



DL550

Engine Power : SAE J1995, gross 294 kW (394 HP)@ 2,100 rpm

Operational Weight : 31,125 kg (68,619 lb) - STD.

Bucket capacity(SAE) : 5.4 ~ 5.7 m³ (7.1 ~ 7.5 cu.yd)



Wheel loader : DOOSAN DL550

A Powerful Wheel loader with Novel Features



DL550

The new DL550 wheel loader has all the advantages of the previous loaders. This logical new step provides real added value to the operator.

The new DL550 was developed with the concept of "providing optimum value to the end user." In concrete terms, this translates, into :



Increased production due to the use of a new generation "Direct Injection" 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 increases the availability of the loader and reduces operating costs.

PERFORMANCE

DL550

DL550 features an intelligent, load-sensing hydraulic system. Two variable piston pumps provide the exact flow and pressure required and deliver a powerful, highly effective force, offering superior penetration of the hardest materials. The exceptional drawbar pull at the wheels, is reinforced further by providing Hydraulic differential Lock 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.



The differential can be automatically engaged, depending on transmission torque, in the first and second gears.

Hydraulic differential locks (Standard)

Available standard for DL550. Two modes are available. In manual mode, the operator can use a foot switch to lock the differential completely.



Scania DC13 engine

Scania DC13 engine is based on electronically controlled unit injectors that gives high torque with good fuel economy and low exhaust emissions



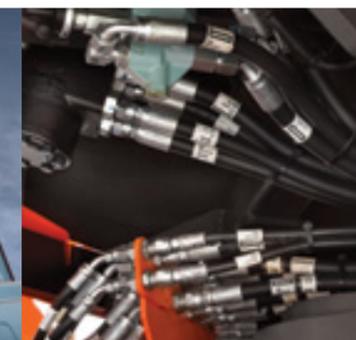
Full Auto Transmission

The electronic powershift 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. Built-in electronic controls enhance productivity and durability. The free wheel stator torque converter improves power train efficiency in load and carry operations which contributes to the improved fuel efficiency.



Hydraulic Power Steering

Works with a flow amplifier and priority valve. And the emergency steering system is equipped as an option to secure a safety against a malfunction of steering system during traveling.



High Lift (Option)

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

COMFORT

DL550

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.



1 Colour LCD monitor panel

The 5.5" TFT LCD panel is suitable for day and night work. The monitor is user-friendly and gives full access to machine settings and maintenance data. Any abnormality is clearly displayed on the screen, allowing you to work safely and confidently with an accurate overview of all conditions.

- a. Gauges** Engine coolant and transmission oil temperatures, fuel levels.
- b. ECO bar** Informs the operator about the fuel efficiency of the current driving profile.
- c. Auto-idle** Automatically decreases engine rpm when the controls are not operated.

2 Torque converter lock-up switch (Opt.)

The torque converter lock-up function automatically links the impeller (input side) with the turbine (output side). This provides a mechanical connection between the engine and transmission for direct drive. With no power loss, fuel consumption is reduced and traction force is increased. Unlike most other systems, the Doosan torque converter lock-up is automatically engaged from 2nd to 4th gear, depending on transmission torque.

3 Automatic lift arm kick-out switch

The boom raise kick-down positions create faster cycle times and can be adjusted from within the cab. An optional "return to dig" position is available.



Tailored performance for maximum efficiency

The DL550 allows you to select from 3 different working modes: ECO, Normal and Power. It also features a Power-up function which lets the operator switch the machine into a higher working mode with lower transmission shift intervals by fully applying the acceleration pedal.



Rear view camera & LCD (Option)

A camera provides a clear view of what's happening behind the machine for added safety and peace of mind. The monitor is aligned with the rear mirrors.



Easy-to-reach control panel

All controls are placed to the right, top and front of the operator. They are clearly positioned for comfortable access and grouped by function, enabling safe, confident operation.

