DL200A

Engine Power : SAE J1995, gross 121 kW(162 HP)@ 2,100 rpm
Operational Weight : 11,120kg (24,515 lb) - STD.
Bucket capacity(SAE) : 2.0 ~ 2.1m^3(2.49~2.75 cu.yd)

Photo may include optional equipment

Wheel loader : DOOSAN DL200A

A Powerful Wheel loader with Novel Features

DL200A

The new DL200A wheel loader has all the advantages of the previous model, and now offers additional added value to the operator.

The new DL200A was developed with the concept of “providing optimum value to the end user.”

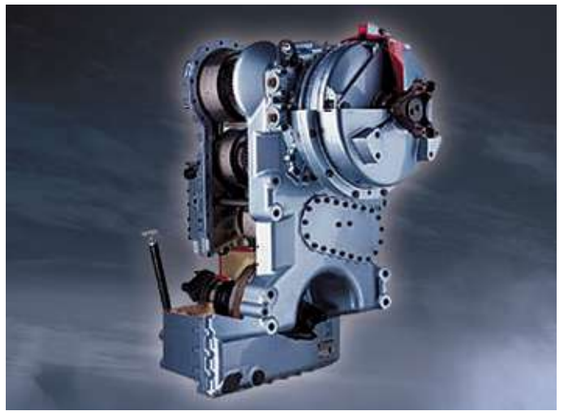
- **Increased production** due to the use of a Doosan inhouse engine and the excellent synchronisation of the drive train with the hydraulics system.
- **Improved ergonomics,** increased comfort and excellent all round visibility ensuring safe and pleasant working conditions.
- **Improved reliability** through the use of higher performance new materials, the development of new computer-assisted structural design techniques and by intensive and systematic test programs. All of these combine to increase the life of vital components and reduce operating costs.
- **Reduced maintenance cost** and increases the availability of the loader.

PERFORMANCE

Perfect integration of power and intelligence. When exceptional power is combined with the very best workmanship, the wheel loader reaches the peak of its performance. The DL200A loader gives you outstanding productivity. The reason is, on the one hand, the impressive digging power allows the hardest materials to be tackled and, and on the other, high tractive power enables easy penetration. With a powerful hydraulic system, the operator can work quickly and powerfully. At the heart of the loader is the Doosan DB58TI inhouse mechanical engine.

DOOSAN DB58TI turbo charged air intercooler engine

Doosan in-house mechanical Engine is advantageous for easier maintenance and lower rick from fuel quality.
With high engine output and torque provide better productivity, low fuel consumption



Automatic Transmission

The transmission is particularly smooth and the gear ratios are optimised. There are no shocks, resulting in an appreciable level of comfort for the operator. The traction force is optimum under all working conditions.
The combination of these characteristics enables the loader to maintain high speed under all conditions and favours penetration and thus optimum bucket filling at each cycle.

The transmission has three modes of operation:
- Manual
- Automatic (automatic shift for all gears)
- Semi - Automatic (automatic with a "kick down" for first gear)

DOOSAN Powerful and Reliable Mechanical 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.
Doosan in-house mechanical E/G has advantage of easy maintenance and low maintenance cost.

High Lift (Option)

As High Lift is equipped besides Standard Lift, customers have further options.

Z kinetics

The Z lifting geometry is very robust and especially designed for heavy loads. Few moving parts, reduced loads, simplicity, everything contributes to good loader stability. This geometry enables very rapid bucket movements and ensures correct angle positioning in all situations. The rapid bucket dump capability makes it easier to unload adhesive materials.

Full heavy duty Axle (Option)

Even hard working condition full heavy duty axle deliver best reliability to customer. Increased Bevel gear and hub parts give better reliability and cooling efficiency. Heavy duty axle is strong in long hour operation.

Limited slip differential (option)

The machines axles are fitted with limited slip differentials at the front and rear. This automatically ensures the maximum tractive effort and easy driving over soft and muddy ground. It also reduces the risk of skidding and, at the same time, prevents excessive tyre wear.

