# KOMATSU®

D155A-6

HORS F CWER Gross: 268 kW 360 HP @ 1905 APRIL 264 kW 354 HP @ 900 description

> **OPERATING WEIGHT 41700 kg** 91,930 lb

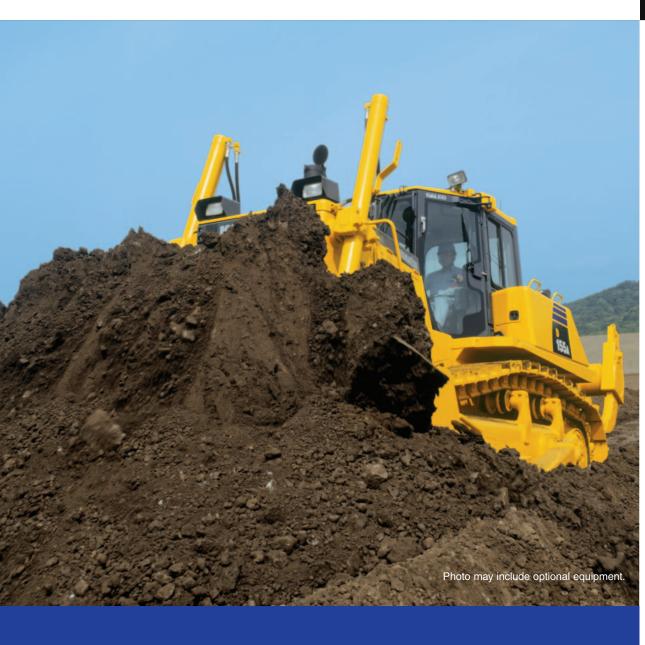
> > **BLADE CAPACITY**

Semi-U DOZER: 9.4 m<sup>3</sup> 12.3 yd<sup>3</sup>



CRAWLER DOZER





# WALK-AROUND

## Large blade capacity:

**9.4 m³** 12.3 yd³ (Semi-U dozer) and **11.9 m³** 15.6 yd³ (U dozer) See page 4.

# **Automatic transmission** increases speed and power to improve productivity. See page 4.

**SAA6D140E-5 turbocharged after- cooled diesel engine** provides an output of **264 kW** 354 HP with excellent productivity. This engine is EPA Tier 2 and EU Stage 2 emissions equivalent.
See page 5.

# Hydraulic drive radiator cooling fan controlled

automatically, reduces fuel consumption and operating noise levels. See page 5.

**Gull-wing engine side covers** for easy and efficient engine servicing.
See page 8.

## Blade tilt lines

completely protected. See page 8.

## Low drive, rugged undercarriage

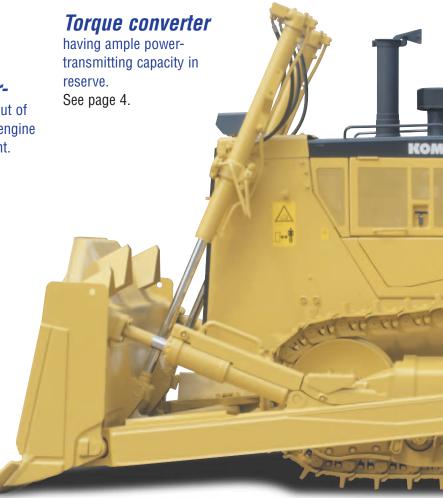
outstanding durability even traveling over severe rocky terrain.

See page 5.

## PCCS (Palm Command Control System)

- Electronic controlled PCCS travel control
- Hydraulic controlled PCCS blade/ripper control
- Fuel control dial
- Automatic/manual gearshift selectable mode
- Gearshift pattern preset function
- ECMV (Electronic Controlled Modulation Valve) controlled transmission

See page 6.



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

**Wet disc brakes** require less maintenance. See page 8.

### **Filtration**

Further enhanced reliability of the machine against fuel contamination thanks to the improvement in filtration. See page 9.

