

KOMATSU

ENGINE POWER

2 x 1250 kW / 1675 HP @ 1800 rpm

OPERATING WEIGHT

677 - 691 ton - 1,492,800 - 1,523,700 lb

SHOVEL CAPACITY

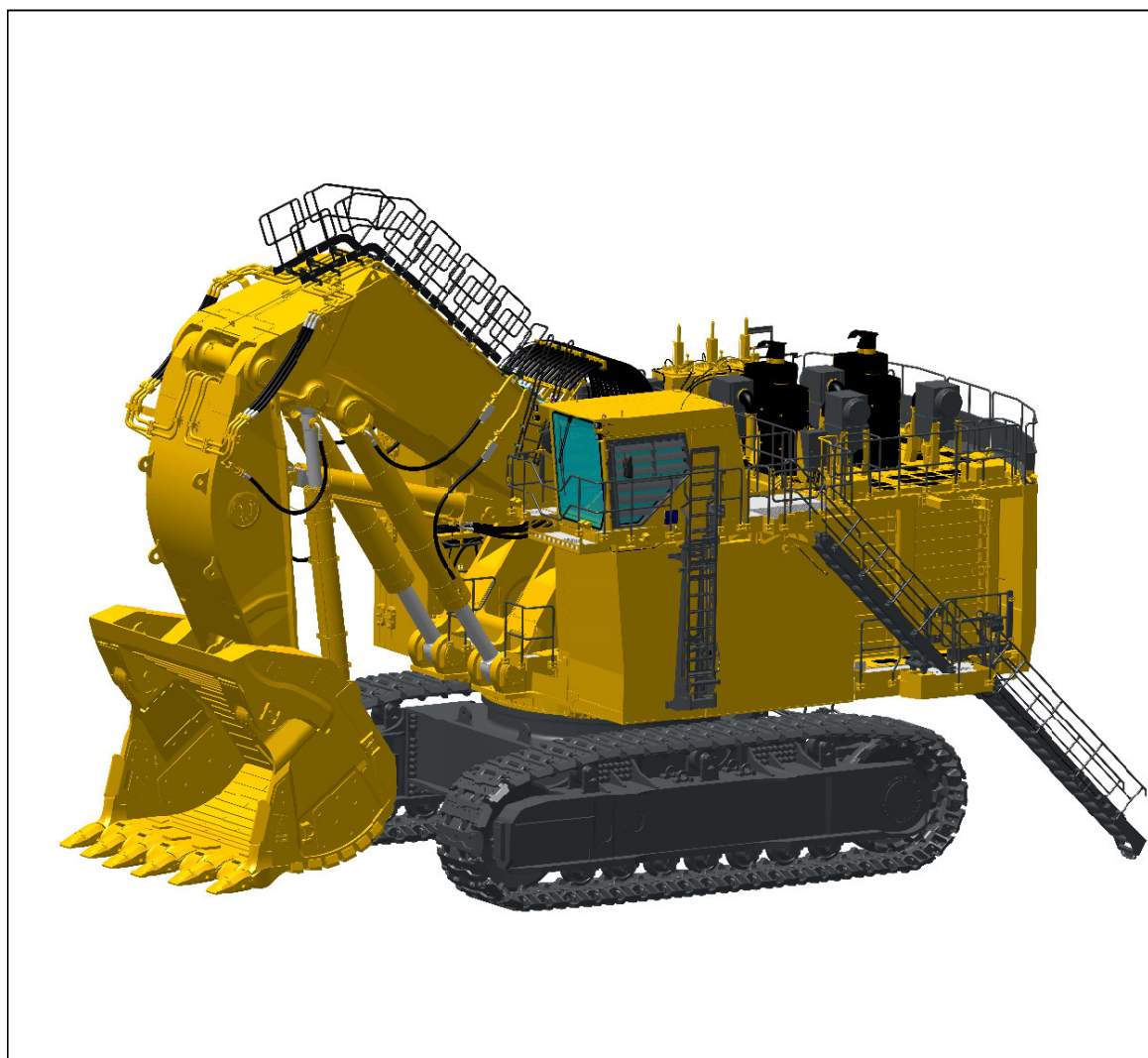
36 m³ 47 yd³ SAE 2:1 heaped

BACKHOE CAPACITY

34 m³ 44 yd³ SAE 1:1 heaped

PC 7000 Loading Shovel PC 7000 Backhoe

- subject to change w/o notice -



HYDRAULIC EXCAVATOR

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
- High consistent quality through continuous investment in personnel, design and manufacturing systems and processes

