

BULLDOZERS D61EX/PX-12

KOMATSU



Model shown may include optional equipment

Bulldozer Technology

The D61 is the leading dozer in his class.

Using hydrostatic steering to combine excellent steering with full power transmission to the tracks new foldable 3-metre blade is available.

BULLDOZER

D61EX/PX-12

FLYWHEEL HORSEPOWER:	112 KW (152 HP) @ 1850 rpm
OPERATING WEIGHT:	D61EX-12 16,900 kg
	D61PX-12 17,800 kg
BLADE CAPACITY:	D61EX-12 PAT BLADE 3,4 m ³
	D61PX-12 PAT BLADE 3,8 m ³

KOMATSU

D61EX-12, D61PX-12 Bulldozer

WALK-AROUND

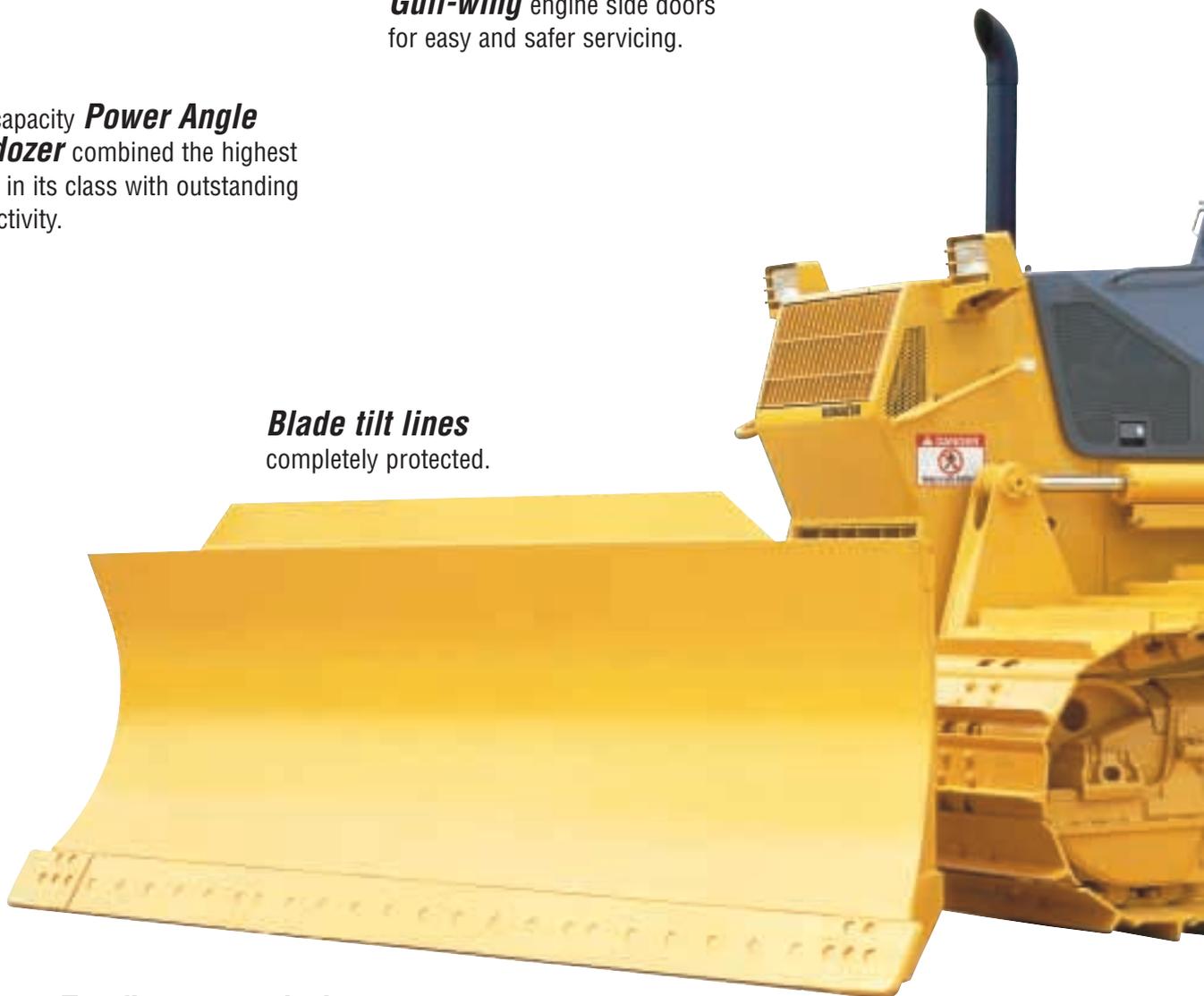
The Komatsu S6D114E-1 turbocharged diesel engine provides an output of **112 kW** 152 HP, with excellent productivity, while meeting current emissions standards.

