KOMATSU®

HORSEPOWER
Gross: 199 kW 266 HP @ 1900 rpm
Net: 197 kW 264 HP @ 1900 rpm

OPERATING WEIGHT
D85EX-15E0: 28100 kg 61,950 lb
D85PX-15E0: 27650 kg 60,960 lb

D85EX-15E0
D85PX-15E0

ecot3

D 85

CRAWLER DOZER

Photo may include optional equipment.

WALK-AROUND

Komatsu-integrated design for the best value, reliability, and versatility. Hydraulics, power train, frame, and all other major components are engineered by Komatsu. You get a machine whose components are designed to work together for higher production, greater reliability, and more versatility.

SAA6D125E-5 turbocharged after-cooled diesel engine provide an output of **197 kW** 264 HP with excellent productivity. This engine is EPA Tier 3 and EU stage 3A emissions certified. See page 6.

Hydrostatic driven engine cooling fan controlled automatically, reduces fuel consumption and operating noise levels. See page 6.

Preventative maintenance
- Centralized service station
- Enclosed hydraulic piping
- Modular power train design

See page 8.

Simple hull frame and monocoque track frame with pivot shaft for greater reliability. See page 8.

Large blade capacities:
D85EX:
5.2 m³ 6.8 yd³ (Straight tilt dozer)
7.0 m³ 9.2 yd³ (Semi-U tilt dozer)
D85PX:
5.9 m³ 7.7 yd³ (Straight tilt dozer)
See page 6.

The track link life is greatly improved through increased bushing diameter and link height in addition to lubricated track. See page 8.

HORSEPOWER
Gross: 199 kW 266 HP @ 1900 rpm
Net: 197 kW 264 HP @ 1900 rpm

OPERATING WEIGHT
D85EX-15E0 **28100 kg** 61,950 lb
D85PX-15E0 **27650 kg** 60,960 lb

BLADE CAPACITY
Semi-U Tilt Dozer:
D85EX-15E0: **7.0 m³** 9.2 yd³

Straight Tilt Dozer:
D85EX-15E0: **5.2 m³** 6.8 yd³
D85PX-15E0: **5.9 m³** 7.7 yd³

New hexagonal designed cab includes:

- Spacious interior
- Comfortable ride with new cab damper.
- Excellent visibility
- High capacity air conditioning system (optional)
- Palm Command Control System (PCCS) lever
- Pressurized cab (optional)
- Adjustable armrests

Extra-low machine profile provides excellent machine balance and low center of gravity.

Hydrostatic Steering System (HSS)
provides smooth, quick and powerful control in various ground conditions.
See page 5.

Low-drive, long-track, undercarriage
ensures outstanding grading ability and stability.
See page 6.

Photo may include optional equipment.

PALM COMMAND CONTROL SYSTEM (PCCS)

Komatsu's new ergonomically designed control system "PCCS" creates an operating environment with *"complete operator control."*

Human-machine interface

Palm command electronic controlled travel control joystick

Palm command travel joystick provides the operator with a relaxed posture and superb fine control without operator fatigue. Transmission gear shifting is simplified with thumb push buttons.

Palm command PPC controlled blade control joystick

Blade and ripper control joystick

Blade control joystick uses the PPC (Proportional Pressure Control) valve and joystick is similar to the travel control joystick. PPC control combined with the highly reliable Komatsu hydraulic system enables superb fine control.

Full-adjustable suspension seat and travel control console

The travel control console has adjustment fore and aft, and height.
For improved rear visibility during reverse operations, the operator can adjust seat 15° to the right. (opt)

Fuel control dial

Engine revolution is controlled by electric signal, providing ease of operation, eliminating maintenance of linkage and joints.

