

KOMATSU®

D31EX-22
D31PX-22
D37EX-22
D37PX-22

NET HORSEPOWER / 2200 rpm

D31EX/PX-22: **58 kW** 78 HP

D37EX/PX-22: **66 kW** 89 HP

OPERATING WEIGHT

D31EX-22: **7670 kg** 16,910 lb

D31PX-22: **8130 kg** 17,930 lb

D37EX-22: **7890 kg** 17,400 lb

D37PX-22: **8240 kg** 18,170 lb

D
31

CRAWLER DOZER



Photo may include optional equipment.

WALK-AROUND

The D31/37-22 is the next addition to an all new Hydrostatic Transmission (HST) dozer line based on the D51-22 design concepts. Some of these concepts include Super-slant nose, large mid-mount cab, and durable construction.

All-around visibility

- Super-slant nose design
- Cab-forward design
- Integrated ROPS (ISO 3471)/FOPS (ISO 3449) (Level 2)

Increased productivity

- Electronically-controlled hydraulically-driven fan
- Rigid track frame with in-shoe final drive
- High capacity Power Angle Tilt (PAT) dozer
- Adjustable blade pitch

Easy operation/Increased operator comfort

- Hydrostatic Transmission (HST) with electronic control
- Palm Command Control System (PCCS)
- New cab damper mounting system (for cab)
- Large and quiet pressurized cab (optional)

Improved durability

- Heavy-plate steel used throughout
- Dozer frame with steel casting
- Strong modular design
- New heavy duty HST components

Easy maintenance

- Electronic monitor panel with on-board diagnostics
- Rear-mount radiator with swing-up hydraulically-driven fan
- Ground-level daily service checks



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See what you have

Unrivalled blade visibility

The D31/37EX/PX-22 incorporates Komatsu's **super-slant nose** design. Komatsu's innovative design provides excellent blade visibility for improved machine control and increased efficiency and productivity.

ve been missing!



Photo may include optional equipment.

OPERATOR COMFORT

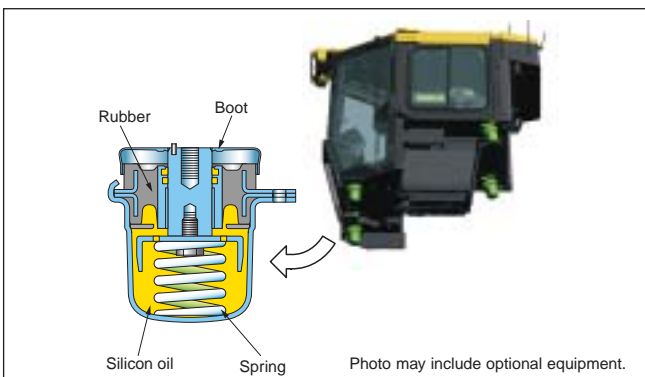


Hydrostatic Transmission (HST) with electronic control

The D31/D37 is equipped with Komatsu-designed Hydrostatic Transmission (HST) that allows for Quick-Shift or variable speed selection. The HST consists of dual-path closed-circuits with two variable displacement piston pumps and two variable displacement travel motors. Hydrostatic steering eliminates steering clutches and brakes, providing smooth powerful turns. Fully electronic control provides full automatic shifting and enables smooth control. Engine speed is controlled using an electronic fuel control dial.

Comfortable ride with cab damper mounting

The D31/D37's cab mount uses a cab damper system that provides excellent shock and vibration absorption which conventional mounting systems are unable to match. The silicon oil filled cab damper mount helps to isolate the cab from the machine body, suppressing vibration and providing a quiet, comfortable operating environment.



Palm command Pressure Proportional Control (PPC)

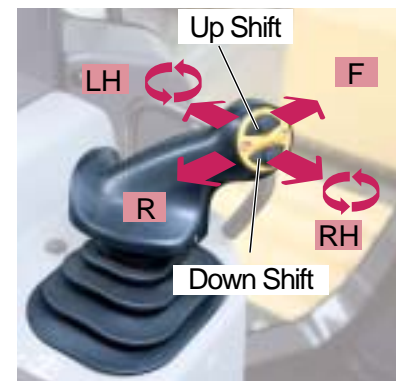
PPC-controlled palm command joystick provides blade control. Combined with the highly reliable Komatsu hydraulic system, precise control is the result.

