KOMATSU

intelligent MACHINE CONTROL 2.0

D85EX-18/D85PX-18/D85EXi-18/D85PXi-18

Tier 4 Final engine — crawler dozer



Photo may include optional equipment

Net horsepower
264 HP @ 1,900 rpm
197 kW @ 1,900 rpm

Operating weight
Semi-U tilt dozer
D85EX-18: 67,615 lbs. (30,670 kg)
D85EXi-18: 68,350 lbs. (31,000 kg)

Sigmadozer
D85EX-18: 68,165 lbs. (30,920 kg)

Straight tilt dozer
D85PX-18: 64,600 lbs. (29,300 kg)
D85PXi-18: 65,460 lbs. (29,700 kg)

Blade capacity
Semi-U tilt dozer
D85EX-18: 9.2 yd^3 (7.0 m^3)
D85EXi-18: 9.2 yd^3 (7.0 m^3)

Sigmadozer
D85EX-18: 9.4 yd^3 (7.2 m^3)

Straight tilt dozer
D85PX-18: 7.7 yd^3 (5.9 m^3)
D85PXi-18: 7.7 yd^3 (5.9 m^3)

Next-generation intelligence

How do you make one of the industry's most capable, dependable dozers even better? Make it smart. The industry's newest slant-nosed, intelligent HST dozer features the latest iMC 2.0 capabilities.

Lift layer control

Achieves consistent lift layers with automatic control, giving you big gains in productivity.

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. Has the ability to operate automatically 100% of the time.

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



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intelligent MACHINE CONTROL 2.0

Innovative. Integrated. Intelligent.

Standard intelligent Machine Control 2.0

Standard factory-installed integrated 3D GNSS intelligent machine control system.

Improved machine control

Uses data from previous pass to plan the next pass. Helps new operators perform like experienced operators.

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
Enhanced 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 improve 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 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.

Komatsu SAA6D125-7 variable geometry turbocharged and aftercooled 11.04 liter diesel engine is EPA Tier 4 Final emissions certified.

Komatsu diesel particulate filter (KDPF) and selective catalytic reduction (SCR) systems reduce particulate matter and NOx while providing automatic regeneration that does not interfere with daily operation.

Variable geometry turbocharger (VGT) uses a hydraulic actuator to provide optimum 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.

Large color monitor:
- Easy-to-read and use large seven inch high-resolution multi-color monitor
- Ecology guidance
- On-board diagnostics

Rearview monitoring system (standard) displays the area behind the machine onto the wide landscape view color monitor screen.

Integrated ROPS cab features include:
- Large, quiet, and pressurized cab meets ISO 3471 standard
- Improved visibility with integrated ROPS structure
- Heated air-suspension seat with high capacity
- Aux plug for audio player and two 12-volt connections
- New LED worklights
- New Bluetooth/USB compatible radio

Maintenance free batteries

Battery disconnect switch with lockout/tagout
Eliminates power draw during storage.

Easy sampling
New sampling ports for engine, hydraulic, and power line oil.

** All comparisons are to the prior model, unless otherwise stated.

intelligent Machine Control (iCM)



intelligent Machine Control (iMC) 2.0

D85EXi/PXi-18 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 supports 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, optimizing productivity throughout each pass and reducing operator fatigue.



Auto/manual switch

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



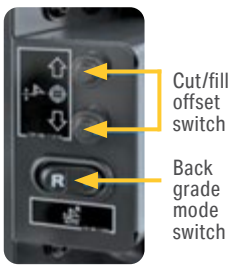
Function switches

Cut/fill offset switch

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

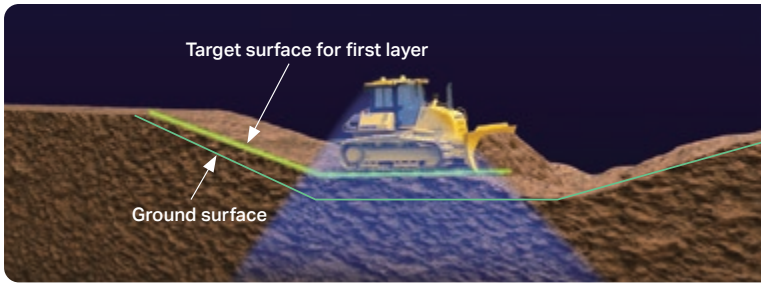
Back grade mode switch

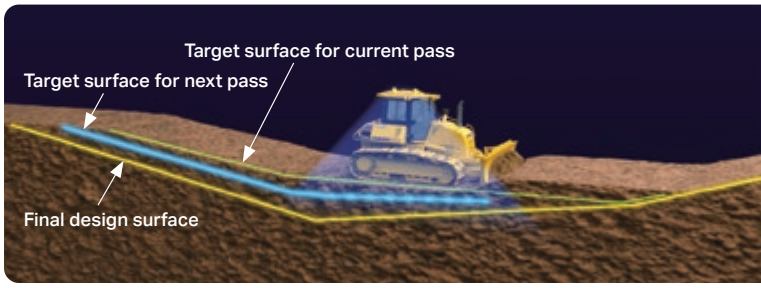
Allows for automatic control during back grading.



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.

