

KOMATSU

PC8000-11 Loading Shovel PC8000-11 Backhoe

ENGINE POWER

2 x 1500 kW / 2010 HP @ 1800 rpm

OPERATING WEIGHT

752 – 773 ton / 1,658,200 – 1,704,500 lb

SHOVEL CAPACITY

42 m³ 55 yd³ SAE 2:1 heaped

BACKHOE CAPACITY

42 m³ 55 yd³ SAE 1:1 heaped

PC
8000

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

Version 1:

2 x Komatsu SDA16V160E-2 Tier 2 engines

- Low engine emission level Tier 2 certified

Version 2:

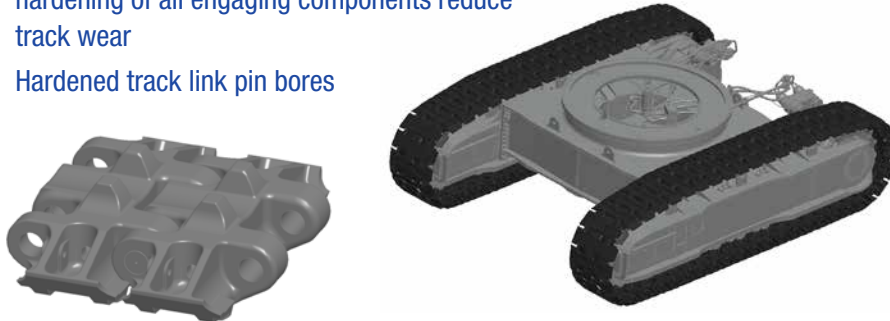
2 x Komatsu SDA16V160E-3 Tier 4 engine

- Low engine emission level Tier 4 certified
- SCR system (selective catalytic reduction)

- Rated power: 2 x 1500 kW (2 x 2010 HP) at 1800 rpm
- Electronic engine management
- Time saving Engine Oil Management System; Reserve Oil Supply and Eliminator Oil Filter System
- Higher fuel efficiency
- Extended service intervals

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



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

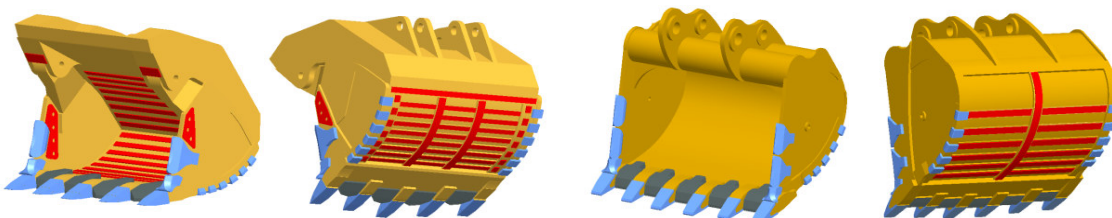
- 45° stairway design
- 3 emergency egresses
 - Cab and machinery house
 - (two pieces flip down solid anti slip steel ladder)
 - Machinery house escape
- Illuminated accesses and egresses



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
- IPCC Systems up to 8,000t/h



MATCHES
240 to 400 U.S. ton TRUCKS

OPERATING WEIGHT
Shovel 752 - 765 ton
1,658,200 - 1,686,800 lb
Backhoe 760 - 773 ton
1,675,800 - 1,704,500 lb

BUCKET CAPACITY
Shovel 42 m³ 55 yd³
Backhoe 42 m³ 55 yd³

WALK-AROUND

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

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
- KomVision system provides 360° bird's-eye view of the machine and the surrounding



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

Version 1: Tier 2 engine
 Model 2 x Komatsu SDA16V160E-2
 Type 4-cycle, water-cooled, direct injection
 Aspiration Turbocharged and aftercooled
 Number of cylinders 16
 Rated power 2 x 1500 kW 2010 HP @ 1800 rpm (SAE J1995)
 Governor All-speed, electronic

Version 2: Tier 4 engine
 Model 2 x Komatsu SDA16V160E-3
 Type 4-cycle, water-cooled, direct injection
 Aspiration Turbocharged and aftercooled
 Number of cylinders 16
 Rated power 2 x 1500 kW 2010 HP @ 1800 rpm (SAE J1995)
 Governor All-speed, electronic
 The Engine meets EPA T4 final low emissions level by using Selective Catalytic Reduction and High Pressure Common Rail Injection 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 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 (Tier 2) 2 x 140 A
 Alternator (Tier 4) 2 x 260 A
 Standard working lights 14 LED lights
 Standard service lights Throughout the platform incl. emergency egresses and stairways