Closed-center Load Sensing System (CLSS) hydraulic system

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

Palm Command Control System (PCCS)

The low-effort PCCS joystick controls all directional movements including machine travel speed as well as counter-rotation.



DURABILITY FEATURES



Heavy-duty undercarriage

Large link, large bushing diameter, and wider sprocket teeth extend undercarriage life.



Main frame

High-rigidity simple main frame structure combined with thick plates and steel castings provide increased reliability and durability.

Protected travel motors and final drives

Travel motors and final drives are mounted within the track shoe width for protection from rocks and stumps, and for improving durability.



Modular design

Just like the D51. One of the design goals behind the creation of the D31/D37 was to manufacture a more durable machine. This was achieved by reducing component complexity and using a strong modular design for increased serviceability and durability.



One-piece nose guard

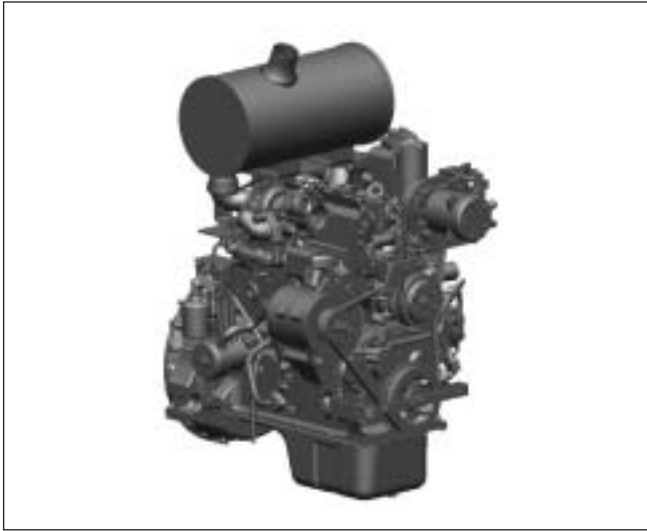
Simplified high-rigidity structure with thicker plates reduces vibration and noise.

Strong and reliable drive train

The HST components have been newly designed to provide higher reliability.

Also, the new system utilizes a new high efficiency filter and hydraulic cap with a separate breather to minimize contaminates.

PRODUCTIVITY FEATURES



ecot3
ecology & economy - technology 3

This engine is U.S. EPA Tier 3 and EU Stage 3A emissions certified; "ecot3" - ecology and economy combine with Komatsu technology to create a high performance engine without sacrificing power or productivity.

Fuel efficient electronic controlled engine

The Komatsu SAA4D95LE-5 engine delivers a net output of **58 kW** 78 HP at 2200 rpm*(D31EX/PX-22), and **66 kW** 89 HP at 2200 rpm*(D37EX/PX-22). The powerful Komatsu engine incorporated into the D31/D37-22 makes this dozer fuel efficient and the logical choice in both grading and dozing operations. The engine is turbocharged and features direct fuel injection and air-to-air aftercooling to maximize power, fuel efficiency, and emission compliance. To minimize noise and vibration, the engine is iso-mounted to the main frame.

* ISO9249

Long track-on-ground

Long track-on-ground improves machine stability and grading/dozing performance.

Adjustable pitch Power Angle Tilt (PAT) blade

Blade pitch angle can be easily adjusted by changing the length of the pitch rod on the top of the blade. This enables maximum job efficiency in various material and ground conditions.



Hydrostatic Transmission (HST) control system

The HST controller monitors engine output and work equipment/travel load. It controls HST pump and motor displacement to provide the optimum speed and drawbar pull. Power to both tracks during turns and counter-rotation makes the D31/D37 extremely maneuverable.

Hydraulically-driven cooling fan

The engine cooling fan rotation speed and direction is electronically controlled. The fan rotation speed depends on engine coolant and hydraulic oil temperatures; the higher the temperature, the higher the fan speed. This system increases fuel efficiency, reduces operating noise levels, and requires less horsepower than a belt-driven fan. Additionally, cool ambient air is pulled in through perforations in the rear access doors adding to its cooling efficiency.



Photo may include optional equipment.