Left hand **joystick** controls all tractor motion. Right hand joystick controls all blade movements.

Gull-wing engine side doors for easy and safer servicing.

High capacity **Power Angle Tilt dozer** combined the highest power in its class with outstanding productivity.

Blade tilt lines completely protected.



Komatsu Torqflow transmission offers single lever control of speed (3 forward and 3 reverse) and directional changes.

Forward mounted **pivot shafts** isolate final drives from blade loads.

Electronic Monitoring System prevents minor problems from developing into major ones.

Hexagonal, low noise cab with viscous damping mounts provides unsurpassed operator comfort and visibility.

FLYWHEEL HORSEPOWER
112 kW 152 HP @ 1850 rpm

OPERATING WEIGHT
D61EX-12: 16900 kg
D61PX-12: 17800 kg

BLADE CAPACITY
PAT Blade:
D61EX-12: 3.4 m³
D61PX-12: 3.8 m³



Wet, multiple-disc brakes eliminates brake-band adjustments for maintenance-free operation.

Hydrostatic Steering System (HSS) provides smooth, quick, and powerful control in varying ground conditions.

Bolt-on sprocket for ease of maintenance.

Modular power train for increased serviceability and durability.

OPERATOR'S COMPARTMENT

All steering, direction, and speed changes are made by a left-hand single joystick control. If the operator wants to move the machine forward and to the left, he simply moves the joystick forward and to the left. If he desires a gear change, he merely twists his wrist. The machine responds to the movement of the lever providing the operator with the feeling of natural control with Komatsu's joystick.

Low-Noise Design

For smoother riding comfort, power train components and hydraulic control valves are mounted to the frame with rubber pads to soften vibration and shut out noise. Since the D61 employs joysticks, the walk-through operator compartment is uncluttered for smooth entry and exit. A suspension seat with backrest is standard equipment.

Hexagonal Pressurized Cab

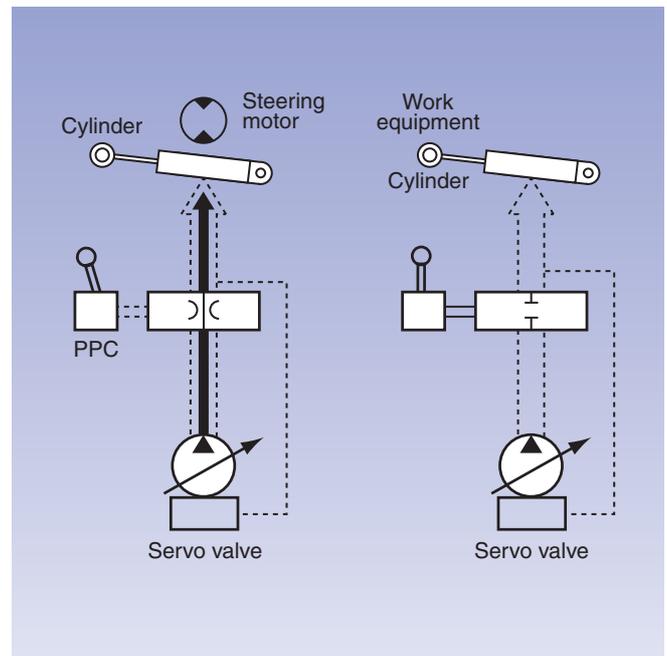
This is another added comfort feature. Air filters and a higher internal air pressure combine to prevent external dust from entering the cab. In addition, the cab's hexagonal design provides excellent front, sides, and rear visibility. Viscous damper cab suspension softens shocks for operator comfort and extends component life.

Easy-to-Operate Work Equipment Control Lever

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

Benefits of CLSS

- More precise and responsive operation due to the pressure compensation valve.
- Reduced fuel consumption by discharging only the required amount of oil from the pump.
- The work equipment moves smoothly for operations such as side-cutting even when priority is given to steering.

