

# KOMATSU®

## PC3000

**OPERATING WEIGHT**  
252-265 ton 556,000-584,000 lb

**SHOVEL CAPACITY**  
16 m<sup>3</sup> 21 yd<sup>3</sup> SAE 2:1 heaped

**BACKHOE CAPACITY**  
15 m<sup>3</sup> 19.5 yd<sup>3</sup> SAE 1:1 heaped

**PC**  
**3000**



SUPER SHOVEL

# WALK-AROUND

## ***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

Undercarriage

- Big diameter rollers, idlers and sprockets
- Large surface area and extensive precision hardening reduce track pads 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
- Buckets and Wear Packages to suit all material densities and ground conditions



### ***Large Comfortable Cab***

Gives full shift comfort

- Komatsu low noise cab on multiple viscous mounts for reduced noise and vibration
- Large volume cab with large scale 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

### **MATCHES**

**85 to 165 U.S. ton  
TRUCKS**

### **SHOVEL AND BACKHOE BUCKET CAPACITY**

Shovel 16 m<sup>3</sup> 21 yd<sup>3</sup>  
Backhoe 15 m<sup>3</sup> 19.5 yd<sup>3</sup>



### ***Advanced Hydraulics***

Extended reliability and control

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

### ***Powerful Diesel Engine***

Standard Komatsu SSA12V159 (Tier 1)

Optional Komatsu SSA12V159E-2 (Tier 2)

- Rated 940 kW 1260 HP, at 1800 rpm
- Electronic diagnostic engine management
- Low engine emission levels
- Optional time saving Engine Oil Management System; Centinel, Engine Reserve Oil Supply and Eliminator Oil Filter systems

### ***Easy and Safe Maintenance***

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

- Hydraulically operated ground access ladder; 60° angle
- 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

# SPECIFICATIONS



## DIESEL DRIVE

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 1260 HP @ 1800 rpm  
 (SAE 1995/J1349)  
 Governor ..... All-speed, electronic

Optional Tier 2 engine:

Model ..... Komatsu SSA12V159E-2 Tier 2 certificated  
 Type ..... 4-cycle, water-cooled, direct injection  
 Aspiration ..... Turbocharged and aftercooled  
 Number of cylinders ..... 12  
 Rated power ..... 940 kW 1260 HP @ 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 to 4000 hours based on oil analysis.



## ELECTRICS

System ..... 24 V  
 Batteries (series/parallel) ..... 4 x 12 V  
 Alternator ..... 140 A  
 Standard working lights ..... 12 Xenon lights  
 Service lights ..... throughout platform



## HYDRAULICS

The power train consists of one main drive. Diesel engine or electric motor can be supplied. One gearbox drives three identical main pumps which draw hydraulic oil from an unpressurized hydraulic tank. Open circuit hydraulics provide maximum cooling and filtering efficiency. Main hydraulic pumps ..... 3x910 ltr/min 3x240 U.S. gal  
 Relief valve setting ..... 310 bar 4,495 psi  
 Swing flow rate ..... 800 ltr/min 211 U.S. gal  
 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 Hydropilot system features electronic engine and pump management to optimise hydraulic power for smooth hydraulic action, fast response, simple system layout and a reduced number of components. Filtration is at the oil intake to pumps, valve blocks, heat exchangers and oil tank.



## DRIVES AND BRAKES

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-disc



## 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



## ELECTRIC DRIVE

Type ..... Squirrel-cage induction motor  
 Power output ..... 900 kW  
 Voltage ..... 6000-7200 V\*  
 Amperage (approximate) ..... 96-80 A  
 Frequency (standard) ..... 50 Hz @ 1500 rpm  
 Optional frequency ..... 60 Hz @ 1800 rpm

\*Other voltages available on request



## UNDERCARRIAGE

The undercarriage consists of one center carbody and two track frames, each side attached by 38 high torque bolts.

Center frame ..... H-type  
 Track frame ..... Steel box-section



## CRAWLER ASSEMBLY

Track adjustment ..... Automatic hydraulic type  
 Number of shoes ..... 46 each side  
 Number of top rollers ..... 3 each side  
 Number of bottom rollers ..... 7 each side



## COOLING SYSTEM

The high capacity engine radiator is cooled by a mechanically driven fan for superior cooling efficiency and requires little maintenance. The hydraulic system includes two large swing-out vertical air-to-oil hydraulic coolers with temperature-regulated hydraulically driven fan.