MAINTENANCE FEATURES

Hydraulically-driven swing-up fan

The D31/D37-22 utilizes a swing-up fan with a gas strut-assisted lift locking system to provide easy access to the (side-by-side) radiator, oil cooler, and charge air cooler. The swing-up feature makes it easier to access cooling cores. The hydraulic fan has a “cleaning” mode. The fan rotates in the reverse direction and helps to clear off objects in front of the cooling areas.



Photo may include optional equipment.

New monitor with self-diagnostic function

The monitor system provides critical information about the machine. It provides operating condition status and notifies the operator with a lamp and buzzer when an abnormality occurs. In addition, fault codes are indicated to aid troubleshooting and help reduce machine downtime. Service reminders for fluids and filters are also indicated. Komtrax adds a valuable dimension to troubleshooting and maintenance.



Daily checks

All daily checks can be performed efficiently at ground level from the left side of the machine.



Photo may include optional equipment.

Adjustment-free parking disc brake

An adjustment-free spring-applied hydraulic release wet parking brake is located in each final drive. Dynamic HST braking is used until the machine stops moving, then the parking brake engages, minimizing wear.

Easy engine oil drain

Changing the engine oil is easy with a strategically mounted access cover. There is no need to crawl under the machine to drain the engine oil.

Towing hitch

The optional hitch extends past the track to allow maximum angle when towing.



SPECIFICATIONS



ENGINE

Model Komatsu SAA4D95LE-5*
 Type 4-cycle, water-cooled, direct injection
 Aspiration Turbocharged, air-to-air charge air cooler
 Number of cylinders 4
 Bore x stroke **95 mm x 115 mm** 3.74" x 4.53"
 Piston displacement **3.26 ltr** 199 in³
 Governor All-speed, electronic
 Horsepower

D31EX/PX-22:

SAE J1995 Gross **60 kW** 80 HP / 2200 rpm
 ISO 9249 / SAE J1349 Net **58 kW** 78 HP / 2200 rpm
 Hydraulic fan at maximum speed . . Net **53 kW** 71 HP / 2200 rpm

D37EX/PX-22:

SAE J1995 Gross **68 kW** 91 HP / 2200 rpm
 ISO 9249 / SAE J1349 Net **66 kW** 89 HP / 2200 rpm
 Hydraulic fan at maximum speed . . Net **59 kW** 79 HP / 2200 rpm

Fan drive type Hydraulic (reversible for cleaning)

Lubrication system

Method Gear pump, force lubrication
 Filter Full-flow

*U.S. EPA Tier 3 and EU stage 3A emissions certified.



HYDROSTATIC TRANSMISSION

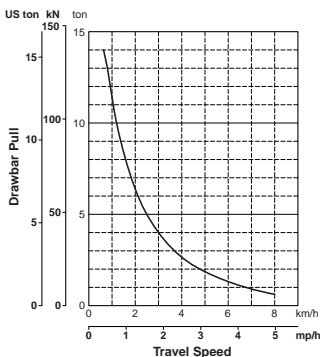
Dual-path, hydrostatic transmission provides infinite speed changes up to **8.5 km/h** 5.3 mph. The variable capacity travel motors allow the operator to select the optimum speed to match specific jobs. Travel control lock lever and neutral switch.

Travel speed (quick shift mode)	Forward	Reverse
1st	0-3.4 km/h 0-2.1 mph	0-4.1 km/h 0-2.5 mph
2nd	0-5.6 km/h 0-3.5 mph	0-6.5 km/h 0-4.0 mph
3rd	0-8.5 km/h 0-5.3 mph	0-8.5 km/h 0-5.3 mph

Travel speed (variable mode)	Forward	Reverse
	0-8.5 km/h 0-5.3 mph	0-8.5 km/h 0-5.3 mph

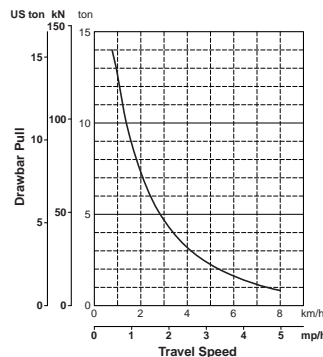
D31-22

Drawbar pull vs. speed.
 maximum usable pull depends on traction and weight of tractor.



D37-22

Drawbar pull vs. speed.
 maximum usable pull depends on traction and weight of tractor.



