







DL300A

Wheel Loader







Take a tour	pages 4 - 5
Performance	pages 6 - 7
Comfort	pages 8 - 9
Reliability	pages 10 - 11
Maintenance	pages 12 - 13
Technical specifications	pages 14 - 17
Equipment	pages 18 - 19

DL300A - A POWERFUL WHEEL-LOADER



DO YOU WANT LOWER RUNNING COSTS, THE MOST EFFICIENT TECHNOLOGY AND FIRST-CLASS OPERATOR COMFORT?

The key phrase used during the development of the DL300A was "giving optimum value to the end user". This translates, in concrete terms, into:

- Increased productivity thanks to the use of the powerful 8 litre engine and the excellent synchronization of the drive train with the hydraulic system
- Improved ergonomics, increased comfort and excellent all-round visibility ensuring safe and pleasant working conditions
- Improved reliability through the use of new high-performance materials, the development of new computer-assisted 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 uptime and reduces operating costs

TAKE A TOUR • Spacious, comfortable cab • Large storage compartments • Large windows for better visibility • Rear screen antenna • Air suspension seat, heated mirrors (optional) Wide range of attachments "Lift arm raise kick-out" and "return to dig" functions Load isolation system (option) 3rd spool (option) Latest generation ZF axles with automatic limited slip differentials Fenders, radiator grille, engine bonnet and other parts made of robust steel

Cooling compartment separated from the engine compartment to prevent warm and dusty air from entering and allow better

3-stage air filter with Turbo 3 cyclone dust separator

POWER AND FUEL FEFICIENCY

- Doosan DE08TIS engine (156 kW at 2100 rpm)
- · High torque at low rpm for better response
- Clutch cut-off via brake pedal
- 4-gear transmission

Hydraulically driven fan as standard

Easy access to maintenance components from the ground

Clean, solid articulation hinge design

4-gear ZF powershift transmission with automatic and manual shift modes

DL 300A

Courtesy of Machine. Market

More power that lifts productivity to new heights

■ Strength and intelligence – a winning combination

Exceptional power combined with the finest workmanship results in a machine that will perform at the highest level. The DL300A enhances your output from every angle. Impressive digging power and high traction make penetration easy and allow you to tackle 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.

Work is quick and efficient with a powerful hydraulic system.



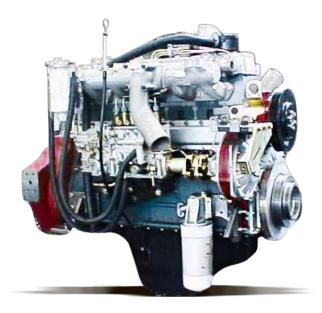
Hudraulic namer stanking

Works with a flow amplifier and priority valve. And the emergency steering system (option) is a safety feature in the event of a malfunction of the steering system while travelling.



High lift

Better dump reach and height at bucket pivot point.



DOOSAN DE08TIS AIR-TO-AIR INTERCOOLER ENGINE

- 156 kW (212 HP) at 2100 rpm, highly efficient, delivering the highest power output in its class
- · Direct injection
- Environmentally friendly
- Meets U.S. EPA Tier II regulations and European Stage II regulations governing the reduction of harmful NOx and PM emissions

Automatic transmission

The transmission is particularly smooth and the gear ratios are optimized. 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, enhances breakout forces and thus optimizes 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)

Axles

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.

Limited-slip ZF differential

The front and rear axles are fitted with limited-slip differentials. This automatically ensures 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.

The brake discs integrated into the planetary reduction gears in the hubs are metal reinforced, ensuring long hours of operation and reduced maintenance.





