

KOMATSU®

830E

MAXIMUM GVW
385852 kg 850,650 lb

GROSS HORSEPOWER
1865 kW 2,500 HP



Photo may include optional equipment.

ELECTRIC DRIVE TRUCK

SPECIFICATIONS



ENGINE

*Make and model	Komatsu SDA16V160
Fuel	Diesel
Number of cylinders	16
Operating cycle	4 cycle
**Rated brake power	1865 kW 2,500 HP @ 1900 rpm
***Flywheel power	1761 kW 2,360 HP @ 1900 rpm
Weight (wet)	9608 kg 21,182 lb

* Tier 2 emissions certified. Tier 1 emissions engine is optional outside of North America.

**Rated brake power is the output of the engine as installed in this machine, at governed rpm and with engine manufacturer's approved fuel setting. Accessory losses included are water pump, fuel pump and oil pump

***Flywheel power is the rated power at the engine flywheel minus the average accessory losses. Accessories include fan and charging alternator. Rating(s) represent gross engine performance in accordance with SAE J1349 conditions.



ELECTRIC DRIVE

AC/DC CURRENT

Alternator	G.E. GTA-26
Dual impeller in-line blower	255 m ³ /min 9,000 cfm
Control	Statex III Fuelsaver
*Motorized wheels	G.E. 787
*Ratio	31.875:1
Speed (maximum)	48.8 kph 30.3 mph

* Wheel motor application depends upon gross vehicle weight, haul road grade, haul road length, rolling resistance and other parameters. Komatsu and G.E. must analyze each job condition to assure proper application.

**Optional ratios available.



TIRES AND RIMS

Rock service, tubeless, tires (bias ply or radial)

*Standard tire	40.00 R57
Standard five (5) piece rim	
737 mm x 1488 mm x 152 mm 29" x 57" x 6" patented Phase II New Generation rim assembly with patented 152 mm 6" double forged flanges. Not interchangeable with other manufacturers' rims due to improved design for greater load support and longer fatigue life. Rated at 827 kPa 120 psi cold inflation pressure.	
Typical tire weight	.21081 kg 46,476 lb

* Tires should meet application requirements for **tmph**/tkph, tread, compound, inflation pressure, ply rating or equivalent, etc.



BODY

All-welded steel flat floor body with horizontal bolsters and full canopy. Rear wheel rock ejectors, body up cable, and rubber mounts on frame are standard. Pivot exhaust heating optional.

Floor sheet	19 mm 0.75" 1379 mPa 200,000 psi tensile strength steel (two-piece)
Front sheet	12 mm 0.47" 1379 mPa 200,000 psi tensile strength steel
Side sheet	8 mm 0.31" 1379 mPa 200,000 psi tensile strength steel
Canopy sheet	5 mm 0.19" 690 mPa 100,000 psi
Struck	117 m ³ 153 yd³
Standard SAE heaped 2:1	147 m ³ 193 yd³
Standard Komatsu body weight	.27669 kg 61,000 lb



CAB

Advanced Operator Environment with integral 4-post ROPS/FOPS structure (meets J1040 Apr88), adjustable air suspension seat w/lumbar support and arm rests, passenger seat, maximum R-value insulation, tilt and telescoping steering wheel, electric windshield wipers w/washer, tinted glass, power windows, Komatsu Payload Weighing System, 55,000 Btu/hr heater and defroster, 21,600 Btu/hr air conditioning (HFC - 134A refrigerant).



FRAME

Advanced technology, full butt-welded box-sectional ladder-type frame with integral ROPS supports, integral front bumper, rear tubular cross members, steel castings at all critical stress transition zones, rugged continuous horseshollar.

Plate material	482.6 mPa 70,000 psi tensile strength steel
Casting material	620.5 mPa 90,000 psi tensile strength steel
Rail width	305 mm 12"
Rail depth (minimum)	864 mm 34"
Top and bottom plate thickness	32 mm 1.25"
Side plate thickness	16 mm 0.62"
Drive axle mounting	Pin and spherical bushing
Drive axle alignment	Swing link between frame and axle



BRAKING SYSTEM

Service brakes: all-hydraulic actuated

Front	Wheel speed disc. Three calipers on a 1213 mm 47.75" O.D. disc.
Rear	Dual disc armature speed. Two 635 mm 25" O.D. discs per side. One caliper per disc.

