

# KOMATSU

## PC8000-6 Loading Shovel PC8000-6 Backhoe

### ENGINE POWER

2 x 1500 kW / 2010 HP @ 1800 rpm

### OPERATING WEIGHT

752–777 ton / 1,658,200–1,713,300 lb

### SHOVEL CAPACITY

42 m<sup>3</sup> / 55 yd<sup>3</sup> SAE 2:1 heaped

### BACKHOE CAPACITY

42 m<sup>3</sup> / 55 yd<sup>3</sup> SAE 1:1 heaped

**PC**  
**8000**

HYDRAULIC EXCAVATOR





# WALK-AROUND



## ***Quality in Manufacturing***

Commitment to „Quality and Reliability“

- Quality management ISO 9001
- Environmental management ISO 14001
- Occupational health and safety management system BS OHSAS 18001:2007
- High consistent quality through continuous investment in personnel, design and manufacturing systems and processes

## ***Powerful Diesel Engine***

Two Komatsu SDA16V160E-2 Tier 2 engines

- Rated (each) 1500 kW (2100 HP), at 1800 rpm
- Electronic engine management
- Low engine emission levels Tier 2 certificated
- Time saving Engine Oil Management System; Centinel, Engine Reserve Oil Supply and Eliminator Oil Filter System

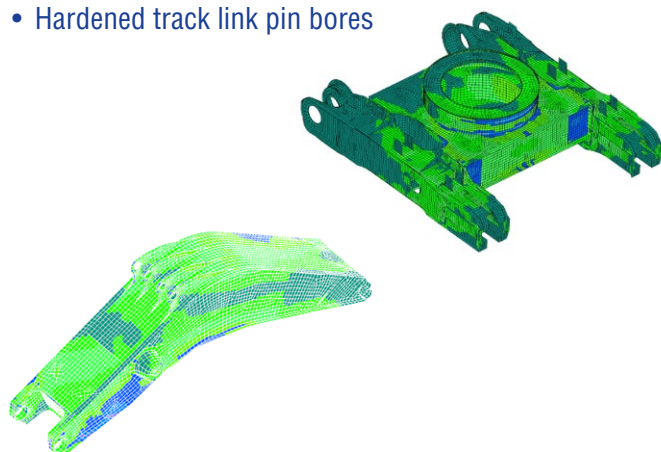
## ***Reliability and Durability***

Long life and low operating cost by design

- Robust structural design developed from field experience and finite element analysis

Undercarriage

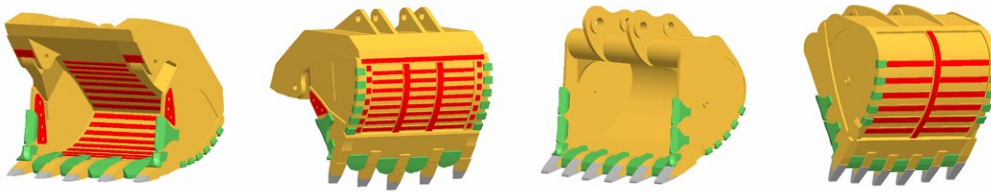
- Large diameter rollers, idlers and sprockets
- Large surface area and extensive precision hardening of all engaging components reduce track wear
- Hardened track link pin bores



**Productivity**

Designed for more tons per hour

- Powerful digging forces
- Ease of bucket filling
- Proven attachment design
- All cylinders mounted in the shadow of the attachment for protection
- Various buckets and wear packages to suit all material densities and properties
- IPCC Systems up to 8,000 t/h

**Advanced Hydraulics**

Extended reliability and precise control

- Comprehensive monitored filtration
- Simple open circuit hydraulic system with high efficiency swing out oil coolers

