

KOMATSU

D65EX-15

D65PX-15

ENGINE POWER
155 kW / 208 HP @ 1.950 rpm

OPERATING WEIGHT
D65EX-15: 20.280 kg
D65EX-15 Long track: 21.020 kg
D65PX-15: 21.000 kg

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CRAWLER DOZER



D65EX/PX-15

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 with components that are designed to work together to deliver higher production levels, greater reliability, and more versatility.

Hydrostatic driven engine cooling fan

Controlled automatically, reduces fuel consumption and operating noise levels. Reverse position for cleaning radiator.

Extra-low machine profile

Provides excellent machine balance and low centre of gravity.

Preventative maintenance

- Komtrax™ Komatsu tracking system
- Centralised service station electronically controlled
- Enclosed hydraulic piping
- Modular power train design

Large blade capacities

D65EX:

5,61 m³ (Semi-U tilt dozer)

3,89 m³ (Straight tilt dozer)

3,55 m³ (Straight angle dozer)

D65PX:

3,69 m³ (Straight tilt dozer)



Simple hull frame

and monocoque track frame with pivot shaft for greater reliability.

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155 kW / 208 HP @ 1.950 rpm

OPERATING WEIGHT

D65EX-15: 20.280 kg

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D65PX-15: 21.000 kg

New hexagonally designed SpaceCab™ includes:

- Spacious interior
- New cab damper for comfortable ride
- Excellent visibility
- High capacity air conditioning system
- PCCS (Palm Command Control System)
lever for direction and blade control
- Pressurised cab
- Adjustable armrests
- State-of-the-art highback seat
- Heated rear window
- Pre radio installation kit
- 12 V connector

**Komatsu SAA6D114E-3**

engine with high pressure common rail injection delivers ample power in a fuel efficient way.

The engine meets EU Stage IIIA and EPA Tier III emissions regulations.

HSS (Hydrostatic Steering System)

provides smooth, quick and powerful turns on various ground conditions.

Power train

Modular power train for increased serviceability and durability.

Low-drive, long-track (option) undercarriage

Ensures outstanding grading ability and stability.

COMFORTABLE ERGONOMIC CONTROL

Komatsu's new cabin meets the needs of operators who work long shifts

PCCS (Palm Command Control System)

Komatsu's new 'PCCS' ergonomically designed control system delivers a work environment with complete operator control.

Human-machine interface

Palm command electronic controlled travel joystick

The palm command travel joystick provides the operator with an environment that supports a comfortable posture and precise machine control, without fatigue. Shifting gears is easily carried out with the gear shift lever's push button control.

The system's proportional steering controller increases safety and assists in precision operations. At the lowest speeds, the total range of steering directions is fully available, giving precise direction control. This makes counter-rotation turns possible when standing in the same space. The range of steering directions is proportionately reduced as the dozer's travel speed increases. This keeps turning manoeuvres within safe ranges, making sharp, unsafe turns at high speeds impossible.

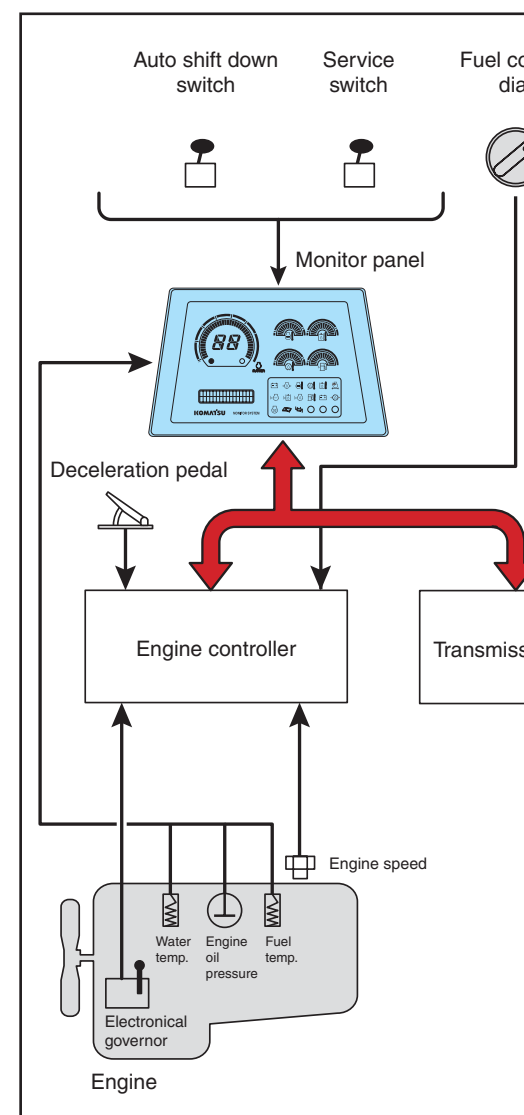
All of the signals are transmitted via an engine and transmission controller, preventing overload of the hydraulic steering system and protecting hydraulic and mechanical parts. Because the controller linkages between the engine speed dial, decelerator pedal, and the engine are electrical, there is no wear of moving linkage parts.



