

# MEGA 250v

- Operating Weight : 14,000kg (30,864lb)
- Bucket capacity (SAE) : 2.4~2.8 m<sup>3</sup> (3.1~3.7cu.yd)
- Engine Power
  - Gross (SAE J1995) :
    - Max : 127kW, 170HP, 173ps / 2,000rpm
    - Rated : 121kW, 163HP, 165ps / 2,200rpm
  - Net (SAE J1349) :
    - Max : 125kW, 168HP, 170ps / 2,000rpm
    - Rated : 120kW, 161HP, 163ps / 2,200rpm



Photo may include optional equipment



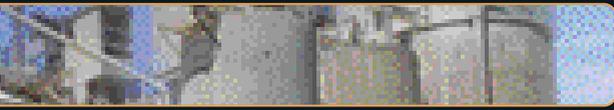
# Anything's Possible with You and



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# ***DOOSAN*** **Powerful Wheel Loader**



# Performance

The Mega 250-v is a machine that delivers a powerful, highly effective force, offering superior penetration of the hardest materials. The exceptional drawbar pull at the wheels, is reinforced further by providing limited-slip differentials as standard equipment. The engine offers high power and torque characteristics. As a result, the hydraulic system is able to multi-function with power and speed.

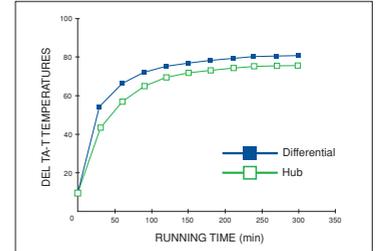


## ZF Axle

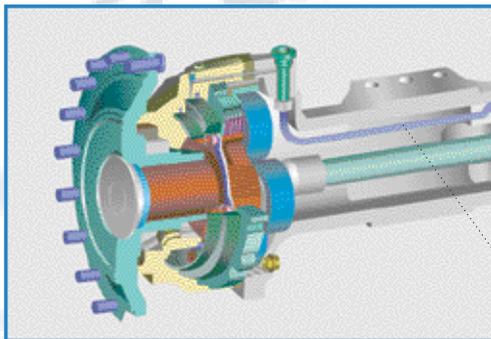
Improved internal oil flow greatly reduces the temperature difference between the hub and the differential, as well as prevents premature disc wear due to overheating of the internal hub components.

## LSD (Limited Slip Differential)

The standard equipment LSD allows easy driving through soft and swampy grounds.



• This result may change according to test condition



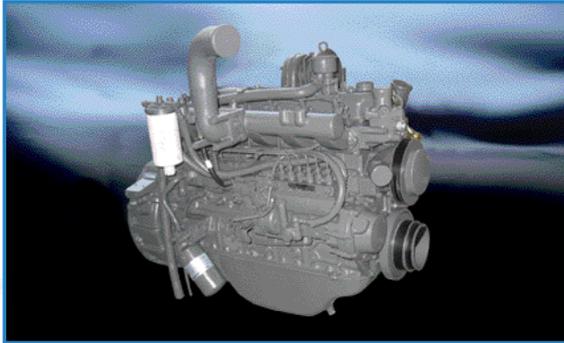
## Increased Axle durability

The brake discs have been repositioned to the rear part of the reduction gear where the rotation speed is lower. As a result, the discs are exposed to lower rpm's and heat generation is reduced and the life span of the discs is greatly extended. Automatic disc clearance regulator has been integrated into the design and the disc clearance is maintained at the optimum level at all times as the discs wear out. This prevents any lag in brake response. Another convenient feature is that brake disc wear can easily be measured without disassembling the hub.

The brake piping has been redesigned into the axle housing and is protected from damage from external shock as the machine drives over rough terrain.

