

HYDRAULIC EXCAVATOR PC1100-6 / PC1100SP-6

KOMATSU



The machine shown may vary according to territory specifications

Class leading productivity.

Advanced design for high quality and durability.

Easy maintenance with walk-through access.

HYDRAULIC EXCAVATOR

PC1100-6

PC1100SP-6

| | | |
|--------------------|------------|------------|
| OPERATING WEIGHT : | PC1100-6 | 103.000 kg |
| | PC1100SP-6 | 104.000 kg |

| | | |
|-------------------|------------|------------------------|
| BUCKET CAPACITY : | PC1100-6 | 5.0 m ³ SAE |
| | PC1100SP-6 | 6.5 m ³ SAE |

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An excavator in the 110 t class is used for the toughest jobs, for the longest hours and in the most extreme conditions. To perform in these conditions, the machine has to be a perfect balance of power, strength and quality. The PC1100-6 has been designed to achieve this balance perfectly.

Contents

- 4 Productivity
- 5 Operator comfort
- 6 Serviceability
- 7 Control system
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PRODUCTIVITY

Like all Komatsu dash-6 excavators, the PC1100-6 series has power, speed and control to give exceptional productivity.

Massive engine power

The starting point for productivity is engine power. The PC1100-6 series are fitted with a turbo-charged, aftercooled engine which not only delivers a huge 620 PS, but it is also fuel efficient and meets all current emissions and noise standards. Fuel consumption and noise are reduced by using the auto-deceleration system, which automatically reduce engine speed when the wrist control levers are in neutral. Controlled by an electronic all speed governor, the large displacement engine gives the machine the highest power of any in its class.

Exceptional digging forces

The massive engine power, combined with an efficient three pump hydraulic system and large cylinders, give the PC1100-6 powerful digging forces. The robust work equipment is equipped with twin bucket cylinders to give an exceptionally high breakout force, perfect for a hard rock application. The bucket capacity is correspondingly huge, with a 5 m³ bucket for the standard version, and 6.5 m³ for the SP version.



Stability for control and safety

The engine and counterweight position, wide tracks and perfect machine weight deliver stable and safe operations, even on the roughest terrain. Operators can work in complete confidence.

Fast cycle times

Power, digging force and stability all contribute to a fast and productive operation cycle. In addition to this, a vast amount of development time has been spent optimising the control characteristics. A perfect balance of swing, boom and arm speed allows the operator to consistently achieve a fast and productive operating cycle.

OPERATOR COMFORT

All sources of operator fatigue have been carefully considered during the design process, the result is a cab offering unparalleled space and ergonomics, combined with exceptionally low vibration and noise.



Outstanding space and comfort

The cab offers unparalleled space for the operator with generous leg and headroom as well as a large space to store personal belongings behind the seat. The multi-adjustable seat and controls can be set to create the ideal individual working position for any operator.



Ergonomic controls

All controls, from the light action wrist control to the adjustable monitor panel, have been designed with operators ergonomics in mind. Major controls are easily visible and operated on the inclined control panel. Large handrails, a cab step light and wide walkways allow safe and convenient access.

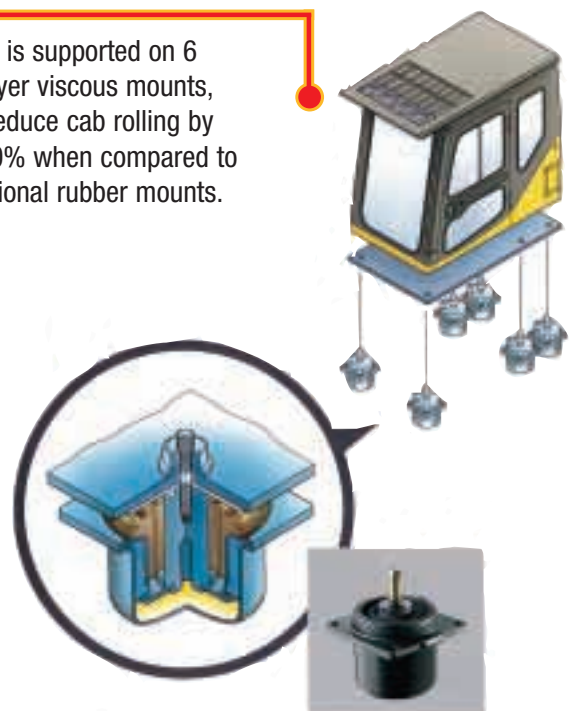


Superb visibility

Excellent all-round visibility is provided by large panoramic windows. Front visibility is further improved by the use of the Komatsu patented wiper system. When not in use the wipers park on the cab frame itself with no contact with the front window. As well as giving excellent visibility this systems avoids the need to disconnect the wiper before lifting the front window.

Viscous damping mounts

The cab is supported on 6 multi-layer viscous mounts, which reduce cab rolling by up to 30% when compared to conventional rubber mounts.

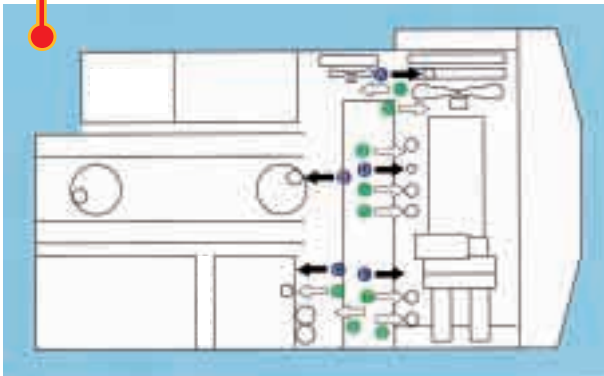


SERVICEABILITY

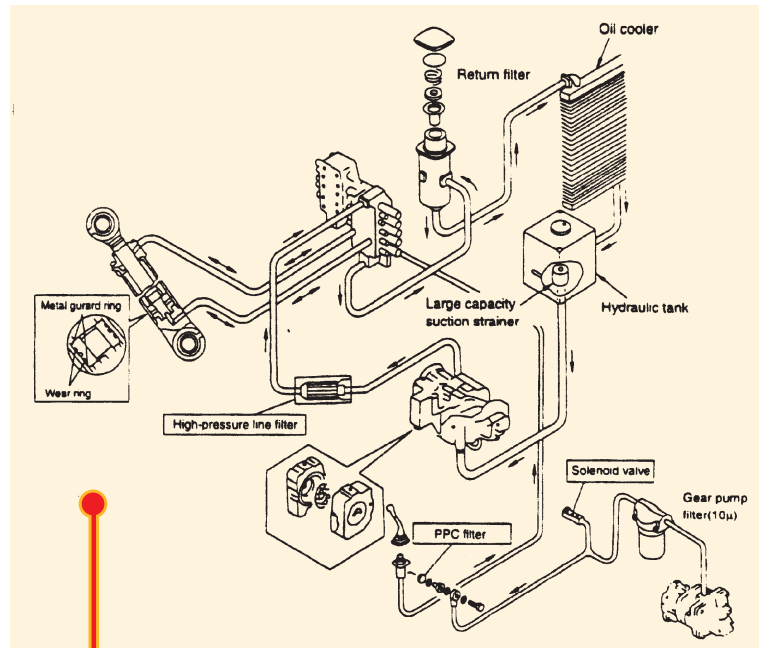
Rapid and effective servicing and diagnostics are essential for machine availability and reduced servicing costs.