Powerful Diesel Engine

Two Komatsu SSDA16V159E-2 Tier 2 engines

- Rated (each) 1250 kW at 1800 rpm
- Electronic engine management
- Low engine emission levels Tier 2 certificated
- 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 1200 kW
- Frequencies: 50 Hz or 60 Hz
- Rated voltage: 6,0 kV up to 7,2 kV

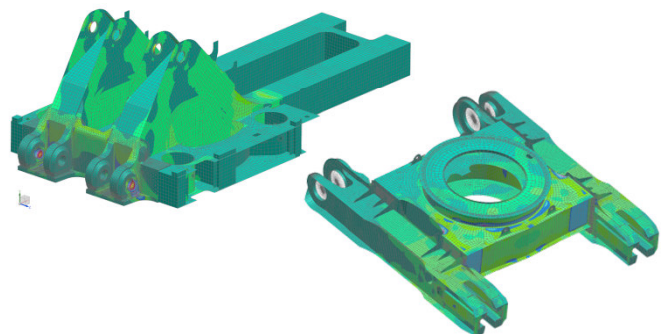
Reliability and Durability

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



Access and Egress

- 45° primary access and egress stairways
- 45° access swing stairway
- 3 emergency egresses
 - cab and machinery house
 - machinery house escape
- Illuminated accesses and egresses

HYDRAULIC EXCAVATOR

MATCHES

240 to 290 U.S. ton TRUCKS

OPERATING WEIGHT

Shovel 677-687 ton

1,492,800-1,514,800 lb

Backhoe 681-691 ton

1,501,600-1,523,700 lb

BUCKET CAPACITY

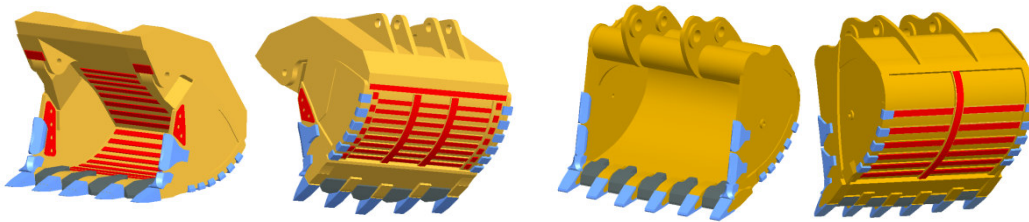
Shovel 36 m³ 47 yd³

Backhoe 34 m³ 44 yd³

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

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

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

HYDRAULIC EXCAVATOR

SPECIFICATIONS



DIESEL DRIVE

Tier 2 engine:	
Model	2 x Komatsu SSDA16V159E-2
Type	4-cycle, water-cooled, direct injection
Aspiration	Turbocharged and aftercooled
Number of cylinders	16
Rated power (SAE 1995/J1349)	2 x 1250 kW 1675 HP @ 1800 rpm
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 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	16 LED lights
Standard service lights	throughout the platform incl. emergency egresses and stairway



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	48 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 50 %
Travel speed (maximum)	2,5 km/h 1.55 mph
Service brake	Hydraulic brake
Parking brake	Wet, multiple-disk



SWING SYSTEM

Hydraulic motors and drives	3
Swing brake, service	Hydraulic brake
Swing brake, parking	Wet, multiple-disc
Swing ring teeth	External
Swing speed (optimized to 90° swing)	4,0 rpm



ELECTRIC DRIVE

Type	2 x Squirrel cage induction motor
Power Output	2 x 1200 kW
Voltage	6.000 – 7.200 V*
Amperage (approximate)	2 x 128 A - 2 x 107 A
Frequency standard	60 Hz @ 1800 rpm
Frequency option	50 Hz @ 1500 rpm
* Other voltages available on request	



ELECTRIC SYSTEM (Electric Version)

System	24 V
Batteries (series/parallel)	4 x 12 V
Battery charger	3 x 100 A
Standard working lights	16 LED lights
Standard service lights	throughout the platform incl. emergency egresses and stairway



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)	6.210 ltr/min / 1,640 gpm
Relief valve setting	310 bar 4,495 psi
Swing flow rate	1.035 ltr/min / 273 gpm
High pressure in line filters	200 microns
one per pump located at the valve blocks	
Full flow return line filters	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 1x 600 and 1x 300 litres (238 gal.). Replenishment of the containers is through the Wiggins connections on the service arm.



