

KOMATSU®

PC8000 Super Shovel

OPERATING WEIGHT
700–720 ton 1,540,000–1,590,000 lb

SHOVEL CAPACITY
42 m³ 55 yd³ SAE 2:1 heaped

BACKHOE CAPACITY
42 m³ 55 yd³ SAE 1:1 heaped



HYDRAULIC SHOVEL

Photo may include optional equipment.

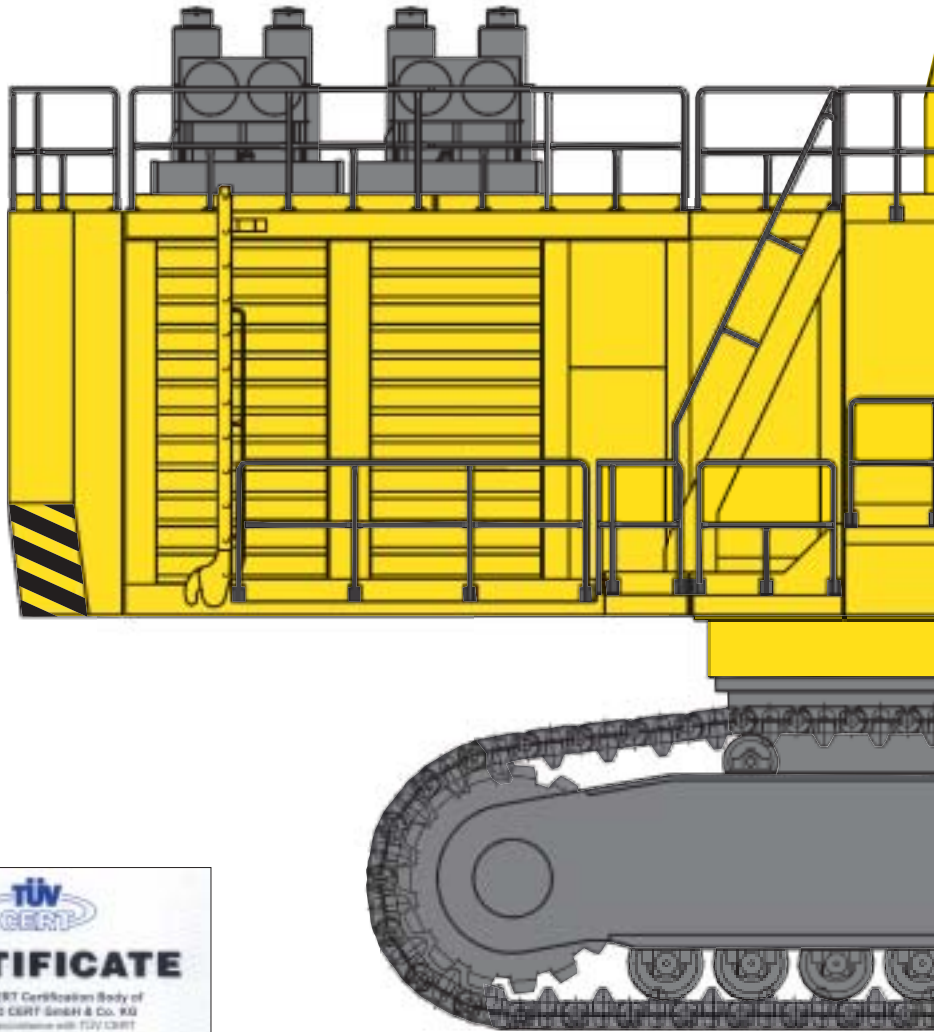
WALK AROUND

The sheer size of this machine far exceeds all other series-built Hydraulic Shovels. The existing world population testifies to the acceptability of this model.

Komatsu Technology and Expertise

Machines innovatively developed for high production, safety, and with environmental responsibility.

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



Undercarriage Built for Mining

Lower operating costs.

- Big diameter rollers, idlers, and drive sprockets
- Large contact areas and detailed hardening reduces wear
- Hardened track link pin bores

**MATCHED FOR TRUCKS
240 ST AND LARGER**

SHOVEL BUCKET
42 m³ 55 yd³ 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

ECS—Electronic Control System

Provides real time and stored information about the running status of the machine.

- Continuous text display
- Service events precisely retained in digital form with battery back-up security
- Automatic engine shut-down for critical malfunctions
- Convenient data download capability

Sustained High Production

Designed for more tons per hour.