Left hand joystick



Blade and ripper control joystick



Power train electronic control system

Smooth and soft operation controlled by the engine and transmission controller

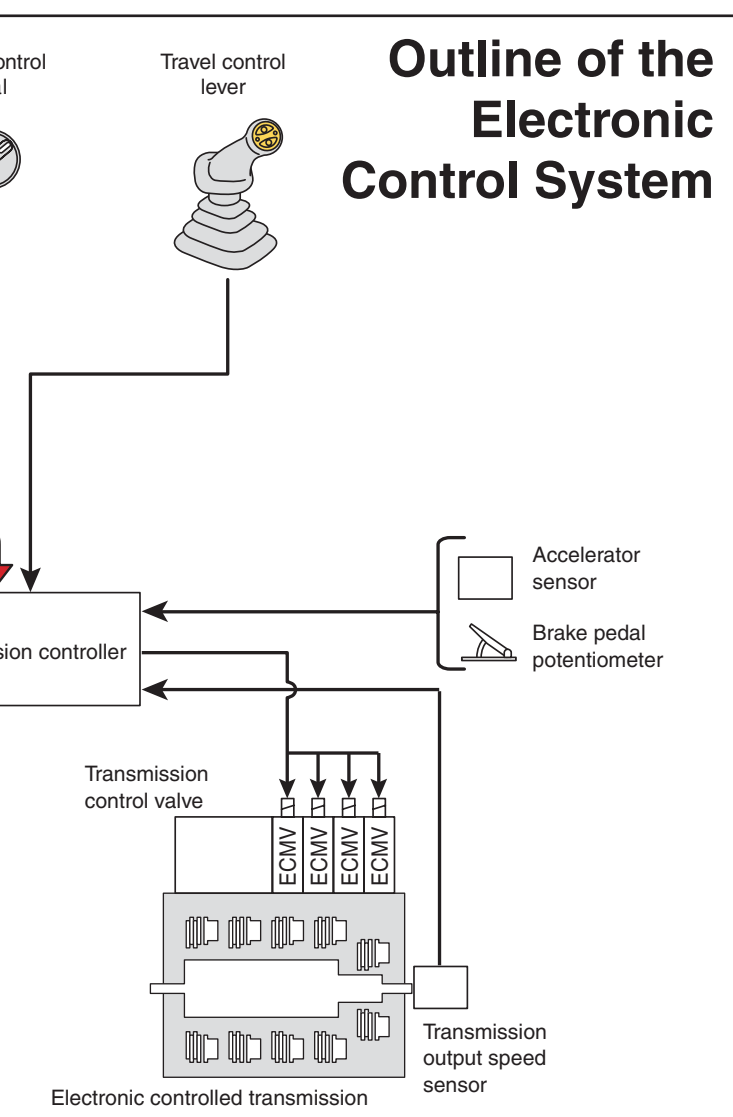
The D65EX/PX-15 utilises a newly designed power train electronic control system. The controller registers the amount of operator control (movement of lever and operation of switches) along with machine condition signals from each sensor, such as the engine speed and machine angle. This is then used to accurately control the torque converter, transmission, steering clutches and brakes, for optimised machine operations.

POWER TRAIN ELECTRONIC CONTROL

Engine controller

By controlling the fuel injection system, the engine controller optimises fuel consumption in combination with the required power. It works on three levels:

- **Passive:** manages actual work condition information, provides an on-board operation manual, and reports machine history.
- **Active:** provides the error code and acts as a warning system, helping reduce expensive machine breakdowns.
- **Measuring tool:** The service technicians can see the various machine parameters without a need for special, expensive hardware and software. This also makes technical information immediately available, optimising operating time.



Engine speed control dial

The rate of engine RPMs is continuously controlled and checked by the engine controller. This controls the fuel injection, when needed, saving on fuel. Because the controller linkages between the engine speed dial, decelerator pedal, and the engine are electronic, there is no wear of moving linkage parts.