Accessible service

Service points are located on just one level of the upperstructure, and are easily reached using the convenient walk-through access gangway. Once on the maintenance level, all service points can be easily accessed through wide opening doors and hoods. Service details include hydraulic pressure points, remote greasing for engine pulleys and an engine oil drain valve.



- ➔ Basic check items
- ① Radiator water
- ② Swing machine case
- ③ Hydraulic tank
- ④ Engine oil
- ⑤ PTO case
- ➔ Periodic maintenance items
- ① After cooler fan mount
- ② Fan belt
- ③ Corrosion resistor
- ④ Fuel filter
- ⑤ Engine oil filter
- ⑥ Hydraulic oil filter
- ⑦ Pilot filter
- ⑧ Hydraulic filter
- ⑨ PTO lubricating oil filter



Hydraulics

A clean hydraulic circuit is assured by the use of a high pressure in-line pump outlet, which prevent any debris from entering the circuit. This is complemented by a range of filters used throughout the hydraulic system. All hydraulic cylinders are now fitted with a metal guard ring which further improves cylinder life.



Undercarriage

The undercarriage has larger link size and the travel motors have been mounted inboard to prevent damage.

CONTROL SYSTEM

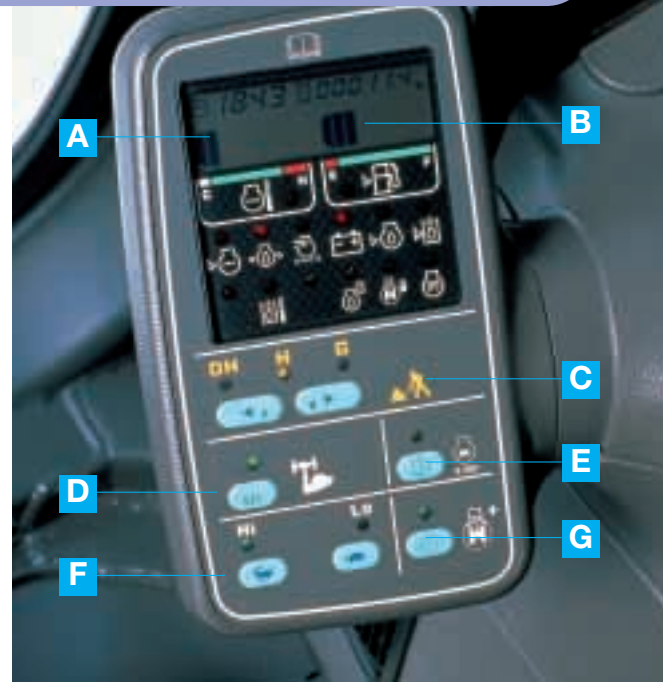
Komatsu was the first to introduce computer control into excavators. The latest control system used by the PC1100-6 is sophisticated but easy to use.

Self-diagnostics

The monitor panel incorporates a sophisticated diagnostic system.

If a serious fault develops the operator is warned immediately, whereas more minor problems are stored in the memory to be checked by service staff later. The memory can be extremely useful for service staff to diagnose intermittent problems. Diagnosis is further assisted by using the facility to display the operating condition of the machine, for example engine speed and pump pressures.

- A Water temperature
- B Fuel gauge
- C Working modes
- D High lift mode
- E Auto deceleration
- F Travel speed
- G Swing panel



3-mode boom control

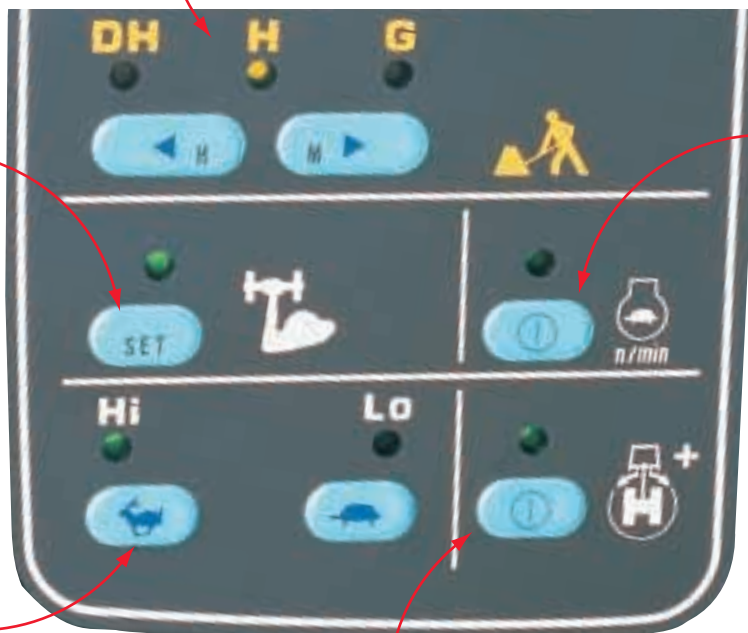
There are 3 operating modes, Heavy load, normal, and finishing work. The heavy load mode supplies 100% of the engine power to the pumps for the highest levels of production. The normal mode delivers 90 % of the power to the pumps and the finishing mode delivers 70 % of the power for light load work. If large stones or rocks have to be moved ,the boom lifting force can be temporarily increased by 10%.

Heavy lift mode

If large stones or rocks have to be moved, the boom lifting force can be temporarily increased by 10%.

Travel speed

2-speed fully automatic travel. Automatically changes from High to low when travelling up steep slopes and can be locked in to low for safe descents and manoeuvring.



Auto deceleration

When selected, automatically reduces engine speed after a short period if the wrist control levers are in neutral.

