OPERATING WEIGHT
385-397 ton 850,000-875,000 lb

SHOVEL CAPACITY
22 m³ 29 yd³ SAE 2:1 heaped

BACKHOE CAPACITY
22 m³ 29 yd³ SAE 1:1 heaped
Quality
- Quality management ISO 9001 certified.
- Environmental Management
  ISO 14001 certified.
- High consistent quality
  through continuous investment
  in personnel, design and manufacturing
  systems and processes.

Reliability and Durability
Designed for lower operating costs
- Robust structural design developed
  from field experience and
  finite element analysis.
- Extended life undercarriage wear parts;
  Big diameter rollers, idlers and sprockets.
  Large surface area and extensive
  precision hardening.
  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 under the shovel attachment for additional protection.
- Buckets and Wear Packages to suit all material densities and ground conditions.
Large Comfortable Cab
Full shift comfort
- Komatsu low noise cab on multiple viscous mounts for reduced noise and vibration.
- Large volume cab with deep wide front window.
- Comprehensive climate control with pressurised filtered air ventilation and air conditioning.
- High specification multi-adjustable air suspension seat.
- Well elevated operator position giving good all round view.

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

Powerful Diesel Engine
Single Komatsu SDA16V160 engine
- Rated 1400 kW 1875 HP, at 1800 rpm.
- Electronic engine management.
- Low engine emission levels meet EPA regulations.
- Time saving oil management system fitted as standard; Centinel Engine Oil Management, Reserve Engine Oil Supply and Eliminator Oil Filter systems.

Easy Maintenance
Simple, common-sense design gives quick safe access to all major components
- Generous access to all major service points from machinery house floor level.
- Enclosed, internally lit machinery house with firewall separating engine from pump area.
- Automatic central lubrication.
- VHMS 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.
**SPECIFICATIONS**

**DIESEL DRIVE**
- Model: Komatsu SDA16V160
- Type: 4-cycle, water-cooled, direct injection
- Aspiration: Turbocharged and aftercooled
- Number of cylinders: 16
- Rated power: 1400 kW (1875 HP) @ 1800 rpm
- Governor: All-speed, electronic
- Swing speed (maximum): 4.0 rpm
- Swing ring teeth: External
- Swing brake, parking: Wet, multiple-disc
- Swing brake, service: Hydraulic brake

**ELECTRIC DRIVE**
- Type: Squirrel-cage induction motor
- Power output: 1350 kW
- Voltage: 6600 V*
- Amperage (approximate): 145 A
- Start-up: Soft start
- Frequency (standard): 50 Hz @ 1500 rpm
- Optional frequency: 60 Hz @ 1800 rpm
- *Other voltages available on request

**UNDERCARRIAGE**
- Undercarriage consists of one center carbody and two track frames, each side attached by 62 high torque bolts.
- Center frame: H-type
- Track frame: Steel box-section

**CRAWLER ASSEMBLY**
- Track adjustment: Automatic hydraulic type
- Number of top rollers: 3 each side
- Number of bottom rollers: 7 each side

**COOLING SYSTEM**
- The high capacity engine radiators are cooled by hydraulically driven fans for superior cooling efficiency and require little maintenance. The hydraulic system includes two large swing-out vertical air-to-oil hydraulic coolers with temperature-regulated hydraulically driven fans.

**AUTOMATIC CENTRALISED LUBRICATION**
- Two hydraulically powered Lincoln single line automatic lubrication systems are provided as standard, complete with time and volume variable controls. Activity and malfunction events are linked to the VHMS. 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.