When turned 15°

Fully-adjustable suspension seat and travel control console

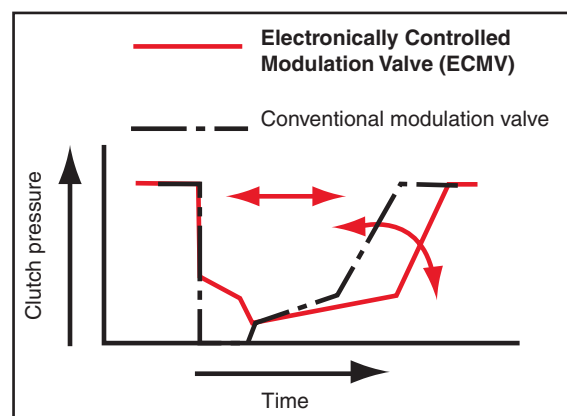
The driver's seat and console are amongst the most important components of the driver's equipment. The comfortable, heavy-duty, ergonomic seat, complete with headrest, gives the driver a secure and comfortable work environment. For reverse operations, the operator

can turn the seat 15° to the right and set it in that position, significantly improving rear visibility and reducing neck strain. The travel control joystick, with its complete console, can be moved forwards, backwards, and in height so that it's fitted to each operator.

PRODUCTIVITY FEATURES

ECMV (Electronically Controlled Modulation Valve) steering clutches/brakes

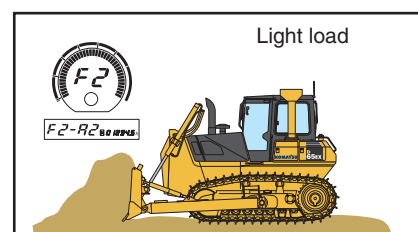
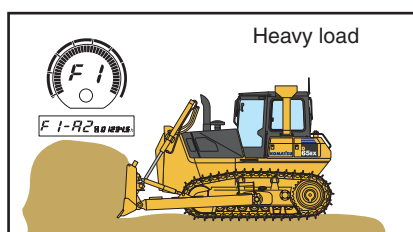
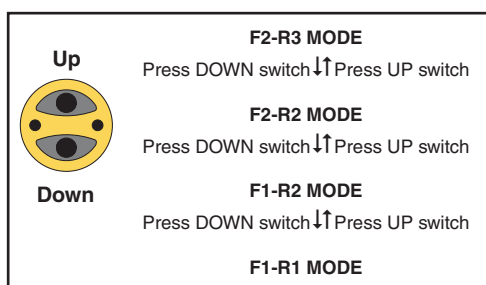
Using an innovative series of valves, the transmission controller automatically and smoothly makes each clutch engagement. The speed of each shift is based on travel conditions such as gear speed, engine RPMs and the current shifting sequence. This provides a smooth, shock-free clutch engagement, longer component life, and increased ride comfort. It also assists productivity because the ECMV manages the transmission, allowing the operator to concentrate on managing the blade position.



Preset travel speed function

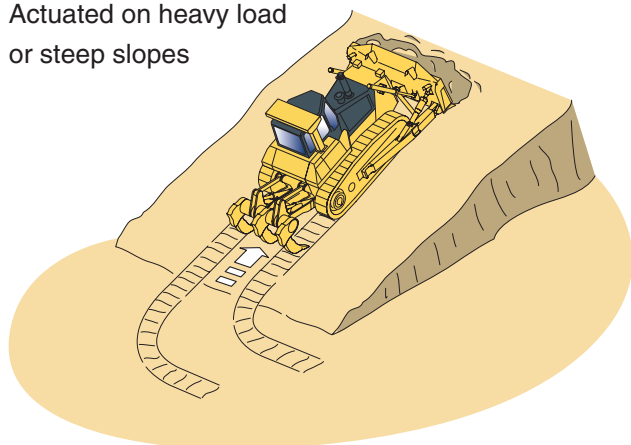
Preset travel speed selection function is provided as standard equipment. The preset switch enables the operator to select forward and reverse travel speeds within 4 preset patterns: F1-R1, F1-R2, F2-R2 and F2-R3, by using UP/DOWN shift switch on the PCCS steering joystick.

When the F1-R2 or F2-R2 preset pattern is selected, and the PCCS steering joystick moves from forward to reverse direction, the machine automatically travels forwards/backwards at the preset F1/R2 or F2/R2 speeds. This function reduces gear shifting time during repeated round trip operations.



Auto-downshift function

Actuated on heavy load or steep slopes

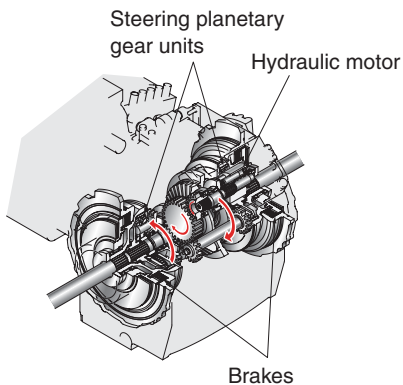


Auto-downshift function

The engine controller monitors engine speed, travel gear and travel speed. When a load is applied and the machine travel speed is reduced, the controller automatically downshifts and optimises the gear speed to provide high fuel efficiency. This function provides comfortable operations and high productivity without manual downshifting. (This function can be deactivated by a cancel switch on the monitor panel.)