FINAL DRIVES

Two-stage planetary gear integrated into axial piston travel motors. Compact in-shoe mount reduces risk of damage by debris. Bolt-on sprocket for easy replacement.



STEERING SYSTEM

Palm Command Control System (PCCS) joystick control 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 or right to make a turn. Tilting the joystick fully to the left or right activates counter-rotation. Hydrostatic Transmission (HST) eliminates steering clutches and brakes, providing smooth powerful turns. Fully electronic control enables smooth control. The PCCS utilizes shift buttons to increase and decrease speed.

Minimum turning radius:

D31EX-22	2.0 m	6'7"
D31PX-22	2.2 m	7'3"
D37EX-22	2.0 m	6'7"
D37PX-22	2.2 m	7'3"

As measured by track marks on the ground at pivot turn.



UNDERCARRIAGE

Suspension Rigid type
 Track roller frame Monocoque, large section, durable construction

Rollers and idlers Lubricated track rollers

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 a grease gun.

	D31EX-22	D31PX-22
Number of track rollers (each side)	6	6
Type of shoes (standard)	Single grouser	Single grouser
Number of shoes (each side)	40	40
Grouser height	47 mm 1.9"	47 mm 1.9"
Shoe width (standard)	400 mm 16.0"	600 mm 24.0"
Ground contact area	17500 cm² 2,713 in ²	26200 cm² 4,061 in ²
Ground pressure (with dozer, ROPS (ISO 3471) cab)	43.1 kPa 0.44 kgf/cm² 6.24 psi	30.4 kPa 0.31 kgf/cm² 4.40 psi
Track gauge	1510 mm 4'11"	1650 mm 5'5"
Length of track on ground	2185 mm 7'2"	2185 mm 7'2"

	D37EX-22	D37PX-22
Number of track rollers (each side)	6	6
Type of shoes (standard)	Single grouser	Single grouser
Number of shoes (each side)	41	41
Grouser height	47 mm 1.9"	47 mm 1.9"
Shoe width (standard)	400 mm 16.0"	600 mm 24.0"
Ground contact area	17900 cm² 2,775 in ²	26900 cm² 4,170 in ²
Ground pressure (with dozer, ROPS (ISO 3471) cab)	43.1 kPa 0.44 kgf/cm² 6.24 psi	30.4 kPa 0.31 kgf/cm² 4.40 psi
Track gauge	1510 mm 4'11"	1650 mm 5'5"
Length of track on ground	2240 mm 7'4"	2240 mm 7'4"



COOLANT AND LUBRICANT CAPACITY (REFILL)

Coolant	18 ltr	4.8 U.S. gal
Fuel tank	195 ltr	51.5 U.S. gal
Engine oil	11 ltr	2.9 U.S. gal
Hydraulic tank	60 ltr	15.9 U.S. gal
Final drive (each side)	3.5 ltr	0.9 U.S. gal



OPERATING WEIGHT (APPROXIMATE)

Tractor weight:

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

D31EX-22 (ROPS* canopy)	6520 kg	14,370 lb
D31PX-22 (ROPS* canopy)	6910 kg	15,240 lb
D31EX-22 (ROPS* cab)	7040 kg	15,520 lb
D31PX-22 (ROPS* cab)	7320 kg	16,140 lb
D31EX-22 (ROPS* canopy)	6710 kg	14,800 lb
D37PX-22 (ROPS* canopy)	6990 kg	15,410 lb
D37EX-22 (ROPS* cab)	7120 kg	15,700 lb
D37PX-22 (ROPS* cab)	7400 kg	16,320 lb

Operating weight:

Including Power Angle Tilt (PAT) dozer, ROPS* canopy or cab, operator, standard equipment, rated capacity of lubricant, coolant, and full fuel tank.

