NET HORSEPOWER
63 kW 85 HP @ 2.000 rpm

OPERATING WEIGHT
D37EX-21: 7.410 kg
D37PX-21: 7.770 kg

KOMATSU

D37EX-21
D37PX-21

D
37

D37EX/PX-21

CRAWLER DOZER

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.

Extra-low machine profile

The low centre of gravity provides excellent machine balance.

Preventative maintenance

- Centralised service station electronically controlled
- Enclosed hydraulic piping
- Modular power train design

Radiator nose

Sound deflection design for reduced ambient noise. Reinforced punched-type radiator grill, for increased protection of the cooling fan.

Large blade capacities

D37EX-21:
1,75 m³ (Straight PAT dozer)
D37PX-21:
1,70 m³ (Straight PAT dozer)
D37PX-21:
1,91 m³ (Straight PAT dozer)

NET HORSEPOWER
63 kW 85 HP

OPERATING WEIGHT
D37EX-21: 7.410 kg
D37PX-21: 7.770 kg

New quadrangular design cab 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

Komatsu SAA4D102E-2

63 kW 85 HP turbocharged, aftercooled engine provides ample power.

Speed sensors

in both travel motors ensure tracking straight ahead, even working on slopes and with uneven blade loads.

Power train

Modular power train for increased serviceability and durability.

Komatsu electronically controlled hydrostatic transmission (KomStat II)

Offers palm control of speed (3 forward and 3 reverse), turn, directional changes, and powerful steering with counter-rotation.

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

KomStat II (KOMATSU HST)

The D37EX/PX-21 is equipped with Komatsu's exclusive KomStat II Hydrostatic Transmission (HST). The HST consists of dual-path closed-circuits with two variable displacement piston pumps and two 3-speed variable displacement travel motors. Because the HST controller electronically controls the pump discharge and motor speed, the operator can select the optimum speed to match each job.

Palm Command Control System

The ergonomically designed Palm Command Control System (PCCS) joystick controls all directional movements. Simply tilt the joystick to the left to make a left turn, and to the right for a right turn. Tilting the joystick fully to the left or right results in counter-rotation. With the electronically controlled HST, the machine works powerfully without actually lowering the travel speed, even when it receives an uneven load on the blade or when it dozes whilst turning.

Steering functions

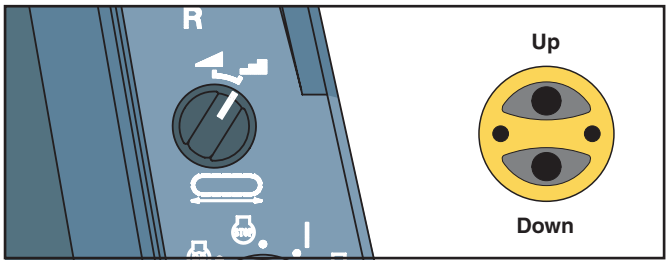
- Forward and reverse
- Right and left steering plus counter-rotation
- Increase/decrease machine speed

Two selectable modes for travel speed

Selection of either the variable speed or the quick shift mode allows KomStat II dozers to achieve maximum efficiency during fine and rough grading operations, with an optimum travel speed to match the job conditions with the greatest efficiency.

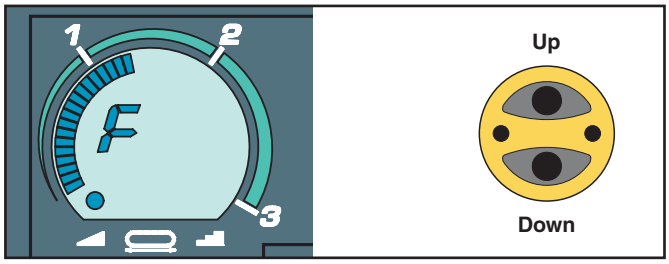
Quick shift mode

If the travel mode switch is placed in the "quick shift mode" position, the transmission shifts from 1st to 2nd gear, and from 2nd to 3rd gear each time that the Up/Down buttons on the PCCS joystick are depressed. This mode is suitable for job sites where the operator must shift gears frequently.



