

# KOMATSU®

**D71EX-24**  
**D71EXi-24**  
**D71PX-24**  
**D71PXi-24**  
*Tier 4 Final Engine*

**CRAWLER DOZER**



**intelligent** <sup>TM</sup> **2.0**  
**MACHINE CONTROL**

Photos may include optional equipment.

#### NET HORSEPOWER

237 HP @ 2100 rpm  
177 kW @ 2100 rpm

#### OPERATING WEIGHT

D71EX-24: 49,824 lb 22600 kg  
D71PX-24: 50,927 lb 23100 kg  
D71PX-24 Wide: 52,690 lb 23900 kg  
D71EXi-24: 50,045 lb 22700 kg  
D71PXi-24: 51,147 lb 23200 kg  
D71PXi-24 Wide: 52,911 lb 24000 kg

#### BLADE CAPACITY (ISO 9246)

Power Angle Tilt (PAT) Dozer:  
D71EX-24: 5.8 yd<sup>3</sup> 4.42 m<sup>3</sup>  
D71PX-24: 6.1 yd<sup>3</sup> 4.65 m<sup>3</sup>  
D71PX-24 Wide: 6.6 yd<sup>3</sup> 5.02 m<sup>3</sup>  
D71EXi-24: 5.8 yd<sup>3</sup> 4.42 m<sup>3</sup>  
D71PXi-24: 6.1 yd<sup>3</sup> 4.65 m<sup>3</sup>  
D71PXi-24 Wide: 6.6 yd<sup>3</sup> 5.02 m<sup>3</sup>

# WALK-AROUND

## Next-generation intelligence

Enhanced machine efficiency for work ranging from heavy dozing to finish grading with intelligent Machine Control technologies.

### Lift layer control

Achieves consistent lift layers with automatic control.

### Quick surface creation

Creates a temporary design surface with the press of a button.

### Proactive dozing control

Cut and carry work performed with the smoothness of an experienced operator.

### Tilt steering control

Reduces need for constant operator corrections toward target point.

### Two antennas to support multiple global navigation satellite system (GNSS)

Improved satellite signal stability and reception offer more reliability and accuracy.

### Factory installed information and communication technology (ICT) system standard

Improved reliability and durability.

D71EX/EXi/PX/PXi-24



Photo may include optional equipment.

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## INNOVATIVE. INTEGRATED. INTELLIGENT.

**Standard intelligent Machine Control 2.0**  
Standard factory-installed integrated 3D GNSS intelligent machine control system.

**Improved Machine Control**  
Up to 8% more efficient dozer operation than comparable aftermarket machine control systems in start to finish grading tests.

### Factory Installed Machine Control Components

Machine control components are factory installed and designed as an integral part of the base machine for improved durability.

### Komatsu Quality

Machine control components and system validated to Komatsu's rigorous quality & durability standards.

### Industry Standard Compatibility

Machine control system makes use of common industry design data file norms and supports typical base station communication.

### Simple Operator Interface

Simple touch screen control box with multi-color customizable display.

### 3D GNSS Machine Control Standard

All on-machine components standard including control box, GNSS receiver/radio, GNSS antenna, and enhanced inertial measuring unit sensor.

### Finish Grade Performance

Upgraded sensor package and intelligent logic provides for finish grade accuracy in an integrated system without traditional blade mounted sensors.

### Enhanced Inertial Measuring Unit (IMU+)

Chassis mounted enhanced inertial measuring unit (IMU+) and intelligent logic provides for finish grade accuracy without blade mounted sensors.

### Dual Cab Top GNSS Antennas

Load control intelligence controls blade elevation to advance productivity and minimize track slip by adjusting blade load. 1.0' from grade or 0.1' from grade – you can run in auto mode.

### Intelligent Dozing Mode Settings

Operators are able to select between 4 distinct machine control operating modes to help optimize performance to the application whether cutting, spreading, or other.

### Operator Selectable Load Settings

Machine control load settings can be adjusted between presets to tailor response to material conditions.

**New Komatsu SAA6D107E-3, variable geometry, turbocharged and aftercooled, 6.8 liter diesel engine** is EPA Tier 4 Final emissions certified.