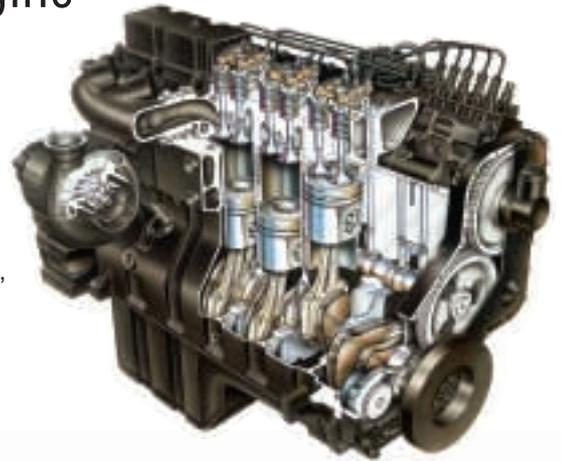


ENGINE AND TORQUE CONVERTER

Komatsu S6D114E-1 Turbocharged Diesel Engine

Powerful Engine

A powerful S6D114E-1 turbocharged diesel engine provides a massive output of **112 kW** 152 HP. The engine power is transmitted smoothly to the final drives via a high-efficiency torque converter. And this engine also meets current emissions standards, without sacrificing power or machine productivity.



Electronic Monitoring System

An electronic monitoring system prevents minor problems from developing into major ones. All meters and gauges are controlled by a microcomputer, which provides a wide indication range for an easier, more precise reading.

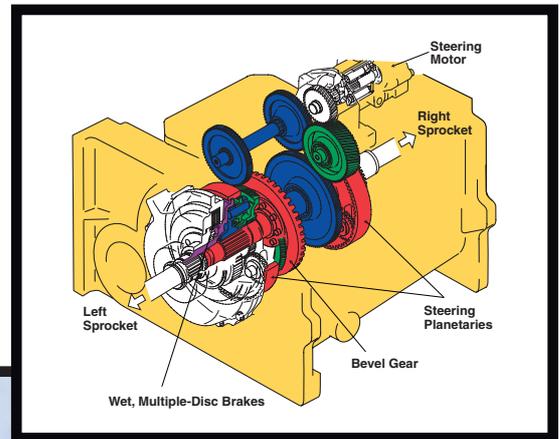


- Charge Lamp
- Engine Oil Pressure Caution Lamp
- Engine Water Temperature Caution Lamp
- Engine Water Temperature Gauge
- Fuel Gauge
- Intake Air Heater Lamp
- Monitor Caution Cancel Switch
- Monitor Caution Lamp
- Service Meter
- Transmission Oil Temperature Caution Lamp
- Transmission Oil Temperature Gauge
- Transmission Gear Indicator

Hydrostatic Steering System—Smooth, Powerful Turning

Komatsu's Hydraulic Steering System (HSS) distributes power 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. The left and right tracks can be counter-rotated for a minimum turning radius providing excellent maneuverability. Shock-free steering reduces machine vibration and minimizes operator fatigue.

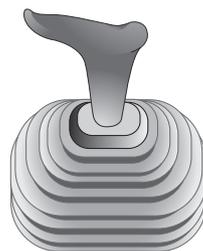
- **Turning while dozing**—the machine turns by driving the left and right tracks under power at different speeds allowing the machine to travel at the same speed as in straight dozing.
- **Side-cutting**—when side-loading the blade, straight travel can be maintained utilizing HSS.
- **On downhill slopes**—the machine doesn't require cross 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.
- **Counter-rotates** for exceptional maneuverability.



Left Hand

Steering Functions

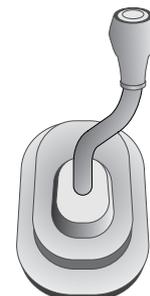
- Forward and reverse
- Right and left steering
- First, to second, to third shifting



Right Hand

Blade Functions

- Lifting and lowering
- Tilting
- Left and right angling



Ripper Functions (Optional)