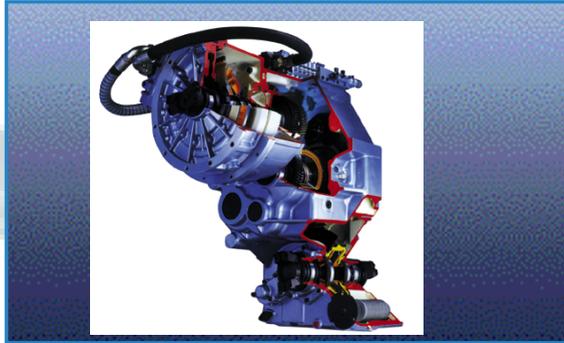


# MEGA 250V



## ⌘ Turbo Charged-Air Cooled Intercooler Engine

Our many years of experience in engine design and production have resulted in the emergence of a highly efficient and very powerful engine that boasts the highest power in its class.



## ⌘ Full Auto Transmission

The transmission is particularly smooth and gear ratios perfectly spaced to give optimal speed. That gives comfort at the same time that it delivers excellent traction in every working conditions. All of these characteristics, combined, provide a machine that makes good shovel penetration.



## ⌘ Hydraulic Power steering

The newly designed steering system ensures smooth steering even in the low engine speed ranges.  
- Steering control valve



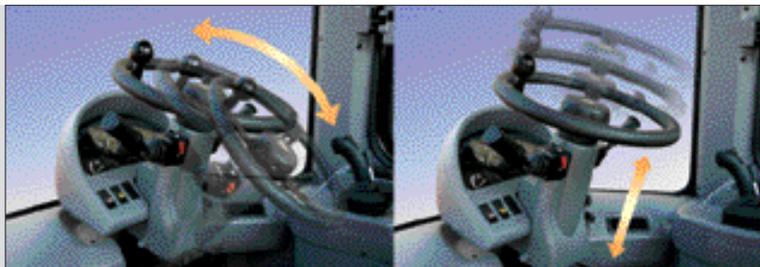
## ⌘ Axle Oscillation Outstanding Work Safety (oscillation)

The center pin support system rear axle can maintain the machine in the horizontal position even in rough terrain achieving the maximum safe operating and driving performance.

# Comfort

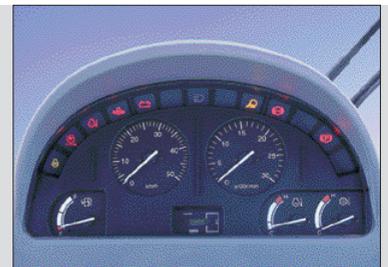
From the beginning, Doosan has had great concern for machine operators.

People need to work in a well-designed and comfortable environment. The work area is spacious, with several places for storage. The checking and monitoring devices are comprehensive. There is an open view of the work area. For night work, operators are provided with powerful front and rear lighting.



## ❖ The steering Column

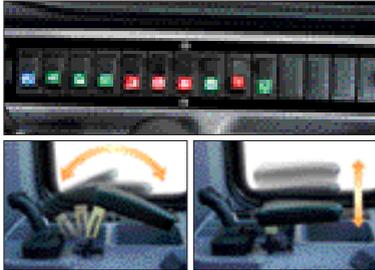
The steering column features both tilting and telescopic functions.



## ❖ Central Monitor Panel

The compact central monitor panel is ergonomically designed and allows the operator to monitor the status and warning lights at a single glance.

# MEGA 250V



### Switch & Wrist rest

The ergonomically laid out switch panel in line with the natural movements of the body allows for very convenient operation. The spare switch cut-outs allows easy installation of additional electric accessories. The tilting and telescopic wrist rest allows the operator to work more comfortably.



### Various Control Lever

The joystick installed in compliance with various needs and preferences of operators ensures more convenient work.

- Left : Mono lever and 3rd function. (option)
- Right : Mono lever with Horn & Kick down button. (std.)



### Air Conditioning & Defroster System

Double filtered air cab, air ducts are properly placed all around the cab with proportional sensitive controls and air re-circulation facility. we offer the same comfort as a passenger car.



Sunvisor (std.)



Room mirror (std.)

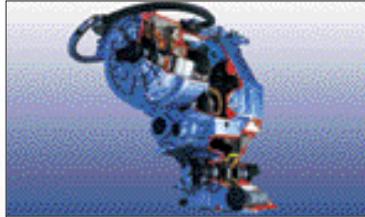
### Various Comfort Features

# Maintenance

A liquid crystal display conveys information to the operator relative to the ZF transmission.

