

700-720 ton 1,540,000-1,590,000 lb

**SHOVEL CAPACITY**

42 m<sup>3</sup> 55 yd<sup>3</sup> SAE 2:1 heaped

**BACKHOE CAPACITY**

42 m<sup>3</sup> 55 yd<sup>3</sup> SAE 1:1 heaped

# KOMATSU®

## PC8000

**PC**  
**8000**



## SUPER SHOVEL

## PC8000 SUPER SHOVEL

# WALK-AROUND

## GALEO

Building on the technology and expertise Komatsu has accumulated since establishment, GALEO presents customers worldwide with a strong, distinctive image of technological innovation and value. Designed for high productivity, safety and environmental considerations, GALEO machines reflect Komatsu's commitment to contributing to the creation of a better world.

### *Genuine Answers for Land and Environment Optimization*

- Quality management ISO 9001 certified.
- Environmental Management ISO 14001 certified.
- High consistent quality through continuous investment in personnel, design and manufacturing systems and processes.

### *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*

Two Komatsu SDA16V160 engines

- Rated (each) 1500 kW 2010 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.



### *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.



**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.

**MATCHED FOR TRUCKS  
240 ST AND LARGER****SHOVEL BUCKET**  
42 m<sup>3</sup> 55 yd<sup>3</sup> SAE 2:1 heaped**CROWD/BREAKOUT FORCE**  
2320 kN 521,500 lb**MAIN DRIVE****DIESEL:**

2 x 1500 kW 2 x 2010 HP

**ELECTRIC:**

2 x 1450 kW

**Sustained High Production**

Designed for more tons per hour

- Powerful digging forces.
- Ease of bucket filling.
- Proven attachment design.
- All cylinders mounted under the shovel attachment for protection.
- Buckets and Wear Packages to suit all material densities and mining conditions.

**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 fire-wall separating engine from pump area.
- Automatic central lubrication.
- ECS 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.

**Worldwide Experience**

The PC8000 is the world's largest series built hydraulic mining shovel and proven in key mining areas. Each shovel symbol represents one or several machines in operation.



**PC8000 SUPER SHOVEL****SPECIFICATIONS****DIESEL DRIVE**

Model . . . . . 2x Komatsu SDA16V160  
 Type . . . . . 4-cycle, water-cooled, direct injection  
 Aspiration . . . . . Turbocharged and aftercooled  
 Number of cylinders . . . . . 16  
 Rated power . . . . . 2x 1500 kW 2010 HP @ 1800 rpm  
 (SAE 1995/J1349)  
 Governor . . . . . All-speed, electronic

The integrated engine oil and filter system extends service intervals. This combines the oil stabilising systems Reserve and Sentinel with the Eliminator self cleaning oil filter to extend, with oil analysis, the oil change interval to 4000 hours.

The high capacity engine radiators are each cooled by a hydraulically driven fan for superior cooling efficiency and requiring little maintenance.

**ELECTRIC SYSTEM (Diesel Version)**

System . . . . . 24 V  
 Batteries (series/parallel) . . . . . 8 x 12 V  
 Alternator . . . . . 2 x 100 A  
 Standard working lights . . . . . 8 Xenon Lights  
 Standard service lights . . . . . 15 lights

\*Optional lighting upon request

**UNDERCARRIAGE**

Undercarriage consists of one center carbody and two track frames, each attached by four large diameter hardened pins.

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

**CRAWLER ASSEMBLY**

Track adjustment . . . . . Automatic hydraulic type  
 Number of track shoes . . . . . 48 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-disc

**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

**ELECTRIC DRIVE**

Type . . . . . 2 x Squirrel-cage induction motor  
 Power output . . . . . 2x 1450 kW  
 Voltage . . . . . 6600 V\*  
 Amperage (approximate) . . . . . 2 x 155 A  
 Frequency (standard) . . . . . 50 Hz @ 1500 rpm  
 Optional frequency . . . . . 60 Hz @ 1800 rpm

\*Other voltages available on request

**ELECTRIC SYSTEM (Electric Version)**

System . . . . . 24 V  
 Batteries (series/parallel) . . . . . 4 x 12 V  
 Standard working lights . . . . . 8 Xenon lights  
 Standard service lights . . . . . 15 lights

Optional lighting upon request

**HYDRAULIC SYSTEM**

The power train consists of two main drives. Diesel engines or electric motors can be supplied. Each of the two gearboxes drives four identical pumps which draw hydraulic oil from an unpressurized hydraulic tank. Open circuit hydraulics provide maximum cooling and filtering efficiency.