- Raise and lower

UNDERCARRIAGE AND FRAME

Undercarriage

Low Drive and Long Track Undercarriage

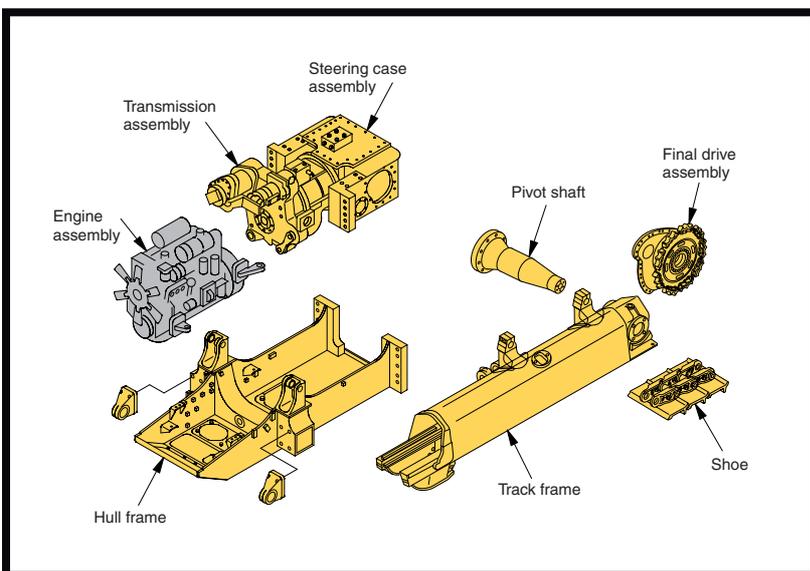
Komatsu's design is extraordinarily tough and offers excellent grading ability and stability. Large-diameter bushings, increased track link heights, and improved oil-seals help to increase undercarriage durability.

Improvements

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

Long Track on EX Series

Long track (the same length of track on ground with PX models) has been added to D61EX to increase operational stability.



Frame

Flat Bottom Frame

A **flat bottom frame**, the monocoque track frames and forward-mounted pivot shafts provide good maneuverability in muddy terrain by preventing mud from building up under the frame.

Modular Designed Power Train Units

The modular design allow easy removal and installation of any individual unit for shorter downtime.

Wet, Multiple-Disc Brakes

Eliminates brake-band adjustments for maintenance-free operation.

Durability

Because fewer components mean greater reliability, we've designed a **simple hull frame** made of a thick, single plate. Track frames have a large-section construction for maximum rigidity. Even the box-section construction of the blade back beam is reinforced, all with durability in mind.

Folding blade

The D61PX-12 can be equipped with a folding blade to facilitate your transport.



Unfolded blade
(for operation)

Folded blade
(during transport)



Easy folding, unfolding procedure

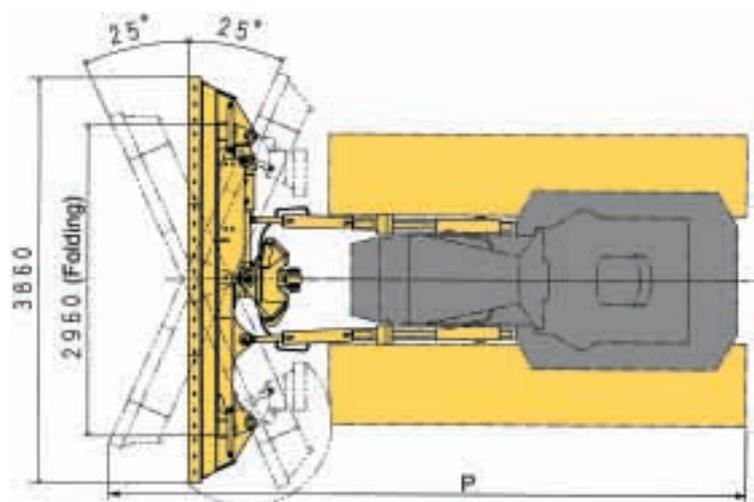


Fixing

Dimensions



Overall width (unfolding the blade)	3.860 mm
Folding width of the blade	2.960 mm



SERVICEABILITY

Centralized service points; Air filter, coolant level, engine oil level and window washer level.



A radiator coolant reservoir makes it easier to check the coolant level and eliminates frequent refilling.



Centralized Oil Pressure Ports. The D61 offers the Komatsu exclusive centralized test ports on the right side of the chassis.

- ① Brake Pressure
- ② Torque Converter Inlet Pressure
- ③ Torque Converter Outlet Pressure
- ④ Transmission Pressure
- ⑤ PPC Pump Pressure



Gull-Wing Engine Side Covers with a gas-spring cylinder that opens widely, the engine and the auxiliary components can be checked easily.