At the same time, it reports the nature of a problem (if one exists). When servicing the loader, a specialised apparatus can be used to adjust the clutch disks to compensate for their wear.

Additionally, by connecting a lap top computer, a complete transmission diagnostic can be performed.



## Large Capacity Transmission Oil Cooler

The large capacity transmission oil cooler ensures durable and stable operation of transmission.

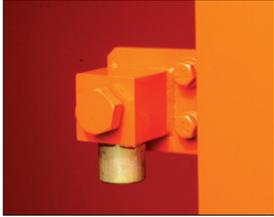


## Swing Out Cooling Fan

Our fan assembly has been designed with the one touch swing out mechanism and cleaning the radiator core is very easy.



# MEGA 250V



## Remote Engine oil & Coolant Drain

Remote drain valves have been installed in an easily accessible location for convenient draining of fluids.  
(Coolant - upper, Engine oil - lower)



## Central Remote Hydraulic Check Port

The centralized remote hydraulic check ports allow main, steering, brake charge, pilot, un loading and transmission clutch pressures to be checked at a convenient central location.



## Greasing Lubrication Ports

The front pins can be lubricated from the outside of the machine without crawling under the machine or in awkward positions through the lubrication ports.



## Propeller Shaft

A protective cover has been installed to protect the oil seal from dust, foreign objects and premature wear.



A good accessibility at the articulation joint is essential for an easy maintenance.



## Convenient Transmission Oil Filling

Because the transmission oil level gauge is attached to the oil filler pipe, it is easy to visually check the level while filling. In addition, the oil filler pipe is located near the articulation joint for easy access.



## Transmission Filter

The transmission filters are within easy reach and like the rest of the machine's service components, can be checked from ground level.



## Air-cleaner Filter

The high capacity air cleaner eliminates harmful particles from the air and extends the life of the engine and replacement intervals.



## Double type Air Conditioner Filter

Two filters are installed in and outside of cabin, they supply fresh air into the cabin.

# Reliability

Every morning, when the operators commence work, they know that things will go smoothly- because Doosan has taken care of it. The product is solid. Operators know that they have significant reserves at hand and that they won't have to push the machine to its limit. The Doosan Daewoo Mega-250 wheel loader is designed and built to last. For Doosan, 'reliable' means availability, accessibility and simplicity.



## ❖ Anechoic chamber Test

For absolutely accurate noise measurements-mainly of engines and hydraulic components which generate noise. Noise reduction test are conducted here which contribute to quieter finished products.



## ❖ Climate Chamber Test

Within the chamber, capable of accommodating the largest wheel loader, machines are tested in extremes of heat, cold and humidity. These conditions simulate the worst to be found anywhere in the world.



## ❖ Rolling Road Chassis Dynamometer Testing

Road travelling performance of articulated wheel loaders is measured and assessed in this facility. Acceleration braking, tractive effort, heat dissipation and gearing are all studied under controlled conditions in this modern facility.



## ❖ 24/7 Ware house operation

Quick responding parts system secures your reliability in running our product.



## ❖ ROPS Cabin (Rollover Protective Structure)

ROPS Meets The Following Criteria

- SAE J 394
- SAE 1040
- ISO 3471



## ❖ FOPS Cabin (Falling Objects Protective Structure)

FOPS Meets The Following Criteria

- SAE J 231
- ISO 3449

# Standard equipment & Optional equipment

## Standard Equipment

### Engine

- Two stage air cleaner with pre-cleaner and external plugging indicator as at the dashboard
- External drains for engine oil and cooling liquid changes
- Maintenance warning lamp
- Hydraulic fan with adjustable speed for extreme temperatures

### Electric System

- Alternator 60A / 24 V
- Working lights: 2 at the front and 2 at the rear (4 x 70 W)
- Driving lights: low and high beams
- Tail, indicators, stop, reversing lights
- Reversing alarm