SERVICE CAPACITIES

Hydraulic oil tank	4.750 ltr	1,255 U.S. gal
Hydraulic system	9.500 ltr	2,510 U.S. gal
Fuel	13.033 ltr	3,443 U.S. gal
Engine coolant	2 x 440 ltr	116 U.S. gal
Engine oil	2 x 236 ltr	62 U.S. gal
Reserve engine oil make up tank	2 x 665 ltr	176 U.S. gal

HYDRAULIC EXCAVATOR



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 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 6396 Noise in operator's cab is max. 75 dB(A)
- ISO 2631-1 Whole body vibration and shock below 0,5 m/s²
- ISO 5349-1 Hand-lever vibration lower than 2,5 m/s²
- 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)

PC 7000 Backhoe:

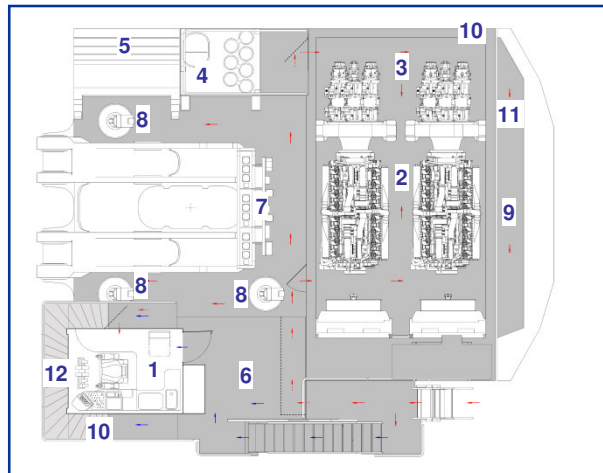
Operating weight including 11.000 mm 36'1" boom, 5.100 mm 16'9" stick, 34 cum (44.5 yd³) backhoe bucket, operator, lubricant, coolant, 1/3 fuel and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1500 mm	681 t	25,9 N/cm ²
59"	1,501,600 lb	37.6 psi
1900 mm	691 t	20,8 N/cm ²
75"	1,523,700 lb	30.2 psi

PC 7000 Front Shovel:

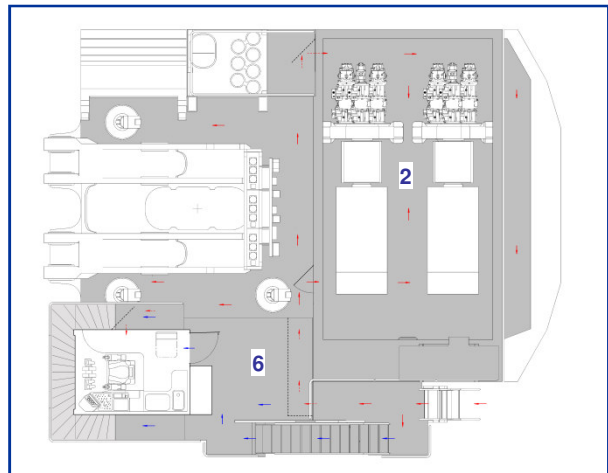
Operating weight including 8.000 mm 26'3" boom, 5.500 mm 18'1" stick, 36 cum (47 yd³) shovel bucket, operator, lubricant, coolant, 1/3 fuel and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1500 mm	677 t	25,8 N/cm ²
59"	1,492,800 lb	37.4 psi
1900 mm	687 t	20,7 N/cm ²
75"	1,514,800 lb	30.1 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

