KOMATSU[®] **D275A-5**R



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HORSEPOWER

Gross: 337 kW 452 HP @ 2000 rpm Net: 335 kW 449 HP @ 2000 rpm

OPERATING WEIGHT

50850 kg 112,100 lb





D275A-5R CRAWLER DOZER

WALK-AROUND

SAA6D140E-5 turbocharged after-cooled

diesel engine provides an output of 335 kW 449 HP with excellent productivity. See page 6.

Preventative maintenance

- Centralized service station
- Enclosed hydraulic piping
- Modular power train design
- Oil pressure checking ports
- Electric priming pump See page 9.

Simple hull frame

and monocoque track frame with pivot shaft for greater reliability.

Large blade capacities:

13.7 m³ 17.9 yd³ (Semi-U dozer), **16.6 m³** 21.7 yd³ (U dozer) and **14.6 m³** 19.1 yd³ (SIGMADOZER) See page 7.

New track link design

reduces maintenance cost by making turning pins easier. with improved pin reuse. See page 9.

Komatsu-integrated design

for the best value, reliability, and versatility. Hydraulics, power train, frame, and all other major components are engineered by Komatsu. You get a machine whose components are designed to work together for higher production, greater reliability, and more versatility.

Hydraulic driven radiator cooling fan

controlled automatically, reduces fuel consumption and operating noise levels. See page 6

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New hexagonal designed cab includes:

- Spacious interior
- Comfortable ride with new cab damper mounting and K-Bogie undercarriage • Excellent visibility
- High capacity air conditioning system (optional)
- Palm Command Control System (PCCS) lever controls
- Optional pressurized cab
- Adjustable armrest

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• Travel control console integrated with operator seat See page 8.

Filtration

See page 10.

Electronic Controlled Modulation Valve (ECMV)

See page 5.

Low-drive, long-track, seven roller undercarriage ensures outstanding grading ability and stability.

Track shoe slip control system (option) See page 7.

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CRAWLER DOZER



HORSEPOWER Gross: 337 kW 452 HP @ 2000 rpm Net: 335 kW 449 HP @ 2000 rpm

> **OPERATING WEIGHT 50850 kg** 112,100 lb

BLADE CAPACITY Semi-U: 13.7 m³ 17.9 yd³ Full-U: 16.6 m³ 21.7 yd³

Extra-low machine profile provides excellent machine balance and low center of gravity.

Further enhanced reliability of the machine against fuel contamination thanks to the improvement in fuel filtration.

controlled steering clutches/brakes facilitating steering operation.



K-Bogie undercarriage system improves traction, component durability, and operator comfort.

See page 6.

PALM COMMAND CONTROL SYSTEM (PCCS)

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

Human-machine Interface

Palm command electronic controlled travel control joystick

Palm command travel joystick provides the operator with a relaxed posture and superb fine control. Transmission gear shifting is simplified with thumb push buttons.



Full-adjustable suspension seat and travel control console

For improved rear visibility during reverse operations, the operator can adjust seat 15° to the right. The transmission and steering controls move with the seat for optimum operator comfort. The travel control console also has adjustment fore and aft, and height. The armrest is independently adjustable up and down, providing optimum operation posture for all operators.

Facing front



When turned 15°



Palm command PPC controlled blade control **joystick**

Blade control joystick uses the **Proportional Pressure Control** (PPC) valve and palm command joystick similar to the travel control joystick. PPC control combined with the

highly reliable Komatsu hydraulic system enables superb fine control. (Dual tilt and pitch operation are enabled by depressing switch with a thumb. This is available when optional dual tilt dozer is installed.)

Blade and ripper

control joystick

Fuel control dial

Engine revolution is controlled by electric signals, providing ease of operation, eliminating maintenance of linkage and joints.

Height adjustable blade control armrest

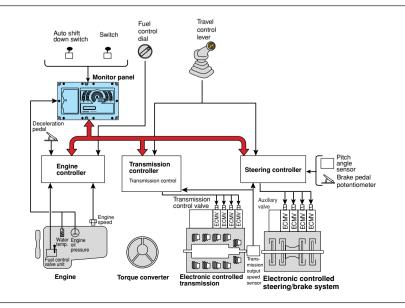
Blade control armrest is height adjustable without any tools in three stages, providing the operator with firm arm support in an ideal armrest.