D31EX-22 (ROPS* canopy)	7670 kg	16,910 lb
D31PX-22 (ROPS* canopy)	8130 kg	17,930 lb
D31EX-22 (ROPS* cab)	8190 kg	18,060 lb
D31PX-22 (ROPS* cab)	8540 kg	18,830 lb
D37EX-22 (ROPS* canopy)	7890 kg	17,400 lb
D37PX-22 (ROPS* canopy)	8240 kg	18,170 lb
D37EX-22 (ROPS* cab)	8300 kg	18,300 lb
D37PX-22 (ROPS* cab)	8650 kg	19,070 lb

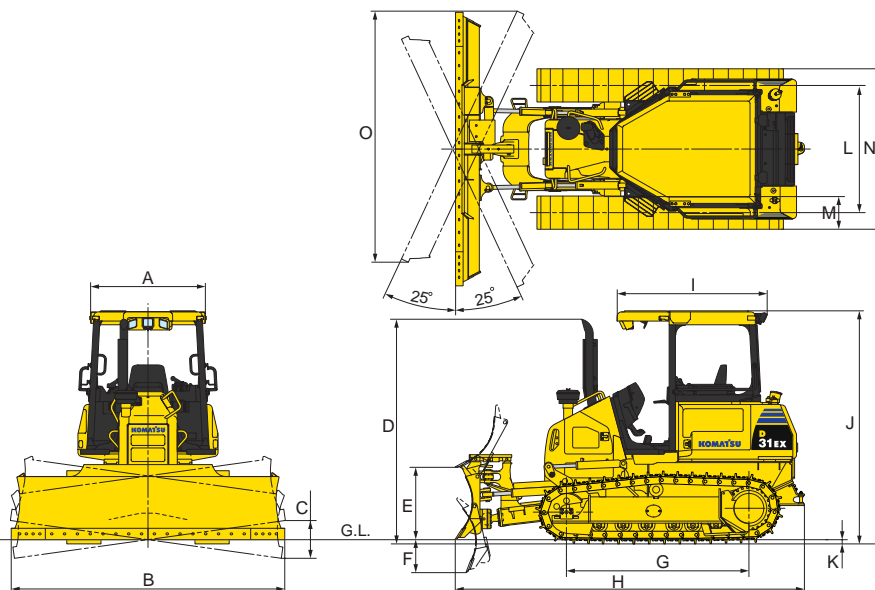
* ISO 3471



DIMENSIONS

	D31EX-22		D31PX-22	
A	1280 mm	4'2"	1280 mm	4'2"
B	2550 mm	8'4"	3250 mm	10'8"
B*	—	—	2875 mm	9'5"
C	350 mm	1'2"	440 mm	1'5"
C*	—	—	390 mm	1'3"
D	2635 mm	8'8"	2635 mm	8'8"
E	870 mm	2'11"	860 mm	2'9"
F	390 mm	1'3"	380 mm	1'3"
G	2185 mm	7'2"	2185 mm	7'2"
H	4175 mm	13'8"	4155 mm	13'8"
I	1785 mm	5'10"	1785 mm	5'10"
J	2775 mm	9'1"	2775 mm	9'1"
K	47 mm	1.9"	47 mm	1.9"
L	1510 mm	4'11"	1650 mm	5'5"
M	400 mm	16"	600 mm	24"
N	1910 mm	6'3"	2250 mm	7'5"
O	2350 mm	7'9"	2980 mm	9'9"
O*	—	—	2640 mm	8'8"

