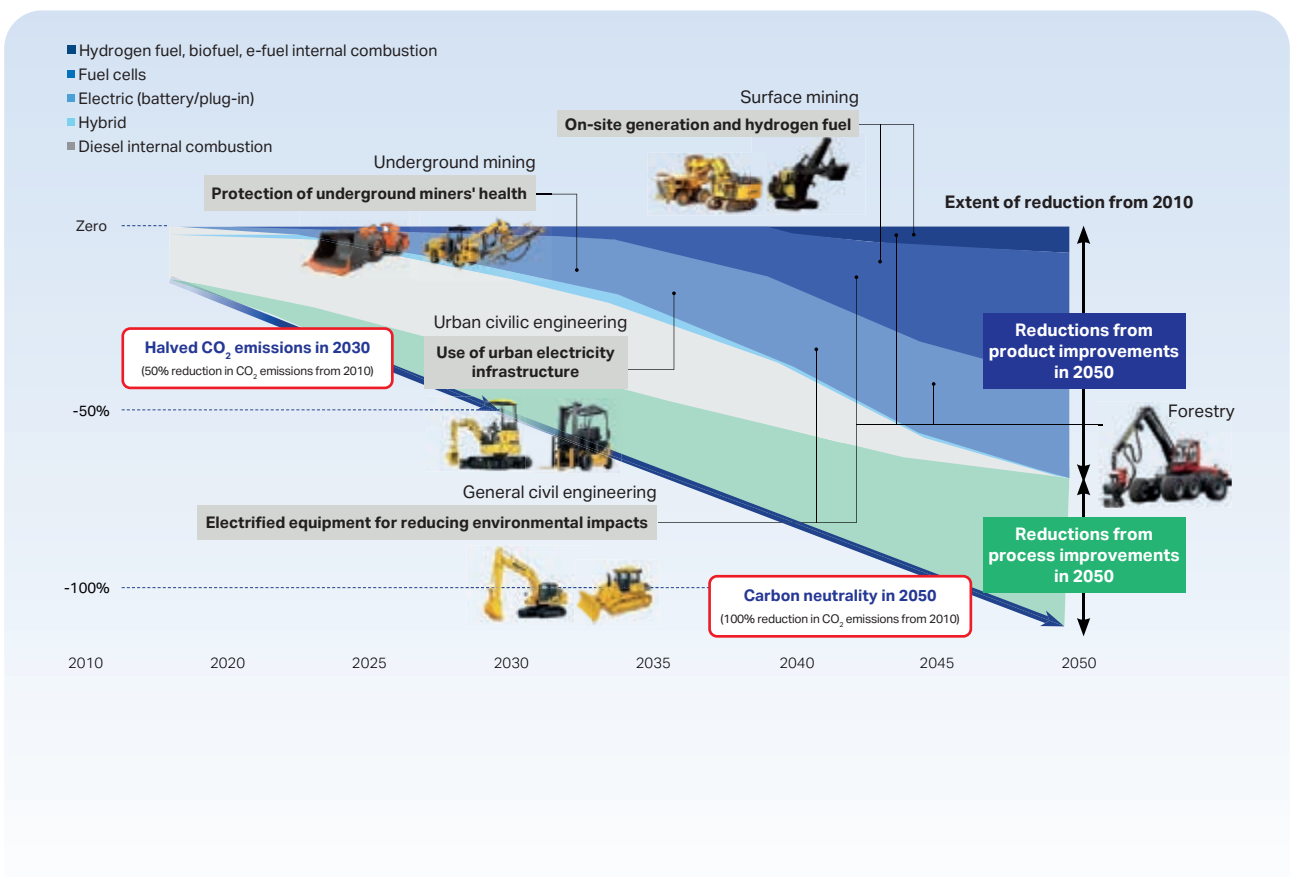
## Carbon neutrality at Komatsu manufacturing plants and offices

Komatsu has committed to halving CO<sub>2</sub> emissions from 2010 levels by 2030 and we will work to achieve net zero CO<sub>2</sub> emissions (carbon neutrality) from our production activities by 2050. In addition, we will deploy the relevant technologies at material suppliers and other partners to help them also achieve carbon neutrality in their operations. In implementing our policies for carbon neutrality initiatives at manufacturing plants, Komatsu will prioritize energy conservation initiatives for reducing energy consumption through production technology innovation, then energy generation initiatives for producing renewable energy in-house, and lastly, purchases of renewable energy .



