

# KOMATSU®

## PC5500

**OPERATING WEIGHT**  
531-549 ton 1,170,000-1,200,000 lb

**SHOVEL CAPACITY**  
28 m<sup>3</sup> 37 yd<sup>3</sup> SAE 2:1 heaped

**BACKHOE CAPACITY**  
28 m<sup>3</sup> 37 yd<sup>3</sup> SAE 1:1 heaped

**PC**  
**5500**



SUPER SHOVEL

# WALK-AROUND

## ***Quality***

- Quality management ISO 9001 certified.
- Environmental Management ISO 14001 certified.
- Consistent high 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.

**MATCHED FOR**  
150 to 320 U.S. ton  
**TRUCKS**

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

28 m<sup>3</sup> 37 yd<sup>3</sup>

**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 SSA12V159 engines

- Rated (each) 940 kW 1260 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.
- 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.

# SPECIFICATIONS



## DIESEL DRIVE

Model . . . . . 2x Komatsu SSA12V159  
 Type . . . . . 4-cycle, water-cooled, direct injection  
 Aspiration . . . . . Turbocharged and aftercooled  
 Number of cylinders . . . . . 12  
 Rated power . . . . . 2x 940 kW 1260 HP @ 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 the Eliminator self cleaning oil filter extends, with oil analysis, the oil change interval to 4000 hours. (not available in Australia)



## ELECTRICS

System . . . . . 24 V  
 Batteries (series/parallel) (diesel version) . . . . . 2 + 6 x 12 V  
 Alternator . . . . . 2x 100 A  
 Standard working lights . . . . . 8 Xenon lights  
 Standard service lights . . . . . 14 lights



## HYDRAULICS

The power train consists of two main drives. Diesel engines or electric motors can be supplied. Each connected to a gearbox and 3 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) . . . . . 4200 ltr/min 1110 U.S. gal  
 Relief valve setting . . . . . 310 bar 4,495 psi  
 Swing flow rate . . . . . 700 ltr/min 185 U.S. gal  
 High pressure in line filters . . . . . 200 microns  
 one per pump located at the valve blocks

Full flow return line filters (10 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. Filtration is at the oil intake to pumps, valve blocks, heat exchangers and the oil tank.



## DRIVES AND BRAKES

Travel control . . . . . 2 foot pedals  
 Gradeability . . . . . Up to 50%  
 Travel speed (maximum) . . . . . 2.1 km/h 1.4 mph  
 Service brake . . . . . Hydraulic brake  
 Parking brake . . . . . Wet, multiple-disc



## SWING SYSTEM

Hydraulic motors and drives . . . . . 2  
 Swing brake, service . . . . . Hydraulic brake  
 Swing brake, parking . . . . . Wet, multiple-disc  
 Swing ring teeth . . . . . External  
 Swing speed (maximum) . . . . . 3.1 rpm



## ELECTRIC DRIVE

Type . . . . . 2x Squirrel-cage induction motor  
 Power output . . . . . 2x 900 kW  
 Voltage . . . . . 6600 V\*  
 Amperage (approximate) . . . . . 215 A  
 Start-up . . . . . Soft start each motor in succession  
 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 80 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 radiators are cooled by hydraulically driven fans for superior cooling efficiency and require little maintenance.

The hydraulic system includes four 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 lube grease system is supplied from a refillable 300 litre 80 gal. container. A second, identical system supplies open gear lubricant to the swing ring teeth through a lube pinion. Replenishment of the containers is through the service arm.