Hydrostatic Steering System – smooth, powerful turning

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



Blade control joystick (PPC)

The blade control joystick uses a PPC (Proportional Pressure Control) valve. The design of the blade control joystick is the same as the travel control joystick. The PPC control, combined with the highly reliable Komatsu hydraulic system, enables superbly fine blade control. It keeps the blade movement independent from the blade load and speed of the machine.

The PPC delivers a proportional response to the joystick, giving the operator essential sensory feedback of what the blade is experiencing, and improving the precision of the work that is being done.

The work equipment pump delivers force and flow only when needed. This saves on fuel and delivers maximum engine power to the tracks, thereby increasing performance.

Electrical outlets that match today's technologies

Good communications help ensure top productivity. To keep the driver in contact with the site management, the dozer's 60 W power supply provides a 12 V service for radio, walkie-talkie and mobile phone use.



PRODUCTIVITY FEATURES



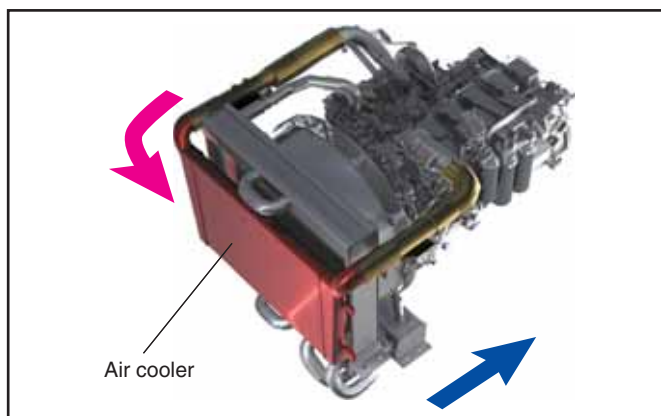
High performance SAA6D114E-3 engine

Heavy duty HPCR system

A high pressure pump pumps fuel into an accumulator chamber or 'Common Rail'. An ECU (electronic control unit) then optimizes fuel injection from the common rail into the engine cylinders. This improves engine power and fuel efficiency, reducing emission and noise levels.

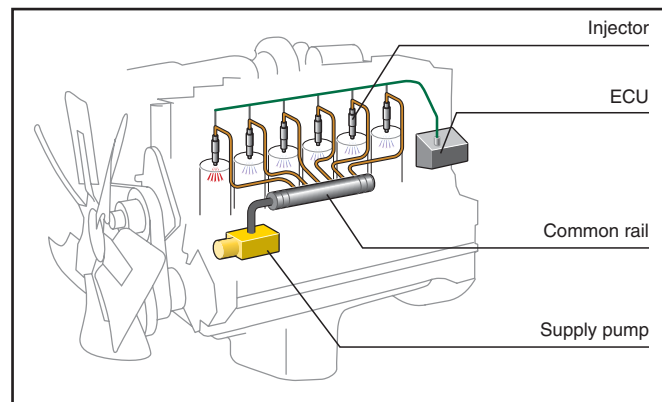
Air-to-air charge air cooling system

By cooling the compressed air supplied by the turbo-charger to the cylinders, this system optimizes combustion efficiency, reduces emissions and improves engine performance.



Electronic control system

Komatsu's electronic control system monitors the vehicle performance, optimizing emissions, fuel efficiency and noise levels, even under extreme conditions.



New combustion system

Our new combustion system optimises combustion timing and ignition. Thanks to extensive computer simulations and analyses, its specially designed combustion chamber reduces NOx and particulates emissions, fuel consumption and noise levels.



Improved efficiency with hydrostatic-driven engine cooling fan

Fan rotation is automatically controlled, based on the coolant and hydraulic oil temperature. This saves fuel and provides great productivity with a quiet operating environment.

WORK EQUIPMENT

Komatsu blades

Komatsu's box blade design delivers the highest resistance for a light blade, increasing blade manoeuvrability. The blade shape lets you handle a wide range of materials easily and provides excellent penetration and low rolling resistance. Consequently, Komatsu blades improve your productivity and reduce fuel consumption. In addition, we use high-tensile-strength steel in the front and sides of the blade for maximum durability.

Semi-U blade

The Komatsu Semi-U blade is ideal for tough applications. Its shape ensure excellent ground penetration while it's two side wings prevent material spillage for best-in-class dozing performance.

Straight blade

Due to the flat bottom side of the cutting edge, the straight blade offers the best grading performance for the mid size range of dozers. Thanks to its shorter cutting edge length, the straight blade offers an excellent penetration power per meter blade length. This makes it an excellent tool for digging into difficult products such as clay.



Straight angle blade

The straight angle blade is fixed on a U-frame on 3 points. The angle and tilt of the blade can be changed mechanically. This angle/tilt function increases the field of application as for example ditch filling.

