

KOMATSU

PC5500-6 Loading Shovel PC5500-6 Backhoe

ENGINE POWER

2 x 940 kW / 1260 HP @ 1800 rpm

OPERATING WEIGHT

533 – 552 ton / 1,175,200 – 1,217,100 lb

SHOVEL CAPACITY

29 m³ 38 yd³ SAE 2:1 heaped

BACKHOE CAPACITY

29 m³ 38 yd³ SAE 1:1 heaped

PC
5500

HYDRAULIC EXCAVATOR



WALK-AROUND



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
- Energy DIN EN ISO 50001
- High consistent quality through continuous investments in personnel, design and manufacturing systems and processes

Powerful Diesel Engine

Two Komatsu SDA12V159E-2 Tier 2 engines

- Rated power: 2 x 940 kW (1260 HP) at 1800 rpm
- Electronic engine management
- Low engine emission level Tier 2 certified
- Time saving Engine Oil Management System; Centinel, Engine Reserve Oil Supply and Eliminator Oil Filter System

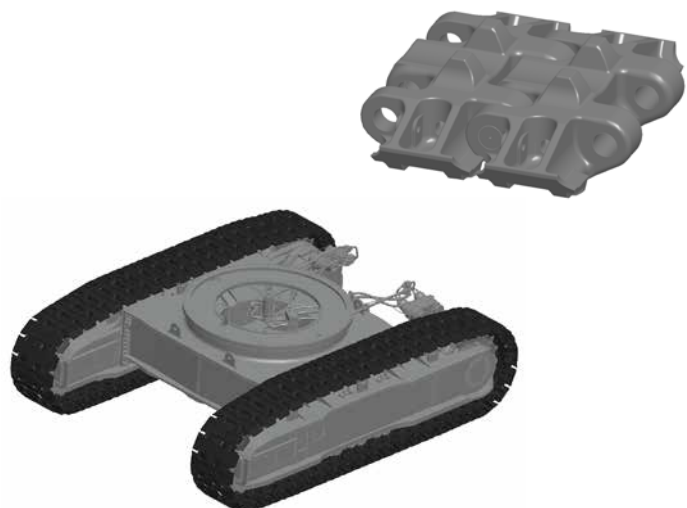
Electric Drive, optional available

Two squirrel cage induction motors

- Output: 2 x 900 kW
- Frequencies: 50 Hz or 60 Hz

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



MATCHES

150 to 320 U.S. ton TRUCKS

OPERATING WEIGHT

Shovel 533-546 ton
1,175,300-1,203,900 lb

Backhoe 538-552 ton
1,186,300-1,217,200 lb

BUCKET CAPACITY

Shovel 29 m³ 38 yd³
Backhoe 29 m³ 38 yd³

Reliability and Durability

Long life and low operating cost by design

- Robust structural design developed from field experience and finite element analysis

Access and Egress

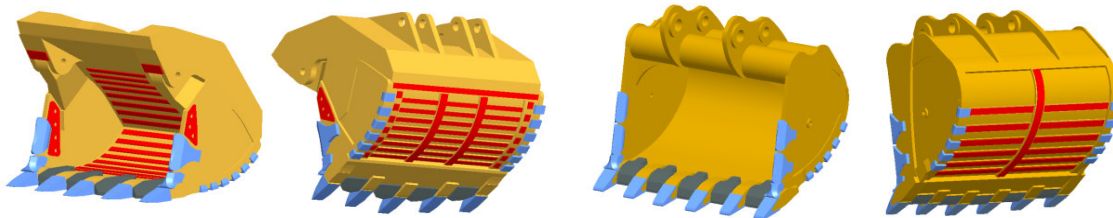
- 45° stairway design
- 3 emergency egresses
 - Cab and machinery house
 - (two pieces flip down solid anti slip steel ladder)
 - Machinery house escape
- Illuminated accesses and egresses



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

- Comprehensive monitored filtration
- Simple open circuit hydraulic system with high efficiency swing out oil coolers
- Parallel kinematic & float action

WALK-AROUND

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 wash wiper covers windshield area for excellent visibility



