KOMATSU

D85EX/PX-15R

Photos may show equipments not available in your area

Crawler dozer

Engine power
199 kW / 266 HP @ 1900 rpm

Operating weight
27550 - 28060 kg

Blade capacity
D85EX-15R: 5.2 - 7.0 m^3
D85PX-15R: 5.9 m^3

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

provides an output of 197 kW 264 HP with excellent productivity. This machine is U.S. EPA Tier 2 and EU Stage 2 emissions equivalent.

Preventative maintenance

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

Hydraulic driven radiator cooling fan

controlled automatically, reduces fuel consumption and operating noise levels.

Simple hull frame

and monocoque track frame with pivot shaft for greater reliability.

Large blade capacities

D85EX-15R:
5.2 m^3 (straight tilt dozer)
7.0 m^3 (semi-U dozer)

D85PX-15R:
5.9 m^3 (straight tilt dozer)

Track link life

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

Engine power
199 kW / 266 HP @ 1900 rpm

Operating weight
27550 - 28060 kg

Blade capacity
D85EX-15R: 5.2 - 7.0 m^3
D85PX-15R: 5.9 m^3

New hexagonal designed cab

- Spacious interior
- Comfortable ride with new cab damper
- Excellent visibility
- High capacity air conditioning system (optional)
- Palm Command Control System (PCCS) lever controls
- Optional pressurized cab
- Adjustable armrest

Hydrostatic Steering System (HSS)

provides smooth, quick and powerful control in various ground conditions.

Extra-low machine profile

provides excellent machine balance and low center of gravity.

Filtration

Further enhanced reliability of the machine against fuel contamination thanks to the improvement in fuel filtration.

Low-drive, long-track, roller undercarriage

ensures outstanding grading ability and stability.

Palm Command Control System (PCCS)

Komatsu's 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. Transmission gear shifting is simplified with thumb push buttons.

Left-hand joystick

Palm command Pressure Proportional Control (PPC) controlled blade control joystick

Blade control joystick uses the PPC valve and palm command joystick similar to the travel control joystick. PPC control combined with the highly reliable Komatsu hydraulic system enables superb fine control.

Blade and ripper control joystick

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.

Fuel control dial

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

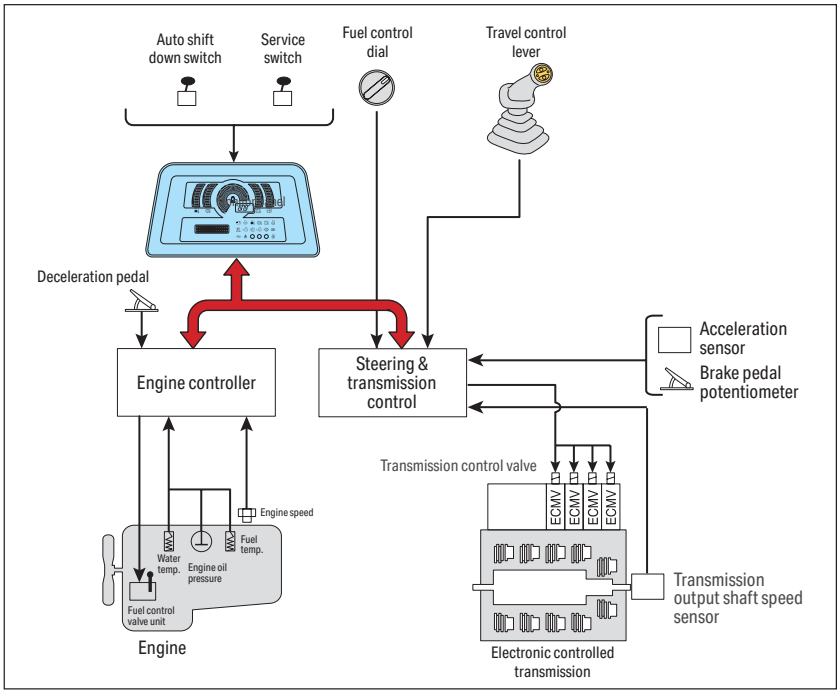
Height adjustable armrest

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

Facing front

When turned 15°

Outline of electronic control system



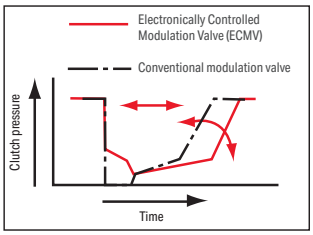
Power train electronic control system

Smooth and soft operation

D85EX/PX-15R 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, steering clutches and brakes for optimal machine operation. The ease of operation and productivity of new D85EX/PX-15R is greatly improved through these new features.