Automatic dozing from grass to grade

Benefits of iMC 2.0



Improved finish grading

Applications: Finish grading

- Analyzes terrain and 3D model to proactively position blade in hard-to-grade areas
- Helps prevent overcutting at finish grade



Lift layer control

Applications: Lifting, compaction quality control

- Maintain precise lift thickness
- Automatically spreads lift from existing terrain and helps prevent overfill
- Up to double the production of prior model



Proactive dozing control

Applications: Stripping topsoil, high-production dozing

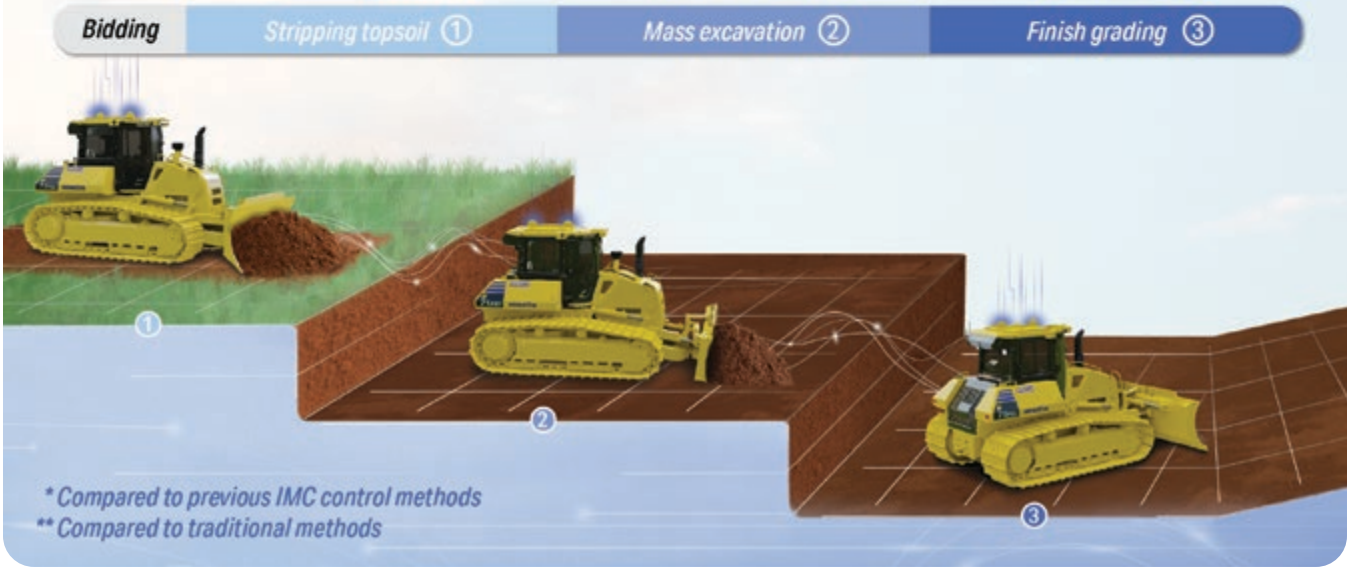
- Uses data from previous pass to plan the next pass
- Automatically cut/strip from existing terrain
- Helps new operators perform like experienced ones



Tilt steering control

- Automatically tilts blade to maintain straight travel while rough dozing
- Maintains consistent power to the ground and track

Use automation throughout the entire process



Performance features

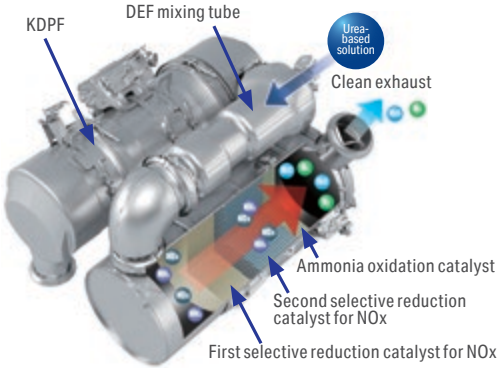
Tier 4 Final engine

The Komatsu SAA6D125E-7 engine is EPA Tier 4 Final emissions certified and provides exceptional performance while reducing fuel consumption. Based on Komatsu proprietary technologies developed over many years, this diesel engine lowers nitrogen oxides (NOx) and particulate matter (PM) by more than 90%, compared to Tier 3 levels. Through the in-house development and production of engines, electronics, and hydraulic components, Komatsu has achieved great advancements in technology, providing high levels of performance and efficiency in virtually all conditions.

Technologies applied to engine

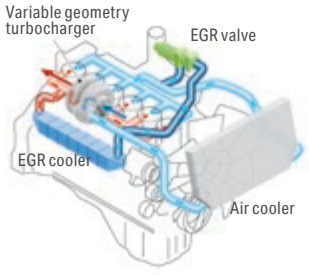
Heavy-duty aftertreatment system

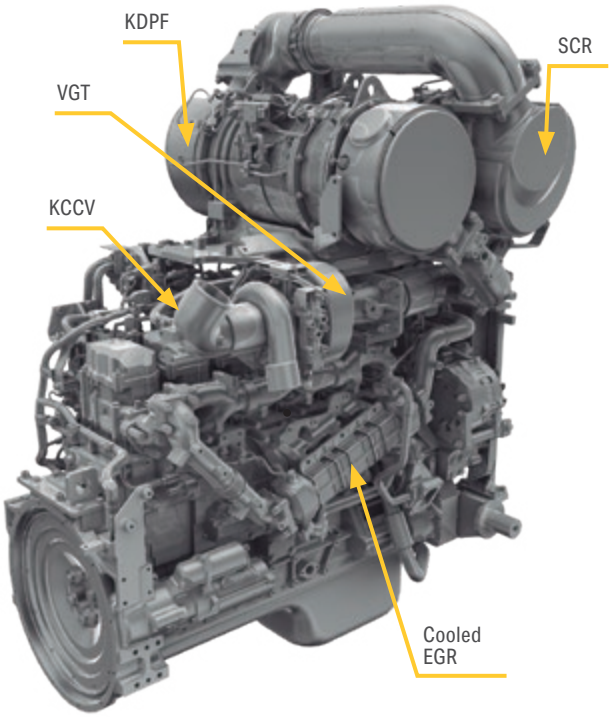
This system combines a Komatsu diesel particulate filter (KDPF) and selective catalytic reduction (SCR). The SCR NOx reduction system injects the correct amount of DEF at the proper rate, thereby transforming NOx into non-toxic water (H_2O) and nitrogen gas (N_2).