Komatsu rippers

Komatsu rippers combine the highest productivity and longevity. The shank is fitted with specially designed wear parts to extend lifetimes and deliver the best penetration into any material.

Multishank parallelogram ripper (EX)(option)

The multishank parallelogram ripper has 3 ripper shanks as standard, but can be easily converted to a giant or two-shank ripper, depending on the job conditions. The strong parallelogram design offers straight shank movement, adapted for small and medium-size dozers.



UNDERCARRIAGE

Low drive undercarriage

Komatsu's design is extraordinarily tough and offers excellent grading ability and stability. Heavy-duty link assemblies with large-diameter bushings, substantial track link height, and superior oil seals increase undercarriage durability and lifetime. Serviceability is also assisted by the remote greasing of the equaliser bar centre pin. And the segmented sprockets can be replaced individually, by hand, making it possible for one mechanic to carry out replacements at the job site. The design also gives the driver a perfect view of the blade tips, making work easier and more precise.

The Komatsu undercarriage design provides stable operations with very low vibration levels.

The reasons for this are:

- Two upper carrier rollers prevent the link assembly from jumping up and down.
- The track rollers are double flanged, thus supporting the link assembly in the best way and reducing wear to a minimum.



Komatsu offers various undercarriage arrangements to match a wide range of different applications.

EX-arrangement

Offers a standard track length, specially designed for applications where there are rough ground conditions, such as those found in quarries. The shoe width is small-to-medium, to gain the longest lifetime.

EX-Long track arrangement

The front idler is moved forward to increase the track length on the ground. This improves the dozer's balance, as well as providing better ground traction. This arrangement enables best dozer grading performance. The shoe width is small-to-medium, to gain the longest lifetime in various working conditions.

PX-arrangement

The front idler is moved forward to increase the track length on the ground. Also, the shoe width is increased to have a larger ground contact area. This is specially designed to work in soft, unstable ground conditions.

OPERATOR COMFORT

Operator comfort

Operator comfort is essential for safe and productive work. The D65EX/PX-15 provides a quiet, comfortable environment where the operator can concentrate on the work at hand.



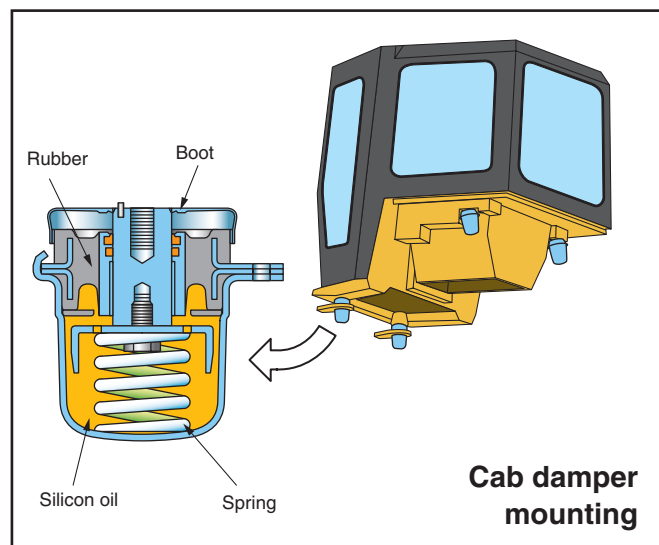
Pressurised hexagonal SpaceCab™

- The cab's new hexagonal design and large tinted glass windows provide excellent front, side, and rear visibility
- Superior cab sealing, air filters and increased internal air pressure prevent dust from entering the cab
- The high quality cab interior is fully lined with sound-absorbent material



Comfortable ride with new cab damper mounting

D65EX/PX-15's cab mounts use a newly designed cab damper that provides an excellent shock and vibration absorption capacity with its long stroke. Cab damper mounts soften shocks and vibrations that conventional mounting systems are unable to absorb, whilst travelling over adverse ground conditions. The cab damper spring isolates the cab from the machine body, suppressing vibrations and providing a quiet, comfortable operating environment.



Superior blade visibility

The slim engine bonnet and well-located operator seat provide excellent blade visibility. This greatly increases grading efficiency and operator performance. Finish grading and rough grading can both be performed easily, significantly reducing cycle times.

EASY MAINTENANCE

Preventative maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D65EX/PX-15 with conveniently located maintenance points, to make required inspections and maintenance quick and easy.

Centralised service station

To assure convenient maintenance, all hydraulic and lubrication oil filters have been centralised to make access to all service points safe and easy.



Monitor with self-diagnostic function

The monitor panel has a multifunction purpose. It offers:

- Hour meter, engine RPM, fuel gauge and water coolant temperature information, in real time
- Preventative maintenance information such as the timing for the replacement of oil filters
- Service information to inform the operator when abnormalities occur
- Komatsu mechanics receive all available detailed information, without the use of any external service tools

Enclosed hydraulic piping

The hydraulic piping for the blade tilt cylinder is completely housed in the push arm, ensuring damage protection.