### Fluid Neutral or Better

Fuel & DEF TOTAL consumption is less than the fuel consumed by the prior model.

**New Komatsu Diesel Particulate Filter (KDPF) and Selective Catalytic Reduction (SCR) systems** reduce particulate matter and NOx, while

providing automatic regeneration that does not hinder daily operation.

### New higher performance Variable Geometry Turbocharger (VGT)

uses a hydraulic actuator to provide optimal air flow under all speed and load conditions.

**Komatsu auto idle shutdown** helps reduce excessive idle time.

**Auto Engine Idle** reduces machine to low idle during times of inactivity.

### Rear Hydraulics (Standard)

### Rear View Monitoring System (Standard)

### New Large Color Monitor:

- Easy-to-read large 7" high-resolution multi-color monitor
- Easy-to-use multiple tabular menus
- Easy-to-use onboard diagnostics that don't require a laptop
- Ecology guidance

### Integrated ROPS Cab Features:

- Large, quiet, pressurized cab
- Excellent visibility with integrated ROPS structure
- Air suspension high-capacity heated seat

**New high-engine-RPM (H) mode** helps maintain ground speed during heavy blade load applications.

**Parallel Link Undercarriage System (PLUS)** provides up to double the wear life and lowers repair and maintenance costs.

**Triple labyrinth final drive** provides additional protection for the final drive floating seals.

# INTELLIGENT MACHINE CONTROL



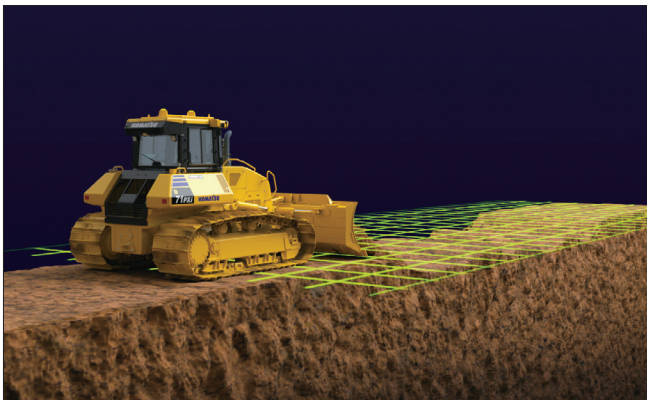
## intelligent Machine Control (iMC) 2.0

D71EXi/PXi-24 utilizes intelligent Machine Control 2.0 a GNSS\* system that automatically controls the blade to 3-dimensional design data. Machine Control 2.0 utilizes the industry's first Proactive Dozing Control logic, lift layer control, quick surface creation, and tilt steering control. A two-antenna system supporting multiple GNSS, which provides less downtime and more work time. These added features make for improved production and efficiency.

\*GNSS (Global Navigation Satellite System): General term for satellite positioning systems such as GPS, GLONASS, etc.

## Quick surface creation

Operators can create a temporary design surface with the press of a button. Designed to simplify in-field surface creation within the control box, it allows for more utilization of iMC 2.0.



## Tilt steering control

The blade automatically tilts under a heavy load to maintain a straight line of travel, to help optimize productivity throughout each pass and reducing operator fatigue.



## Auto/manual switch

A conveniently located on/off switch giving the operator control of when iMC 2.0 is active.



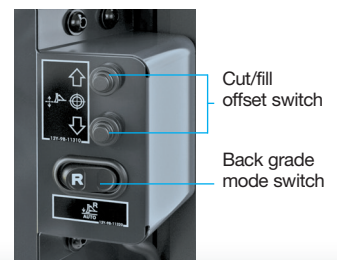
## Function switches

### Cut/fill offset switch

The target surface height can be quickly adjusted by pressing the offset switch (button).