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 49 each side
 Number of top rollers 3 each side
 Number of bottom rollers 8 each side



TRAVEL AND BRAKE SYSTEMS

Gradeability Up to 50 %
 Travel speed (maximum) 2.4 km/h 1.5 mph
 Service brake Hydraulic brake
 Parking brake Multiple-disc



SWING SYSTEM

Hydraulic motors and drives 3
 Swing brake, service Hydraulic brake
 Swing brake, parking Multiple-disc
 Swing ring teeth External
 Swing speed (maximum) 2.7 rpm



HYDRAULIC SYSTEM

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

Rated flow (total output) 8,280 ltr/min / 2,190 gpm
 Relief valve setting 310 bar / 4,495 psi
 Swing flow rate 2,070 ltr/min / 547 gpm
 High pressure in line filters 200 microns one per pump located at the valve blocks
 Full flow return line filters (7 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 7,750 ltr / 2,050 U.S. gal
 Hydraulic system 11,500 ltr / 3,040 U.S. gal
 Fuel 13,925 ltr / 3,680 U.S. gal
 Engine coolant 2 x 430 ltr / 2 x 114 U.S. gal
 Engine oil 2 x 290 ltr / 2 x 77 U.S. gal
 Reserve engine oil make up tank 2 x 1,056 ltr / 2 x 279 U.S. gal
 Lubrication system (total) 900 ltr / 238 U.S. gal
 DEF (diesel exhaust fluid) tank 2 x 587 ltr / 2 x 155 U.S. gal (only Tier 4 engine)



ENVIRONMENT

Vibration levels
 Hand-lever (ISO 5349-1) lower than 2.5 m/s²
 Whole body vibration and shock (ISO 2631-1) below 0.5 m/s²
 Contains fluorinated greenhouse gas HFC-134a (GWP 1430)
 PC8000-11D Quantity of gas 5.8-10.6 kg, CO² equivalent 8,294-15,158 t



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 right hand window is an emergency exit. All windows are tinted parsol green. The cab 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. A walkway is mounted around the 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 Wi-Fi or Orbcmm satellite transmission (check for availability in your territory).



OPERATING WEIGHTS (APPROXIMATE)

PC8000 Backhoe:

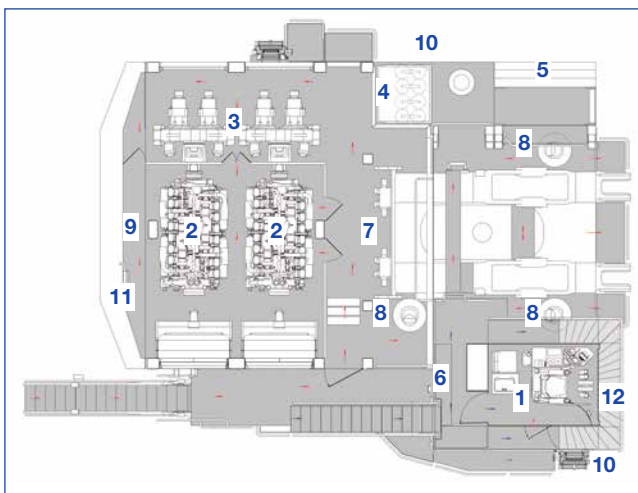
Operating weight including 11,500 mm 37'9" boom, 5,500 mm 18'0" stick, 42 m³ (55 yd³) backhoe bucket, operator, lubricant, coolant, 1/3 fuel and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1,500 mm 59"	760 t 1,675,800 lb	27.5 N/cm ² 39.9 psi
1,900 mm 75"	773 t 1,704,500 lb	22.1 N/cm ² 32.0 psi

PC8000 Front Shovel:

Operating weight including 8,150 mm 26'9" boom, 5,750 mm 18'9" stick, 42 m³ (55 yd³) shovel bucket, operator, lubricant, coolant, 1/3 fuel and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1,500 mm 59"	752 t 1,658,200 lb	27.3 N/cm ² 39.6 psi
1,900 mm 75"	765 t 1,686,800 lb	21.9 N/cm ² 31.7 psi