Position adjustable ripper control lever

Ripper control lever position is adjustable, providing optimum operator posture during all types of ripping operations.

Outline of electronic control system

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Power Train Electronic Control System

Smooth and soft operation

D275A-5R utilizes a newly designed power train electronic control system. The controller registers the amount of operator control (movements of lever and operation of switches) along with machine condition signals from each sensor, to calculate accurately the control of the transmission, steering clutches and brakes for optimal machine operation. The ease of operation and productivity of new D275A-5R is greatly improved through these new features.

Electronic Controlled Modulation Valve (ECMV) controlled transmission

Controller automatically adjusts each clutch engagement depending on travel conditions such as gear speed, revolution and shifting pattern. This provides smooth shockless clutch engagement, improved component reliability, improved component life and operator ride comfort.

Electronic Controlled Modulation Valve (ECMV) controlled steering clutches/brakes

Sensors monitor machine operating conditions, and electronically control steering clutches and brakes depending on type of job, such as size of load during dozing, incline angle of slope or load, providing smooth and ease of operation by reducing counter-steering on downhill travel, etc.

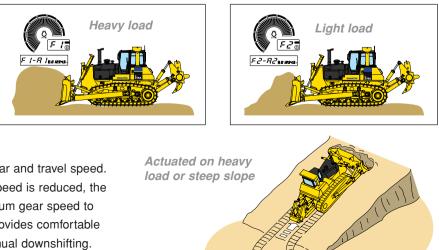
Effect of ECMV steering clutches/brake control

When dozing and turning, ECMV automatically controls stroke ratio of steering clutches and brakes depending on degree of load. enabling smooth dozing and turning.

Preset travel speed function

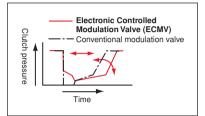
Preset travel speed selection function is standard equipment, enabling the operator to select fore and aft travel speed from three preset patterns; F1-R1, F1-R2 and F2-R2 by using the UP/DOWN switch. When the F1-R2 or F2-R2 preset pattern is selected and the travel control is moved into forward or reverse, the machine travels in the preset gear range automatically. This function reduces manual gear shifting frequency during machine operation, enabling the operator to focus on directional and hydraulic control. Preset travel speed selection is especially helpful when used in combination with the auto-downshift function and reduces cycle times during repeated round trip operations.

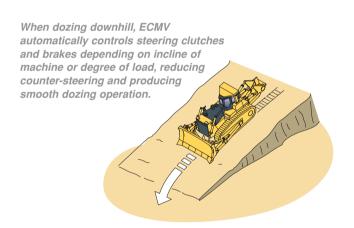




Auto downshift function

Controller monitors engine speed, travel gear and travel speed. When load is applied and machine travel speed is reduced, the controller automatically downshifts to optimum gear speed to provide high fuel efficiency. This function provides comfortable operation and high productivity without manual downshifting. (This function can be cancelled with cancel switch.)





PRODUCTIVITY FEATURES

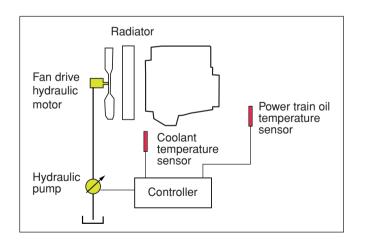


Engine

The Komatsu SAA6D140E-5 engine delivers 335 kW 449 HP at 2000 rpm. The fuel-efficient Komatsu engine, together with the heavy machine weight, make the D275A-5R a superior crawler dozer in both ripping and dozing production. The engine features direct fuel injection, turbocharger and air-toair 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

Fan rotation is automatically controlled depending on coolant and hydraulic oil temperature, saving fuel consumption and providing great productivity with a quiet operating environment.



Undercarriage

K-Bogie system

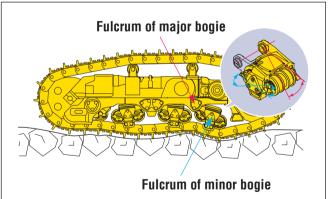
New K-Bogie undercarriage system retains prior advantages, with new additional features.

