PC8000-6 Loading Shovel
PC8000-6 Backhoe

ENGINE POWER
2 x 1500 kW / 2010 HP @ 1800 rpm

OPERATING WEIGHT
752 – 771 ton / 1,658,200 – 1,700,100 lb

SHOVEL CAPACITY
42 m³ 55 yd³ SAE 2:1 heaped

BACKHOE CAPACITY
42 m³ 55 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
- 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 (2010 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

Access and Egress
- 45° primary access and egress stairways
- 45° access swing stairway
- 3 emergency egresses
  - cab and machinery house
  - machinery house escape
- Illuminated accesses and egresses
**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 engine 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
**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 @ 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 up 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 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 LED lights
- **Standard service lights**: throughout the platform incl. emergency egresses and stairways

### UNDERCARRIAGE

Undercarriage consists of one centre carbody and two track frames, each side attached by high torque bolts
- **Centre frame**: H-type
- **Track frame**: Steel box-section

### CRAWLER ASSEMBLY

- **Track adjustment**: Automatic hydraulic type
- **Number of track 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-disk

### 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

### HYDRAULIC SYSTEM

The power train consists of two main drives. Each of the two gearboxes drives four identical main 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**

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**: 7.750 ltr / 2,050 U.S. gal
- **Hydraulic system**: 11.500 ltr / 3,040 U.S. gal
- **Fuel**: 13.925 ltr / 3,680 U.S. gal
- **Engine coolant**: 2 x 430 ltr / 2 x 114 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 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 with AUX in 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 left hand window is an emergency exit. All windows are tinted parl sor green. The front window is a 19 mm thick impact resistant window. A walkway is mounted in front of cabin.

**OPERATING WEIGHTS (APPROXIMATE)**

**PC 8000 Backhoe:**
Operating weight including 11.500 mm 37’9” boom, 5.500 mm 18’0” stick, 42 m$^3$ (55 yd$^3$) 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>1.500 mm</td>
<td>759 t</td>
<td>27.5 N/cm$^2$</td>
</tr>
<tr>
<td>59”</td>
<td>1,673,600 lb</td>
<td>39.9 psi</td>
</tr>
<tr>
<td>1.900 mm</td>
<td>771 t</td>
<td>22.1 N/cm$^2$</td>
</tr>
<tr>
<td>75”</td>
<td>1,700,100 lb</td>
<td>32.0 psi</td>
</tr>
</tbody>
</table>

**PC 8000 Front Shovel:**
Operating weight including 8.150 mm 26’9” boom, 5.750 mm 18’9” stick, 42 m$^3$ (55 yd$^3$) 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>1.500 mm</td>
<td>740 t</td>
<td>27.2 N/cm$^2$</td>
</tr>
<tr>
<td>59”</td>
<td>1,631,700 lb</td>
<td>39.4 psi</td>
</tr>
<tr>
<td>1.900 mm</td>
<td>752 t</td>
<td>21.9 N/cm$^2$</td>
</tr>
<tr>
<td>75”</td>
<td>1,658,200 lb</td>
<td>31.7 psi</td>
</tr>
</tbody>
</table>

**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).

**Hydraulic Excavator**

PC 8000 Backhoe:

- Diesel Drive
  - 1 Cab
  - 2 Diesel Engines
  - 3 Hydraulic Pumps
  - 4 Hydraulic Tank
  - 5 Hydraulic Coolers
  - 6 Fuel Tank
  - 7 Valve Blocks
  - 8 Swing Motors
  - 9 Counterweight
  - 10 Emergency swing ladder egress
  - 11 Emergency access out of machinery house
  - 12 See-through Cat Walk

**Variation for Electric Drive Version**

- 2 Electric Motors
- 6 High Voltage Electric Cabinet

**Walkways**

- Lower-Level
- Upper-Level
**PC8000-6**

**Hydraulic Excavator**

**Productivity-Features**

**Backhoe Attachment**

<table>
<thead>
<tr>
<th>Bucket Capacity</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>(Heaped 1:1) SAE cum cum</td>
<td>mm foot/inch</td>
<td>qty</td>
<td></td>
<td></td>
<td>t/cum lb/cuyd</td>
</tr>
<tr>
<td>42,0 55.0</td>
<td>4.575 15’0”</td>
<td>6</td>
<td>standard</td>
<td>Hensley XS 800 *</td>
<td>1.8 3,000</td>
</tr>
</tbody>
</table>

Alternative buckets on request

*other systems on request

<table>
<thead>
<tr>
<th>Boom length</th>
<th>Stick length</th>
<th>Break-out force (ISO)</th>
<th>Tear-out force (ISO)</th>
<th>Max. digging height</th>
<th>Max. dumping height</th>
<th>Max. digging depth</th>
<th>Max. digging reach</th>
<th>Max. digging reach at ground level</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.500 mm</td>
<td>5.500 mm</td>
<td>2.077 kN</td>
<td>1.813 kN</td>
<td>16.900 mm</td>
<td>11.200 mm</td>
<td>8.000 mm</td>
<td>20.700 mm</td>
<td>19.600 mm</td>
</tr>
<tr>
<td>37’9”</td>
<td>18’1”</td>
<td>66’8”</td>
<td>67’11”</td>
<td>64’4”</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Hydraulic Excavator