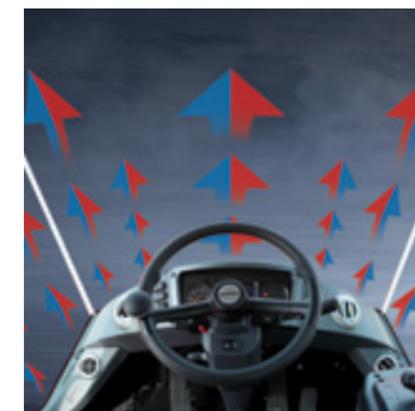


▲ Joystick or fingertip control

The bucket can be moved using a convenient joystick with an FNR switch and kick-down function. The operator can also choose the option of fingertip control.

◀ Transmission cut-off

The transmission cut-off function disconnects the driveline from the engine if the brake pedal is engaged. This delivers the full engine power to the hydraulics, speeding up cycle times and boosting fuel efficiency. The brake pressure needed for activation is automatically controlled, depending on speed, pedal angle and transmission resistance.

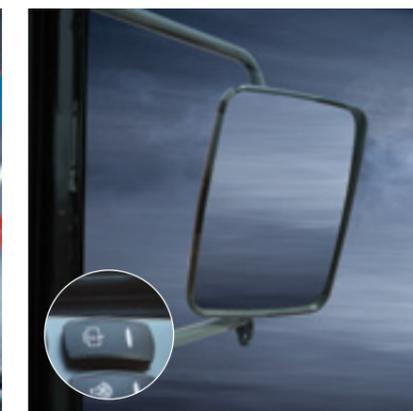


Air Conditioning & Defroster System

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.

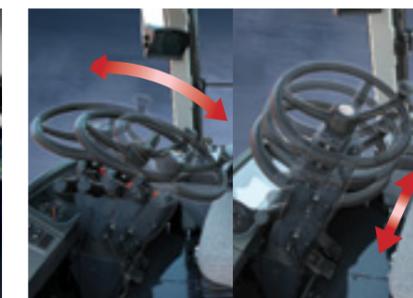


Sunvisor & Room mirror(Std.)



Outside mirrors with built-in hot wires

The hot wires built in the outside mirrors get rid of moisture and frost caused by rain or snow to secure rear fields of vision even in bad weather.



Wrist rest

The tilting and telescopic wrist rest allows the operator to work more comfortably.

The steering Column

The steering column features both tilting and telescopic functions.



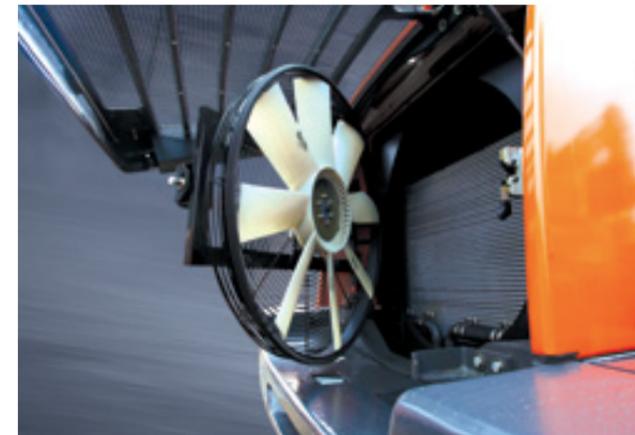
Air-Suspension & Heating Seat (Opt.)

Now available Air-suspension seats provide more comfort and support for the operator. The built-in hot wires help to rapidly adjust the temperatures to an optimal level to give comfort in the cold winter.

MAINTENANCE

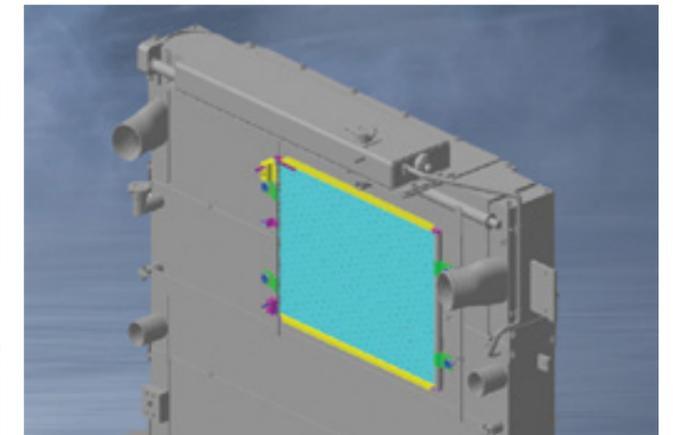
A liquid crystal display conveys information to the operator relative to the machine. At the same time, it reports the nature of a problem (if one exists). When servicing the loader, a specialised apparatus can be used to adjust the clutch disks to compensate for their wear. Additionally, by connecting a laptop computer, a complete transmission diagnostic can be performed.