Electronic Controlled Modulation Valve controlled transmission

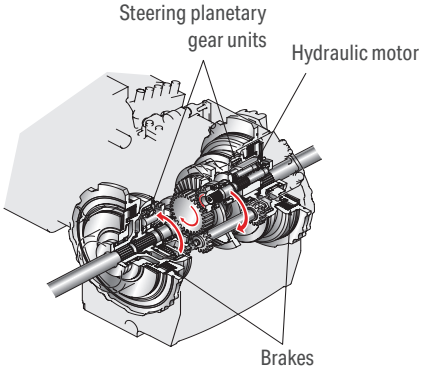
Controller automatically adjusts each clutch engagement depending on travel conditions such as gear speed, revolution and shifting pattern. This provides smooth shockless clutch engagement, improved component reliability, improved component life and operator ride comfort.



Hydrostatic Steering System - smooth, powerful turning

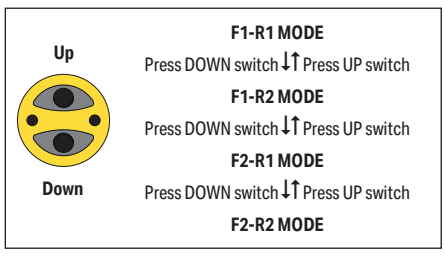
The Hydrostatic Steering System (HSS) is powered by an independent hydraulic pump with engine power transmitted to both tracks without power interruption on the inside track. When the machine turns, the outside track moves faster and the inside slower, for smooth, powerful turns. Counter-rotation is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

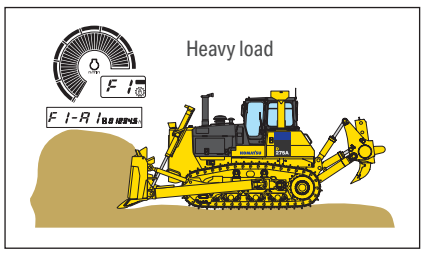
- Turning while dozing: the machine turns by driving the left and right tracks under power at different speeds allowing the machine to travel at the same speed as in straight dozing.
- Side cutting: when side-loading the blade, straight travel can be maintained utilizing HSS.
- On downhill slopes: the 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.

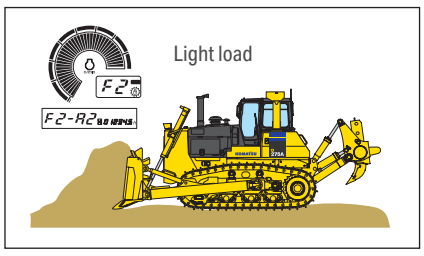


Preset travel speed function

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.

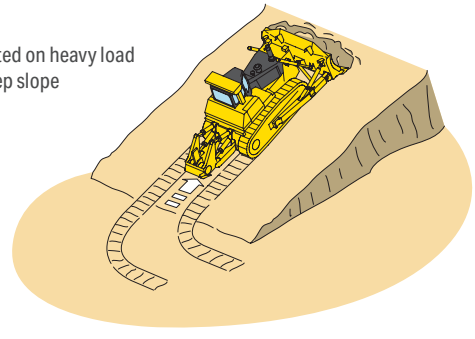




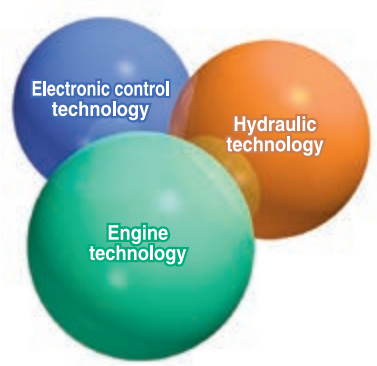


Auto downshift function

Controller monitors engine speed, travel gear and travel speed. When load is applied and machine travel speed is reduced, the controller automatically downshifts to optimum gear speed to provide high fuel efficiency. This function provides comfortable operation and high productivity without manual downshifting. (This function can be cancelled 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-15R a superior crawler dozer in both ripping and dozing production. The engine is U.S. EPA Tier 2 and EU Stage 2 emissions equivalent, and features direct fuel injection, turbocharger and air-to-air aftercooler to maximize fuel efficiency. To minimize noise and vibration, the engine is mounted to the main frame with rubber cushions.