Load isolation system (LIS option)

This system is ideal for all loading and movement situations and increases driver productivity and comfort. It also minimises the amount of material spilt during travelling.

Hydraulic Power Steering

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

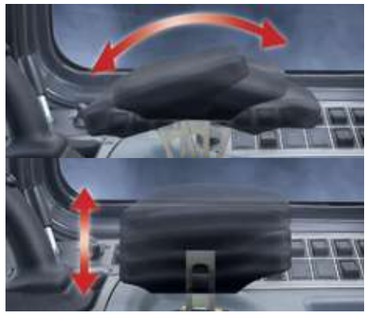
COMFORT

A perfect workspace has been created for you. The work rate of the wheel loader is directly linked to the performance of its operator. DOOSAN designed the DL200A by putting the operator at the centre of their development goals. More space, better visibility, air conditioning, a very comfortable seat, sufficient storage space... All these elements ensure that the operator can work for hours in excellent conditions.

Visibility
Visibility has been improved in all directions and the size of the cab has been increased.

Air conditioning
The high performance air conditioning system provides an air flow which is adjusted and electronically controlled according to the conditions. A double air filter protects the operator's environment. The comfort is comparable to that of a new car.

Steering column
The steering column features both tilting and telescopic functions.



Arm rest
Correct positioning with clear controls makes the operator's task easier.

Control levers (option)
The control levers are very precise. Different options are available to match what the operator is accustomed to as well as an optional auxiliary lever.

Lateral console
The control console is thoughtfully placed to the right of the operator.
Provision is provided to fit switches for additional equipment if required.

Central indicator panel
A high visibility indicator panel allows the operator to check essential loader functions.

Sunvisor & Room mirror(Std.)

MAINTENANCE

Short, simple maintenance operations at long intervals increase the availability of the equipment on site. DOOSAN has developed the DL200A with a view to high profitability for its user. A detailed design of each detail guarantees optimum reliability and reduced maintenance costs.

Hydraulic circuit return filter

The hydraulic circuit return filter, made of glass fiber, eliminates up to 99.5% of foreign substances. It effectively protects the hydraulic circuit and extends service intervals.

Central joints

The central joints of the machine are particularly robust. The attachment points are positioned to withstand bending and torsion forces. A large amount of space has been left to allow easy access to internal components.

Transmission filter

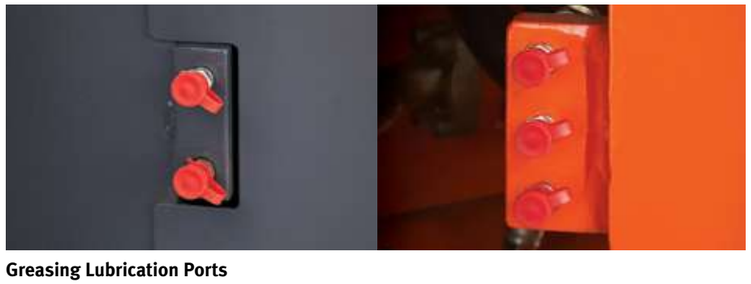
The transmission filter is easy to reach and can, like all other maintenance components, be checked from ground level.

Air cleaner

The forced air cleaner removes 99.9% of particles. It is preceded by a high capacity pre-filter. The cleaning and cartridge replacement intervals are very long.

Reversible fan

The radiator fan has a reversible flow capability to make cleaning of the coolers easier when the machine is operating in dusty environments.



Greasing Lubrication Ports

Rear axle pivot and propeller shaft can be lubricated from the outside of the machine without crawling under the machine or in awkward positions through the lubrication ports.

Convenient Transmission Oil Filling

The oil filler pipe is located near the articulation joint for easy access.

Hydraulic pressure check points

The pressure test points are grouped together. (Main pressure, steering, braking etc).

Transmission diagnostics

The transmission and engine can be diagnosed using a laptop computer to interface with the diagnostic system.