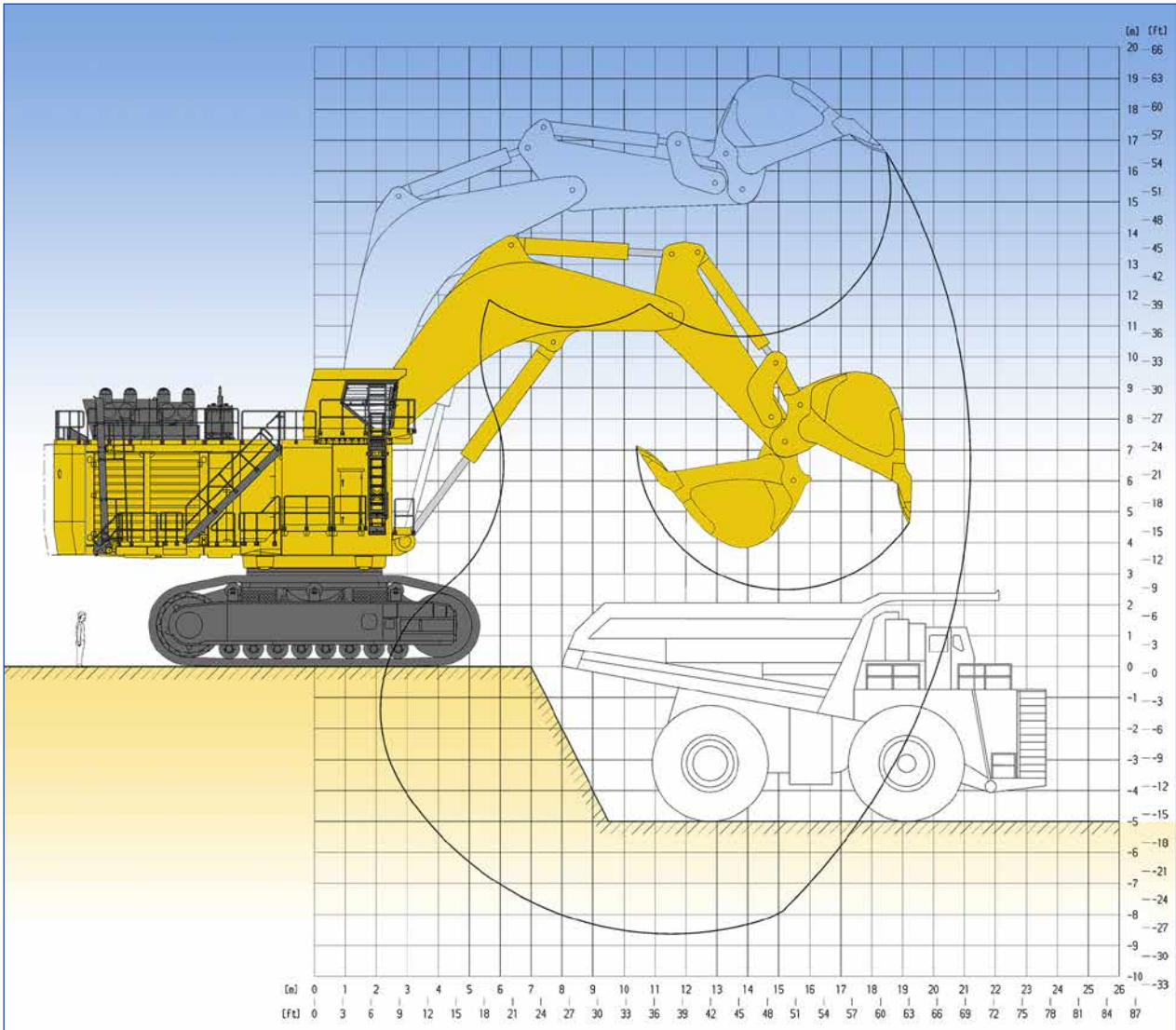
Diesel Drive

- | | |
|---------------------|--|
| 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 |

Walkways Lower-Level
 Upper-Level

PRODUCTIVITY-FEATURES

BACKHOE ATTACHMENT



Boom length	11,500 mm	36'1"
Stick length	5,500 mm	16'9"
Break-out force (ISO)	2,077 kN	466,850 lb
Tear-out force (ISO)	1,813 kN	407,510 lb