**Large Comfortable Cab**

Comfortable for the whole day

- Komatsu low noise cab on multiple viscous mounts for reduced noise and vibration
- Large volume cab with full height front window
- Comprehensive climate control with pressurised filtered air ventilation and air conditioning
- High specification multi-adjustable air suspension seat plus trainer seat
- Well elevated operator position giving good all round view
- Large wash wiper covers windshield area for excellent visibility

**Easy and Safe Maintenance**

Simple, common-sense design provides easy access to all major components

- Generous access to all major service points from machinery house floor level
- Enclosed, walk-in machinery house with partition wall separating engines from pump area
- Automatic central lubrication
- KOMTRAX Plus electronic monitoring system providing real time information about the operating status of the machine
- Ground-level access to hydraulically powered swing down service arm with Wiggins connections
- Acknowledges EMESRT design philosophies

**MATCHES**

240 to 400 U.S. ton TRUCKS

**OPERATING WEIGHT**

Shovel 752–767 ton

1,658,200–1,691,200 lb

Backhoe 763–777 ton

1,682,400–1,713,300 lb

**BUCKET CAPACITY**

Shovel 42 m<sup>3</sup> / 55 yd<sup>3</sup>

Backhoe 42 m<sup>3</sup> / 55 yd<sup>3</sup>

# SPECIFICATIONS



## DIESEL DRIVE

Tier 2 engine:

Model. . . . . 2 x Komatsu SDA16V160E-2  
Type . . . . . 4-cycle, water-cooled, direct injection  
Aspiration. . . . . Turbocharged and aftercooled  
Number of cylinders . . . . . 16  
Rated power. . . . . 2 x 1500 kW (2010 HP) @ 1800 rpm  
(SAE 1995/J1349)

Governor . . . . . All-speed, electronic  
The integrated engine oil and filter system combining the oil stabilising systems, Reserve and Centinel, with Eliminator oil filter extends the oil change interval to 4,000 hours based on oil analysis. The high capacity Mesabi engine radiators are cooled by a hydraulically driven fan for superior cooling efficiency.



## ELECTRIC SYSTEM (Diesel Version)

System. . . . . 24 V  
Batteries (series/parallel) . . . . . 8 x 12 V  
Alternator. . . . . 2 x 100 A  
Standard working lights . . . . . 14 Xenon Lights  
Standard service lights . . . . . Throughout platform



## ELECTRIC DRIVE

Type . . . . . 2 x Squirrel-cage induction motor  
Power output . . . . . 2 x 1450 kW  
Voltage. . . . . 6,000 – 7,200 V\*  
Amperage (approximate) . . . . . 2 x 155 A – 2 x 128 A  
Frequency standard . . . . . 60 Hz @ 1800 rpm  
Frequency option . . . . . 50 Hz @ 1500 rpm

\*Other voltages available on request



## ELECTRIC SYSTEM (Electric Version)

System. . . . . 24 V  
Batteries (series/parallel) . . . . . 4 x 12 V  
Standard working lights . . . . . 14 Xenon Lights  
Standard service lights . . . . . Throughout platform



## UNDERCARRIAGE

Track adjustment . . . . . Automatic hydraulic type  
Number of shoes . . . . . 49 each side  
Number of top rollers. . . . . 3 each side  
Number of bottom rollers . . . . . 8 each side



## TRAVEL AND BRAKE SYSTEMS

Travel control . . . . . 2 foot pedals  
Gradeability . . . . . Up to 50%  
Travel speed (maximum) . . . . . 2,4 km/h / 1.5 mph  
Service brake . . . . . Hydraulic brake  
Parking brake . . . . . Wet, multiple-disc



## SWING SYSTEM

Hydraulic motors and drives . . . . . 3  
Swing brake, service . . . . . Hydraulic brake  
Swing brake, parking . . . . . Wet, multiple-disc  
Swing ring teeth. . . . . External  
Swing speed (maximum) . . . . . 2,7 rpm



## HYDRAULICS

The power train consists of two main drives. Each of two gearboxes drives four identical pumps which draw hydraulic oil from an unpressurised hydraulic tank. Open circuit hydraulics provide maximum cooling and filtering efficiency.