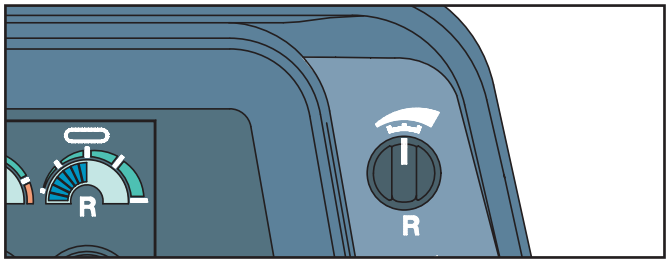
Variable speed mode

When the travel mode switch is placed in the “variable speed mode”, a gradual speed increase/decrease is available. The travel speed is indicated by a 20 segment LED. Utilising the Up/Down shift button on the PCCS joystick, the speed is increased or decreased gradually.



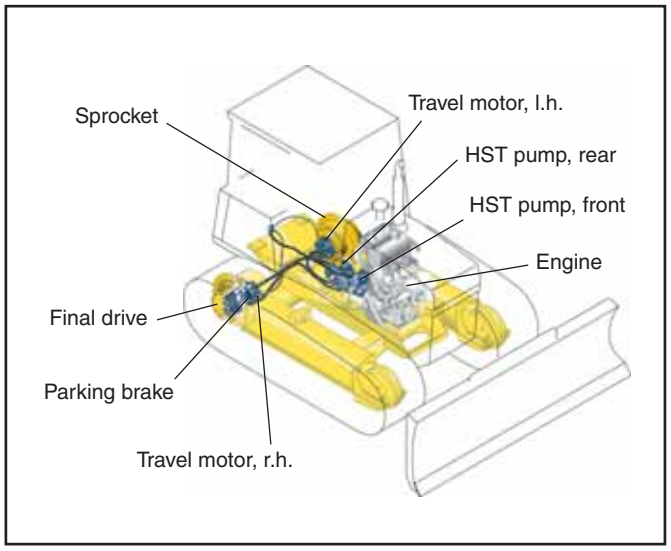
Preset function of reverse travel speed

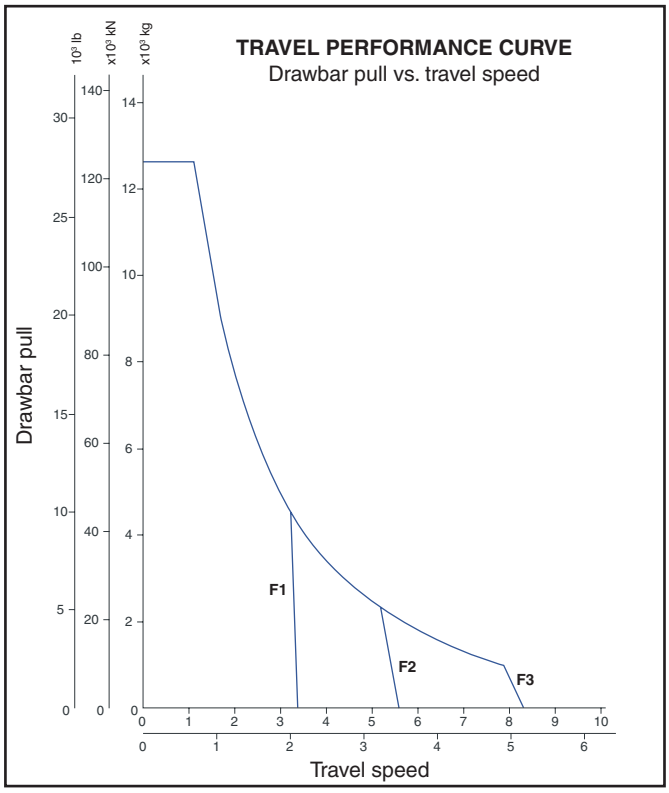
The reverse travel speed can be preset easily with the reverse speed switch. The travel speed is indicated on the analog LCD display. Once the reverse travel speed is set, the operator can then drive the machine in reverse at that speed by simply pulling the direction lever.