Rated flow (total output) . . . . . 8280 ltr/min .. 2190 gpm  
 Relief valve setting . . . . . 310 bar .... 4,495 psi  
 Swing flow rate . . . . . 2070 ltr/min ... 547 gpm

High pressure in line filters . . . . . 200 microns  
 one per pump located at the valve blocks

Full flow return line filters (8 double elements) . . . . . 10 microns  
 at head of hydraulic tank

Case drain/by-pass return line filters . . . . . 3 microns

The four-circuit system features a load-limiting governor with oil delivery summation to the working circuits and incorporates pressure cut-off control. Hydropilot prioritizes hydraulic flow giving smooth hydraulic response, simple hydraulic system layout, and a reduced number of components. The hydraulic system includes six 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 ECS. The central lubrication and open gear lubricant are supplied by identical pump assemblies from a refillable twin container which has a capacity of 2 x 300 litres (2 x 80 gal.). Replenishment of the containers is through the Wiggins connections on the service arm.

**SERVICE CAPACITIES**

Hydraulic oil tank . . . . .	83500 ltr	2,205	U.S. gal
Hydraulic system . . . . .	11500 ltr	3,040	U.S. gal
Fuel . . . . .	13500 ltr	3,564	U.S. gal
Engine coolant . . . . .	2x 475 ltr	2x 125	U.S. gal
Engine oil . . . . .	2x 290 ltr	2x 77	U.S. gal
Centinel engine oil make up tank . . . . .	2x 670 ltr	2x 180	U.S. gal



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 ECS 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.

Cab engineering standards are;

- ISO 3449 Falling Objects Protection Structure
- ISO 6396 Noise in operator's cab is 76dB(A)
- ISO 2631-1/5349-1 Vibration and Shock
- Air conditioner . . . . .10kW 34120 Btu
- Heater/Demister (Diesel version) . . . . .10kW 34120 Btu
- Heater/Demister (Electric version) . . . . .12kW 40940 Btu



### HEALTH MONITORING SYSTEM

The ECS digital diagnostic system, mounted in the operator's console, provides a text display of real time and stored information about the status of the operating machine. Non serious and critical faults are immediately announced, and for major malfunctions the engines are also shut down. The integrated digital storage provides full event history, which can be down loaded with a laptop computer. The ability to electronically record service events provides precise service information to assist in reducing downtime.



### OPERATING WEIGHTS

#### PC 8000 Backhoe:

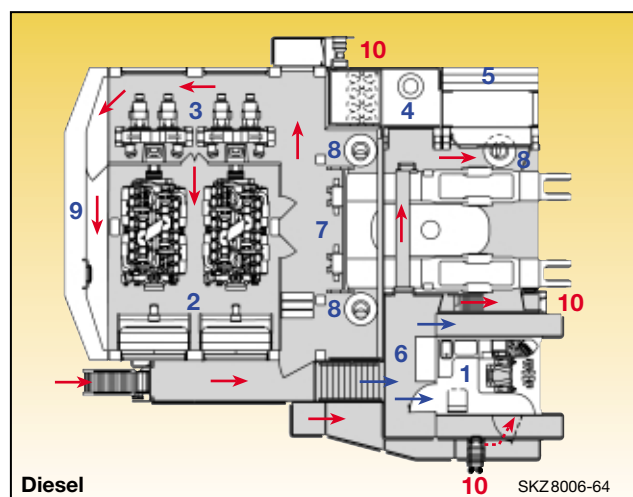
Operating weight including 11,500 mm 37'9" boom, 5500 mm 18'0" stick, 38 m³ 50.0 yd³ backhoe bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1500 mm 59"	710 t 1,565,000 lb	26.7 N/cm² 38.7 psi
1900 mm 75"	720 t 1,590,000 lb	21.4 N/cm² 31.0 psi