### Back grade mode switch

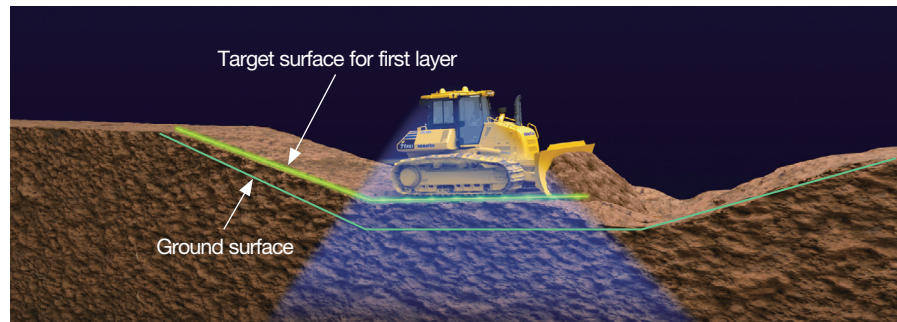
Allows for automatic control during back grading.



D71EXi/PXi-24

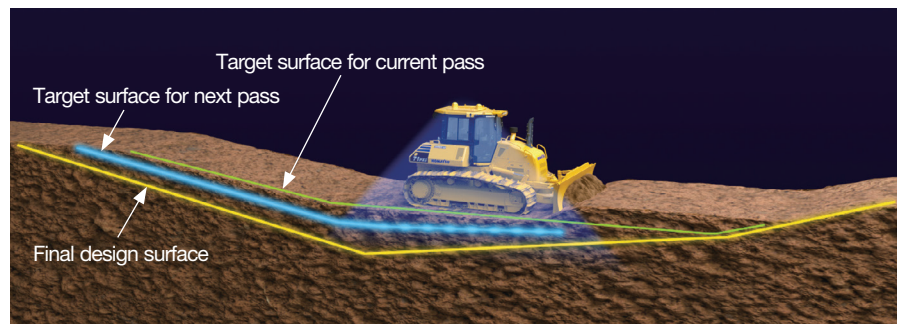
**Lift layer control**

Advance earthwork productivity and maintain compaction quality by automatically controlling lifts to the desired heights with respect to the mapped terrain. Excess fill is eliminated as automatic blade control will follow finish surface once lifts have reached finish grade.



**Proactive dozing control**

Operators can utilize automatic blade control from rough grading to finish grading work. Proactive dozing control understands the terrain in the path of each cut, maximizes the blade load throughout the pass, regardless of the terrain ahead, and achieves productivity similar to that of an experienced operator.



**Two antennas supporting multiple GNSS**

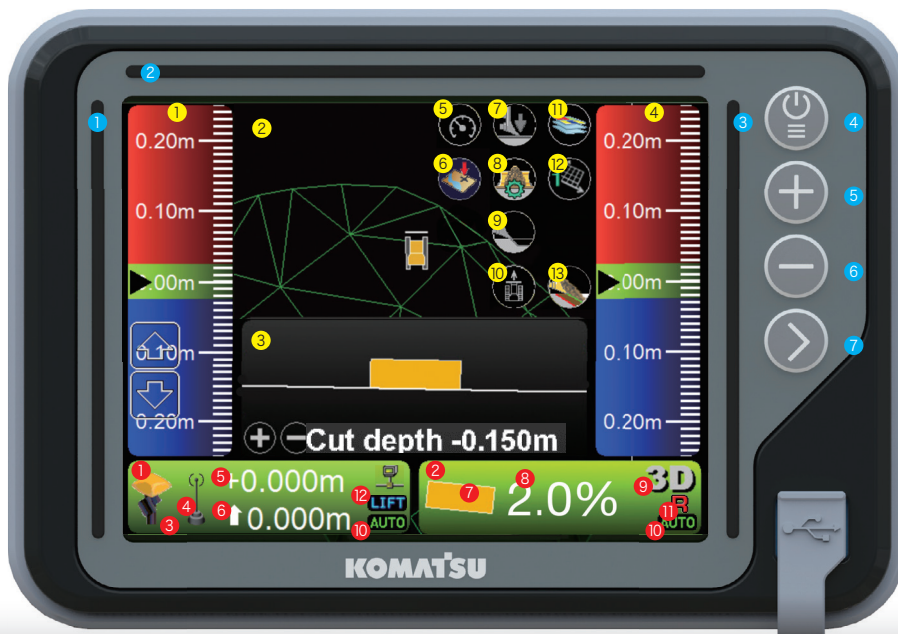
Work accuracy is improved by two antennas supporting the multiple GNSS.