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



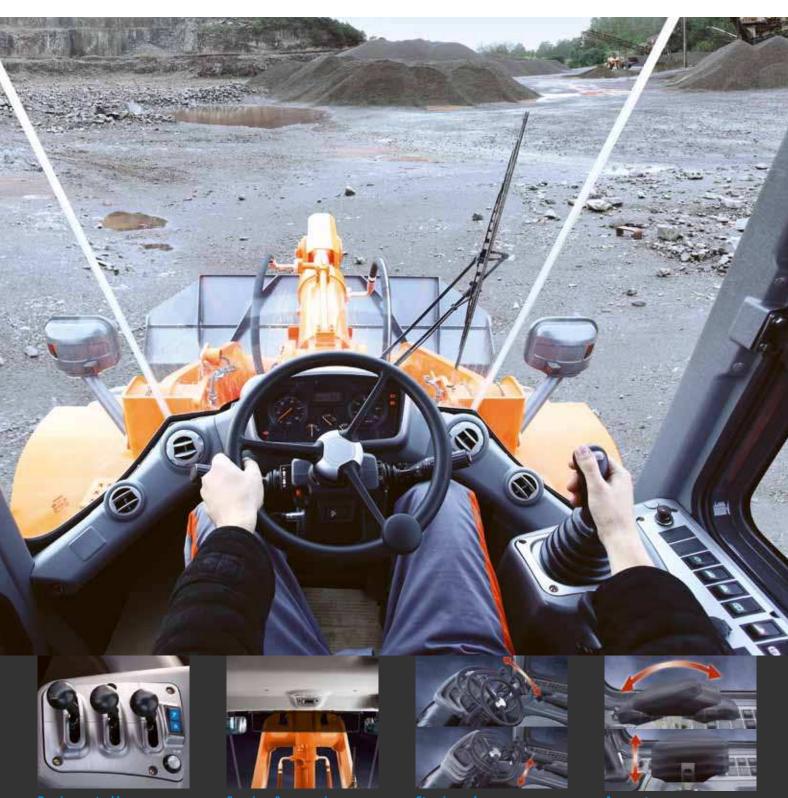
Increased axle durability and machine stability

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, heat generation is reduced and the life span of the discs is greatly extended. This positioning provides excellent machine stability. An 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.

Comfort at its best – take a seat!

■ The workspace you've always wanted

The productivity of your wheel loader is directly linked to the operator's performance. That's why Doosan has placed comfort at the very centre of its design priorities for the DL300A. More space, better visibility, air conditioning, a comfortable seat and plenty of storage space make it easy to work for hours without fatigue or discomfort. There's no need to pay extra for the options you want – most of them are standard features on this loader.



Precise control levers

Different options are available to match what the operator is accustomed to as well as an optional auxiliary lever.

Sunvisor & room mirror

Featured as standard for extra comfort when operating.

Steerina column

The steering column is adjustable for reach and rake and features both tilting and telescopic functions.

Irm rests

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



Air conditioning & defroster system

Double filtered air cab, air ducts are distributed throughout the cab with proportional sensitive controls and air re-circulation facility. We offer the same comfort as a passenger car.

Air-suspension seat (option)

The DL300A is equipped with a very comfortable, fully adjustable seat.



Central indicator panel

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



Lateral console

The ergonomically laid out switch panel in line with the natural movements of the body allows very convenient operation. Provision is made to install switches for additional equipment if required.

Doosan reliability – whatever the job!

■ Dependable performance for low lifetime cost

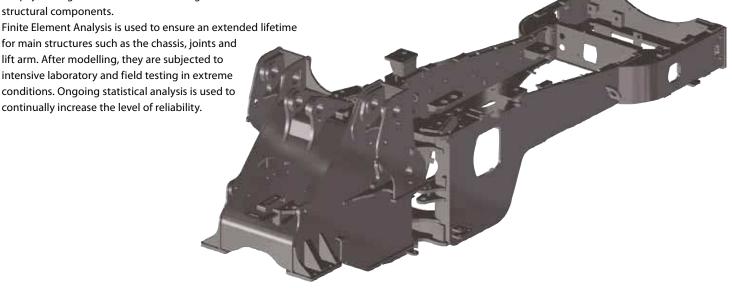
Doosan has been building heavy construction equipment for 40 years. This long experience is reflected in the superior design and development of our wheel loaders as well as by an extensive logistics network. The operator knows that the DOOSAN loader is a tough, durable product with large power reserves, which he can rely on to work for long periods.