HORSEPOWER Gross: 268 kW 360 HP @ 1900 rpm

Net: 264 kW 354 HP @ 1900 rpm OPERATING WEIGHT

41700 kg 91,930 lb

BLADE CAPACITY Semi-U DOZER: 9.4 m<sup>3</sup> 12.3 yd<sup>3</sup>

#### CRAWLER DOZER

### New integrated ROPS cab includes:

- Large quiet operator environment
- Comfortable ride with new cab damper
- Excellent visibility without ROPS post
- Two-position seat
- High capacity air conditioning system (optional)
- Pressurized cab (optional)
- Adjustable armrests and suspension seat (optional)

See page 7.

### Large TFT LCD monitor

- Easy-to-see and use 7" large multi-color monitor
- Can be displayed in 10 languages for global support
- Advanced monitoring system for early troubleshooting



Photo may include optional equipment.

# **Modular power train** for increased serviceability and durability. Forward mounted pivot shafts isolate final drives from blade loads. See page 8.

# **High-rigidity, simple hull frame** and monocoque track frame with pivot shaft for greater reliability.

See page 8.

### Rippers (optional):

- Variable multi-shank
- Variable giant

Newly designed ripper offers excellent ripper visibility and dynamic ripping operation. See page 4.

# **PRODUCTIVITY FEATURES**

#### **Automatic transmission with torque converter**

Greater power train efficiency is achieved by the new 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 selectable with a switch)

#### Automatic/manual gearshift selectable mode

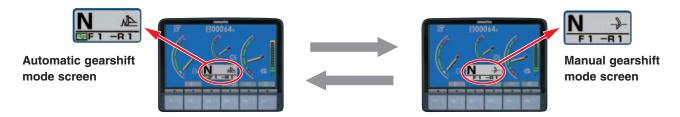
Automatic or manual gearshift modes can be selected with ease to suit the work at hand by simply pressing the switch on the multi-monitor (selection at neutral).

#### Automatic gearshift mode

The mode for general dozing. When a load is applied, the gear automatically shifts down, and when the load is off, it automatically shifts up to a set maximum gear speed. This mode automatically selects the optimum gear speed.

#### Manual gearshift mode

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



#### Large blade capacity

Capacity of **9.4 m³** 12.3 yd³ (Semi-U dozer) and **11.9 m³** 21.7 yd³ (U dozer) yield outstanding production. Hightensile-strength steel is incorporated into the front and sides of the blade for increased durability.

#### Ripper performance

Ripper cylinders are reduced from four to two, greatly improving rear visibility during ripping.

Also, expanded ripper movement offers a wider range of

operation.



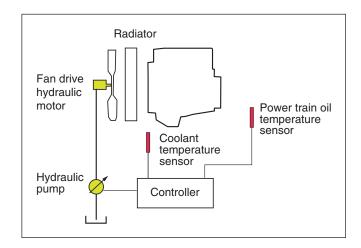
## **Engine**

#### Fuel-efficient electronic controlled engine

The Komatsu SAA6D140E-5 engine delivers **264 kW** 354 HP at 1900 rpm. The fuel-efficient, powerful Komatsu engine makes the D155A superior in both ripping and dozing operations. The engine is EPA Tier 2 and EU Stage 2 emissions equivalent, and features direct fuel injection, turbocharger and air-to-air aftercooling to maximize power. To minimize noise and vibration, the engine is mounted to the main frame with rubber cushions.

#### Hydraulic driven engine 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

#### Field-proven low-drive, rigid type undercarriage

Komatsu's unique low-drive undercarriage features less shoe slippage compared with other types of undercarriage. The undercarriage follows the ground firmly for increased drawbar pull. Large strengthened shoes have been proven to be highly durable in various job sites all over the world.