Swing priority

When switched off, the oil flow to the swing and boom functions is balanced to give easy loading at 90°. When switched on, the swing function is prioritised so that loading at 180° is made easier.



ENGINE

Model Komatsu SAA6D170
Type 4 cycle, water-cooled, overhead-valve, direct-injection
Aspiration Turbocharged, air to air aftercooler
No. of cylinders 6
Bore 170 mm
Stroke 170 mm
Piston displacement 23.15
Flywheel horsepower
 (Din 6270NET) 620PS 463 kW at 1800 RPM
 (SAE J1349) 611HP 456kW at 1800RPM
Governor Electronic all-speed

HYDRAULIC SYSTEMS

Type (E-OLSS) Electronic Open-centre Load Sensing System.
No. of selectable working modes 3
Pumps 2 variable displacement piston pumps supply the boom, arm and bucket circuits. An additional variable displacement piston pump supplies the swing circuit.
Total oil flow 2 x 494 ltr/min + 1 x 600 ltr./min.
Total flow 1588 ltr./min
Relief valve setting:
Implement circuits 320 kg/cm²
Travel circuit 350 kg/cm²
Swing circuit 275 kg/cm²
Pilot circuit 30 kg/cm²
Hydraulic cylinders:
Boom (No - Bore x stroke) 2-225 mm x 2390 mm
Arm (No - Bore x stroke) 1-250 mm x 2435 mm
Bucket (No - Bore x stroke) PC1100: 2-160 mm x 1825 mm
 PC1100SP: 2-160 mm x 1950 mm

STEERING

Steering/travelling controls are activated by either hand levers or foot pedals. Pushing both levers(or pedals) moves the machine forward. Pulling them back makes the machine go into reverse. Setting one lever (or pedal) in neutral and the other in forward enables the machine to make a pivot turn. Pushing one forward while pulling the other backward makes the machine counter-rotate on the spot.

CAB

Sound-insulated all-weather steel cab, laminated safety glass windows, lockable door, 2 window wiper, electric horn, cab lamp, adjustable reclining seat, monitor system and gauges.

WORKING RANGE 6 ATTACHMENT

| Model | | PC1100 | | | | PC1100SP |
|--------------------------|------------------------------|---------------------|--------|---------------|--------|---------------|
| | | Standard Boom 9.1 m | | | | SP Boom 7.8 m |
| Arm | | Standard Arm | | Semi-Long Arm | | Long Arm |
| | | 3.4 m | *3.4 m | 4.5 m | *4.5 m | 5.7 m |
| Bucket | Narrow 3.4 m ³ | - | - | ○ | - | ● |
| | Narrow 4.0 m ³ | ○ | - | ● | - | △ |
| | *Narrow 4.0 m ³ | - | ○ | - | ● | - |
| | Standard 5.0 m ³ | ● | - | △ | - | - |
| | *Standard 5.0 m ³ | - | ● | - | △ | - |
| | Wide 6.5 m ³ | - | - | - | - | - |
| *Wide 6.5 m ³ | - | - | - | - | - | ● |

*Strengthend

● General purpose use
 ○ Usable
 △ Light duty work, weight up to 1.5 t/m²
 - Not usable

DRIVES & BRAKES

Fully hydrostatic type Each track is driven by one hydraulic motor and planetary reduction gearbox.
Max. drawbar pull 70.000 KG
Max. travel speed (High) 3.2 km/h
Max. travel speed (Low) 2.1 km/h
Service brake Hydraulic lock type.
 The brakes are automatically applied when the levers are in the neutral position.
Parking brake Oil multi-disc type hydraulically interconnected with travel /steering levers.

UNDERCARRIAGE

Shoe width 700 mm
No. of shoes 48 each side
No. of carrier rollers 3 each side
No. of track rollers 8 each side
Ground pressure 1.34 kg/cm²

COOLANT & LUBRICANT CAPACITY

Fuel tank 1,360 ltr.
Radiator 139 ltr.
Engine 48 ltr.
Final drive (each side) 22 ltr.
Swing drive (each) 21.5 ltr.
Hydraulic oil refill capacity 670 ltr.
P.T.O. 13.5 ltr.