**Improvement of blade accuracy on slope**

Blade accuracy is maintained during slope work.

**Reliability of blade accuracy**

Galileo, QZSS, and BeiDou can be used in addition to GPS and GLONASS. Since the satellite capture rate is improved, the machine can be used in any time zone.



**Control Box**

- 1 L.H. LED indicator 2 Upper LED indicator
- 3 R.H. LED indicator
- 4 Power ON/OFF and menu switch (Press: Display the main menu / Hold down: Turn ON/OFF the power supply)
- 5 Zoom in switch 6 Zoom out switch
- 7 Toggle main view switch (Press: Switch the display of main window / Hold down: Adjust the brightness and sound volume)
- 1 Left window 2 Main window 3 Lower window
- 4 Right window 5 Speed control ON/OFF
- 6 Take a topo shot 7 Simple grading ON/OFF
- 8 Cut depth selection 9 Smooth start ON/OFF
- 10 Tilt steering ON/OFF 11 Toggle As-built mode change view to [none], [cut fill], [pass counts]
- 12 Quick surface creation (Create slope plane surface)
- 13 Lift layer control (Create As-built design surface)
- 1 Elevation control key 2 Slope control key
- 3 GNSS status 4 Radio status 5 Cut/Fill offset
- 6 Cut/Fill reading 7 Tilt of blade
- 8 Design cross-slope 9 Type of control
- 10 AUTO indicator 11 Back Grade mode indicator
- 12 Lift indicator

\*This is a typical main screen of control box.

# SPECIFICATIONS



## ENGINE

Model.....Komatsu SAA6D114E-6\*  
 Type..... 4-cycle, water-cooled, direct injection  
 Aspiration..... Komatsu Variable Geometry  
 Turbocharged, air-to-air aftercooled, cooled EGR  
 Number of cylinders..... 6  
 Bore x stroke..... 114 mm x 144.5 mm **4.5" x 5.7"**  
 Piston displacement..... 8.85 ltr **540 in<sup>3</sup>**  
 Governor.....All-speed and mid-range, electronic  
 Horsepower  
 SAE J1995.....Gross 179 kW **240 HP**  
 ISO 9249 / SAE J1349.....Net 177 kW **237 HP**  
 Hydraulic fan at maximum speed.....Net 159 kW **213 HP**  
 Rated rpm..... 2100 rpm  
 Fan drive type.....Hydraulic  
 Lubrication system  
 Method.....Gear pump, forced lubrication  
 Filter..... Full-flow

\*EPA Tier 4 Final emissions certified



## HYDROSTATIC TRANSMISSION

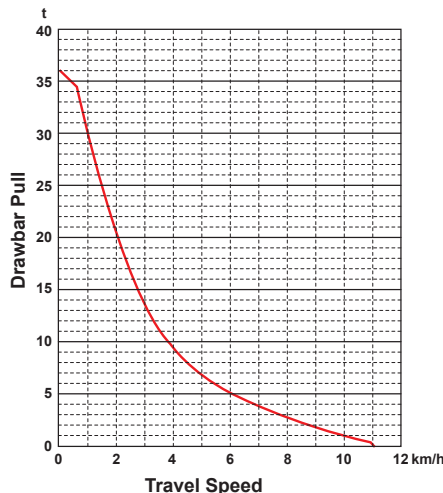
Dual-path, hydrostatic transmission provides extensive speed changes up to 11 km/h **6.8 mph**. The variable capacity travel motors allow the operator to select the optimum speed to match specific jobs. Travel control lock lever and neutral switch.

