DOOSAN

Construction Equipment

DL300

Engine Power	SAE J1995, gross 162 kW(217 HP) @ 2,000 rpm
Operational Weight	17,300 kg (38,139 lb)
Bucket Capacity (SAE)	2.7 ~ 6.0 m^3 (3.5 ~ 7.8 yd^3)

TECHNICAL SPECIFICATIONS

ENGINE

The high performance Doosan DL08 combined a 6 cylinder in-line, cmmon-rail 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

162 kW (217 HP) @ 2,000 rpm (SAE J1995, gross)

Max. Power

166 kW (223 HP) @ 1,800 rpm (SAE J1995, gross)

Max Torque

105 kgf.m (1,029 Nm) @ 1,300 rpm

Displacement

7,640 cc (466 cu.in)

Bore x stroke

∅ 108 x 139 mm
Dry replaceable cylinder liner

3 stages Air cleaner including a very efficent precleaner, main and safety elements.

Hydraulically driven puller type fan with possibility of adjustment.

Battery

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

Starter power

24 V / 6.0 kW

Alternator

24 V / 50 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.

Limited slip Differential (front and rear)

45%

Oscillation angle

+/- 12°

Brake

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

The sintered metal brake discs extended discs service intervals : increased three times

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. (Optional)

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 : Single stage, one phase,
three elements
Stall ratio : 2.845

Maximum traction

18.2 ton

Travel speed, kph

Forward : 6.5 - 12.0 - 22.5 - 34 (1 - 2 - 3 - 4)
Reverse : 6.6 - 12.6 - 23.6 (1 - 2 - 3)

HYDRAULIC SYSTEM

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

Pilot actuation with 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

150 / 132 / 37 ℓ /min (39.6 / 34.9 / 9.8 gal/min)

Operating Pressure

200 bars

Pressure of the pilot circuit

30 bars

Filtration capacity on the return line

10 microns

Loading cycles time

Lifting speed (loaded) : 5.9 seconds
Dumping speed (loaded) : 1.9 seconds
Lowering speed (empty) : 3.7 seconds

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 equiped 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 2000 / 14 / EC) 103 dB (A)

LIFTING SYSTEM

The lifting system with two cylinders and Z configuration is designed for the toughest jobs. The breakout force (162 kN with a 3.0m³ bucket) is very important 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 : 150 x 831 mm

Bucket cylinders (1)

bore x stroke : 200 x 505 mm

STEERING

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

Steering angle

40°

Oil flow

132 ℓ /min (34.9 gal/min)

Operating pressure

190 bars

Steering cylinders (2)

bore x stroke : 80 x 450 mm
Emergency steering system with hydraulic pump driven by electric motor. (Optional)

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.

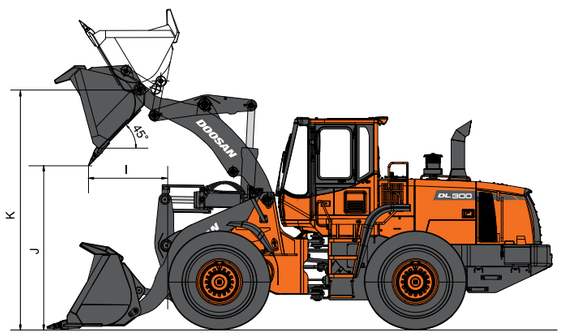
Engine (oil) : 35 ℓ (5.6 US gal)
Radiator (cooling liquid) : 50 ℓ (13.2 US gal)
Fuel : 326 ℓ (86.1 US gal)
Hydraulic oil : 190 ℓ (50.2 US gal)
Gear box and torque converter : 48 ℓ (12.7 US gal)
Front axle : 38 ℓ (10.0 US gal)
Rear axle: 30 ℓ (7.0 US gal)