Automatic speed change in all speed ranges

Because the KomStat II changes the travel speed automatically and steplessly through the range of travel speeds (depending on load or ground conditions), efficient operations are facilitated - without shift shocks. This mode makes the dozer shift speeds at the best point, improving productivity and providing the best fuel efficiency.





PRODUCTIVITY FEATURES

Benefits of the HST system

- Grading operations
  Optimum travel speed is easily selectable, making grading operations more efficient.
- Dozing operations while turning
  The power from the engine is transmitted to both tracks while turning (power turn), enabling dozing operations during turns to be carried out efficiently at the same speed as when straight dozing.
- Side-cut operations
  It is easy to control dozing operations, even with a load on one side of the blade. This enables the operator to perform side-cut operations efficiently and accurately.

HST dynamic brakes

The D37EX/PX-21 uses HST dynamic brakes to ensure safe operations. Placing the steering lever in the neutral position makes that the hydraulic pumps work as a brake. The parking brake is a wet, multiple-disc type with a unique drag-prevention control to keep the hydraulic oil clean. This brake system can be actuated by use of the brake pedal and the parking lever.

Superb steering accuracy

The KomStat II steering system offers smooth steering performance, even in gradual turns, permitting the D37EX/PX-21 to approach dozing objects accurately in corner grading and side wall operations. Spread sensors on both drives enable it to make a straight drive, even with an uneven blade load, without adjusting the direction.

Counter-rotation

Allows the operator to correctly position the dozer when side-loading the blade, or when working in a narrow environment. By pushing the PCCS joystick completely to the right or left side, the dozer makes a counter-rotation to the right or to the left.

Photo may include optional equipment not available in your area

Outstanding blade control

Easy-to-operate, 3-axis PPC operated blade control joystick

The newly developed 3-axis PPC valve and ergonomically designed joystick provide light operating effort and excellent blade response. This eliminates the need to adjust components such as the mechanical linkages.

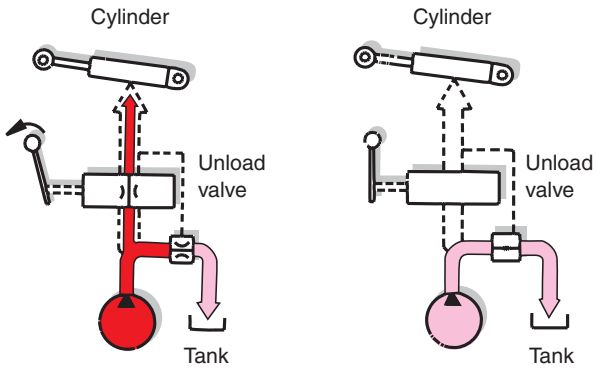
CLSS Hydraulic System

With the hydraulic Closed-center Load Sensing System (CLSS), the blade lever stroke is directly proportional to the blade speed, regardless of the load and travel speed. This results in superb, fine controllability.

Benefits of the CLSS

- More precise and responsive operations, provided by the pressure compensation valve.
- Reduced fuel consumption, by discharging only the required amount of oil from the pump.
- Compound operations such as blade raise, tilt, and angle are easy, thanks to the CLSS parallel circuit with pressure compensation valve.