**LUBRICATION**
- Engine coolant: 475 ltr 125 U.S. gal
- Fuel: 6400 ltr 1691 U.S. gal
- Engine oil: 475 ltr 125 U.S. gal
- Centinel engine oil make up tank: 460 ltr 122 U.S. gal

**DIESELS**
- 4-cycle, water-cooled, direct injection

**ELECTRIC DRIVE**
- Squirrel-cage induction motor
- 1350 kW
- 6600 V
- 145 A

**UNDERCARRIAGE**
- One center carbody and two track frames, each side attached by 62 high torque bolts.
- H-type

**CRAWLER ASSEMBLY**
- Automatic hydraulic type
- 3 each side
- 7 each side

**COOLING SYSTEM**
- High capacity engine radiators
- Hydraulically driven fans

**AUTOMATIC CENTRALISED LUBRICATION**
- Two hydraulically powered Lincoln single line automatic lubrication systems
- Time and volume variable controls
- Activity and malfunction events linked to the VHMS
- 200 litre 53 gal. barrel

**LUBRICATION CAPACITIES**
- Engine coolant: 475 ltr 125 U.S. gal
- Fuel: 6400 ltr 1691 U.S. gal
- Engine oil: 475 ltr 125 U.S. gal
- Centinel engine oil make up tank: 460 ltr 122 U.S. gal

**SYSTEMS**
- Regulated hydraulically driven fans
- Large swing-out vertical air-to-oil hydraulic coolers

**HYDRAULICS**
- The power train consists of one main drive. Diesel engine or electric motor can be supplied. One gearbox drives four identical main pumps which draw hydraulic oil from an unpressurized hydraulic tank. Open circuit hydraulics provide maximum cooling and filtering efficiency.
- Rated flow (total output): 4140 ltr/min 1096 U.S. gal
- Relief valve setting: 310 bar 4,495 psi
- Swing flow rate: 1590 ltr/min 420 U.S. gal
- High pressure in line filters: 200 microns
- Full flow return line filters (8 double elements): 10 microns
- Case drain/by-pass return line filters: 3 microns

**DIESELS**
- 4-cycle, water-cooled, direct injection

**ELECTRIC DRIVE**
- Squirrel-cage induction motor
- 1350 kW
- 6600 V
- 145 A

**UNDERCARRIAGE**
- One center carbody and two track frames, each side attached by 62 high torque bolts.
- H-type

**CRAWLER ASSEMBLY**
- Automatic hydraulic type
- 3 each side
- 7 each side

**COOLING SYSTEM**
- High capacity engine radiators
- Hydraulically driven fans

**AUTOMATIC CENTRALISED LUBRICATION**
- Two hydraulically powered Lincoln single line automatic lubrication systems
- Time and volume variable controls
- Activity and malfunction events linked to the VHMS
- 200 litre 53 gal. barrel
- 200 litre 53 gal. barrel

**LUBRICATION CAPACITIES**
- Engine coolant: 475 ltr 125 U.S. gal
- Fuel: 6400 ltr 1691 U.S. gal
- Engine oil: 475 ltr 125 U.S. gal
- Centinel engine oil make up tank: 460 ltr 122 U.S. gal

**SYSTEMS**
- Regulated hydraulically driven fans
- Large swing-out vertical air-to-oil hydraulic coolers
**CAB**

The large welded steel safety cab is mounted with 18 viscous damping pads and sound insulated. It is equipped with automatic climate control and is pressurised. The operator’s seat is fully adjustable, air suspended, electrically heated and has a lap seat belt. There is a trainer’s seat. Low effort joy stick controls are electric over hydraulic and foot controls are for front shovel clam, crawler and swing brake.

Full instrumentation and VHMS are provided. Space in the console is provided for an additional monitor. AM/FM radio is fitted. The windshield wash wiper has two speed and intermittent operation. (Water reservoir 7 litres 1.8 gal.) Amenities include a wash basin with running water, water reservoir, (50 litres 13 gal.), refrigerator and storage cabinets. Powered mirrors are adjusted from inside the cab. There are left and right hand sliding windows. All windows are tinted parsol green. External metal louvres are provided on the cab side windows.