Komtrax Plus

- Remote monitoring system with access to specific machine data
- Preventive maintenance scheduling
- Reporting information
- Data transfer via Satellite (Orbcom or Iridium)



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, refillable via service arm
- Ground-level access to hydraulically powered swing down service arm with Wiggins connections
- Acknowledges EMESRT design philosophies
- Spacious pump compartment with head height clearance



SPECIFICATIONS



DIESEL DRIVE

Tier 2 engine:
 Model 2 x Komatsu SDA12V159E-2
 Type 4-cycle, water-cooled, direct injection
 Aspiration Turbocharged and aftercooled
 Number of cylinders 12
 Rated power 2 x 940 kW 1260 HP @ 1800 rpm (SAE J1995)
 Governor All-speed, electronic
 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. The high capacity Mesabi engine radiators are cooled by a hydraulically driven fan for superior cooling efficiency.



ELECTRIC SYSTEM (Diesel Version)

System 24 V
 Batteries (series/parallel) 8 x 12 V
 Alternator 2 x 140 A
 Standard working lights 14 LED lights
 Standard service lights Throughout the platform



UNDERCARRIAGE

Undercarriage consists of one centre carbody and two track frames, each side attached by high torque bolts
 Centre frame H-type
 Track frame Steel box-section



CRAWLER ASSEMBLY

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

Gradeability Up to 50 %
 Travel speed (maximum) 2.1 km/h 1.4 mph
 Service brake Hydraulic brake
 Parking brake Multiple-disk



SWING SYSTEM

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



ELECTRIC SYSTEM (Electric Version)

System 24 V
 Batteries (series/parallel) 4 x 12 V
 Standard working lights 14 LED lights
 Standard service lights Throughout the platform



ELECTRIC DRIVE

Type 2 x Squirrel cage induction motor
 Power Output 2 x 900 kW
 Voltage 6,000 – 7,200 V*
 Amperage (approximate) 2 x 96 A - 2 x 80 A
 Frequency standard 60 Hz @ 1800 rpm
 Frequency option 50 Hz @ 1500 rpm
 * Other voltages available on request



HYDRAULIC SYSTEM

The power train consists of two main drives. Each of the two gearboxes drives three identical pumps which draw hydraulic oil from an unpressurised hydraulic tank. Open circuit hydraulics provide maximum cooling and filtering efficiency.

Rated flow (total output) 4,200 ltr/min / 1,110 gpm
 Relief valve setting 310 bar / 4,495 psi
 Swing flow rate 700 ltr/min / 185 gpm
 High pressure in line filters 200 microns
 one per pump located at the valve blocks
 Full flow return line filters (5 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 prioritises hydraulic flow giving smooth hydraulic response, simple hydraulic system layout, and a reduced number of components. The hydraulic system includes large swing-out vertical air-to-oil hydraulic coolers with temperature-regulated hydraulically driven fans.



AUTOMATIC CENTRALISED LUBRICATION

Three hydraulically powered Lincoln single line automatic lubrication systems are provided as standard, complete with time and volume variable controls. The two central lubrication circuits and open gear grease circuit are supplied by identical pump assemblies from refillable containers which have a capacity of 1 x 600 and 1 x 300 litres (total 238 gal). Replenishment of the containers is through the Wiggins connections on the service arm.



SERVICE CAPACITIES

Hydraulic oil tank 3,715 ltr / 982 U.S. gal
 Hydraulic system 6,000 ltr / 1,585 U.S. gal
 Fuel 10,355 ltr / 2,736 U.S. gal
 Engine coolant 2 x 360 ltr / 95 U.S. gal
 Engine oil 2 x 190 ltr / 50 U.S. gal
 Reserve engine oil make up tank 2 x 500 ltr / 132 U.S. gal
 Lubrication system (total) 900 ltr / 238 U.S. gal