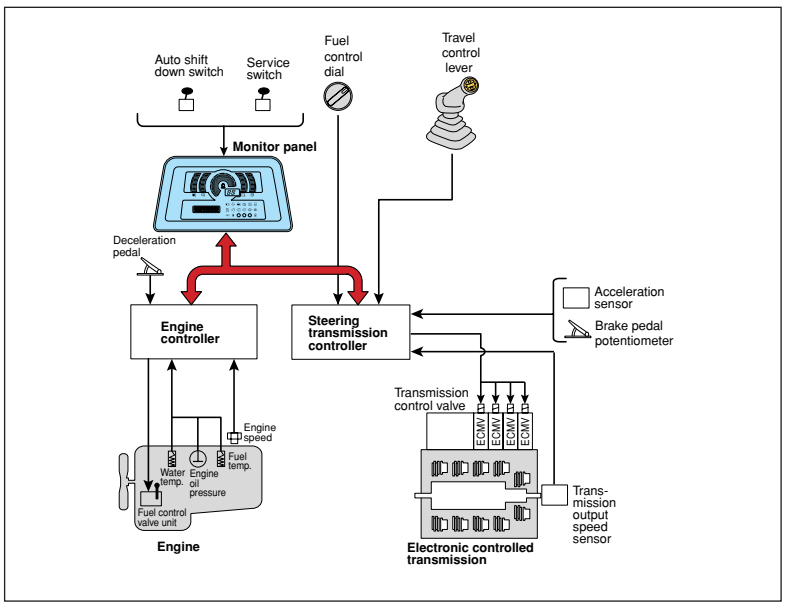
Height adjustable armrest

Armrest is height adjustable without any tools, providing the operator with firm arm support in an ideal armrest.

Facing front

When turned 15° (opt)

Outline of electronic control system



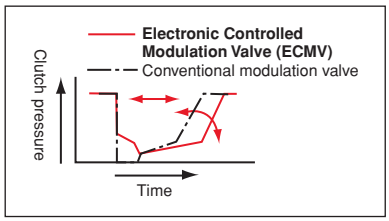
Power train electronic control system

Smooth and soft operation

D85EX/PX utilizes a newly designed power train electronic control system. The controller registers the amount of operator control (movements of lever and operation of switches) along with machine condition signals from each sensor, to calculate accurately the control of the transmission for optimal machine operation. The ease of operation and productivity of the new D85EX/PX is greatly improved through these new features.

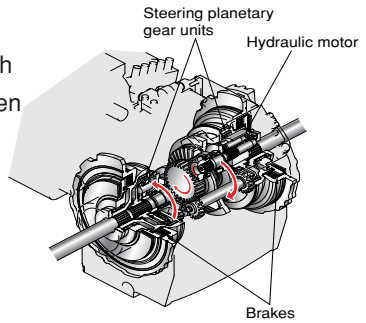
Electronic Controlled Modulation Valve (ECMV) controlled transmission

Controller automatically adjusts each clutch engagement depending on travel conditions such as gear speed, revolution and shifting pattern. This provides smooth shockless clutch engagement, improved component reliability, improved component life and operator ride comfort.



Hydrostatic Steering System—smooth, powerful turning

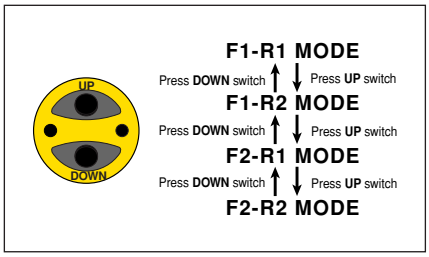
The Hydrostatic Steering System (HSS) is powered by an independent hydraulic pump with engine power transmitted to both tracks without power interruption on the inside track. When the machine turns, the outside track moves faster and the inside slower, for smooth, powerful turns. Counter-rotation is available for minimum turning radius providing excellent maneuverability. Shock-free steering reduces machine vibration and minimizes operator fatigue.