CLSS Hydraulic System



Excellent grading ability

Outstanding stability

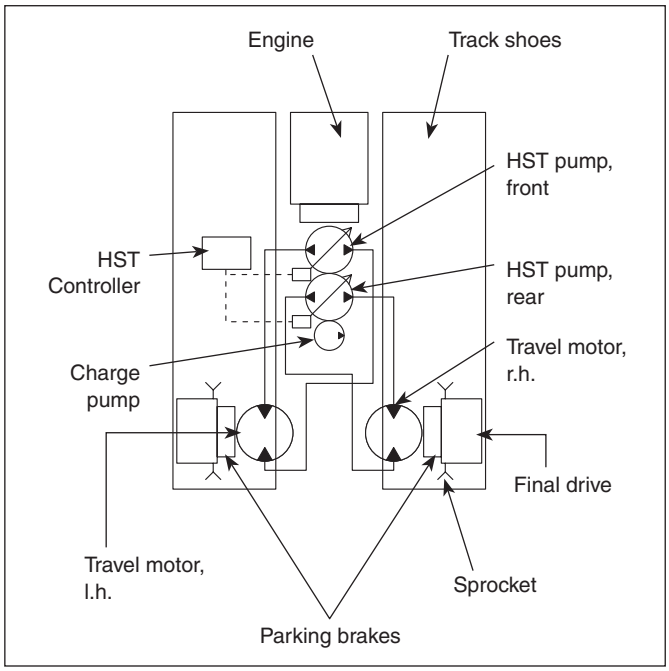
The large ground contact surface area, created by the long tracks and wide track gauge, and combined with a low centre of gravity, makes for a stable and well-balanced machine that can also perform precise grading work on rough or inclined terrain.

Photo may include optional equipment not available in your area

PRODUCTIVITY FEATURES

Engine

The Komatsu SAA4D102E-2 engine delivers 63 kW / 85 HP at 2.000 rpm. This fuel-efficient engine, together with the heavy machine weight, make the D37EX/PX-21 superior crawler dozers in both ripping and dozing operations. The engine is designed to surpass European Stage II and EPA TIER II regulations, and features direct fuel injection, turbocharger, and aftercooler to maximise fuel efficiency. To minimise noise and vibrations, the engine is mounted on the main frame with rubber cushions.



WORK EQUIPMENT

Komatsu blades

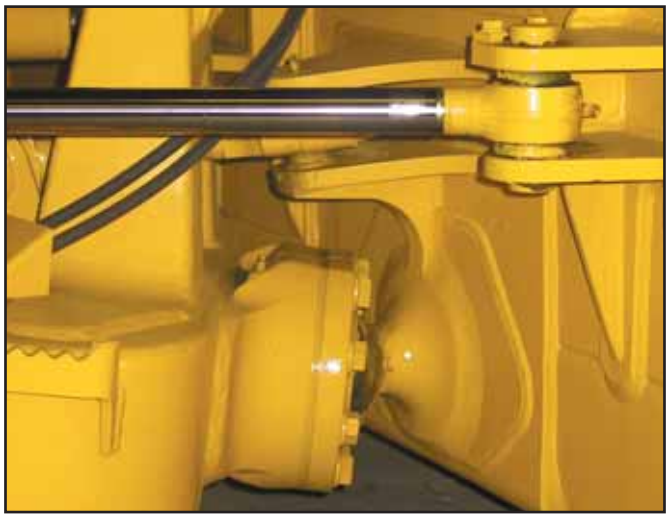
Komatsu uses a box blade design, offering the highest resistance for a low weight blade. This increases total blade manouevrability. High-tensile-strength steel has been incorporated into the front and sides of the blade for increased durability. The blade shape design makes it easy to handle a wide range of materials, offering good blade penetration, combined with a low blade rolling resistance. And finally, Komatsu blades help deliver very good, lower fuel consumption performance.

Straight Power Angle Tilt blade

The Straight Power Angle Tilt blade (PAT), offers a wide range of working modes. With a combination of available blade positions: hydraulically angle, tilt and lift, the operator can move the blade to an optimal position, using the PPC joystick.

Photo may include optional equipment not available in your area

The new centreball design, with a large ball diameter, offers a strong and durable solution for the blade attachment to the Inpat frame. The straight PAT blade is always combined with a long track design, offering the best machine stability for grading applications. The PAT blade is available for the EX and PX models.