Heavy-duty cooled exhaust gas recirculation (EGR) system

The system recirculates a portion of exhaust gas into the air intake and lowers combustion temperatures, thereby reducing NOx emissions. EGR gas flow has been decreased for Tier 4 Final with the addition of SCR technology. The system dramatically reduces NOx, while helping cut fuel consumption below Tier 3 levels.



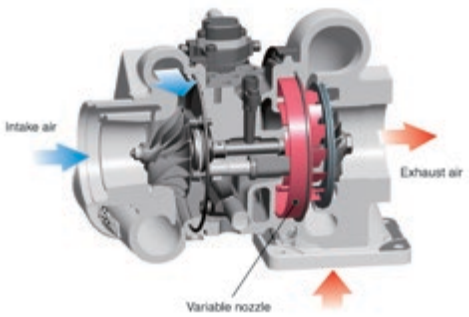


Advanced electronic control system

The electronic control system performs high-speed processing of all signals from sensors installed in the vehicle, providing total control of equipment in all conditions of use. Engine condition information is displayed via an onboard network to the monitor inside the cab, providing vital operator information. Additionally, managing the information via Komtrax helps customers keep up with required maintenance.

Variable geometry turbocharger (VGT) system

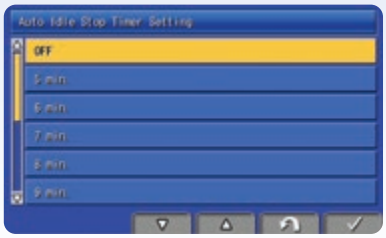
The VGT system features proven Komatsu design hydraulic technology for variable control of air-flow and supplies optimal air according to load conditions. The upgraded version provides better exhaust temperature management.



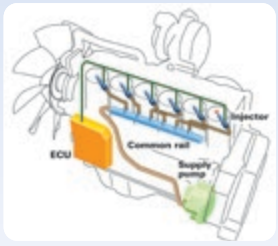
Performance features

Komatsu auto idle shutdown

Komatsu auto idle shutdown automatically shuts the engine down after idling temporarily to reduce unnecessary fuel consumption and exhaust emissions. The amount of time before the engine is shutdown can be easily programmed from 5 to 60 minutes.



Heavy duty high-pressure common rail (HPCR) fuel injection system



The system is designed to achieve an optimal injection of high-pressure fuel via computerized control, providing close-to-complete combustion to reduce PM emissions. This system uses high-pressure injection, thereby reducing both PM emissions and fuel consumption over the entire range of engine operating conditions. The Tier 4 Final engine has advanced fuel injection timing for reduced fuel consumption and lower soot levels.

Secondary engine shutdown switch

A secondary switch is at the side of the front console to shut down the engine.

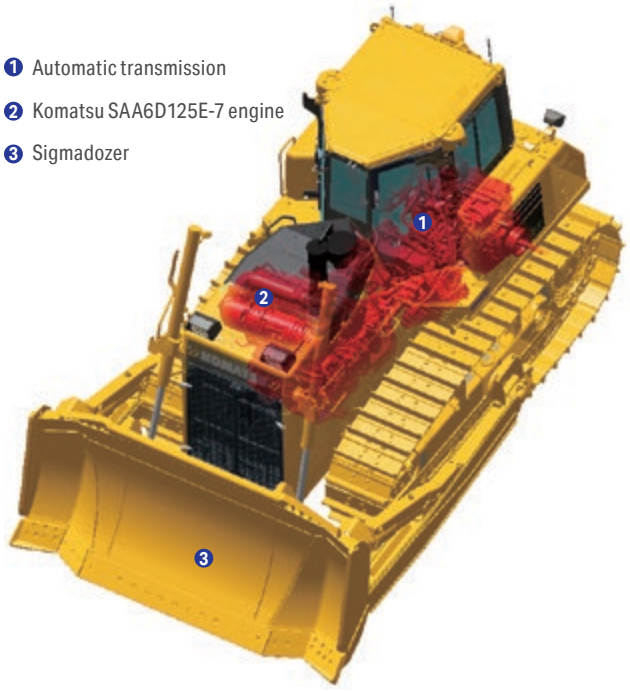


Hydraulically driven cooling fan

The engine cooling fan rotation speed is electronically controlled. The fan rotation speed depends on engine coolant, powertrain oil 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 a belt-driven fan. The fan is manually reversible by the operator for periodic cleaning.

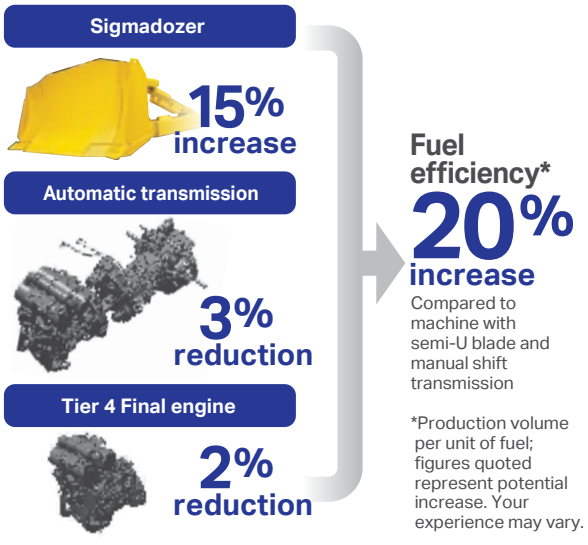


Productivity and fuel economy features



Fuel-efficient dozer

The D85EX/EXi/PX/PXi-18 is both productive and fuel-efficient with the Sigmadozer blade, automatic transmission and Tier 4 Final engine. Based on innovative digging theory, the Sigmadozer blade dramatically increases production. This dozer significantly improves fuel efficiency compared to a conventional model.



intelligent MACHINE CONTROL 2.0

Innovative Sigmadozer

Based on an innovative digging theory, Sigmadozer dramatically improves dozing performance and increases productivity. A frontal design adopted for digging and rolling up material at the center of the blade increases soil holding capacity and simultaneously reduces sideway spillage. Lower digging resistance produces smoother flow of material, enabling dozing with less power. In addition, adoption of a blade linkage system holds the blade closer to the tractor for improved visibility, enhanced digging force and reduced lateral sway of the blade. This is the next generation of dozer blades.

