KOMATSU

D65EX/WX/PX-16



Crawler dozer

Engine power

155 kW / 207 HP @ 1950 rpm

Operating weight

19540 - 21020 kg

Blade capacity

D65EX-16: 3.55 - 5.61 m³ D65WX-16: 4.42 - 5.90 m³ D65PX-16: 3.69 - 4.42 m³

Walk-around

SAA6D114E-3 turbocharged aftercooled diesel engine

provides an output of 155 kW 207 HP with excellent productivity. This machine is U.S. EPA Tier 3 and EU Stage 3A emissions equivalent.

Automatic transmission with lockup torque converter

improves fuel consumption.

Innovative SIGMADOZER

material up for increased blade loads. Blade capacity: 5.6 m³ (EX)



Engine power

155 kW / 207 HP @ 1950 rpm

Operating weight

D65EX-16: 19540 kg D65WX-16: 20400 kg D65PX-16: 21020 kg

Blade capacity

D65EX-16: 3.55 - 5.61 m³ D65WX-16: 4.42 - 5.90 m³ D65PX-16: 3.69 - 4.42 m³

New integrated ROPS cab includes:

- · Large quiet operator environment
- Comfortable ride with new cab damper
- Excellent visibility without ROPS post
- · Automatic high capacity air conditioning
- · Pressurized cab
- Adjustable armrest and suspension seat

Complete operator control with Palm Command Control System (PCCS)

- Electronic controlled PCCS travel control
- Hydraulic controlled PCCS blade/ripper control
- · Fuel control dial
- Automatic/manual gearshift selectable mode
- Gearshift pattern preset function
- ECMV controlled transmission



Parallel Link Undercarriage System (PLUS)

provides longer wear life and lower repair & maintenance costs with new rotating bushings and other key enhancements.

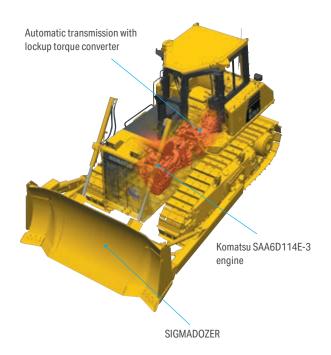
Wet, multiple-disc brakes

adjustment free for excellent service life.

Increased-track length for EX/WX

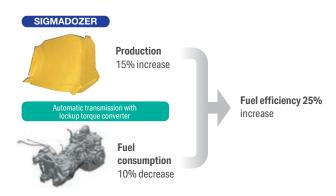
ensures outstanding grading ability and stability.

Productivity & fuel economy features



New fuel efficient bulldozer

The new D65 has achieved both high levels of productivity and fuel economy through the usage of SIGMADOZER and automatic transmission with lockup torque converter. SIGMADOZER developed based on completely new digging theory dramatically increases production. New transmission with high power transmission efficiency greatly reduces fuel consumption. This bulldozer significantly improves fuel efficiency compared with our conventional model.



Production increased by

15%

Compared with our conventional model

Outstanding productivity

SIGMADOZER - The next generation blade

Based on a completely new digging theory, SIGMADOZER dramatically improves dozing performance and increases productivity. A new frontal design concept adopted for digging and rolling up at the center of the blade increases

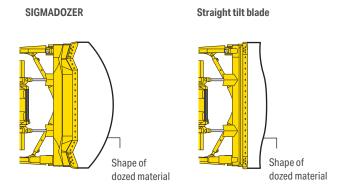
soil holding capacity while simultaneously reducing sideway spillage. It also reduces digging resistance producing a smoother flow of earth, enabling the dozing of larger quantities of soil with less power.



SIGMADOZER (D65-16)



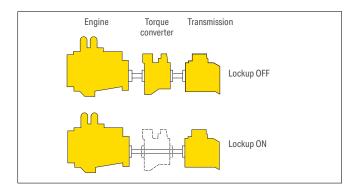
Straight tilt blade (D65-15E0)



Outstanding fuel economy

Automatic transmission with lockup torque converter

A sharp reduction in fuel consumption and greater power train efficiency is achieved by the new automatic gearshift transmission and lockup torque converter. The automatic transmission selects the optimal gear range depending on the working conditions and load placed on the machine. This means the machine is always operating at maximum efficiency.