Komatsu rippers

Komatsu rippers have been designed to combine the highest productivity with a long lifetime. The shank is fitted with specially designed wear parts that increase longevity, and offer the best penetration in various types of materials.

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.

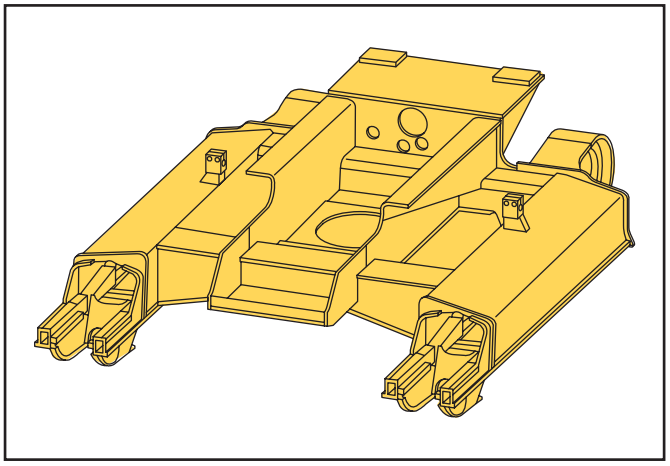
UNDERCARRIAGE

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. The design also gives the driver a perfect view of the blade tips, making work easier and more precise.

Durable and reliable main frame

D37EX/PX-21 main frame is designed by the same advanced Computer Aided Engineering (CAE) technology used on the D575A (the largest bulldozer in the world). This main frame structural feature is a main frame and track frame combined with connecting bars by welding, providing the ideal stiffness required in a small size crawler dozer.



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

EX-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 D37EX/PX-21 provides a quiet, comfortable environment where the operator can concentrate on the work at hand.

Pressurised quadrangular cab

- The cab's quadrangular design and large 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
- Rubber isomount cab suspension mounts reduce shocks for increased operator comfort and extended component life

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.

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.

EASY MAINTENANCE

Preventative maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D37EX/PX-21 with conveniently located maintenance points, to make required inspections and maintenance quick and easy.

Centralised service station

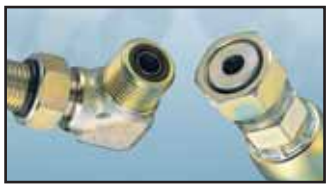
To assure convenient maintenance, all hydraulic and lubrication oil filters have been centralised to make access to all service points safe and easy.

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.

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.



Extended engine oil replacement interval

Engine oil replacement interval is extended to 500 hours using a high performance engine oil filter.

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.

Sealed DT connectors

Main harnesses and controller connectors are equipped with sealed DT connectors, providing high reliability, water resistance and dust resistance.

SERVICEABILITY AND CUSTOMER SUPPORT

The Komatsu dealer network guarantees you the lowest operating costs

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 D37EX/PX-21 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.

SPECIFICATIONS

ENGINE

Model ..... Komatsu SAA4D102E-2
Type ..... Direct injection, water-cooled, emissionised, turbocharged, after-cooled diesel
Rated capacity
SAE J1349 ..... 63 kW/85 HP @ 2.000 rpm
DIN 6270 ..... 63 kW/86 PS @ 2.000 rpm
No. of cylinders 4
Bore × stroke ..... 102 × 120 mm
Displacement ..... 3,92 ltr
Governor ..... All-speed, mechanical
Lubrication system
Method ..... Gear pump, force lubrication
Filter ..... Full flow

KOMSTAT II HYDROSTATIC TRANSMISSION

Type ..... Komatsu KOMSTAT II
Hydraulic pumps ..... 2 × variable displacement
Hydraulic motors ..... 2 × variable capacity
Max. drawbar pull ..... 123 kN / 12.500 kg
Gearshift lock lever and neutral safety switch prevent accidental starts

Travel speeds:

Quick shift mode	Forward	Reverse
1st	3,4 km/h	4,1 km/h
2nd	5,6 km/h	6,5 km/h
3rd	8,5 km/h	8,5 km/h

Variable speed mode	Forward	Reverse
	0,8 - 8,5 km/h	0,8 - 8,5 km/h

FINAL DRIVE

Type ..... Planetary gear, double-reduction
Sprocket ..... Sprocket ring is bolt-on for easy replacement

ENVIRONMENT

Engine emissions ..... Fully complies with EC Stage II exhaust emission regulations
Noise levels
LwA external ..... 107 dB(A) (2000/14/EC)
LpA operator ear ..... 85 dB(A) (ISO 6369 dynamic test)

STEERING SYSTEM

Type ..... Hydrostatic Steering System (HST)
Steering control ..... PCCS-joystick
Service brakes ..... Hydraulic lock
Parking brake ..... Wet, multiple disc type, hand controlled
Minimum turning radius (counter-rotation)
D37EX-21 ..... 1,8 m
D37PX-21 ..... 1,9 m

UNDERCARRIAGE

Suspension ..... Rigid type
Track roller frame ..... Box section, durable construction
Rollers and idlers ..... Lubricated track and carrier rollers
Tracks ..... Lubricated tracks, fully sealed
Track tension ..... Combined spring and hydraulic unit

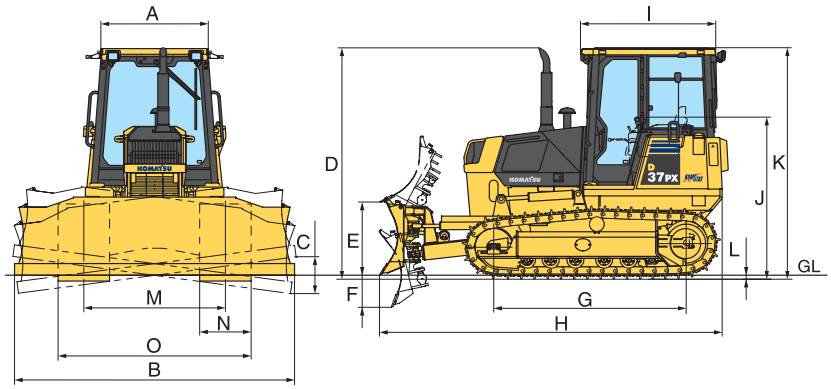
	D37EX-21	D37PX-21
Number of track rollers (each side)	6	6
Number of carrier rollers (each side)	1	1
Type of shoes (standard)	Single grouser	Single grouser
Number of shoes (each side)	41	41
Grouser height	47 mm	47 mm
Shoe width (standard)	400 mm	600 mm
Ground contact area	17.900 cm²	26.900 cm²
Track gauge	1.450 mm	1.650 mm
Length of track on ground	2.240 mm	2.240 mm

COOLANT AND LUBRICANT CAPACITY (REFILLING)

Fuel tank ..... 165 ltr
Radiator ..... 27 ltr
Engine oil ..... 12,5 ltr
Final drive (each side) ..... 3,5 ltr
Dozer blade hydraulics ..... 47 ltr
(includes the additional capacity for the optional ripper)

DIMENSIONS

	D37EX-21	D37PX-21
A	1.255 mm	1.255 mm
B	2.720 mm	3.250 mm
C	375 mm	445 mm
D	2.645 mm	2.645 mm
E	860 mm	855 mm
F	385 mm	380 mm
G	2.240 mm	2.240 mm
H	4.055 mm	4.035 mm
I	1.605 mm	1.605 mm
J	1.890 mm	1.890 mm
K	2.700 mm	2.700 mm
L	47 mm	47 mm
M	1.450 mm	1.650 mm
N	400 mm	600 mm
O	1.850 mm	2.250 mm



Ground clearance: 315 mm

OPERATING WEIGHT (APPR.)