Production increased by up to 15%

Compared to conventional semi-U blade

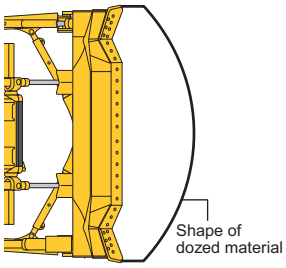


Sigmadozer (D85EX-18)

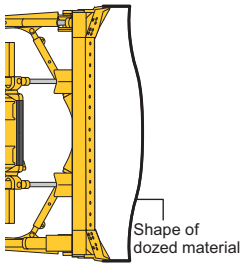


Semi-U blade (D85EX-15E0)

Production increased by 15% (compared with a conventional semi-U blade model)



Sigmadozer



Semi-U blade

Productivity and fuel economy features

Automatic transmission

A sharp drop in fuel consumption and greater powertrain efficiency are achieved by the automatic gearshift transmission. The automatic gearshift 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. (Manual gearshift mode is also selectable).

Fuel consumption reduced by up to 3%

Compared to machine with manual shift transmission

Selectable working modes

Select P mode for powerful operation and maximum production. E mode is for general dozing applications with adequate speed and power, while saving energy. For CO2 reduction and energy saving, a switch on the monitor panel can be easily pressed to select the working mode that matches 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.

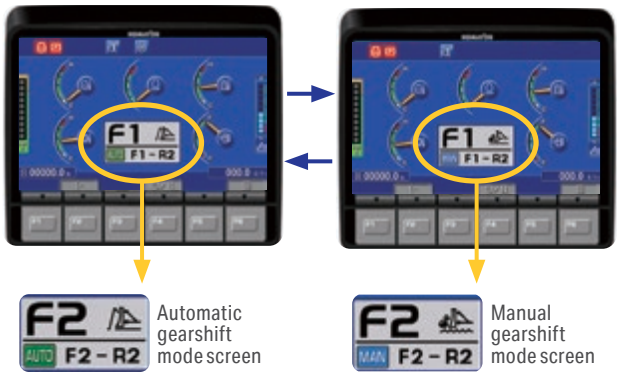
E mode (economy mode)
With E mode, the engine outputs enough power for moderate work without delivering unnecessary power. This mode provides energy-saving operation and is suitable for work on ground where the machine may experience excessive shoe slip in moderate power applications, such as downhill dozing, leveling and light-load work.

Automatic/manual gearshift selectable mode

Automatic or manual gearshift modes can be selected with ease to suit the job site conditions by simply pressing the switch on the monitor.

Automatic gearshift mode
The automatic mode is for general dozing. When a high load is encountered, the transmission automatically shifts down, and when the load is released, it automatically shifts up to quickly and efficiently carry the material. This mode optimizes fuel use and production.

Manual gearshift mode
The manual mode is for dozing and ripping rough ground. When enabled, the transmission automatically shifts down when a high load is encountered, but does not shift up when the load is off. The operator can specify whether the auto shift down function is enabled or disabled in manual gearshift mode by selection in the monitor.

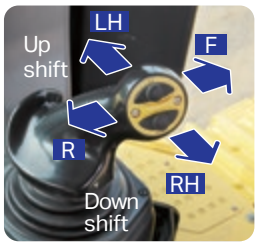




Control features

Palm command control system (PCCS) 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 added for high speed leveling.



Automatic gearshift mode	Manual gearshift mode
F1-R1 mode	F1-R1 mode
Press DOWN switch / Press UP switch	Press DOWN switch / Press UP switch
F1-R2 mode	F1-R2 mode
Press DOWN switch / Press UP switch	Press DOWN switch / Press UP switch
F2-R1 mode	F2-R1 mode
Press DOWN switch / Press UP switch	Press DOWN switch / Press UP switch
F2-R2 mode	F2-R2 mode
Press DOWN switch / Press UP switch	Press DOWN switch / Press UP switch
F2-R3L mode	F2-R3 mode
Press DOWN switch / Press UP switch	
F3L-R3L mode	



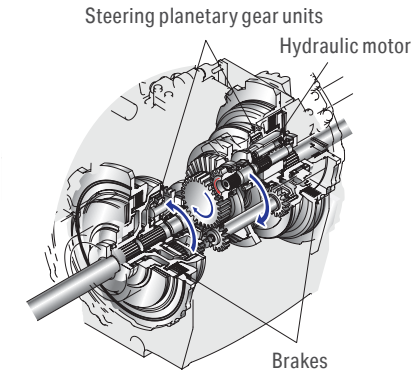
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Electronic controlled modulation valve (ECMV) controlled transmission and brakes

The 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 (HSS) — smooth, powerful turning

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



Selectable auto downshift in manual mode

Auto downshift can be turned off in manual mode in the mode select section of the monitor. The operator can have full control over the downshift in manual mode.

Working environment





Integrated rollover protection structure (ROPS) cab



The D85EX/EXi/PX/PXi-18 has a strong integrated ROPS cab. High rigidity and superb sealing sharply reduce noise and vibration for the operator and minimizes dust that enters the cab. This provides the operator a comfortable working environment. Also, there is more side visibility because an additional external ROPS structure and posts are not required.

Rearview monitoring system

The operator can view directly behind the machine on the color monitor panel.





Comfortable ride with heated seat

The operator seat features an air-suspension, lumbar support, a tilt adjust function and electric heater. The seat easily adjusts to fit operator shape and working conditions. Also the heated seat allows operators to work comfortably in the winter.

LED lights

LED lights are equipped on the machine. The visibility under low light environment is improved, and the operator can work at night with ease.