For DOOSAN, reliability means simplicity of design, durability and maximum uptime.

Designed to last

We pay the highest attention to the design and manufacture of structural components.

for main structures such as the chassis, joints and lift arm. After modelling, they are subjected to intensive laboratory and field testing in extreme conditions. Ongoing statistical analysis is used to continually increase the level of reliability.

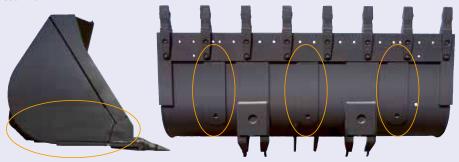


Reinforced bucket

The lower and side panels of the bucket have been reinforced with additional plates.

Reinforcements:

- On both sides 1 area
- On lower panel 3 areas

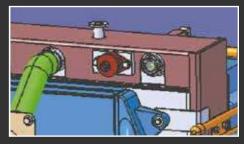




To ensure perfect tightness, all ports, even the low pressure ports which are used for the pilot lines, are ORFS type.



(Pin-on-tooth + bolt-on adapter)



The aluminium radiators are installed on rubber mounts to effectively dampen vibration.





Propeller shaft

A cover has been fitted to protect the oil seal from dust and foreign objects, thus wear and damage are reduced.



Radiator grill

The radiator grille is made of reinforced steel for increased shock resistance.

Easy maintenance for more uptime

A liquid crystal display conveys information about the ZF transmission. At the same time, it reports the nature of any problem. When servicing the loader, a special tool can be used to adjust the clutch discs to compensate for their wear. Additionally, by connecting a laptop computer, a complete transmission diagnostic can be performed.

Short and simple maintenance operations at long intervals mean that your machine is available on site when you need it. Our service centre has more than 40000 parts in stock to supply you with top quality components as quickly as possible.



Hydraulic oil return filter

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



Air cleane

The forced-air cleaner removes 99% of particles. It is preceded by a high capacity Turbo pre-filter. The cleaning and cartridge replacement intervals are very long.



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.



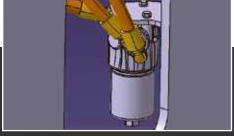
Remote greasing ports

The front pins can be lubricated from the outside of the machine without having to crawl under it or make awkward movements to reach the lubrication ports.



Transmission filters

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



Brake & pilot filter

The pilot filter is easy to replace and protect hydraulic system.



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.

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.



Transmission diagnostics

The laptop PC "monitoring" function allows the status of the transmission to be checked very easily. Disc brake wear is automatically compensated and can be checked without disassembly.



Hydraulically driven fan

The radiator fan is hydraulically driven to reduce sound level and to increase engine performance. It swings out for easier cleaning of radiator from front and rear site.

Air conditioning condenser is combined with radiator assembly and can be tilt for easier cleaning.



Remote engine oil & coolant drain

Remote drain valves have been installed in an easily accessible location for convenient draining of fluids. (coolant, engine oil)



Large capacity transmission oil cooler

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

Technical specifications

* Engine

Model

DOOSAN DE08TIS

The high performance Doosan DE08TIS 6 cylinder, direct injection, turbo charged, air-air intercooler engine offers low fuel consumption and low exhaust emissions, which are well below the requirements of the Tier II legislation.