## 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 incorporating the ISO 3449 FOPS structure is vibration isolated, based on 15 viscous combination pads and sound insulated to 77 dB(A). The whole body vibration shocks are below 0,5 m/s<sup>2</sup> according ISO 2631-1, hand-lever vibrations are lower than 2,5 m/s<sup>2</sup> according ISO 5349-1. The cab has an 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 speed and intermittent operation. Two heated rear view mirrors are externally mounted. External metal sun blinds on side windows and internal roller blinds on all windows are standard. There is a left hand sliding window. All windows are tinted parsol green.



VEHICLE 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 text monitor. The integrated digital storage provides a full event history and trend data, which can be downloaded by laptop, optional are W-LAN or satellite modem.



OPERATING WEIGHTS (APPROXIMATE)

PC 3000 Backhoe:

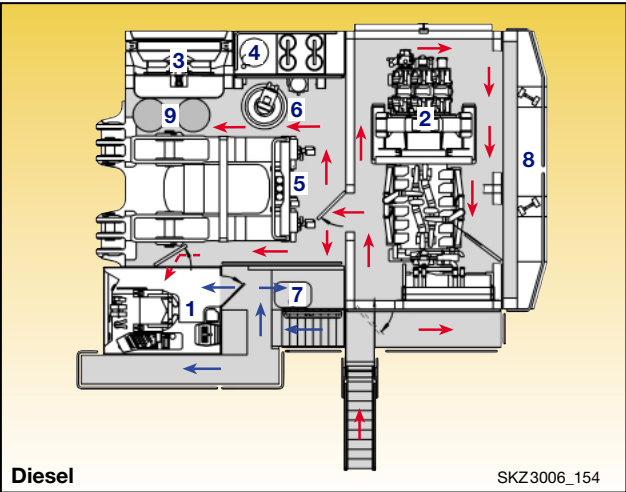
Operating weight including 8.600 mm 28'3" boom, 4.000 mm 13'1" stick, 15 m<sup>3</sup> 19.5 yd<sup>3</sup> backhoe bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
800 mm 31"	256 t 564,500 lb	24.0 N/cm <sup>2</sup> 34.8 psi
1.000 mm 39"	265 t 584,300 lb	19.9 N/cm <sup>2</sup> 28.9 psi
1.200 mm 47"	265 t 584,300 lb	16.6 N/cm <sup>2</sup> 24.1 psi

PC 3000 Front Shovel:

Operating weight including 6.000 mm 19'8" boom, 4.300 mm 14'1" stick, 16 m<sup>3</sup> 21 yd<sup>3</sup> shovel bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
800 mm 31"	252 t 555,700 lb	23.6 N/cm <sup>2</sup> 34.2 psi
1.000 mm 39"	261 t 575,500 lb	19.6 N/cm <sup>2</sup> 28.4 psi
1.200 mm 47"	261 t 575,500 lb	16.3 N/cm <sup>2</sup> 23.6 psi