Length of track on ground: 3150 mm (10'4")



# **CONTROL FEATURES**



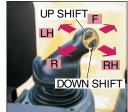
## Human-Machine Interface PCCS (Palm Command Control System)

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

## Palm command electronic controlled travel control joystick

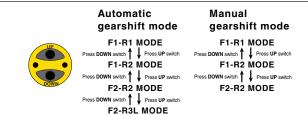
Palm command travel joystick provides the operator with a relaxed posture and superb fine control.

Transmission gear shifting is simplified with thumb push buttons.



#### Gearshift pattern preset function

When the gearshift pattern is set to either <F1-R2>, <F2-R2> or <F2-R3L> in automatic gearshift mode, the gear is automatically shifted, reducing round trip repetition work time and operator's efforts.



## **ECMV** (Electronic Controlled Modulation Valve) controlled transmission and brakes

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

## Palm command PPC controlled blade/ripper control joystick

Blade control joystick uses a PPC (Proportional Pressure

Control) valve and blade control joystick ergonomics are similar to the travel control joystick.

PPC control combined with the highly reliable Komatsu hydraulic system enables superb fine control.



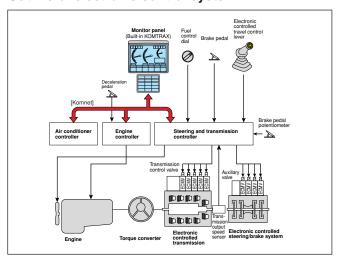
#### **Fuel control dial**

Engine revolution is controlled by an electronic signal, providing ease of operation, eliminating maintenance of linkage and joints.

#### **Height adjustable armrest (Optional)**

Armrest is height adjustable without any tools, providing the operator with firm arm support.

#### Outline of electronic control system



# **WORKING ENVIRONMENT**





#### **New integrated ROPS cab (Optional)**

A newly designed cab is integrated with ROPS. High rigidity and superb sealing performance sharply reduce noise and vibration for the operator and helps prevent dust from entering the cab. The result is relaxed operation in a comfortable environment for the operator. 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

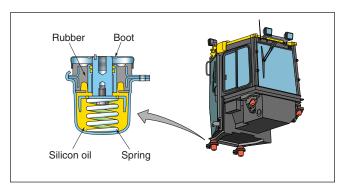
A large user-friendly color monitor enables, accurate and smooth work. Improved screen visibility is achieved by use of TFT liquid crystal display that can easily be read at various angles and lighting conditions. Simple and easy to operate switches. Industry first function keys facilitate multifunction operations.

Display data in 10 languages to globally support operators around the world.



#### Comfortable ride with cab damper mounting

The D155A-6's cab mount uses a cab damper which provides excellent shock and vibration absorption capacity with its long stroke. Cab damper mounts soften shocks and vibration while traveling over adverse conditions, which conventional 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.



# MAINTENANCE FEATURES

## Preventative maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D155A-6 with conveniently located maintenance points to make necessary inspections and maintenance quick and easy.

#### Multi-monitor with troubleshooting function to keep operator informed

Various meters, gauges, and warning functions are centrally arranged on the multi-monitor. Offers ease of 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 stage codes.

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 turning the switch to reverse.

#### Oil pressure checking ports

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

#### **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.

## Low maintenance costs

#### Reliable simple hull frame

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

#### **Sealed DT connectors**

Main harnesses and controller connectors are equipped with sealed DT 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 and to help prevent oil leakage.

#### **Enclosed hydraulic piping**

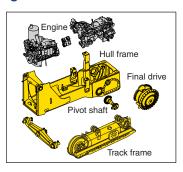
Hydraulic piping for the blade tilt cylinder is completely housed in the push arm, helping protect it from damage.

#### Modular power train design

Power train components are sealed in a modular design, making servicing work clean, smooth and easy.

#### **Disc brakes**

Wet disc brakes require less maintenance.



#### Measures against poor quality fuel

In order to help protect the engine against dust and water contained in the fuel, the machine is equipped with a new high efficient main fuel filter and a large water separator. In addition, fuel tank drain valve, water drain valve of the water separator and fuel drain valve are concentrated at one place.