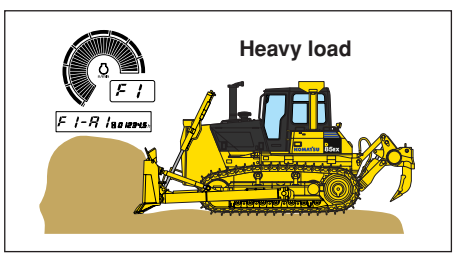


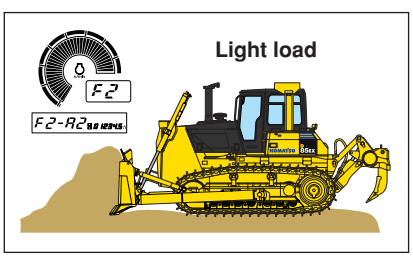
- Turning while dozing— the machine turns by driving the left and right tracks under power at different speeds allowing the machine to travel at the same speed as in straight dozing.
- Side cutting— when side-loading the blade, straight travel can be maintained utilizing HSS.
- On downhill slopes— the machine doesn't require counter-steering. The joystick provides the same steering response on downhill slopes as on flat ground.
- Grading— can be done efficiently without damaging the ground, because the inside track is not locked during turning.

Preset travel speed function

Preset travel speed selection function is provided as standard equipment. The preset switch enables the operator to select a combination of forward/reverse gear shifts, from 4 patterns; F1-R1, F1-R2, F2-R1 and F2-R2, by using UP/DOWN shift switch, and once the shift pattern is selected, operator can control the machine, concentrating his attention on directional control only. Once F2-R2 pattern is selected, for example, 2nd gear is automatically selected when travel control joystick is moved into forward/reverse. This function reduces gear shifting frequency during machine operation, and is especially helpful, when used in combination with auto-downshift function.

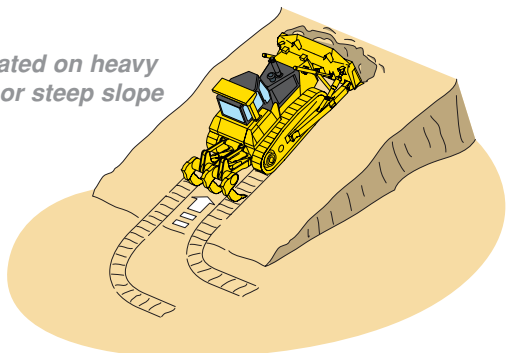






Auto downshift function

Controller monitors engine speed, travel gear and travel speed. When load is applied and machine travel speed is reduced, the controller automatically downshifts to optimize gear speed to provide high fuel efficiency. This function provides comfortable operation and high productivity without manual downshifting. (This function can be deactivated with cancel switch.)



PRODUCTIVITY FEATURES

Engine

The Komatsu SAA6D125E-5 engine delivers **197 kW** 264 HP at 1900 rpm. The fuel-efficient Komatsu engine, together with the heavy machine weight, make the D85EX/PX superior crawler dozers in both ripping and dozing operations. The engine is EPA Tier 3 and EU stage 3A emissions certified, and features direct fuel injection, turbocharger, air-to-air aftercooler, and cooled EGR system to maximize fuel efficiency.
To minimize noise and vibration, the engine is mounted to the main frame with rubber cushions.

Hydrostatic driven engine cooling fan

Fan rotation is automatically controlled depending on coolant and hydraulic oil temperature, saving fuel consumption and providing great productivity with a quiet operating environment.

Photo may include optional equipment

Work equipment

Large blade

Capacities of **5.2 m³** 6.8 yd³ (Straight tilt dozer for D85EX), **5.9 m³** 7.7 yd³ (D85PX), **7.0m³** 9.2 yd³ (Semi-U tilt dozer for D85EX) yield outstanding production. High-tensile-strength steel has been incorporated into the front and sides of the blade for increased durability.

Rippers (EX)

- The multi-shank ripper features a long sprocket center-to-ripper point distance, making ripping operation easy and effective while maintaining high penetration force.
- The multi-shank ripper is a parallelogram single shank ripper ideal for ripping in tough material. The ripping depth is adjustable in two stages.

Undercarriage

Low drive and long track undercarriage

Komatsu's design is extraordinarily tough and offers excellent grading ability and stability. Large-diameter bushings, increased track link heights, and improved oil-seals help to increase undercarriage durability.