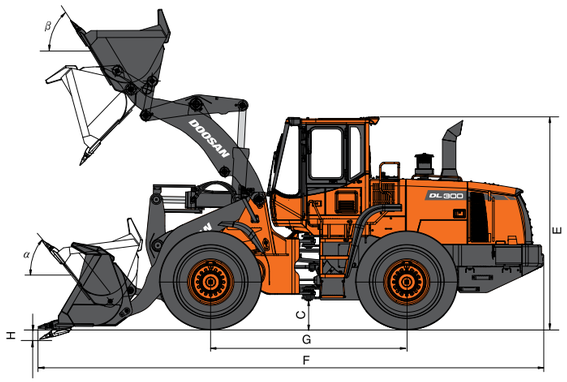
OPERATIONAL DATA

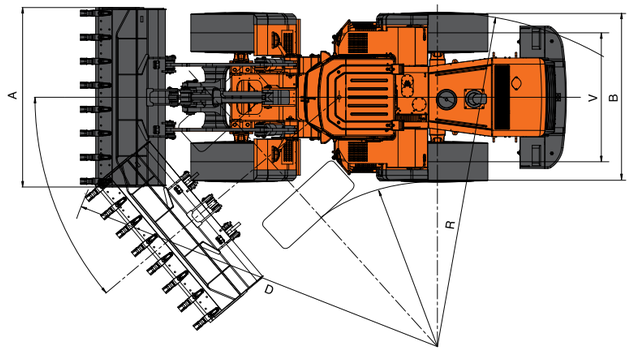
Bucket type			General purpose						High Lift
Configuration		**Unit**	**Teeth**	**Teeth (std.)**	**Teeth**	**Bolt-on edge**	**Bolt-on edge**	**Teeth & segments**	**Bolt-on edge**
Capacity heaped ISO/SAE		m^3	2.7	3.0	3.0	2.9	3.2	3.2	2.9
		yd^3	3.5	3.9	3.9	3.8	4.2	4.2	3.8
Tooth type			Adapter tooth	Adapter tooth	Integrated tooth			Adapter tooth	
Bucket width	A	mm	2,730	2,920	2,920	2,730	2,920	2,920	2,920
		ft in	8'11"	9'7"	9'7"	8'11"	9'7"	9'7"	9'7"
Breakout force		kN	162	162	162	162	162	162	160
		lbf	36,419	36,419	36,419	36,419	36,419	36,419	35,969
Static tipping load (straight)		kg	13,557	13,500	13,500	13,392	13,332	13,342	11,203
		lb	29,888	29,762	29,762	29,524	29,392	29,414	24,698
Static tipping load (40°)		kg	11,150	11,100	11,100	11,004	10,951	10,961	9,603
		lb	24,582	24,471	24,471	24,260	24,143	24,165	21,171
Dump height (at 45°)[1] (at fully raised)	J	mm	2,760	2,780	2,782	2,880	2,890	2,780	3,465
		ft in	9'1"	9'1"	9'2"	9'5"	9'6"	9'1"	11'4"
Dump reach (at 45°)[1] (at fully raised)	I	mm	1,307	1,285	1,280	1,183	1,171	1,285	1,175
		ft in	4'3"	4'3"	4'2"	3'11"	3'10"	4'3"	3'10"
Digging depth	H	mm	76	76	76	76	76	76	200
		ft in	3"	3"	3"	3"	3"	3"	8"
Height at bucket pivot point	K	mm	4,000	4,000	4,000	4,000	4,000	4,000	4,532
		ft in	13'1"	13'1"	13'1"	13'1"	13'1"	13'1"	14'10"
Max. tilt angle at carry position	a	°	46	46	46	46	46	46	50
Max. tilt angle at fully raised	β	°	58	58	58	58	58	58	55
Max. tilt angle at ground		°	43	43	43	43	43	43	45
External radius at tire sidea	R	mm	5,800	5,800	5,800	5,800	5,800	5,800	5,800
		ft in	19'	19'	19'	19'	19'	19'	19'
External radius at bucket edge	D	mm	6,300	6,360	6,320	6,290	6,380	6,360	6,868
		ft in	20'8"	20'10"	20'9"	20'8"	20'11"	20'10"	22'6"
Wheel base	B	mm	3,200	3,200	3,200	3,200	3,200	3,200	3,200
		ft in	10'6"	10'6"	10'6"	10'6"	10'6"	10'6"	10'6"
Width at tyres	V	mm	2,760	2,760	2,760	2,760	2,760	2,760	2,760
		ft in	9'1"	9'1"	9'1"	9'1"	9'1"	9'1"	9'1"
Tread	C	mm	2,150	2,150	2,150	2,150	2,150	2,150	2,150
		ft in	7'1"	7'1"	7'1"	7'1"	7'1"	7'1"	7'1"
Ground clearance	F	mm	470	470	470	470	470	470	470
		ft in	1'7"	1'7"	1'7"	1'7"	1'7"	1'7"	1'7"
Overall length	E	mm	8,160	8,150	8,110	8,110	8,045	8,150	8,533
		ft in	26'9"	26'9"	26'7"	26'5"	26'5"	26'5"	27'11"
Overall height		mm	3,438	3,438	3,438	3,438	3,438	3,438	3,438
		ft in	11'3"	11'3"	11'3"	11'3"	11'3"	11'3"	11'3"
Operating weight		kg	17,120	17,300	17,300	17,260	17,460	17,450	17,728
		lb	37,743	38,140	38,140	38,052	38,493	38,471	39,084

1) Measured to the tip of the bucket teeth or bolt-on edge.
2) All measurements with tyres 23.5-25-16PR(L3).

