PC3000-6 Loading Shovel
PC3000-6 Backhoe

ENGINE POWER
940 kW / 1260 HP @ 1800 rpm

OPERATING WEIGHT
250 – 261 ton / 511,300 – 575,500 lb

SHOVEL CAPACITY
16 m³ 21 yd³ SAE 2:1 heaped

BACKHOE CAPACITY
15 m³ 19.5 yd³ SAE 1:1 heaped
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
- Energy DIN EN ISO 50001
- High consistent quality through continuous investments in personnel, design and manufacturing systems and processes

Powerful Diesel Engine
Komatsu SDA12V159E-2 (Tier 2)
- Rated 940 kW / 1260 HP at 1800 rpm
- Electronic engine management
- Low engine emission levels
- Optional time saving Engine Oil Management System; Centinel, Engine Reserve Oil Supply and Eliminator Oil Filter System

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
Reliability and Durability
Long life and low operating cost by design
- Robust structural design developed from field experience and finite element analysis

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

Advanced Hydraulics
Extended reliability and precise control
- Electronic pump management
- Comprehensive monitored filtration
- Simple open circuit hydraulic system with high efficiency swing out oil coolers

MATCHES
85 to 165 U.S. ton TRUCKS

OPERATING WEIGHT
Shovel 250-258 ton
551,300-568,900 lb
Backhoe 252-261 ton
555,700-575,500 lb

BUCKET CAPACITY
Shovel 16 m³ 21 yd³
Backhoe 15 m³ 19.5 yd³
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 twin wiper covers windshield area for excellent visibility

Komtrax Plus
- Remote monitoring system with access to specific machine data
- Preventive maintenance scheduling
- Reporting information
- Data transfer via Satellite (Orbcom or Iridium)

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 engine from pump area
- Automatic central lubrication
- Ground-level access to hydraulically powered swing down service arm with Wiggins connections
- Acknowledges EMESRT design philosophies
**DIESEL DRIVE**

Tier 2 engine:
- Model: Komatsu SDA12V159E-2, Tier 2 certified
- Type: 4-cycle, water-cooled, direct injection
- Aspiration: Turbocharged and aftercooled
- Number of cylinders: 12
- Rated power: 940 kW / 1260 HP @ 1800 rpm (SAE J1995)
- Governor: All-speed, electronic

Optional engine oil management system:
- The integrated engine oil and filter system combining the oil stabilising systems, Reserve and Centinel, with Eliminator oil filter extends the oil change interval up to 4,000 hours based on oil analysis.

**ELECTRIC DRIVE**

- Type: Squirrel cage induction motor
- Power Output: 900 kW
- Voltage: 6,000 – 7,200 V*
- Amperage (approximate): 96 A – 80 A
- Frequency standard: 60 Hz @ 1800 rpm
- Frequency option: 50 Hz @ 1500 rpm
- * Other voltages available on request

**ELECTRIC SYSTEM**

- System: 24 V
- Batteries (series/parallel): 4 x 12 V
- Alternator: 140 A
- Standard working lights: 12 LED lights
- Standard service lights: Throughout the platform

**UNDERCARRIAGE**

- Track Adjustment: Automatic hydraulic type
- Number of track shoes: 46 each side
- Number of top rollers: 3 each side
- Number of bottom rollers: 7 each side

**TRAVEL AND BRAKE SYSTEMS**

- Gradeability: Up to 57%
- Travel speed (maximum): 2.4 km/h / 1.5 mph
- Service brake: Hydraulic brake
- Parking brake: Multiple-disk

**HYDRUATIC SYSTEM**

- The power train consists of one main drive. Diesel or electric motor can be supplied. One gearbox drives three identical main pumps which draw hydraulic oil from an unpressurised hydraulic tank. Open circuit hydraulics provide maximum cooling and filtering efficiency.
- Main hydraulic pumps: 3 x 910 ltr/min / 3 x 250 gpm
- Relief valve setting: 310 bar / 4,495 psi
- Swing flow rate: 800 ltr/min / 211 gpm
- High pressure in line filters: 200 microns
- One per pump located at the valve blocks
- Full flow return line filters: 3 x 10 microns and leakage line filter: 3 microns all with monitored 200 microns by pass filters.
- The three-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.

**AUTOMATIC CENTRALISED LUBRICATION**

- Two hydraulically powered Lincoln single line automatic lubrication systems are provided as standard, complete with time and volume variable controls. The central lube grease system is supplied from a refillable 200 litre (53 gal.) barrel. A second, identical system supplies open gear lubricant to the swing ring teeth through a lube pinion.
- Replenishment of the barrels is through the service arm.

