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
Version 1 - Komatsu SSA12V159 (Tier 1)
Version 2 - 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

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

**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

**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

**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

Version 1 - Tier 1 engine:
- **Model**: Komatsu SSA12V159
- **Type**: 4-cycle, water-cooled, direct injection
- **Aspiration**: Turbocharged and aftercooled
- **Number of cylinders**: 12
- **Rated power**: 940 kW @ 1800 rpm (SAE 1995/J1349)
- **Governor**: All-speed, electronic

Version 2 - Tier 2 engine:
- **Model**: Komatsu SDA12V159E-2, Tier 2 certificated
- **Type**: 4-cycle, water-cooled, direct injection
- **Aspiration**: Turbocharged and aftercooled
- **Number of cylinders**: 12
- **Rated power**: 940 kW @ 1800 rpm (SAE 1995/J1349)
- **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 Xenon 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

- **Travel control**: 2 foot pedals
- **Gradeability**: Up to 57 %
- **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**: 1
- **Swing brake, service**: Hydraulic brake
- **Swing brake, parking**: Wet, multiple-disc
- **Swing ring teeth**: External
- **Swing speed (maximum)**: 4.6 rpm

### HYDRAULIC 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
- **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
**OPERATOR CAB**

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 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 parasol green. A walkway is mounted in front of cabin. (Subject to change without notice)

**KOMTRAX PLUS HEALTH MONITORING SYSTEM**

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.

**OPERATING WEIGHS (APPROXIMATE)**

**PC 3000 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>

**PC 3000 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>
<thead>
<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**
1. Electric Motor
6. High Voltage Electric Cabinet

**Walkways**
- Lower-Level
- Upper-Level
**Backhoe Attachment**

<table>
<thead>
<tr>
<th>Bucket Capacity (Heaped 1:1) SAE cum cuyd</th>
<th>Width mm</th>
<th>Width foot/inch</th>
<th>Teeth qty</th>
<th>Wear Package acc. abrasiveness</th>
<th>GET System</th>
<th>Max. Material Density (Loose) t/cum lb/cuyd</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0 15.7</td>
<td>3.045</td>
<td>9'12''</td>
<td>5</td>
<td>heavy</td>
<td>Hensley XS 252 *</td>
<td>2.2 3,700</td>
</tr>
<tr>
<td>15.0 19.5</td>
<td>3.260</td>
<td>10'8''</td>
<td>5</td>
<td>standard</td>
<td>Hensley XS 252 *</td>
<td>1.8 3,000</td>
</tr>
<tr>
<td>16.5 21.5</td>
<td>3.045</td>
<td>9'12''</td>
<td>5</td>
<td>standard</td>
<td>Hensley XS 252 *</td>
<td>1.6 2,700</td>
</tr>
</tbody>
</table>

*Other systems on request*

**Productivity - Features**

- **Bucket Capacity**
  - 12.0 cuyd
  - 15.7 cuyd
  - 15.0 cuyd
  - 19.5 cuyd
  - 16.5 cuyd

- **Width**
  - 3.045 mm
  - 3.260 mm
  - 3.045 mm

- **Teeth**
  - 5 qty

- **Wear Package**
  - heavy
  - standard

- **GET System**
  - Hensley XS 252 *

- **Max. Material Density (Loose)**
  - 2.2 t/cum
  - 1.8 t/cum
  - 1.6 t/cum

- **Boom length**
  - 8,600 mm

- **Stick length**
  - 4,000 mm

- **Break-out force (ISO)**
  - 890 kN

- **Tear-out force (ISO)**
  - 811 kN

- **Max. digging height**
  - 14,100 mm

- **Max. dumping height**
  - 9,000 mm

- **Max. digging depth**
  - 7,900 mm

- **Max. digging reach**
  - 16,200 mm

- **Max. digging reach at ground level**
  - 15,600 mm

*Alternative buckets on request*
**FRONT SHOVEL ATTACHMENT**

### Bucket Capacity

<table>
<thead>
<tr>
<th>Bucket Capacity (Heaped 1:2) SAE cum</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>cm</td>
<td>m</td>
<td>foot/inch</td>
<td>qty</td>
<td>heavy duty</td>
<td>Hensley XS 252 *</td>
</tr>
<tr>
<td>12,0</td>
<td>15.7</td>
<td>3.430</td>
<td>11'3&quot;</td>
<td>5</td>
<td>Hensley XS 252 *</td>
</tr>
<tr>
<td>16,0</td>
<td>21.0</td>
<td>3.790</td>
<td>12'5&quot;</td>
<td>6</td>
<td>Hensley XS 252 *</td>
</tr>
</tbody>
</table>

*Alternative buckets on request

*other systems on request

### Key Specifications

- **Max. cutting height**: 15.100 mm (49’6"
- **Max. dumping height**: 10.200 mm (33’6"
- **Max. digging depth**: 3.300 mm (10’10"
- **Max. digging reach**: 13.300 mm (43’8"
- **Level crowd at ground level**: 4.700 mm (15’5"
- **Bucket opening width**: 2.330 mm (7’8"