**OPERATING WEIGHTS**

**PC 4000 Backhoe:**
Operating weight including 9750 mm 32’0’’ boom, 4500 mm 14’9’’ stick, 22 m³ 29 yd³ backhoe bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

<table>
<thead>
<tr>
<th>Shoe Width</th>
<th>Operating Weight</th>
<th>Ground Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200 mm</td>
<td>392 t</td>
<td>2.19 kg/cm²</td>
</tr>
<tr>
<td>47”</td>
<td>865,000 lb</td>
<td>31.2 psi</td>
</tr>
<tr>
<td>1500 mm</td>
<td>397 t</td>
<td>1.78 kg/cm²</td>
</tr>
<tr>
<td>59”</td>
<td>875,000 lb</td>
<td>25.3 psi</td>
</tr>
</tbody>
</table>

**PC 4000 Front Shovel:**
Operating weight including 7150 mm 23’6’’ boom, 4900 mm 16’1’’ stick, 22 m³ 29 yd³ shovel bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

<table>
<thead>
<tr>
<th>Shoe Width</th>
<th>Operating Weight</th>
<th>Ground Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200 mm</td>
<td>385 t</td>
<td>2.15 kg/cm²</td>
</tr>
<tr>
<td>47”</td>
<td>850,000 lb</td>
<td>30.6 psi</td>
</tr>
<tr>
<td>1500 mm</td>
<td>390 t</td>
<td>1.75 kg/cm²</td>
</tr>
<tr>
<td>59”</td>
<td>860,000 lb</td>
<td>24.8 psi</td>
</tr>
</tbody>
</table>

**Explanation**
1. Operator’s Cab
2. Power Train
3. Hydraulic Pumps
4. Hydraulic Tank
5. Hydraulic Coolers
6. Valve Blocks
7. Swing Motor
8. Fuel Tank
9. Counterweight
10. Autolube System
11. Secondary Egress

**VEHICLE HEALTH MONITORING SYSTEM**

VHMS is designed for Komatsu mining equipment to provide real time and stored information about the status of the operating machine. A touch sensitive flat screen color monitor gives a continuous display or can be activated to provide operator or service data. Non serious and critical faults are automatically announced, while for major malfunctions the engine is also shut down.

The integrated digital storage provides a full event history, which can be downloaded by laptop computer or by wireless link. The ability to provide real time service information as messages, snap-shot or trend data automatically to mine control programmes can improve mechanical utilisation and reduce costs.

(Electric drive version fitted with ECS Health Monitor)
**DIGGING FORCES**

Break-out force: 1155 kN, 260,000 lb

Tear-out force: 1050 kN, 236,000 lb

Maximum reach at ground level: 16.650 mm, 54' 8"

Maximum digging depth: 8000 mm, 26' 3"

**BACKHOE BUCKET, STICK AND BOOM COMBINATION**

<table>
<thead>
<tr>
<th>Bucket Capacity</th>
<th>Width</th>
<th>Weight</th>
<th>Teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE Heaped 1:1</td>
<td>22 m³</td>
<td>3790 mm 12' 5&quot;</td>
<td>23.4 t 51,590 lb</td>
</tr>
</tbody>
</table>

| Material weight | 1.8 t/m³, 3000 lb/yd³ |

<table>
<thead>
<tr>
<th>Boom Length</th>
<th>Stick Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>9750 mm 32' 0&quot;</td>
<td>4500 mm 14' 9&quot;</td>
</tr>
</tbody>
</table>

Alternative buckets/wear packages are available.
**DIGGING FORCES**

- Break-out force: 1250 kN 280,000 lb
- Crowd force: 1330 kN 300,000 lb

- Level crowd at ground level: 5700 mm 18' 8"
- Maximum dumping height: 12000 mm 39' 4"

**SHOVEL BUCKET, STICK AND BOOM COMBINATION**

<table>
<thead>
<tr>
<th>Bucket Capacity</th>
<th>Width</th>
<th>Weight</th>
<th>Teeth</th>
<th>Boom Length</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAE/CECE</strong></td>
<td><strong>Heaped 2 : 1</strong></td>
<td><strong>Heaped 1 : 1</strong></td>
<td><strong>including Wear package-3</strong></td>
<td><strong>Stick Length</strong></td>
</tr>
<tr>
<td>22 m³ 29 yd³</td>
<td>25 m³ 32.7 yd³</td>
<td>4020 mm 13' 2&quot;</td>
<td>38.8 t 76,700 lb</td>
<td>4900 mm 16' 1&quot;</td>
</tr>
</tbody>
</table>