## SERVICE CAPACITIES

Hydraulic oil tank . . . . .	3800 ltr	1,000 U.S. gal
Hydraulic system . . . . .	6000 ltr	1,585 U.S. gal
Fuel . . . . .	10,800 ltr	2,853 U.S. gal
Engine coolant . . . . .	2x 360 ltr	2x 95 U.S. gal
Engine oil . . . . .	2x 190 ltr	2x 50 U.S. gal
Centinel engine oil make up tank . . . . .	2x 580 ltr	2x 153 U.S. gal

**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 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

**ECS 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 (APPROXIMATE)**

**PC 5500 Backhoe:**

Operating weight including 11.000 mm 36'1" boom, 5100 mm 16'9" stick, 28 m³ 37 yd³ backhoe bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1350 mm 53"	535 t 1,180,000 lb	23.9 N/cm² 33.4 psi
1800 mm 71"	549 t 1,210,000 lb	18.3 N/cm² 26.5 psi

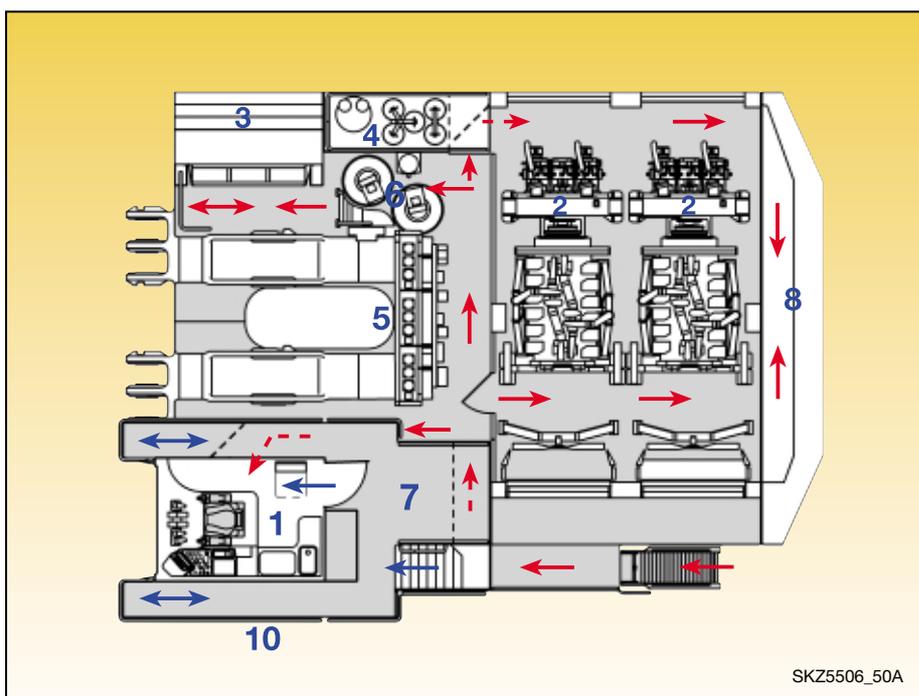
**PC 5500 Front Shovel:**

Operating weight including 7600 mm 24'11" boom, 5600 mm 18'4" stick, 28 m³ 37 yd³ shovel bucket, operator, lubricant, coolant, full fuel tank and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1350 mm 53"	531 t 1,170,000 lb	23.1 N/cm² 33.5 psi
1800 mm 71"	545 t 1,200,000 lb	18.2 N/cm² 26.4 psi