Easy servicing from ground level.

SPECIFICATIONS



ENGINE

Model..... Komatsu S6D114E-1
 Type..... 4-stroke cycle, water-cooled, emissionized, direct injection, turbocharged engine

Number of cylinders 6
 Bore **114 mm**
 Stroke **135 mm**
 Piston displacement **8.3 ltr**
 Net flywheel horsepower*..... **112 kW** 152 HP @ 1850 rpm
 Net maximum torque 80 kg m **784 Nm** @ 1300 rpm

Direct injection fuel system. All-speed mechanical governor. Forced lubrication driven by gear pump. Full-flow for lube purification. Dry-type air cleaner with automatic dust evacuator and dust indicator. **7.5 kW/24V** electrical starter motor. **35 A/24V** alternator. **170 Ah/2 x 12V** batteries.

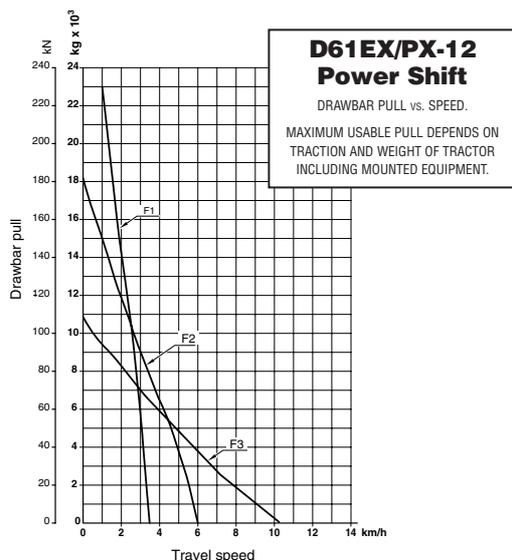
* Net flywheel horsepower output for standard engine (SAE J1349) including air cleaner, alternator (not charging), water pump, lubricating oil pump, fuel pump, muffler, and fan.



TORQFLOW TRANSMISSION

Komatsu's 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. Joystick control of gears (3 forward and 3 reverse) and directional steering changes. Gearshift lock lever and neutral safety switch prevent machine from accidental starts.

Travel speed	Forward	Reverse
1st	0-3.5 km/h	0-4.6 km/h
2nd	0-6.0 km/h	0-7.9 km/h
3rd	0-10.3 km/h	0-12.8 km/h



FINAL DRIVE

Spur gear double-reduction, final drives increase tractive effort. Segmented sprocket are bolt-on for easy in-the-field replacement.



ENVIRONMENT

Noise levels (2000/14/EC-dynamic values)
 LwA External noise 109 dB (A)
 LpA Operator ear noise 81 dB (A)



STEERING

Joystick controls for all directional movements. Pushing the joystick forward results in forward machine travel, while pulling it rearward reverses the machine. Simply tilt the joystick to the left to make a left turn. Tilt it to the right for a right turn.

The Hydrostatic Steering System (HSS) is comprised of a hydraulic pump and motor. This design allows for counter rotation under certain ground conditions. Wet, multiple-disc, pedal-controlled service brakes are spring-actuated and hydraulically-released. The directional and gear control joystick lock lever also applies the brakes.

Minimum turning radius:
 D61EX-12 **2.0 m**
 D61PX-12 **2.2 m**

As measured by track marks on ground.



UNDERCARRIAGE

Suspension Oscillation with equalizer bar and forward mounted pivot shafts
 Track roller frame Monocoque, large section, durable construction
 Number of carrier rollers (each side) 2
 Track shoes Lubricated tracks. Unique dust seals for preventing entry of foreign abrasives into pin-to-bushing clearances for extended service. Track tension is easily adjusted with a grease gun.