Material weight to 1.8 t/m³ 3000 lb/yd³

Alternative buckets/wear packages are available.
STANDARD EQUIPMENT

Hydraulic Mining Shovel with Diesel Drive will comprise:

- **FRONT SHOVEL ATTACHMENT**
  7.15 m 23'6" boom and 4.9 m 16'1" stick complete with cylinders, 22 m³ 29 yd³ (SAE 2:1) shovel bucket with mechanical teeth and lip system.

  OR

- **BACKHOE ATTACHMENT**
  9.75 m 32'0" boom and 4.5 m 14'9" stick with 22 m³ 29 yd³ (SAE 1:1) bucket.

- **CRAWLER UNDERCARRIAGE**
  Heavy-duty shovel type undercarriage consisting of a center carbody and 2 heavy box-type track frames, each having 7 bottom rollers, 3 top rollers, and 1200 mm 47" cast steel track shoes. Hydraulic track adjustment and parking brake provided.

- **SUPERSTRUCTURE**
  Main frame mounted over an externally toothed swing circle carries the main drive module, including Komatsu SDA16V160 diesel engine, oil and fuel reservoirs, counterweight, operator’s cab and base.

- **LIGHTING**
  8 Xenon high performance working lights. 11 service lights throughout platform.

- **OPERATOR’S CAB**
  Fully enclosed steel cab which incorporates the ISO 3449 standard FOPS structure and CARRIER SÜTRAK air-conditioning unit. Mounted on viscous pads. GRAMMER fully suspended seat with lap-belt. Fold-away auxiliary seat. Full selection of controls, switches, and VHMS (Vehicle Health Monitoring System). Joystick and pedal-operated controls are electric over hydraulic. Windshield wash wipers with two speed and intermittent operation. (reservoir 7 ltr 1.8 gal).

- **ACCESSORIES**
  Acoustic travel alarm
  Hydraulically actuated ground access ladder
  Electric air horn
  Engine oil management System.
  (Centinel, Reserve & Eliminator Systems)

- **LUBRICATION**
  LINCOLN central lubrication for basic machine, attachment, and bucket. 200 ltr 53 gal refillable barrel.
  LINCOLN automatic pinion lubrication system for swing circle teeth with 200 ltr 53 gal refillable barrel.
  Service point (diesel version only as standard) on hydraulic arm carrying WIGGINS fluid receiving connectors for filling of fuel, engine oil and coolant, hydraulic oil, grease, cabwater and the evacuation of coolant, and hydraulic and engine oils.

- **AM-FM radio. Washbasin with running water (reservoir 50 ltr 13 gal). Refrigerator and storage cabinets. Left and right hand sliding windows. All windows tinted parasol green.**

OPTIONAL EQUIPMENT

- 1500 mm 59" track shoes
- Extra or alternative, lighting
- Electric drive
- Cable reel (Electric Version)
- Low temperature package
- Fire suppression system

DIMENSIONS

**BASIC MACHINE WITH COUNTERWEIGHT**

| A 1200mm | 47" | H 3017mm | 9'11" |
| B 1500mm | 59" | I 3085mm | 10'2" |
| C_A 6750mm | 22'2" | J 7600mm | 24'11" |
| C_B 7050mm | 23'2" | K 8300mm | 27'3" |
| D 2480mm | 8'2" | L 3175mm | 10'5" |
| E 3380mm | 11'1" | M 4700mm | 18'6" |
| F 6700mm | 22'0" | N 7975mm | 26'2" |
| G 8842mm | 29'0" | O 6095mm | 20'0" |
| O_A 6500mm | 21'4" |

Ground Clearance: 930mm 3'0"

www.komatsu-mining.com

Materials and specifications are subject to change without notice. **KOMATSU** is a trademark of Komatsu Ltd. Japan.