Improvements

Numerous improvements to increase undercarriage reliability and durability have been incorporated. Serviceability has also been improved with the addition of remote greasing of the equalizer bar center pin.

WORKING ENVIRONMENT

Operator comfort

Operator comfort is essential for safe and productive work. The D85EX/PX provides a quiet, comfortable environment where the operator can concentrate on the work at hand.

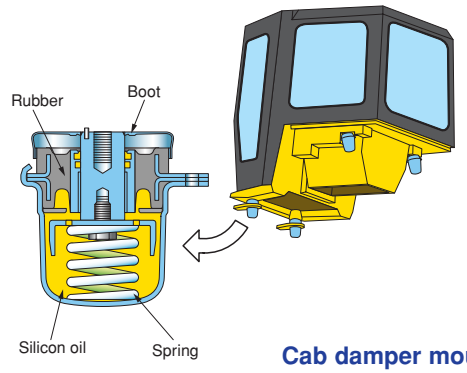
Hexagonal pressurized cab

- The cab's new hexagonal design and large tinted glass windows provide excellent front, side, and rear visibility.
- Air filters and a higher internal air pressure combine to prevent dust from entering the cab.

Photo may include optional equipment

Comfortable ride with new cab damper mounting

D85EX/PX's cab mount uses a new cab damper which provides excellent shock and vibration absorbtion capacity with its long stroke. Cab damper mounts soften shocks and vibration while traveling over adverse conditions, which conventional mounting system are unable to absorb. The cab damper spring isolates the cab from machine chassis, suppressing vibration and providing a quiet, comfortable operating environment.



Cab damper mounting

New suspension seat

D85EX/PX uses a new suspension seat. Fore and aft sliding rails and suspension spring increase strength and rigidity. The new seat provides excellent support, improving riding comfort. Fore and aft seat travel can cover almost all for all operator sizes.

MAINTENANCE

Preventative maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D85EX/PX with conveniently located maintenance points to make necessary inspections and maintenance quick and easy.

Centralized service station

To assure convenient maintenance, the transmission and HSS oil filters, power train oil level gauges and hydraulic tank are arranged in the right side of the machine.

Monitor with self-diagnostic function

With the starting switch turned ON, the monitor displays on the display, check-before-starting and caution items appear on the lower right part of the panel. If the monitor finds abnormalities, corresponding warning lamp blinks and warning buzzer sounds. The monitor displays engine rpm and forward/reverse gear speed on the upper part of the monitor during operation. When abnormalities occur during operation, action code and service meter are displayed alternately. When a critical action code is displayed, the caution lamp blinks and a warning buzzer sounds to prevent the development of serious problems.

Enclosed hydraulic piping

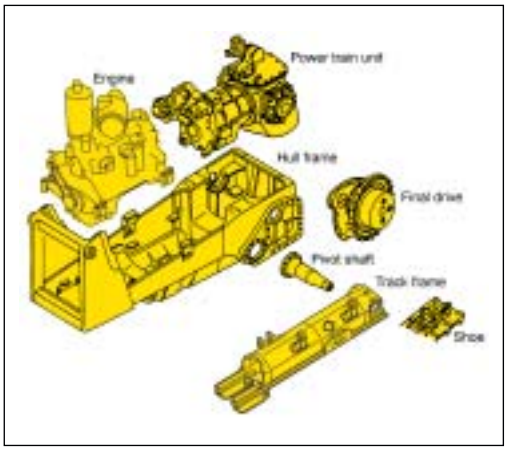
Hydraulic piping for the blade tilt cylinder is completely housed in the push arm, ensuring damage protection from materials.

Easy/cleaning with hydraulic driven radiator fan

The radiator core and the core on the front side of the oil cooler can be easily cleaned by running the hydraulic engine fan in reverse. Accordingly, the cleaning intervals of those cores can be increased.

Modular power train design

Power train components are sealed in a modular design that allows the components to be dismounted and mounted without oil spillage.