Hydraulic drive radiator 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.

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.

Work equipment

Large blade
Capacities of 5.2 m^3 (straight tilt dozer for D85EX), 5.9 m^3 (D85PX), 7.0 m^3 (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 type ideal for ripping in tough material. The ripping depth is adjustable in two stages.

Working environment

Operator comfort

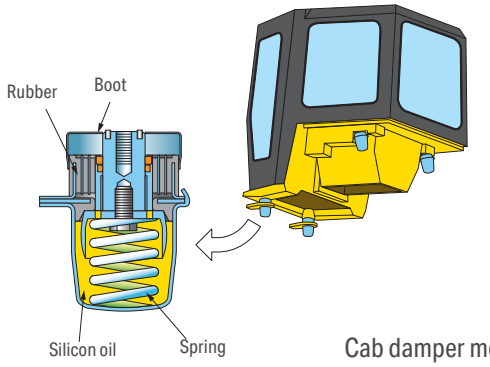
Operator comfort is essential for productive work. The D85EX/PX-15R provides a quiet, comfortable environment where the operator can concentrate on the work at hand.

Hexagonal pressurized cab (optional)

- 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.

Comfortable ride with new cab damper mounting and K-Bogie undercarriage

D85EX/PX-15R's cab mount uses a new cab damper which provides excellent shock and vibration absorption capacity with its long stroke. Cab damper mounts combined with new K-Bogie undercarriage, softens shocks and vibration while traveling over adverse conditions, that are impossible to absorb with conventional cab mounting methods.
The soft spring of cab damper isolates the cab from machine body, suppressing vibration and providing a quiet, comfortable operating environment.



Cab damper mounting

New suspension seat

D85EX/PX-15R 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 be adjusted to accommodate different operator sizes.

Easy 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-15R 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 P 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. If abnormalities occur during operation, user code and service meter are displayed alternately. When a critical user code is displayed, the caution lamp blinks and a warning buzzer sounds to prevent the development of serious problems.

Easy cleaning with hydraulic drive radiator fan

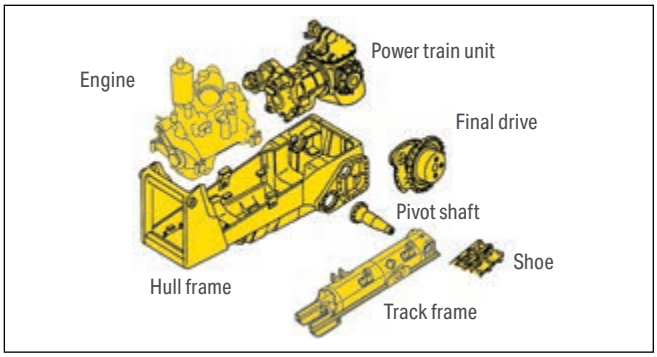
The radiator core and the core on the front side of the oil cooler can be easily cleaned by running the hydraulic engine fan in reverse. Accordingly, the cleaning intervals of those cores can be increased.

Enclosed hydraulic piping

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

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

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.

Reliability features

Filtration

Engine
This machine is equipped a new high efficient main fuel filter of 2 µ and a water separator protect the engine against dirt and water in the fuel.

The fuel tank is equipped with a high-filtration breather with pressure valve to prevent dust from entering.

Hydraulic
The hydraulic tank is equipped with a high-filtration breather with pressure valve to prevent dust from entering.