DL550



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.



Improved Air Condenser

Optimized air condenser position for cooling & maintenance.



Remote Engine oil & Coolant Drain

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



Central Remote Hydraulic Pressure Check Port

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



Convenient Transmission Oil Filling

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



Propeller Shaft

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



Remote 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.



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.



Central Joints

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



Transmission & Engine Diagnosis

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



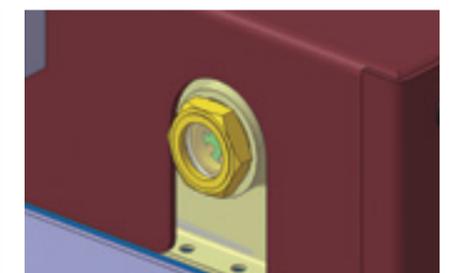
Air-Cleaner Filter

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



Brake & Pilot Filter

The brake & pilot filter is easy to replace and a clogged filter warning system has been added for extra protection.



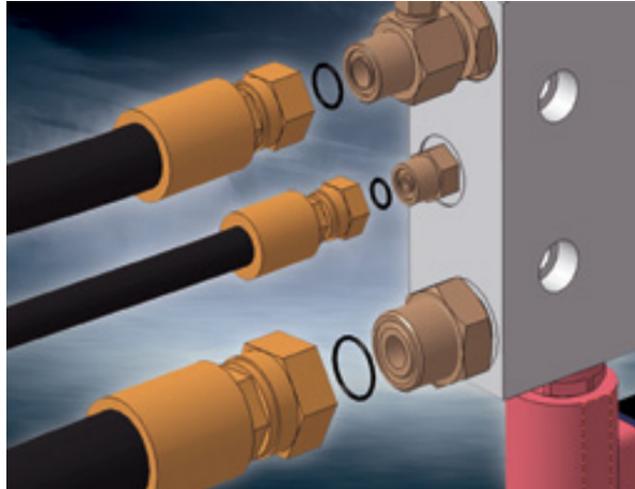
Sight Gauges

Well-located, yet easily visible sight gauges for the hydraulic oil and radiator coolant allow easy daily checks while reducing the risk of contaminants entering the systems.

RELIABILITY

DL550

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 DL550 wheel loader is designed and built to last. For Doosan, 'reliable' means availability, accessibility and simplicity.



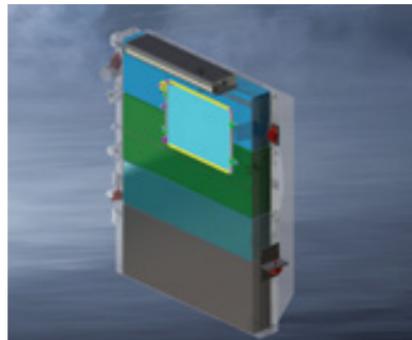
ORFS(O-Ring faced Seal)-All Ports(Even in Pilot line and Low pressure line)



2-Piece Type Tooth(Pin-on+Bolt-on adapter)



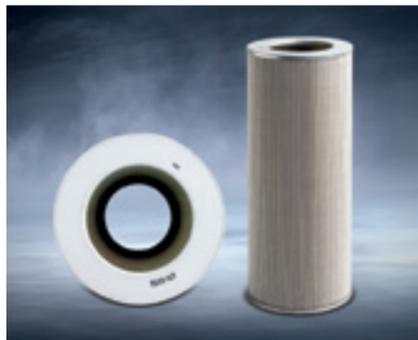
Radiator Grill (Steel structure)



Rubber-Mounting (for Radiator: Lateral 2EA / Vertical 2EA)



Fender-Edge(Opt.)