Explanation

- 1 Cab

2 Power Train

3 Hydraulic Cooler

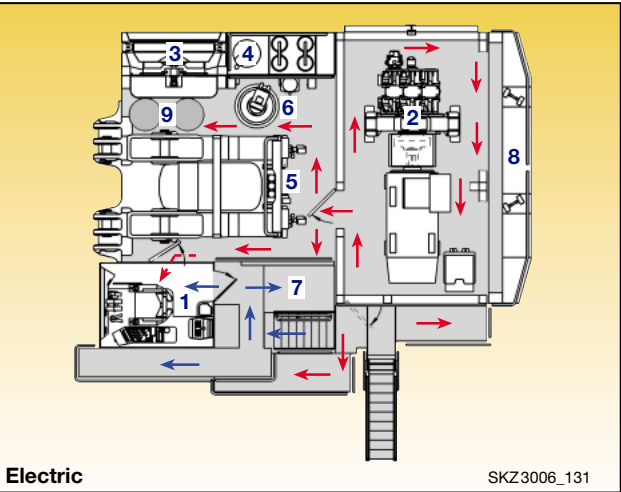
4 Hydraulic Reservoir

5 Valve Blocks
- 6 Swing Motor

7 Fuel Tank

8 Counterweight

9 Autolube Systems



- Variation for Electric Drive Version
- 2 Electric Motor

7 High Voltage Electric Cabinet

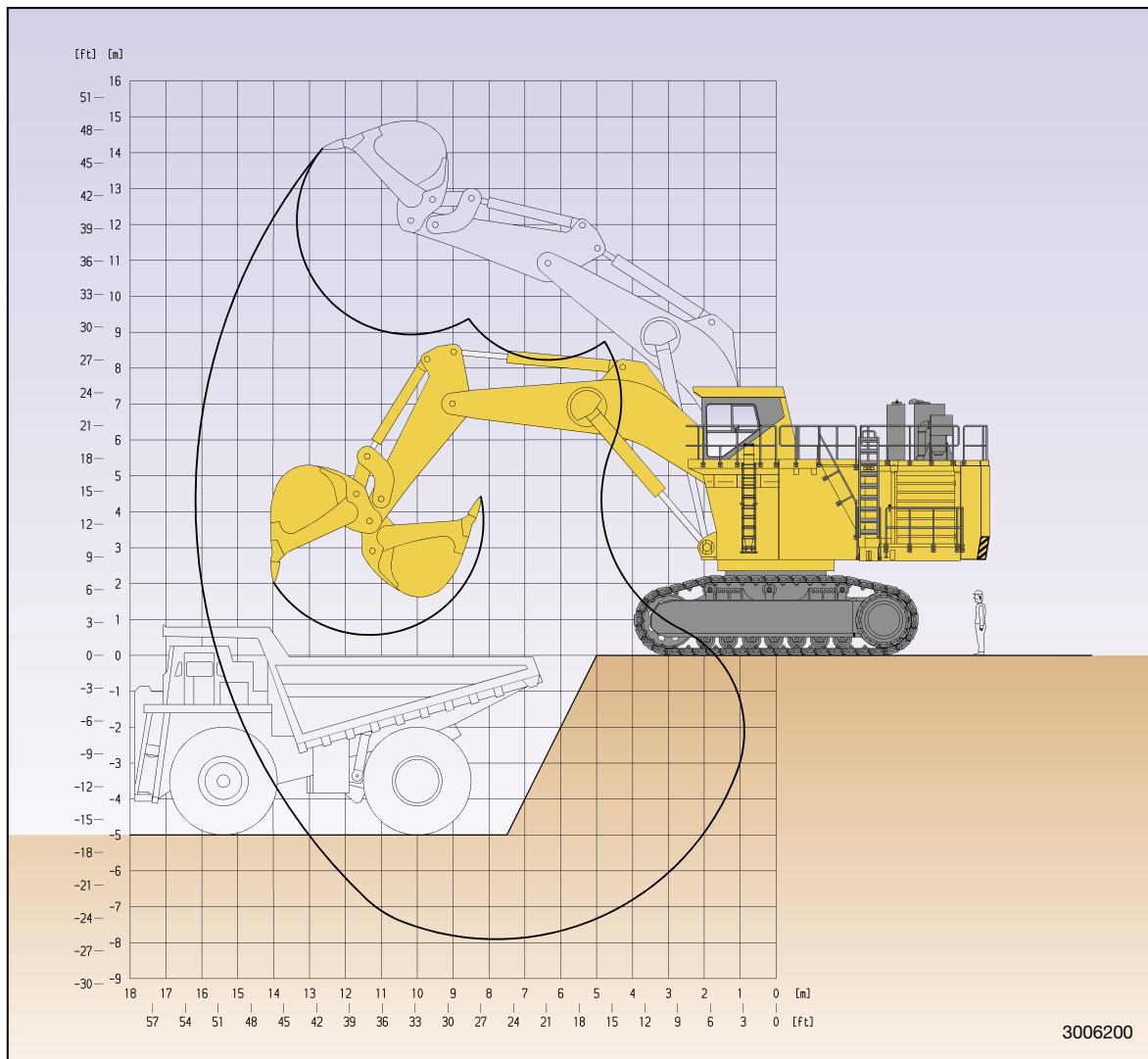
- Walkways
- Lower-Level

Upper-Level

# PRODUCTIVITY-FEATURES



## BACKHOE ATTACHMENT



3006200

Boom length	8.600 mm	28'3"
Stick length	4.000 mm	13'1"
Break-out force (SAE)	850 kN	191,000 lb
Tear-out force (SAE)	800 kN	179,800 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"