Emergency brakesAutomatically applied prior to hydraulic system pressure dropping below level required to meet secondary stopping requirements.

Wheel brake locksSwitch-activated
Parking brakesSpring-applied, hydraulically released, with speed application protection.

Electric dynamic retarder (max.)2983 kW **4000 hp**
Continuously rated blown grids. Two-speed overspeed retarding. Extended range retarding. Reverse retarding.



SUSPENSION

HYDRAIR® II

Variable rate hydro-pneumatic with integral rebound control.
Max. front stroke335 mm **13.2"**
Max. rear stroke279 mm **11.0"**
Max. rear axle oscillation±10.3°



COOLING SYSTEM

L&M radiator assembly with sight gauge. Deaeration-type top tank. Dual pass cooling.

Radiator frontal area6.24 m² **67.2 ft²**



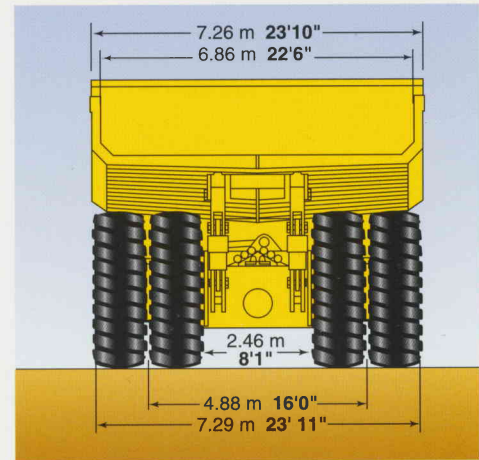
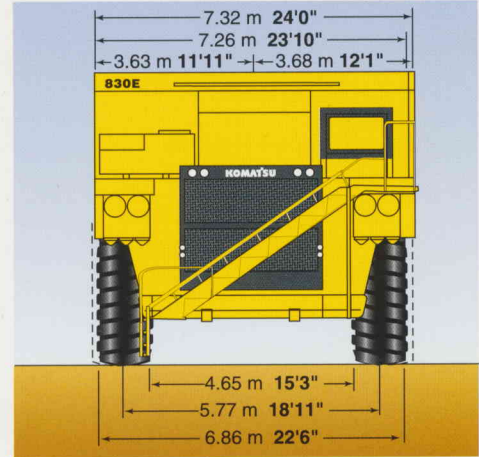
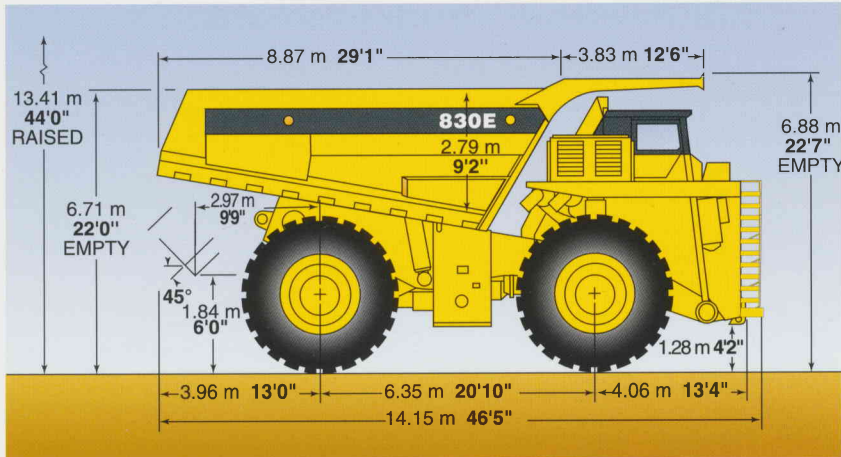
SERVICE CAPACITIES

Cooling system	.568 L	150 U.S. gal
*Crankcase	.280 L	74 U.S. gal
Hydraulic system	.946 L	250 U.S. gal
Motor gear box	.40 L	10.5 U.S. gal
Fuel	.4542 L	1200 U.S. gal

* Includes lube oil filters



DIMENSIONS



All dimensions are with 147 m³ 193 yd³ body.