- Powerful digging forces
- Ease of bucket filling
- Proven attachment design
- Buckets and Wear Packages to suit all densities and ground conditions

Operator Comfort

Large operator's cab

- Low internal noise level
- New generation viscous cab mounts
- Comprehensive climate control with pressurised filtered air ventilation and air conditioning
- High specification multi-adjustable air suspension seat incorporates variable lumbar control

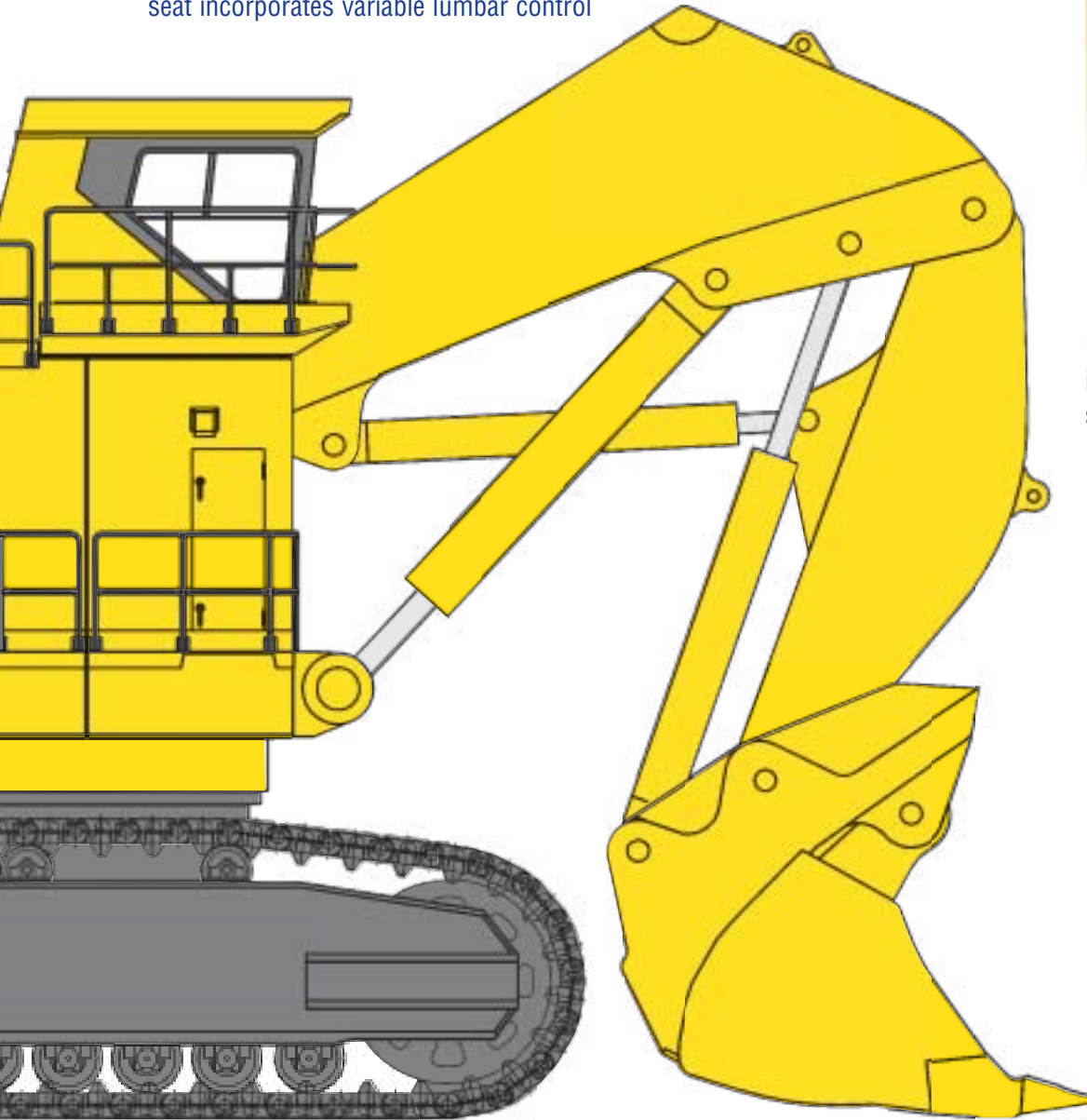


Photo may include optional equipment.

Worldwide Experience

PC8000 population is found in key mining areas throughout the world. Each shovel symbol represents one or several machines in operation.