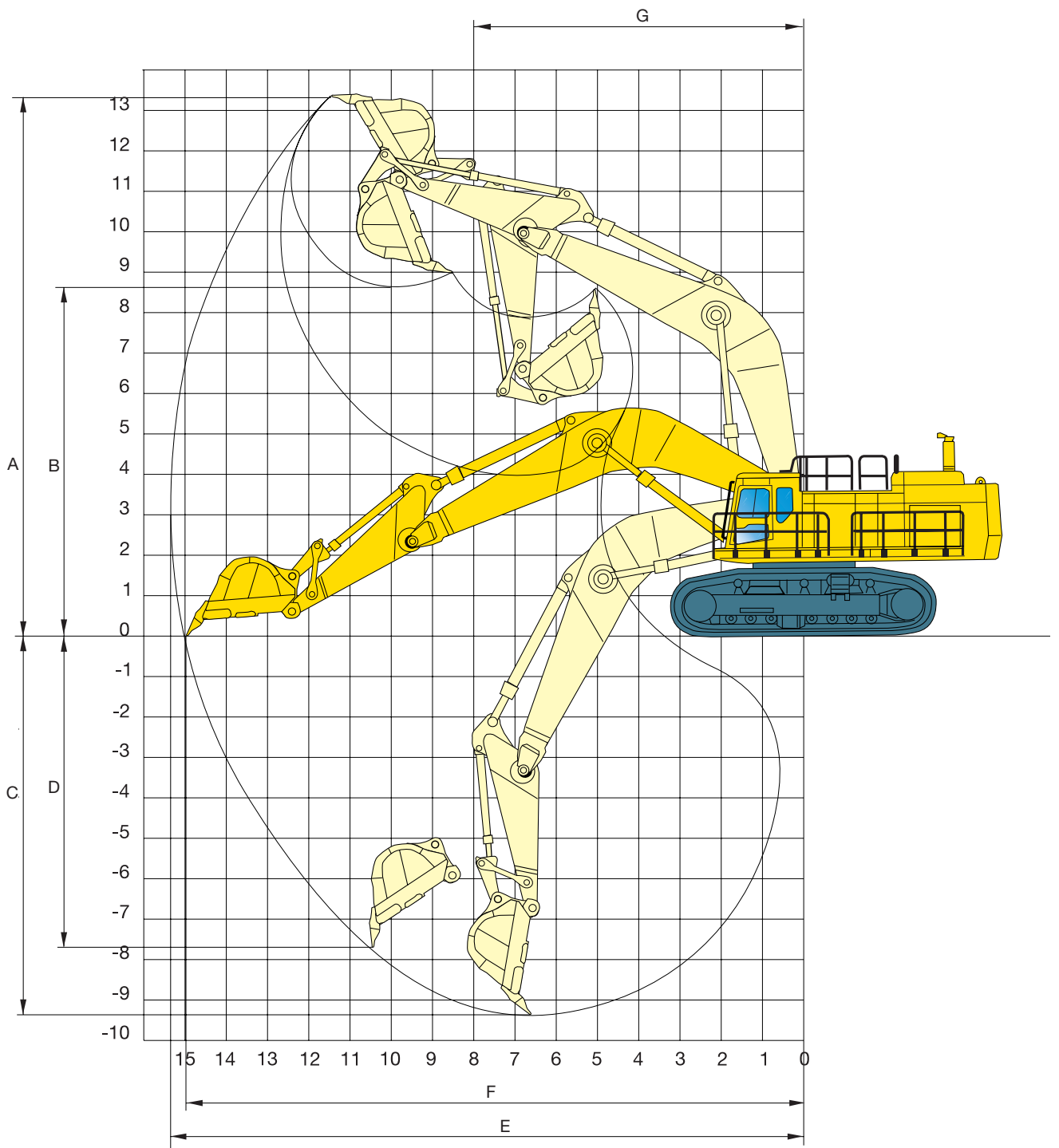
OPERATING WEIGHT

PC1100: Operating weight, including 9100 mm one-piece boom, 3400 mm arm, SAE heaped 5.0 m³ backhoe bucket, 700 mm double-grouser shoes, operator, lubricant, coolant and full fuel tank and the standard equipment 103,000kg

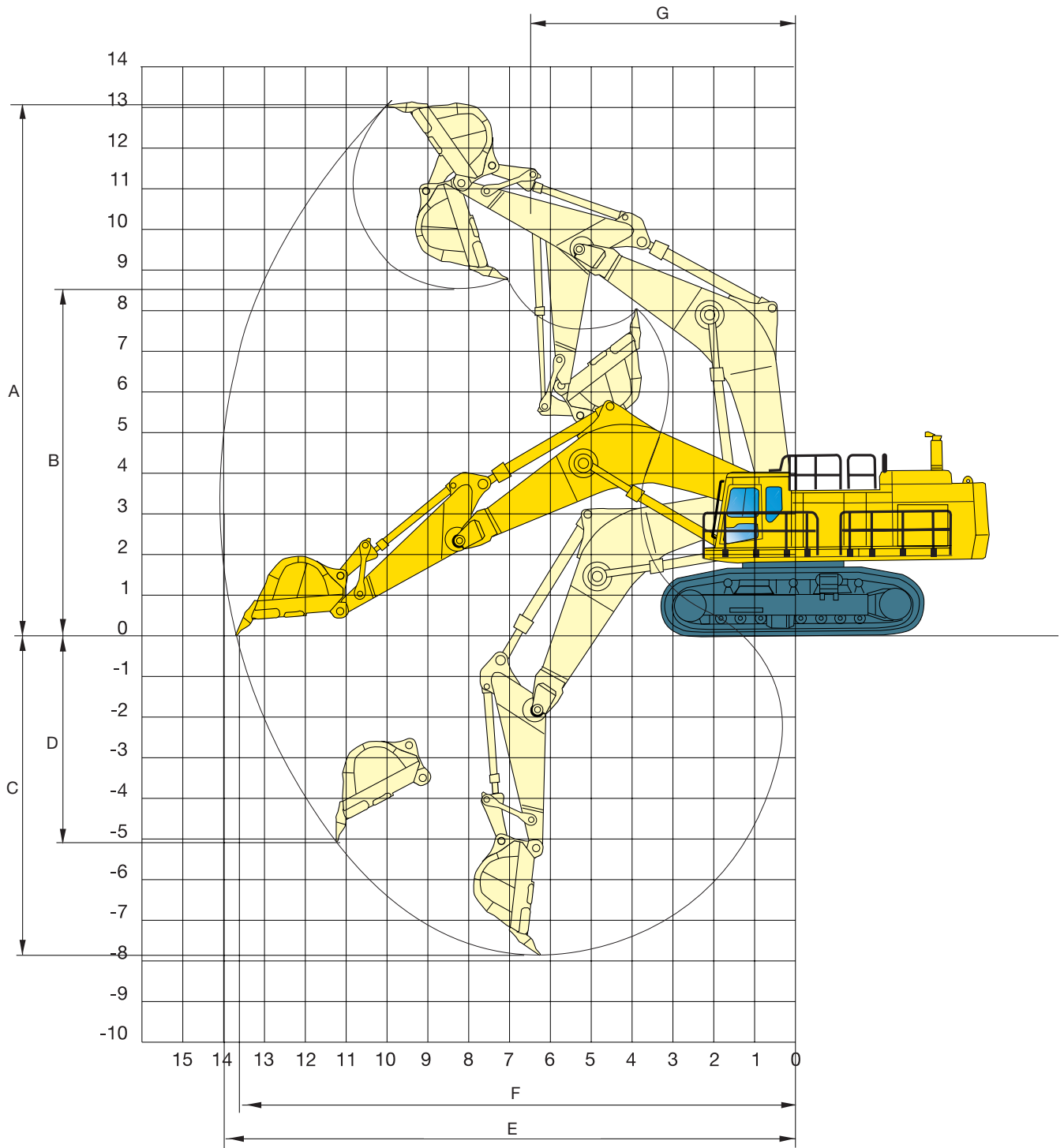
PC1100SP: Operating weight, including 7800 mm one-piece boom, 3400 mm arm, SAE heaped 6.5 m³ backhoe bucket, 700 mm double-grouser shoes, operator, lubricant, coolant and full fuel tank and the standard equipment 104,000kg