No. of cylinders

6

Rated power (Gross - SAE J1995)

156 kW (209 HP - 212PS) at 2100 rpm

Maximum power

209 HP at 2100 rpm

· Maximum torque

92 kgf/m (902 Nm) at 1300 rpm

• Engine rpm low / high

 $950 \pm 25 / 2300 \pm 50 \text{ rpm}$

Piston displacement

8070 cm³

• Bore x stroke

111 mm x 139 mm

Starter

24 V / 6.6 kW

Batteries

2 x 12 V / 150 Ah

Air filter

3-stage air filter with Turbo 3 cyclone dust separator.

Cooling

Hydraulic fan for better productivity and lower noise.

* Transmission

4-Gear powershift transmission with 3 operating modes: manual, fully automatic or semi-automatic with 'kick-down' function. Based on high quality components. Equipped with a modulation system for protection and smooth gear and direction changes. A manual transmission control lever is located to the left of the operator. Direction change function also available in automatic or semi-automatic mode. The transmission can be disengaged by the brake pedal to deliver full engine power to the hydraulics. A safety device prevents the engine from starting if the transmission is not in neutral.

Gearbox

ZF 4 WG 210

Torque converter

Simple stage / mono phase / fixed wheel stator 4 Speed, full auto power-shift, countershaft, engine mounted with flexible plate

• Speeds km/h (Tyre 23.5-25-16PR - L3)

Forward 1 / 2 / 3 / 4: 6.1 - 12.0 - 22.5 - 34.4 Reverse 1 / 2 / 3: 6.3 - 12.2 - 22.3

Maximum traction

17.7 ton

Maximum gradeability

58% / 30°

Braking distance

12.5 m at 34.0 km/h

Breakout force

168 kN

* Lift arm

Z-kinematics with simple lifting piston system designed for heavy duty. 17.7 ton breakout force combines with a bucket angle that is maintained throughout the range of movement. Bucket angles are optimised in the travelling position and at ground level. Load Isolation System (LIS) can be fitted for improved comfort and output (optional).

Cylinders	Quantity	Bore x rod diameter x stroke (mm)
Lift	2	150 x 85 x 831
Bucket	1	200 x 105 x 505

* Axles

ZF Axles

Fully suspended front and rear drive axles with planetary reduction gears in the hubs. Front and rear equipped with limited slip differentials. Optimum traction in all conditions.

17.7 ton traction power allows operation on slopes of 58%.

Differential lock ratio

Front (45%) / Rear (45%)

Oscillation angle

+/- 12°

• Brakes

Dual multi-disc circuit with sintered metal discs for extended service life. Braking system activated by a pump and accumulator circuits. Spring-applied, hydraulically released parking brake mounted on the transmission shaft.



* Hydraulic system

The hydraulic system consists of tandem vane pumps with automatic wear compensation.

The hydraulic control valve (2 spools) has a third port for powering an auxilary hydraulic function (option) and is controlled by standard single lever.

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

Main pumps

Triple section vane pump

Maximum flow

132 l/min

Operating pressure

200 bar

Pilot system

Automatic functions for positioning the bucket for digging as well as a function for stopping the lift arm at the desired height and low position by manual adjustment 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 (seconds)

Lift arm: up: 6.0 / down: 3.3 Bucket dump: 1.8

* Steering system

Load sensing type with flow amplification valve and priority valve.

Steering angle

40°

• Oil flow

145 l/min

Operating pressure

185 bar

Steering cylinders (2)

Emergency steering system with electric motor-driven hydraulic pump (option).

Cylinders	Quantity	Bore x rod diameter x stroke (mm)
Steering	2	80 x 40 x 450

* Fluid capacities (litres)

Fuel tank: 330 Cooling system: 50 Engine oil: 21 Front axle: 42 Rear axle: 42

Gearbox and converter: 48 Hydraulic system: 210

* Cab

Spacious modular cab with excellent all-round visibility and ample storage space. Good overview of the bucket, tyres and loading area. Push button controlled air conditioning and heating with air recirculation function. Double cab air filter installed in the cab with extra protection for the operator in dusty or polluted environments. Viscous suspension mount for maximum comfort. High quality seat with air suspension (option). All operating information clearly displayed in front of the operator. Control functions are centralised on a console on the right. Adjustable seat, arm rests and steering column.