### Drive line

- Gear box which can be declutched when braking
- Gear box with diagnosis and monitoring indicator, and electronic plug for a fast adjustment
- Selection of Manual or Automatic mode
- Starting safety system
- Kickdown and travelling direction selection: lever at left of the steering wheel or on the joystick
- Limited slip differential on front and rear axles
- Dual braking circuit with pump and accumulator
- Tire 20.5 - 25 - 16PR (L3)

### Lifting and Hydraulic system

- Robust Z bar lifting system
- Standard general purposes 2.4m<sup>3</sup> bucket
- Single lever joystick
- Hydraulic control valve with two sections
- Boom adjustable lift Kick out
- Bucket kick out
- Fast couplers for hydraulic check

### Steering system

- Load sensing steering system

### Cab

- Air-conditioning / heating with recirculation function
- Double Filtered air cab
- Mechanical suspension seat with safety belt
- Adjustable steering column
- Compartment for cans
- Floor mat
- Tinted glasses
- Left sliding window
- Front and rear wiper
- Front and rear washers
- Sun visor
- Interior cab light
- Interior rear view mirrors (1)
- Exterior rear view mirrors (2)
- Machine monitoring (condition, control & maintenance indicators in front of the driver by gauges and lamps)
- Main switches in front of the driver
- Switches for the general functions in the right console
- Electrical horn
- Cigarette lighter
- Cassette radio AM / FM

### External equipments

- Lower protection plates
- Lifting hooks
- Articulation lock in the transport position
- Towing hitch
- Tools compartment
- Fender

## Optional equipment

Some of these optional equipments may be standard in some markets.

Some of these optional equipments cannot be available in some markets. You must check with the local Doosan dealer to know about the availability or to release the adaptation following the needs of the application.

### Ground engaging tools

- Various types of buckets, fork palette, timber grapples and accessories

### Tires

- L3 following various types of manufacturers

### Hydraulic

- Hydraulic control valve with 3 sections
- FNR mono lever and 3rd function lever for third hydraulic
- Load isolation system (LIS)
- Emergency steering pump driven by electric motor

### Electric system

- Rotating beacon

### Various

- Mudguard
- Fuel filling pump
- Tool Kit

### External equipments

- Full fender
- Wheel chocks

# Specifications



## Engine

### General description

The High performance Doosan DB58TIS 6 cylinders, direct injection, turbo charged, air-air intercooler engine offers low fuel consumption and low exhaust emissions, which are well below the requirements of the Phase II legislation.

(Phase I Area : Doosan D1146T Engine)

### Power :

- GROSS SAE J1995

Rated(Max):

121 kW(127 kW)

163 HP(170 HP)

165 ps (173 ps)

@ 2,200(2,000) rpm

- NET SAE J 1349

Rated(Max):

120 kW(125 kW)

161 HP(168 HP)

163 ps (170 ps)

@ 2,200(2,000) rpm

### Max Torque:

75 kgf.m

736 Nm

543 lbf.ft

@ 1,300 rpm

### Displacement:

5,785 cc (353cu.in)

### Bore x stroke:

102 x 118 mm (4" x 4.7")

3 stages Air cleaner including a very efficient pre-cleaner, main and safety elements.

Hydraulically driven puller type fan with possibility of adjustment, pivoting fan for easier cleaning

### Battery

System voltage : 24 V

Quantity : 12 V x 2

Capacity(AMP) : 100 Ah

### Starter power:

4.5 kW

### Alternator output:

60 A



## Axles

The front and rear axles with planetary hub reductions are built on the base of very reputed components.

Fitted as standard, the front and rear limited slip differentials, ensure the traction is optimal in all circumstances.

### Maker and model:

ZF MT-L3000 Series

### Max torque transfer at the front and at the rear:

45 %

### Oscillation angle:

+/- 11 °

### Brake:

Dual circuit multi-plate wet discs. Hydraulic actuation with pump and accumulator.

A Spring applied and hydraulically released parking brake is mounted on the transmission shaft.



## Transmission

"Full Power Shift " transmission. It can be used in manual or automatic modes.