ENVIRONMENT

Vibration levels
 Hand-lever (ISO 5349-1) lower than 2.5m/s²
 Whole body vibration and shock (ISO 2631-1) below 0.5m/s²
 Contains fluorinated greenhouse gas HFC-134a (GWP 1430)
 PC5500-6 D Quantity of gas 5.5-10.0 kg, CO₂ equivalent 7,865-14,300t
 PC5500-6 E Quantity of gas 7.9-12.4 kg, CO₂ equivalent 11,297-17,732t



OPERATOR CAB

The large and comfortable cab is mounted on 18 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 joystick controls are electro-hydraulic 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 with AUX in is fitted. The windshield wash wiper has two speeds and intermittent operation. Amenities include a refrigerator and storage cabinets. Powered and heated mirrors are adjusted from inside the cab. External metal sun blinds on the cab side window and internal roller blinds on all windows are standard. The left hand window is an emergency exit. All windows are tinted parsol green. The cap is equipped with a special penetration proof front window (acc. DIN EN 1063, resistance classification BR2-S) to increase the safety level of the operator. The front window is a 19mm thick impact resistant window. A walkway is mounted in front of cabin.

Major cab engineering standards are:

- ISO 3449 Falling Objects Protection Structure (FOPS)
- ISO 6394 Noise in operator's cab is max. 75 dB(A)
- ISO 10263-4 Heating and air conditioning second heater or air conditioner as option



KOMTRAX PLUS 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 coloured display. The integrated digital storage provides a full event history and trend data, which can be downloaded by laptop. Optionally available are W-LAN or Orbcomm satellite transmission (check for availability in your territory).



OPERATING WEIGHTS (APPROXIMATE)

PC5500 Backhoe:

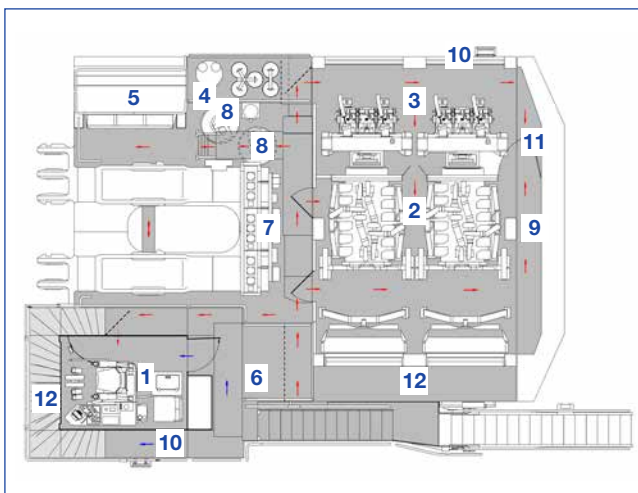
Operating weight including 11,000 mm 36'1" boom, 5,100 mm 16'9" stick, 29 m³ (38 yd³) backhoe bucket, operator, lubricant, coolant, 1/3 fuel and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1,350 mm 53"	539 t 1,188,500 lb	23.8 N/cm ² 34.5 psi
1,800 mm 71"	552 t 1,217,200 lb	18.3 N/cm ² 26.5 psi

PC5500 Front Shovel:

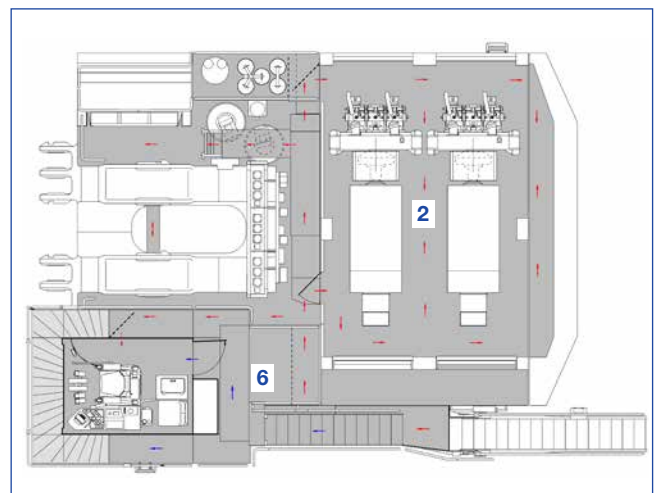
Operating weight including 7,600 mm 24'1" boom, 5,600 mm 18'4" stick, 29 m³ (38 yd³) shovel bucket, operator, lubricant, coolant, 1/3 fuel and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1,350 mm 53"	533 t 1,175,300 lb	23.5 N/cm ² 34.0 psi
1,800 mm 71"	547 t 1,206,100 lb	18.1 N/cm ² 26.2 psi