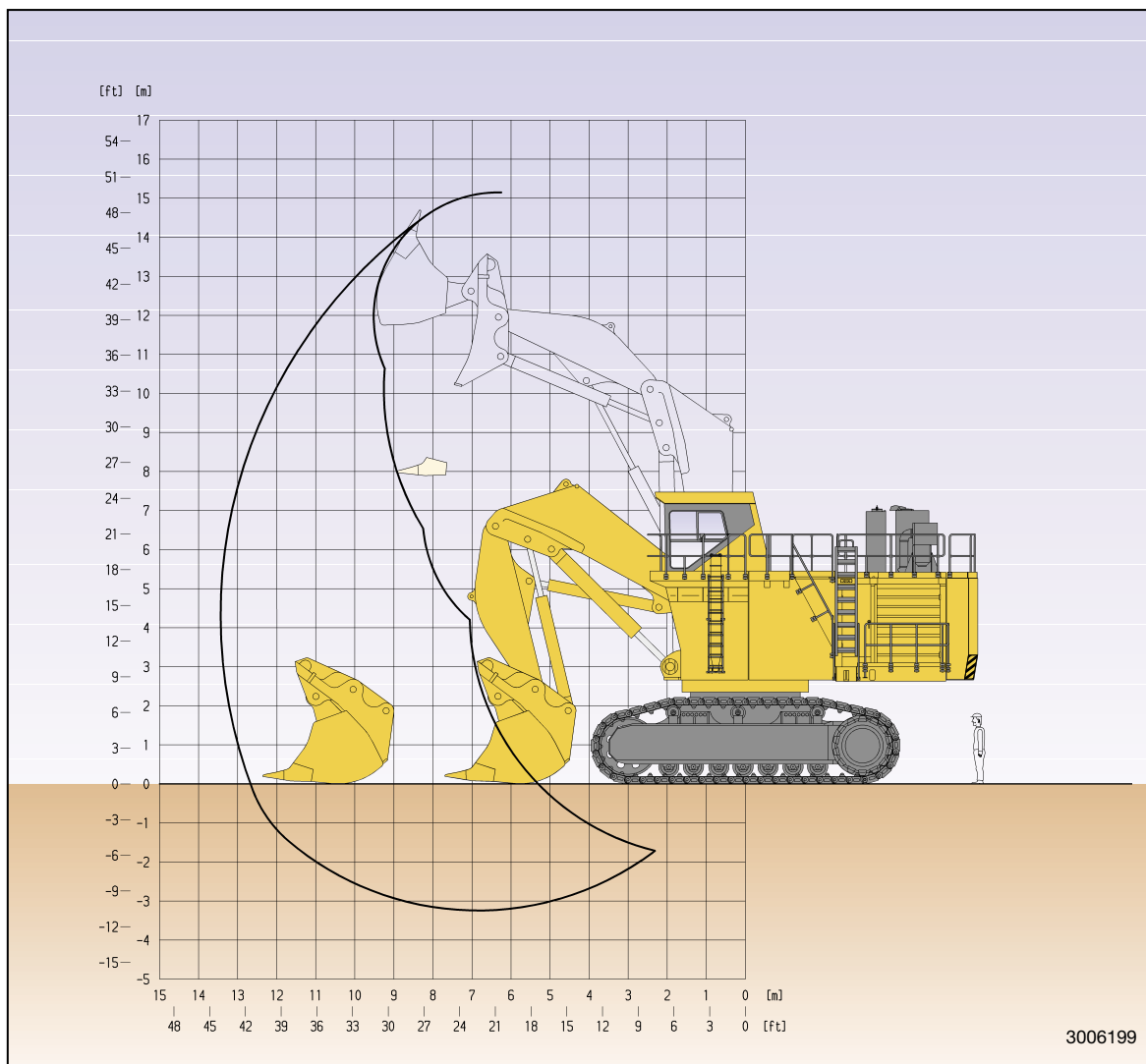
Bucket Capacity (Heaped 1:1) SAE		Width		Teeth	Wear Package	Weight		Max. Material Density (Loose)		Recommended Mining Uses
cum	cuyd	mm	foot/inch	qty	*)	t	lb	t/cum	lb/cuyd	
12,0	15.7	3.045	9'12"	5	3	15,2	33,500	2,2	3700	Heavy Duty
15,0	19.5	3.260	10'8"	5	2	15,6	34,400	1,8	3000	Standard
16,5	21.5	3.045	9'12"	5	2	16,5	36,400	1,6	2700	General Purpose