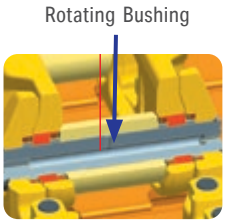
Multifunction audio

Has functions of AM/FM radio and AUX, USB and Bluetooth wireless technology-enabled products can be connected.



Reliability and maintenance features

Parallel Link Undercarriage System (PLUS)



Komatsu's innovative Parallel Link Undercarriage System features a rotary bushing that demonstrates high durability in any working condition. 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



The self-adjusting idler support provides constant and even tension on idler guide plates reducing noise and vibration and increasing undercarriage life.

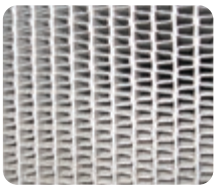
Oil pressure checking ports

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

Easy sampling

New sampling ports for engine, hydraulic and power line oil.

Wide core cooling system



In addition to improved engine compartment sealing, a wide core cooling system is standard. Radiator, oil cooler and charge air cooler use large square-wave fins spaced at 6 fins per inch. This allows more material to pass through, which helps self-cleaning and reduces maintenance.

Equalizer bar side pins



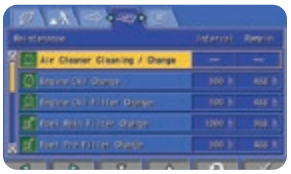
Remote grease nipple located on the outside of track-frame, so you can grease equalizer bar side pins easily.

Multimonitor with troubleshooting function to minimize downtime



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 four levels to help prevent major problems. Replacement times for oil and filters are also indicated.

Maintenance



When the machine reaches the replacement interval for oil and filters, the monitor panel will display lights to inform the operator.

Battery disconnect switch with lockout



A standard battery disconnect switch allows a technician to disconnect the power supply before servicing the machine.

Tie-offs



Anchor points of tie-off are installed. They are used to connect the safety belts of workers for maintenance and cleaning work.

Komatsu helps you bring it all together

Get the most out of your fleet on My Komatsu

We've designed a portal that makes it easy to collect, visualize and monitor data for both Komatsu machines and other OEM machines. My Komatsu also gives you one easy source for accessing manuals and purchasing parts for your machines.

- Quickly collect, view and manage intuitive data displays in one location
- Help keep costs under control
- Benchmark machine performance and track fuel consumption
- Monitor for theft and unauthorized use
- Receive timely maintenance alerts



My Komatsu, our comprehensive portal, analyzes telematics data from your on-machine technology — Komtrax and Komtrax Plus, or from other OEMs — and displays it on easy-to-read dashboards. Now you can get the powerful analytics you need to manage your costs and enhance your fleet's efficiency without a complicated process or expensive third-party solutions.



Data
Telematics data is generated by on-machine technology.



Storage
Telematics data flows into data storage. ISO 15143-3 (AEMP 2.0) facilitates the extraction and raw data to your choice of databases.



Connection
Choose how you want to connect and view your data. Go to multiple systems, send to a third party, or easily connect it all through My Komatsu.



Analytics
My Komatsu connects telematics data from Komatsu and non-Komatsu equipment and creates powerful analytics dashboard views.

Connect your machines to Smart Construction to optimize your job sites

Your projects depend on robust data that is easily shared, replicated, updated and — most important of all — correct.



Take a step toward a digital transformation of your job sites with Komatsu's suite of Smart Construction solutions, where advanced automation and integrated technologies intersect to help you:

- Track costs of labor, machines and materials
- Receive real-time insights straight from the field
- Enhance workflow with fully integrated data
- Visualize your data for actionable results
- Quickly map your job site
- Attract and retain talent



Not sure where to begin? Komatsu-certified solution experts are available on the phone, online or at your job site to help you navigate and thrive along your digitalization journey.

komatsu.com/smart-construction

Komatsu maintenance and repair programs

Simplify the complexities of machine owning and operating costs and enhance the value of your equipment with Komatsu's tiered maintenance and repair offerings. Manage your active coverage programs through the My Komatsu customer interface and take advantage of attractive financing options.

- Solutions that fit your needs and ease your mind
- Fixed maintenance and repair costs for the life of the contract
- National coverage



Komatsu Care Complimentary
Complimentary maintenance
Our complimentary scheduled maintenance program for the first 36 months or 1,500 hours, whichever occurs first.

Komatsu Care Plus
Extended maintenance
A continuation of the Komatsu Care program. Along with regularly scheduled maintenance and national distributor coverage, you get a variety of added benefits.

Komatsu Care Plus II
Extended maintenance and repair
Everything in the Komatsu Care Plus program bundled with comprehensive repair coverage for qualifying repairs.

Komatsu Care Plus III
Extended maintenance, repair and consumables
A comprehensive program that simplifies your equipment's total cost of ownership with a fixed cost per hour for qualifying repairs and replacements.

Komatsu Care Advantage Warranty *Extended warranty*
Protect your equipment in the event a covered component fails due to a defect in material or workmanship. Repairs are performed by Komatsu-trained experts using Komatsu genuine parts.

komatsu.com/maintenance-repair

Komatsu Financial

Financial services built for your business success.

komatsu.com/financing

Komatsu Genuine Parts

Engineered to help extend the life of your Komatsu machine. Now available on the My Komatsu parts store.

komatsu.com/parts

Komatsu training

Comprehensive training support — virtually, at our facility or where most convenient.