Diesel Drive

- | | |
|---------------------|--|
| 1 Cab | 7 Valve Blocks |
| 2 Diesel Engines | 8 Swing Motors |
| 3 Hydraulic Pumps | 9 Counterweight |
| 4 Hydraulic Tank | 10 Emergency swing ladder egress |
| 5 Hydraulic Coolers | 11 Emergency access out of machinery house |
| 6 Fuel Tank | 12 See-through Cat Walk |



Variation for Electric Drive Version

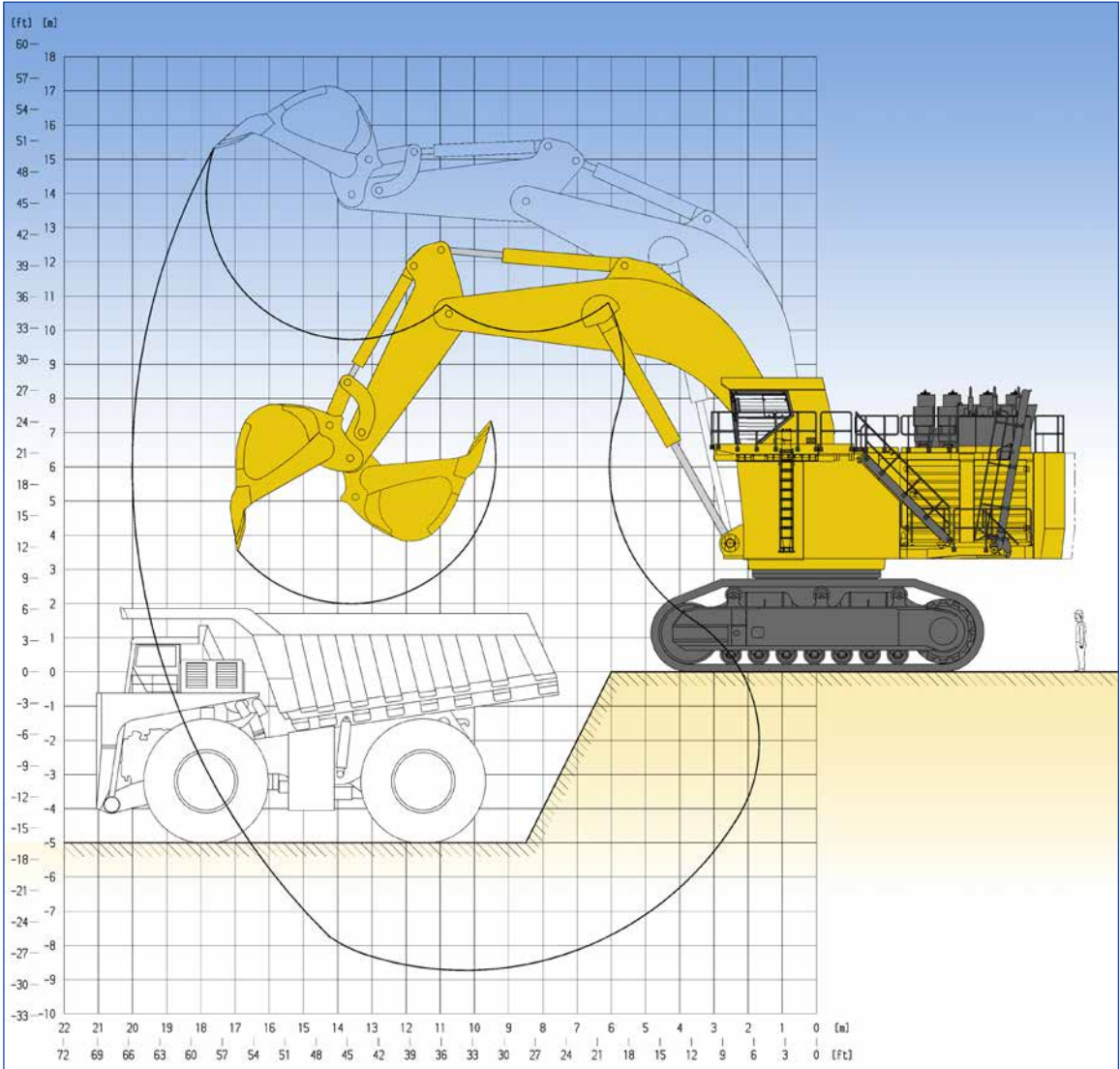
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|---------------------------------|
| 2 Electric Motors |
| 6 High Voltage Electric Cabinet |