	D61EX-12	D61PX-12
Number of track rollers (each side)	8	8
Number of shoes (each side)	46	46
Grouser height	55.5 mm	55.5 mm
Shoe width (standard)	600 mm	860 mm
Ground contact area	38040 cm²	54524 cm²
Ground pressure	43.6 kPa 0.44 kgf/cm²	32 kPa 0.33 kgf/cm²
Track gauge	1900 mm	2140 mm
Length of track on ground	3170 mm	3170 mm



COOLANT AND LUBRICANT CAPACITY (REFILLING)

Coolant **44 ltr**
 Fuel tank **315 ltr**
 Engine oil **19 ltr**
 Damper **1.3 ltr**
 Transmission, bevel gear, and steering system **44 ltr**
 Final drive (each side) **28.5 ltr**



OPERATING WEIGHT (APPROXIMATE)

Tractor weight:
 Including rated capacity of lubricant, coolant, ROPS, steel cab, full fuel tank, operator, and standard equipment.
 D61EX-12 **14560 kg**
 D61PX-12 **15175 kg**

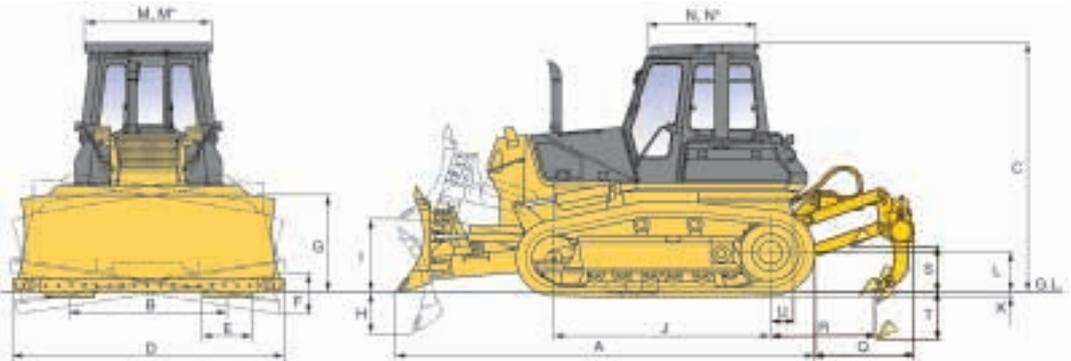
Operating weight:
 Including power angle tilt dozer, ROPS canopy, steel cab, operator, standard equipment, rated capacity of lubricant, coolant, and full fuel tank.
 D61EX-12 **16900 kg**
 D61PX-12 **17800 kg**
 D61PX-12 Folding blade **18020 kg**



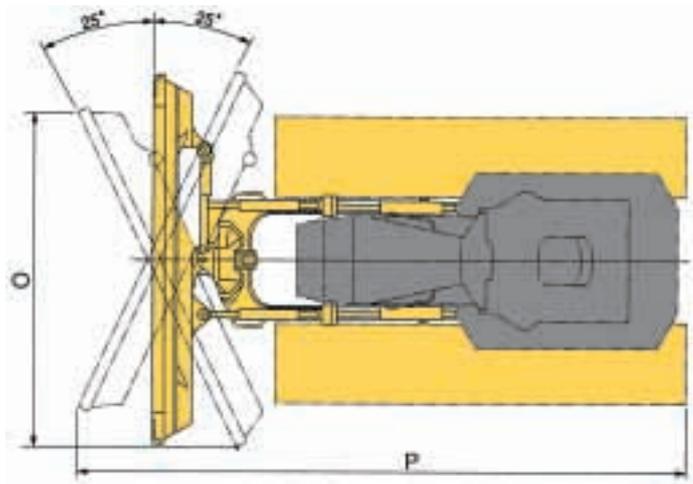
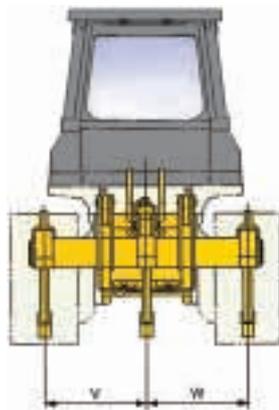
DIMENSIONS

	D61EX-12	D61PX-12
A	5440 mm	5440 mm
B	1900 mm	2140 mm
C	3115 mm	3115 mm
D	3275 mm	3860 mm
E	600 mm	860 mm
F	510 mm	600 mm
G	1200 mm	1160 mm
H	575 mm	575 mm
I	1020 mm	1020 mm
J	3170 mm	3170 mm
K	55 mm	55 mm
L	485 mm	485 mm
M	1600 mm	1600 mm
M*	1490 mm	1490 mm
N	1830 mm	1830 mm
N*	1270 mm	1270 mm
O	2970 mm	3500 mm
P	6070 mm	6205 mm
Q	1255 mm	-
R	1295 mm	-
S	565 mm	-
T	665 mm	-
U	225 mm	-
V	950 mm	-
W	950 mm	-

*ROPS canopy when cab installed



Ground clearance 390 mm



HYDRAULIC SYSTEM

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

Hydraulic control unit:

All spool control valves externally mounted beside the hydraulic tank. Variable displacement piston pump with capacity (discharge flow) of **174 ltr/min** at rated engine rpm.