komatsu.com/training



D85EX-18/D85PX-18/D85EXi-18/D85PXi-18

Engine

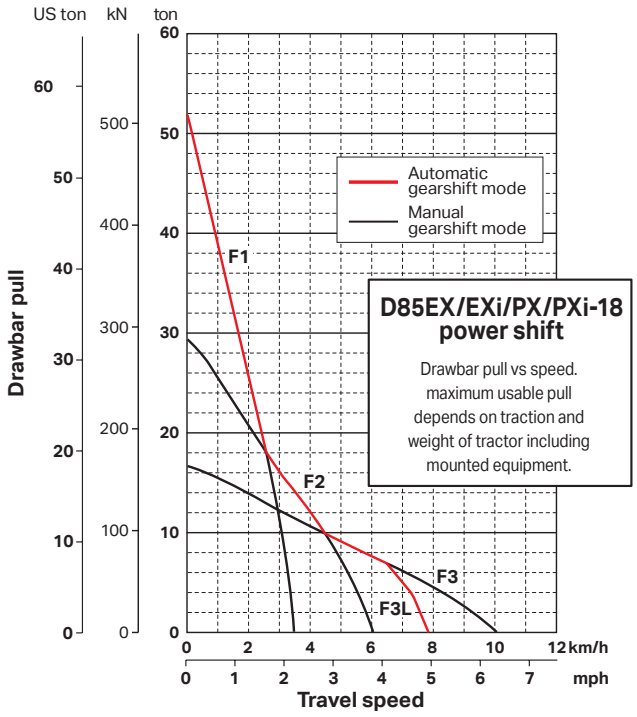
Model	Komatsu SAA6D125E-7*
Type	4-cycle, water-cooled, direct injection
Aspiration	Komatsu variable geometry turbocharged, air-to-air aftercooled
Number of cylinders	6
Bore x stroke	125 mm x 150 mm (4.49 in x 5.69 in)
Piston displacement	11.04 L (674 in^3)
Governor	All-speed and mid-range, electronic
Horsepower	
SAE J1995	Gross: 199 kW 267 HP
ISO 9249/SAE J1349	Net: 197 kW 264 HP
Rated rpm	1,900 rpm
Fan drive type	Hydraulic
Lubrication system	
Method	Gear pump, force lubrication
Filter	Full-flow

**EPA Tier 4 Final emissions certified

Torqflow transmission

Komatsu Torqflow transmission consists of a water-cooled, 3-element, 1-stage, 1-phase and a planetary gear, multiple-disc clutch transmission which is electronically controlled, hydraulically actuated and force-lubricated for optimum heat dissipation. Shift lock lever and neutral safety switch.

Travel speed	Forward	Reverse
1st	3.3 km/h (2.1 mph)	4.4 km/h (2.7 mph)
2nd	6.1 km/h (3.8 mph)	8.0 km/h (5.0 mph)
3rd L	7.8 km/h (4.8 mph)	9.2 km/h (5.7 mph)
3rd	10.1 km/h (6.3 mph)	13.0 km/h (8.1 mph)



Steering system

Palm Command Control 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.

Hydrostatic steering system (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	
D85EX/EXi-18	2.0 m (6'6")
D85PX/PXi-18	2.2 m (7'3")

Undercarriage

Suspension	Oscillating equalizer bar and pivot shaft
Track roller frame	Monocoque, large section, durable construction
Rollers and idlers	Lubricated

Track shoes (D85EX/PX-18 standard)

Lubricated tracks. Unique dust seals for preventing entry of foreign abrasives into pin-to-bushing clearance for extended service life. Track tension is easily adjusted with grease gun.

		D85EX-18	D85PX-18
Number of track rollers (each side)		7	8
Type of shoes (standard)		Single grouser	Single grouser
Number of shoes (each side)		41	45
Grouser height	mm in	72 2.8"	72 2.8"
Shoe width (standard)	mm in	660 26"	910 36"
Ground contact area (ISO 16754)	cm^2 in^2	45920 7,120	70780 10,970
Ground pressure (tractor) (ISO 16754)	kPa kgf/cm^2 psi	52 0.52 7.5	36 0.36 5.2
Track gauge	mm ft. in	2000 6'7"	2250 7'5"
Length of track on ground	mm ft. in	3050 10'0"	3480 11'5"

Track shoes (D85EXi/PXi-18 standard, D85EX/PX-18 optional)

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

		D85EXi-18	D85PXi-18
Number of track rollers (each side)		7	8
Type of shoes (standard)		Single grouser	Single grouser
Number of shoes (each side)		41	45
Grouser height	mm in	72 2.8"	72 2.8"
Shoe width (standard)	mm in	660 26"	910 36"
Ground contact area (ISO 16754)	cm^2 in^2	45920 7,120	70780 10,970
Ground pressure (tractor) (ISO 16754)	kPa kgf/cm^2 psi	52 0.52 7.5	36 0.36 5.2
Track gauge	mm ft. in	2000 6'7"	2250 7'5"
Length of track on ground	mm ft. in	3050 10'0"	3480 11'5"

Final drives

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. Triple labyrinth protects seals and improves durability.

Service refill capacities

Fuel tank	470 L	124.1 US gal
DEF tank	23.5 L	6.2 US gal
Coolant	65 L	17.2 US gal
Engine	38 L	10.0 US gal
Damper case	1.6 L	0.42 US gal
Torque converter, transmission, bevel gear, and steering system	60 L	15.8 US gal
Final drive (each side)		
D85EX-18	26 L	6.9 US gal
D85PX-18	36 L	9.5 US gal

Hydraulic system

Hydraulic control unit		
Closed-center load sensing system (CLSS) designed for precise and responsive control, and for efficient simultaneous operation.		
All spool valves externally mounted beside the hydraulic tank. Piston type hydraulic pump with capacity (discharge flow) of 331 L/min 87.4 US gal/min at rated engine rpm.		
Relief valve setting		22.6 MPa 230 kg/cm² (3,270 psi)
Control valves		
Spool control valves for Sigmadozer, semi-U tilt or straight tilt dozer		
Positions: blade lift		Raise, hold, lower, and float
blade tilt		Right, hold, and left
rear attachment		Raise, hold and lower

	Number of cylinders		Bore
	Sigmadozer	Straight tilt dozer semi-U tilt dozer	
Blade lift	2	2	100 mm (4.0")
Blade tilt	1	1	150 mm (5.9")
Blade angle	1	–	150 mm (5.9")
Ripper lift	2	2	130 mm (5.1")
Pitch angle	45° - 51°	52° - 58°	