Travel speed (quick shift mode)*	Forward	Reverse
<b>1st</b>	0-3.8 km/h <b>0-2.4 mph</b>	0-4.5 km/h <b>0-2.8 mph</b>
<b>2nd</b>	0-6.5 km/h <b>0-4 mph</b>	0-7.5 km/h <b>0-4.7 mph</b>
<b>2.5th</b>	0-8.4 km/h <b>0-5.2 mph</b>	0-9.3 km/h <b>0-5.8 mph</b>
<b>3rd</b>	0-11 km/h <b>0-6.8 mph</b>	0-11 km/h <b>0-6.8 mph</b>

Travel speed (variable mode)	Forward	Reverse
	0.8-11 km/h <b>0.5-6.8 mph</b>	0.8-11 km/h <b>0.5-6.8 mph</b>

\*Quick shift speeds are adjustable in the monitor.



## FINAL DRIVES

In-shoe mounted axial piston type travel motors with integrated two-stage planetary gear reduction. Compact in-shoe mount can reduce risk of damage by debris. Bolt-on sprocket for easy displacement.



## STEERING SYSTEM

PCCS joystick control for all directional movements. Pushing the joystick forward results in forward machine travel, while pulling it backward 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. HST eliminates steering clutches and brakes, providing smooth, powerful turns. Fully electronic control enables smooth operation. The PCCS utilizes shift buttons to increase and decrease speed.

Minimum turning radius

D71EX-24/ D71EXi-24	3.1 m <b>10'2"</b>
D71PX-24/ D71PXi-24	3.1 m <b>10'2"</b>
D71PX-24 Wide/ D71PXi-24 Wide	3.3 m <b>10'10"</b>



## UNDERCARRIAGE

Suspension..... Oscillating-type with equalizer bar and pivot shafts  
 Track roller frame.....Monocoque, large section, durable construction

Rollers and idlers.....Lubricated track rollers

Lubricated tracks

Parallel Link Undercarriage System (PLUS) with lubricated rotating bushings for extended system wear life and lower maintenance costs. Track tension is adjusted easily with grease gun.

	D71EX-24/ D71EXi-24	D71PX-24/ D71PXi-24	D71PX-24 Wide/ D71PXi-24 Wide
Number of track rollers (each side)	8	8	8
Type of shoes (standard)	Single grouser	Single grouser	Single grouser
Number of shoes (each side)	45	45	45
Grouser height	mm in 65 <b>2.6"</b>	65 <b>2.6"</b>	65 <b>2.6"</b>
Shoe width (standard)	mm in 610 <b>24"</b>	760 <b>30"</b>	915 <b>36"</b>
Ground contact area	cm <sup>2</sup> ft <sup>2</sup> 39960 <b>43</b>	49780 <b>53.6</b>	59930 <b>64.5</b>
Ground pressure (with dozer, ROPS cab) (ISO 16754)	kPa psi 43 <b>6.3</b>	40 <b>5.8</b>	35 <b>5.0</b>
Track gauge	mm ft.in 2230 <b>7'3"</b>	2230 <b>7'3"</b>	2385 <b>7'10"</b>
Length of track on ground	mm ft.in 3275 <b>10'8.9"</b>	3275 <b>10'8.9"</b>	3275 <b>10'8.9"</b>



## SERVICE REFILL CAPACITIES

Coolant	54.5 ltr	<b>14.4 U.S. gal</b>
Fuel tank	439 ltr	<b>116.0 U.S. gal</b>
Engine oil	30.5 ltr	<b>8.1 U.S. gal</b>
Hydraulic tank	154 ltr	<b>40.7 U.S. gal</b>
Final drive (each side)	10 ltr	<b>2.6 U.S. gal</b>
DEF tank	20 ltr	<b>5.3 U.S. gal</b>



## OPERATING WEIGHT (APPROXIMATE)

Tractor weight:

Including ROPS (ISO 3471) cab, U frame for PAT dozer, rated capacity of lubricant, coolant, full fuel tank, operator and standard equipment.

D71EXi-24	21350 kg <b>47,069 lb</b>
D71PXi-24	21800 kg <b>48,061 lb</b>
D71PXi-24 Wide	22500 kg <b>49,604 lb</b>

Operating weight:

Including PAT dozer, ROPS (ISO 3471) cab, operator, standard equipment, rated capacity of lubricant, coolant and full fuel tank.