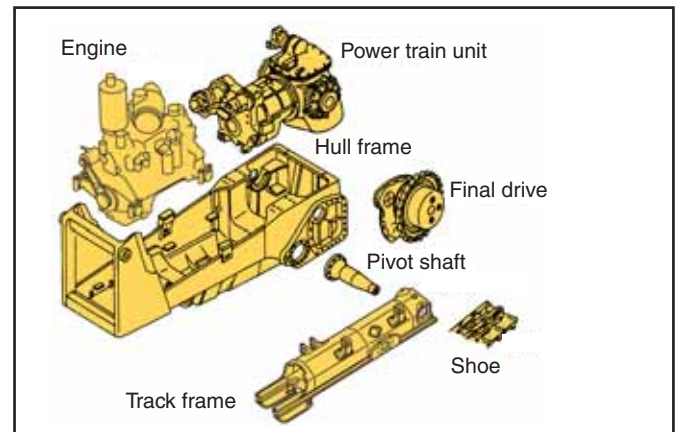
O-ring face seal

The hydraulic hose connections use high quality O-ring face seals. They provide improved sealing performance against vibrations and load shocks.



Modular power train design

Power train components are sealed in a modular design that allows them to be dismantled and mounted without oil spillage. This makes servicing work clean, smooth, and easy.



Reliable, simple structure

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

Maintenance-free disc brakes

Wet disc brakes require less maintenance.

Gull wing engine side covers

Gull wing engine side covers facilitate easy engine maintenance and filter replacement. The side covers are a solid structure with a bolt-on latch to improve durability and repairability.



SERVICEABILITY AND CUSTOMER SUPPORT

When you purchase Komatsu equipment, you gain access to a broad range of programmes and services that have been designed to help you get the most from your investment. These all support substantial productivity, long and useful equipment lifetime, low operating costs, and a high trade-in or resale value.

- Many of the vital components in the D65EX/PX-15 have been installed and proven totally reliable in other heavy-duty Komatsu earthmoving equipment.
- Komatsu's extensive parts warehouses and logistics system across Europe and around the globe ensure unparalleled parts availability.
- Continuous training programmes for Komatsu service personnel guarantee that your equipment is serviced properly and maintained in top running condition.
- The Komatsu Oil Wear Analysis (KOWA) programme offers sophisticated oil analysis to identify problems to be followed up during preventative, scheduled maintenance.
- KFWP (Komatsu's Flexible Warranty Programme) is available, providing a range of extended warranty options on the machine and its components. These can be chosen, based on individual needs and activities. This programme is designed to help reduce total operating costs.
- A Komatsu Repair & Maintenance Contract is a way to establish a fixed operating cost and ensure optimal machine availability for the duration of the contract.



KOMTRAX™ Komatsu Tracking System

The Komatsu Tracking System, KOMTRAX™, provides a revolutionary new way to monitor your equipment, anytime, anywhere. It lets you pin-point the precise location of your machines and obtain real-time machine data. Using GPS transmitter and satellite technology, it's designed to be future proof and will meet your demands today and tomorrow.



SPECIFICATIONS



ENGINE

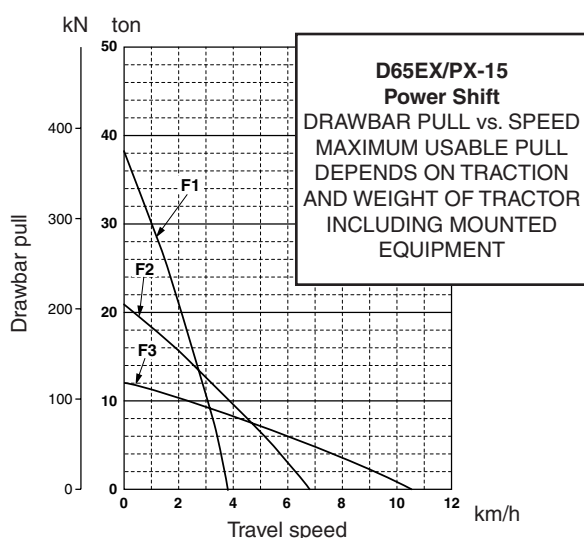
Model.....Komatsu SAA6D114E-3
 Type.....Common rail direct injection, water-cooled, emissionised, turbocharged, after-cooled diesel
 Engine power
 at rated engine speed 1.950 rpm
 ISO 14396 155 kW / 208 HP
 ISO 9249 (net engine power) 153 kW / 205 HP
 No. of cylinders 6
 Bore x stroke 114 x 135 mm
 Displacement..... 8,27 ltr
 Governor.....All-speed, electronic
 Lubrication system
 Method Gear pump, force lubrication
 Filter Full flow



TORQFLOW TRANSMISSION

Type.....Komatsu TORQFLOW
 Torque converter.....3-element, 1-stage, 1-phase, water-cooled
 Transmission..... Planetary gear, multiple-disc clutch
 hydraulically actuated, force-lubricated
 Gearshift lock lever and neutral safety switch prevent accidental starts.