Hydraulic oil capacity (refill):	69 L	18.2 US gal
Ripper equipment (additional volume):		
Multi-shank ripper	11 L	2.9 US gal

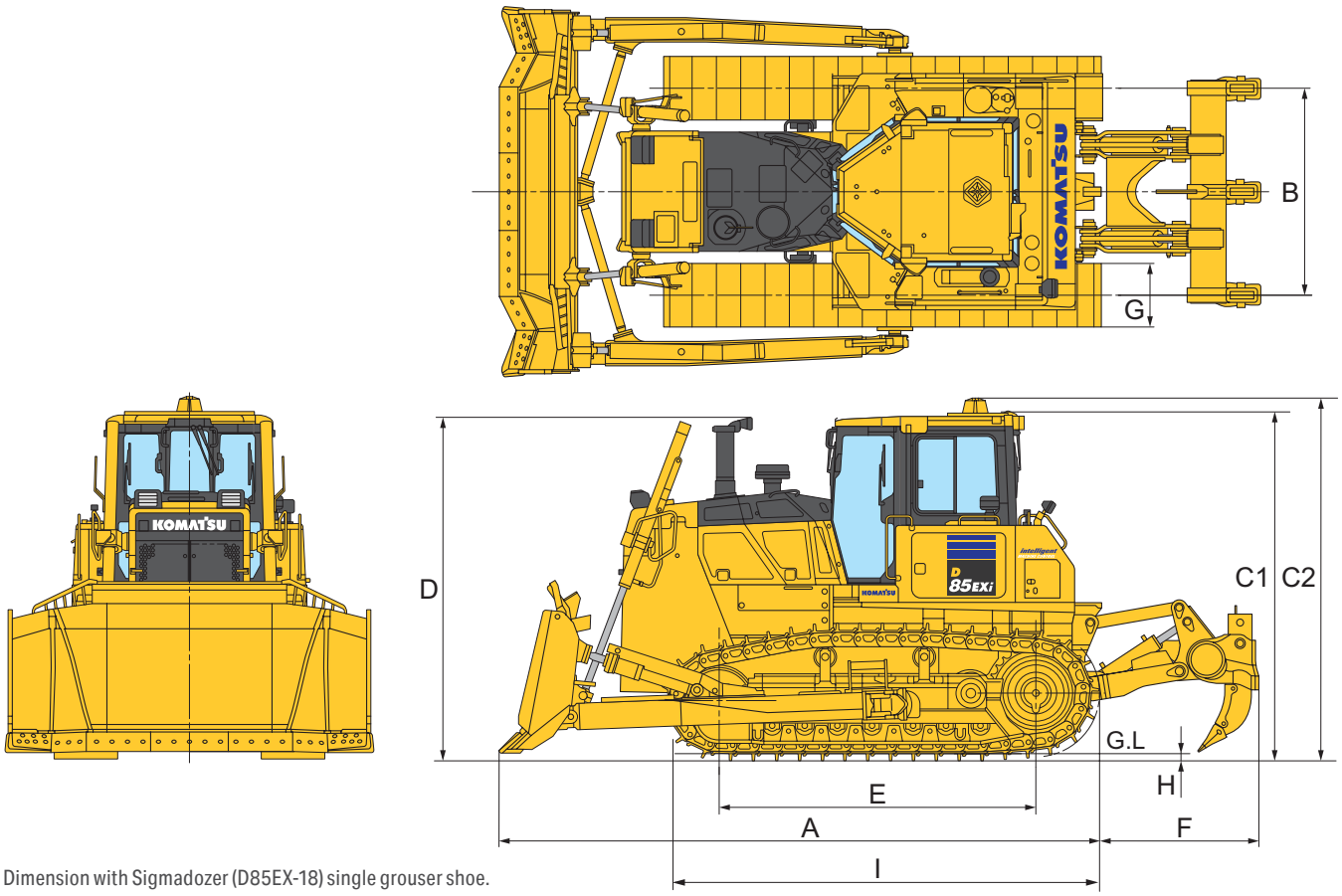
Dozer equipment

Blade capacities are based on the SAE recommended practice J1265. Use of high tensile strength steel in moldboard for strengthened blade construction.

	Overall length with dozer mm ft. in	Blade capacity m^3 yd^3	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	Weight dozer equipment kg lbs.	Ground pressure* ISO 16754 kPa kg/cm² psi
D85EX-18 Strengthened single tilt power pitch Sigmadozer	5810 19' 1"	7.2 9.4	3575 x 1665 11' 9" x 5' 5"	1215 4' 0"	590 1' 11"	700 2' 4"	4030 8880	66 / 0.67 / 9.6
D85EX/EXi-18 Strengthen semi-U tilt dozer	5820 19' 1"	7 9.2	3635 x 160 11' 11" x 5' 3"	1175 3' 10"	530 1' 9"	735 2' 5"	3780 8330	65 / 0.66 / 9.5
D85PX/PXi-18 Straight tilt dozer	6025 19' 9"	5.9 7.7	4355 x 1400 14' 4" x 4' 7"	1230 4' 0"	560 1' 10"	500 1' 8"	3140 6920	41 / 0.41 / 5.9

*Ground pressure is based on machine operating weight with blade shown and fixed ripper (EX) or long drawbar (PX)

D85EX-18/D85PX-18/D85EXi-18/D85PXi-18



Dimension with Sigmadozer (D85EX-18) single grouser shoe.