D71EX-24	22600 kg <b>49,824 lb</b>
D71PX-24	23100 kg <b>50,927 lb</b>
D71PX-24 Wide	23900 kg <b>52,690 lb</b>
D71EXi-24	22700 kg <b>50,045 lb</b>
D71PXi-24	23200 kg <b>51,147 lb</b>
D71PXi-24 Wide	24000 kg <b>52,911 lb</b>

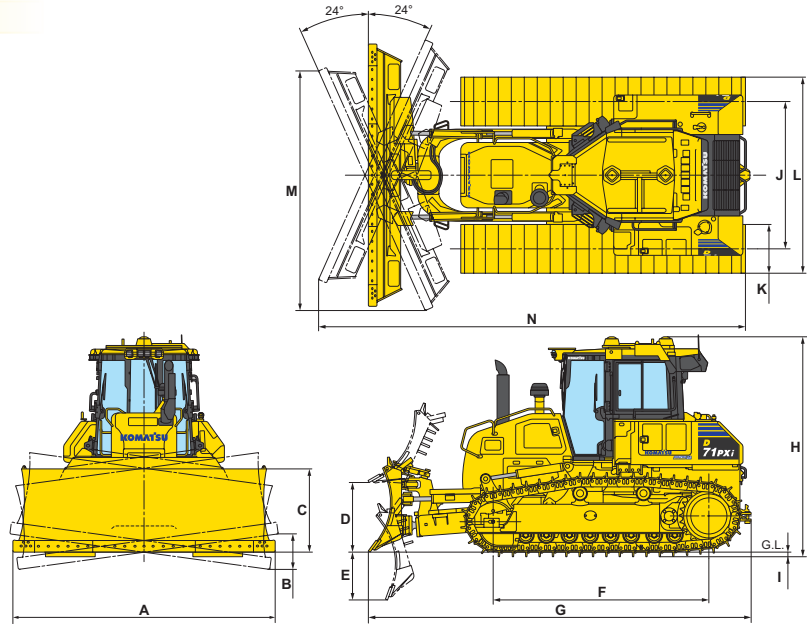
D71EX/EXi/PX/PXi-24



## DIMENSIONS

	D71EX-24/ D71EXi-24	D71PX-24/ D71PXi-24	D71PX-24 Wide/ D71PXi-24 Wide
A	3870 mm <b>152"</b>	4010 mm <b>158"</b>	4295 mm <b>169"</b>
B	500 mm <b>20"</b>	515 mm <b>20"</b>	555 mm <b>22"</b>
C	1265 mm <b>50"</b>	1265 mm <b>50"</b>	1265 mm <b>50"</b>
D	1090 mm <b>43"</b>	1090 mm <b>43"</b>	1090 mm <b>43"</b>
E	705 mm <b>28"</b>	705 mm <b>28"</b>	705 mm <b>28"</b>
F	3275 mm <b>129"</b>	3275 mm <b>129"</b>	3275 mm <b>129"</b>
G	5810 mm <b>229"</b>	5810 mm <b>229"</b>	5810 mm <b>229"</b>
H	3330 mm <b>131"</b>	3330 mm <b>131"</b>	3330 mm <b>131"</b>
I	65 mm <b>3"</b>	65 mm <b>3"</b>	65 mm <b>3"</b>
J	2230 mm <b>88"</b>	2230 mm <b>88"</b>	2385 mm <b>94"</b>
K	610 mm <b>24"</b>	760 mm <b>30"</b>	915 mm <b>36"</b>
L	2840 mm <b>112"</b>	2990 mm <b>118"</b>	3300 mm <b>130"</b>
M	3575 mm <b>141"</b>	3705 mm <b>146"</b>	3970 mm <b>156"</b>
N	6515 mm <b>256"</b>	6540 mm <b>257"</b>	6600 mm <b>260"</b>

Ground clearance ..... 410 mm **1'4"**



## 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 235 ltr/min **62.3 U.S. gal/min** at rated engine rpm.

Relief valve setting ..... 28.8 MPa 294 kg/cm<sup>2</sup> **4,177 psi**

Hydraulic cylinders ..... Double-acting, piston type

Hydraulic oil capacity (refill):