Hydraulic Oil Return Filter

The high-efficiency, large-capacity return filter manufactured with the glass-fiber media can eliminate foreign substances up to 99.5 percent to protect the costly hydraulic equipment and substantially extend the replacement cycle.



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 Turbo-3 pre-cleaner, inner filter, and external plugging indicator as at the dashboard
- Water separator with fuel filter
- Crankcase Ventilation oiltrap system
- Two fuel filters
- Hydraulically driven fan
- External drains for engine oil and coolant
- Electric driven fuel feeding pump
- Mode selector switch for the engine power (Standard / Economy mode)
- Self-diagnosis function

• Lifting and Hydraulic system

- Robust Z bar lifting system
- General purpose bucket 5.4m³ (SAE,heaped)
- FNR Lever(Finger tip lever is option)
- Hydraulic control valve with two sections
- Automatic boom kick out
- Automatic bucket return to dig
- Fast couplers for hydraulic check
- Variable displacement piston pump and load sensing hydraulic system

• Steering system

- Load sensing steering system

• External equipments

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

• Electric System

- Alternator 100A / 28 V
- Working lights : 2 at the front and 4 at the rear (6 x 70W)
- Driving lights: low and high beams
- Tail indicators, stop, reversing lights
- Reversing alarm

• Loader Linkage

- Z-bar loader linkage

• Drive line and Brake system

- Intelligent transmission clutch cut-off via the brake pedal
- Gear box with diagnosis and monitoring indicator, and electronic plug for a fast adjustment
- Mode selector switch for the transmission (Manual / Auto 1 ↔ 4 / Auto 2 ↔ 4)
- Starting safety system
- Kickdown and travelling direction selection: lever at left of the steering wheel or on the joystick
- DHL on front axle.
- Dual brake circuits with accumulator
- Tire 29.5R25 (L3)
- Dual service brake pedals
- Secondary brake system
- Parking brake on the transmission, electric-hydraulic

• Cab

- Air-conditioning / heating with recirculation function
- Double Filtered air cab
- Mechanical suspension seat with safety belt(2")
- 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 room mirror (2)
- Exterior rear view mirrors (2)
- Machine monitoring (condition, control & maintenance indicators in front of the driver by dials, gauges and lamps)
- Main switches in front of the driver (Starter & hazard switches)
- Switches for the general functions in the right console
- Electrical horn
- Cigarette lighter
- MP3 CD Player
- 12 Volt socket
- Cup holder
- Compartment for Shoes
- Glass antenna
- Heatwire in side mirror
- ROPS Cabin(Rollover Protective Structure): ROPS Meets The Following Criteria - SAE 1040 , ISO 3471
- FOPS Cabin(Falling Objects Protective Structure): FOPS Meets The Following Criteria - SAE J 231, ISO 3449
- Digital clock
- Coat hook

* 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, Pallet fork, timber grapples and accessories

• Drive line and Brake System

- 5 Gear with Lock-up clutch

• Tires

- L3, L4, L5 following various types of manufacturers

• Hydraulic

- Hydraulic 3rd function control valve
- FNR lever with 3rd function lever for third section
- Two hydraulic levers for 2 sections function
- Three hydraulic levers for 3 sections function
- Load isolation system (LIS)
- Emergency steering pump driven by electric motor(ESS)
- Electric Steering Lever

• Electric system

- Rotating beacon
- Additional lighting

• Cab

- Rear Camera (CCTV) and monitor
- Air suspension seat with 3" belt

• Various

- Additional counterweight

•External equipments

- Full fender with rubber protector

• Loader Linkage

- Z-bar high lift loader linkage

• Bucket and Attachments

- Adapter tooth 5.4m³ (7.1 cu.yd.)
- Bolt-on edge 5.7m³ (7.5 cu.yd.)
- Mono tooth 5.0m³ (6.5 cu.yd.)
- Adapter tooth 5.0m³ (6.5 cu.yd.)
- Teeth & segments 5.2m³ (6.8 cu.yd.)
- Bolt-on edge 5.2m³ (6.8 cu.yd.)
- Rock bucket Adapter tooth 4.5m³ (5.9 cu.yd.)