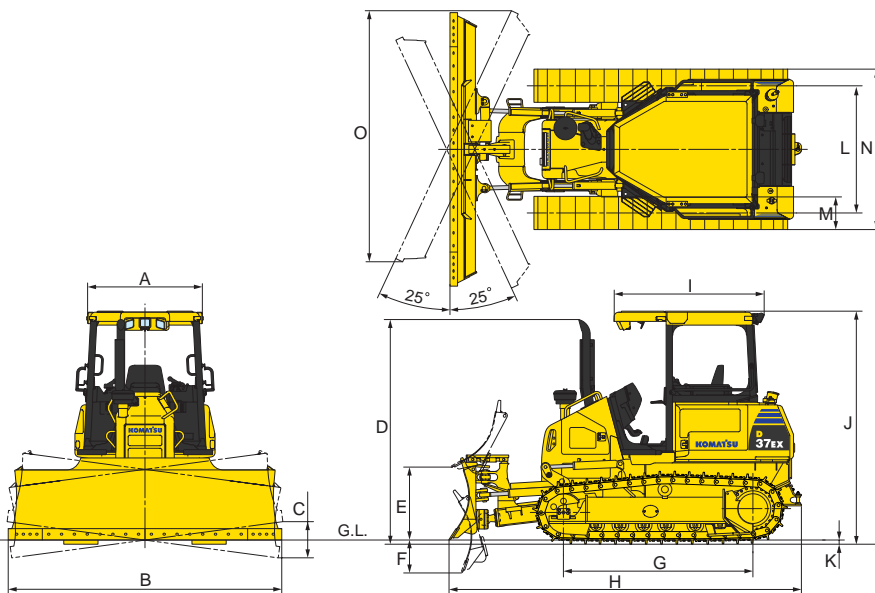
* Narrow blade for D31PX-22



Ground clearance **315 mm 12.4"**

	D37EX-22		D37PX-22	
A	1280 mm	4'2"	1280 mm	4'2"
B	2710 mm	8'11"	3250 mm	10'8"
B*	—	—	2875 mm	9'5"
C	370 mm	1'3"	440 mm	1'5"
C*	—	—	390 mm	1'3"
D	2635 mm	8'8"	2635 mm	8'8"
E	880 mm	2'11"	870 mm	2'10"
F	400 mm	1'4"	390 mm	1'3"
G	2240 mm	7'4"	2240 mm	7'4"
H	4190 mm	13'9"	4175 mm	13'8"
I	1785 mm	5'10"	1785 mm	5'10"
J	2775 mm	9'1"	2775 mm	9'1"
K	47 mm	1.9"	47 mm	1.9"
L	1510 mm	4'11"	1650 mm	5'5"
M	400 mm	16"	600 mm	24"
N	1910 mm	6'3"	2250 mm	7'5"
O	2490 mm	8'2"	2980 mm	9'9"
O*	—	—	2640 mm	8'8"

* Narrow blade for D37PX-22



Ground clearance **315 mm 12.4"**

D31/D37-22 CRAWLER DOZER



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 remote to the hydraulic tank. Piston-type hydraulic pump with capacity (discharge flow) of **99 ltr/min** 26.2 U.S. gal/min at rated engine rpm.

Relief valve setting 27.4 MPa, **280 kg/cm²** 3,983 psi
Hydraulic cylinders Double-acting, piston type

	Number of cylinders	Bore	
Blade lift	2	75 mm	2.95"
Blade tilt	1	90 mm	3.54"
Blade angle	2	80 mm	3.15"

Hydraulic oil capacity (refilling):

Power Angle Tilt (PAT) dozer **60 ltr** 15.9 U.S. gal

Control valves:

3-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

Additional control valve required for ripper.

Positions:

Ripper lift Raise, hold and lower



DOZER EQUIPMENT

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

	Overall length with dozer*	Blade capacity (SAE)	Blade width x height	Maximum lift above ground	Maximum drop below ground	Maximum tilt adjustment	Blade angle
D31EX-22 PAT Standard Blade	4175 mm 13'8"	1.61 m ³ 2.11 yd ³	2550 mm x 840 mm 8'4" x 2'9"	870 mm 2'10"	390 mm 1'3"	350 mm 1'2"	25
D31PX-22 PAT Standard Blade	4155 mm 13'8"	1.61 m ³ 2.11 yd ³	3250 mm x 750 mm 10'8" x 2'6"	860 mm 2'10"	380 mm 1'3"	440 mm 1'5"	25
D31PX-22 PAT Narrow Blade	4155 mm 13'8"	1.60 m ³ 2.09 yd ³	2875 mm x 790 mm 9'5" x 2'7"	860 mm 2'10"	380 mm 1'3"	390 mm 1'3"	25
D37EX-22 PAT Standard Blade	4190 mm 13'9"	1.77 m ³ 2.32 yd ³	2710 mm x 860 mm 8'11" x 2'10"	880 mm 2'11"	400 mm 1'4"	370 mm 1'3"	25
D37PX-22 PAT Standard Blade	4175 mm 13'8"	1.95 m ³ 2.55 yd ³	3250 mm x 830 mm 10'8" x 2'9"	870 mm 2'10"	390 mm 1'3"	440 mm 1'5"	25
D37PX-22 PAT Narrow Blade	4175 mm 13'8"	1.76 m ³ 2.30 yd ³	2875 mm x 830 mm 9'5" x 2'9"	870 mm 2'10"	390 mm 1'3"	390 mm 1'3"	25