Reliable simple structure

Simple hull structure main frame design increases durability and reduces stress concentration at critical areas. The track frame has a large cross section and utilizes pivot shaft mounting for greater reliability.

Maintenance free disc brakes

Wet disc brakes require less maintenance.

Gull-wing engine side covers (optional)

The opening area is further enlarged when gull-wing engine side covers are opened, facilitating engine maintenance and filter replacement. Side covers have been changed to a thick one-piece structure with a bolt-on catch to improve durability.

Heavy-duty track link

The track link life is greatly improved through increased bushing diameter and link height in addition to lubricated track.

CLEAN AND SILENT DESIGN

Clean engine

The SAA6D125E-5 engine is EPA (Environmental Protection Agency) Tier 3 and EU stage 3 emissions certified. So, it developes low emission of NOx, hydrocarbon, and black smoke remarkably, without sacrificing power or machine productivity.

Quiet design

The low-noise engine hydraulically driven fan, and rubber-mounted power train provide a quiet operation.

Use of recyclable parts

Recyclable parts are used, considering the effects on the environment.

Extended service interval

Long-life consumable parts such as filters and elements are used to lengthen their replacement interval to lower the maintenance cost.

SPECIFICATIONS

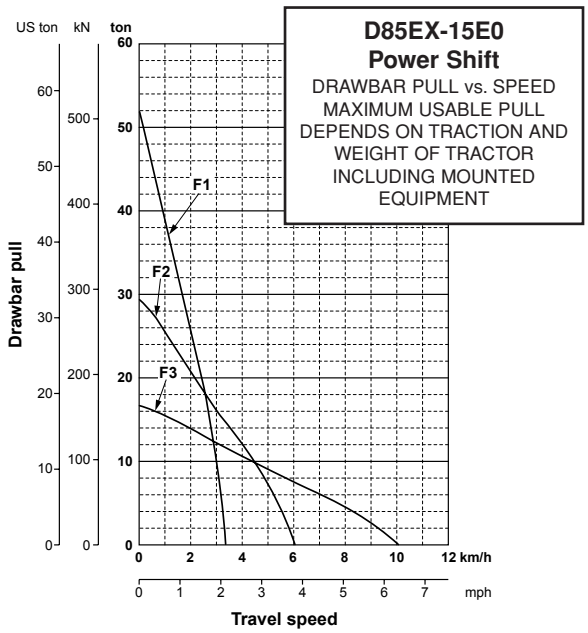
ENGINE

Model . . . . . Komatsu SAA6D125E-5
Type. . . . . 4-cycle, water-cooled, direct injection
Aspiration. . . . . Turbocharged, air-to-air aftercooled, cooled EGR
Number of cylinders 6
Bore x stroke . . . . . **125 mm x 150 mm** 4.92" x 5.91"
Piston displacement. . . . . **11.04 ltr** 674 in³
Governor . . . . . All-speed, electronic
Horsepower
SAE J1995 . . . . . Gross **199kW** 266HP
ISO 9249 / SAE J1349* . . . . . Net **197kW** 264HP
Rated rpm. 1900rpm
Fan drive type . . . . . Hydraulic
Lubrication system
Method . . . . . Gear pump, force lubrication
Filter . . . . . Full-flow
*Net horsepower at the maximum speed of radiator cooling fan . . . . . **179 kW** 240HP
EPA Tier 3 and EU Stage 3A emissions certified.

TORQFLOW TRANSMISSION

Komatsu TORQFLOW transmission consists of a water-cooled, 3-element, 1-stage, 1-phase, torque converter and a planetary gear, multiple-disc clutch transmission which is hydraulically-actuated and force-lubricated for optimum heat dissipation. Gearshift lock lever and neutral safety switch prevent accidental starts.