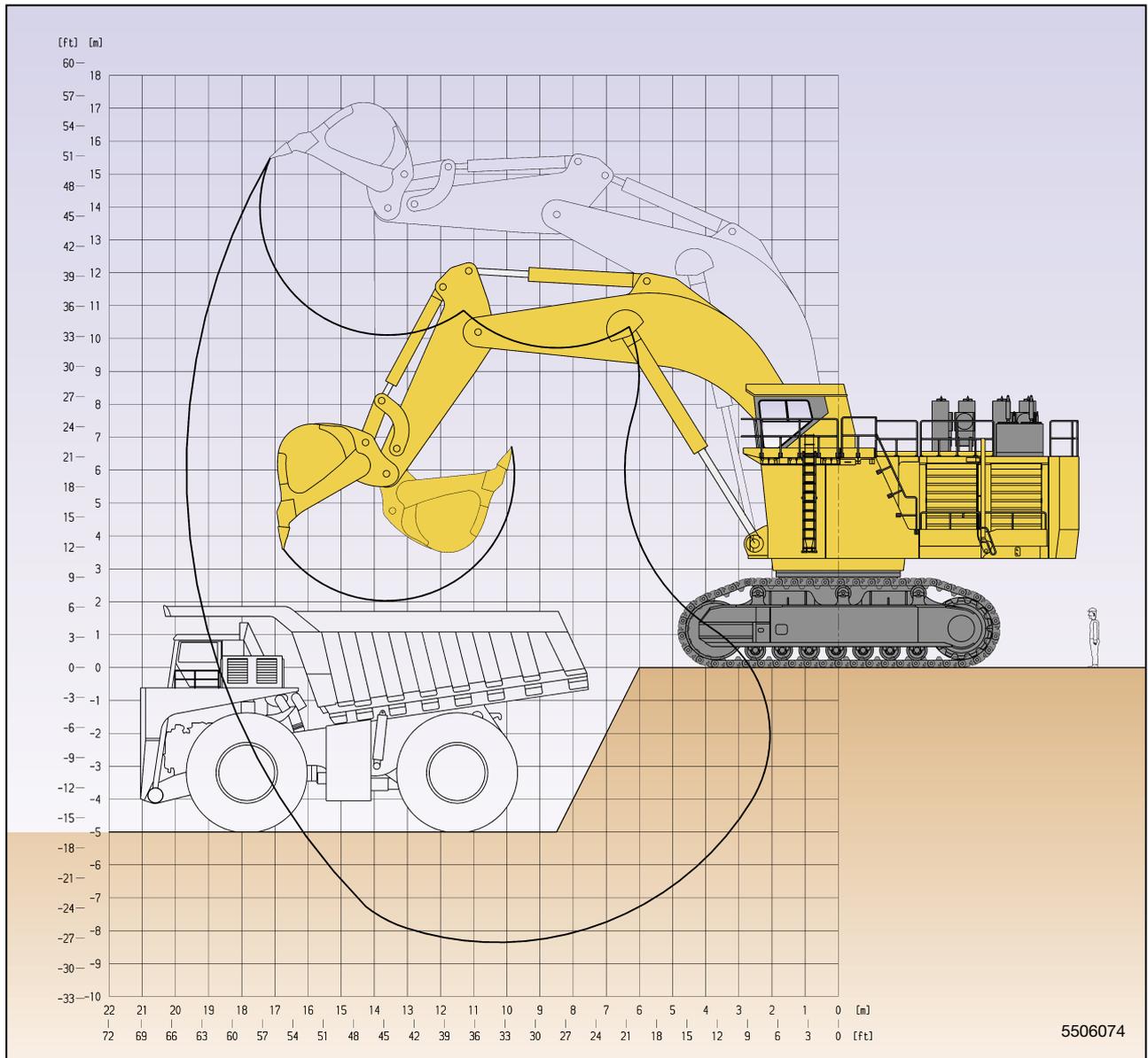
**Explanation**

- 1 Operator's cab
- 2 Power Trains
- 3 Hydraulic Cooler
- 4 Hydraulic Reservoir
- 5 Valve Blocks
- 6 Swing Motors
- 7 Fuel Tank
- 8 Counterweight
- 9 Autolube Systems (on upper deck)
- 10 Secondary Egress