SWING SYSTEM

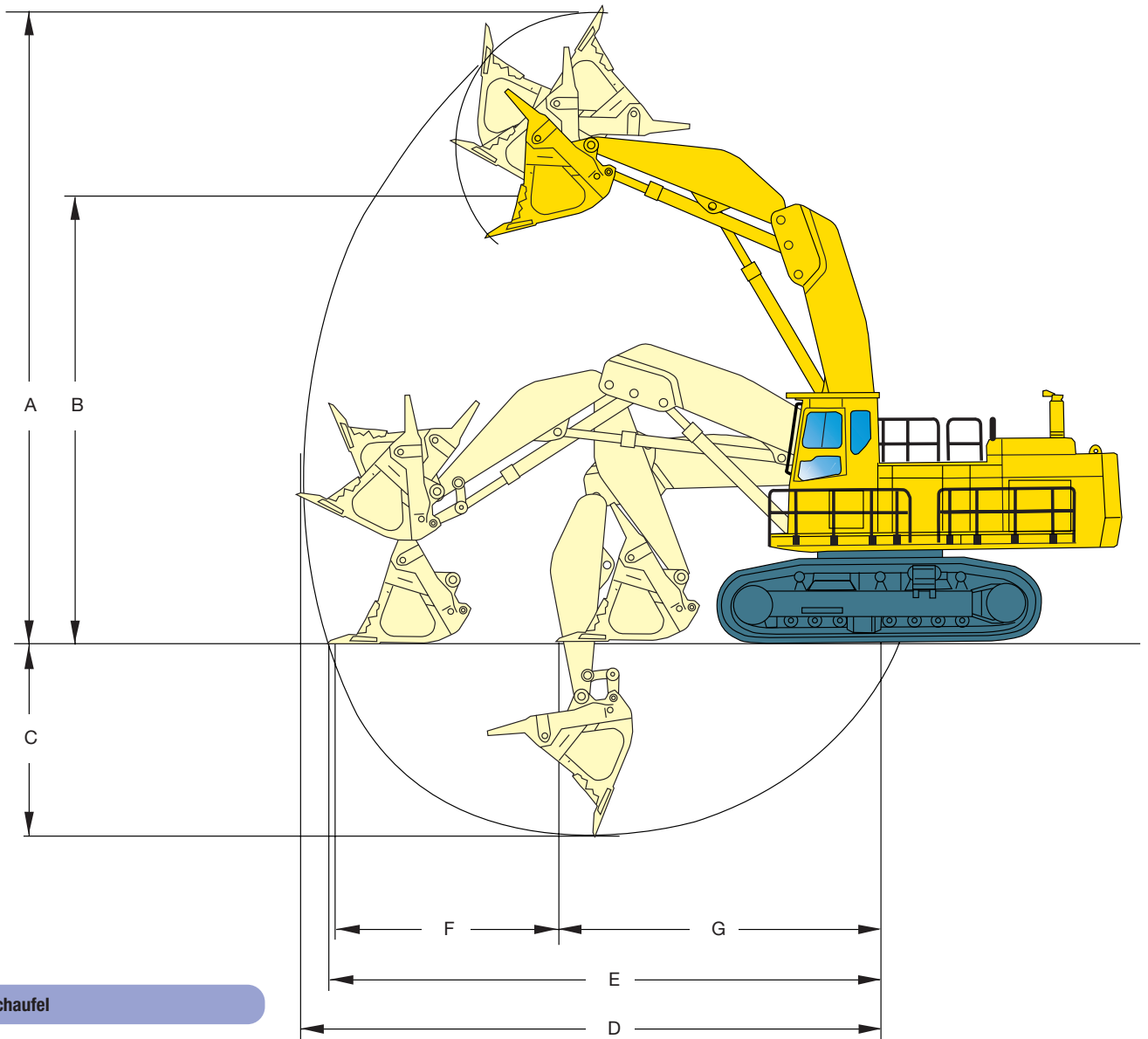
Two piston motors power the swing system through the swing machinery with spur and planetary reduction gears. The wet disc brake is automatically applied when the control levers are in neutral .
 Swing speed 5.8 RPM



| Arm length | | Standard arm | Semi-long arm | Long arm |
|------------|------------------------------------|-------------------|-------------------|-------------------|
| A | Max. digging height | 13400 mm | 13490 mm | 13910 mm |
| B | Max. dumping height | 8670 mm | 9000 mm | 9440 mm |
| C | Max. digging depth | 9350 mm | 10440 mm | 11590 mm |
| D | Max. vertical wall depth | 7610 mm | 8490 mm | 9480 mm |
| E | Max. digging reach | 15350 mm | 16340 mm | 17450 mm |
| F | Max. digging reach at ground level | 15000 mm | 16000 mm | 17130 mm |
| G | Min. swing radius | 7965 mm | 7990 mm | 8150 mm |
| | Bucket digging force | 43000 kg / 422 kN | 43000 kg / 422 kN | 35000 kg / 343 kN |
| | Arm crowd force | 40000 kg / 392 kN | 33300 kg / 327 kN | 28700 kg / 282 kN |



| Arm length | | SP arm |
|------------|------------------------------------|-------------------|
| A | Max. digging height | 13000 mm |
| B | Max. dumping height | 8450 mm |
| C | Max. digging depth | 7900 mm |
| D | Max. vertical wall depth | 5025 mm |
| E | Max. digging reach | 14070 mm |
| F | Max. digging reach at ground level | 13670 mm |
| G | Min. swing radius | 6415 mm |
| | Bucket digging force | 48000 kg / 471 kN |
| | Arm crowd force | 40000 kg / 392 kN |



Klappschaufel

| | | | |
|-----------------|----------------|------|------|
| Schnittbreite | mm | 2450 | 2650 |
| Inhalt nach SAE | m ³ | 6,0 | 6,5 |
| Gewicht | kg | 9900 | 9070 |
| Panzerstufe | | III | I |