Rated flow (total output) . . . . . 8.280 ltr/min 2,190 gpm  
Relief valve setting . . . . . 310 bar 4,495 psi  
Swing flow rate . . . . . 2.070 ltr/min 547 gpm  
High pressure in line filters . . . . . 200 microns  
one per pump located at the valve blocks

Full flow return line filters (7 elements) . . . . . 10 microns  
at head of hydraulic tank

Case drain/by-pass return line filters . . . . . 3 microns

The four-circuit system features a load-limiting governor with oil delivery summation to the working circuits and incorporates pressure cut-off control. Hydropilot prioritises hydraulic flow giving smooth hydraulic response, simple hydraulic system layout, and a reduced number of components. The hydraulic system includes large swing-out vertical air-to-oil hydraulic coolers with temperature-regulated hydraulically driven fans.



## AUTOMATIC CENTRALISED LUBRICATION

Three hydraulically powered Lincoln single line automatic lubrication systems are provided as standard, complete with time and volume variable controls. The two central lubrication circuits and open gear grease circuit are supplied by identical pump assemblies from refillable containers which have a capacity of 3 x 300 litres (3 x 80 gal.). Replenishment of the containers is through the Wiggins connections on the service arm.



## SERVICE CAPACITIES

Hydraulic oil tank . . . . .	8.350 ltr	2,206 U.S. gal
Hydraulic system . . . . .	11.500 ltr	3,040 U.S. gal
Fuel . . . . .	13.900 ltr	3,672 U.S. gal
Engine coolant . . . . .	2 x 475 ltr	2 x 125 U.S. gal
Engine oil . . . . .	2 x 290 ltr	2 x 77 U.S. gal
Reserve engine oil make up tank . . . . .	2 x 1.056 ltr	2 x 279 U.S. gal





## OPERATOR CAB

The large and comfortable cab is mounted on 18 viscous damping pads and sound insulated. The cab has automatic climate control and is pressurised. The operator's seat is air suspended, electrically heated and has a lap seat belt and offers multiple adjustments. The trainer seat is also equipped with a lap seat belt. Low-effort joystick controls are electro-hydraulic with foot controls for front shovel clam, crawler and swing brake. Full instrumentation, KOMTRAX Plus and an AM/FM radio with MP3 ready CD player is fitted.

The windshield wash wiper has two speeds and intermittent operation. Amenities include a refrigerator and storage cabinets. Powered and heated mirrors are adjusted from inside the cab. External metal sun blinds on the cab side window and internal roller blinds on all windows are standard. The right hand window is an emergency exit. All windows are tinted parsol green. A walkway is mounted in front of cabin.

Major cab engineering standards are:

- ISO 3449 Falling Objects Protection Structure (FOPS)
- ISO 6396 Noise in operator's cab is 78 dB(A)
- ISO 2631-1 Whole body vibration and shock below 0,5 m/s<sup>2</sup>
- ISO 5349-1 Hand-lever vibration lower 2,5 m/s<sup>2</sup>
- ISO 10263-4 Heating and air conditioning second heater or air conditioner as option



## KOMTRAX Plus HEALTH MONITORING SYSTEM

KOMTRAX Plus is designed for Komatsu mining equipment to provide real time information about the operating status of the machine via a coloured display. The integrated digital storage provides a full event history and trend data, which can be downloaded by laptop. Optionally available are W-LAN or Orbcomm satellite transmission (check for availability in your territory).