* The standard delivery package and options may vary by region.

TECHNICAL SPECIFICATIONS

DL550

* ENGINE

General description

The high performance Engine Scania DC13 combined a 6 cylinder in-line, high-pressure unit injector fuel injection system with electronically controlled direct injection and turbo charged air to air intercooler offers low fuel consumption and emission.

-GROSS SAE J1995

• Rated Power :

294 kW @ 2,100rpm
394 HP @ 2,100rpm

• Max. Power :

394 HP (294 kW) @2,100 rpm

• Max. Torque :

2,157 Nm @ 1,200rpm
1,591 lbf.ft @ 1,200rpm

• Displacement :

12,700cc (775 cu.in)

• Bore x stroke :

∅ 130 x 160 (5.1" x 6.3")mm

Wet replaceable cylinder liner

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

Hydraulically driven puller type fan with possibility of adjustment.

• Battery :

System voltage : 24V
Quantity : 12V x 2
Capacity (AMP) : 150Ah

• Starter power :

24V x 6.0kW

• Alternator output :

100A

* AXLES

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

Fitted as standard, the front hydraulic differential locks, ensure the traction is optimal in all circumstances.

• Maker and model :

MT-L3125II / MT-L3115II

• Differential :

Front DHL (100%) / Rear (Open)

• Oscillation angle :

+/- 10°

• 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.

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 :

Type : 4 speed, Full auto power-shift, Countershaft, Engine remote mounted with propeller shaft and damper

Stall ratio : 2.598

• Gear box :

Maker and model : ZF 4 WG 310

• Speed Forward/Rearward :

1	6.5 / 6.5 km/h (4.0 / 4.0 mph)
2	12.4 / 12.1 km/h (7.5 / 7.5 mph)
3	19.7 / 19 km/h (12.2 / 11.8 mph)
*	28.0 km/h (17.4 mph)
** 4/5	36 km/h (22.4 mph)

* : 5 speed w/lock up (option)

** : 4th,5th T/M max speed is 36 km/h

* HYDRAULIC SYSTEM

Two load-sensing axial piston pumps with variable displacement.

Main control valve of double acting 2-spool is controlled by standard single lever.

Automatic boom kick out and bucket return to dig. Is standard.

All of hydraulic lines are equipped with special seals (ORFS)

• Max flow main:

480 l/min (Main 210 + Steering 270)

• Working Pressure:

275 bars

• Pressure of the pilot circuit:

30 bars

• Filtration capacity on the return line:

10 microns

• Loading cycles time:

Lifting speed (loaded) :
6.1 sec
Dumping speed (loaded) :
1.1 sec
Lowering speed (empty) :
4.2 sec

* OPERATOR' 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 an air 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 ISO 6395, 2000 / 14 / EC) 113 dB(A)

* STEERING

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

• Steering angle :

40°

• Oil flow :

270 l/min

• Working pressure :

185 bars

• Steering cylinders (2) :

bore x stroke : 110 x 465 mm (4.3" x 1'6")

Emergency steering system with hydraulic pump driven by electric motor.

* LIFTING SYSTEM

The lifting system with two cylinders and Z configuration is designed for the toughest jobs. The breakout force (26.5 ton with a 5.4m³ bucket) is optimized for work and the bucket movements are fast.

The "Z" form lifting geometry is extremely robust and especially tailored for demanding jobs. Particularly effective in penetrating piles of hard material, it delivers superior breakout force and loader stability. This is achieved with fewer moving parts and reduced stress on components. Performance improves with rapid bucket movements and correct angle positioning in every situation. With greater dumping and lifting speed for the bucket and lift arm, faster cycle times and increased productivity are ensured.

• Lifting cylinders (2)

bore x stroke : 190 x 890 mm (7.5" x 2'11")

• Bucket cylinders (1)

bore x stroke : 220 x 610 mm (8.7" x 2'0")

* MAINTENANCE

Maintenance is easy due to excellent access.