Travel speed	Forward		Reverse	
	D85EX-15E0	D85PX-15E0	D85EX-15E0	D85PX-15E0
1st	**3.3 km/h** 2.1 mph	**3.3 km/h** 2.1 mph	**4.4 km/h** 2.7 mph	**4.4 km/h** 2.7 mph
2nd	**6.1 km/h** 3.8 mph	**6.0 km/h** 3.7 mph	**8.0 km/h** 5.0 mph	**7.9 km/h** 4.9 mph
3rd	**10.1 km/h** 6.3 mph	**10.0 km/h** 6.2 mph	**13.0 km/h** 8.1 mph	**12.7 km/h** 7.9 mph



D85EX-15E0
Power Shift
DRAWBAR PULL vs. SPEED
MAXIMUM USABLE PULL
DEPENDS ON TRACTION AND
WEIGHT OF TRACTOR
INCLUDING MOUNTED
EQUIPMENT

FINAL DRIVES

Double-reduction final drive of spur and planetary gear sets to increase tractive effort and reduce gear tooth stresses for long final drive life. Segmented sprocket rims are bolt-on for easy replacement.

STEERING SYSTEM

PCCS lever controls for all directional movements. Pushing the PCCS lever forward results in forward machine travel, while pulling it rearward reverses the machine. Simply tilt the PCCS lever to left to make a left turn.
Hydrostatic Steering System (HSS) is powered by steering planetary units and an independent hydraulic pump and motor. Counter-rotation turns are also available. Wet, multiple-disc, pedal-controlled service brakes are spring-actuated and hydraulically released. Gear shift lock lever also applies parking brake.
Minimum turning radius D85EX-15E0 . . . . . **1.99 m** 6'6"
D85PX-15E0 . . . . . **2.24 m** 7'4"

UNDERCARRIAGE

Suspension . . . . . Oscillating equalizer bar and pivot shaft
Track roller frame . . . . . Monocoque, large section, durable construction
Rollers and idlers. . . . . Lubricated track rollers

Track shoes
Lubricated tracks. Unique seals prevent entry of foreign abrasive material into pin to bushing clearances to provide extended service life. Track tension is easily adjusted with grease gun.

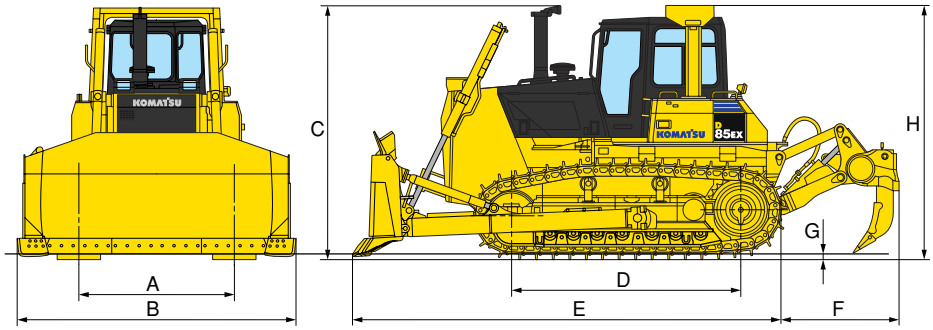
	D85EX-15E0	D85PX-15E0
Number of track rollers (each side)	7	8
Type of shoes (standard)	Single grouser	Single grouser
Number of shoes (each side)	41	45
Grouser height	**72 mm** 2.8"	**72 mm** 2.8"
Shoe width (standard)	**560 mm** 22"	**910 mm** 36"
Ground contact area	**34160 cm²** 5295 in²	**63340 cm²** 9,820 in²
Ground pressure (with dozer, cab and ROPS)	**73.6 kPa** 0.75 kg/cm² 10.7 psi	**43.1 kPa** 0.44 kg/cm² 6.3 psi
Track gauge	**2000 mm** 6'7"	**2250 mm** 7'5"
Length of track on ground	**3050 mm** 10'	**3480 mm** 11'5"

COOLANT AND LUBRICANT CAPACITY (REFILL)

Fuel tank.	**490 ltr**	129 U.S. gal
Coolant	**58 ltr**	15.3 U.S. gal
Engine	**38 ltr**	10.0 U.S. gal
Torque converter, transmission, bevel gear, and steering system	**60 ltr**	15.9 U.S. gal
Final drive (each side).	**26 ltr**	6.9 U.S. gal