## OPERATING WEIGHTS (APPROXIMATE)

### PC 8000 Backhoe:

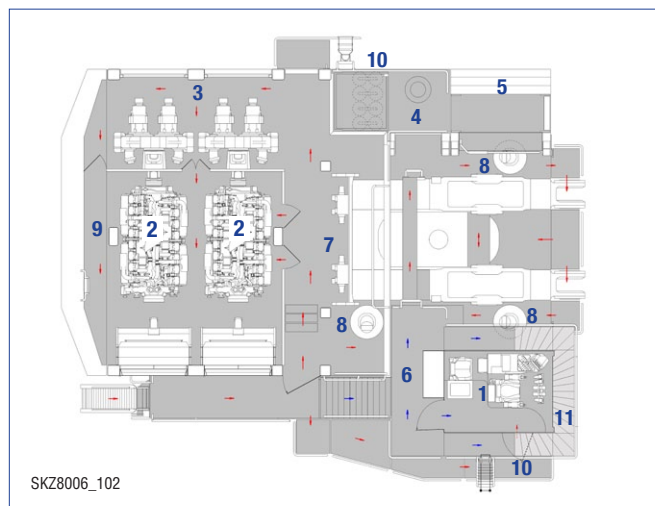
Operating weight including 11.500 mm / 37'9" boom, 5.500 mm / 18'0" stick, 42 m<sup>3</sup> / 55.0 yd<sup>3</sup> backhoe bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1.500 mm 59"	763 t 1,682,400 lb	27,9 N/cm <sup>2</sup> 40.4 psi
1.900 mm 75"	777 t 1,713,300 lb	22,4 N/cm <sup>2</sup> 32.5 psi

### PC 8000 Front Shovel:

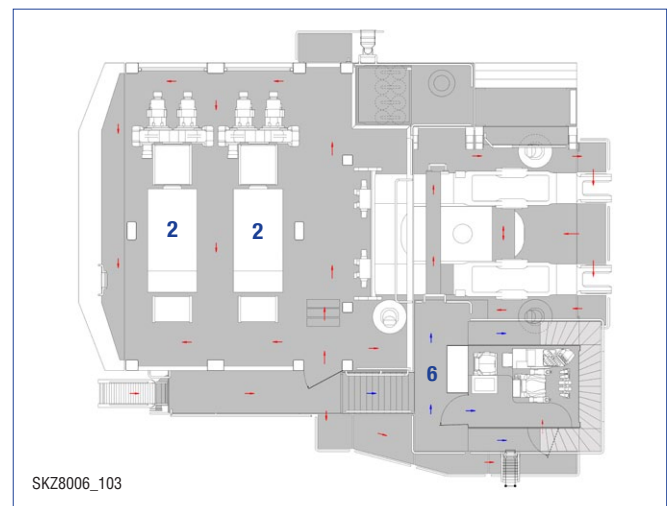
Operating weight including 8.150 mm / 26'9" boom, 5.750 mm / 18'9" stick, 42 m<sup>3</sup> / 55.0 yd<sup>3</sup> shovel bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1.500 mm 59"	752 t 1,658,200 lb	27,5 N/cm <sup>2</sup> 39.9 psi
1.900 mm 75"	767 t 1,691,200 lb	22,1 N/cm <sup>2</sup> 32.0 psi



### Diesel Drive

- |                     |                         |
|---------------------|-------------------------|
| 1 Cab               | 7 Valve Blocks          |
| 2 Diesel Engines    | 8 Swing Motors          |
| 3 Hydraulic Pumps   | 9 Counterweight         |
| 4 Hydraulic Tank    | 10 Secondary Egress     |
| 5 Hydraulic Coolers | 11 See-through Cab Walk |
| 6 Fuel Tank         |                         |