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

• Engine (oil) : 45 l (11.8 gal)

• Radiator (cooling liquid) : 60 l (15.8 gal)

• Fuel : 564 l (148.9gal)

• Hydraulic oil : 247 l (65.2 gal)

• Gear box and torque converter : 54 l (14.2 gal)

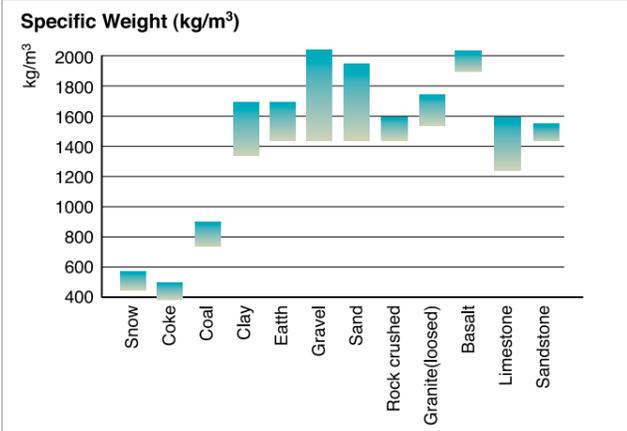
• Front axle : 50 l (13.2 gal)

• Rear axle : 50 l (13.2 gal)