\*) WP 1 Light abrasive  
WP 2 Medium abrasive  
WP 3 Severe abrasive

Alternative buckets on request



FRONT SHOVEL ATTACHMENT



Boom length	6.000 mm	19' 8"
Stick length	4.300 mm	14' 1"
Break-out force (SAE)	1000 kN	225,000 lb
Crowd force (SAE)	1100 kN	247,500 lb

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"

Bucket Capacity (Heaped 1:2) SAE		Width		Teeth	Wear Package	Weight		Max. Material Density (Loose)		Recommended Mining Uses
cum	cuyd	mm	foot/inch	qty	*)	t	lb	t/cum	lb/cuyd	
12,0	15.7	3.430	11' 3"	5	4	22,3	49,000	2,4	4000	Heavy Duty
16,0	21	3.630	11' 11"	6	3	23,6	52,000	1,8	3000	Standard

\*) WP 1 Non abrasive  
 WP 2 Light abrasive  
 WP 3 Medium abrasive  
 WP 4 Severe abrasive

Alternative buckets on request





## STANDARD EQUIPMENT

### HYDRAULIC MINING SHOVEL WITH DIESEL DRIVE TIER 1

#### 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
- WP3, with hammerless GET system

#### OR

#### 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
- WP2, 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

#### SUPERSTRUCTURE

- Main frame mounted over an externally toothed swing circle carries the drive module
- Komatsu SSA12V159 diesel engine
- Oil and fuel reservoirs
- Hydraulic cooler
- Counterweight

#### LIGHTING

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

#### OPERATOR CAB

- Enclosed steel cab mounted on viscous pads
- FOP structure ISO 3449
- Air-conditioning unit Sūtrak
- Full suspension operator seat with belt
- Trainer seat with belt
- Controls in operator comfort zone
- 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
- All windows tinted parsol green

#### 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, and the evacuation of coolant, hydraulic and engine oils

#### ACCESSORIES

- Acoustic travel alarm
- Hydraulically actuated ground access ladder
- Electric air horn
- Service transfer oil pump
- Rails and steps on boom
- Tie off points on boom



## OPTIONAL EQUIPMENT

- 1.000 mm 39" track shoes
- 1.200 mm 47" track shoes
- Additional lighting

- Fire suppression system
- Tier 2 engine
- Electric drive

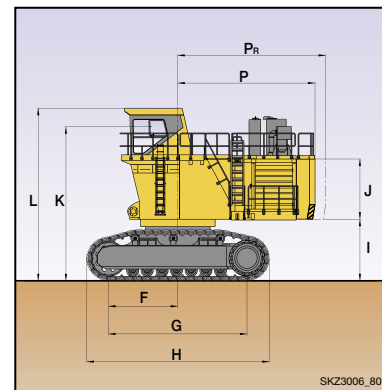
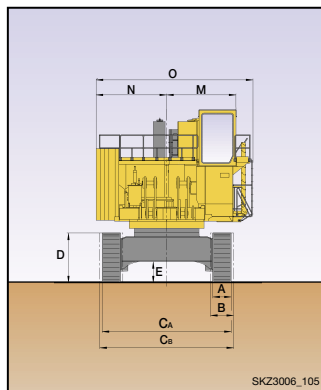
- Low temperature package (-40°C; -50°C)
- Engine oil management package (Centinel, Reserve & Eliminator systems)



## DIMENSIONS

### BASIC MACHINE WITH COUNTERWEIGHT

<b>A</b>	800 mm	2'7"	<b>I</b>	2620 mm	8'7"
<b>B</b>	1000 mm	3'3"	<b>J</b>	2635 mm	8'8"
<b>C<sub>A</sub></b>	5600 mm	18'4"	<b>K</b>	6680 mm	21'11"
<b>C<sub>B</sub></b>	5800 mm	19'	<b>L</b>	7455 mm	24'6"
<b>D</b>	2210 mm	7'3"	<b>M</b>	3010 mm	9'11"
<b>E</b>	935 mm	3'1"	<b>N</b>	3060 mm	10'1"
<b>F</b>	3000 mm	9'10"	<b>O</b>	6800 mm	22'6"
<b>G</b>	6000 mm	19'8"	<b>P</b>	5950 mm	19'6"
<b>H</b>	7910 mm	25'11"	<b>P<sub>R</sub></b>	6410 mm	21'



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