This transmission is based on components having excellent worldwide reputations. It is equipped with a modulation system allowing soft gear shifting and inversion of travel direction. Safety devices also protect the transmission of bad operations.

The gear and direction shifting is operated by a single lever to the left of the steering wheel. A travel direction control is also mounted on the hydraulic joystick.(Option)

With a special electronic device, the transmission can be tested and adjusted easily for optimum performance and efficiently.

The transmission can be de-clutched by the operation of brake pedal to increase the power available to the hydraulic pumps.

A safety device prevents the starting of the engine when not in neutral.

### Torque converter:

Single stage, one phase

Max Torque ratio

2.87

### Gear box:

Maker and model

ZF 4 WG 190

### Speed Forward / Rearward:

(Tire 20.5 - 25 - 16PR - L3)

1 7.5 / 8.0 km/h  
(4.7 / 5.0 mph)

2 12.0 / 12.5 km/h  
(7.5 / 7.8 mph)

3 23.5 / 24.5 km/h  
(14.6 / 15.2 mph)

4 37 km/h  
(23 mph)

### Max traction force:

14.1 tons (31,085 lb)





## Hydraulic System

The hydraulic system uses tandem vane pumps with automatic wear compensation.

Pilot actuation with standard single lever.

Automatic and adjustable systems for bucket kick out and boom stop at top position are standard.

The leveling function is also mounted on the wheel loader.

Major hydraulic lines are equipped with special seals (ORFS)

### Max flow main:

(With steering)

120 ℓ / min (31.7g / min)

(Without steering)

250 ℓ / min (66.0g / min)

### Relief Pressure:

200 bars

### Pressure of the pilot circuit:

28 bars

### Filtration capacity on the return line:

10 microns

### Loading cycles time:

Lifting speed (loaded) :  
5.3 seconds

Dumping speed (loaded):  
1.2 seconds

Lowering speed (empty):  
3.3 seconds



## Operators' Cab

The modular cab allows excellent visibility in all directions. The optimal ventilation is obtained by numerous ventilation outlets. Touch buttons control the air re-circulation air conditioning and heating systems. The air of the cab is filtered.

All necessary information for the operator are centralized in front of him.

The main functions are actuated via switches located on a console at the right of the operator.

Generous storage places are well located. The cab, mounted on viscous element and equipped with suspended seat, offers a better comfort for the operator.

**Access door:** 1

**Emergency exits:** 2

The cab conforms ROPS ISO 3471 and FOPS : ISO 3449

**Guaranteed external noise level Lwa:**  
(following 2000 / 14 / EC) 108 dB (A)



## Steering

The steering system is a load sensing type with a priority valve.

**Steering angle:**  
40°

**Oil flow:**  
132 ℓ / min (35 gal / min)

**Relief pressure:**  
175 bars

**Steering cylinders (2):**  
bore x stroke : 70 x 430 mm (2.8" x 15")

Emergency steering system with hydraulic pump driven by electric motor.(Option)



## Lifting System

The lifting system with two cylinders and Z configuration is designed for the toughest jobs. It ensures powerful breakout force (13.2 ton with a 2.4m<sup>2</sup> bucket) and the bucket movements are fast.

The bucket angles are well kept in good positions on all the range of bucket movement.

### Lifting cylinders (2)

bore x stroke (mm) :  
140 x 777 mm (5.5" x 2'7")

### Bucket cylinders (1)

bore x stroke (mm) :  
160 x 500 mm (6.3" x 1'8")



## Maintenance

Maintenance is easy due to excellent access.

The radiator fan swivels to aid cleaning.

The transmission is electronically controlled. An error coding system allows easy diagnosis of the systems and proper intervention.