Walkways ← Lower-Level
← Upper-Level

PRODUCTIVITY-FEATURES



BACKHOE ATTACHMENT



Boom length	11,000 mm	36'1"
Stick length	5,100 mm	16'9"
Break-out force (ISO)	1,516 kN	340,750 lb
Tear-out force (ISO)	1,326 kN	298,050 lb

Max. digging height	15,330 mm	50'4"
Max. dumping height	9,730 mm	31'11"
Max. digging depth	8,720 mm	28'7"
Max. digging reach	20,000 mm	65'8"
Max. digging reach at ground level	19,050 mm	62'6"

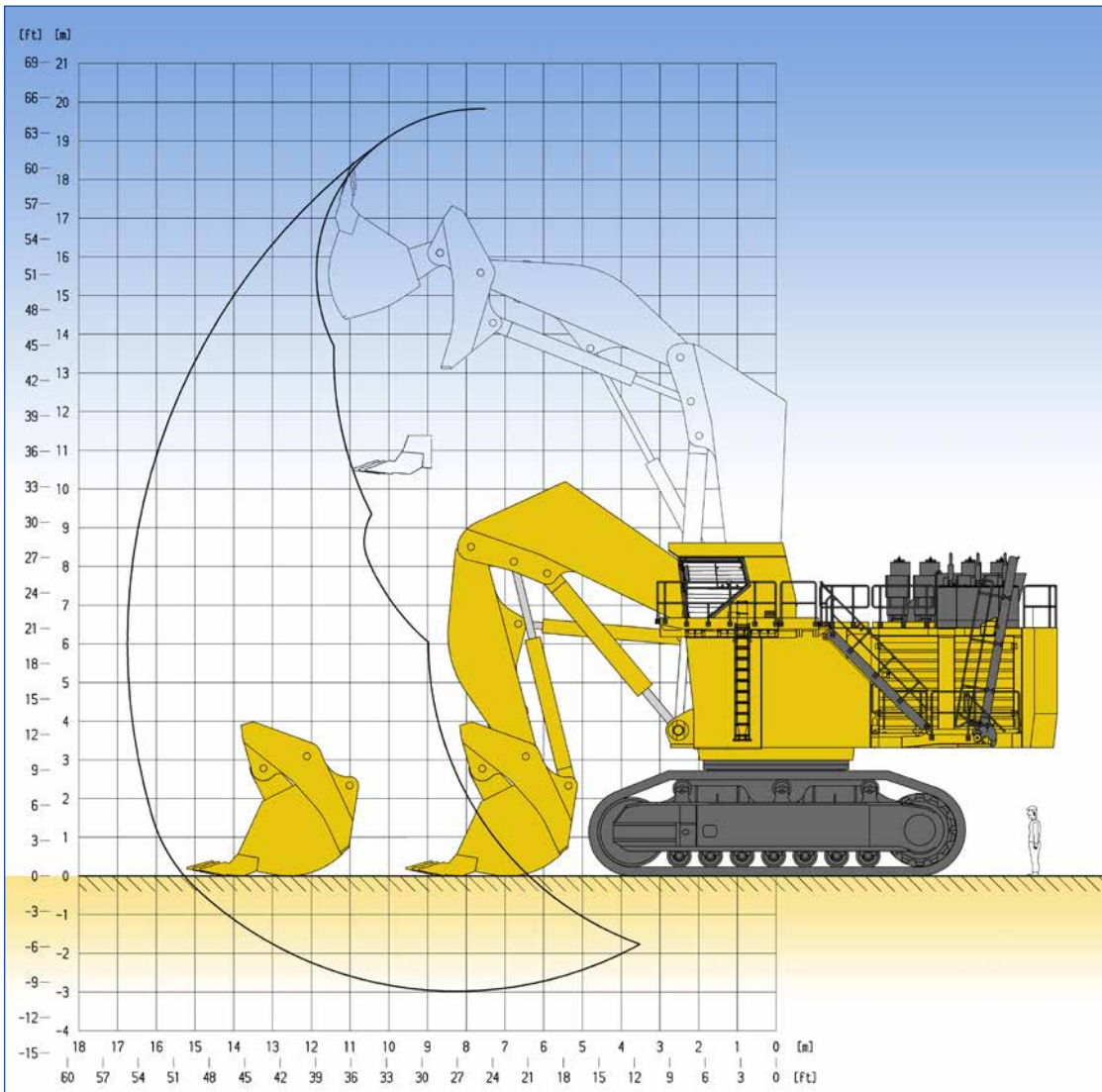
Bucket Capacity (Heaped 1:1) SAE		Width		Teeth	Wear Package acc. abrasiveness	GET System	Max. Material Density (Loose)	
cum	cuyd	mm	foot/inch	qty			t/cum	lb/cuyd
26.0	34.0	4,380	14'4"	5	heavy	Hensley XS 644 *	2.1	3,500
29.0	38.0	4,380	14'4"	5	heavy	Hensley XS 644 *	1.8	3,000