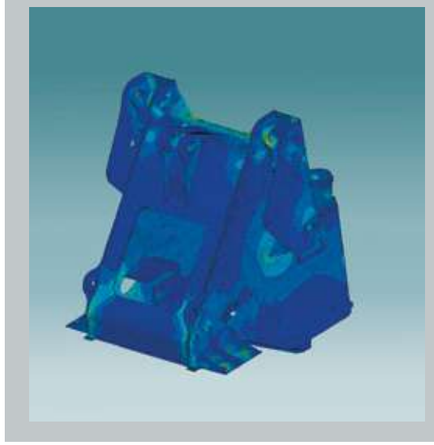
Engine oil and coolant drains

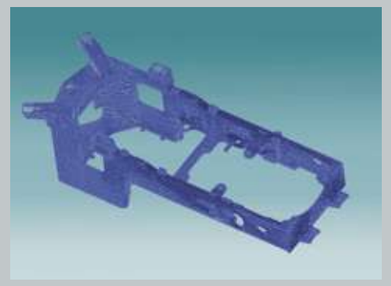
Drains are installed in very accessible places to facilitate emptying without the risk of polluting the environment.

RELIABILITY

DL 200A

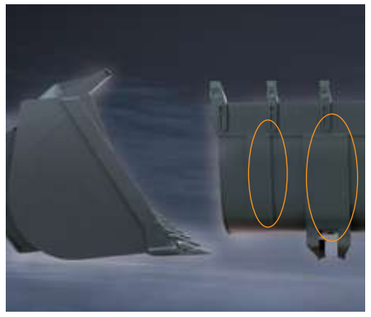
Because the operator knows that the DOOSAN loader is a tough, reliable, product with large power reserves, it can be relied on to work for long periods.
For DOOSAN, reliability means above all durability, availability, accessibility and simplicity.





Special attention was given to the design and manufacture of structural components.

To ensure long lifetime for the main structures, DOOSAN has used finite element techniques. All the structural components such as the chassis, the joints and the lifting arm have been designed using this method. After modelling, they are subjected to intensive laboratory and field testing where extreme conditions are simulated and tested. Statistical data is established in order to constantly increase the level of reliability.

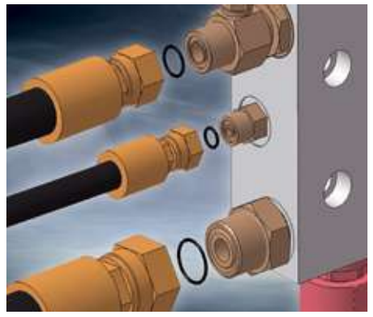


Reinforced bucket

The bottom of the bucket are reinforced.

Radiator grill

The radiator grill is made from reinforced steel for increased shock resistance.



ORFS

To ensure perfect oil tightness, all ports, even the low pressure ports which are used for the pilot lines, are ORFS type.

Radiators mounted on rubber mounts

The aluminium radiators are mounted on rubber mounts to effectively withstand vibrations.

Front combination lamp

With the application of high-grade Hella products, the lamp life has extended much more.

Rear combination lamp

A semi-permanent lamp life has been secured with the application of LED-type stop and position lamps.

STANDARD AND OPTIONAL EQUIPMENT

* STANDARD EQUIPMENT

• Engine
- Three stage air cleaner with cyclone precleaner, inner filter, and external filter restriction indicator as at the dashboard
- Fuel filter with water separator
- Hydraulically driven fan with bi-direction flow for core cleaning
- External drains for engine oil and coolant changes

• Lifting and Hydraulic system
- Robust Z bar lifting system
- General purpose bucket 2.0 m^3 (SAE,heaped)
- Mono control lever
- Hydraulic control valve with two sections
- Automatic boom kick out
- Automatic bucket return to dig.
- Fast couplers for hydraulic check

• Steering system
- Load sensing orbitrol type steering control, full hydraulic, power steering

• External equipments
- Lifting hooks
- Articulation lock in the transport position
- Towing hitch
- Tool compartment
- Semi-fender
- Lower protection plates

• Electric System
- Alternator 60A / 24V
- Working lights: 2 at the front and 4 at the rear (6 x 70 W)
- Driving lights: low and high beams
- Tail indicators, stop, reversing lights
- Reversing alarm