Engine (oil): 21 ℓ (5.6 gal)

Radiator (cooling liquid): 50 ℓ (13.2 gal)

Fuel: 270 ℓ (71.3 gal)

Hydraulic oil: 195 ℓ (51.5 gal)

Gear box and torque converter: 27 ℓ (7.1 gal)

Front axle: 31 ℓ (8.2 gal)

Rear axle: 24 ℓ (6.3 gal)

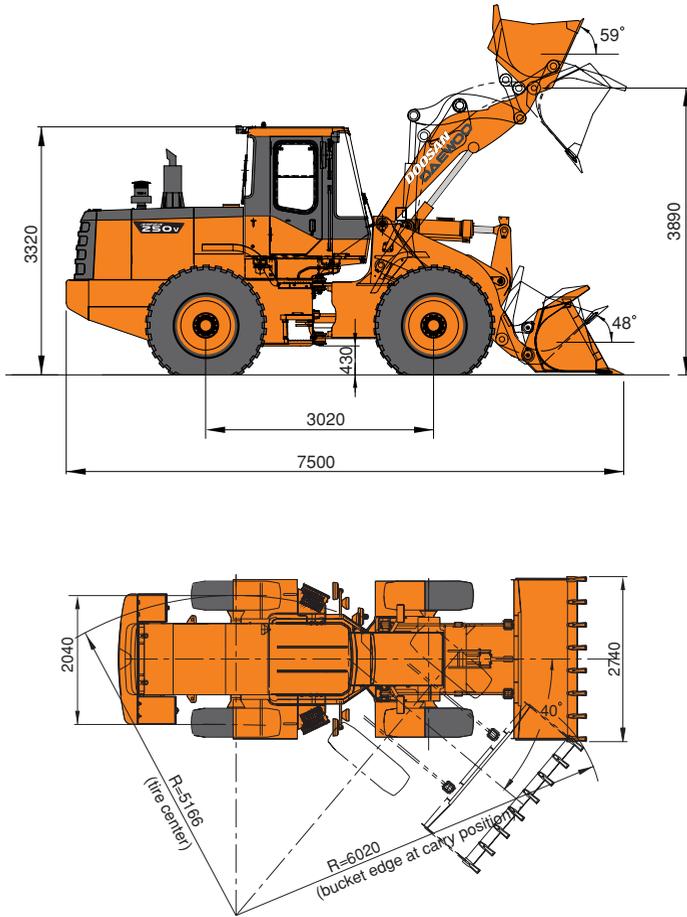
# Operational data



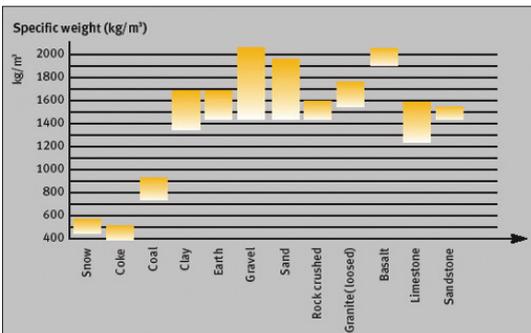
Bucket type	Unit	General purpose		
		Teeth(standard)	Teeth	Cutting edge
Capacity heaped	m <sup>3</sup> (yd <sup>3</sup> )	2.4 (3.1)	2.5 (3.3)	2.5 (3.3)
Bucket weight	kg(lb)	1,204 (2,654)	1,233 (2,718)	1,270 (2,800)
Bucket width	mm(ft.in)	2,740 (9')	2,838 (9'4")	2,740 (9')
Static tipping load, straight	kg(lb)	12,000 (29,101)	11,975 (26,400)	11,940 (26,323)
Full turn ( 40° )	kg(lb)	9,800 (21,605)	9,780 (21,561)	9,755 (21,506)
Breakout force	kg(lb)	13,200 (29,101)	13,170 (29,035)	13,135 (28,957)
Dump height at 45°	mm(ft.in)	2,760 (9'1")	2,760 (9'1")	2,838 (9'4")
Dump reach at 45°	mm(ft.in)	1,160 (3'9")	1,160 (3'9")	1,090 (3'7")
Digging depth	mm(ft.in)	42 (1.6")	42 (1.6")	42 (1.6")
Turning radius at bucket	mm(ft in)	6,051 (19'10")	6,127 (20'1")	6,020 (19'9")
Max. tilt angle on ground	dge	38°	38°	38°
Max. dump angle at fully raised	dge	59°	59°	59°
Overall length	mm(ft in)	7,500 (24'7")	7,500 (24'7")	7,395 (24'3")
Overall height	mm(ft in)	3,320 (10'11")	3,320 (10'11")	3,320 (10'11")
Ground clearance	mm(ft in)	430 (1'5")	430 (1'5")	430 (1'5")
Wheel base	mm(ft in)	3,020 (9'11")	3,020 (9'11")	3,020 (9'11")
Width at tire	mm(ft in)	2,563 (8'5")	2,563 (8'5")	2,563 (8'5")
Tread	mm(ft in)	2,040 (6'8")	2,040 (6'8")	2,040 (6'8")
Tire		20.5 - 25 - 16PR	20.5 - 25 - 16PR	20.5 - 25 - 16PR
Operating weight	kg(lb)	14,000 (30,864)	14,029 (30,928)	14,066 (31,010)