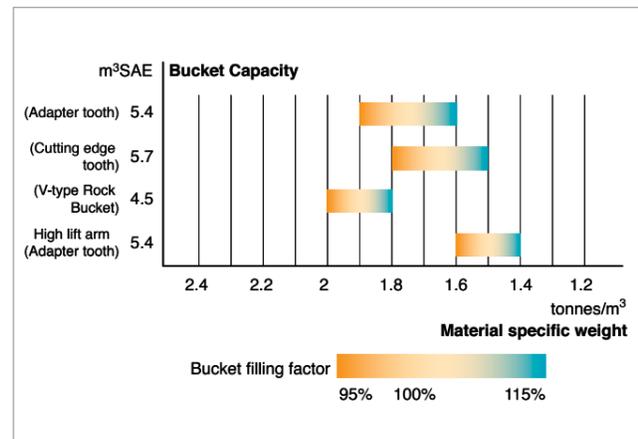
OPERATIONAL DATA

Loader type		General purpose						Rock	High lift
Bucket mount		PIN ON	PIN ON	PIN ON	PIN ON	PIN ON	PIN ON	PIN ON	PIN ON
Configuration	Unit	Adapter tooth	Bolt-on edge	Mono tooth	Adapter tooth	Teeth & segments	Bolt-on edge	Adapter tooth	Bolt-on edge
Capacity heaped ISO/SAE	m ³	5.4	5.7	5.0	5.0	5.2	5.2	4.5	5.7
	yd ³	7.1	7.5	6.5	6.5	6.8	6.8	5.9	7.5
Bucket width	B mm	3,405	3,405	3,405	3,405	3,405	3,405	3,440	3,405
	ft in	11'2"	11'2"	11'2"	11'2"	11'2"	11'2"	11'3"	11'2"
Breakout force	kN	260	260	283	283	282	282	266	253
	lbf	58,450	58,450	63,621	63,621	63,396	63,396	59,799	56,877
Static tipping load (straight)	kg	24,680	24,290	24,845	24,865	24,345	24,480	24,025	19,490
	lb	54,410	53,550	54,774	54,818	53,671	53,969	52,966	42,968
Static tipping load (at full turn)	kg	21,790	21,445	21,935	21,955	21,495	21,615	21,210	17,210
	lb	48,039	47,278	48,358	48,402	47,388	47,653	46,760	37,942
Dump height (at 45°) (at fully raised) ¹⁾	H mm	3,285	3,405	3,355	3,380	3,480	3,355	3,330	3,830
	ft in	10'9"	11'2"	11'0"	11'1"	11'5"	11'0"	10'11"	12'7"
Dump reach (at 45°) (at fully raised) ¹⁾	I mm	1,535	1,400	1,460	1,435	1,325	1,460	1,545	1,620
	ft in	5'0"	4'7"	4'10"	4'9"	4'4"	4'9"	5'1"	5'4"
Dump height (at max. dump) (at max. reach) ¹⁾	mm	685	855	785	820	955	785	730	870
	ft in	2'3"	2'10"	2'7"	2'8"	3'2"	2'7"	2'5"	2'10"
Dump reach (at max. dump) (at max. reach) ¹⁾	mm	1,830	1,750	1,790	1,770	1,710	1,790	1,855	2,295
	ft in	6'0"	5'9"	5'10"	5'10"	5'7"	5'10"	6'1"	7'6"
Digging depth	mm	80	80	80	80	80	80	45	205
	ft in	3"	3"	3"	3"	3"	3"	2"	8"
Height at bucket pivot point	J mm	4,795	4,795	4,795	4,795	4,795	4,795	4,795	5,220
	ft in	15'9"	15'9"	15'9"	15'9"	15'9"	15'9"	15'9"	17'2"
Max. tilt angle at carry position	K deg	48	48	48	48	48	48	48	50
Max. tilt angle at fully raised	M deg	67	67	67	67	67	67	67	62
Max. tilt angle on ground	deg	43	43	43	43	43	43	43	43
Max. tilt angle at max. reach	deg	68	68	68	68	68	68	68	62
Max. dump angle at max. reach	deg	68	68	68	68	68	68	68	65
Max. dump angle on ground	deg	79	79	79	79	79	79	79	79
Max. dump angle at fully raised	deg	47	47	47	47	47	47	47	47
External radius at bucket edge	Q mm	7,565	7,515	7,525	7,535	7,485	7,485	7,555	7,790
	ft in	24'10"	24'8"	24'8"	24'9"	24'7"	24'7"	24'9"	25'7"
Overall length	A mm	9,870	9,680	9,760	9,725	9,575	9,760	9,805	10,255
	ft in	32'5"	31'9"	32'0"	31'11"	31'5"	32'0"	32'2"	33'8"
Operating weight	kg	31,125	31,250	30,950	30,995	31,195	31,120	31,280	31,705
	lb	68,619	68,894	68,233	68,332	68,773	68,608	68,961	69,897

1) Measured to the tip of the bucket teeth or bolt on edge with tires 29.5R25VSNT(L4)