Doors

1

Emergency exits

2

Safety standards

ROPS ISO 3471:2008 - SAE 1040 FOPS ISO 3449 - SAE J231

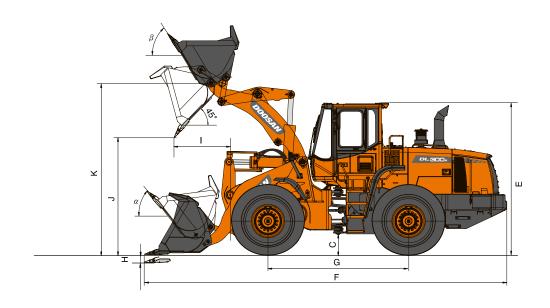
Noise levels

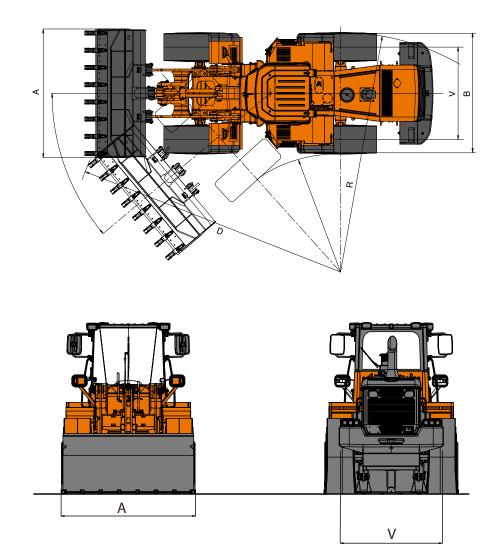
LwA external noise: 110 dB(A) (ISO 6395, 2000/14/EC) LpA operator noise: 72 dB(A) (ISO 6396)

* Pressure settings

 $200 \pm 5 bar$ Working (pump cut-off): Steering relief (LS port side): 185 ± 5 bar (steering pump side): 210 ± 5 bar Pilot control: 28 + 2 barBrake accumulator charging: 120 ± 5 bar Service brake: $60 \pm 3 \text{ bar}$ Fan motor: $120 \pm 10 \, bar$ Parking brake release: 120 ± 5 bar Transmission selection pressure: 17 ± 1 bar