#### PC 8000 Front Shovel:

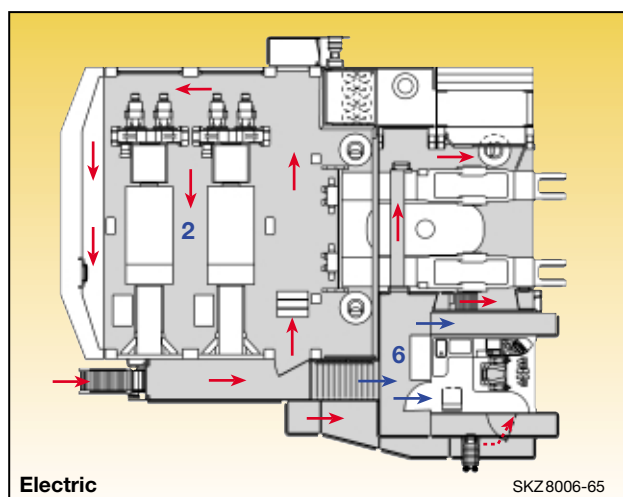
Operating weight including 8150 mm 26'9" boom, 5750 mm 18'9" stick, 42 m³ 55.0 yd³ shovel bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1500 mm 59"	700 t 1,540,000 lb	26.3 N/cm² 38.1 psi
1900 mm 75"	710 t 1,565,000 lb	21.2 N/cm² 30.7 psi



#### Explanation

- |                     |                     |
|---------------------|---------------------|
| 1 Cab               | 6 Fuel Tank         |
| 2 Diesel Engines    | 7 Valve Blocks      |
| 3 Hydraulic Pumps   | 8 Swing Motors      |
| 4 Hydraulic Tank    | 9 Counterweight     |
| 5 Hydraulic Coolers | 10 Secondary Egress |