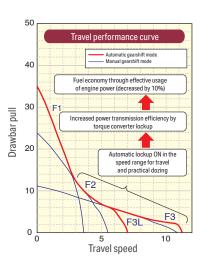


Fuel consumption decreased by

10%

Compared with our conventional model

Lockup mechanism of the torque converter is automatically actuated to transfer engine power directly to the transmission in travelling and usual dozing speed ranges. Locking up the torque converter eliminates loss of power by 10%. Because the electronically controlled engine is extremely efficient, a decrease in fuel consumption is realized while also maintaining machine power.



Automatic/manual gearshift selectable mode

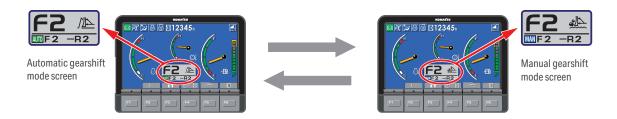
Automatic or manual gearshift modes can be selected with ease to suit the work at hand by simply pressing the switch on the multi-monitor (selection at neutral).

Automatic gearshift mode

Select for all general dozing. When a load is applied, the transmission automatically shifts down, and when the load is off, it automatically shifts up to a set maximum gear speed. This mode economizes both fuel and production further where the torque converter lockup mechanism is actuated according to load, providing a one to one drive.

Manual gearshift mode

Select for dozing and ripping rough ground. When loaded, the transmission automatically shifts down, but does not shift up when the load is off.



Selectable working mode

Working mode P is the mode aiming for powerful operation and maximum production and mode E for general dozing applications with adequate speed and power while saving energy. For CO₂ reduction and energy saving, the monitor panel allows for switching the working mode with ease, depending on the work at hand.

P mode (Power mode)

With P mode, the engine outputs its full power, allowing the machine to perform the work requiring large production, heavy-load work, and uphill work.

E mode (Economy mode)

With E mode, the engine outputs enough power for the work without delivering unnecessary power. This mode allows for energy saving operation and is suitable for the work on a ground where the machine may cause shoe slip and the work not requiring large power such as downhill dozing, leveling and light-load work.

Ecology features





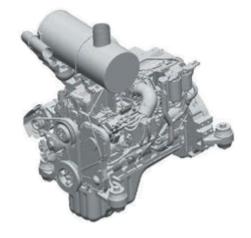
Komatsu technology

Komatsu develops and produces all major components, such as engines, electronics and hydraulic components in house. Since all components can be matched, efficiencies are increased achieving high levels of productivity and ecology. With this "Komatsu technology", and adding customer feedback, Komatsu is achieving great advancements in technology. The result is a new generation of high performance and environment friendly machines.

Fuel efficient electronic controlled engine

The Komatsu SAA6D114E-3 engine delivers 155 kW / 207 HP at 1950 rpm. The fuel-efficient Komatsu engine, together with the heavy machine weight, make the D65EX/WX/PX-16 a superior crawler dozer in both ripping and dozing production. The engine is U.S. EPA Tier 3 and EU Stage 3A emissions equivalent, and features direct fuel injection, turbocharger and air-to-air aftercooler to maximize fuel efficiency. To minimize noise and vibration, the engine is mounted to the main frame with rubber cushions.





Hydraulic drive radiator cooling fan

The engine cooling fan rotation speed 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 the operating noise levels and requires less horsepower than belt driven fan.

Control features



Human-machine interface PCCS

Komatsu's ergonomically designed control system "PCCS" creates an operating environment with "complete operator control".

Palm command electronic controlled travel joystick

Palm command travel joystick provides the operator with a relaxed posture and superb fine control without operator fatigue. Transmission gear shifting is simplified with thumb push buttons.