Including steel cab, ROPS, operator, standard equipment, rated capacity of lubricant, coolant, and full fuel tank.

D37EX-21 ..... 7.410 kg
D37PX-21 ..... 7.770 kg

RIPPER EQUIPMENT

Multishank ripper
Type ..... Hydraulically controlled parallelogram ripper
No. of shanks 3
Weight (including hydraulic control unit) ..... 575 kg
Beam length ..... 1.530 mm
Maximum lift above ground ..... 435 mm
Maximum digging depth ..... 315 mm

HYDRAULIC SYSTEM

Type ..... CLSS (closed-centre load sensing system)
All spool valves externally mounted beside the hydraulic tank.
Main pump ..... Gear type pump
Maximum pump flow ..... 76 ltr/min
Relief valve setting ..... 210 kg/cm²
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 × 85 mm
Blade tilt ..... 1 × 90 mm
Ripper lift ..... 1 × 90 mm

DOZER EQUIPMENT

Blade capacities are based on the SAE recommended practice J1265.

	Overall length with dozer	Blade capacity	Blade width × height	Maximum lift above ground	Maximum drop below ground	Maximum tilt adjustment	Blade angle
Straight PAT blade (EX)	4.055 mm	1,75 m³	2.720 × 865 mm	860 mm	385 mm	375 mm	25°
Straight PAT blade (PX)	4.035 mm	1,70 m³	2.875 × 830 mm	855 mm	380 mm	395 mm	25°
Straight PAT blade (PX)	4.035 mm	1,91 m³	3.250 × 830 mm	855 mm	380 mm	445 mm	25°

CRAWLER DOZER

STANDARD EQUIPMENT

Cab
- Suspension seat: fabric, reclining, high backrest
- Seat belt
- High mount footrest
- Palm lever steering control (PCCS)
- Mono lever blade control
- Air conditioner
- Pre-radio installation kit (antenna, loudspeakers)
- Decelerator pedal
- Electronic monitor panel
- Fenders
- Rear-view mirror (inside cab)
- Cup holder

Undercarriage
- Single grouser shoes (EX: 400 mm; PX: 600 mm)
- Heavy-duty link assembly, sealed and lubricated (EX/PX)
- Track roller guard, end section
- Sprocket ring
- Fixed track rollers
- Hydraulic track adjusters

Engine related parts
- Radiator reserve tank
- Heavy-duty radiator mask
- Cooling fan, mechanically driven
- Water separator
- Fuel tank inlet strainer
- Hard water area arrangement incl. corrosion resistor
- Intake pipe with rain cap
- Dry type air cleaner, double element with dust indicator and evacuator
- Locks, filter caps and covers
- Starting motor 24 V/5,5 kW
- Alternator 24 V/35 A
- Batteries 2 × 12 V/60 Ah
- Gull wing engine side covers
- Quick shift selection system
- 3-speed variable capacity travel motors

Attachments
- Hitch
- Front pull hook
- Wiper rear window
- Wiper front window
- Lighting system, front
- Lighting system, rear
- Tool kit

Work equipment
- Hydraulics for dozing blades

Safety equipment
- Back-up alarm
- Warning horn
- Safety glass
- Steel cab, meets ISO 3471 and SAE J1040, APR88 ROPS standards, as well as ISO 3449 FOPS standards.

OPTIONAL EQUIPMENT

Undercarriage
- Triple grouser shoes (EX: 400 mm)
- Full length track roller guard

Engine related parts
- High-capacity batteries

Attachments
- Swing type drawbar

Control Systems
- Komatsu-Topcon machine control systems

Work equipment
- Straight PAT blade (EX: 1,75 m³)
- Straight PAT blade (PX: 1,70 m³)
- Straight PAT blade (PX: 1,91 m³)
- Hydraulics for ripper (EX only)
- Multishank parallelogram ripper (EX only)

Safety equipment
- Fire extinguisher

Call the experts

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

EESS017102 01/2007