Large water separator

#### **Dust-proof measures**

Large fresh air pre-cleaner is also provided as optional equipment. The hydraulic tank and the fuel tank are equipped with a high-filtration breather with pressure valve to help prevent dust from entering.



Large fresh air pre-cleaner



High-filtration breather



## **SPECIFICATIONS**



#### **ENGINE**

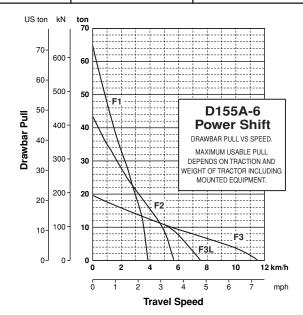
Model Komatsu SAA6D140E-5
Type4-cycle, water-cooled, direct injection
Aspiration Turbocharged, air-to-air aftercooled
Number of cylinders
Bore x stroke
Piston displacement
Governor All-speed and mid-range, electronic
Horsepower
SAE J1995
ISO 9249 / SAE J1349*
Rated rpm
Fan drive type
Lubrication system
Method Gear pump, force lubrication
Filter Full-flow
*Net horsepower at the maximum speed of
radiator cooling fan
EPA Tier 2 and EU Stage 2 emissions equivalent.



#### **TORQFLOW TRANSMISSION**

Komatsu's automatic TORQFLOW transmission consists of a watercooled, 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 switch prevent machine from accidental starts.

Travel speed	Forward	Reverse	
1st	<b>3.9 km/h</b> 2.4 mph	<b>4.7 km/h</b> 2.9 mph	
2nd	<b>5.7 km/h</b> 3.5 mph	<b>6.8 km/h</b> 4.2 mph	
3rd L	<b>7.5 km/h</b> 4.7 mph	<b>9.2 km/h</b> 5.7 mph	
3rd	<b>11.4 km/h</b> 7.1 mph	<b>13.7 km/h</b> 8.5 mph	





Double-reduction, spur and planetary final drives increase tractive effort. Segmented sprockets are bolt-on for easy in-the-field replacement.



#### 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 the left to make a left turn. Tilt it to the right for a right turn.

Wet, multiple-disc, pedal-controlled service brakes are springactuated and hydraulically released. Gearshift lock lever also applies parking brakes.



#### **UNDERCARRIAGE**

Suspension	Oscillation-type with equalizer bar
	and forward mounted pivot shafts
Track roller frame	Monocoque, high-tensile-
	strength steel construction

#### Track shoes

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

Number of shoes (each side)	41
Grouser height	<b>80 mm</b> 3.1"
Shoe width (standard/maximum) 560	mm 22"/710 mm 28"
Ground contact area	35280 cm <sup>2</sup> 5,468 in <sup>2</sup>
Ground pressure (tractor only) 90.2 kPa	0.92 kg/cm <sup>2</sup> 13.1 psi
Number of track rollers (each side)	
Number of carrier rollers (each side)	2



## COOLANT AND LUBRICANT CAPACITY (REFILL)

Fuel tank	165 U.S. gal
Coolant	21.7 U.S. gal
Engine oil	9.8 U.S. gal
Damper	0.4 U.S. gal
Transmission, bevel gear	
and steering system 90 ltr	23.8 U.S. gal
Final drive (each side)	8.2 U.S. gal



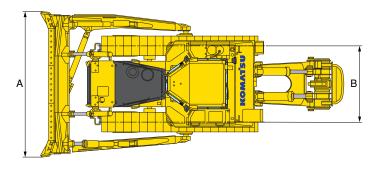
#### **OPERATING WEIGHT**

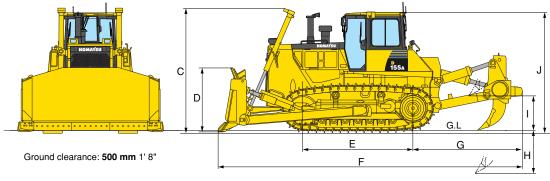
Tractor weight
Including rated capacity of lubricant, coolant, full fuel tank,
operator and standard equipment





Α	4130 mm	13'7"
В	2140 mm	7'
С	3510 mm	11'6"
D	1790 mm	5'10"
Е	3150 mm	10'4"
F	8680 mm	28'6"
G	3100 mm	10'2"
Н	1370 mm	4'6"
Τ	900 mm	2'11"
J	3395 mm	11'2"







#### **HYDRAULIC SYSTEM**

Closed-center load sensing system (CLSS) designed for precise and responsive control, and for efficient simultaneous operation.