### Variation for Electric Drive Version

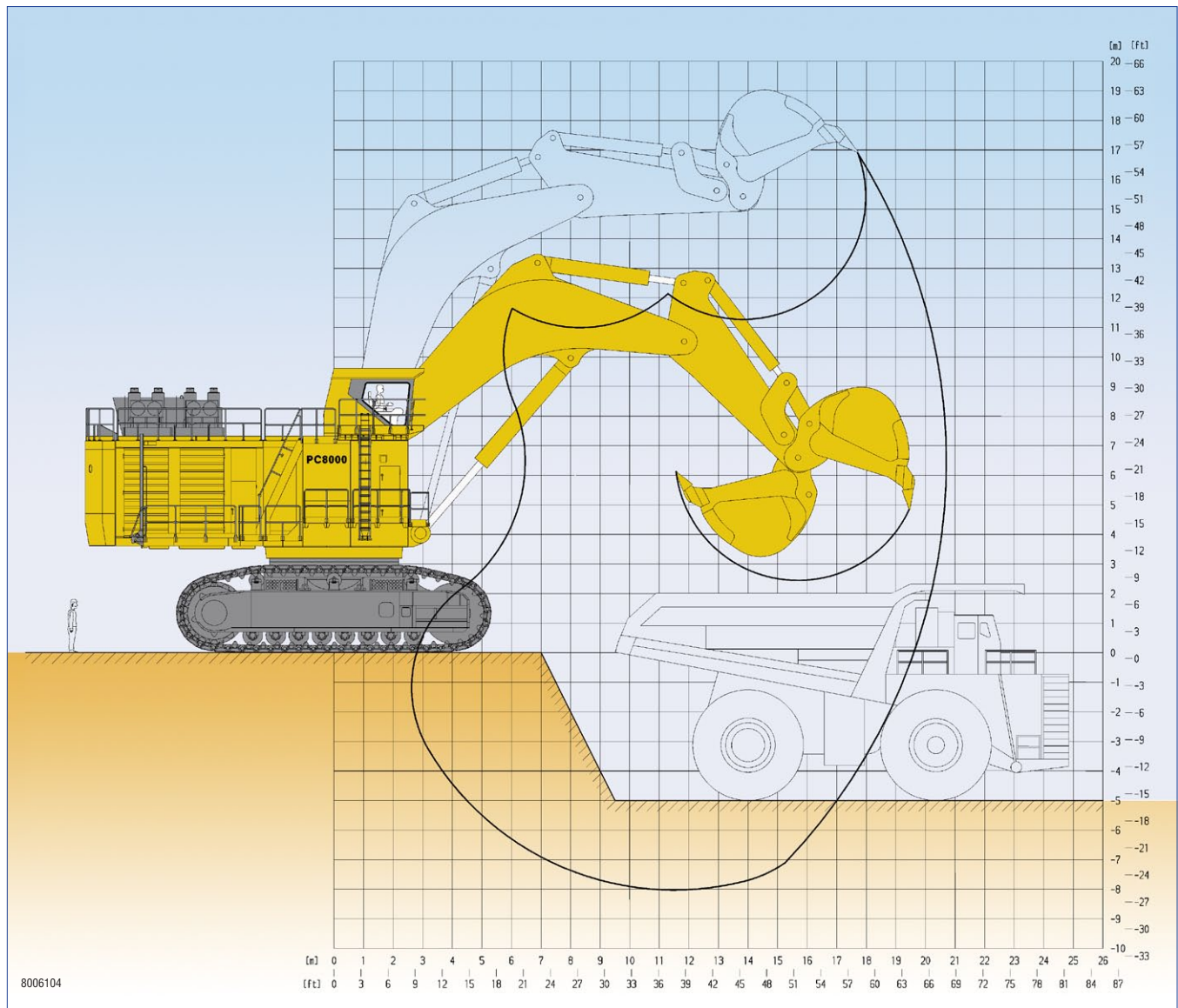
- |                                 |
|---------------------------------|
| 2 Electric Motors               |
| 6 High Voltage Electric Cabinet |

Walkways ← Lower-Level  
← Upper-Level

# PRODUCTIVITY-FEATURES



## BACKHOE ATTACHMENT



Boom length	11.500 mm	37'9"	Max. digging height	16.900 mm	55'5"
Stick length	5.500 mm	27'7"	Max. dumping height	11.200 mm	36'9"
Break-out force (SAE)	2.000 kN	449,500 lb	Max. digging depth	8.000 mm	26'3"
Tear-out force (SAE)	1.800 kN	404,600 lb	Max. digging reach	20.700 mm	67'11"
			Max. digging reach at ground level	19.600 mm	64'4"