• Loader Linkage
- Z-bar loader linkage

• Drive line and Brake system
- Transmission which can be declutched when braking
- Transmission with self diagnosis and monitoring indicator, plus electronic plug for fast adjustment
- Transmission Mode selector switch (Manual / Auto 1 ↔ 4 / Auto 2 ↔ 4)
- Starting safety system
- Travel direction and kickdown selection lever at left of the steering wheel and on the joystick
- Dual brake circuits with accumulator
- Dual service brake pedals
- Parking brake on front axle, spring applied hydraulic release

• Cab
- Air-conditioning / heating with recirculation function
- Double Filtered air cab
- Mechanical seat with 2" safety belt & telescopic)
- 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 mirror (2)
- Exterior rear view mirrors (2)
- Machine monitoring (condition, control & maintenance indicators in front of the driver by dials, gauges and lamps)
- Switches for the general functions in the right console
- Electrical horn
- Cigarette lighter
- 12 Volt power socket
- Cup holder
- Compartment for shoes
- Radio antenna built into rear window
- Speakers & connection for radio
- 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
- CD MP3 player

* OPTIONAL EQUIPMENT

Some of these optional equipments may be standard in some markets. Some of these optional equipments cannot be available on 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

• Tyres
- L2, L3, L5 following various types of manufacturers

• Lifting and Hydraulic system
- Hydraulic control valve with 3 sections
- FNR mono lever with 3rd function lever for third section
- Two hydraulic levers for 2 sections with FNR function
- Three hydraulic levers for 3 sections with FNR function
- Hydraulically driven fan with adjustable speed proportional to fluid temperature
- Load isolation system (LIS option)

• Electric system
- Rotating beacon
- Fuel heater

• Cab
- Air suspension seat

• Various
- Tool Kit

• External equipments
- Full fenders with rubber protector
- Boom float kick-out
- Additional counter weight

• Steering system
- Emergency steering pump driven by electric motor

• Driven line and Brake system
- Limited slip differentials on front and rear axles

• Loader Linkage
- Z-bar high lift loader linkage

• Bucket and Attachments
- Bolt-on teeth (BOT) 2.0m^3 (2.6 cu.yd.)
- Bolt-on cutting edge (BOC) 2.1m^3 (2.75 cu.yd.)

TECHNICAL SPECIFICATIONS

ENGINE

- **Model**
  Doosan DB58TI
  Turbo charged direct injection
  Doosan inhouse Mechanical Engine Tier 1
- **Number of cylinders**
  6
- **Rated power**
  121 kW(162 HP) @ 2,100 rpm (SAE J1995, gross)
- **Maximum power**
  121 kW(162 HP) @ 2,100 rpm (SAE J1995, gross)
- **Maximum torque**
  65 kgf.m (637 Nm) at 1,400 rpm
- **Piston displacement**
  5,800 cc (354 cu.in)
- **Bore & stroke**
  Φ102 x 118 mm
- **Alternator**
  24 V / 60 A
- **Batteries**
  2 x 12 V / 100 Ah / 900 CCA
- **Air cleaner**
  Dry, Double Element
- **Cooling**
  The hydraulic motor fan direction is reversible to facilitate cleaning.

TRANSMISSION

The "Power Shift" transmission can be used in manual mode,fully automatic or semi-automatic with the "kick down"function.
This transmission is based on components of excellent reputation. It is equipped with a modulation system designed to protect it and ensure smooth gear and direction changes.
A manual transmission control lever is located to the left of the operator. In automatic or semi-automatic mode a change of direction function is also available.
The transmission can be disengaged by the brake pedal to make all the engine power available for the hydraulics. A safety device prevents the engine being started if the transmission is not in neutral. The transmission can be tested and adjusted with special equipment. A computer can be connected to monitor the history of its operation.