## Development of products that reduce environmental impact

The workplace conditions under which construction and mining equipment developed and produced by Komatsu is used can vary based on model and output. Accordingly, we are incorporating cutting-edge technologies to eliminate CO<sub>2</sub> emissions from products by model and by output class. At the same time, we are sharing our roadmap for carbon neutrality with external development partners and customers while making steady progress based on this map.



## Environmental declaration

The information within this brochure is correct for Komatsu machines at time of manufacture when configured for sale within EU, European Economic Area, Switzerland and the United Kingdom. The information contained is valid on the date of issue and may change without prior notice. For more up to date information, consult individual machine product brochures or operating and maintenance manuals.

## Exhaust gas emissions levels

All engines are approved in accordance with Regulation (EU) 2016/1628 Stage V requirements. The limits of these requirements depend upon the engine power rating as indicated below.

Engine power (kW)	CO (g/kWh)	NOx (g/kWh)	HC (g/kWh)	PM (g/kWh)	PN (1/kWh)
0<P<8	8.0	7.5	7.5	0.4/0.6	—
8≤P<19	6.0	7.5	7.5	0.4	—
19≤P<37	5.0	4.7	4.7	0.015	1 × 10 <sup>12</sup>
37≤P<56	5.0	4.7	4.7	0.015	1 × 10 <sup>12</sup>
56≤P<130	5.0	0.4	0.19	0.015	1 × 10 <sup>12</sup>
130≤P<560	3.5	0.4	0.19	0.015	1 × 10 <sup>12</sup>
P>560	3.5	3.5	0.19	0.045	—

Some machine model names end with the suffix "EO". The "EO" at the end of the model name refers to a change in engine specification during the lifetime of the model. For example: PC210LC-11 was launched with an EU Stage IV engine and changed to PC210LC-11EO with the introduction of EU Stage V compliant engine. Models launched since the introduction of EU Stage V engine emissions regulations, may or may not have the "EO" suffix attached to the model name. For simplicity, the "EO" suffix has been removed from all relevant model names in brochures.

## Manufacturing ISO Accreditation

All Komatsu machines sold within Europe are manufactured in Komatsu plants that conform to ISO14001:2015.

## Diesel fuels

EN590 Automotive Diesel Fuel describes the properties that all automotive diesel fuel must meet if it is to be sold in the European Union, United Kingdom, Iceland, Liechtenstein, Norway and Switzerland. EN590 was introduced along with the development of emissions standards across the European Union to reduce the effects of diesel fuel on the environment.

Since 2007, diesel that conforms to EN590 has been referred to as Ultra Low Sulphur Diesel (ULSD) in the European Union. The goal of EN590 has been to reduce the sulphur content of diesel fuel. Sulphur was added to diesel as a lubricant, its role is now taken by special additives in ULSD.

EN15940 Automotive fuels – Paraffinic diesel fuel from synthesis or hydrotreatment.

Diesel fuels that conform to EN15940 are synthetic fuels made by processing of natural gas (GTL, Gas To Liquid) or biomass (BTL, Biomass To Liquid) through the Fischer Tropsch process or through a hydrotreatment process of vegetable oils or animal fats (HVO, Hydrotreated Vegetable Oil).