## Front Shovel Attachment

### Bucket Capacity (Heaped 1:2) SAE

<table>
<thead>
<tr>
<th>Cum</th>
<th>Cubic Yards</th>
<th>Width (mm)</th>
<th>Feet</th>
<th>Teeth Qty</th>
<th>Wear Package Abrasiveness</th>
<th>GET System</th>
<th>Max. Material Density (Loose)</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>37</td>
<td>4575</td>
<td>15'0&quot;</td>
<td>6</td>
<td>heavy</td>
<td>Hensley XS 800 *</td>
<td>2.8</td>
</tr>
<tr>
<td>36</td>
<td>47</td>
<td>5375</td>
<td>17'8&quot;</td>
<td>6</td>
<td>heavy</td>
<td>Hensley XS 800 *</td>
<td>2.0</td>
</tr>
<tr>
<td>42</td>
<td>55</td>
<td>5375</td>
<td>17'8&quot;</td>
<td>6</td>
<td>standard</td>
<td>Hensley XS 800 *</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Alternative buckets on request

*other systems on request

---

**Key Specifications**

- **PC 8000**
- **Hydraulic Excavator**
- **Bucket Capacity**
  - 28 cum / 37 cuyd: 4,575 mm (15'0")
  - 36 cum / 47 cuyd: 5,375 mm (17'8")
  - 42 cum / 55 cuyd: 5,375 mm (17'8")
- **Width of Bucket Opening**: 3,200 mm (10'6")
- **Max. Cutting Height**: 20,900 mm (68'7")
- **Max. Dumping Height**: 13,900 mm (45'7")
- **Max. Digging Depth**: 3,000 mm (9'10")
- **Max. Digging Reach**: 17,800 mm (58'5")
- **Level Crowd at Ground Level**: 5,800 mm (19'0")
- **Bucket Opening Width**: 3,200 mm (10'6")

---

**Notations**

- SAE: Society of Automotive Engineers
- GET: Gearbox Excavator Technology
- Cum: Cubic Meters
- Cubic Yards
- T/cum: Tonnes per Cubic Yard
- Tonne
- Cubic Yard

---

*Alternative buckets on request*
HYDRAULIC MINING SHOVEL

FRONT SHOVEL ATTACHMENT
- 8.15 m (26’9”) boom
- 5.75 m (18’0”) stick
- Set of cylinders
- 42 m³ (55 yd³) (SAE 2:1) shovel bucket
- Standard wear package 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
- Standard wear package 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
- 1.500 mm (59”) cast steel track shoes
- Hydraulic track adjustment and parking brake
- Drive gear box protection

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 LED high performance working lights
- Service lights throughout the platform
- Incl. emergency egresses and stairways

OPERATOR CAB
- Enclosed steel cab mounted on viscous pads
- FOPS according ISO 3449
- Air-conditioning unit Sultrak
- 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 parasol green
- Impact resistant front window (19 mm)
- Walkway in front of cab

LUBRICATION AND SERVICE
- 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
- 45° primary access and egress stairway
- 45° access swing stairway
- Electric air horn
- Engine turbo and exhaust pipe covers
- Engine oil management package (Centinel, Reserve & Eliminator systems)
- Service transfer oil pump
- Sidewalks and stairs are provided with skid-resistant plates
- Guard rails and steps on boom
- Tie off points on boom
- Engine emergency stop at ground level

ATTACHMENT/BUCKET
- Alternative buckets on request
- Boom cylinder sliding guard
- Arm cylinder sliding guard
- Bucket cylinder sliding guard (BH)

UNDERCARRIAGE
- 1.900 mm 75” track shoes

POWER
- Electro drive various voltages
- Cable drum without cable
- Fire suppression system, Ansul (Agent LVS+Powder), diesel drive

COLD WEATHER
- Cold weather package down to -40° C (diesel and electro drive)
- Arctic weather package down to -50° C (diesel and electro drive)
- Holstart 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
- Camera system acc. ISO5006
- Service Monitor (incl. all relevant manuals)
- Additional working lights
- Rotaflare warning lights
- Additional cab A/C
- Additional cab heater
- Service crane
- Special painting

DIMENSIONS

BASIC MACHINE WITH COUNTERWEIGHT

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1500 mm</td>
</tr>
<tr>
<td>B</td>
<td>1900 mm</td>
</tr>
<tr>
<td>C_a</td>
<td>8330 mm</td>
</tr>
<tr>
<td>C_b</td>
<td>8730 mm</td>
</tr>
<tr>
<td>D</td>
<td>2995 mm</td>
</tr>
<tr>
<td>E</td>
<td>1065 mm</td>
</tr>
<tr>
<td>F</td>
<td>4050 mm</td>
</tr>
<tr>
<td>G</td>
<td>8100 mm</td>
</tr>
<tr>
<td>H</td>
<td>10685 mm</td>
</tr>
<tr>
<td>P_a</td>
<td>8720 mm</td>
</tr>
</tbody>
</table>

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