SPECIFICATIONS



DIESEL DRIVE

Model 2 x Komatsu SDA16V160
 Type 4-cycle, water-cooled, direct injection
 Aspiration Turbocharged and aftercooled
 Number of cylinders 16
 Rated power 2 x 1500 kW **2,010 HP** @ 1800 rpm
 (SAE 1995/J1349)

Governor All-speed, electronic
 The integrated engine oil and filter system extends service intervals. This combines the oil stabilizing systems, Reserve and Centinel, 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 (each engine) 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 frames 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 55%
 Travel speed (maximum) 2.2 km/h **1.4 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) 3.5 rpm



ELECTRIC DRIVE

Type 2 x Squirrel-cage induction motors
 Power output 2 x 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 **2,190 gpm**
 Relief valve setting 310 bar **4,495 psi**
 Swing flow rate 2385 ltr/min **630 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 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 CENTRALIZED 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 ltrs (2 x 80 gal.). Replenishment of the containers is through the Wiggins connections on the service arm.



SERVICE CAPACITIES

Hydraulic oil tank . . . . .	.8350 ltr	2,205 U.S. gal
Hydraulic system . . . . .	.11500 ltr	3,040 U.S. gal
Fuel . . . . .	.13900 ltr	3,675 U.S. gal
Engine coolant . . . . .	.2 x 475 ltr	2 x 125 U.S. gal
Engine oil (sump) . . . . .	.2 x 290 ltr	2 x 77 U.S. gal
Centinel engine oil make up tank . . . . .	.2 x 670 ltr	2 x 180 U.S. gal

CAB

The large welded steel cab incorporating the ISO 3449 FOPS structure is vibration isolated with 18 viscous combination pads and sound insulated to below 70db(A). It is equipped with automatic climate control and is pressurized. The operator's seat is air suspended, electrically heated and has a lap seat belt. There is a fold away 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 speeds with intermittent operation (fluid reservoir 7 liters **1.8 gal**). Amenities include a wash basin with running water (water reservoir 50 liters **13 gal**), refrigerator and storage cabinets.

Working lights and powered mirrors are adjusted from inside the cab. There are left and right hand sliding windows. All windows are tinted par-sol green. External metal louvres are provided on cab side windows.

Air Conditioner10 kW **34120 Btu**
 Heater/Defroster10 kW **34120 Btu**

ECS ELECTRONIC CONTROL 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 engines are shut down when major malfunctions occur. 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:

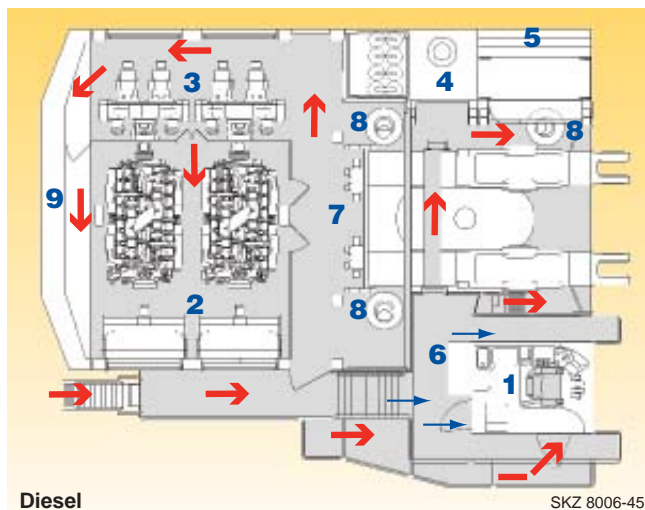
Operating weight including 11500 mm **37'9"** boom, 5500 mm **18'0"** stick, 38 m³ **50.0 yd³** backhoe bucket, operator, lubricant, coolant, full fuel tank, and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1500 mm 59"	710 t 1,565,000 lb	26.7 N/cm ² 38.7 psi
1900 mm 75"	720 t 1,590,000 lb	21.4 N/cm ² 31.0 psi

PC 8000 Front Shovel:

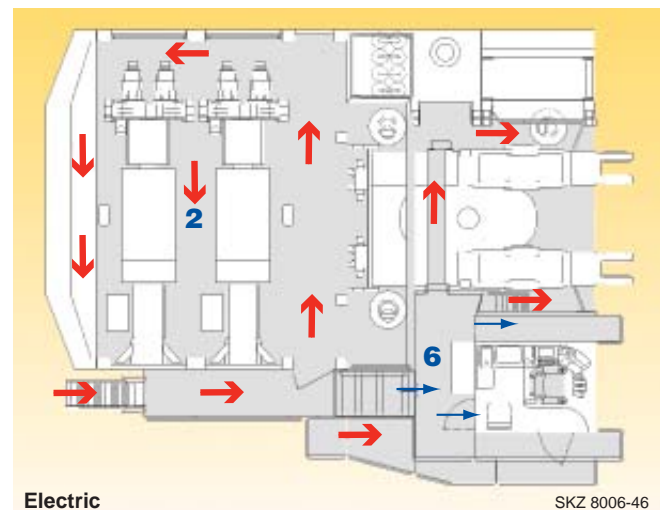
Operating weight including 8150 mm **26'9"** boom, 5750 mm **18'9"** stick, 42 m³ **55.0 yd³** shovel bucket, operator, lubricant, coolant, full fuel tank, and standard equipment.

Shoe Width	Operating Weight	Ground Pressure
1500 mm 59"	700 t 1,540,000 lb	26.3 N/cm ² 38.1 psi
1900 mm 75"	710 t 1,565,000 lb	21.2 N/cm ² 30.7 psi



Diesel

SKZ 8006-45



Electric

SKZ 8006-46

Explanation

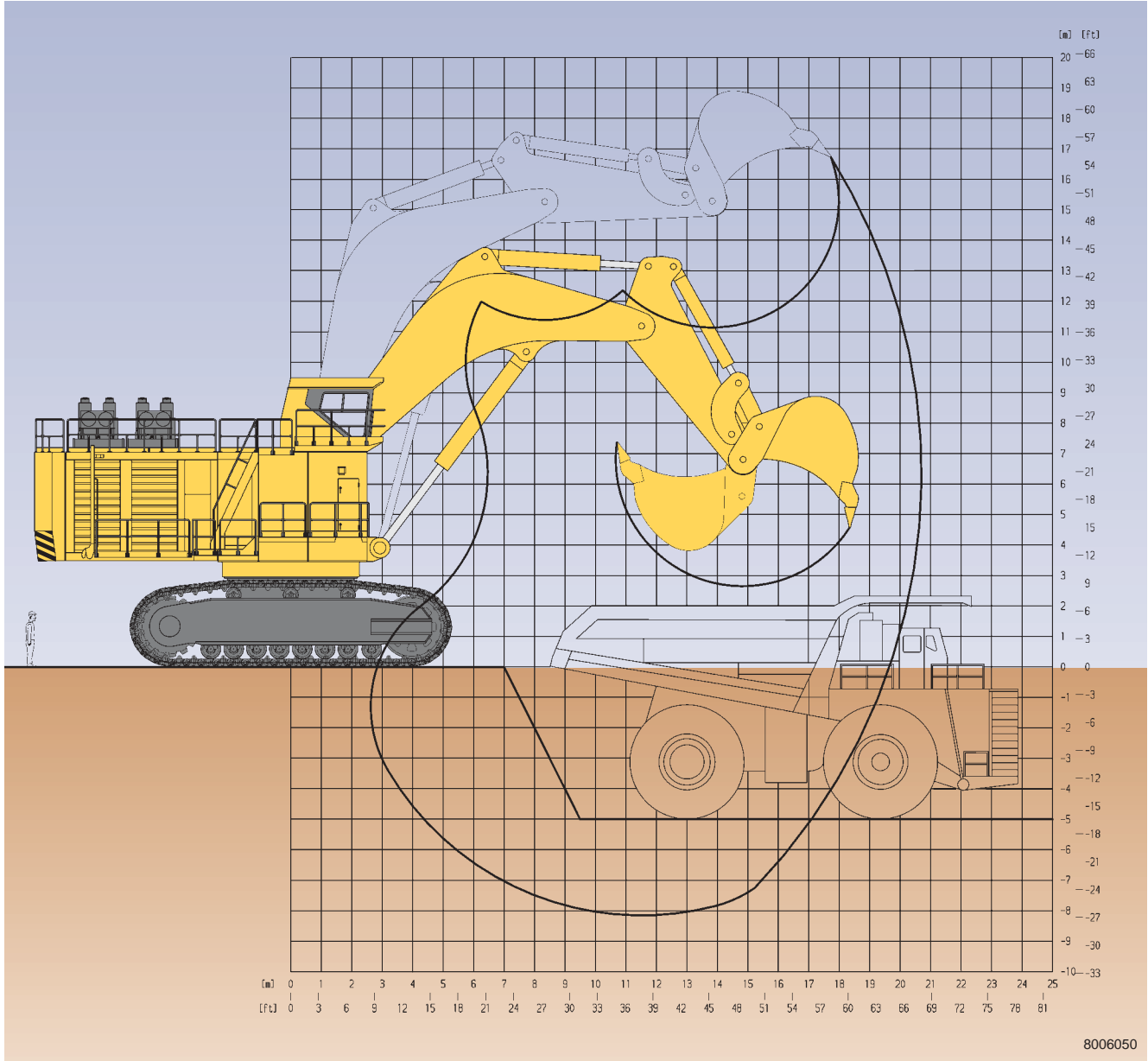
- 1 Cab
- 2 Diesel Engines
- 3 Hydraulic Pumps
- 4 Hydraulic Tank
- 5 Hydraulic Coolers
- 6 Fuel Tank
- 7 Valve Blocks
- 8 Swing Motors
- 9 Counterweight