Hydraulic control unit:

All spool control valves externally mounted beside the hydraulic tank. Variable piston pump with capacity (discharge flow) of **200 ltr/min** 52.8 U.S. gal/min for implement at rated engine rpm.

Relief valve setting . . . for implement **27.5 MPa** 280 kg/cm² 3,980 psi Control valves:

Spool control valve for Semi-U tilt dozer and Full-U tilt dozer.

Positions: Blade lift . . . . . . . . Raise, hold, lower, and float Blade tilt . . . . . . . . . Right, hold, and left

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

Positions: Ripper lift . . . . . . . Raise, hold, and lower and float Ripper tilt . . . . . . . Increase, hold, and decrease

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

	Number of cylinders	Bore
Blade Lift	2	<b>110 mm</b> 4.33"
Blade Tilt	1	<b>160 mm</b> 6.30"
Ripper Lift	1	<b>180 mm</b> 7.09"
Ripper Tilt	1	<b>200 mm</b> 7.87"

Hydraulic oil capacity (refill):

Semi-U tilt dozer	85 Itr	22.5 U.S. gal
U-tilt dozer	85 Itr	22.5 U.S. gal

Ripper equipment (additional volume):

Multi-shank ripper	37 ltr	9.8 U.S. gal
Giant ripper	37 ltr	9.8 U.S. gal



#### DOZER EQUIPMENT

Use of high-tensile-strength steel in moldboard for strengthened blade construction. Blade tilt hose piping is mounted inside the dozer push arm to help prevent damage.

	Overall length with dozer	Blade capacity	Blade length x height	Maximum lift above ground	Maximum drop below ground	Maximum tilt adjustment	Additional weight
Semi-U	<b>6010 mm</b>	<b>9.4 m³</b>	<b>4130 mm x 1790 mm</b>	<b>1250 mm</b>	<b>590 mm</b>	<b>950 mm</b>	<b>4960 kg</b>
Tilt Dozer	19'9"	12.3 yd³	13'7" x 5'10"	4'1"	1'11"	3'1"	10,940 lb
Strengthened	<b>6010 mm</b>	<b>9.4 m³</b>	<b>4130 mm x 1790 mm</b>	<b>1250 mm</b>	<b>590 mm</b>	<b>950 mm</b>	<b>5620 kg</b>
Semi-U Tilt Dozer	19'9"	12.3 yd³	13'7" x 5'10"	4'1"	1'11"	3'1"	12,390 lb
Full-U	<b>6430 mm</b>	<b>11.9 m³</b>	<b>4225 mm x 1790 mm</b>	<b>1250 mm</b>	<b>590 mm</b>	<b>970 mm</b>	<b>5630 kg</b> 12,410 lb
Tilt Dozer	21'1"	15.6 yd³	13'10" x 5'10"	4'1"	1'11"	3'2"	
Angle	<b>6580 mm</b>	<b>4.6 m³</b> 6.0 yd³	<b>4850 mm x 1170 mm</b>	<b>1560 mm</b>	<b>660 mm</b>	<b>520 mm</b>	<b>5170 kg</b>
Dozer	21'7"		15'11" x 3'10"	5'1"	2'2"	1'8"	11,400 lb



Oilindustry.ir

- Air cleaner, double element with dust indicator
- Alternator, 60 ampere
- Backup alarm
- Batteries, 2 x 12V 170 Ah
- Blower cooling fan
- Color monitor
- Decelerator pedal
- Fenders
- Horn, warning