DIMENSIONS

	D85EX-15E0	D85PX-15E0
A	**2000 mm** 6'7"	**2250 mm** 7'5"
B	**3635 mm** 11'11"	**4365 mm** 14'4"
C	**3330 mm** 10'11"	**3330 mm** 10'11"
D	**3050 mm** 10'	**3480 mm** 11'5"
E	**5795 mm** 19'	**6015 mm** 19'9"
F	**1460 mm** 4'9"	—
G	**72 mm** 2.8"	**72 mm** 2.8"
H	**3324 mm** 10'11"	**3324 mm** 10'11"



Ground Clearance: **450 mm** 1'6"

Dimensions with semi-U dozer and multi-shank ripper (D85EX)

OPERATING WEIGHT

Tractor weight:
Including rated capacity of lubricant, coolant, full fuel tank, operator, and standard equipment.
D85EX-15E0 . . . . . **21220 kg** 46,780 lb
D85PX-15E0 . . . . . **23500 kg** 51,810 lb

Operating weight
Including Semi-U tilt dozer (EX) or straight tilt dozer (PX), multi-shank ripper (EX), steel cab, ROPS, operator, standard equipment, rated capacity of lubricant, coolant, and full fuel tank.
D85EX-15E0 . . . . . **28100 kg** 61,950 lb
D85PX-15E0 . . . . . **27650 kg** 60,960 lb

HYDRAULIC SYSTEM

Closed-center Load Sensing System (CLSS) designed for precise and responsive control, and for efficient simultaneous operation.

Hydraulic control units:
All spool valves externally mounted beside the hydraulic tank.
Plunger type hydraulic pump with capacity (discharge flow) of **195 ltr/min** 51.5 U.S. gal/min at rated engine rpm.

Relief valve setting . . . . . **22.6 MPa** 230 kg/cm² 3,270 psi
Control valves:
Spool control valves for tilt dozer
Positions: Blade lift . . . . . Raise, hold, lower, and float
Blade tilt. . . . . Right, hold, and left

Additional control valve required for multi-shank ripper (EX)
Positions: Ripper lift . . . . . Raise, hold, and lower

Hydraulic cylinders . . . . . Double-acting, piston

	Number of cylinders	Bore
Blade lift	2	**100 mm** 3.9"
Blade tilt	1	**150 mm** 5.9"
Ripper lift	2	**130 mm** 5.1"

Hydraulic oil capacity (refill):
Straight tilt dozer . . . . . **67 ltr** 17.7 U.S. gal
Semi-U tilt dozer . . . . . **67 ltr** 17.7 U.S. gal
Ripper equipment (additional volume):
Multi-shank ripper . . . . . **11 ltr** 2.9 U.S. gal

DOZER EQUIPMENT

Blade capacities are based on the SAE recommended practice J1265.

	Overall length with dozer	Blade capacity	Blade length x height	Maximum lift above ground	Maximum drop below ground	Maximum tilt adjustment	Weight		Ground pressure*
							Dozer equipment	Hydraulic oil	
D85EX-15E0 Straight tilt dozer	**5640 mm** 18'6"	**5.2 m³** 6.8 yd³	**3715 mm x 1436 mm** 12'2" x 4'9"	**1210 mm** 4'	**540 mm** 1'9"	**750 mm** 2'6"	**3305 kg** 7,290 lb	**24 kg** 53 lb	**72.6 kPa** 0.74 kg/cm² 10.5 psi
D85EX-15E0 Semi-U tilt dozer	**5795 mm** 19'	**7.0 m³** 9.2 yd³	**3635 mm x 1580 mm** 11'11" x 5'2"	**1210 mm** 4'	**540 mm** 1'9"	**735 mm** 2'5"	**3575 kg** 7,890 lb	**24 kg** 53 lb	**73.6 kPa** 0.75 kg/cm² 10.7 psi
D85PX-15E0 Straight tilt dozer	**6015 mm** 19'9"	**5.9 m³** 7.7 yd³	**4365 mm x 1370 mm** 14'4" x 4'6"	**1230 mm** 4'	**570 mm** 1'10"	**500 mm** 1'8"	**3343 kg** 7,370 lb	**23 kg** 51 lb	**43.1 kPa** 0.44 kg/cm² 6.3 psi
D85EX-15E0 Mechanical angle power tilt dozer	**6035 mm** 19'10"	**4.0 m³** 5.2 yd³	**4515 mm x 1130 mm** 14'10" x 3'8"	**1173 mm** 3'10"	**760 mm** 2'6"	**520 mm** 1'8"	**3730 kg** 8,220 lb	**24 kg** 53 lb	**73.6 kPa** 0.75 kg/cm² 10.7 psi