- **Gearbox**
  ZF 4 WG 160
- **Torque converter**
  Simple stage / mono phase
- **Movement speed, kph**
  Forward: 7.5 - 12.5 - 21 - 36 (1 - 2 - 3 - 4)
  Reverse: 7.5 - 13.0 - 23.5 (1 - 2 - 3)
- **Maximum traction**
  10 tonnes

LIFTING SYSTEM

The type Z lifting system has a simple lifting piston system and is designed for the toughest jobs. The breakout force of 10.5 tonnes combines with a Bucket angle that is well maintained throughout the range of movement. The bucket angles are optimised in the travelling position and at ground level.
The load isolation system (LIS option) is fitted as option. It increases operator comfort and improves output.

- **Lifting cylinders (2)**
  Bore x stroke: 120 mm x 798 mm(4.7 " x 2'7 ")
- **Bucket cylinders (1)**
  Bore x stroke: 140 mm x 495 mm(5.5 " x 1'7 ")

AXLES

- **Model DANA**

The front and rear drive axles are fully suspended and hermetically sealed final drives and wet disc brakes.
A traction power of 10 tonnes allows inclines with a slope of 58% to be tackled.

- **LSD differential (front and rear)- option**
  45%
- **Oscillation angle**
  +/- 11°
- **Brakes**

Dual multi-disc circuit.
The braking system is activated by a pump and accumulator circuits.
The parking brake consists of a disc mounted on the front axle applied by a spring and released hydraulically.

HYDRAULIC SYSTEM

The hydraulic system consists of gear type pump with steel case and automatic wear compensation.
The hydraulic control valve has a third port for powering an auxiliary hydraulic function.

- **Main pumps**
  Triple gear pump
- **Maximum flow**
  96 / 96 / 35 ℓ /min(25.3 /25.3 /9.2 gal/min)
- **Operating pressure**
  204 kgf/cm² (200 bar)
- **Pilot system**
  Automatic functions for positioning the bucket for digging as well as for stopping the boom at the desired height position are standard.
  A simple levelling function is also standard.
- **Filters**
  In the oil return to the tank, the glass fibre filter has a filtering capability of 10 micron.
- **Loading cycle**

Lifting speed(loaded)	6.0 seconds
Dumping speed(loaded)	1.3 seconds
Lowering speed(empty)	4.0 seconds

CAB

The modular cab gives excellent visibility in all directions.
The driving position provides an excellent view of the bucket, the tyres and the loading area.
The ventilation is optimum. The air conditioning and heating are controlled by pushbuttons with an air recirculation function.
A double cab air filter is installed in the cab and a slight overpressure effectively protects the operator in dusty and polluted environments.
The cab is mounted on viscous suspension mounts for maximum comfort.
The cab is spacious and has generous amounts of storage.
All information necessary for operating the machine is displayed in front of the operator. The control functions are centralised on a console on the right.
Seat and arm rests are adjustable according to the operator.
The same applies for the steering column.

- **Number of doors**
  1
- **Emergency exits**
  2
- **Standards**
  ROPS ISO 3471 and FOPS: ISO 3449
- **Guaranteed external noise level (2000/14/EC)**
  106 dB(A)
- **Sound level in cab. (ISO 6396)**
  76 dB(A)

STEERING SYSTEM

The steering system is electro-hydraulic load sensitive type.

- **Steering angle**
  40°
- **Oil flow**
  96 ℓ /min (25.3 US gpm, 19.4 lmp gpm)
- **Operating pressure**
  204 kgf/cm² (200 bar)
- **Steering cylinders (2)**
  Bore x stroke: 70 mm x 370 mm(2.8 " x 1'3 ")
  Emergency steering system with hydraulic pump driven by an electric motor.(option)