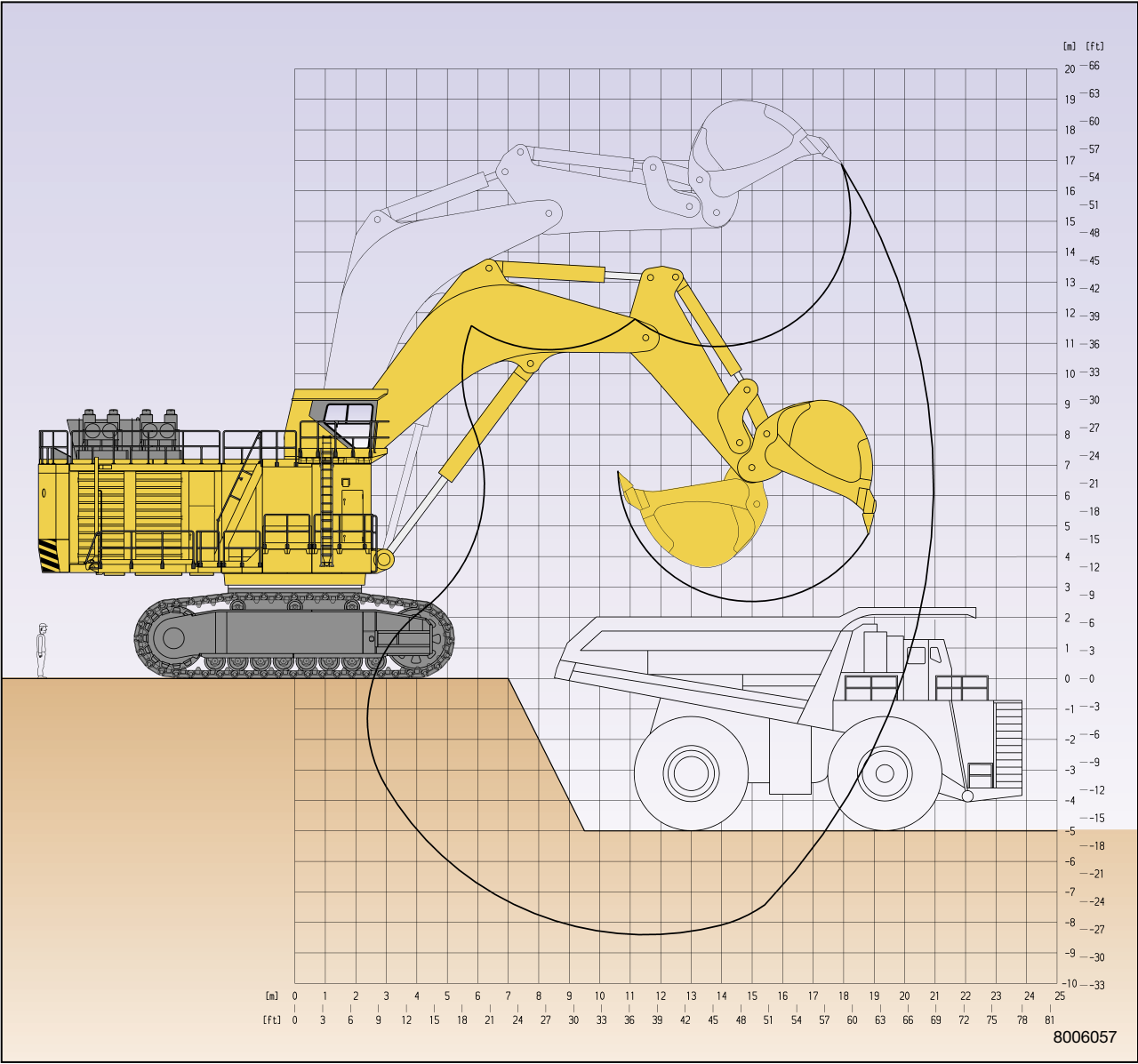
#### Variation for Electric

- Drive Version
- 2 Electric Motors
  - 6 High Voltage
  - Electric Cabinet

Walkways ← Lower-Level  
← Upper-Level

PC8000 SUPER SHOVEL

PRODUCTIVITY-FEATURES



8006057



DIGGING FORCES

Break-out force	2000 kN	449,500 lb
Tear-out force	1800 kN	404,600 lb

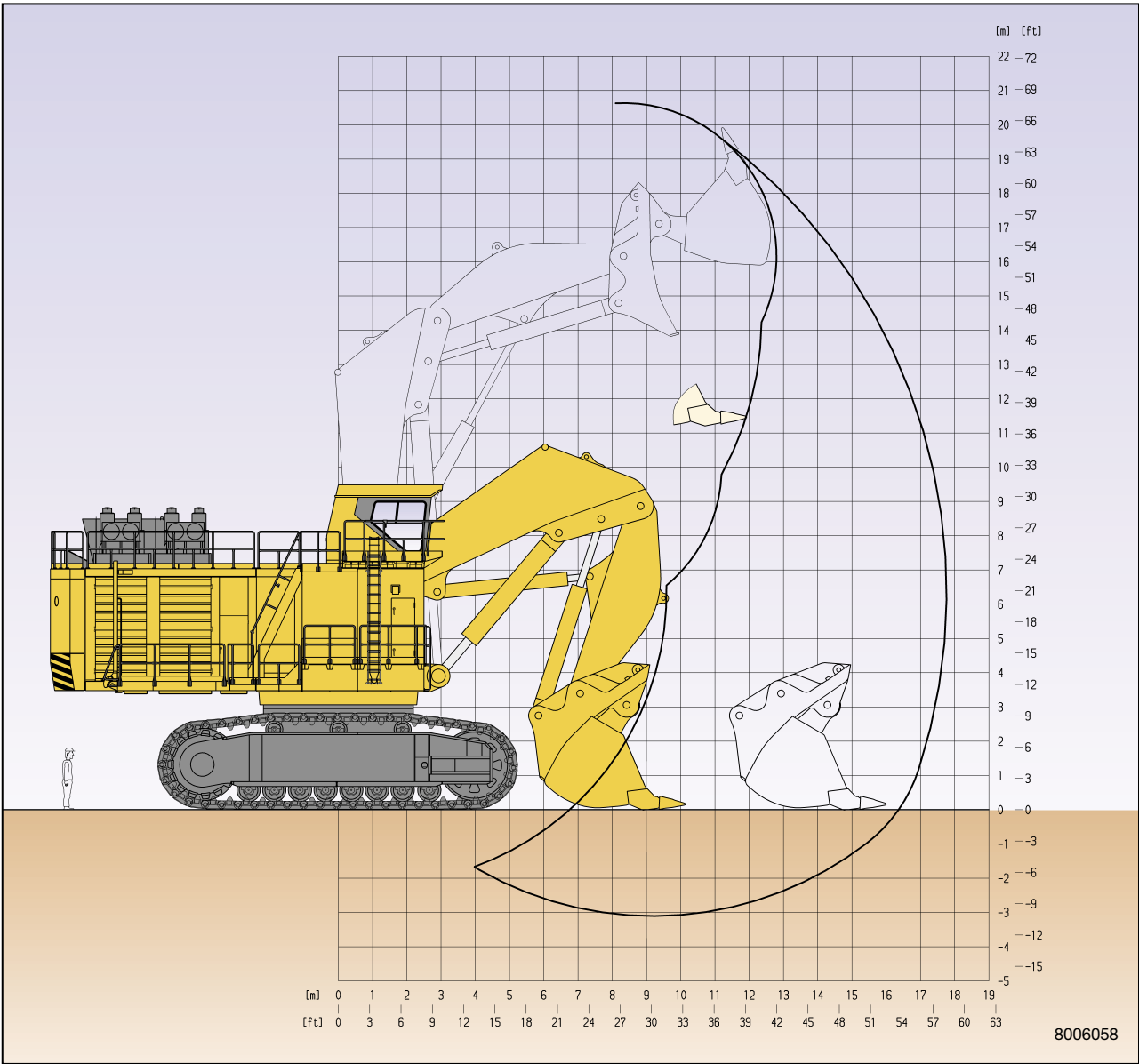
Maximum reach at ground level .....19900 mm 65'4"  
Maximum digging depth .....8400 mm 27'7"



BACKHOE BUCKET, STICK AND BOOM COMBINATION

Bucket Capacity	Width	Teeth	Weight		Boom Length
			including WP-1	Wear package WP-2	Stick Length
SAE Heaped 1 : 1					11500 mm 37'9"
38 m <sup>3</sup> 50 yd <sup>3</sup>	4830 mm 15'10"	6	—	45.5 t 100,300 lb	5500 mm 18'0"
42 m <sup>3</sup> 55 yd <sup>3</sup>	4780 mm 15'8"	6	40.3 t 88,900 lb	—	Material weight to 1.8 t/m <sup>3</sup> 3000 lb/yd <sup>3</sup>
					Material weight to 1.7 t/m <sup>3</sup> 2900 lb/yd <sup>3</sup>

Alternative buckets/wear packages are available



DIGGING FORCES

Break-out force	2320 kN	521,500 lb
Crowd force	2320 kN	521,500 lb

Level crowd at ground level	.....5900 mm	19'4"
Maximum dumping height	.....13900 mm	45'7"

SHOVEL BUCKET, STICK AND BOOM COMBINATION

Bucket Capacity		Width	Teeth	Weight	Boom Length
SAE/CECE	Heaped 2 : 1			including Wear package-3	Stick Length
42 m³ 55 yd³	48 m³ 63 yd³	5630 mm 18'6"	6	67.2 t 148,000 lb	8150 mm 26'9"
				Material weight to 1.8 t/m³ 3000 lb/yd³	

Alternative buckets/wear packages are available





## STANDARD EQUIPMENT

Hydraulic Mining Shovel will comprise:

### FRONT SHOVEL ATTACHMENT

8.15 m 26'9" boom and 5.75 m 18'9" stick complete with cylinders. 42 m<sup>3</sup> 55 yd<sup>3</sup> (SAE 2:1) shovel bucket with mechanical teeth and lip system.