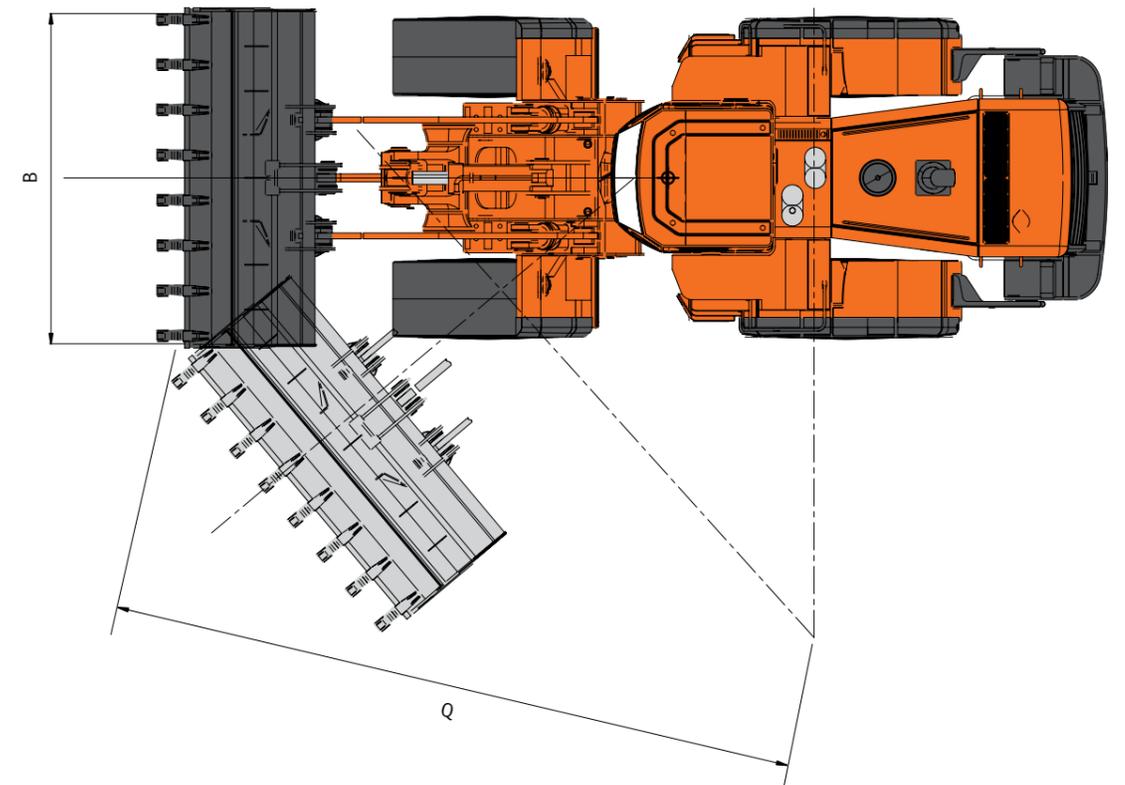
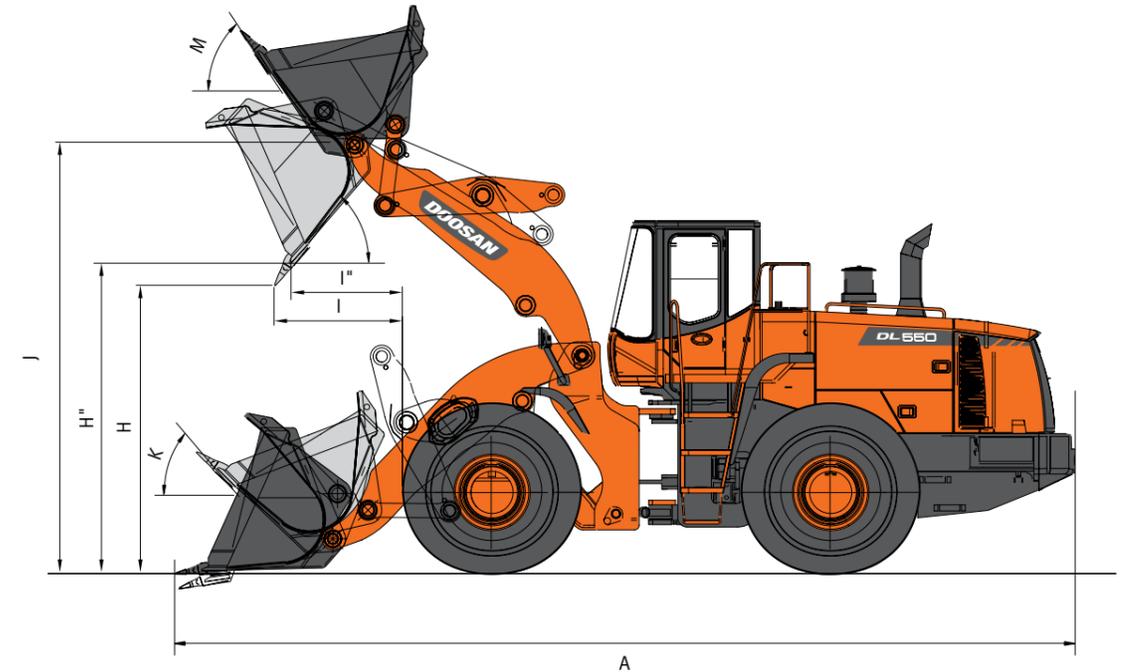
The specific weight of material largely depends on moisture rate, compacting value, percentage of various components etc... This chart is given only for information.



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

DIMENSIONS

DL550





Doosan worldwide factories

- Heavy Equipment Factory
- Compact Equipment Factory
- Attachment Factory



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