* Including Hitch



STANDARD EQUIPMENT FOR BASE MACHINE

Engine and related items

- Air cleaner, dry, double element type with caution lamp on monitor
- Decelerator pedal
- Engine, KOMATSU SAA4D95LE-5, direct injection, turbocharged, air-to-air change air cooler, U.S. EPA Tier 3 emissions certified
- Fan hydraulic driven, electronic control
- Fuel pre-filter (10 micron) and fuel filter (2 micron)
- Grid heater
- Intake pipe with precleaner
- Radiator mask grid
- Radiator reserve tank
- Water separator

Electric system

- Alternator, 24 V / 35 A
- Back-up alarm
- Batteries, large capacity 92 Ah
- Starting motor, 4.5 kW

Power train and controls

- Brake pedal
- Counter rotation
- Electronically controlled Hydrostatic Transmission (HST) with Quick-shift and variable speed settings
- Palm Command Control System (PCCS) with electronic control for travel control
- Reverse speed presets

Undercarriage

- Idler
- Sprockets, bolt-on, solid type
- Track roller guards, end sections
- Track shoe assembly with sealed and lubricated link assembly:
 - D31EX-22: **400 mm** 16.0" single grouser shoes
 - D31PX-22: **600 mm** 24.0" single grouser shoes
 - D37EX-22: **400 mm** 16.0" single grouser shoes
 - D37PX-22: **600 mm** 24.0" single grouser shoes

Guards and covers

- Crankcase guard and underguard
- Engine hood and side panels
- ROPS/FOPS*
- Sprocket inner guard

Operator environment

- Electronic monitor panel with on-board diagnostics
- Foot rest, high mounted
- Horn
- Seat belt, **76 mm** 3" retractable
- Seat, suspension type

Hydraulics and controls

- Accumulator for Pressure Proportional Control (PPC)
- Hydraulics for Power Angle Tilt (PAT) dozer
- Palm Command Control System (PCCS) with PPC for blade control

Vandalism protection

- Filler cap locks and cover locks
- Instrument panel lock and cover (canopy only)

Other standard equipment

- Grease gun holder
- High altitude arrangement (no fuel adjustment up to **2300 m** 7,546 ft)
- Lighting package - (3 front, 1 rear cab/canopy)
- Marks and plates, English
- Pullhook, front

*ROPS cab or ROPS canopy must be ordered for all machines. Cab and canopy FOPS Level 2. Meets ISO 3471 ROPS standards and ISO 3449 FOPS standards.

Dozer assembly and rear-mounted equipment are not included in base machine price.



OPTIONAL EQUIPMENT

Track shoe assembly with sealed and lubricated link assembly

- D31EX-22
 - **400 mm** 16" single grouser shoe
 - **460 mm** 18" single grouser shoe
- D31PX-22
 - **600 mm** 24" single grouser shoe
 - **400 mm** 16" single grouser shoe
 - **600 mm** 24" swamp shoe
- D37EX-22
 - **400 mm** 16" single grouser shoe
 - **460 mm** 18" single grouser shoe
- D37PX-22
 - **600 mm** 24" single grouser shoe
 - **600 mm** 24" swamp shoe

Dozer assembly

- Variable pitch, power angle tilt dozer assembly, inside arms
 - D31EX: **2550 mm** 8'4" width blade
 - D31PX: **2875 mm** 9'5" width narrow blade
 - D31PX: **3250 mm** 10'8" width blade
 - D37EX: **2710 mm** 8'11" width blade
 - D37PX: **2875 mm** 9'5" width narrow blade
 - D37PX: **3250 mm** 10'8" width blade

Track roller guards

- Track roller guards, full length

Hitch

- Standard type

Electric system

- Alternator 24 V / 60 A

Rear equipment and hydraulics

- Rear, hydraulics
- Ripper, multi-shank (D31/D37EX-22 only)

ROPS canopy

- Lower heater for canopy
 - Lunchbox holder
 - Seat, suspension type, vinyl
- ### ROPS cab
- ROPS cab (includes air conditioner with heater, defroster, pressurizer, cup holder, lunchbox holder, radio, AM/FM cassette, cigarette lighter (24 V), 12 V / 12A, power port)

- Seat, suspension type, vinyl

- Seat, suspension type, fabric

- Seat, air suspension type, fabric

Operator environment

- Forestry guards for cab and canopy

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M E M O

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KOMATSU[®]