Dimensions and operational data



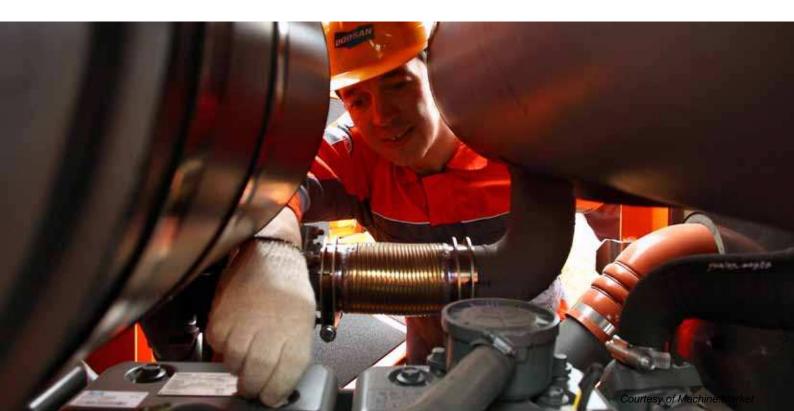




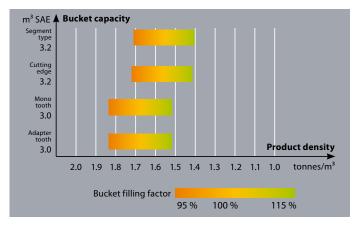
* Dimensions & operational data

	Bucket mounting	Pin-on								
Tyre size 23.5-25-16PR (L3)			General purpose							High lift
Configuration			Teeth	Teeth (Std.)	Teeth	Teeth	Bolt-on edge	Bolt-on edge	Teeth & Segments	Bolt-on edge
	Capacity heaped ISO/SAE	m³	2.7	3.0	3.0	3.3	2.9	3.2	3.2	3.2
	Tooth type	-	Adapter tooth	-	Mono tooth	Mono tooth	-	-	Adapter tooth	-
A	Bucket width	mm	2920	2920	2920	2920	2920	2920	2920	2920
	Breakout force	kN	176	168	168	168	176	167	167	161
	Static tipping load (straight)	kg	13650	13350	13670	13390	13520	13225	13190	10930
	Static tipping load (at full turn)	kg	11860	11600	11880	11635	11750	11495	11465	9500
J	Dump height (at 45°) – (fully raised)*	mm	2800	2730	2779	2779	2918	2849	2730	3401
Т	Dump reach (at 45°) – (fully raised)*	mm	1296	1294	1291	1291	1165	1163	1294	1193
	Dump height (at max dump) – (at max reach)*	mm	700	640	690	690	865	805	640	840
	Dump reach (at max dump) – (at max reach)*	mm	1460	1440	1460	1460	1390	1370	1440	1970
Н	Digging depth	mm	78	118	78	78	78	118	118	243
K	Height at bucket pivot point	mm	3980	3980	3980	3980	3980	3980	3980	4531
α	Max tilt angle at carry position	0	48	48	48	48	48	48	48	51
β	Max tilt angle fully raised	0	58	58	58	58	58	58	58	55
	Max tilt angle on ground	0	45	45	45	45	45	45	45	45
	Max tilt angle at max reach	0	59	59	59	59	59	59	59	57
	Max dump angle at max reach	0	69	69	69	69	69	69	69	61
	Max dump angle on ground	0	72	72	73	73	72	72	71	66
	Max dump angle at fully raised	0	47	47	47	47	47	47	47	45
R	External radius at tyre side	mm	5800	5800	5800	5800	5800	5800	5800	5800
D	External radius at bucket edge	mm	6421	6453	6427	6427	6376	6407	6453	6646
G	Wheel base	mm	3200	3200	3200	3200	3200	3200	3200	3200
В	Width at tyres	mm	2760	2760	2760	2760	2760	2760	2760	2760
٧	Tread	mm	2150	2150	2150	2150	2150	2150	2150	2150
C	Ground clearance	mm	460	460	460	460	460	460	460	460
F	Overall length	mm	8192	8275	8238	8238	8015	8100	8275	8613
E	Overall height	mm	3435	3435	3435	3435	3435	3435	3435	3435
	Operating weight	kg	17855	17910	17640	17870	17980	18030	18065	18155

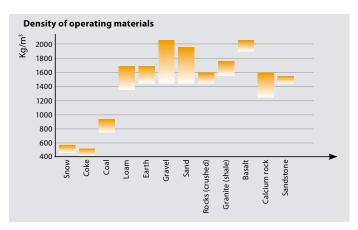
 $^{^{*}}$ Measured to the tip of the bucket teeth or bolt-on edge. All dimensions given with 23.5-25-16PR (L3) tyres.



Attachments



The filling factor depends on the type of material, the working conditions and the experience of the operator. $\frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \left(\frac{1}{2} \int_{-$



The specific weight of the material largely depends on the level of humidity, the degree of compaction, composition, etc.