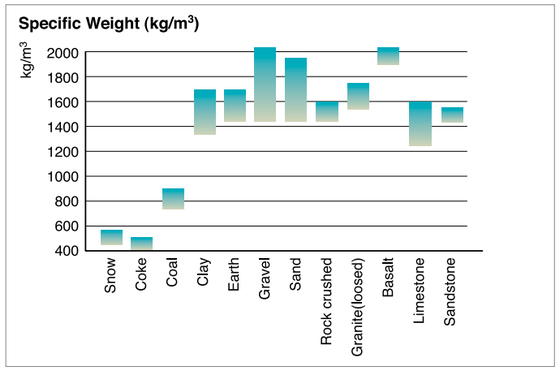
MAINTENANCE

- **Fuel tank :** 243 ℓ (64.2 US gal, 53.5 lmp gal)
- **Cooling system :** 40 ℓ (10.6 US gal, 8.8 lmp gal)
- **Engine oil :** 21 ℓ (5.54 US gal, 5.9 lmp gal)
- **Front axle :** 18.4 ℓ (4.86 US gal, 4.3 lmp gal)
- **Rear axle :** 17 ℓ (4.49 US gal, 4.0 lmp gal)
- **Gearbox and converter :** 30 ℓ (7.9 US gal, 6.6 lmp gal)
- **Hydraulic system :** 174 ℓ (45.96 US gal, 25.3 lmp gal)

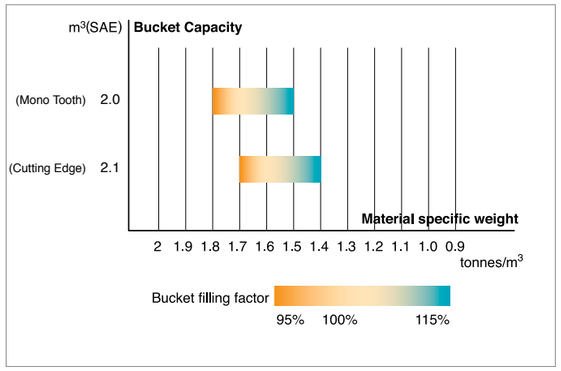
OPERATIONAL DATA

Loader type			General purpose				High lift
Bucket mount			PIN ON	PIN ON	PIN ON	PIN ON	PIN ON
Configuration		Unit	Teeth (std.)	Bolt-on edges	Teeth (std.)	Bolt-on edges	Teeth
Capacity heaped ISO/SAE		m^3	2.0	2.1	2.0	2.1	2.0
		yd^3	2.6	2.7	2.6	2.7	2.6
Bucket width	U	mm	2,550	2,550	2,550	2,550	2,550
		ft in	8′4″	8′4″	8′4″	8′4″	8′4″
Breakout force		kN	103	103	103	103	-
		lbf	23,155	23,155	23,155	23,155	-
Static tipping load (at straight)		kg	8,690	8,630	8,610	8,545	-
		lb	19,158	19,025	18,982	18,838	-
Static tipping load (at full turn)		kg	7,260	7,210	7,195	7,140	-
		lb	16,005	15,895	15,862	15,740	-
Dump height (at 45°)[1] (at fully raised)	A	mm	2,730	2,795	2,675	2,740	3,068
		ft in	9'	9'2"	8'8"	9'	10'
Dump reach (at 45°)[1] (at fully raised)	B	mm	1,000	940	955	895	1,066
		ft in	3′3″	3′1″	3′1″	2'9"	3'5"
Digging depth	E	mm	75	75	130	130	-
		ft in	2′	2′	4′	4′	-
Height at bucket pivot point	F	mm	3,840	3,840	3,785	3,785	4,184
		ft in	12′6″	12′6″	12′4″	12′4″	13′7″
Max. tilt angle at carry position	G	degree	47	47	47	47	-
Max. tilt angle at fully raised	H	degree	64	64	64	64	-
Max. tilt angle on ground	I	degree	42	42	42	42	-
Max. dump angle at fully raised	M	degree	45	45	45	45	-
Width at tyres	Q	mm	2,460	2,460	2,375	2,375	2,460
		ft in	8′	8′	7′8″	7′8″	8′
Ground clearance	S	mm	450	450	395	395	450
		ft in	1'5"	1'5"	1′3″	1′3″	1′5″
Overall length	T	mm	7,320	7,230	7,320	7,230	-
		ft in	24'	23'7"	24'	23'7"	-
Overall height	V	mm	3,240	3,240	3,185	3,185	3,240
		ft in	10'6"	10'6"	10′4″	10′4″	10′6″
Tyre size			20.5-25-16PR	20.5-25-16PR	17.5-25-16PR	17.5-25-16PR	20.5-25-16PR
Operating weight		kg	11,120	11,175	10,950	11,005	-
		lb	24,515	24,636	24,140	24,261	-

[1] Measured to the tip of the bucket teeth or bolt-on edges.