Bucket Capacity (Heaped 1:1) SAE		Width		Teeth	Wear Package (*)	Weight		Max. Material Density (Loose)	
cum	cuyd	mm	foot/inch	qty		t	lb	t/cum	lb/cuyd
42,0	55.0	4.575	15'	6	2	48,0	105,840	1,8	3,000

\*) WP 1 Light abrasive

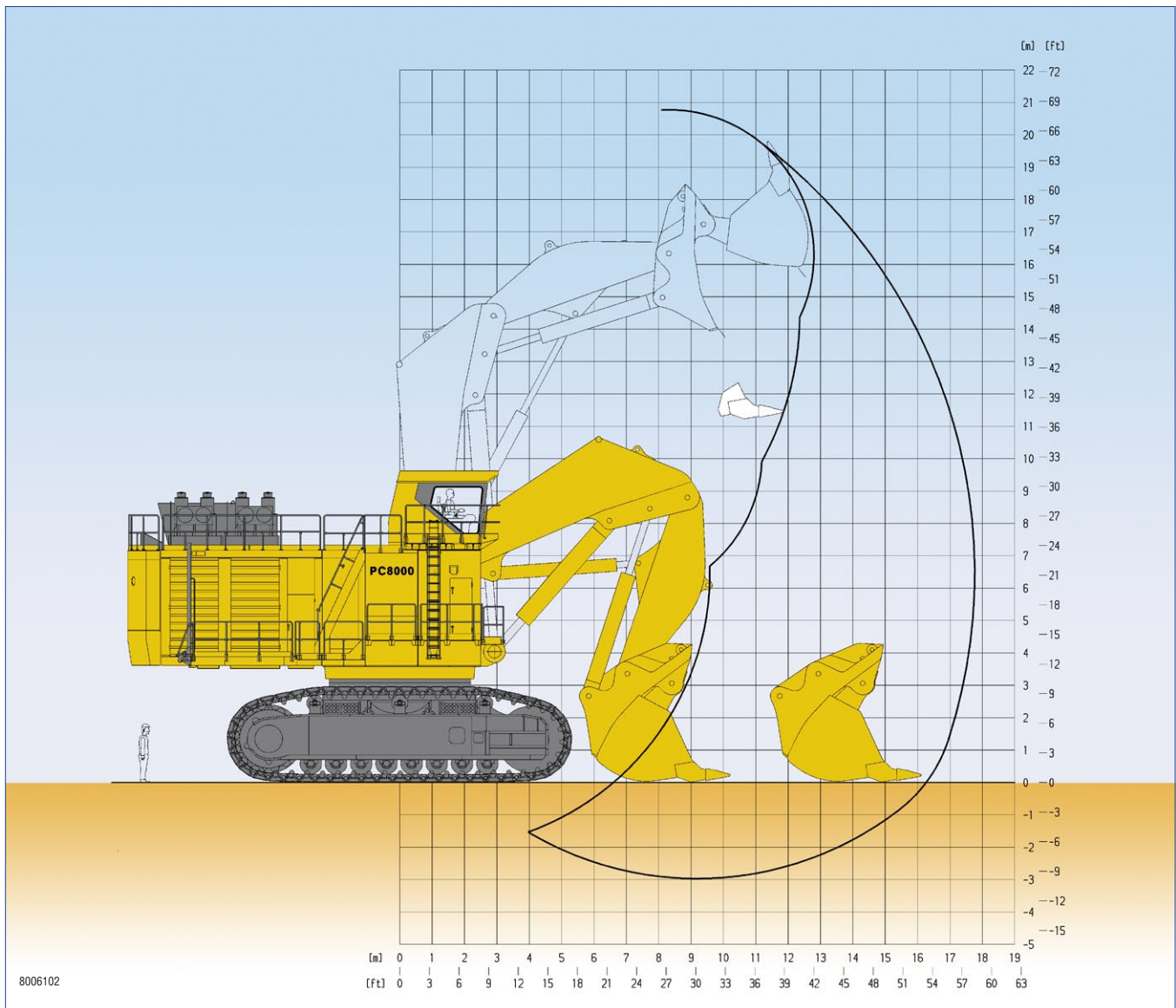
WP 2 Medium abrasive

WP 3 Severe abrasive

Alternative buckets on request



## FRONT SHOVEL ATTACHMENT



Boom length	8.150 mm	26'9"	Max. cutting height	20.900 mm	68'7"
Stick length	5.750 mm	18'9"	Max. dumping height	13.900 mm	45'7"
Break-out force (SAE)	2.320 kN	521,500 lb	Max. digging depth	3.000 mm	9'10"
Crowd force (SAE)	2.320 kN	521,500 lb	Max. digging reach	17.800 mm	58'5"
			Level crowd at ground level	5.900 mm	19'4"
			Bucket opening width	3.200 mm	10'6"

Bucket Capacity (Heaped 2:1) SAE		Width		Teeth	Wear Package )	Weight		Max. Material Density (Loose)	
cum	cuyd	mm	foot/inch	qty		t	lb	t/cum	lb/cuyd
28,0	37.0	4.575	15'	6	3	62,3	137,370	2,8	4,700
36,0	47.0	5.375	17'8"	6	3	70,7	155,890	2,0	3,400
42,0	55.0	5.375	17'8"	6	2	69,7	153,690	1,8	3,000

\*) WP 1 Light abrasive

WP 2 Medium abrasive

WP 3 Severe abrasive

Alternative buckets on request



## STANDARD EQUIPMENT

### HYDRAULIC MINING SHOVEL

#### FRONT SHOVEL ATTACHMENT

- 8,15 m / 26'9" boom
- 5,75 m / 18'9" stick
- Set of cylinders
- 42 m³ / 55 yd³ (SAE 2:1) shovel bucket incl. standard wear package (WP2) with hammerless GET system

#### OR

#### BACKHOE ATTACHMENT

- 11,5 m / 37'9" boom
- 5,5 m / 18'0" stick
- Set of cylinders