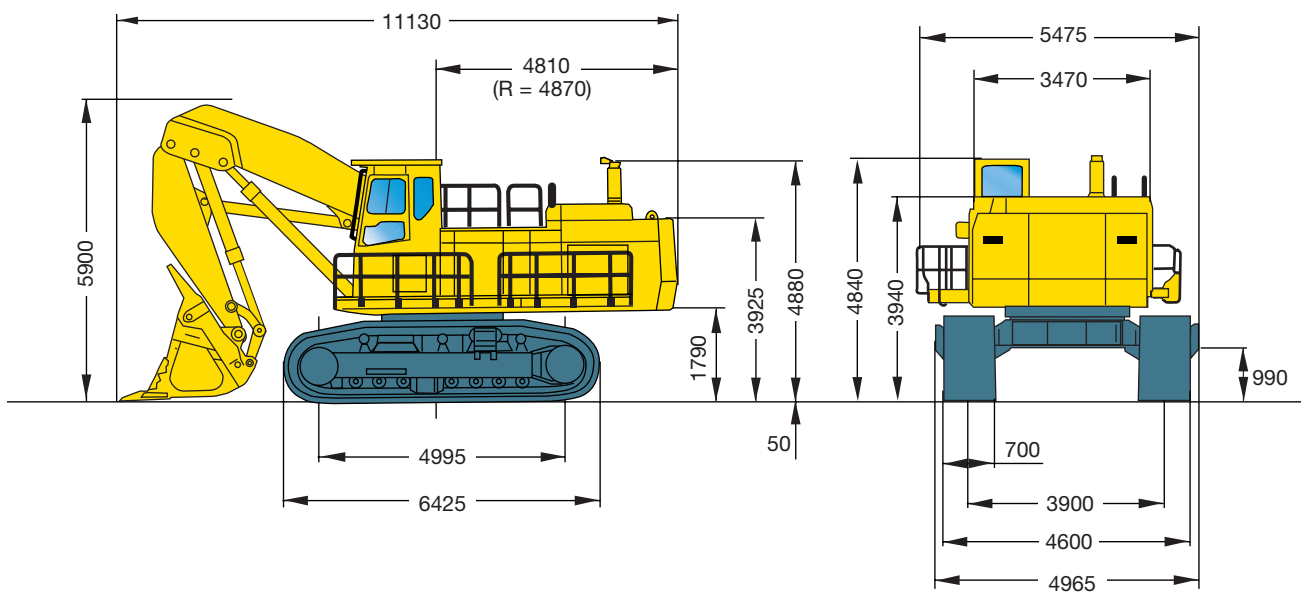
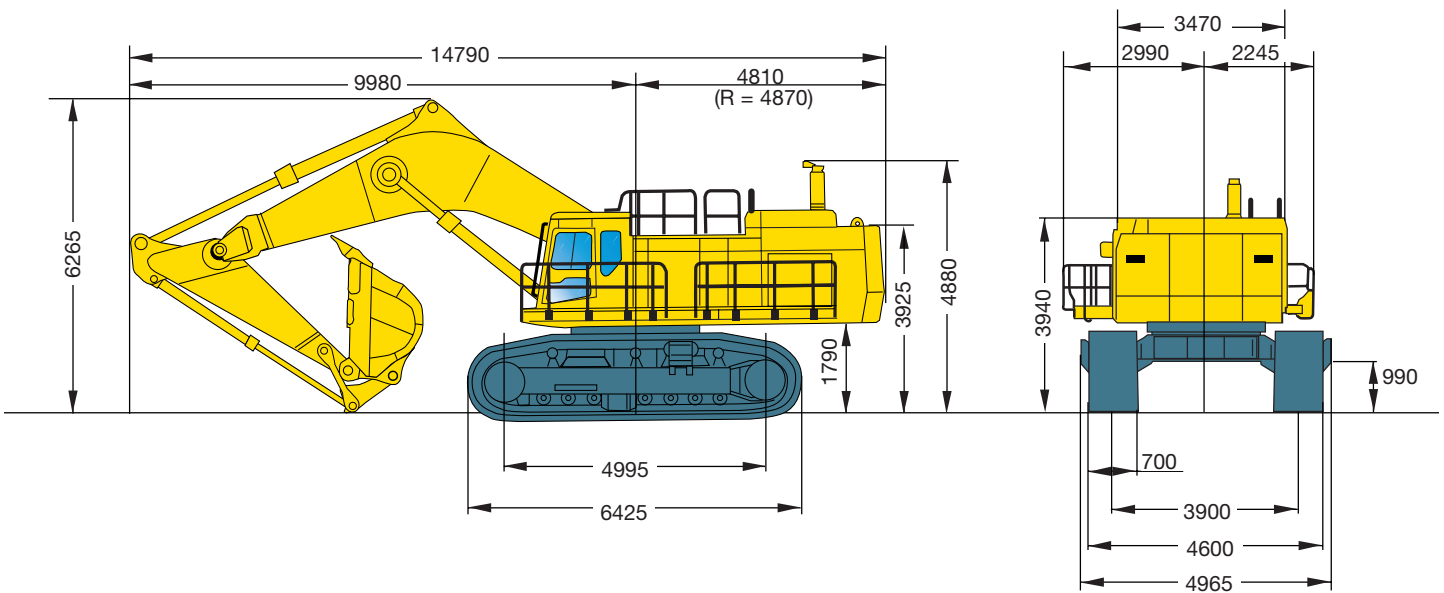
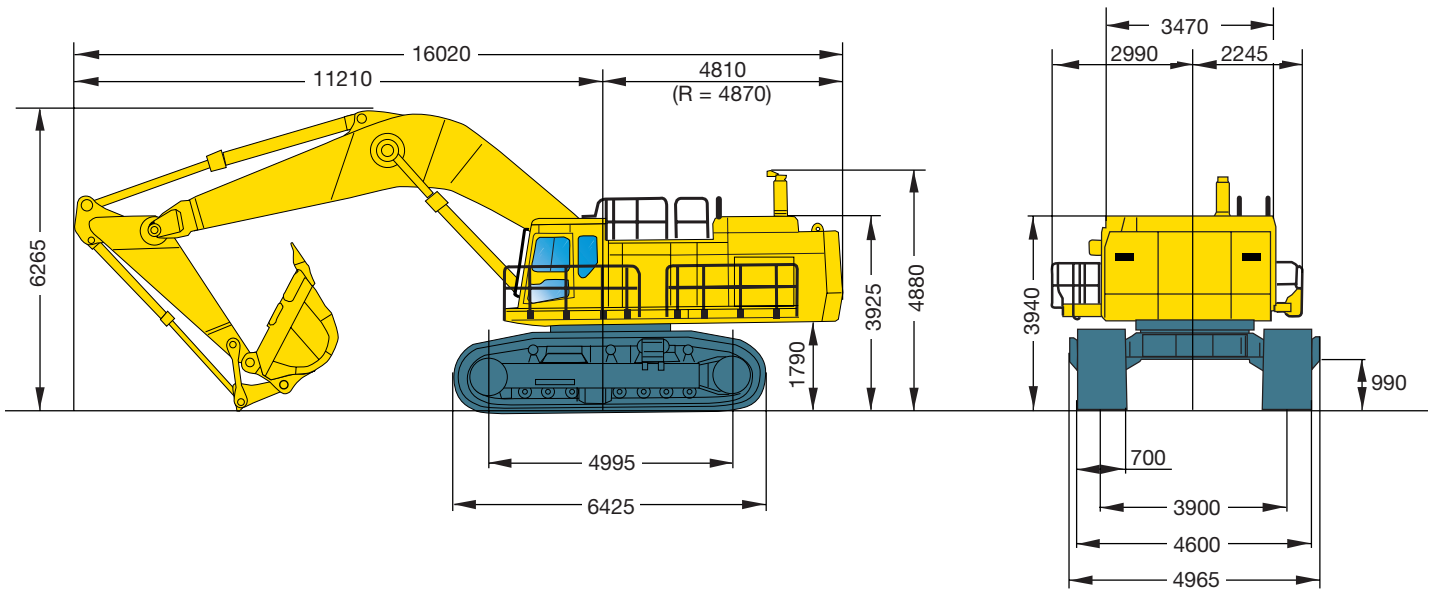
Arm length