**SERVICE CAPACITIES**

- Hydraulic oil tank: 2,670 ltr / 705 U.S. gal
- Hydraulic system: 4,400 ltr / 1,160 U.S. gal
- Fuel: 4,500 ltr / 1,190 U.S. gal
- Engine coolant: 254 ltr / 67 U.S. gal
- Engine oil: 190 ltr / 50 U.S. gal
- Lubrication system (total): 400 ltr / 105 U.S. gal

**ENVIRONMENT**

- Vibration levels:
  - Hand-lever (ISO 5349-1): lower than 2.5m/s²
  - Whole body vibration and shock (ISO 2631-1): below 0.5m/s²
- Contains fluorinated greenhouse gas HFC-134a (GWP 1430)
- PC 3000-6 D: Quantity of gas 3.7 kg, CO₂ equivalent 5.3 t
- PC 3000-6 E: Quantity of gas 4.9 kg, CO₂ equivalent 7.0 t
The large and comfortable cab is mounted on 15 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 seat belt. Low-effort hydraulic joystick controls are combined 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 with AUX in is fitted. Two windshield wash wipers are synchronised and have two speeds and intermittent operation. Two heated rear view mirrors are externally mounted. External metal sun blinds on the cab side windows and internal roller blinds on all windows are standard. There is a left hand sliding window. All windows are tinted parsley green. The cab is equipped with a special penetration proof front window (acc. DIN EN 1063, resistance classification BR2-S) to increase the safety level of the operator. A walkway is mounted in front of cabin. (Subject to change without notice)

Major cab engineering standards are:
• ISO 10262 Falling Objects Protection Structure (FOPS)
• ISO 6394 Noise in operator’s cab is max. 77 dB(A)
• ISO 10263-4 Heating and air conditioning second heater as option

The KOMTRAX Plus monitoring system is designed for Komatsu mining equipment to provide real time and stored information about the operating status of the machine. Fault messages are immediately available to the operator via a digital display and in the event of critical malfunctions the engine is also shut down. The digital storage provides failure summary and analysis, which can be downloaded by laptop computer. This data will assist in predicting or reducing downtime. Optionally available is Orbcorn satellite transmission (check for availability in your territory).

**OPERATING WEIGHTS (APPROXIMATE)**

**PC3000 Backhoe:**
Operating weight including 8,600 mm 28’3” boom, 4,000 mm 13’1” stick, 15 m³ (19.5 yd³) backhoe bucket, operator, lubricant, coolant, 1/3 fuel and standard equipment.

<table>
<thead>
<tr>
<th>Shoe Width</th>
<th>Operating Weight</th>
<th>Ground Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 mm 31”</td>
<td>252 t 555,700 lb</td>
<td>23.2 N/cm² 33.6 psi</td>
</tr>
<tr>
<td>1,000 mm 39”</td>
<td>261 t 575,500 lb</td>
<td>19.2 N/cm² 26.5 psi</td>
</tr>
<tr>
<td>1,200 mm 47”</td>
<td>261 t 575,500 lb</td>
<td>16.0 N/cm² 23.2 psi</td>
</tr>
</tbody>
</table>

**PC3000 Front Shovel:**
Operating weight including 6,000 mm 19’8” boom, 4,300 mm 14’1” stick, 16 m³ (21 yd³) shovel bucket, operator, lubricant, coolant, 1/3 fuel and standard equipment.

<table>
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<tr>
<th>Shoe Width</th>
<th>Operating Weight</th>
<th>Ground Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 mm 31”</td>
<td>250 t 551,300 lb</td>
<td>22.9 N/cm² 33.2 psi</td>
</tr>
<tr>
<td>1,000 mm 39”</td>
<td>258 t 568,900 lb</td>
<td>19.0 N/cm² 27.5 psi</td>
</tr>
<tr>
<td>1,200 mm 47”</td>
<td>258 t 568,900 lb</td>
<td>15.8 N/cm² 22.9 psi</td>
</tr>
</tbody>
</table>

**Diesel Drive**
1 Cab
2 Diesel Engine
3 Hydraulic Pumps
4 Hydraulic Tank
5 Hydraulic Coolers
6 Fuel Tank
7 Valve Blocks
8 Swing Motors
9 Counterweight
10 Emergency egress
11 See-through Cat Walk

**Variation for Electric Drive Version**
2 Electric Motor
6 High Voltage Electric Cabinet

Walkways
Upper-Level
Lower-Level
# PC3000-6 Hydraulic Excavator

## Productivity-Features

### Backhoe Attachment

<table>
<thead>
<tr>
<th>Bucket Capacity (Heaped 1:1) SAE</th>
<th>Width</th>
<th>Teeth</th>
<th>Wear Package acc. abrasiveness</th>
<th>GET System</th>
<th>Max. Material Density (Loose)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cum</td>
<td>cuyd</td>
<td>mm</td>
<td>foot/inch</td>
<td>qty</td>
<td></td>
</tr>
<tr>
<td>12.0</td>
<td>15.7</td>
<td>3,045</td>
<td>9’12”</td>
<td>5</td>
<td>heavy</td>
</tr>
<tr>
<td>15.0</td>
<td>19.5</td>
<td>3,260</td>
<td>10’8”</td>
<td>5</td>
<td>standard</td>
</tr>
<tr>
<td>16.5</td>
<td>21.5</td>
<td>3,045</td>
<td>9’12”</td>
<td>5</td>
<td>standard</td>
</tr>
</tbody>
</table>