## CO<sub>2</sub> measurement result as required by Article 43(4) of Regulation (EU) 2016/1628

The CO<sub>2</sub> measurement that is given results from testing, over a fixed test cycle under laboratory conditions, an engine that is selected to be representative of a particular engine family (e.g SAA4D107E-3) and shall not imply or express any guarantee of the performance of a particular engine.

Engine family in this context means a grouping of Komatsu engine types which, through their design, have similar exhaust emission characteristics, and respect the applicable emission limit values.

## Crawler excavators > 12 t

Model	PC138US-11	PC170LC-11	PC210-11	PC230NHD-11	PC228USLC-11
Engine model	SAA4D95LE-7-C	SAA4D107E-5	SAA6D107E-3-A	SAA6D107E-3-A	SAA6D107E-3-A
Engine power (ISO 14396)	72.6 kW / 97.3 HP @ 2050 rpm	90 kW / 121 HP @ 2100 rpm	123 kW / 165 HP @ 2000 rpm	123 kW / 165 HP @ 2000 rpm	123 kW / 165 HP @ 2000 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	756.5 g/kWh	667.78 g/kWh	765.1 g/kWh	765.1 g/kWh	765.1 g/kWh

Model	PC240-11	PC290-11	PC360-11	HB365-3	PC490-11
Engine model	SAA6D107E-3-B	SAA6D107E-3-B	SAA6D114E-6	SAA6D114E-6	SAA6D125E-7
Engine power (ISO 14396)	141 kW / 189 HP @ 2000 rpm	159 kW / 213 HP @ 2050 rpm	202 kW / 271 HP @ 1950 rpm	202 kW / 271 HP @ 1950 rpm	270 kW / 362 HP @ 1900 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	701 g/kWh	701 g/kWh	729.5 g/kWh	729.5 g/kWh	722.6 g/kWh

Model	PC700LC-11	PC950LC-11	PC1250-11	PC2000-11
Engine model	SAA6D140E-7	SAA6D140E-7	SAA6D170E-7	SAA12V140E-7
Engine power (ISO 14396)	327 kW / 439 HP @ 2000 rpm	405 kW / 543 HP @ 1800 rpm	578 kW / 775 HP @ 1800 rpm	794 kW / 1065 HP @ 1800 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	745.8 g/kWh	697.0 g/kWh	723.7 g/kWh	684.2 g/kWh

## Noise levels

Model	PC138US-11	PC170LC-11	PC210-11	PC230NHD-11	PC228USLC-11
External sound power *1 [dB(A)]	99	99	100	100	100
Sound level at operators ear *2 [dB(A)]	72	68	67	67	71

Model	PC240-11	PC290-11	PC360-11	HB365-3	PC490-11
External sound power *1 [dB(A)]	103	104	104	101	107
Sound level at operators ear *2 [dB(A)]	70	70	71	69	71

Model	PC700LC-11	PC950LC-11	PC1250-11	PC2000-11
External sound power *1 [dB(A)]	106	109	111	110
Sound level at operators ear *2 [dB(A)]	75	75	73	72

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test

## Recycling

The recyclability of Komatsu machines is considered throughout the development cycle and tested against a combination of ISO16714 earthmoving machinery – possibility of recycling and recovery and advice from CEMA (Association of Construction Equipment Manufacturers) in Japan.

Model	PC138US-11	PC170LC-11	PC210-11	PC230NHD-11	PC228USLC-11
Possibility of recycling (%)	99.57%	99.40%	99.50%	98.70%	99.60%

Model	PC240-11	PC290-11	PC360-11	HB365-3	PC490-11
Possibility of recycling (%)	99.60%	99.70%	99.30%	99.40%	98.40%

Model	PC700LC-11	PC950LC-11	PC1250-11	PC2000-11
Possibility of recycling (%)	99.60%	99.30%	99.80%	99.60%

## Paint

The paint used on Komatsu crawler excavators has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

Heavy metals	Content
Barium	0 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm



## Wheeled excavators

Model	PW98MR-11	PW138MR-11	PW148-11	PW158-11
Engine model	SAA3D95E-1-B	SAA4D95LE-7-C	SAA4D107E-5	SAA4D107E-5
Engine power (ISO 14396)	50.7 kW / 68.0 HP @ 1850 rpm	72.5 kW / 97.2 HP @ 2050 rpm	110 kW / 148 HP @ 2000 rpm	110 kW / 148 HP @ 2000 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	690.3 g/kWh	756.5 g/kWh	667.78 g/kWh	667.78 g/kWh

Model	PW160-11	PW168-11	PW180-11	PW198-11
Engine model	SAA4D107E-5	SAA4D107E-5	SAA6D107E-3-A	SAA4D107E-5
Engine power (ISO 14396)	110 kW / 148 HP @ 2000 rpm	110 kW / 148 HP @ 2000 rpm	123 kW / 165 HP @ 2000 rpm	129 kW / 173 HP @ 2000 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	667.78 g/kWh	667.78 g/kWh	765.1 g/kWh	667.78 g/kWh

## Noise Levels

Model	PW98MR-11	PW138MR-11	PW148-11	PW158-11
External sound power *1 [dB(A)]	99	100	101	101
Sound level at operators ear *2 [dB(A)]	76	74	69	69

Model	PW160-11	PW168-11	PW180-11	PW198-11
External sound power *1 [dB(A)]	102	99	101	100
Sound level at operators ear *2 [dB(A)]	69	69	69	69

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test

## Recycling

Model	PW98MR-11	PW138MR-11	PW148-11	PW158-11
Possibility of recycling (%)	99.40%	99.60%	97.00%	97.00%

Model	PW160-11	PW168-11	PW180-11	PW198-11
Possibility of recycling (%)	97.00%	97.00%	97.00%	97.00%

## Paint

The paint used on Komatsu wheeled excavators has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

Heavy metals	Content
Barium	0 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm

## Electric excavators

Model	PC33E-6	PC210LCE-11
Motor model	LZR-ZFP	-
Motor power	17.4 kW	123 kW
Battery capacity	35 kWh	451 kWh
Battery technology	LFP (Lithium Iron Phosphate)	Lithium ion
Charger type / input	External / 400 V / CEE 63 A	External / 400 V / CEE 63 A
System voltage	115 V	700 V

### Noise Levels

Model	PC33E-6	PC210LCE-11
External sound power *1 [dB(A)]	92	97
Sound level at operators ear *2 [dB(A)]	75	65

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test



### Recycling

Model	PC33E-6	PC210LCE-11
Possibility of recycling (%)	99.40%	98.30%



### Paint

The paint used on Komatsu electric excavators has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

	PC33E-6	PC210LCE-11
<b>Heavy metals</b>	<b>Content</b>	<b>Content</b>
Barium	0 ppm	0 ppm
Cadmium	0 ppm	0 ppm
Chrome	0 ppm	1.65 ppm
Lead	0 ppm	0.23 ppm

## Wheel loaders

Model	WA70M-8	WA80M-8	WA100M-8	WA200-8	WA270-8
Engine model	4D98E-6S	S4D98E-6V	SAA4D94LE-3W	SAA4D107E-5	SAA6D107E-3-A
Engine power (ISO 14396)	46.2 kW / 62.0 HP @ 2200rpm	53.7 kW / 72.0 HP @ 2100 rpm	69.8 kW / 93.6 HP @ 2000 rpm	95.2 kW / 128 HP @ 2000 rpm	115 kW / 153 HP @ 2000 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	791 g/kWh	738 g/kWh	727 g/kWh	667.78 g/kWh	765.1 g/kWh

Model	WA320-8	WA380-8	WA470-8	WA475-10	WA480-8
Engine model	SAA6D107E-3-A	SAA6D107E-3-B	SAA6D125E-7	SAA6D125E-7	SAA6D125E-7
Engine power (ISO 14396)	127 kW / 170 HP @ 2100 rpm	143 kW / 192 HP @ 2100 rpm	204 kW / 273 HP @ 2000 rpm	217 kW / 291 HP @ 1600 rpm	224 kW / 300 HP @ 2000 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	765.1 g/kWh	701 g/kWh	722.6 g/kWh	722.6 g/kWh	722.6 g/kWh