Bucket type	Unit	General purpose	Light bucket	
		Cutting edge	Teeth	Cutting edge
Capacity heaped	m <sup>3</sup> (yd <sup>3</sup> )	2.6 (3.4)	2.7 (3.5)	2.8 (3.7)
Bucket weight	kg (lb)	1,306 (2,879)	1,244 (2,743)	1,317 (2,904)
Bucket width	mm (ft.in)	2,838 (9'4")	2,838 (9'4")	2,838 (9'4")
Static tipping load, straight	kg (lb)	11,920 (26,279)	11,965 (26,378)	11,900 (26,235)
Full turn ( 40° )	kg (lb)	9,735 (21,462)	9,770 (21,539)	9,720 (21,429)
Breakout force	kg (lb)	13,110 (28,902)	13,160 (29,012)	13,090 (28,858)
Dump height at 45°	mm (ft.in)	2,838 (9'4")	2,760 (9'1")	2,838 (9'4")
Dump reach at 45°	mm (ft.in)	1,090 (3'7")	1,160 (3'9")	1,090 (3'7")
Digging depth	mm (ft.in)	42 (1.6")	42 (1.6")	42 (1.6")
Turning radius at bucket	mm (ft in)	6,096 (20')	6,127 (20'1")	6,096 (20')
Max. tilt angle on ground	dge	38°	38°	38°
Max. dump angle at fully raised	dge	59°	59°	59°
Overall length	mm (ft in)	7,395 (24'3")	7,500 (24'7")	7,395 (24'3")
Overall height	mm (ft in)	3,320 (10'11")	3,320 (10'11")	3,320 (10'11")
Ground clearance	mm (ft in)	430 (1'5")	430 (1'5")	430 (1'5")
Wheel base	mm (ft in)	3,020 (9'11")	3,020 (9'11")	3,020 (9'11")
Width at tire	mm (ft in)	2,563 (8'5")	2,563 (8'5")	2,563 (8'5")
Tread	mm (ft in)	2,040 (6'8")	2,040 (6'8")	2,040 (6'8")
Tire		20.5 - 25 - 16PR	20.5 - 25 - 16PR	20.5 - 25 - 16PR
Operating weight	kg (lb)	14,012 (30,891)	14,040 (30,952)	14,113 (31,113)

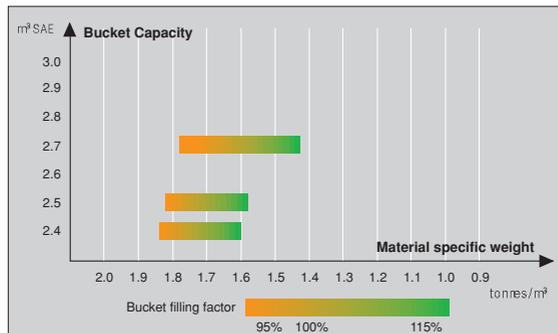
## Dimensions



• Measured to the tip of the bucket teeth or bolt on edge with tires 20.5 - 25 - 16PR (L3)



The specific weight of material largely depends on moisture rate, compacting value, percentage of various components etc... This chart is given only for information.



The bucket filling factor depends also of the nature of material, the working conditions and the operator ability.



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Specifications are subject to change without prior notice