Bodies	Struck	2:1 Heap	Loading Height*
Standard	117 m ³ 153 yd ³	147 m ³ 193 yd ³	6.71 m 22'

* Exact load may vary due to tire make, type and inflation pressure.



HYDRAULIC SYSTEM

- Steering Accumulator-assisted twin cylinders provide constant rate steering. Emergency steering automatically supplied by accumulator.
- Turning circle diameter (SAE) 28.4 m 93 ft
- Reservoir 901 L 238 U.S. gal
- Filtration In-line replaceable elements
 - Suction Single, full-flow, 100 mesh
 - Hoist and steering Dual, in-line, high-pressure.
- Brake component cabinet Above-deck, easily accessible with diagnostic test connections.
- Hoist Two 3-stage dual-acting outboard cylinders, internal cushion valve, over-center damping.
- Hoist times
 - Power-up loaded 25 sec
 - Power-down 27 sec
 - Float-down empty 24 sec
- Pumps
 - Hoist Tandem gear-type pump with output of 851 lpm 225 gpm @ 1900 rpm and 17240 kPa 2,500 psi
 - Steering and brake Pressure compensating piston pump with output of 246 lpm 65 gpm @ 1900 rpm and 18961 kPa 2,750 psi
- System relief pressures
 - Hoist 17240 kPa 2,500 psi
 - Steering and Brake 27580 kPa 4,000 psi
- Quick disconnects standard for powering disabled truck and for system diagnostics.



ELECTRICAL SYSTEM

- 4 x 8D 1450 CCA, 12 volt batteries, in series/parallel, deck-mounted with disconnect switch.
- Alternator 24 volt, 260 amp
- Lighting 24 volt
- Cranking motors two/24 volt



WEIGHT DISTRIBUTION

Empty vehicle weight (wet, 100% fuel, no options, std Komatsu body, std tires)			
Front axle	81823 kg	180,387 lb	50%
Rear axle	80682 kg	177,872 lb	50%
Total EVW	162505 kg	358,259 lb	
Gross vehicle weight (Nominal)			
Front axle	127330 kg	280,715 lb	33%
Rear axle	258521 kg	569,936 lb	67%
Total	385852 kg	850,650 lb	
Nominal payload*	223347 kg	492,391 lb	
		246 U.S. ton	

*Nominal payload is defined by Komatsu America Corp. payload policy documentation. In general, the nominal payload must be adjusted for the specific vehicle configuration and site application. The figures above are provided for basic product description purposes. Please contact your Komatsu distributor for specific application requirements.



STANDARD EQUIPMENT

- Air cleaners, Donaldson SRG
- Alternator (24 volt/260A)
- Auto lubrication system –90 lbs.
- Batteries (4 x 8D, 1450 CCA 12 volt)
- Battery charging receptacle, 24 volt
- Body down indicator/body up buzzer
- Body over center device
- Brakes: Front: Wheel speed disc; Rear: dual disc armature speed
- Electric start
- Filters, high pressure hydraulic
- Gate valves on hydraulic tank
- Komatsu control cabinet
- Komatsu Payload Weighing System-PLM III
- Mirrors, LH flat and RH rectangular convex
- Mud flaps
- Muffled exhaust, deck-mounted
- On-board load box
- Power supply, 24 volt and 12 volt DC
- Quick disconnects (steering and hoist)
- Radiator sight gauge
- Removable power module unit (radiator, engine, alternator, blower)
- Retard grids, 14-element, blown, 7 step (EER) Extended Range Retarding
- Retard speed control
- Reverse retarding
- Rock ejectors
- Thermostatic Fan Clutch
- Two-speed overspeed retarding
- Vari-volt alternator control
- Fast-Fill Fuel System (in-tank)
- Service Center LH (radiator, engine, hydraulics)