Current features:

- Effective length of track on ground is consistent. Shoe slippage is minimized; therefore, high traction is obtained.
- The idler does not oscillate under load, providing excellent machine balance. Blade and ripper penetration force remains stable for increased productivity.

New features on K-Bogie undercarriage system:

- K-Bogies oscillate with two fulcrums, and track roller vertical travel is greatly increased. Impact load on all undercarriage components has been reduced and durability of components is improved since track rollers are always in contact with track link.
- Undercarriage life is improved due to better control of track chain alignment with track rollers.
- Riding comfort is improved by reducing vibration and shock when traveling over rough terrain.





Large blade

Capacities of 13.7 m³ 17.9 yd³ (Semi-U dozer) , 16.6 m³ 21.7 yd³ (U dozer) and 14.6 m³ 19.1 yd³ (SIGMADOZER) yield outstanding production. High-tensile-strength steel has been incorporated into the front and sides of the blade for increased durability.

Dual tilt dozer (option)

The dual tilt dozer increases productivity while reducing operator effort.

- Optimum blade cutting angle for all types of materials and grades can be selected on-the-go for increased load and production. • Digging, dozing (carry), and dumping (spreading) are easy and smooth.
- Dozer tilt angle and tilt speed are twice that of a conventional single tilt system.

Rippers

- The variable giant ripper features a long sprocket center-to-ripper point distance, making ripping operation easy and effective while maintaining high penetration force.
- The variable giant ripper is a parallelogram single shank ripper ideal for ripping in tough material. The ripping angle is variable, and the depth is adjustable in three stages by a hydraulically controlled pin puller.
- The multi-shank ripper is a hydraulically controlled parallelogram ripper with three shanks.

Track shoe slip control system (option)



Track shoe slip

control panel

- Eliminates the need for the operator to constantly control engine power output with the decelerator while ripping.
- Maneuverability is improved because the operator is free to focus on the ripping application without having to monitor the track shoe slippage
- Repair costs are significantly lowered and undercarriage life is prolonged with the reduction in track shoe slippage.
- automatically controlled to optimum levels for operation.



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CRAWLER DOZER



D275A-5R

• The track shoe slip control system will contribute to lower fuel costs, because the engine output is

WORKING ENVIRONMENT

Operator Comfort

Operator comfort is essential for productive work. The D275A-5R provides a quiet, comfortable environment where the operator can concentrate on the work at hand.



Hexagonal pressurized cab (optional)

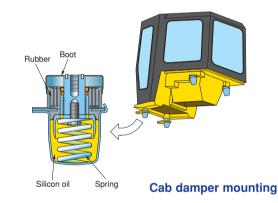
- The cab's new hexagonal design and large tinted glass windows provide excellent front, side, and rear visibility.
- Air filters and a higher internal air pressure combine to prevent dust from entering the cab.



Photo may include optional equipment

Comfortable ride with new cab damper mounting and K-Bogie undercarriage

D275A-5R's cab mount uses a new cab damper which provides excellent shock and vibration absorption capacity with its long stroke. Cab damper mounts combined with new K-Bogie undercarriage, softens shocks and vibration while traveling over adverse conditions, that are impossible to absorb with conventional cab mounting methods. The soft spring of cab damper isolates the cab from machine body, suppressing vibration and providing a quiet, comfortable operating environment.



New suspension seat

D275A-5R uses a new suspension seat. Fore and aft sliding rails and suspension spring are reinforced and play

of joints is reduced. In addition to turning function for ripper operation, the seat is also tiltable to facilitate down hill dozing. Air suspension seat is also available.



MAINTENANCE

Preventative Maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D275A-5R with conveniently located maintenance points to make necessary inspections and maintenance quick and easy.

Centralized service station

To assure convenient maintenance, the transmission and HSS oil filters, power train oil level gauges and hydraulic tank are arranged in the right side of the machine.



All warning and monitor lamps are lit for photo shooting.

Monitor with self-diagnostic function

With the starting switch turned ON, the monitor displays P on the display, check-before-starting and caution items appear on the lower right part of the panel. If the monitor finds abnormalities, corresponding warning lamp blinks and warning buzzer sounds. The monitor displays engine rpm and forward/reverse gear speed on the upper part of the monitor during operation. If abnormalities occur during operation, user code and service meter are displayed alternately. When a critical user code is displayed, the caution lamp blinks and a warning buzzer sounds to prevent the development of serious problems.