Alternative buckets on request

*other systems on request



FRONT SHOVEL ATTACHMENT



Boom length	7,600 mm	24'11"	Max. cutting height	19,820 mm	65'
Stick length	5,600 mm	18'4"	Max. dumping height	13,100 mm	42'12"
Break-out force (ISO)	1,870 kN	420,320 lb	Max. digging depth	2,980 mm	9'9"
Crowd force (ISO)	1,850 kN	415,830 lb	Max. digging reach	16,750 mm	54'11"
			Level crowd at ground level	5,680 mm	18'8"
			Bucket opening width	2,790 mm	9'2"

Bucket Capacity (Heaped 1:2) SAE		Width		Teeth	Wear Package acc. abrasiveness	GET System	Max. Material Density (Loose)	
cum	cuyd	mm	foot/inch	qty			t/cum	lb/cuyd
19.0	24.8	4,570	14'12"	5	heavy	Hensley XS 644 *	3.3	5,700
21.0	27.5	4,410	14'6"	5	heavy	Hensley XS 644 *	2.8	4,400
26.0	34.0	4,570	14'12"	6	heavy	Hensley XS 644 *	2.0	3,400
29.0	38.0	4,570	14'12"	6	standard	Hensley XS 644 *	1.8	3,000

Alternative buckets on request

*other systems on request



STANDARD AND OPTIONAL EQUIPMENT

FRONT SHOVEL ATTACHMENT

- 7.6 m 24'11" boom, 5.6 m 18'4" stick
- 29 m³ (38 yd³) (SAE 2:1) shovel bucket incl. standard wear package with
- Hammerless GET system
- Alternative buckets
- Boom cylinder sliding guard
- Stick cylinder sliding guard

BACKHOE ATTACHMENT

- 11.0 m 36'1" boom, 5.1 m 16'9" stick
- 29 m³ 38 yd³) (SAE 1:1) shovel bucket incl. standard wear package with
- Hammerless GET system
- Alternative buckets
- Bucket cylinder sliding guard

CRAWLER UNDERCARRIAGE

- Heavy-duty shovel type undercarriage
- Centre carbody
- 2 heavy box-type track frames
- 7 bottom rollers and 3 top rollers each side
- 1,350 mm 53" cast steel track shoes
- 1,800 mm 71" cast steel track shoes
- Hydraulic track adjustment and parking brake
- Drive gear box protection
- Travel motor protection