Relief valve setting **20.6 MPa**, 210 kg/cm²

Hydraulic cylinders Double-acting, piston

	Number of cylinders	Bore
Blade lift	2	110 mm
Blade tilt	1	130 mm
Blade angle	2	100 mm

Hydraulic oil capacity (refilling):

Power angle tilt dozer **48.0 ltr**

Control valves:

Spool control valve for power angle tilt dozer.

Positions:

- Blade lift Raise, hold, lower, and float
- Blade tilt Right, hold, and left
- Blade angle Right, hold, and left



DOZER EQUIPMENT

Use of high tensile strength steel in moldboard for strengthened blade construction.

	Overall Length With Dozer	Blade Capacity	Blade Width x Height	Maximum Lift Above Ground	Maximum Drop Below Ground	Maximum Tilt Adjustment	Additional Weight
D61EX-12 Power Angle Tilt Dozer	5440 mm	3.4 m³	3275 mm x 1200 mm	1020 mm	575 mm	510 mm	2340 kg
D61PX-12 Power Angle Tilt Dozer	5440 mm	3.8 m³	3860 mm x 1160 mm	1020 mm	575 mm	600 mm	2625 kg
D61PX-12 Power Angle Tilt Dozer	5455 mm	3.8 m³	3860 mm x 1160 mm	1020 mm	575 mm	600 mm	2844 kg

KOMATSU BULLDOZERS D61EX/PX-12



STANDARD EQUIPMENT FOR BASE MACHINE

- Air cleaner, double element with dust indicator
- Alternator, **35 ampere**
- Backup alarm
- Batteries, **170 Ah/2 x 12V**
- Blower cooling fan
- Cab accessories
 - Cup holder
 - Lunch box holder
 - Rear view mirror
- Decelerator pedal
- Dozer assembly, power angle tilt
- Electronic instrument monitor panel
- Engine hood and gull-wing side covers
- Fenders
- Front pull hook
- Heater and defroster
- High mount footrests
- Hitch
- HSS hydrostatic steering system
- Hydraulics for ripper (EX)
- Lighting system, (includes 2 front, 1 rear)
- Locks, filler caps and covers
- Mono-lever steering with PPC
- Muffler with curved exhaust pipe
- Radiator reserve tank
- Rear cover
- Radiator core protective grid
- Radiator guard door, flat
- Starting motor, **7.5 kW/24V**
- Suspension seat, reclining with fabric material + seat belt
- Track roller guard, center section
- Track roller guard, end sections
- Trackshoe assembly
 - Sealed and lubricated track
 - **600 mm** single grouser shoe (EX)
 - **860 mm** single grouser shoe (PX), AR track assembly (abrasion resistant bushings)
- Underguards, oil pan and transmission, heavy duty

ROPS CANOPY FOR CAB

- Additional weight **250 kg**
- Meets ISO 3741, SAE J1040 APR88, and ISO 3449 FOPS standards
- Roof dimensions:
 - Length: **1270 mm**
 - Width: **1440 mm**

— Height from operator compartment floor: **1515 mm**

STEEL CAB

- Additional weight **285 kg**
- All-weather, enclosed pressurized cab
- Dimensions:
 - Length: **1765 mm**

— Width: **1720 mm**
— Height: **1625 mm**
— Height from floor to ceiling: **1515 mm**

OPTIONAL EQUIPMENT

- Air conditioner
- Drawbar, rigid type
- Drawbar, swing type
- Towing winch
- Multi-shank ripper
 - Additional weight (including hydraulic control unit): **1680 kg**
 - Beam length: **2170 mm**
 - Maximum digging depth: **550 mm**
 - Maximum lift above ground: **455 mm**
- Track roller guard, full length
- Water separator
- Additional working light
- Intake pipe with precleaner

6/2002

KOMATSU®