Klappschaufel

| | | |
|---|------------------------------------|----------|
| A | Max. digging height | 12400 mm |
| B | Max. dumping height | 8790 mm |
| C | Max. digging depth | 3650 mm |
| D | Max. vertical wall depth | 11400 mm |
| E | Max. digging reach | 11020 mm |
| F | Max. digging reach at ground level | 4700 mm |
| G | Min. swing radius | 6320 mm |
| | Bucket digging force | 574 kN |
| | Arm crowd force | 549 kN |

DIMENSIONS

PC1100SP-6



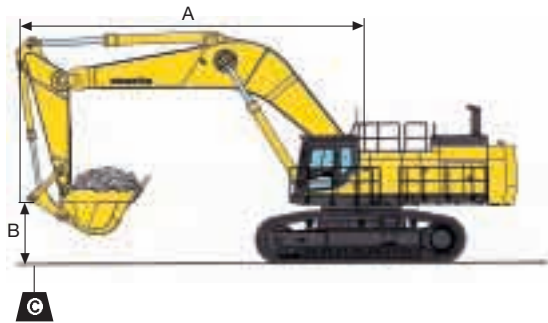
NOTES

LIFTING CAPACITIES

PC1100-6
PC1100SP-6

PC1100-6

- 9100 mm boom
- 5.0 m³ Löffel SAE gehäuft
- 700 mm mit Zweisteg-Bodenplatten



- L – Arm length 3400 mm
- A – Reach from swing center
- B – Bucket hook height
- Rating over front
- Rating over side
- Rating at maximum reach

“OFF”

| B \ A | | | | 12.2 m | | 10.7 m | | 9.1 m | | 7.6 m | | 6.1 m | | 4.6 m | |
|--------|----|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | | | | | | | | | | | | | |
| 9.1 m | kg | *15200 | *15200 | | | *15500 | *15500 | | | | | | | | |
| 7.6 m | kg | *15400 | 13750 | | | *16200 | *16200 | *18000 | *18000 | | | | | | |
| 6.1 m | kg | *15850 | 12300 | | | *17300 | 16400 | *19950 | *19950 | *24400 | *24400 | | | | |
| 4.6 m | kg | 15150 | 11450 | 15750 | 11950 | *18600 | 15750 | *22050 | 20700 | *27850 | 27750 | | | | |
| 3.0 m | kg | 14650 | 11000 | 15400 | 11600 | 19700 | 15050 | *23900 | 19600 | *30550 | 26050 | | | | |
| 1.5 m | kg | 14700 | 11000 | 15100 | 11300 | 19150 | 14500 | 23500 | 17650 | *32150 | 24950 | | | | |
| 0 m | kg | 15250 | 11450 | | | 18750 | 14150 | 22750 | 16950 | 32550 | 24500 | | | | |
| -1.5 m | kg | 16500 | 12400 | | | 18650 | 14050 | 22750 | 16950 | *32250 | 24400 | *40650 | 35600 | | |
| -3.0 m | kg | 18800 | 14200 | | | 18850 | 14250 | 24150 | 18300 | *30750 | 24650 | *38350 | 36200 | *39300 | *39300 |
| -4.6 m | kg | *20200 | 17550 | | | | | *21950 | 18800 | *27850 | 25300 | *34600 | *34600 | *42600 | *42600 |
| -6.1 m | kg | *20200 | *20200 | | | | | | | *21900 | *21900 | *28150 | *28150 | | |

“ON”

| B \ A | | | | 12.2 m | | 10.7 m | | 9.1 m | | 7.6 m | | 6.1 m | | 4.6 m | |
|--------|----|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | | | | | | | | | | | | | |
| 9.1 m | kg | *17200 | 16100 | | | *18000 | 17200 | | | | | | | | |
| 7.6 m | kg | *17350 | 13750 | | | *18750 | 16950 | *20700 | *20700 | | | | | | |
| 6.1 m | kg | 16150 | 12300 | | | -20050 | 16400 | *22950 | 21900 | *27900 | *27900 | | | | |
| 4.6 m | kg | 15150 | 11450 | 15750 | 11950 | 20400 | 15750 | *25350 | 20700 | *31850 | 27750 | | | | |
| 3.0 m | kg | 14650 | 11000 | 15400 | 11600 | 19700 | 15050 | 25550 | 19600 | 34200 | 26050 | | | | |
| 1.5 m | kg | 14700 | 11000 | 15100 | 11300 | 19150 | 14500 | 23500 | 17650 | 33050 | 24950 | | | | |
| 0 m | kg | 15250 | 11450 | | | 18750 | 14150 | 22750 | 16950 | 32500 | 24500 | | | | |
| -1.5 m | kg | 16500 | 12400 | | | 18650 | 14050 | 22750 | 16950 | *32450 | 24400 | *46450 | 35600 | | |
| -3.0 m | kg | 18800 | 14200 | | | 18850 | 14250 | 24150 | 18300 | 32750 | 24650 | *43900 | 36200 | *43550 | *43550 |
| -4.6 m | kg | 23050 | 17550 | | | | | 24700 | 18800 | *32050 | 25300 | *39700 | 37150 | *48850 | *48850 |
| -6.1 m | kg | *23500 | *23500 | | | | | | | *25450 | *25450 | *32550 | *32550 | | |

* Load is limited by hydraulic capacity rather than tipping.
Ratings are based on SAE Standard No. J1097.
Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.