Model	WA500-8	WA600-8	WA800-8	WA900-8
Engine model	SAA6D140E-7	SAA6D170E-7-A	SAA12V140E-7	SAA12V140E-7
Engine power (ISO 14396)	266 kW / 357 HP @ 1900 rpm	396 kW / 530 HP @ 1800 rpm	638 kW / 856 HP @ 2025 rpm	672 kW / 901 HP @ 2050 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	745.8 g/kWh	720.4 g/kWh	684.2 g/kWh	684.2 g/kWh

## Noise levels

Model	WA70M-8	WA80M-8	WA100M-8	WA200-8	WA270-8
External sound power *1 [dB(A)]	101	101	102	104	104
Sound level at operators ear *2 [dB(A)]	74	74	75	68	68

Model	WA320-8	WA380-8	WA470-8	WA475-10	WA480-8
External sound power *1 [dB(A)]	105	106	107	107	108
Sound level at operators ear *2 [dB(A)]	68	68	70	70	71

Model	WA500-8	WA600-8	WA800-8	WA900-8
External sound power *1 [dB(A)]	109	111	115	115
Sound level at operators ear *2 [dB(A)]	72	73	73	73

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test



## Paint

The paint used on Komatsu wheeled loaders has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

Heavy metals	Content
Barium	0 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm



## Recycling

Model	WA70M-8	WA80M-8	WA100M-8	WA200-8	WA270-8
Possibility of recycling (%)	98.00%	98.00%	98.00%	99.00%	99.00%

Model	WA320-8	WA380-8	WA470-8	WA475-10	WA480-8
Possibility of recycling (%)	99.00%	99.10%	99.10%	99.10%	99.10%

Model	WA500-8	WA600-8	WA800-8	WA900-8
Possibility of recycling (%)	99.40%	99.50%	99.00%	99.00%

## Crawler dozers

Model	D51-24	D61-24	D65-18	D71-24
Engine model	SAA4D107E-5	SAA6D107-3-A	SAA6D114E-6	SAA6D114E-6
Engine power (ISO 14396)	99 kW / 133 HP @ 2200 rpm	126 kW / 169 HP @ 2200 rpm	164 kW / 220 HP @ 1950 rpm	179 kW / 240 HP @ 2100 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	667.78 g/kWh	765.1 g/kWh	729.5 g/kWh	729.5 g/kWh

Model	D85-18	D155AX-8	D375A-8	D475A-8
Engine model	SAA6D125E-7	SAA6D140E-7	SAA6D170E-7-B	SAA12V140E-7
Engine power (ISO 14396)	199 kW / 267 HP @ 1900 rpm	268 kW / 360 HP @ 1900 rpm	474 kW / 636 HP @ 1800 rpm (fwd) 578 kW / 775 HP @ 1800 rpm (rvs)	697 kW / 934 HP @ 1800 rpm (fwd) 777 kW / 1040 HP @ 1800 rpm (rvs)
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	722.6 g/kWh	745.8 g/kWh	723.7 g/kWh	684.2 g/kWh



## Noise levels

Model	D51-24	D61-24	D65-18	D71-24
External sound power *1 [dB(A)]	106	107	108	108
Sound level at operators ear *2 [dB(A)]	76	78	78	78

Model	D85-18	D155AX-8	D375A-8	D475A-8
External sound power *1 [dB(A)]	111	112	N/A *3	N/A *3
Sound level at operators ear *2 [dB(A)]	79	80	78	76

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test

\*3: External sound power declaration not required for larger machines > 500 kW



## Recycling

Model	D51-24	D61-24	D65-18	D71-24
Possibility of recycling (%)	99.60%	99.50%	98.70%	99.60%