Enclosed hydraulic piping

Hydraulic piping for the blade tilt cylinder is completely housed in the push arm, ensuring damage protection from materials.

Modular power train design

Power train components are sealed in a modular design that allows the components to be dismounted and mounted without oil spillage.

Low Maintenance Costs

New Track Link Design

New D275A-5R track links feature increased link tread and link height and track guiding guard shape is improved. The result is improved undercarriage life and reduced cost through maintenance man-hours when turning pins and bushings.

CRAWLER DOZER

Oil pressure checking ports

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



D275A-5R

Maintenance free disc brakes

Wet disc brakes require less maintenance.

Enlarged engine room

Engine room space is enlarged by increasing engine hood height, facilitating maintenance of the engine and related equipment. Perforated holes on the engine hood are discontinued, preventing dust and rain entering and to keep engine area clean.

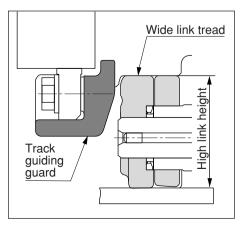
Gull-wing engine side covers

The opening area is further enlarged when gull-wing engine side covers are opened, facilitating engine maintenance and filter replacement. Side covers have been changed to a thick one-piece structure with a bolt-on catch to improve durability.

Electric priming pump

Simply pressing the button enables bleeding air from the fuel circuit at the time of filter replacement, etc.





RELIABILITY FEATURES

Filtration

Engine

Newly added main fuel filter of 2μ and water separator protect the engine against dirt and water in the fuel.



The fuel tank is equipped with a high-filtration breather with pressure valve to prevent dust from entering.

The hydraulic tank is equipped with a high-filtration breather with pressure valve to prevent dust from entering.

Hydraulic







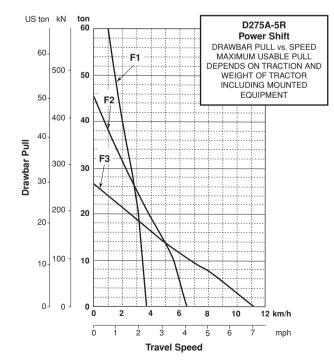
Specifications

Model
Horsepower
SAE J1995 452 HP
ISO 9249 / SAE J1349* Net 335 kW 449 HP
Rated rpm
Fan drive type Hydraulic
Lubrication system
Method
Filter
*Net horsepower at the maximum speed of
radiator cooling fan



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

Gear	Forv	vard	Reverse		
1st	3.6 km/h	3.6 km/h 2.2 mph		2.9 mph	
2nd	6.7 km/h	4.2 mph	8.7 km/h	5.4 mph	
3rd	11.2 km/h	7.0 mph	14.9 km/h	9.3 mph	





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 rims are bolt-on for easy replacement. D275A-5R



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.

PCCS lever, joystick controlled wet multiple-disc steering clutches, hydraulically loaded and hydraulically released. Wet multiple-disc, pedal/lever controlled steering brakes are spring loaded hydraulically released and require no adjustment. Steering clutches and brakes are interconnected for easy, responsive steering.

Suspension Oscillating equalizer bar and pivot shaft Track roller frame Cylindrical, high-tensile-strength steel construction Rollers and idlers Lubricated track rollers K-Bogie undercarriage Lubricated track rollers are resiliently mounted to the roller frame with a series of K-Bogies whose oscillating motion is cushioned by rubber pads. Extreme service 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. Number of shoes (each side) 39

 Grouser height:
 88 mm 3.5"

 Shoe width (standard)
 610 mm 24"

 Ground contact area
 42456 cm² 6,580 in²

 Ground pressure (tractor only)
 87.3 kPa 0.89 kg/cm² 12.7 psi

 Number of track rollers
 7

 Number of carrier rollers
 2

Extreme service shoes	Additional Ground weight contact area		Ground pressure		
710 mm 28"	570 kg 1,260 lb	49416 cm² 7,659 in²	102 kPa 1.04 kg/cm ² 14.8 psi		
760 mm 30"	850 kg 1,870 lb	52,896 cm² 8,199 in²	96 kPa 0.98 kg/cm² 13.9 psi		