Gearshift pattern preset function

When the gearshift pattern is set to either <F1-R2>, <F2-R1>, <F2-R2>, <F2-R3L> or <F3L-R3L> in the automatic gearshift mode, the gear automatically shifts to the preset gear when the travel control joystick is set to Forward or Reverse position, reducing round trip repetition work time and operator's efforts. Gearshift pattern <F2-R3L> and <F3L-R3L> are newly added for high speed leveling operation.

Palm command hydraulic controlled blade/ripper joystick

Hydraulically-controlled palm command joystick is equipped for blade/ ripper control. Combined with the highly reliable Komatsu hydraulic system, superb control is the result.

Electronic Controlled Modulation Valve controlled transmission

A controller automatically adjusts each clutch engagement depending on travel conditions, providing smooth shockless clutch engagement, improved component life and operator ride comfort.

Hydrostatic Steering System—smooth, powerful turning

The engine power is transmitted to both tracks without power interruption on the inside track for smooth, powerful turns. Counter-rotation is available for minimum turning radius enhancing maneuverability.

Up



Down

Automatic gearshift mode

F1-R1 MODE

Press DOWN switch $\fill \fill \fil$

Press DOWN switch ↓↑ Press UP switch F2-R1 MODE

Press DOWN switch ↓↑ Press UP switch F2-R2 MODE

Press DOWN switch 11 Press UP switch F2-R3L MODE

Press DOWN switch 11 Press UP switch F3L-R3L MODE

Manual gearshift mode

F1-R1 MODE

Press DOWN switch \$\bigcup 1 \text{ Press UP switch} \\ F1-R2 MODE

Press DOWN switch \$1 Press UP switch F2-R1 MODE

Press DOWN switch ↓↑ Press UP switch F2-R2 MODE

Press DOWN switch ↓↑ Press UP switch F2-R3 MODE

Working environment

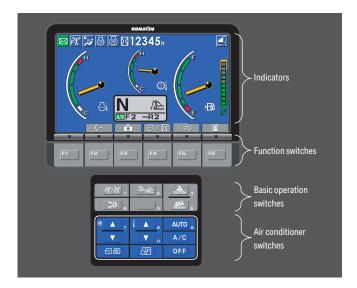


New integrated ROPS cab

A newly designed cab is integrated with ROPS according to the latest computer analysis. High rigidity and superb sealing performance sharply reduce noise and vibration for the operator and prevent dust from entering the cab. Relaxed operation in comfortable environment. In addition, side visibility is increased because external ROPS structure and posts are not required. Outstanding visibility has been achieved.

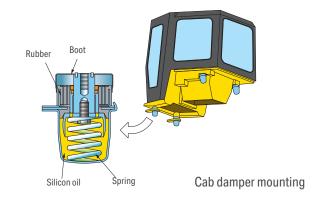
Large multi-lingual LCD color monitor

A large user-friendly color monitor enables safe, accurate and smooth work. Excellent screen visibility is achieved by use of LCD that can easily be read at various angles and lighting conditions. Simple and easy to operate switches. Plus function keys facilitate multi-function operations. Display data in 10 languages to globally support operators around the world.



Comfortable ride with cab damper mounting

The D65's cab mount uses a cab damper which provides excellent shock and vibration absorption capacity. The long stroke cab damper mounts soften shocks and vibration while traveling over adverse conditions, which conventional rubber mounting systems are unable to absorb. The cab damper spring isolates the cab from the machine body, suppressing vibration and providing a quiet, comfortable operating environment.



Power angle power tilt dozer (optional)

A power angle and power tilt dozer blade with highly durable box-structure frame is optionally available. This dozer is available for the EX, WX and PX machines. The hydraulic blade tilt and angling function expands versatility and productivity in a variety of applications. The manually adjustable blade pitch further expands the versatility and productivity.



Maintenance features

Preventative maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D65EX/WX/PX-16 with conveniently located maintenance points to make necessary inspections and maintenance quick and easy.