Model	D85-18	D155AX-8	D375A-8	D475A-8
Possibility of recycling (%)	99.50%	99.30% (99.00%)	99.40%	99.50%

## Paint

The paint used on Komatsu crawler dozers has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

Heavy metals	Content
Barium	89.000 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm

# Dump trucks

Model	HM300-5	HM400-5	HD325-8	HD405-8
Engine model	SAA6D125E-7	SAA6D140E-7	SAA6D140E-7	SAA6D140E-7
Engine power (ISO 14396)	248 kW / 332 HP @ 2000 rpm	353 kW / 473 HP @ 2000 rpm	386 kW / 518 HP @ 2000 rpm	386 kW / 518 HP @ 2000 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	722.6 g/kWh	745.8 g/kWh	745.8 g/kWh	745.8 g/kWh

Model	HD465-8	HD605-8	HD785-8	HD1500-8
Engine model	SAA6D170E-7-B	SAA6D170E-7-B	SAA12V140E-7	SSDA16V159E-3
Engine power (ISO 14396)	578 kW / 778 HP @ 2000 rpm	578 kW / 778 HP @ 2000 rpm	895 kW / 1200 HP @ 1900 rpm	1175 kW / 1576 HP @ 1900 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	723.7 g/kWh	723.7 g/kWh	684.2 g/kWh	670.91 g/kWh

Model	730E-10	830E-5	930E-5
Engine model	SSDA16V159E-3	SSDA16V160	SSDA16V160
Engine power (ISO 14396)	1492 kW / 2000 HP @ 1900 rpm	1864 kW / 2500 HP @ 1900 rpm	2013 kW / 2700 HP @ 1900 rpm
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	674 g/kWh	689 g/kWh	676 g/kWh



## Noise levels

Model	HM300-5	HM400-5	HD325-8	HD405-8
External sound power *1 [dB(A)]	114	110	110	110
Sound level at operators ear *2 [dB(A)]	73	72	78	78

Model	HD465-8	HD605-8	HD785-8	HD1500-8
External sound power *1 [dB(A)]	N/A *3	N/A *3	N/A *3	N/A *3
Sound level at operators ear *2 [dB(A)]	78	78	72	75

Model	730E-10	830E-5	930E-5
External sound power *1 [dB(A)]	N/A *3	N/A *3	N/A *3
Sound level at operators ear *2 [dB(A)]	74	76	73

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test

\*3: External sound power declaration not required for larger machines > 500 kW

## Recycling

Model	HM300-5	HM400-5	HD325-8	HD405-8
Possibility of recycling (%)	99.00%	99.00%	99.00%	99.00%

Model	HD465-8	HD605-8	HD785-8	HD1500-8
Possibility of recycling (%)	99.00%	99.00%	99.00%	99.00%

Model	730E-10	830E-5	930E-5
Possibility of recycling (%)	98.50%	98.27%	98.75%

## Paint

The paint used on Komatsu dump trucks has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

### Diesel machines

Heavy metals	Content
Barium	89.000 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm

### Diesel electric machines

Heavy metals	Content
Barium	0 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm

## Mini & midi excavators

Model	PC09-1	PC14R-3	PC16R-3	PC17R-5	PC18MR-5
Engine model	2D68E-3A	3D67E-2A	3D67E-2A	3D67E-2A	3D67E-2A
Engine power (ISO 14396)	6.8 kW / 9.1 HP @ 2200 rpm	11.6 kW / 15.6 HP @ 2600 rpm	11.6 kW / 15.6 HP @ 2600 rpm	11.4 kW / 15.3 HP @ 2600 rpm	11.8 kW / 15.8 HP @ 2600 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	995 g/kWh	1019.8 g/kWh	1019.8 g/kWh	1019.8 g/kWh	1019.8 g/kWh