Max. digging height	16,580 mm	54'5"
Max. dumping height	10,650 mm	34'11"
Max. digging depth	8,640 mm	28'4"
Max. digging reach	21,190 mm	69'6"
Max. digging reach at ground level	20,110 mm	65'12"

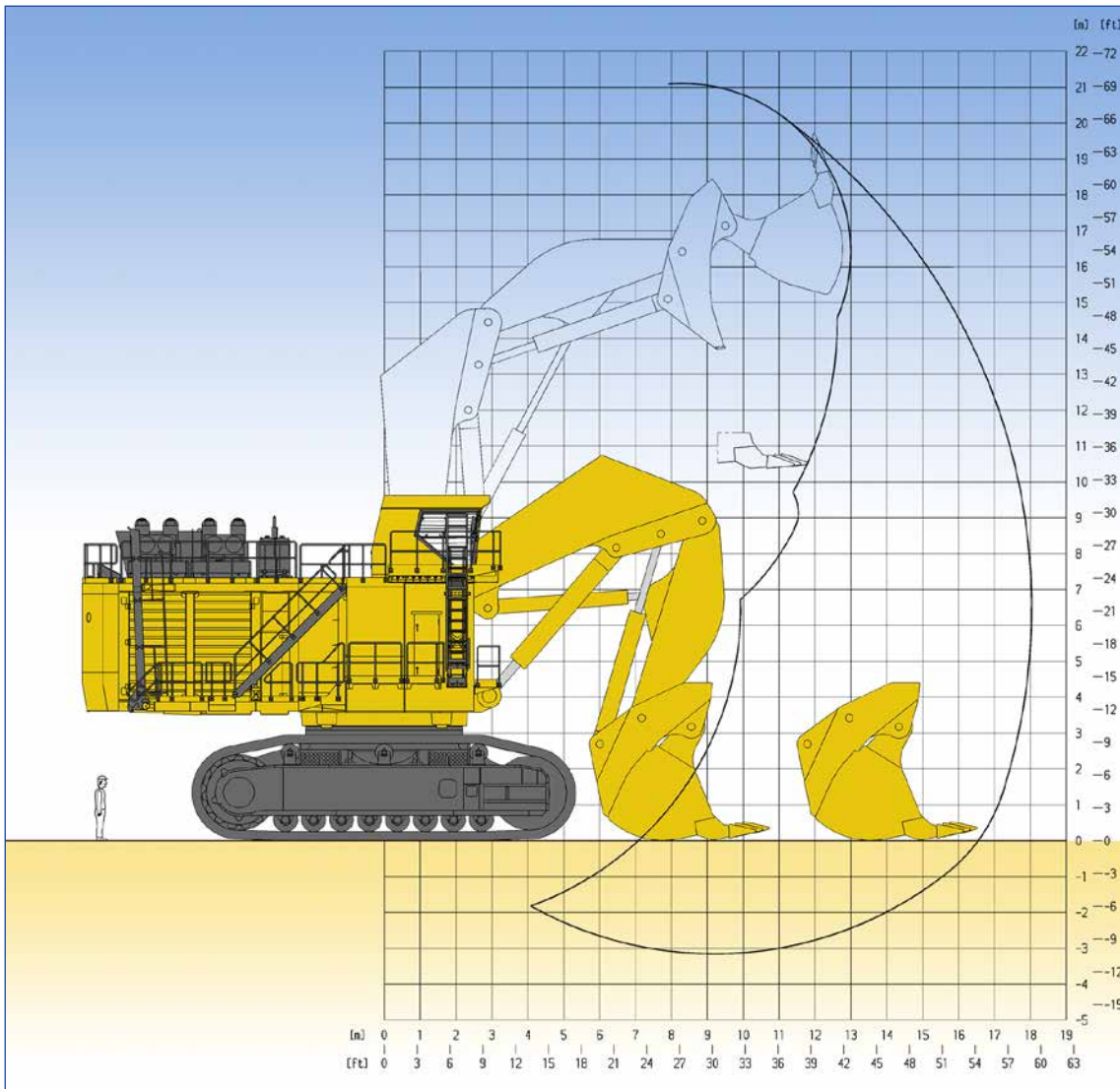
Bucket Capacity (Heaped 1:1) SAE		Width		Teeth	Wear Package acc.	GET System	Max. Material Density (Loose)	
cum	cuyd	mm	foot/inch	qty	abrasiveness		t/cum	lb/cuyd
42.0	55.0	4,556	14'11"	5	standard	Hensley 804TS1222 *	1.8	3,000