Multi-monitor with troubleshooting function to prevent critical machine troubles

Various meters, gauges and warning functions are centrally arranged on the multi-monitor.

The monitor simplifies start-up inspection and promptly warns the operator with a lamp and buzzer if any abnormalities should occur. In addition,



countermeasures are indicated in 4 levels to ensure safety and prevent the machine from major problems. Replacement times for oil and filters are also indicated.

Easy radiator cleaning with hydraulic drive fan

The radiator can be cleaned by utilization of the reversible, hydraulically driven cooling fan. The fan can be reversed from inside the cab by simply activating a switch.

Oil pressure check ports

Pressure check ports for power train components are centralized to promote quick and simple diagnosis.

Gull-wing engine side covers

The engine side covers are gull-wing type with a gas spring, and the opening angle of the cover is further increased to facilitate engine maintenance and filter replacement.

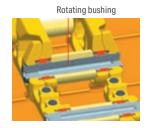


Low maintenance costs

Parallel Link Undercarriage System (PLUS) (optional)

Komatsu's innovative PLUS features a rotary bushing that demonstrates

high durability in any working conditions. Allowing the bushing to rotate virtually eliminates bushing wear, resulting in doubled service life of the undercarriage when compared with the conventional undercarriage. In addition, wear limits of the link and carrier roller are increased to balance with the extended service life of the bushing.



Self-adjusting idler support

Self-adjusting idler support applies a constant spring force to the wear plate of the idler guide to eliminate the play of the idler. This results in reduced noise and vibration as well as extends the service life of the wear plate.

Reliable simple hull frame

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

Sealed connectors

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

Flat face O-ring seals

Flat face O-ring seals are used to securely seal all hydraulic hose connections preventing leakage.

Enclosed hydraulic piping

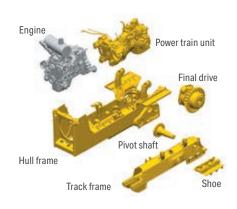
Hydraulic piping for the blade tilt cylinder is completely housed in the push arm, protecting it from damage.

Adjustment-free disc brakes

Wet disc brakesare adjustment-free and provide excellent service life.

Modular power train design

Power train components are sealed in a modular design that allows the components to be removed and installed without oil spillage, making servicing work clean, smooth and easy.



Specifications



Engine

Model	
Type	
Aspiration	Turbocharged, air-to-air aftercooled
Number of cylinders	6
Bore × stroke	
Piston displacement	8.271
Governor	
Horsepower	
SAE J1995	Gross 155 kW / 207 HP
(ISO 14396	Maximum Gross 163.7 kW / 219 HP)
ISO 9249 / SAE J1349*	Net 153 kW / 205 HP
Rated rpm	1950 rpm
	Hydraulic
Lubrication system	
Mathad	0 () ! ! ! !!
Metrioa	Gear pump, force lubrication

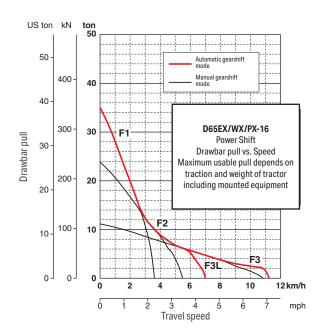
*Net horsepower at the maximum speed of radiator cooling fan: 139 kW / 186 HP U.S. EPA Tier 3 and EU Stage 3A emissions equivalent.



Torqflow transmission

Komatsu TORQFLOW transmission consists of a water-cooled, 3-element, 1-stage, 2-phase, torque converter with lockup clutch, and a planetary gear, multiple-disc clutch transmission which is hydraulically actuated and force-lubricated for optimum heat dissipation. Gearshift lock lever and neutral safety switch prevent machine from accidental starts.

Gear	Forward	Reverse
1st	3.6 km/h	4.4 km/h
2nd	5.5 km/h	6.6 km/h
3rd L	7.2 km/h	8.6 km/h
3rd	11.2 km/h	13.4 km/h





Steering system

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

HSS is powered by steering planetary units and a hydraulic pump and motor. Counter-rotation turns are also available. Wet, multiple-disc, pedal-controlled service brakes are spring-actuated and hydraulically released. Gear shift lock lever also applies parking brake.