SKZ5506\_50A

# PRODUCTIVITY-FEATURES



## DIGGING FORCES

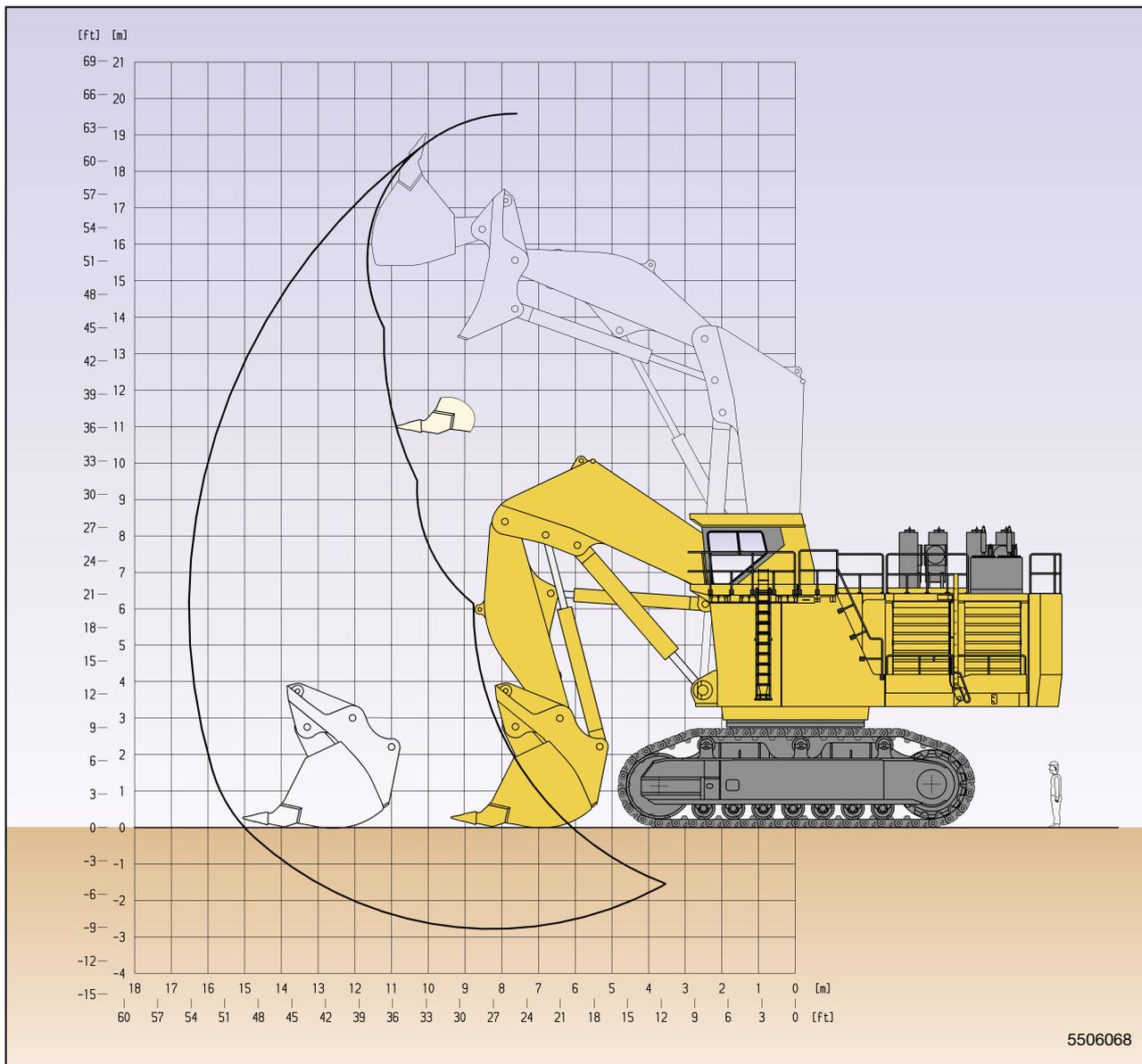
Break-out force	1450 kN	326,250 lb
Tear-out force	1290 kN	290,250 lb

Maximum reach at ground level	18.700 mm	61'4"
Maximum digging depth	.8300 mm	27'3"

## BACKHOE BUCKET, STICK AND BOOM COMBINATION

Bucket Capacity	Width	Weight	Teeth	Boom Length
		including Wear package -2		Stick Length
SAE Heaped 1 : 1	4380 mm 14'4"	31.9 t 70,330 lb	5	11.000 mm 36'1"
28 m <sup>3</sup> 37 yd <sup>3</sup>				5100 mm 16'9"
Material weight to 1.8 t/m <sup>3</sup> 3000 lb/yd <sup>3</sup>				

Alternative buckets/wear packages are available



**DIGGING FORCES**

Break-out force	1865 kN	419,200 lb
Crowd force	1870 kN	420,300 lb

Level crowd at ground level	.5600 mm	18'5"
Maximum dumping height	.13.400 mm	44'0"