OPERATION ENVIRONMENT & CONTROL

- All-hydraulic service brakes with emergency auto apply
- Battery disconnect switch
- Body up cable
- Brake lock and drive system interlock
- Circuit breakers, 24 volt
- Diagonal staircase across grill, R to L
- Dynamic retarding with continuous rated grids

- Engine shutdown at ground level
- Hoist propulsion interlock
- Horns (electric)
- Integral roll-over protection (ROPS)
- Maintenance & power lock-out
- Parking brake with warning light and speed application protection
- Power steering w/auto emergency steering
- Protective deck rails
- Pump drive line protector
- Radiator fan guard
- Seat belts 76 mm 3" retractable
- Skid-resistant coating on walkways

STANDARD HIGH VISIBILITY DELUXE CAB:

Instrumentation

- Alarm System warning lights (red)
 - Accumulator pre-charge
 - Coolant low level w/alarm
 - Coolant high temperature w/alarm
 - Electric drive system cooling blower w/alarm
 - Electric system fault w/alarm
 - Hydraulic oil level w/alarm
 - Hydraulic oil temperature w/alarm
 - Low engine oil pressure w/alarm
 - Low brake pressure w/alarm
 - Motorized wheel temperature w/alarm
 - Stop engine w/alarm
 - Steering pressure w/alarm
- Air cleaner vacuum indicators
- Air conditioner HFC 134a
- AM/FM cassette radio, XM capable
- Blower pressure indicator light
- Digital tachometer and speedometer
- Dome light
- Engine hourmeter
- Engine shutdown
- Floor mat
- Fuel gauge in cab and on tank
- Gauges (w/back light)
- Headlight switch
- Heater and defroster (heavy-duty)
- Heater switch

- High beam selector and indicator
- Indicator lights (amber):
 - 5-minute idler timer
 - Auto lube alarm
 - Check engine w/alarm
 - Circuit breaker tripped
 - Dynamic retarding
 - Dump body up
 - Hydraulic oil filter
 - Low fuel level
 - Manual back-up lights
 - Park brakes applied
 - Retard speed control
 - Service brakes
 - Starter circuit
- Insulation (Max R-Value)
- Oil pressure gauge
- Operator seat, adjustable w/air suspension, lumbar support and arm rests
- Panel lighting (adjustable)
- Passenger seat
- Payload Meter PLM III
- Power windows
- Pressurized cab air system
- RS232 port—Statex III-PLM III
- Starter key switch
- Steering system warning light and buzzer
- Sunvisor (adjustable)
- Tilt and telescoping steering wheel
- VHMS with ORBCOMM
- Voltmeter (battery output)
- Windshield (tinted safety plate)
- Windshield wipers and washer (electric)

LIGHTING:

- Back-up lights (2)
- Brake and retard lights on top of cab
- Clearance lights
- Control cabinet service light
- Dynamic retarding, rear (2)
- Headlights—(4) halogen
- Ladder lights
- Manual back-up light, switch and indicator
- Service light in rear axle
- Stop and tail lights (2)
- Turn signals
- Under-hood service lights



OPTIONAL EQUIPMENT

(Optional equipment may change operating weight).

- Additional high-mounted headlights
- Air cleaner dust evacuators
- Arctic protection package (suspensions, antifreeze/lube below -40° C)
- Back-up lights, deck-mounted
- Body liners*
- Eliminator, Centinel, Reserve
- Filtered air inlet system
- Fire extinguisher 9 kg **20 lb**
- Fog lights
- Hot starts (engine oil, coolant, hydraulic tank)
- Hubodometer (miles or kilometers)
- Modular Mining Systems (MMS) ready
- Motorized wheel ratios (higher - lower)
- Mufflers between frame rails
- Pivot exhaust (heated body)
- Pressure fueling remote LH
- Radiator shutters
- RH Service Center
- Special language decals

*Available factory installed or non-installed. All other options and accessories listed are available factory installed only.

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12/06 (EV-1)

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