Minimum turning radius

D65EX-16	1.9 m
D65EX-16 with PAT	2.0 m
D65PX-16	2.2 m
D65WX-16	2.1 m



Undercarriage

Suspension	Oscillating equalizer bar and pivot shaft
Track roller frame	Monocoque, large section,
	durable construction
Rollers and idlers	Lubricated track rollers
Track shoes	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 grease gun.

D65EX-16	D65PX-16	D65WX-16
SIGMADOZER	Straight tilt	SIGMADOZER
7	8	7
	Single grouser	
42	45	42
65 mm	65 mm	65 mm
510 mm	915 mm	760 mm
30395 (30295) cm ²	60115 (59935) cm ²	45295 (45145) cm ²
0.56 kgf/cm ²	0.31 kgf/cm ²	0.40 kgf/cm ²
1880 mm	2050 mm	2050 mm
2980 (2970) mm	3285 (3275) mm	2980 (2970) mm
	SIGMADOZER 7 42 65 mm 510 mm 30395 (30295) cm ² 0.56 kgf/cm ² 1880 mm 2980	SIGMADOZER Straight tilt 7 8 Single grouser 42 45 65 mm 65 mm 510 mm 915 mm 30395 60115 (30295) cm² (59935) cm² 0.56 kgf/cm² 0.31 kgf/cm² 1880 mm 2050 mm 2980 3285

for PAT dozer

	DCEEV 40	DCEDV 40	DCEWN 40
	D65EX-16	D65PX-16	D65WX-16
Type of dozer	PAT	PAT	PAT
Number of track rollers (each side)	7	8	7
Type of shoes (standard)		Single grouser	
Number of shoes (each side)	42	45	42
Grouser height	65 mm	65 mm	65 mm
Shoe width (standard)	560 mm	760 mm	760 mm
Ground contact area	33375 (33265) cm ²	49930 (49780) cm ²	45295 (45145)cm ²
Ground pressure (tractor)	0.54 kgf/cm ²	0.38 kgf/cm ²	0.42 kgf/cm ²
Track gauge	2050 mm	2230 mm	2230 mm
Length of track on ground	2980 (2970) mm	3285 (3275) mm	2980 (2970) mm

() ... PLUS spec.



Double-reduction final drive of spur and planetary gear sets to increase tractive effort and reduce gear tooth stresses for long final drive life. Segmented sprocket teeth are bolt-on for easy replacement.



Service refill capacities

Fuel tank
Coolant
Engine
Torque converter, transmission, bevel gear, and steering system48 I
Final drive (each side)
D65EX-16241
D65EX-16 with PAT27 I
D65PX-1627 I
D65WX-16 27 L



Hydraulic system

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

Hydraulic control units:

All spool valves externally mounted beside the hydraulic tank. Plunger type hydraulic pump with capacity (discharge flow) of 248 l/min at rated engine rpm.

Spool control valves for SIGMADOZER or straight tilt dozer

Additional control valve required for multi-shank ripper (EX, WX)

Hydraulic cylinders	Double-acting,	nicton
Tryurauno cynnucio		pistoii

	No of	Bore			
	cylinders	SIGMADOZER Straight tilt dozer	Power Angle Power Tilt Dozer		
Blade lift	2	90 mm	90 mm		
Blade tilt	1	125 mm	130 mm		
Blade angle	2	_	110 mm		
Ripper lift	1	125 mm	125 mm		

Hydraulic oil capacity (refill)
Ripper equipment (additional volume):
Multi-shank ripper



Dozer equipment

Blade capacities are based on the SAE recommended practice ISO 9246. Use of high tensile strength steel in moldboard for strengthened blade construction.