Max. travel speeds	Forward	Reverse
1st	3,3 km/h	4,4 km/h
2nd	6,3 km/h	8,2 km/h
3rd	10,1 km/h	12,9 km/h



FINAL DRIVE

Type..... Planetary gear, double-reduction
 Sprocket Segmented sprocket teeth
 are bolt-on for easy replacement



STEERING SYSTEM

Type.....Hydrostatic Steering System (HSS)
 Steering control PCCS-lever
 Service brakes..... Wet, multiple-disc, pedal-controlled,
 spring-actuated and hydraulically released
 Minimum turning radius (counter-rotation)
 D65EX-15 1,8 m
 D65EX-15 Long track..... 2,0 m
 D65PX-15 2,2 m



UNDERCARRIAGE

Suspension..... Oscillating equaliser bar and pivot shaft
 Track roller frame.....Monocoque, large section, durable construction
 Rollers and idlers..... Lubricated track rollers
 Tracks Lubricated tracks, fully sealed
 Track tension Combined spring and hydraulic unit

	D65EX-15	D65EX-15 Long Track	D65PX-15
Number of track rollers (each side)	7	8	8
Type of shoes (standard)	Single grouser	Single grouser	Single grouser
Number of shoes (each side)	39	45	45
Grouser height	65 mm	65 mm	65 mm
Shoe width (standard)	610 mm	610 mm	915 mm
Ground contact area	32.635 cm ²	40.077 cm ²	60.115 cm ²
Track gauge	1.880 mm	1.880 mm	2.050 mm
Length of track on ground	2.675 mm	3.285 mm	3.285 mm



COOLANT AND LUBRICANT CAPACITY (REFILLING)

Fuel tank..... 415 ltr
 Radiator 37 ltr
 Engine oil..... 28 ltr
 Torque converter, transmission, bevel gear,
 and steering system 48 ltr
 Final drive (each side)
 D65EX-15 (EX Long track) 24 ltr
 D65PX-15 27 ltr
 Dozer blade hydraulics 55 ltr
 (includes the additional capacity for the optional ripper)



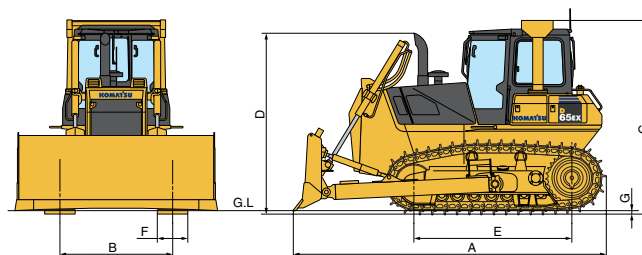
ENVIRONMENT

Engine emissions Fully complies with EU Stage IIIA and
 EPA Tier III exhaust emission regulations
 Noise levels
 LwA external 108 dB(A) (2000/14/EC)
 LpA operator ear 80 dB(A) (ISO 6396 dynamic test)



DIMENSIONS

	D65EX-15	D65EX-15 Long Track	D65PX-15
A	5.440 mm	5.845 mm	5.520 mm
B	1.880 mm	1.880 mm	2.050 mm
C	3.220 mm	3.220 mm	3.220 mm
D	2.990 mm	2.990 mm	2.990 mm
E	2.675 mm	3.285 mm	3.285 mm
F	610 mm	610 mm	915 mm
G	65 mm	65 mm	65 mm



Dimensions with semi-U tilt blade (D65EX-15) and single grouser shoes



OPERATING WEIGHT (APPR.)

Including semi-U tilt dozer (EX) or straight tilt dozer (PX), steel cab, ROPS, operator, standard equipment, rated capacity of lubricant, coolant, and full fuel tank.

D65EX-15 Standard track.....	20.280 kg
D65EX-15 Long track	21.020 kg
D65PX-15	21.000 kg



RIPPER EQUIPMENT

Multishank ripper

Type	Hydraulically controlled parallelogram ripper
No. of shanks	3
Weight (including hydraulic control unit)	1.680 kg
Beam length	2.170 mm
Maximum lift above ground.....	640 mm
Maximum digging depth	595 mm



HYDRAULIC SYSTEM

Type	CLSS (closed-centre load sensing system)
All spool valves externally mounted beside the hydraulic tank.	
Main pump	Variable displacement piston pump
Maximum pump flow.....	210 ltr/min
Relief valve setting	210 kg/cm ²
Spool control valve positions for tilt dozer	
Blade lift	Raise, hold, lower, and float
Blade tilt	Right, hold, and left
Additional control valve positions for multishank ripper (EX)	
Ripper lift.....	Raise, hold, and lower
Hydraulic cylinders	Double-acting, piston
No. of cylinders × bore	
Blade lift	2 × 95 mm
Blade tilt	1 × 140 mm
Ripper lift.....	1 × 140 mm



DOZER EQUIPMENT

Blade capacities are based on the SAE recommended practice J1265.