SUPERSTRUCTURE

- Main frame mounted over an externally toothed swing circle carries the drive module
- 2 x Komatsu SDA12V159E-2 Tier 2 diesel engines
- Electric drive various voltages
- Cable drum without cable

LIGHTING

- 14 LED high performance working lights
- Service lights throughout the platform incl. emergency egresses and stairways
- Rotafare warning lights

OPERATOR CAB

- Enclosed steel cab mounted on viscous pads
- FOPS according ISO 10262
- Air-conditioning unit Süttrak
- Full suspension operator seat with belt
- Controls ergonomic
- KOMTRAX Plus (Monitoring System)
- Joysticks are electro-hydraulic
- 1 large parallel windshield wash wiper
- AM-FM radio with MP3 ready CD player and AUX in
- Internal and external sun blinds
- Impact resistant front window (19mm)
- All windows tinted parsol green
- Walkway around the cab
- Additional cab A/C
- Additional cab heater

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

SERVICE AND LUBRICATION

- LINCOLN central lubrication for basic machine and attachment
- LINCOLN central lubrication for bucket and bucket stick assembly
- 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, grease, and the evacuation of coolant, hydraulic and engine oils
- Service transfer oil pump
- Engine oil management package (Centinel, Reserve & Eliminator systems)
- Service Monitor (incl. all relevant manuals)

SAFETY FEATURES

Access and egress system

- 45° stairway design
- Hydraulically operated (two switches)
- Equipped with hand rails up to cab
- All steps with antislip edge
- Illuminated system

Emergency egress system

- Two pieces flip down solid antislip steel ladder
- Easy release with foot lever
- One system on cab site (illuminated)
- One system on opposite site (illuminated)
- One machinery house escape system (ladder + hatch)

- Acoustic travel alarm
- Electric air horn
- Engine turbo and exhaust pipe covers
- Engine emergency stop at ground level
- Camera system acc. ISO5006
- Sidewalks and stairs are provided with skid resistant plates
- Hand rails and steps on boom; tie off points on boom

Other Equipment

- Fire suppression system, Ansul (Agent LVS+Powder), diesel drive
- Service crane
- Special painting
- Biodegradable hydraulic oil

Further equipment on request

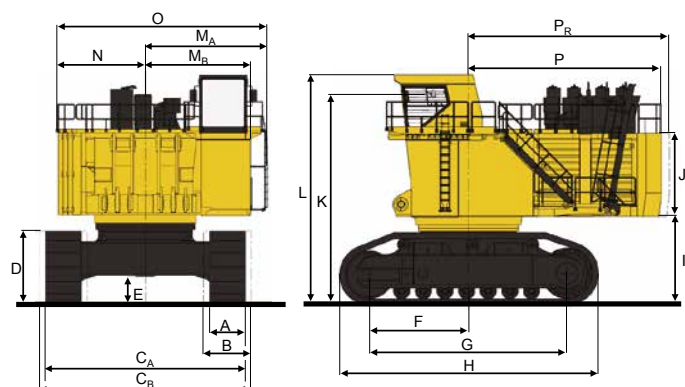
- Standard Equipment
- Optional Equipment



DIMENSIONS

BASIC MACHINE WITH COUNTERWEIGHT

A	1,350 mm	4'5"	I	3,310 mm	10'10"
B	1,800 mm	5'11"	J	3,100 mm	10'2"
C _A	7,540 mm	24'9"	K	7,910 mm	25'11"
C _B	7,990 mm	26'3"	L	8,610 mm	28'10"
D	2,715 mm	8'11"	M _A	4,600 mm	15'1"
E	995 mm	3'3"	M _B	3,970 mm	13'0"
F	3,712 mm	12'2"	N	3,300 mm	10'10"
G	7,424 mm	24'4"	O	7,900 mm	25'11"
H	9,720 mm	31'11"	P	7,260 mm	23'10"
		P _R		7,500 mm	24'9"



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