	Overall length with blade	Blade capacity	Blade width × height	Max. lift above ground	Max. drop below ground	Max. tilt adjustment	Dozer equipment weight	Ground pressure*
	mm	m³	mm	mm	mm	mm	kg	kg/cm ²
D65EX-16 SIGMADOZER	5490	5.61	3410 × 1425	1130 (1135)	630 (625)	870	2390	0.64 (0.65)
D65EX-16 Semi-U tilt dozer	5510	5.61	3460 × 1425	1110 (1115)	560 (555)	855	2320	0.64 (0.65)
D65EX-16 Straight tilt dozer	5330	3.89	3415 × 1225	1100 (1105)	555 (550)	870	2060	0.63 (0.64)
D65EX-16 Power Angle Power Tilt Dozer	5790	4.25	3870 × 1235	1165 (1170)	700 (695)	500	2960	0.63 (0.64)
D65EX-16 Angle Dozer	5540	3.55	3970 × 1100	1175 (1180)	570 (565)	400	2200	0.64 (0.65)
D65PX-16 Straight tilt dozer	5680	3.69	3970 × 1100	1125 (1130)	580 (575)	890	2100	0.35 (0.36)
D65PX-16 Power Angle Power Tilt Dozer	5790	4.42	4010 × 1235	1165 (1170)	700 (695)	520	2990	0.44 (0.45)
D65WX-16 SIGMADOZER	5500	5.90	3580 × 1425	1130 (1135)	630 (625)	770	2500	0.45 (0.46)
D65WX-16 Power Angle Power Tilt Dozer	5790	4.42	4010 × 1235	1165 (1170)	700 (695)	520	2990	0.48 (0.49)

 $^{^{*}\,}Ground\,pressure\,shows\,tractor,\,cab,\,ROPS\,(ISO\,3471),\,operator,\,giant\,ripper\,standard\,equipment\,and\,applicable\,blade.$

^{() ...} PLUS spec.

Specifications



Tractor weight 17150 (1747) D65EX-16 17150 (1747) D65PX-16 18920 (1924) D65WX-16 17900 (1822))) kg
for PAT dozer D65EX-16) kg

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

() ... PLUS spec.

Operating weight 19540 (19860) kg D65EX-16 21020 (21340) kg D65PX-16 20400 (20720) kg
for PAT dozer
D65EX-16
D65PX-16
D65WX-16

Including SIGMADOZER (EX/WX) or straight tilt dozer (PX) or Power Angle Power Tilt dozer, ROPS cab, operator, standard equipment, rated capacity of lubricant, hydraulic control unit, coolant, and full fuel tank.

() ... PLUS spec.



Model	Shoe	Additional weight	Ground contact area	Additional ground pressure to tractor
	560 mm single grouse	+130 kg (+130 kg)	33375 cm² (33265 cm²)	-0.05 kgf/cm² (-0.05 kgf/cm²)
D65EX-16	610 mm single grouse	+250 kg (+260 kg)	36355 cm² (36235 cm²)	-0.09 kgf/cm ² (-0.09 kgf/cm ²)
	660 mm single grouse	+380 kg (+390 kg)	39335 cm² (39205 cm²)	-0.12 kgf/cm² (-0.12 kgf/cm²)
D65PX-16	940 mm circular arc	+30 kg	61760 cm ²	-0.01 kgf/cm ²

() ... PLUS spec.

Dimensions

	D65EX-16	D65PX-16	D65WX-16
	SIGMADOZER	Straight tilt	SIGMADOZER
Α	5490 mm	5680 mm	5500 mm
В	1880 mm	2050 mm	2050 mm
С	3155 mm (3160 mm)	3155 mm (3160 mm)	3155 mm (3160 mm)
D	3080 mm (3085 mm)	3080 mm (3085 mm)	3080 mm (3085 mm)
Е	2980 mm (2970 mm)	3285 mm (3275 mm)	2980 mm (2970 mm)
F	510 mm	915 mm	760 mm
G	65 mm	65 mm	65 mm