Specifications

Engine

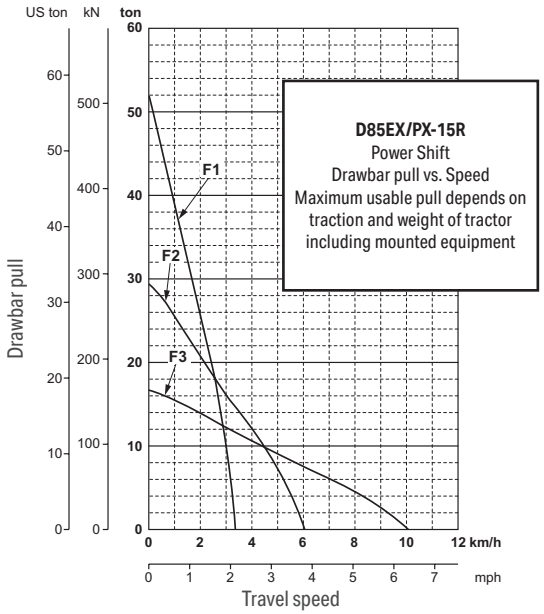
Model.....Komatsu SAA6D125E-5
Type.....4-cycle, water-cooled, direct injection
Aspiration.....Turbocharged, air-to-air aftercooled
Number of cylinders.....6
Bore × stroke.....125 mm × 150 mm
Piston displacement.....11.04 l
Governor.....All-speed, electronic
Horsepower
SAE J1995.....Gross 199 kW / 266 HP
ISO 9249 / SAE J1349*.....Net 197 kW / 264 HP
Rated rpm.....1900 rpm
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 / 240 HP
U.S. EPA Tier 2 and EU Stage 2 emissions equivalent.

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.

	Forward		Reverse	
Gear	D85EX-15R	D85PX-15R	D85EX-15R	D85PX-15R
1st	3.3 km/h	3.3 km/h	4.4 km/h	4.4 km/h
2nd	6.1 km/h	6.0 km/h	8.0 km/h	7.9 km/h
3rd	10.1 km/h	10.0 km/h	13.0 km/h	12.7 km/h



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. Tilt it to the right for a right 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 (EX / PX).....1.99 m/ 2.24 m

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-15R	D85PX-15R
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	72 mm
Shoe width (standard)	560 mm	910 mm
Ground contact area	34160 cm^2	63340 cm^2
Ground pressure (with dozer, cab and ROPS)	0.75 kg/cm^2	0.44 kg/cm^2
Track gauge	2000 mm	2250 mm
Length of track on ground	3050 mm	3480 mm

Service refill capacities

Fuel tank.....490 l
Coolant.....58 l
Engine.....38 l
Torque converter, transmission, bevel gear, and steering system.....60 l
Final drive (each side).....26 l

Final drives

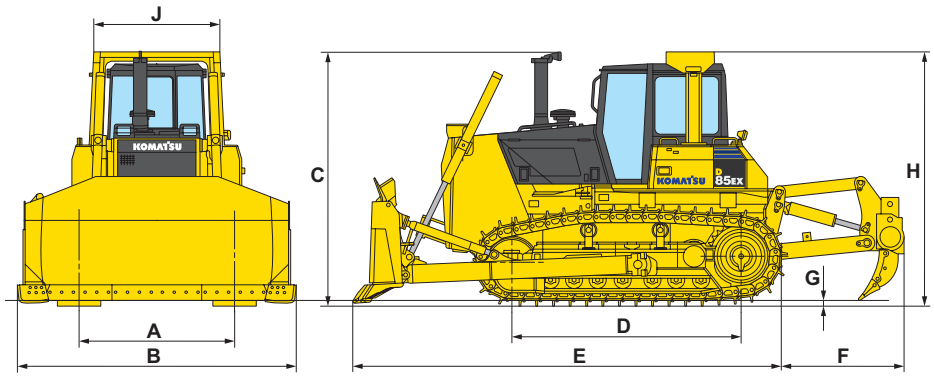
Double-reduction final drive of spur and planetary gear sets to increase tractive effort and reduce gear tooth stresses for long final drive life. Segmented sprocket rims are bolt-on for easy replacement.