- Hydraulics for dozer
- Lighting system (includes 2 front, 1 rear)
- Muffler with rain cap
- Open ROPS
- Palm lever steering control
- Radiator with reserve tank
- Rear cover
- Starting motor, 11kW/24V
- Suspension seat
- Track roller guard, end sections

- Track shoe assembly
  - Sealed and lubricated track
- Underguards, oil pan and transmission
- 560 mm 22" single grouser shoe

## OPTIONAL EQUIPMENT

#### ROPS cal

Additional weight: 430 kg 948 lb
All-weather, enclosed pressurized cab

Dimensions:

—Length: **1735 mm** 5'8" —Width: **1755 mm** 5'9"

—Height from floor: 1635 mm 5'4"

 Meets ISO 3471, SAE J/ISO 3471 ROPS standards, and ISO 3449 FOPS standard.

#### Variable multi-shank ripper

- Additional weight (including hydraulic control unit): 3760 kg 8,290 lb
- Beam length: 2320 mm 7'7"
- Hydraulically-controlled parallelogram-type ripper with three shanks.
   Digging angle infinitely adjustable.
   Standard digging angle: 45°
- Maximum digging depth: 900 mm 2'11"
- Maximum lift above ground: 950 mm 3'1"

#### Variable giant ripper

- Additional weight (including hydraulic control unit): 3380 kg 7,450 lb
- Beam length: 1410 mm 4'8"
- Hydraulically-controlled parallelogram-type ripper with one shank.
   Digging angle infinitely adjustable.
   Standard digging angle: 45°
- Maximum digging depth: 1370 mm 4'6"
- Maximum lift above ground: 945 mm 3'1"

#### **Shoes**

Shoes (optional)	Additional weight		Ground conta	ict area
<b>560 mm</b> 22" single-grouser shoes	-0 kg	-0 lb	35280 cm <sup>2</sup>	5,468 in <sup>2</sup>
610 mm 24" single-grouser shoes	+200 kg	+440 lb	38430 cm²	5,957 in <sup>2</sup>
<b>660 mm</b> 26" single-grouser shoes	+410 kg	+900 lb	41580 cm <sup>2</sup>	6,445 in <sup>2</sup>
<b>710 mm</b> 28" single-grouser shoes	+610 kg	+1,340 lb	44730 cm <sup>2</sup>	6,933 in <sup>2</sup>
<b>560 mm</b> 22" extreme service shoes	+450 kg	+990 lb	35280 cm <sup>2</sup>	5,468 in <sup>2</sup>
<b>610 mm</b> 24" extreme service shoes	+690 kg	+1,520 lb	38430 cm <sup>2</sup>	5,957 in <sup>2</sup>
660 mm 26" extreme service shoes	+920 kg	+2,030 lb	41580 cm <sup>2</sup>	6,445 in <sup>2</sup>

#### Other

- Air conditioner
- Cab heater and defroster
- Engine side cover
- Large pre-cleaner
- Locks, filler caps and covers
- Rear view monitoring system
- Rigid drawbar
- Tool kit

#### SIGMADOZER

	Overall length	Blade	Blade	Maximum lift	Maximum drop	Maximum tilt	Additional
	with dozer	capacity	length x height	above ground	below ground	adjustment	weight
SIGMADOZER	6125 mm	9.4 m <sup>3</sup>	4060 mm x 1850 mm	1320 mm	617 mm	920 mm	4940 kg
	20'1"	12.3 yd <sup>3</sup>	13'4" x 6'1"	4'4"	2'	3'	10,890 lb
Strengthened	6125 mm	9.4 m <sup>3</sup>	4060 mm x 1850 mm	1320 mm	617 mm	920 mm	5360 kg
SIGMADOZER	20'1"	12.3 yd <sup>3</sup>	13'4" x 6'1"	4'4"	2'	3'	11,820 lb



www.Komatsu.com

Printed in Japan 201301 IP.SIN