- 42 m³ / 55 yd³ (SAE 1:1) bucket incl. standard wear package (WP2) with hammerless GET system

#### CRAWLER UNDERCARRIAGE

- Heavy-duty shovel type undercarriage
- Centre carbody
- 2 heavy box-type track frames
- 8 bottom rollers and 3 top rollers each side
- 1500 mm / 59" cast steel track shoes
- Hydraulic track adjustment and parking brake

### SUPERSTRUCTURE

- Main frame mounted over an externally toothed swing circle carries the drive module
- 2 x Komatsu SDA16V160E-2 Tier 2 diesel engines
- Oil and fuel reservoirs
- Hydraulic components
- Counterweight

#### LIGHTING

- 14 Xenon high performance working lights
- Service lights throughout platform

#### OPERATOR CAB

- Enclosed steel cab mounted on viscous pads
- FOPS according ISO 3449
- Air-conditioning unit Süttrak
- Full suspension operator seat with belt
- Trainer seat with belt
- Controls ergonomic
- KOMTRAX Plus (Monitoring System)
- Joysticks are electro-hydraulic
- 1 large parallel windshield wash wiper
- AM-FM radio with MP3 ready CD player
- Internal and external sun blinds
- All windows tinted parsol green
- Walkway in front of cab

### LUBRICATION

- LINCOLN central lubrication for basic machine and attachment
- LINCOLN central lubrication for bucket and bucket stick assembly
- LINCOLN automatic pinion lubrication system for swing circle teeth
- WIGGINS service arm carrying fluid receiving connectors for filling of fuel, engine oil and coolant, hydraulic oil, grease, and the evacuation of coolant, hydraulic and engine oils