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

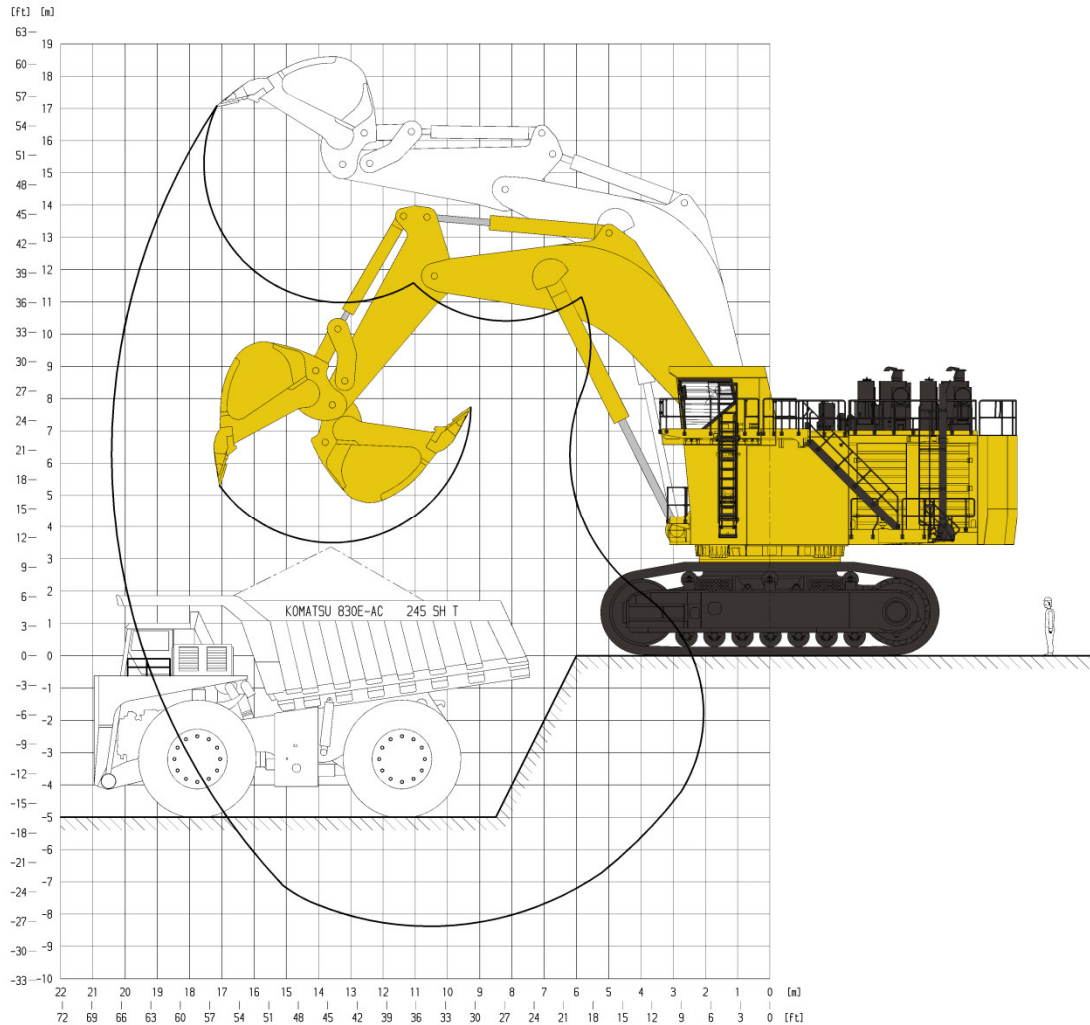
Walkways ← Lower-Level
← Upper-Level

HYDRAULIC EXCAVATOR

PRODUCTIVITY-FEATURES



BACKHOE ATTACHMENT



Boom length	11.000 mm	36'1"
Stick length	5.100 mm	16'9"
Break-out force (ISO)	1.671 kN	375,592 lb
Tear-out force (ISO)	1.509 kN	339,179 lb

Max. digging height	17.100 mm	56'1"
Max. dumping height	11.000 mm	36'1"
Max. digging depth	8.600 mm	28'3"
Max. digging reach	20.500 mm	67'3"
Max. digging reach at ground level	19.600 mm	64'4"

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
34,0	44.5	4.550	14'11"	6	heavy	Hensley XS 644 *	1,8	3,000
34,0	44.5	4.550	14'11"	6	standard	Hensley XS 644 *	1,8	3,000
36,0	47.0	4.550	14'11"	6	light	Hensley XS 644 *	1,8	3,000