Alternative buckets on request

*other systems on request

- Boom length: 8,600 mm (28’3”)
- Stick length: 4,000 mm (13’1”)
- Break-out force (ISO): 890 kN (200,050 lb)
- Tear-out force (ISO): 811 kN (182,290 lb)
- Max. digging height: 14,100 mm (46’3”)
- Max. dumping height: 9,000 mm (29’6”)
- Max. digging depth: 7,900 mm (25’11”)
- Max. digging reach: 16,200 mm (53’2”)
- Max. digging reach at ground level: 15,600 mm (51’2”)

*Other systems on request*
FRONT SHOVEL ATTACHMENT

**Bucket Capacity**

<table>
<thead>
<tr>
<th>SAE cum</th>
<th>SAE cuyd</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0</td>
<td>15.7</td>
</tr>
<tr>
<td>16.0</td>
<td>21.0</td>
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<tr>
<th>Width</th>
<th>Teeth</th>
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<tr>
<td>mm</td>
<td>qty</td>
<td>acc. abrasiveness</td>
<td></td>
<td>t/cum</td>
</tr>
<tr>
<td>3,430</td>
<td>5</td>
<td>heavy duty</td>
<td>Hensley XS 252 *</td>
<td>2.4</td>
</tr>
<tr>
<td>3,790</td>
<td>6</td>
<td>standard</td>
<td>Hensley XS 252 *</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Alternative buckets on request

*other systems on request*
FRONT SHOVEL ATTACHMENT
- 6.0 m 19'8" boom, 4.3 m 14'1" stick
- 16 m³ (21 yd³) (SAE 2:1) shovel bucket incl. standard wear package with
- Hammerless GET system
  ○ Alternative buckets and GETs
  ○ Boom cylinder sliding guard
  ○ Stick cylinder sliding guard

BACKHOE ATTACHMENT
- 8.6 m 28'3" boom, 4.0 m 13'1" stick
- 15 m³ (19.5 yd³) (SAE 1:1) shovel bucket incl. standard wear package with
- Hammerless GET system
  ○ Alternative buckets and GETs
  ○ Buckets cylinder sliding guard

CRAWLER UNDERCARRIAGE
- Heavy-duty shovel type undercarrige
  ○ Centre carboy
  ○ 2 heavy box-type track frames
  ○ 7 bottom rollers and 3 top rollers each side
  ○ 800 mm 31" cast steel track shoes
  ○ 1,000 mm 39" cast steel track shoes
  ○ 1,200 mm 47" cast steel track shoes
  ○ Hydraulic track adjustment and parking brake
  ○ Drive gear box protection
  ○ Travel motor protection

SUPERSTRUCTURE
- Main frame mounted over an externally toothed swing circle carries the drive module
- Diesel Engine:
  Komatsu SDA12V159E-2 Tier 2
  ○ Electric drive various voltages
  ○ Cable guide without cable

LIGHTING
- 12 LED high performance working lights
- Service lights throughout the platform
- Rotoflare warning lights

OPERATOR CAB
- Enclosed steel cab mounted on viscous pads
- FOPS according ISO 10262
- Air-conditioning unit Sutrak
- Full suspension operator seat with belt
- Controls ergonomic
- KOMTRAX Plus (Monitoring System)
- Joysticks and controls are hydraulic
- 2 synchronised windshield wash wiper
- AM-FM radio with MP3 ready CD player and AUX in
  ○ External metal sun blinds on side window
  ○ Internal roller blinds on all windows
  ○ Impact resistant front window (19mm)
  ○ All windows tinted parsol green
  ○ Walkway in front of cab
  ○ Additional cab heater

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

SERVICE AND LUBRICATION
- LINCOLN central lubrication for basic machine, attachment and bucket
- 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
- Service transfer oil pump
- Service Monitor (incl. all relevant manuals)
  ○ Engine oil management package (Centinel, Reserve & Eliminator systems)

SAFETY FEATURES
Access and egress system
- 60° stairway design
- Hydraulically operated ground access ladder
- Equipped with hand rails up to cab
- All steps with antislip edge
- Illuminated system

Emergency egress system
- Two pieces flip down solid antislip steel ladder
- Easy release with foot lever
- One system on cab site (illuminated)
- One system on opposite site (illuminated)
- One machinery house escape system (ladder - hatch)

Further equipment on request
- Acoustic travel alarm
- Electric air horn
- Engine turbo and exhaust pipe covers
- Engine emergency stop at ground level
- Camera system acc. ISO5006
- Sidewalks and stairs are provided with skid-resistant plates
- Hand rails and steps on boom; tie off points on boom

Other Equipment
- Fire suppression system, Ansol (Agent LVS+Powder), diesel drive
- Special painting
- Biodegradable hydraulic oil
- Additional cab heater

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