### Additional Features

- **Boom length**: 6.000 mm (19’8"
- **Stick length**: 4.300 mm (14’1"
- **Break-out force (ISO)**: 1.066 kN (239,600 lb
- **Crowd force (ISO)**: 1.136 kN (255,340 lb

### Wear Package

- **Heavy duty**: standard
- **Standard**: heavy duty

### GET System

- **Hensley XS 252 * other systems on request

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**HYDRAULIC EXCAVATOR PC3000**
STANDARD EQUIPMENT

HYDRAULIC MINING SHOVEL

FRONT SHOVEL ATTACHMENT
• 6.0 m 19'8" boom
• 4.3 m 14'1" stick
• Set of cylinders
• 16 m³ (21 yd³) (SAE 2:1) shovel bucket incl. standard wear package with hammerless GET system

BACKHOE ATTACHMENT
• 8.6 m 28’3” boom
• 4.0 m 13’1” stick
• Set of cylinders
• 15 m³ (19.5 yd³) (SAE 1:1) bucket incl. standard wear package with hammerless GET system

CRAWLER UNDERCARRIAGE
• Heavy-duty shovel type undercarriage
• Centre carbody
• 2 heavy box-type track frames
• 7 bottom rollers and 3 top rollers each side
• 800 mm 31” 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
• Version 1 - Komatsu SSA12V159
  Tier 1 diesel engine
• Version 2 - Komatsu SDA12V159E-2
  Tier 2 certified diesel engine
• Oil and fuel reservoirs
• Hydraulic components
• Counterweight

LIGHTING
• 12 XENON high performance working lights
• Service lights throughout the platform

OPERATOR CAB
• Enclosed steel cab mounted on viscous pads
• FOPS according ISO 3449
• Air-conditioning unit Sutrak
• Full suspension operator seat with belt
• Trainer seat with belt
• Controls ergonomic
• KOMTRAX Plus (Monitoring System)
• Joysticks and controls are hydraulic
• 2 synchronised windshield wash wipers
• AM-FM radio with MP3 ready CD player
• External metal sun blinds on side windows
• Internal roller blinds on all windows

ATTACHMENT/BUCKET
• Boom cylinder sliding guard
• Arm cylinder sliding guard
• Bucket cylinder sliding guard (BH)

UNDERCARRIAGE
• 1.000 mm 39” track shoes
• 1.200 mm 47” track shoes

POWER
• Electric drive various voltages
• Cable guide 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)
• Hotstart temperature treatment for ambient temperature down to -50° C (diesel and electro drive), external power source not included

ACCESSORIES INCLUDED
• All windows tinted parsol green
• Walkway in front of cab

LUBRICATION AND SERVICE
• 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 and the evacuation of coolant, hydraulic and engine oils

SPECIAL HYDRAULIC OIL
• Biodegradable hydraulic oil

MISCELLANEOUS
• Engine oil management package (Centinel, Reserve & Eliminator systems)
• Additional lighting
• Additional cab heater
• Sound suppression kit
• Special painting

DIMENSIONS

BASIC MACHINE WITH COUNTERWEIGHT

<table>
<thead>
<tr>
<th>Alphabet</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>800 mm</td>
<td>2'7&quot;</td>
</tr>
<tr>
<td>B</td>
<td>1000 mm</td>
<td>3'3&quot;</td>
</tr>
<tr>
<td>Cₐ</td>
<td>5640 mm</td>
<td>18'6&quot;</td>
</tr>
<tr>
<td>Cₜ</td>
<td>5840 mm</td>
<td>19'2&quot;</td>
</tr>
<tr>
<td>D</td>
<td>2210 mm</td>
<td>7'3&quot;</td>
</tr>
<tr>
<td>E</td>
<td>955 mm</td>
<td>3'1&quot;</td>
</tr>
<tr>
<td>F</td>
<td>3000 mm</td>
<td>9'10&quot;</td>
</tr>
<tr>
<td>G</td>
<td>6000 mm</td>
<td>19'8&quot;</td>
</tr>
<tr>
<td>H</td>
<td>7914 mm</td>
<td>25'12&quot;</td>
</tr>
<tr>
<td>MHSₐ</td>
<td>3010 mm</td>
<td>9'11&quot;</td>
</tr>
<tr>
<td>N</td>
<td>2670 mm</td>
<td>8'9&quot;</td>
</tr>
<tr>
<td>O</td>
<td>2610 mm</td>
<td>8'7&quot;</td>
</tr>
<tr>
<td>P</td>
<td>3740 mm</td>
<td>12'3&quot;</td>
</tr>
<tr>
<td>Q</td>
<td>3060 mm</td>
<td>10'1&quot;</td>
</tr>
<tr>
<td>R</td>
<td>6800 mm</td>
<td>22'6&quot;</td>
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<tr>
<td>S</td>
<td>5950 mm</td>
<td>19'6&quot;</td>
</tr>
<tr>
<td>T</td>
<td>5033 mm</td>
<td>16'6&quot;</td>
</tr>
<tr>
<td>U</td>
<td>6402 mm</td>
<td>20'12&quot;</td>
</tr>
</tbody>
</table>

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