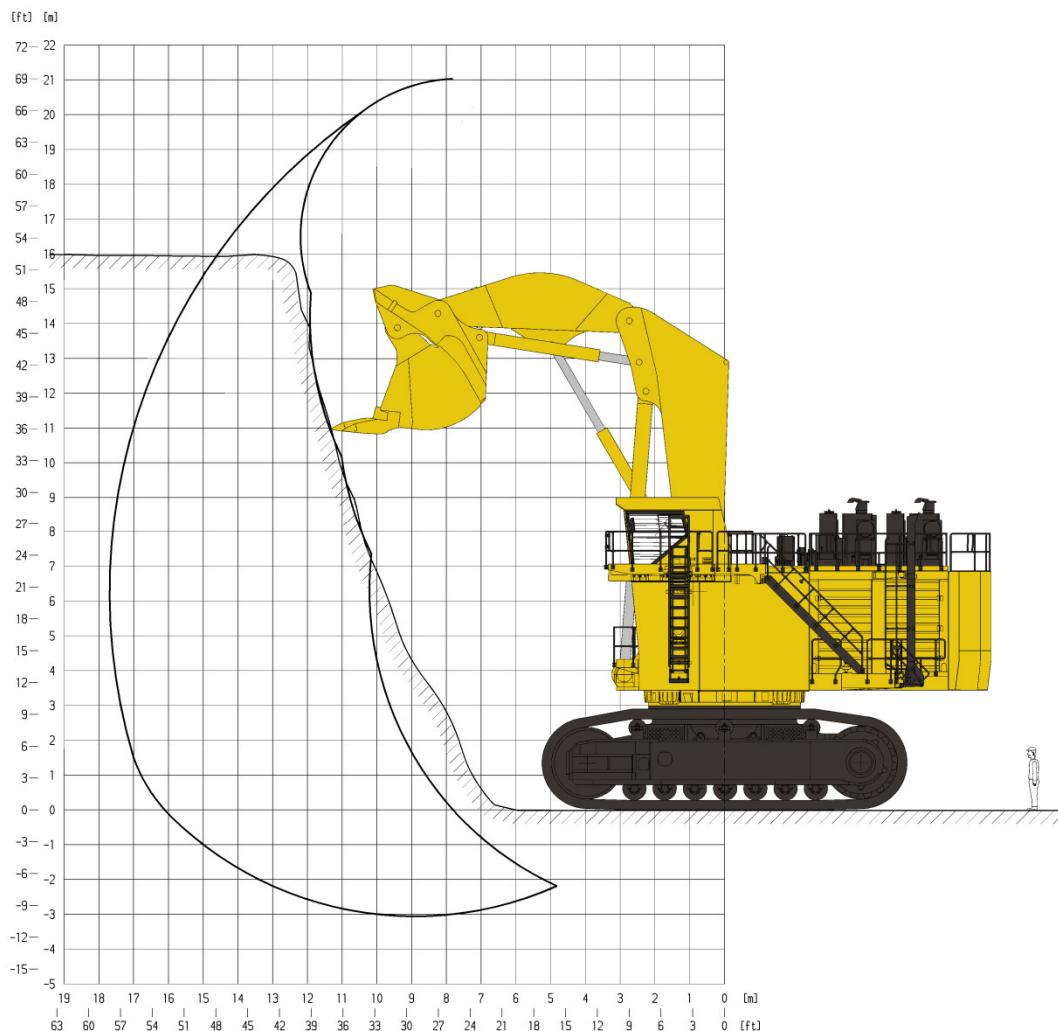
* other systems on request

Alternative buckets on request

HYDRAULIC EXCAVATOR



FRONT SHOVEL ATTACHMENT



Boom length	8.000 mm	26'3"
Stick length	5.500 mm	18'1"
Break-out force (ISO)	1.994 kN	448,193 lb
Crowd force (ISO)	2.151 kN	483,482 lb

Max. cutting height	11.000 mm	36'1"
Max. dumping height	14.000 mm	45'11"
Max. digging depth	2.800 mm	9'2"
Max. digging reach	17.700 mm	58'1"
Level crowd at ground level	5.400 mm	17'9"
Bucket opening width	2.960 mm	9'9"