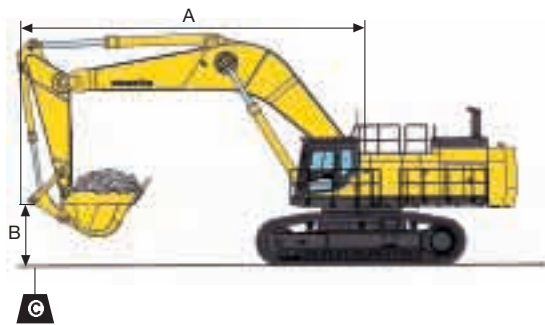
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LIFTING CAPACITIES

PC1100-6
PC1100SP-6

PC1100SP-6

- 9100 mm boom
- 5.0 m³ Löffel SAE gehäuft
- 700 mm mit Zweisteg-Bodenplatten



- L – Arm length 3400 mm
- A – Reach from swing center
- B – Bucket hook height
- Rating over front
- Rating over side
- Rating at maximum reach

“OFF”

| B \ A | | | | 12.2 m | | 10.7 m | | 9.1 m | | 7.6 m | | 6.1 m | | 4.6 m | |
|--------|----|--------|--------|--------|--|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | | | | | | | | | | | | | |
| 9.1 m | kg | *12650 | *12650 | | | | | *17950 | *17950 | | | | | | |
| 7.6 m | kg | *12600 | *12600 | | | | | *20500 | *20500 | | | | | | |
| 6.1 m | kg | *13050 | *13050 | | | *17050 | 15850 | *21950 | *21950 | *25950 | *25950 | *32850 | *32850 | | |
| 4.6 m | kg | *13950 | *13950 | | | 20150 | 15450 | *23700 | 21100 | *29050 | *29050 | *38450 | *38450 | | |
| 3.0 m | kg | *15300 | 13450 | | | 19650 | 15000 | *25300 | 20150 | *31650 | 27600 | *42550 | 39550 | | |
| 1.5 m | kg | *17350 | 13500 | | | 19200 | 14550 | 25350 | 19350 | 31250 | 24100 | *44100 | 37800 | | |
| 0 m | kg | 18850 | 14200 | | | 18950 | 14300 | 24800 | 18850 | 31050 | 23050 | *43600 | 37100 | | |
| -1.5 m | kg | 20900 | 15800 | | | | | 24650 | 18700 | *30100 | 23100 | *41300 | 37100 | *43400 | *43400 |
| -3.0 m | kg | *21350 | 18950 | | | | | *21400 | 19000 | *27600 | 24250 | *36900 | *36900 | *46650 | *46650 |
| -4.6 m | kg | *20300 | *20300 | | | | | | | *21450 | *21450 | *29250 | *29250 | *36700 | *36700 |
| -6.1 m | kg | | | | | | | | | | | | | | |

“ON”

| B \ A | | | | 12.2 m | | 10.7 m | | 9.1 m | | 7.6 m | | 6.1 m | | 4.6 m | |
|--------|----|--------|--------|--------|--|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | | | | | | | | | | | | | |
| 9.1 m | kg | *14450 | *14450 | | | | | *20250 | *20250 | | | | | | |
| 7.6 m | kg | *14400 | *14400 | | | | | *23500 | 22700 | | | | | | |
| 6.1 m | kg | *14900 | *14900 | | | *19250 | 15850 | *25200 | 22000 | *29550 | *29550 | *37100 | *37100 | | |
| 4.6 m | kg | *15850 | 14000 | | | 20150 | 15450 | *27150 | 21100 | *33050 | 29250 | *43550 | 42650 | | |
| 3.0 m | kg | *17300 | 13450 | | | 19650 | 15000 | 26200 | 20150 | 35950 | 27600 | *48250 | 39550 | | |
| 1.5 m | kg | 17900 | 13500 | | | 19200 | 14550 | 25350 | 19350 | 32200 | 24100 | *50100 | 37800 | | |
| 0 m | kg | 18850 | 14200 | | | 18950 | 14300 | 24800 | 18850 | 31050 | 23050 | *49550 | 37100 | | |
| -1.5 m | kg | 20900 | 15800 | | | | | 24650 | 18700 | 31100 | 23100 | *47050 | 37100 | *48150 | *48150 |
| -3.0 m | kg | *24750 | 18950 | | | | | *24800 | 19000 | *31900 | 24250 | *42200 | 37600 | *53300 | *53300 |
| -4.6 m | kg | *23700 | *23700 | | | | | | | *25000 | *25000 | *33750 | *33750 | *42250 | *42250 |
| -6.1 m | kg | | | | | | | | | | | | | | |

* Load is limited by hydraulic capacity rather than tipping.
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Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.

Änderungen der technischen Daten bleiben vorbehalten.

HYDRAULIC EXCAVATOR PC1100-6 / PC1100SP-6



STANDARD EQUIPMENT

Standard and optional equipment may vary. Consult your Komatsu dealer for more information.

Engine

- Engine, Komatsu SAA6D170E
- Alternator, 90-ampere
- Auto-decelerator system
- Batteries, 2X12-volt 170-AH
- Starting motor, 2X7.5-kW

Cab

- Air conditioner
- Seat, suspension type
- Cab, sound suppression
- Cab mount, standard height
- Floor mat
- Horn, air

- Intermittent wipers
 - Luggage box
 - Seat belt
 - Sun shade for roof window
 - Monitor, tiltable
 - with working mode & heavy lift mode selection system
 - with inspection monitor
 - Rear view mirror, RH, LH
- ### Lighting system
- Working lights, standard (two on boom, one on rev. frame)
 - Step light, timer-off

Undercarriage

- Track roller guards and additional guiding guards
- Track shoe assembly, 700mm, double grouser

Guards & covers

- Revolving frame under cover

Hydraulic system

- E-OLSS(Electronic open-centre load sensing system)
- In-line filter, high pressure

Others

- Catwalk & Handrail
- General Tool kit
- PM service connectors
- Spare parts for first service
- Shockless boom control
- Swing priority function
- Two mode boom setting
- Vandalism protection kit

OPTIONAL EQUIPMENT

Cab

- Heater
- Radio, AM/FM

Lighting system

- Working lights, front (two on the cab)

Loading shovel arrangements

- Boom, arm, hydraulic controls, cylinders, bucket linkage, piping for boom, arm and bucket

- Automatic level digging system
 - Bucket angle assist system
- ### Undercarriage
- Track roller guards, full length (for quarry operation)
 - Track shoe assembly, 1000 mm, double grouser, holed
- ### Buckets
- Wide range of Komatsu buckets

- Cab front full guard

- FOPS
- Lifting capacity chart
- Travel alarm

Others

- Track frame under cover
- Revolving frame under covers, heavy duty type
- Rock protector for crawler frame

- Alternator, 50-ampere
- Air grease gun
- Batteries, 2X12 Volt 200 ah large capacity
- Fire extinguisher
- First aid kit
- Starting motors, 2x11-kW
- Water separator

KOMATSU

**Komatsu Europe
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