Model	PC20R-5	PC24MR-5	PC26MR-5	PC30MR-5	PC35MR-5
Engine model	3D67E-2A	3D76E-6NDAAF	3D76E-6NDAAF	3D88E-7ESDF	3D88E-7ESDF
Engine power (ISO 14396)	11.4 kW / 15.3 HP @ 2600 rpm	15.8 kW / 21.2 HP @ 2500 rpm	15.8 kW / 21.2 HP @ 2500 rpm	18.2 kW / 24.4 HP @ 2200 rpm	18.2 kW / 24.4 HP @ 2200 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	1019.8 g/kWh	932 g/kWh	932 g/kWh	839 g/kWh	839 g/kWh

Model	PC45MR-5	PC55MR-5	PC58MR-5	PC78US-11	PC80MR-5
Engine model	4D88E-7PCDV	4D88E-7PCDV	4D88E-7PCDV	SAA3D95E-1-B	4D98E-5SFBV
Engine power (ISO 14396)	29.1 kW / 39.0 HP @ 2400 rpm	29.1 kW / 39.0 HP @ 2400 rpm	29.1 kW / 39.0 HP @ 2400 rpm	50.7 kW / 68.0 HP @ 1900 rpm	46.2 kW / 62.0 HP @ 2200 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	835 g/kWh	835 g/kWh	835 g/kWh	690.3 g/kWh	794 g/kWh

Model	PC88MR-11
Engine model	SAA3D95E-1-B
Engine power (ISO 14396)	50.7 kW / 68.0 HP @ 1850 rpm
EU Emissions Stage	Stage V
Approved fuels	EN590 EN15940
CO <sub>2</sub> measurement result	690.3 g/kWh



## Noise levels

Model	PC09-1	PC14R-3	PC16R-3	PC17R-5	PC18MR-5
External sound power *1 [dB(A)]	91	93	93	93	93
Sound level at operators ear *2 [dB(A)]	74	77	77	78	77

Model	PC20R-5	PC24MR-5	PC26MR-5	PC30MR-5	PC35MR-5
External sound power *1 [dB(A)]	93	93	93	94	95
Sound level at operators ear *2 [dB(A)]	78	76	76	75	77

Model	PC45MR-5	PC55MR-5	PC58MR-5	PC78US-11	PC80MR-5
External sound power *1 [dB(A)]	96	96	96	96	98
Sound level at operators ear *2 [dB(A)]	77	77	77	71	73

Model	PC88MR-11
External sound power *1 [dB(A)]	98
Sound level at operators ear *2 [dB(A)]	71

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test

## Recycling

Model	PC09-1	PC14R-3	PC16R-3	PC17R-5	PC18MR-5
Possibility of recycling (%)	96.00%	98.50%	98.60%	98.90%	98.70%

Model	PC20R-5	PC24MR-5	PC26MR-5	PC30MR-5	PC35MR-5
Possibility of recycling (%)	98.70%	96.00%	96.00%	96.00%	96.00%

Model	PC45MR-5	PC55MR-5	PC58MR-5	PC78US-11	PC80MR-5
Possibility of recycling (%)	96.00%	96.00%	96.00%	99.30%	90.72%

Model	PC88MR-11
Possibility of recycling (%)	96.00%

## Paint

The paint used on Komatsu mini and midi excavators has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

Heavy metals	PC14R-3 - PC55MR-5, PC80MR-5, PC88MR-11	PC09R-1, PC78US-11
	Content	Content
Barium	0 ppm	89.000 ppm
Cadmium	0 ppm	0 ppm
Chrome	0 ppm	0 ppm
Lead	0 ppm	0 ppm

## Backhoe loaders

Model	WB93R-8	WB93S-8	WB97R-8	WB97S-8
Engine model	SAA4D102SE-1	SAA4D102SE-1	SAA4D102SE-1	SAA4D102SE-1
Engine power (ISO 14396)	75 kW / 101 HP @ 2300 rpm	75 kW / 101 HP @ 2300 rpm	75 kW / 101 HP @ 2300 rpm	75 kW / 101 HP @ 2300 rpm
EU Emissions Stage	Stage V	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	704.89 g/kWh	704.89 g/kWh	704.89 g/kWh	704.89 g/kWh