**SHOVEL BUCKET, STICK AND BOOM COMBINATION**

Bucket Capacity		Width	Weight including Wear package-3	Teeth	Boom Length
<b>SAE/CECE</b>	Heaped 1 : 1				4565 mm 15'0"
Heaped 2 : 1		Stick Length			
28 m <sup>3</sup> 37 yd <sup>3</sup>	32 m <sup>3</sup> 42 yd <sup>3</sup>				5600 mm 18'4"
					○ Material weight to 1.8 t/m <sup>3</sup> 3000 lb/yd <sup>3</sup>

Alternative buckets/wear packages are available



## STANDARD EQUIPMENT

Hydraulic Mining Shovel with Diesel Drive will comprise:

### ● FRONT SHOVEL ATTACHMENT

7.6 m 24'11" boom and 5.6 m 18'4" stick complete with cylinders. 28 m<sup>3</sup> 37 yd<sup>3</sup> (SAE 2:1) shovel bucket with mechanical teeth and lip system.

OR

### ● BACKHOE ATTACHMENT

11.0 m 36'1" boom and 5.1 m 16'9" stick with 28 m<sup>3</sup> 37 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 7 bottom rollers, 3 top rollers, and 1350 mm 53" cast steel track shoes. Hydraulic track adjustment and parking brake provided.

### ● SUPERSTRUCTURE

The main frame mounted over an externally toothed swing circle carries the main drive module, including two Komatsu SSA12V159 diesel engines, oil and fuel reservoirs, counterweight, operator's cab and base.

### ● LIGHTING

8 Xenon high performance working lights.  
14 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 full suspension operator's seat with lap-belt. An auxiliary seat. Full selection of controls, switches, and ECS (Electronic Health Monitor). Joy stick and pedal-operated controls are electric over hydraulic.

Windshield wash wipers with two speed and intermittent operation. (reservoir 7 ltr 1.8 gal). AM-FM radio. External metal sun blinds. Left and right hand sliding windows. All windows tinted parsol green.

### ● 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, cabwater and the evacuation of coolant, and hydraulic and engine oils.

### ● ACCESSORIES

Acoustic travel alarm  
Hydraulically actuated ground access ladder  
Electric air horn



## OPTIONAL EQUIPMENT

- 1800 mm 71" track shoes
- Extra or alternative, lighting
- Fire suppression system

- Electric drive
- Cable reel (Electric version)

- Low temperature package (incl. KIM hot start)

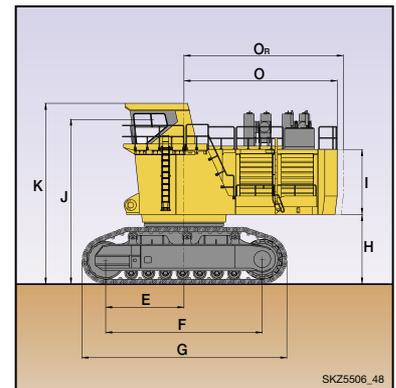
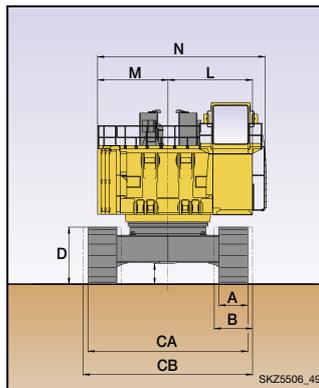


## DIMENSIONS

### BASIC MACHINE WITH COUNTERWEIGHT

A	1350mm	53"	H	3310mm	10'10"
B	1800mm	71"	I	3100mm	10'2"
C <sub>A</sub>	7540mm	24'9"	J	7910mm	25'11"
C <sub>B</sub>	7990mm	26'3"	K	8610mm	28'10"
D	2715mm	8'11"	L	3970mm	13'0"
E	3712mm	12'2"	M	3300mm	10'10"
F	7424mm	24'4"	N	7900mm	25'11"
G	9720mm	31'11"	O	7260mm	23'10"
			O <sub>R</sub>	7550mm	24'9"

Ground Clearance: 995mm 3'3"



QESS0556 03

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