### ACCESSORIES INCLUDED

- Acoustic travel alarm
- Hydraulically actuated ground access ladder
- Electric air horn
- Engine turbo and exhaust pipes cover
- Engine oil management package (Centinel, Reserve & Eliminator systems)
- Service transfer oil pump
- Sidewalks and stairs are provided with skid-resistant plates
- Hand rails and steps on boom
- Tie off points on boom



## OPTIONAL EQUIPMENT

### ATTACHMENT/BUCKET

- Boom cylinder sliding guard
- Stick cylinder sliding guard
- Bucket cylinder sliding guard (BH)

### UNDERCARRIAGE

- 1.900 mm / 75" track shoes

### POWER

- Electro drive various voltages
- Cable drum without cable

### COLD WEATHER

- Cold weather package down to -40° C (diesel and electro drive)
- Arctic weather package down to -50° C (diesel and electro drive)
- KIM Hotstart temperature treatment for ambient temperature down to -50° C (diesel and electro drive), external power source not included

### SPECIFIC HYDRAULIC OIL

- Biodegradable hydraulic oil

### MISCELLANEOUS

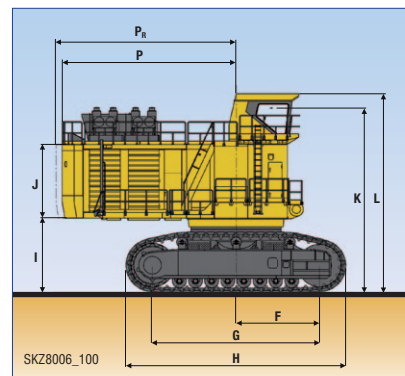
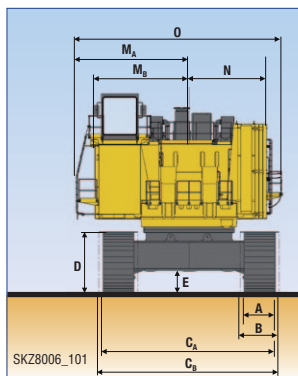
- Fire suppression system
- Camera system acc. ISO5006
- 19 mm thick impact resistant front window
- Additional lighting
- Additional cab A/C
- Additional cab heater
- Service crane
- Special painting



## DIMENSIONS

### BASIC MACHINE WITH COUNTERWEIGHT

A	1500 mm	4'11"	I	3615 mm	11'10"
B	1900 mm	6'3"	J	3560 mm	11'8"
C <sub>A</sub>	8330 mm	27'4"	K	8950 mm	29'4"
C <sub>B</sub>	8730 mm	28'8"	L	9655 mm	31'8"
D	3055 mm	10'0"	M <sub>A</sub>	5480 mm	17'12"
E	1095 mm	3'7"	M <sub>B</sub>	4550 mm	14'11"
F	4050 mm	13'3"	N	3750 mm	12'4"
G	8100 mm	26'7"	O	10010 mm	32'10"
H	10735 mm	35'2"	P	8410 mm	27'7"
			P <sub>R</sub>	8710 mm	28'7"



QESS0087 02

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## شرکت بهراد تهران (با مسئولیت محدود)

نماینده انحصاری ماشین آلات معدنی، بیل های حفاری هیدرولیک کوماتسو آلمان  
تهران، خیابان ولیعصر، بلوار اسفندیار، پلاک ۷۰، واحد ۱، کدپستی ۱۹۶۸۶۵۳۵۱۱  
تلفن ۰۲۱-۸۸۸۸۱۳۳۶ فکس ۰۲۱-۸۸۷۷۴۹۰۰ / ۸۸۷۸۳۰۳۹ / ۸۸۷۸۲۳۷۱

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