Alternative buckets on request

*other systems on request



FRONT SHOVEL ATTACHMENT



Boom length	8,150 mm	26'9"	Max. cutting height	21,090 mm	69'2"
Stick length	5,750 mm	18'9"	Max. dumping height	13,690 mm	44'11"
Break-out force (ISO)	2,331 kN	523,940 lb	Max. digging depth	3,160 mm	10'4"
Crowd force (ISO)	2,353 kN	528,890 lb	Max. digging reach	18,030 mm	59'2"
			Level crowd at ground level	5,800 mm	19'0"
			Bucket opening width	3,230 mm	10'7"

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
28.0	37.0	4,575	15'	6	heavy	Hensley 804TS1222 *	2.8	4,700
36.0	47.0	5,375	17'8"	6	heavy	Hensley 804TS1222 *	2.1	3,400
40.0	52.0	5,375	17'8"	6	heavy	Hensley 804TS1222 *	1.8	3,500
42.0	55.0	5,375	17'8"	6	standard	Hensley 804TS1222 *	1.8	3,000

Alternative buckets on request

*other systems on request



STANDARD AND OPTIONAL EQUIPMENT

FRONT SHOVEL ATTACHMENT

- 8.15 m 26'9" boom, 5.75 m 18'9" stick
- 42 m³ (55 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

- 11.5 m 37'9" boom, 5.5 m 18'0" stick
- 42 m³ (55 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
- 8 bottom rollers and 3 top rollers each side
- 1,500 mm 59" cast steel track shoes
- 1,900 mm 75" cast steel track shoes
- Hydraulic track adjustment and parking brake
- Drive gear box protection

SUPERSTRUCTURE

- Main frame mounted over an externally toothed swing circle carries the drive module
- Diesel Engine:
Version 1: 2 x Komatsu SDA16V160E-2 Tier 2
Version 2: 2 x Komatsu SDA16V160E-3 Tier 4

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
- Trainer 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
- KomVision (360° birds-eye-view) (Tier 4)
- 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 electric drive)
- Hotstart temperature treatment for ambient temperature down to -50° C (diesel and electric 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
- Special painting
- Biodegradable hydraulic oil

Further equipment on request

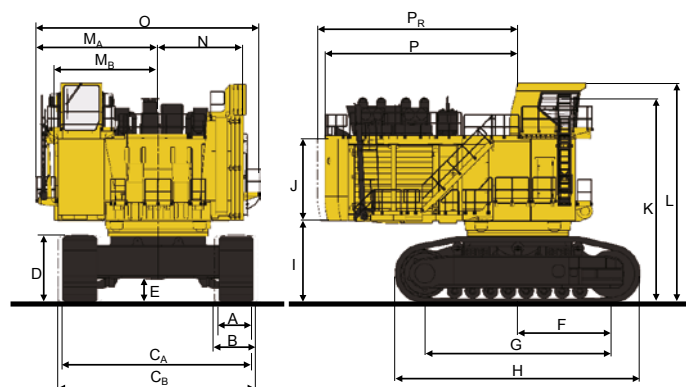
- Standard Equipment
- Optional Equipment



DIMENSIONS

BASIC MACHINE WITH COUNTERWEIGHT

A	1,500 mm	4'11"	I	3,640 mm	11'4"
B	1,900 mm	6'3"	J	3,560 mm	11'8"
C _A	8,330 mm	27'4"	K	8,956 mm	29'5"
C _B	8,730 mm	28'8"	L	9,653 mm	31'8"
D	2,995 mm	9'10"	M _A	5,370 mm	17'7"
E	1,065 mm	3'6"	M _B	4,550 mm	14'11"
F	4,050 mm	13'3"	N	3,750 mm	12'4"
G	8,100 mm	26'7"	O	10,025 mm	32'11"
H	10,685 mm	35'1"	P	8,290 mm	27'2"
			P _R	8,556 mm	28'1"



QESS0087 04

KOMATSU

Komatsu Germany GmbH

Forststrasse 29

40597 Duesseldorf, Germany

Phone: +49(0)211 71 09-0

Fax: +49(0)211 71 58-22

info@komatsu-mining.de

www.komatsu-mining.de