Variation for Electric

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

Walkways ← Lower-Level
 ← Upper-Level

PRODUCTIVITY FEATURES



8006050



DIGGING FORCES

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

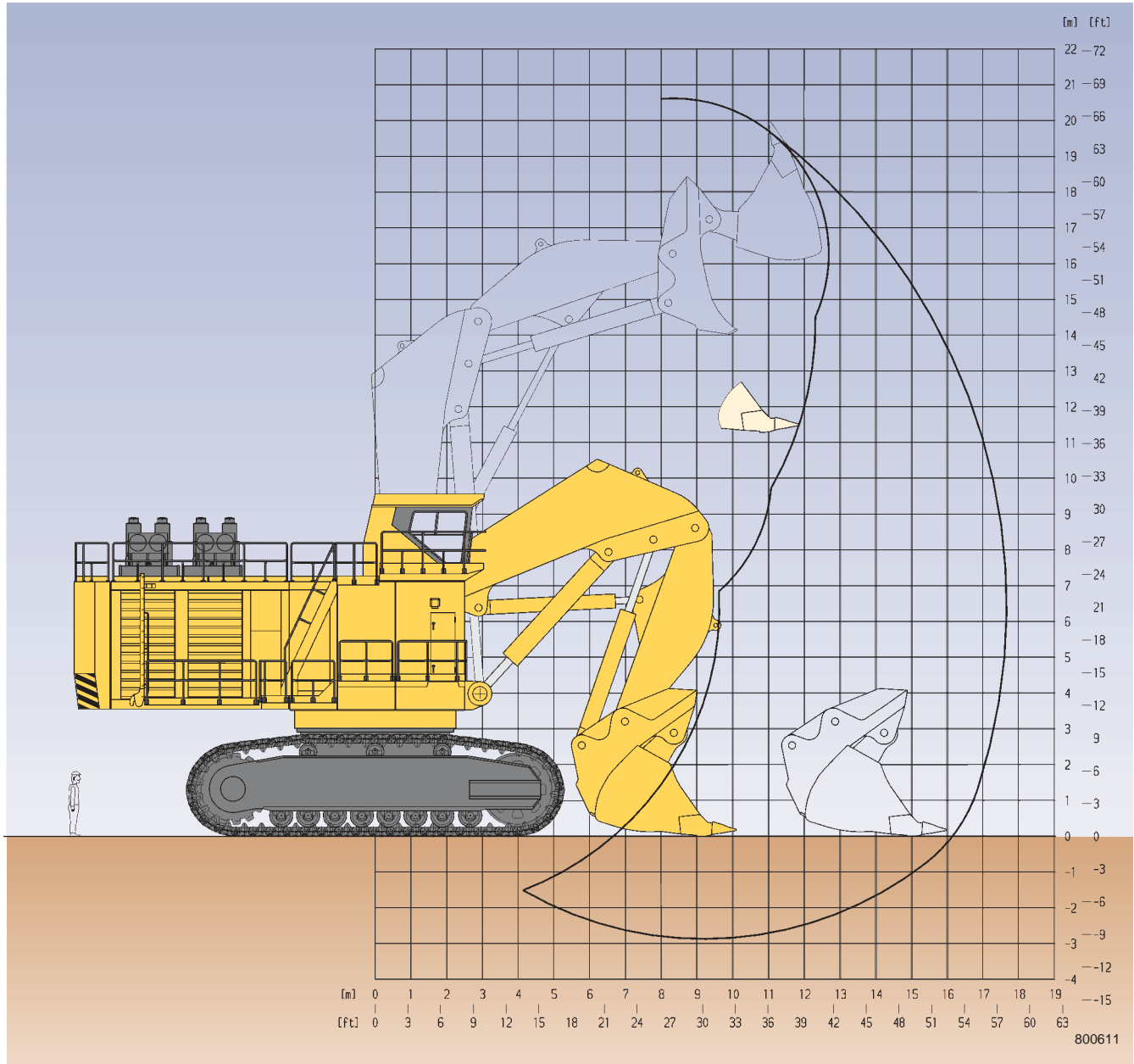
Maximum reach at ground level	19650 mm	64'6"
Maximum digging depth	8165 mm	26'9"