OR

### BACKHOE ATTACHMENT

11.5 m 37'9" boom and 5.5 m 18'0" stick with 38 m<sup>3</sup> 50 yd<sup>3</sup> (SAE 1:1) bucket with mechanical teeth and lip system.

### CRAWLER UNDERCARRIAGE

Heavy-duty shovel type undercarriage consisting of a center carbody and 2 heavy box-type track frames, each having 8 bottom rollers, 3 top rollers, and 1500 mm 59" cast steel track shoes. Hydraulic track adjustment and parking brake provided.

### SUPERSTRUCTURE

A main frame mounted over an externally toothed swing circle carries the platform component modules and the counterweight.

### Diesel version

- Fuel tank module.
- Drive module:  
Two Komatsu SDA16V160 diesel engines, each driving 4 identical hydraulic pumps.

### Electric version

- Electrical cabinet module.
- Drive module:  
2 Squirrel cage induction motors, each with soft start and mounted with 4 identical main hydraulic pumps per motor.
- Hydraulic tank module.
- Oil cooler module.
- Cab base module:  
Includes the low tension electrical cabinet.

### 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 full suspended seat with lap-belt. Fold-away auxiliary seat. Full selection of controls, switches, and ECS (Electronic Control System). Joystick and pedal-operated controls are electric over hydraulic. Windshield wash wiper with two-speed and intermittent operation (reservoir 7 ltr 1.8 gal).

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

### LIGHTING

8 Xenon high performance lights. 15 service lights throughout platform.

### LUBRICATION

LINCOLN central lubrication for basic machine, attachment, and bucket. 300 ltr 80 gal refillable container.

LINCOLN automatic pinion lubrication system for swing circle teeth with 300 ltr 80 gal refillable container.

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, cab water and the evacuation of coolant, and hydraulic and engine oils.

### ACCESSORIES

- Acoustic travel alarm
- Hydraulically actuated ground access ladder
- Electric air horn
- Engine oil management package (Centinel, Reserve & Eliminator systems)



## OPTIONAL EQUIPMENT

- 1900 mm 75" trackshoes
- Extra or alternative, lighting
- Fire suppression system

- Electric drive
- Cable reel (Electric version)
- Service crane

- Low temperature package (incl. KIM hot start)
- Auxiliary diesel generator

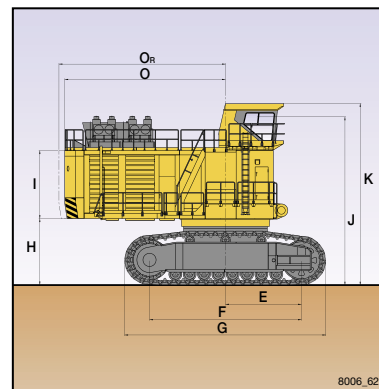
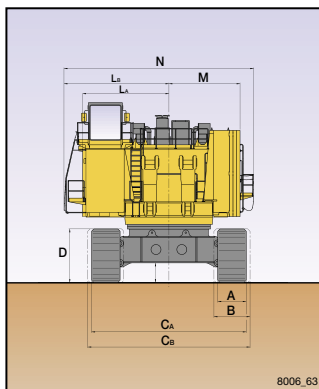


## DIMENSIONS

### BASIC MACHINE WITH COUNTERWEIGHT

A	1500mm	59"	I	3550mm	11'8"
B	1900mm	75"	J	8780mm	28'10"
C <sub>A</sub>	8150mm	26'9"	K	9500mm	31'2"
C <sub>B</sub>	8550mm	28'1"	L <sub>A</sub>	4550mm	14'11"
D	2830mm	9'3"	L <sub>B</sub>	5530mm	18'1"
E	3970mm	13'00"	M	3750mm	12'4"
F	7945mm	26'00"	N	10000mm	32'10"
G	10515mm	34'6"	O	8410mm	27'7"
H	3470mm	11'5"	O <sub>R</sub>	8710mm	28'7"

Ground Clearance: 1144mm 3'9"



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