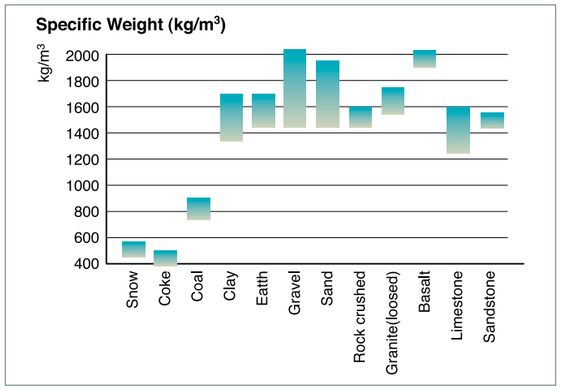
DIMENSIONS



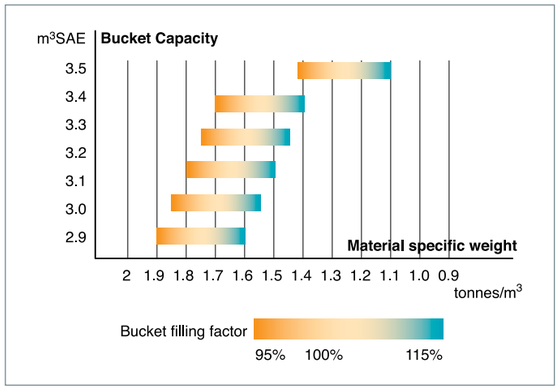




Measured to the tip of the bucket teeth or bolt on edge with tires 23.5-25-16PR(L3)



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.

STANDARD AND OPTIONAL EQUIPMENT

STANDARD EQUIPMENT

Engine
- DOOSAN DL08 Diesel engine
- Air cleaner - Double element cartridge + Cyclone filteration in prior stage
- Fuel filter - Main fuel filter and fuel pre-filter with water separator
- External drains for engine oil and coolant changes
- Hydraulic radiator fan - Reversible fan

Hydraulic System
- Hydraulic control valve - 2 spool
- Hydraulic main pump - Triple tandem vane
- Hydraulic control levers
- Boom kick out - Automatic
- Bucket return to dig - Automatic

Cabin and Interior
- 12V power socket
- Double filtered air cab
- Air conditioner and heater with recirculation function
- Cup holder
- Tinted glasses
- Floor mat
- AM/FM Radio + MP3(USB)
- Windshield washer front and rear
- Windshield wipers front and rear
- Cigarette lighter
- Multiple storage compartments
- Sun visor
- Glass antenna
- Seat - Mechnical suspention
- ROPS cabin - ISO 3471
- FOPS cabin - ISO 3449
- Adjustable steering column
- Rear view mirrors - Interior 2
- Rear view mirrors - Exterior 2

Eletrical and lighting
- Battery cut-off switch
- Working light - Front 2 + Rear 4
- Driving light - Low and high beams
- Tail indicators - Stop, reversing lights
- Reversing alarm
- Electric horn
- Alternator - 24V, 60A
- Self-diagnostic system

Linkage
- Z-bar loader linkage

Drivetrain and Brake system
- Gear shift switch - Manual, Auto 1 ↔ 4, Auto 2 ↔ 4
- Kickdown and travelling direction selection
- Starting safety system
- Dual brake circuits with accumulator
- Dual service brake pedals
- Secondary brake system
- Parking brake - Electrical, hydraulic
- Differential - Limited slip

Steering system
- Load sensing steering system

External equipment
- Fender
- Counterweight - 0.24t
- Tool Kit
- Air compressor

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.

Engine
- Fuel filter - Wather separator with heater

Hydraulic System
- Hydraulic Oil - VG32 Cold Weather
- Hydraulic Oil - VG46 Normal Weather
- Hydraulic control valve - 3 spool
- Load isolation system (LIS)
- Hydraulic control levers - Mono
- Hydraulic control levers - FNR
- Hydraulic control levers - Finger tip

Cabin and Interior
- Seat - Air suspention with heater
- Seat - Air suspention
- Camera - Rear view

Eletrical and lighting
- License lamp
- Beacon - Rotating
- Alternator - 24V, 80A
- EMI Filter

Linkage
- Z-bar high lift loader linkage

Steering system
- Emergency steering pump

External equipment
- Fender - Full fender + rubber protector
- Fender - Rubber protector
- Anti-noise Kit
- Counterweight - 0.24t
- Tool Kit
- Air compressor

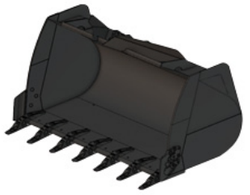
* Standard specification and options may vary by country.
** Specification is subject to change without prior notice for quality enhancement.

ATTACHMENTS

BUCKETS

General Purpose

Light Material



Material Handler

	Mounting type	Capacity	Width
GENERAL PURPOSE	Direct mount	2.7 / 2.9 / 3.0 / 3.2 m³	2,730 / 2,920 mm
	Quick coupling	3.0 m³	2,920 mm
LIGHT MATERIAL	Direct mount	3.5 / 6.0 m³	3,000 / 3,174 mm
	Quick coupling	3.5 / 6.0 m³	3,000 / 3,174 mm
MATERIAL HANDLER	Direct mount	3.0 / 3.2 / 3.3 / 3.5m³	2,920 mm

CONNECTING

Quick Coupler

	Model	Mounting type	Weight
QUICK COUPLER	Quick coupling	DLQC30	530 kg

MATERIAL HANDLING

Pallet Fork

General purpose

Tropical type

Sorting type

Log Grapple

	Model	Length
PALLET FORK	DLPF30	48” / 60” / 72”

	Model	Type
LOG GRAPPLE	DLLG30	General purpose Tropical Sorting type