BACKHOE BUCKET, STICK AND BOOM COMBINATION

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

Alternative buckets/wear packages are available



DIGGING FORCES

Break-out force	2320 kN	521,500 lb	Level crowd at ground level	5900 mm	19'4"
Crowd force	2320 kN	521,500 lb	Maximum dumping height	16100 mm	52'10"

SHOVEL BUCKET, STICK AND BOOM COMBINATION

Bucket Capacity		Width	Teeth	Weight	Boom Length					
SAE/CECE Heaped 2 : 1	Heaped 1 : 1				Including Wear Package-3	Stick Length				
42 m ³	55 yd ³	48 m ³	63 yd ³	5630 mm	18'6"	6	65 t	143,300 lb	Material density to 1.8 t/m ³	3000 lb/yd ³

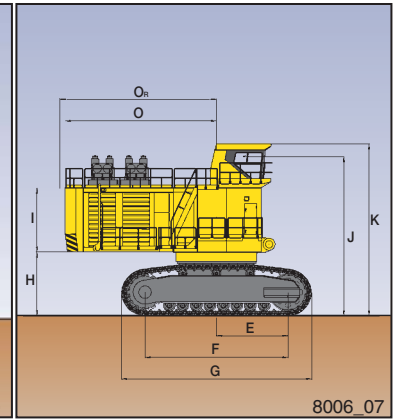
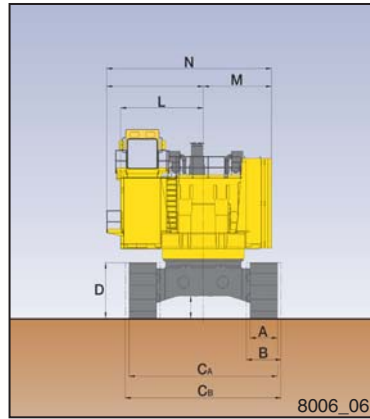
Alternative buckets/wear packages are available



DIMENSIONS

A	1500 mm	59"	H	3470 mm	11'5"
B	1900 mm	75"	I	3560 mm	11'8"
CA	8150 mm	26'9"	J	8730 mm	28'8"
CB	8550 mm	28'1"	K	9500 mm	31'2"
D	2828 mm	9'3"	L	4550 mm	14'11"
E	3970 mm	13'0"	M	3750 mm	12'4"
F	7945 mm	26'1"	N	9070 mm	29'9"
G	10580 mm	34'9"	O	8410 mm	27'7"
			OR	8710 mm	28'7"

Ground Clearance:1144mm 3'9"



STANDARD EQUIPMENT

Hydraulic mining shovel will comprise:

Front Shovel Attachment

8.15 m **26'9"** boom and 5.75 m **18'10"** stick complete with cylinders. 42 m³ **55 yd³** (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 m³ 50 yd³ (SAE 1:1) bucket with mechanical teeth and lip system.

Crawler Undercarriage

Heavy-duty shovel type undercarriage consisting of center carbody and 2 heavy box-type track frames, each having eight (8) bottom rollers, three (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 four (4) identical hydraulic pumps.

Electric version

- Electrical cabinet module
- Drive module:
Two (2) Squirrel cage induction motors, each with soft start and mounted with four (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 SUTRAK air-conditioning unit. Mounted on viscous pads. GRAMMER fully suspended seat with seat 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

- Eight (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 gear 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



OPTIONAL EQUIPMENT

- 1900 mm **75"** track shoes
- Alternative travel speed 3.3 km/h **2 mph**
- Auxiliary diesel generator

- Cable reel (electric version)
- Electric drive
- Extra or alternative lighting

- Fire suppression system
- Low temperature package (including KIM hot start)
- Service crane

AESS661-00

©2004 Komatsu Printed in USA

DK07(4.5M) C

07/04(EV-2)

KOMATSU®

440 N. Fairway Drive
P.O. Box 8112
Vernon Hills, IL 60061-8112