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
34,0	44.5	4.965	16'3"	6	heavy	Hensley XS 644 *	1,8	3,000
36,0	47.0	4.965	16'3"	6	standard	Hensley XS 644 *	1,8	3,000
38,0	49.7	4.965	16'3"	6	light	Hensley XS 644 *	1,8	3,000

* other systems on request

Alternative buckets on request



STANDARD EQUIPMENT

HYDRAULIC MINING SHOVEL

FRONT SHOVEL ATTACHMENT

- 8,0 m 26'3" boom
- 5,5 m 18'1" stick
- Set of cylinders
- 36 cum (47 yd³) (SAE 2:1) shovel bucket incl. standard wear package with hammerless GET system

OR

BACKHOE ATTACHMENT

- 11,0 m 36'1"
- 5,1 m 16'9"
- Set of cylinders
- 34 cum (44.5 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
- 1500 mm 59" cast steel track shoes
- Hydraulic tank adjustment and parking brake
- Protection drive gear box

SUPERSTRUCTURE

- Main frame mounted over an externally toothed swing circle carries the drive module
- 2 x Komatsu SSDA16V159E-2 Tier 2 diesel engines
- Oil and fuel reservoirs
- Hydraulic components
- Counterweight

LIGHTING

- 16 LED high performance working lights
- Service lights throughout the platform incl. emergency egresses

OPERATOR CAB

- Enclosed steel cab mounted on viscous pads
- FOPS according ISO 3449
- Air-conditioning unit Sūtrak
- 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 & aux port
- Internal and external sun blinds
- All windows tinted parsol green
- Impact resistant front window (19mm)
- Walkway in front of cab

LUBRICATION AND SERVICE

- 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

ACCESSORIES INCLUDED

- Acoustic travel alarm
- Hydraulically actuated ground access staircase
- 45° primary access and egress stairway
- 45° access swing stairway (hydraulically operated)
- 3 emergency egresses
 - cab and machinery house
 - machinery house escape
- Electric air horn each side
- Engine turbo and exhaust pipes cover
- Engine oil management package (Centinel, Reserve & Eliminator systems)
- Service transfer oil pump
- Hand rails and steps on boom
- Tie off points on boom
- Engine emergency stop at ground level



OPTIONAL EQUIPMENT

ATTACHMENT/BUCKET

- Alternative buckets on request
- Boom cylinder sliding guard
- Arm cylinder sliding guard
- Bucket cylinder sliding guard (BH)

UNDERCARRIAGE

- 1.900 mm 75" track shoes

POWER

- Electro drive various voltages
- Cable drum 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)
- KIM Hotstart temperature treatment for ambient temperature down to -50° C (diesel and electro drive), external

SPECIFIC HYDRAULIC OIL

- Biodegradable hydraulic oil

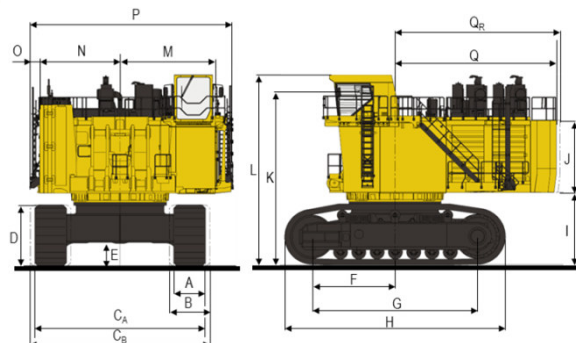
MISCELLANEOUS

- Camera system acc. ISO5006
- Additional LED working lights
- Rotaflare warning lights
- Additional cab A/C
- Additional independent cab heater
- Sound suppression kit
- Vibration monitoring for electro drive
- Service crane
- Sliders instead of top rollers
- Special painting



DIMENSIONS

A	1500 mm	4'11"	I	3437 mm	11'3"
B	1900 mm	6'3"	J	3430 mm	11'3"
C _A	8050 mm	26'5"	K	8304 mm	27'3"
C _B	8450 mm	27'9"	L	9001 mm	29'6"
D	2895 mm	9'6"	M	4480 mm	14'8"
E	1065 mm	3'6"	N	3790 mm	12'5"
F	3945 mm	12'11"	O	480 mm	1'7"
G	7875 mm	25'10"	P	9620 mm	31'7"
H	10510 mm	34'6"	Q	7670 mm	25'2"
			Q _R	7850 mm	25'9"



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