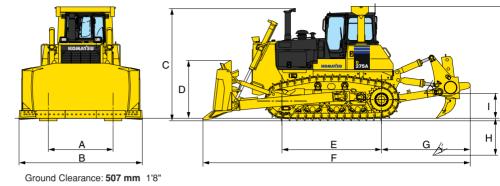
COOLANT AND LUBRICANT CAPACITY (REFILL)

Fuel tank	222 U.S. gal
Coolant	26.4 U.S. gal
Engine	13.7 U.S. gal
Torque converter, transmission,	
bevel gear, and steering system	23.8 U.S. gal
Final drive (each side)	10.6 U.S. gal

SEMI-U DOZER WITH GIANT RIPPER

D275A-5R

Α	2260 mm	7'5"
В	4300 mm	14'1"
С	3915 mm	12'10"
D	1960 mm	6'5"
E	3480 mm	11'5"
F	9290 mm	30'6"
G	3060 mm	10'0"
Н	1420 mm	4'8"
I	1195 mm	3'11"
J	3990 mm	13'1"





OPERATING WEIGHT

Ground pressure 117 kPa 1.20 kg/cm² 17.0 psi

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 **230 ltr/min** 60.8 U.S. gal/min at rated engine rpm.

Relief valve setting 27.5 MPa 280 kg/cm² 3,980 psi

Control valves:

Spool control valves for Semi-U tilt dozer and Full-U tilt dozer Positions: Blade lift Raise, hold, lower, and float

Additional control valve required for variable digging angle multi-shank ripper and giant ripper.

Positions: Ripper lift..... Raise, hold, and lower Ripper tilt..... Increase, hold, and decrease Hydraulic cylinders Double-acting, piston

 Number of cylinders
 Bore

	Number of cymuers	DUIG
Blade lift	2	120 mm 4.72"
Blade tilt	1	180 mm 7.09"
Ripper lift	2	180 mm 7.09"
Ripper tilt	2	160 mm 6.30"

Hydraulic oil capacity (refill):	
Semi-U tilt dozer 130 ltr	34.3 U.S. gal
Full-U tilt dozer	34.3 U.S. gal
Ripper equipment (additional volume):	
Giant ripper	10.0 U.S. gal
Multi-shank ripper 38 Itr	10.0 U.S. gal



DOZER EQUIPMENT

Blade capacities are based on the SAE recommended practice J1265.

	Overall	Diada	Diada	Maximum	Maximum	Maximum	We	ight	Oriound
	length with	Blade	Blade	lift above	drop below	tilt	Dozer	Hydraulic	Ground
	dozer	capacity	length x height	ground	ground	adjustment	equipment	oil	pressure*
Semi-U tilt	6930 mm	13.7 m³	4300 mm x 1960 mm	1450 mm	640 mm	1000 mm	7480 kg	29 kg	117 kPa
dozer	22'9"	17.9 yd³	14'1" x 6'5"	4'9"	2'1"	3'3"	16,490 lb	64 lb	1.20 kg/cm² 17.0 psi
Full-U tilt	7265 mm	16.6 m³	4615 mm x 1973 mm	1450 mm	640 mm	1070 mm	8405 kg	29 kg	120 kPa
dozer	23'10"	21.7 yd³	15'2" x 6'6"	4'9"	2'1"	3'6"	18,530 lb	64 lb	1.22 kg/cm² 17.3 psi
Dual tilt	6930 mm	13.7 m³	4300 mm x 1960 mm	1450 mm	640 mm	1140 mm	7560 kg	35 kg	118 kPa
Semi-U dozer	22'9"	17.9 yd³	14'1" x 6'5"	4'9"	2'1"	3'9"	16,670 lb	77 lb	1.20 kg/cm² 17.1 psi
Dual tilt	7265 mm	16.6 m³	4615 mm x 1973 mm	1450 mm	640 mm	1220 mm	8485 kg	35 kg	120 kPa
Full-U dozer	23'10"	21.7 yd ³	15'2" x 6'6"	4'9"	2'1"	4'0"	18,710 lb	77 lb	1.22 kg/cm² 17.4 psi

^t Ground pressure shows tractor, cab, ROPS, operator, giant ripper standard equipment and applicable blade.