* Ground pressure shows tractor, cab, ROPS canopy operator, standard equipment and applicable blade.

STANDARD EQUIPMENT

- Alternator 50 ampere/24V
- Back up alarm
- Batteries 140 Ah/2 x 12V
- Blower fan
- Decelerator pedal
- Dry-type air cleaner with dust evacuator and dust indicator
- Engine hood
- Final drive case wear guard
- Front pull hook
- Hinged front mask, perforated
- Hydraulic track adjusters
- Hydrostatic Steering System (HSS)
- Lighting system (including two front and rear lights)
- Muffler with rain cap
- Palm lever steering control
- Radiator reserve tank
- Rear cover
- Segmented sprockets
- Shoes:
  560 mm 22" single-grouser (EX)
  910mm 36" single-grouser (PX)
- Starting motors 7.5 kW/24 V
- Suspension seat and reclining
- TORQFLOW transmissions
- Track frames
- Track roller guards, full length (EX), center and end section (PX)
- Warning horn
- Water separator

OPTIONAL EQUIPMENT

- Air conditioner
- Alternator 75 ampere/24 V
- AM-FM radio with cassette
- Batteries 200 Ah/2 x 12V
- Engine side covers
- Fire extinguisher
- First-aid kit
- Heater and defroster
- Light for ripper point
- Lunchon box
- Mirror, rearview
- Panel cover
- Seat belt
- Shoes:
  610 mm 24" Single grouser shoe (EX)
  660 mm 26" Single grouser shoes (EX)
  910 mm 36" Swamp shoes (PX)
- Starting motor 11 kW/24V
- Sun visor
- Suspension seat, turn, fabric material
- Thermos
- Tool kit
- Vandalism protection kit

ROPS canopy (without cab):*
Weight. . . . . **437 kg** 970 lb
Roof dimensions
Length . . . . . **1368 mm** 4'6"
Width . . . . . **1850 mm** 6'1"
Height from
compartment floor. . . . . **1768 mm** 5'10"

*Meets ISO 3471 and SAE J1040 APR88 ROPS standards, as well as ISO 3449 FOPS standard.

ROPS for cab:*
Weight. . . . . **371 kg** 820 lb
Roof dimensions
Length . . . . . **650 mm** 2'2"
Width . . . . . **1774 mm** 5'10"
Height from
compartment floor. . . . . **1754 mm** 5'9"

*Meets ISO 3471 and SAE J1040 APR88 ROPS standards.

Steel cab:*
Weight. . . . . **410 kg** 910 lb
Dimensions:
Length . . . . . **1758 mm** 5'9"
Width . . . . . **1323 mm** 4'4"
Height from compartment
floor to ceiling . . . . . **1592 mm** 5'3"

*Meets ISO 3449 FOPS standard.

Multi-shank ripper (EX):
Hydraulically controlled parallelogram ripper with three shanks.

Weight (including hydraulic
control unit) . . . . . **2500 kg** 5,520 lb
Beam length . . . . . **2246 mm** 7'4"
Maximum lift above ground . . **564 mm** 1'10"
Maximum digging depth . . . . . **653 mm** 2'2"

www.Komatsu.com

Printed in Japan 201303 IP.AD

KOMATSU®

CEN00052-04