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

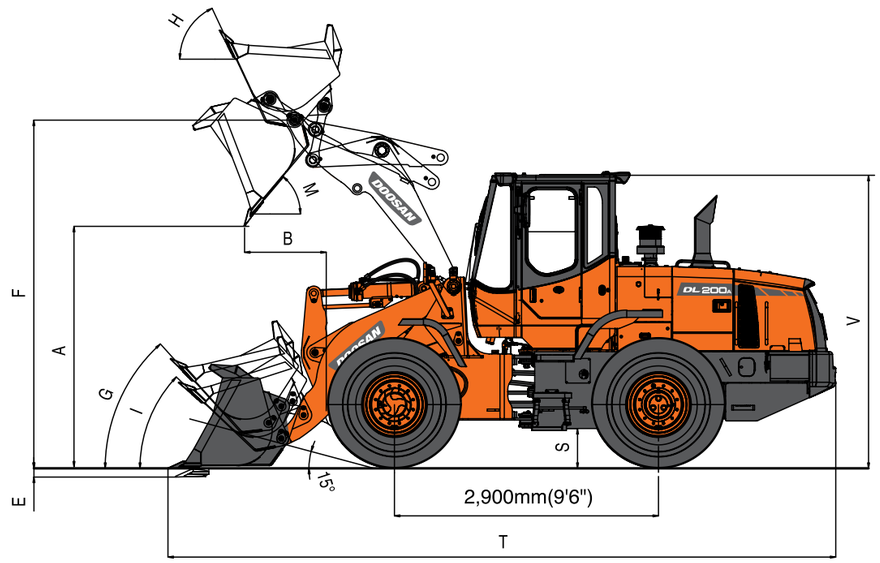


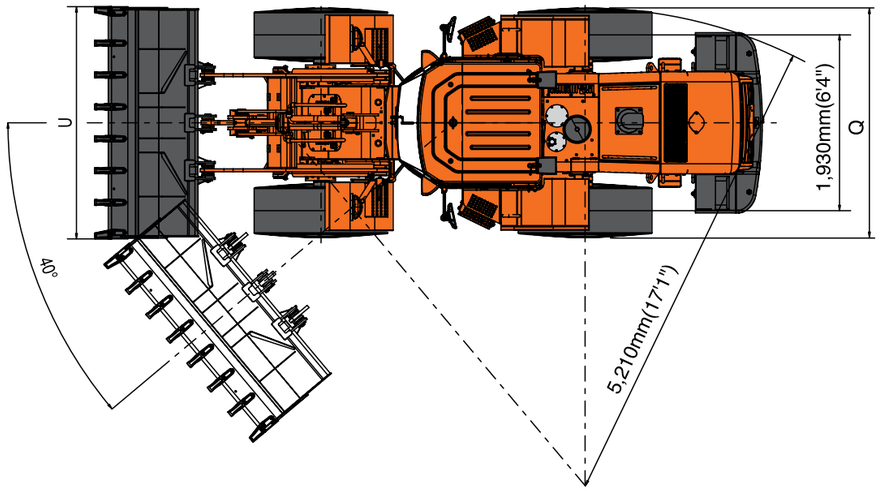
The Bucket filling factor depends also of the nature of material, the working conditions and the operator ability.

DIMENSIONS

DL200A

* Z-bar Linkage Bucket





Bobcat

DOOSAN Portable Power

DOOSAN

MONTABERT

Geith

Doosan worldwide factories

- Heavy Equipment Factory
- Compact Equipment Factory
- Attachment Factory

ILDESIGN_EN_201303

DOOSAN

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