## Noise levels

Model	WB93R-8	WB93S-8	WB97R-8	WB97S-8
External sound power *1 [dB(A)]	103	103	103	103
Sound level at operators ear *2 [dB(A)]	75	75	75	75

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test

## Recycling

Model	WB93R-8	WB93S-8	WB97R-8	WB97S-8
Possibility of recycling (%)	85.90%	85.70%	86.20%	86.00%

## Paint

The paint used on Komatsu backhoe loaders has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

Heavy metals	Content
Barium	0 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm





## Skid steer loaders

Model	SK715-8	SK815-8	SK820-8
Engine model	4D88E-7KFD	S4D86E-7MFD	S4D86E-7MFD
Engine power (ISO 14396)	34.3 kW / 46.0 HP @ 2800 rpm	37.5 kW / 50.3 HP @ 2600 rpm	37.5 kW / 50.3 HP @ 2600 rpm
EU Emissions Stage	Stage V	Stage V	Stage V
Approved fuels	EN590 EN15940	EN590 EN15940	EN590 EN15940
CO <sub>2</sub> measurement result	835 g/kWh	837 g/kWh	837 g/kWh

## Noise Levels

Model	SK715-8	SK815-8	SK820-8
External sound power *1 [dB(A)]	101 *3	101 *3	101 *3
Sound level at operators ear *2 [dB(A)]	86 *3	86 *3	86 *3

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test

\*3: Preliminary data

## Recycling

Model	SK715-8	SK815-8	SK820-8
Possibility of recycling (%)	97.80%	97.80%	97.80%

## Paint

The paint used on Komatsu skid steer loaders has been measured for content of heavy metals.

Any content of heavy metals were measured in PPM (parts per million).

Heavy metals	Content
Barium	0 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm



## Motor grader

<b>Model</b>	<b>GD675-7</b>
Engine model	SAA6D107E-3-B
Engine power (ISO 14396)	165 kW / 221 HP @ 2100 rpm
EU Emissions Stage	Stage V
Approved fuels	EN590 EN15940
CO <sub>2</sub> measurement result	701 g/kWh

### Noise levels

<b>Model</b>	<b>GD675-7</b>
External sound power *1 [dB(A)]	106
Sound level at operators ear *2 [dB(A)]	75

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test

### Recycling

<b>Model</b>	<b>GD675-7</b>
Possibility of recycling (%)	99.20%

### Paint

The paint used on Komatsu motor grader has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

Heavy metals	Content
Barium	89.000 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm



# Mobile crusher

<b>Model</b>	<b>BR380JG-3</b>
Engine model	SAA6D107E-3-B
Engine power (ISO 14396)	159 kW / 213 HP @ 2050 rpm
EU Emissions Stage	Stage V
Approved fuels	EN590 EN15940
CO <sub>2</sub> measurement result	701 g/kWh

## Noise levels

<b>Model</b>	<b>BR380JG-3</b>	
External sound power *1 [dB(A)]	N/A	Not required for EU regulations
Sound level at operators ear *2 [dB(A)]	N/A	Not required for EU regulations

\*1: External sound power measured according to EU directive 2000/14/EC Stage II

\*2: Sound level at the operator's ear measured according to ISO 6396:2008 dynamic test

## Recycling

<b>Model</b>	<b>BR380JG-3</b>
Possibility of recycling (%)	99.00%

## Paint

The paint used on Komatsu crusher has been measured for content of heavy metals. Any content of heavy metals were measured in PPM (parts per million).

Heavy metals	Content
Barium	89.000 ppm
Cadmium	0 ppm
Chrome	0 ppm
Lead	0 ppm



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