Ground clearance: 410 (415) mm

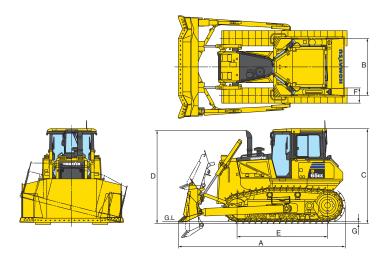
() ... PLUS spec.

for Power Angle Tilt (PAT) dozer

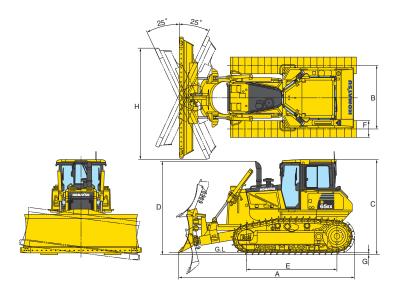
	D65EX-16	D65PX-16	D65WX-16
	PAT	PAT	PAT
Α	5790 mm	5790 mm	5790 mm
В	2050 mm	2230 mm	2230 mm
С	3155 mm (3160 mm)	3155 mm (3160 mm)	3155 mm (3160 mm)
D	3080 mm (3085 mm)	3080 mm (3085 mm)	3080 mm (3085 mm)
Е	2980 mm (2970 mm)	3285 mm (3275 mm)	2980 mm (2970 mm)
F	560 mm	760 mm	760 mm
G	65 mm	65 mm	65 mm
Н	3545 mm	3670 mm	3670 mm

Ground clearance: 410 (415) mm

() ... PLUS spec.



Dimension with SIGMADOZER (D65EX-16) and single grouser shoes.



 $\label{lem:power angle Power Tilt dozer (D65EX-16) and single grouser shoes.}$

MEMO	



- · Air cleaner, double element with dust indicator
- Alternator, 60 A/24 V
- Backup alarm
- Batteries, 140 Ah/2 × 12 V
- Color monitor
- Decelerator pedal
- Engine hood
- Engine side covers, gull-wing
- Fenders
- High mount foot rests
- Hydraulic drive radiator cooling fan with clean mode
- · Locks, filler caps and covers
- · Muffler with curved exhaust pipe
- Oil pressure check ports for power train
- Radiator mask, heavy-duty, hinged
- Radiator reserve tank

- Rear counterweight (EX, WX with PAT)
- Rear cover
- Seat, adjustable
- Starting motor, 7.5 kW/24V
- Steering system: HSS
- Track roller guard, center and end section (PX)
- Track roller guard, end sections (EX, WX)
- Track shoe assembly
- Heavy-Duty sealed and lubricated track
 510 mm single grouser shoe (EX)
 560 mm single grouser shoe (EX with PAT)
 760 mm single grouser shoe (WX)
 760 mm single grouser shoe (PX, WX with PAT)
 915 mm single grouser shoe (PX)
- Oil pan and transmission underguard
- · Heavy-duty underguard
- Water separator

ROPS cab* incl.
 Air conditioner
 Air-conditioner intake precleaner
 Cab accessories
 12V power supply
 Cup holder
 Rear view mirror

Sun visor

* Meets ISO 3471, SAE J1040 APR88 ROPS standards, and ISO 3449 FOPS standard.



Optional equipment

- · Air suspension seat with turn, high-back
- Alternator, 90 A/24 V
- AM-FM radio
- Batteries 200 Ah/2 × 12 V
- Engine intake precleaner
- Front pull hook
- Hinged underguards
- · Hitch type drawbar
- Hydraulics for ripper (EX, WX)

- · Light working, cab additional
- Rear view monitoring system
- ROPS canopy
- Rotary bushing link track (PLUS)
- Starting motor 11.0 kW/24 V
- Suspension seat with high-back
- Tool kit
- Track roller guard, full length

Multi-shank ripper (EX/WX):

Up to 20% blended biodiesel fuel and paraffine fuel can be used. Please consult your Komatsu distributor for detail.

	 	KOMATSU
Your Komatsu partner:		komatsu.com
		NUIIIalSu.UUIII