Power angle tilt dozer ..... 154 ltr **40.7 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

	Number of cylinders	Bore
Blade lift	2	120 mm <b>4.7"</b>
Blade tilt	1	130 mm <b>5.1"</b>
Blade angle	2	110 mm <b>4.3"</b>



## DOZER EQUIPMENT

	Overall Length With Dozer mm ft.in	Blade Capacity m <sup>3</sup> yd <sup>3</sup>	Blade Width x Height mm ft.in	Max. Lift Above Ground mm ft.in	Max. Drop Below Ground mm ft.in	Max. Tilt Adjustment mm ft.in	Additional Weight kg lbs
<b>D71EX-24/D71EXi-24</b>	5810	4.42	3870 x 1265	1090	705	500	0 <b>0</b>
Power Angle Tilt Dozer	<b>19'1"</b>	<b>5.8</b>	<b>12'8" x 4'2"</b>	<b>42.9"</b>	<b>27.76"</b>	<b>19.7"</b>	(Included)
<b>D71PX-24/ D71PXi-24</b>	5810	4.65	4010 x 1265	1090	705	515	0 <b>0</b>
Power Angle Tilt Dozer	<b>19'1"</b>	<b>6.1</b>	<b>13'2" x 4'2"</b>	<b>42.9"</b>	<b>27.76"</b>	<b>20.3"</b>	(Included)
<b>D71PX-24 Wide/ D71PXi-24 Wide</b>	5810	5.02	4295 x 1265	1090	705	555	0 <b>0</b>
Power Angle Tilt Dozer	<b>19'1"</b>	<b>6.6</b>	<b>14'1" x 4'2"</b>	<b>42.9"</b>	<b>27.76"</b>	<b>21.9"</b>	(Included)

Blade capacities are based on the SAE recommended practice J1265.

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



**STANDARD EQUIPMENT FOR BASE MACHINE\***

- Air cleaner, double element with dust indicator
- Air suspension seat with operator presence sensing system
- Alternator, 24 V/90 A
- Backup alarm
- Batteries, 2 x 12 V/140 Ah
- Closed engine hood
- Color monitor, Liquid Crystal Display (LCD)
- Decelerator/brake pedal (Single pedal)
- Engine intake precleaner (Auto eject)
- Expansion tank
- Fuel prefilter with water separator
- High mount foot rests
- Hitch type drawbar
- Hydraulically driven cooling fan with clean mode

- Komatsu Diesel Particulate Filter (KDPF) with curved exhaust pipe
- Locks, filler caps and covers
- Radiator mask, swing up
- Rear view monitor system
- Starting motor, 11 kW/24 V
- Steering system: HST system
- Tie-offs
- Track roller guard, center and end section
- Track shoe assembly
  - Parallel Link Undercarriage System (PLUS) link
  - 610 mm **24"** single grouser shoe (EX)
  - 760 mm **30"** single grouser shoe (PX)
  - 915 mm **36"** single grouser shoe (PX wide)
- Underguards: Oil pan and hydraulic pumps

**ROPS cab\***

- Air conditioner (A/C)
- AUX-injack
- Cab accessories
  - 12 V x 2 power supply
  - Cup holder
  - Rear view mirror
- Front pull hook
- LED lights
- Multifunction Audio
- Work lamps (Front 4, rear 2)

\* Dozer assembly and rear mounted equipment are not included in base machine standard equipment

\*\* Cab meets ROPS (ISO 3471) and FOPS (ISO 3449) Level 2 standards



**OPTIONAL EQUIPMENT**

- Hydraulics for ripper (EXi)
- Long drawbar
- Scoop holder
- Tool kit
- Track roller guard, full length

**Multi-shank ripper (For D71EX-24)**

Weight (including hydraulic control unit) 1780 kg **3,924 lb**  
 Beam length ..... 2170 mm **7'1"**  
 Maximum lift above ground..... 640 mm **2'1"**  
 Maximum digging depth ..... 580 mm **1'11"**



*Note: All comparisons and claims of improved performance made herein are made with respect to the prior Komatsu model unless otherwise specifically stated.*