Dimensions

	D85EX-15R	D85PX-15R
A	2000 mm	2250 mm
B	3635 mm	4365 mm
C	3330 mm	3330 mm
D	3050 mm	3480 mm
E	5795 mm	6065 mm
F	1490 mm	—
G	72 mm	72 mm
H	3324 mm	3324 mm

Ground clearance: 450 mm

Semi-U tilt dozer with multishank ripper (EX)



Operating weight

Tractor weight
D85EX-15R. . . . . 21120 kg
D85PX-15R. . . . . 23400 kg
Including rated capacity of lubricant, coolant, full fuel tank, operator, and standard equipment.

Operating weight
D85EX-15R. . . . . 28060 kg
D85PX-15R. . . . . 27550 kg
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.

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 l/min at rated engine rpm.

Relief valve setting. . . . . 22.6 MPa / 230 kg/cm²
Control valves:
Spool control valves for Semi-U tilt dozer and Full-U 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
Blade tilt	1	150 mm
Ripper lift	2	130 mm

Hydraulic oil capacity (refill):
Semi-U tilt dozer . . . . . 67 l
Full-U tilt dozer . . . . . 67 l
Ripper equipment (additional volume):
Multi-shank ripper . . . . . 11 l

Dozer equipment

Blade capacities are based on the SAE recommended practice J1265.

	Overall length with blade	Blade capacity	Blade width × height	Max. lift above ground	Max. drop below ground	Max. tilt adjustment	Dozer equipment	Hydraulic oil	Ground pressure*
D85EX-15R Straight tilt dozer	5640 mm	5.2 m³	3715 mm × 1436 mm	1210 mm	540 mm	750 mm	3305 kg	24 kg	0.74 kg/cm²
D85EX-15R Semi-U tilt dozer	5795 mm	7.0 m³	3635 mm × 1580 mm	1210 mm	540 mm	735 mm	3575 kg	24 kg	0.75 kg/cm²
D85PX-15R Straight tilt dozer	6065 mm	5.9 m³	4365 mm × 1370 mm	1230 mm	570 mm	500 mm	3343 kg	23 kg	0.44 kg/cm²
D85PX-15R Mechanical angle power tilt dozer	6035 mm	4.0 m³	4515 mm × 1130 mm	1173 mm	760 mm	520 mm	3730 kg	24 kg	0.75 kg/cm²

* Ground pressure shows tractor, cab, ROPS (ISO 3471), operator, giant ripper standard equipment and applicable blade.

Standard equipment

- Alternator 50 A/24V
- Back up alarm
- Batteries 140 Ah/2 × 12V
- 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 drive radiator cooling fan
- Hydraulic track adjusters
- Hydrostatic steering system (HSS)
- Lighting system (including two front and rear lights)
- Muffler with rain cap
- Palm lever steering control
- Perforated side covers
- Radiator reserve tank
- Rear cover
- Segmented sprockets
- Shoes 560 mm single-grouser (EX)
- Shoes 910 mm single-grouser (PX)
- Starting motor 7.5 kW/24 V
- Suspension seat and reclining
- TORQFLOW transmission
- Track frames
- Track roller guards, full length (EX), center and end section (PX)
- Warning horn
- Water separator

ROPS canopy (without cab):*
Weight . . . . . 437 kg
Roof dimensions
Length . . . . . 1368 mm
Width . . . . . 1850 mm
Height from compartment floor . . . . . 1768 mm

* Meets ISO 3471 and SAE J/ISO 3471 ROPS standards, as well as ISO 3449 FOPS standard.

Optional equipment

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

ROPS for cab:*
Weight . . . . . 371 kg
Roof dimensions
Length . . . . . 650 mm
Width . . . . . 1774 mm
Height from compartment floor . . . . . 1754 mm

*Meets ISO 3471 and SAE J/ISO 3471 ROPS standards.

Steel cab:*
Weight . . . . . 410 kg
Dimensions:
Length . . . . . 1758 mm
Width . . . . . 1323 mm
Height from compartment floor to ceiling . . 1592 mm

*Meets ISO 3449 FOPS standard.

Multi-shank ripper (EX):
Hydraulically controlled parallelogram ripper with three shanks.
Weight (including hydraulic control unit) . . . 2560 kg
Beam length . . . . . 2250 mm
Maximum lift above ground . . . . . 595 mm
Maximum digging depth . . . . . 660 mm

Your Komatsu partner:

KOMATSU

komatsu.com