Dimensions

	D85EX/EXi-18 Sigmadozer or semi-U dozer with multi-shank ripper		D85PX/PXi-18 Straight tilt dozer with long drawbar	
A	7325 mm	24'1"	6435 mm	21'1"
B	2000 mm	6'7"	2250 mm	7'5"
C1	3322 mm	10'11"	3322 mm	10'11"
C2	3498 mm	11'6"	3498 mm	11'6"
D	3290 mm	10'10"	3290 mm	10'10"
E	3050 mm	10'0"	3480 mm	11'5"
F	1515 mm	5'0"	-	-
G	660 mm	2'2"	910 mm	3'0"
H	72 mm	2.8"	72 mm	2.8"
I	4275 mm	14'0"	4685 mm	15'4"
Ground clearance				450 mm 1'6"

Operating weight

Tractor shipping weight	
Shipping weight includes blade lift cylinders, lubricants, coolant, 10% fuel, ROPS/FOPS cab, ripper (EX/EXi) or drawbar (PX/PXi).	
D85EX-18	58,500 lbs. (26,540 kg)
D85EXi-18	59,240 lbs. (26,870 kg)
D85PX-18	56,900 lbs. (25,810 kg)
D85PXi-18	57,760 lbs. (26,200 kg)
Operating weight	
Operating weight includes blade, lubricants, coolant, full fuel tank, ROPS/FOPS cab, ripper (EX/EXi) or drawbar (PX/PXi).	
D85EX-18 semi-u	67,615 lbs. (30,670 kg)
D85EX-18 Sigma	68,165 lbs. (30,920 kg)
D85EXi-18 semi-u	68,350 lbs. (31,000 kg)
D85PX-18 straight	64,600 lbs. (29,300 kg)
D85PXi-18 straight	65,460 lbs. (29,700 kg)

Standard equipment for base machine*

- Air cleaner, double element with dust indicator
- Alternator, 90 ampere/24V
- Auto idle shutdown function
- Backup alarm
- Batteries, 200 Ah/2 x 12V, maintenance-free
- Battery disconnect switch with lockout
- B20 Biodiesel fuel lines
- Blade lift cylinders
- Color monitor, LCD
- Decelerator pedal
- Engine auto-deceleration
- Engine hood
- Engine intake centrifugal precleaner
- Engine, gull-wing side covers
- Engine shutdown secondary switch
- Exhaust pipe with raincap
- Fenders
- Front pull hook
- High mount foot rests
- Horn, warning
- Hydraulic driven radiator cooling fan with reverse clean mode
- Hydraulics for front attachment:
  - Semi U blade hydraulics, single tilt
  - Straight blade hydraulics, single tilt
  - Sigma blade hydraulics, single tilt and pitch
- Hydraulics for rear attachment
- Komtrax Level 5
- Komatsu Diesel Particulate Filter (KDPF)
- Komatsu variable geometry Turbocharger (KVGT)
- Locks, filler caps and covers
- Oil pressure check ports for power train
- Oil sampling ports for engine, trans, hydraulics
- PM service connector
- Radiator mask, heavy-duty, hinged, perforated
- Radiator reserve tank
- Rear cover
- Remote equalizer bar grease fittings
- ROPS cab**
- 75 dB operator ear noise level (ISO 6394: 1998)
- Air conditioner
- Cab accessories
  - 12V power supply (2 ports)
  - Cup holder
  - Rearview mirror
  - Rear view monitoring (1 camera)
  - Radio, Bluetooth USB compatible
- Work lights, LED type
  - 2 front, hood mounted
  - 2 front, cab mounted
  - 1 rear, left fender mounted
  - 2 rear, cab mounted
- Seat, air suspension, fabric, heated low back, rotates 12.5° to right, headrest
- Seat belt, 76 mm 3", retractable
- Seat belt indicator
- Sealed electrical connectors
- Starting motor, 11.0 kW/24V
- Steering system:
- Hydrostatic steering system (HSS)
- Tie-off points standard (ISO 14567)
- Torque converter
- Track roller guards, center and end sections
- Track shoe assembly
  - Heavy-duty sealed and lubricated track (EX and PX)
  - 660 mm 26" extreme service single grouser shoe (EX)
  - 910 mm 36" moderate service single grouser shoe (PX)
  - Heavy-duty lubricated rotary bushing (PLUS) track (EXi and PXi)
  - 660 mm 26" ES single grouser shoe (EXi)
  - 910 mm 36" ES single grouser shoe (PXi)
- Transmission with auto/manual shift modes
- Underguards, heavy duty
  - Hinged belly pan
  - Transmission
- Fuel system water separator
- Wide core A/C condenser

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

** Cab meets OSHA/MSHA ROPS and FOPS Level 2 standards (ROPS standards ISO 3471, SAE J/ISO 3471; FOPS standards ISO 3449)

Optional equipment

- Drawbar, long type
- Hitch
- Sigmadozer (EX)
- Semi-U (EX and EXi)
- Straight tilt (PX and PXi)
- Push arms for use with allied blades
- Trunnions for use with allied dozer assembly
- Track roller guard, full length
- Waste Package available with EX semi-U and PX straight blade

Three-shank ripper (for EX and EXi)

Weight	5,520 lbs. (2,500 kg)
Beam length	2,246 mm 7'4"
Maximum lift above ground	565 mm 1'10"
Maximum digging depth	655 mm 2'2"



Shoes

	Shoes, single grouser	Additional weight	Ground contact area
EX	660 mm 26" PLUS extreme service	+728 lbs.+330 kg	40260 cm^2 6,240 in^2
PX	910 mm 36" PLUS extreme service	+860 lbs.+390 kg	63340 cm^2 9,820 in^2





Allied manufacturer's attachments (shipped loose)

- Guarding - Medford
  - Cab cover 400 lbs. (181 kg)
  - Front sweeps, open bullnose 700 lbs. (317 kg)
  - Front sweeps, covered bullnose 1,100 lbs. (500 kg)
  - Hinged cab side screens 175 lbs. (79 kg)
  - Hinged cab rear screen 200 lbs. (91 kg)
  - Tank guards 1,100 lbs. (500 kg)
- Hydraulic winch - Allied H8L
  - 3,400 lbs. (1,542 kg)



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