When calculating the operating weight of dual tilt dozer, add the 50 kg weight of additional hydraulic system to the tractor weight.

STANDARD EQUIPMENT

- Alternator 75 ampere/24V
- Backup alarm
- Batteries 170 Ah/2 x 12V
- Blower fan
- Decelerator pedal
- Dry-type air cleaner with dust evacuator and dust indicator
- Electric priming pump
- Final drive case wear guard
- Hinged front mask

ROPS:*

*Meets ISO 3471 and SAE J/ISO 3471 ROPS standards

- · Hinged underguard with front pull hook
- Hydraulic track adjusters
- Lighting system (including four front and two rear lights)
- Muffler with rain cap
- Palm lever steering control
- Perforated side covers
- Radiator reserve tank
- ROPS brackets
- Segmented sprockets

Dimensions

Width 1980 mm 6'6"

- Seven-roller track frames
- Shoes, 610 mm 24" extreme service, single-grouser
- Starting motors 11 kW/24 V
- Suspension seat
- TORQFLOW transmissions
- Torque converter
- Track roller guards
- Warning horn
- Wet steering clutches/brakes

Height from

compartment floor 1835 mm 6'0"

OPTIONAL EQUIPMENT

- Air conditioner with heater and defroster
- Alternator 90 ampere/24 V
- Batteries 200 Ah/2 x 12V
- Counterweight .
- Cushion push block
- Dual tilt dozer
- Fire extinguisher
- Hitch
- Hydraulics for ripper
- Light for ripper point
- Mirror, rearview

Steel cab:*

- Dimensions:
- Width 1455 mm 4'9"
- Height from compartment floor to ceiling 1530 mm 5'0"
- *Meets ISO 3449 FOPS standard.

- Panel cover
- Perforated single radiator mask
- Pusher plate
- Radio, stereo
- Seat
- Air suspension seat
- Suspension seat
- -Fabric seat
- -Fabric seat, high backrest
- Seat belt

Multi-shank ripper:

Hydraulically controlled parallelogram ripper with three shanks. Ripping angle infinitely adjustable.

Weight (including hydraulic

vveight (including hydraulic
control unit) 4462 kg 9,840 lb
Beam length
Maximum lift above ground 955 mm 3'2"
Maximum digging depth 900 mm 2'11"

• Shoes:

- -710 mm 28"
- -760 mm 30"
- Spill guard for Semi-U dozer
- Spill guard for U dozer
- Strengthened Semi-U blade •
- Strengthened U blade
- Sun visor
- Track shoe slip control system
- Vandalism protection kit

Variable giant ripper:

Variable, parallelogram single-shank ripper ideal for ripping up tough material. Ripping angle is infinitely adjustable. Ripping depth is adjustable in three stages by a hydraulically controlled pin puller.

Weight (including hydraulic

control unit) 4600 kg 10,140 lb Maximum lift above ground . 1195 mm 3'11" Maximum digging depth 1420 mm 4'8"

SIGMADOZER

	Overall			Maximum	Maximum	Maximum	Weight		
	length with	Blade	Blade	lift above	drop below	tilt	Dozer	Hydraulic	Ground
	dozer	capacity	length x height	ground	ground	adjustment	equipment	oil	pressure**
Strengthened Dual tilt	6665 mm	14.6 m³	4440 mm x 2150 mm	1390 mm	745 mm	1070 mm	9110 kg	35 kg	121 kPa
SIGMADOZER	21'10"	19.1 yd³	14'7" x 7'1"	4'7"	2'5"	3'6"	20,080 lb	77 lb	1.24 kg/cm² 17.6 psi
Strengthened	6665 mm	14.6 m³	4440 mm x 2150 mm	1390 mm	745 mm	1000 mm	9030 kg	29 kg	121 kPa
SIGMADOZER	21'10"	19.1 yd³	14'7" x 7'1"	4'7"	2'5"	3'3"	19,910 lb	64 lb	1.23 kg/cm² 17.6 psi

Ground pressure shows tractor, cab, ROPS, operator, giant ripper standard equipment and applicable blade. When calculating the operating weight of dual tilt dozer, add the 50 kg weight of additional hydraulic system to the tractor weight.