	Overall length with dozer	Blade capacity	Blade width × height	Max. lift above ground	Max. drop below ground	Max. tilt adjustment	Additional weight
D65EX-15/EX Long track Semi-U blade single tilt	5.440 mm	5,61 m ³	3.460 x 1.425 mm	1.105 mm	440 mm	855 mm	3.000 kg
D65EX-15 Straight tilt blade	5.210 mm	3,89 m ³	3.415 x 1.225 mm	1.105 mm	440 mm	870 mm	2.720 kg
D65EX-15 Straight angle blade	5.470 mm	3,55 m ³	3.970 x 1.100 mm	1.185 mm	450 mm	400 mm	2.930 kg
D65PX-15 Straight tilt blade	5.520 mm	3,69 m ³	3.970 x 1.100 mm	1.105 mm	540 mm	450 mm	2.740 kg
D65EX-15 Long track Short Semi-U blade, single tilt	5.893 mm	5,25 m ³	2.990 x 1.480 mm	1.180 mm	565 mm	430 mm	3.060 kg

CRAWLER DOZER

STANDARD EQUIPMENT

Cab

- Suspension seat: fabric, reclining, high backrest, turnable
- Seat belt
- Headrest
- High mount footrest
- Palm lever steering control (PCCS)
- Mono lever blade control
- Air conditioner
- Heated rear window
- Pre radio installation kit (12 V, antenna, loudspeakers)
- Decelerator pedal
- Electronic monitor panel
- Fenders
- Rear-view mirror (inside cab)
- Sun visor
- Cup holder
- Lunch box holder

Undercarriage

- Single grouser heavy-duty shoes (EX: 610 mm / PX: 915 mm)
- Heavy-duty, abrasion resistant link assembly, sealed and lubricated (PX)
- Track roller guard, centre section
- Segmented sprockets
- Fixed track rollers
- Hydraulic track adjusters

Engine related parts

- Heavy-duty radiator mask
- Cooling fan, hydrostatic driven
- Water separator
- Fuel tank inlet strainer
- Hard water area arrangement incl. corrosion resistor
- Intake pipe with precleaner

- Dry type air cleaner, double element with dust indicator and evacuator
- Locks, filter caps and covers
- Starting motor 24 V/7,5 kW
- Alternator 24 V/60 A
- Batteries 2 × 12 V/140 Ah
- Gull wing engine side covers
- Hydroshift transmission
- Torque converter
- Damper
- HSS hydrostatic steering system

Attachments

- Hitch
- Front pull hook
- Wiper rear window
- Wiper front window
- Wipers doors
- Tool kit

Work equipment

- Hydraulics for ripper (EX only)
- Hydraulics for dozing blades

Safety equipment

- Back-up alarm
- Warning horn
- Steel cab, meets ISO 3449 FOPS standards
- ROPS canopy for cab, meets ISO 3471 and SAE J1040, APR88 ROPS standards

Control systems

- Komtrax™ Komatsu tracking system

OPTIONAL EQUIPMENT

Undercarriage

- Single grouser heavy-duty shoes (EX: 510 mm, 560 mm, 660 mm)
- Heavy-duty, abrasion resistant link assembly, sealed and lubricated (EX)
- Full length track roller guard

Engine related parts

- Starting motor 24 V/11 kW
- Alternator 24 V/90 A
- Batteries 2 × 12 V/200 Ah

Attachments

- Rigid drawbar
- Ripper working light
- Additional working light, rear
- Additional cab lights, front and rear

Work equipment

- Straight tilt blade 3,69 m³ (PX)
- Semi-U blade single tilt 5,61 m³ (EX/EX Long track)
- Straight tilt blade 3,89 m³ (EX)
- Straight angle blade 3,55 m³ (EX)
- Short Semi-U blade, single tilt 5,25 m³ (EX Long track)
- Multishank parallelogram ripper
- Hydraulics for ripper (field installation kit)

Safety equipment

- Fire extinguisher

Control systems

- Komatsu-Topcon machine control systems



Komatsu Europe International NV

Mechelsesteenweg 586
B-1800 VILVOORDE (BELGIUM)
Tel. +32-2-255 24 11
Fax +32-2-252 19 81
www.komatsueurope.com