Standard and optional equipment



* Standard equipment

Engine

Three-stage air cleaner with Turbo 3 cyclone pre-cleaner, inner filter and external plugging indicator on the dashboard

Fuel filter

Hydraulically driven fan

External drains for engine oil and coolant changes

Maintenance warning lamp

Lifting and hydraulic system

Robust Z bar lifting system

General purpose bucket 3.0 m³ (SAE, heaped)

Single lever joystick

Hydraulic control valve with 2 spools

Automatic lift arm kick-out

Automatic bucket return to dig

Levelling function (floating mode)

Fast couplers for hydraulic check

Fixed triple vane pump system

Mono control lever with kickdown switch

Steering system

Load sensing steering system with flow amplifier

External equipment

Lifting hooks

Articulation lock in the transport position

Towing hitch

Tool compartment

Semi fenders

Mudguard

Bottom protection plates

Electric system

Alternator 60 A / 24 V

Work lights: 2 at the front and 4 at the rear (6 x 70 W)

Travel lights: low and high beam

Tail indicators, stop, reversing lights

Reverse travel alarm

Fuel filling pump

Drive line and brake system

Transmission clutch cut-off via the brake pedal

Transmission with self-diagnosis and monitoring indicator with electronic plug for fast adjustment

Transmission mode selector switch (Manual / Auto 1 \leftrightarrow 4 / Auto 2 \leftrightarrow 4 with kick-down) Starting safety system

Selection lever at left of the steering wheel for kickdown and travel direction

Limited slip differentials on front and rear axles

Dual brake circuits with accumulator Tyres: 23.5-25-16PR (L3)

Dual service brake pedals

Parking brake on the transmission, spring-applied hydraulic release

ROPS cab (SAE J 394, SAE 1040, ISO 3471) - FOPS cab (SAE J 231, ISO 3449)

Air conditioning / heating with recirculation function

Double filtered air cab

Mechanical seat with 2" safety belt

Adjustable steering column (inclination & telescopic)

Floor mat

Tinted glass

Left sliding window

Front and rear wiper and washer

Sun visor

Interior cab light

2 interior and 2 exterior rear view mirrors + 1 rear side mirror

Machine monitoring (dials, gauges and lamps)

Main switches in front of the driver (starter & hazard switch)

Switches for the general functions in the right console

Horn

Cigarette lighter and 12 Volt power socket

Cup holder & multiple storage compartments

Radio antenna built into rear window

MP3 / CD player

Digital clock

* Optional equipment

Tyres

L3, L5, various brands

Lifting and hydraulic system

Hydraulic control valve with 3 spools

Additional lever for 3rd function

Two hydraulic levers for 2 spools with FNR switch

Three hydraulic levers for 3 spools with FNR switch

Load isolation system (LIS)

Multi-function joystick with FNR switch

Steering system

Emergency steering pump driven by electric motor

External equipment

Full fenders with rubber protector

Additional counterweight

High lift arm

Electric system

Rotating beacon

Additional lighting

Other

Tool kit

Mudguard, fully covering

Cab

Heated side mirror

Rear camera (CCTV) and monitor

Radio / CD / MP3

Fuel heater switch

Air suspension seat with 3" belt

Attachments

Bucket: Bolt-on teeth (BOT) $2.7 \, \mathrm{m}^3$, $3.0 \, \mathrm{m}^3 \, \& \, 3.3 \, \mathrm{m}^3$

Bucket: Bolt-on cutting edge (BOC) 2.9 m³ & 3.2 m³

Bucket: Bolt-on teeth & segments 3.2 m³

Various types of other attachments



High lift arm

Better dump reach and height at bucket pivot point.



Load Isolation System (LIS)

The bucket is suspended using a closed accumulator to reduce material loss as well as stress on the driver and machine structure. The system is automatic and depends on the speed of operation.



Fingertip control

3 lever control for lift arm, bucket and 3rd circuit. FNR switch for changing travel direction as well as kick-down, return to dig, lift arm raise kick-out and floating mode.

Some of these options may be standard in some markets. Some of these options may not be available for certain markets.

Please check with your local DOOSAN dealer for more information about availability or to adapt your machine to your application needs.

The pulse of transformation



Construction Equipment

Machine Tools

Engines

The spirit of challenge and innovation has led Doosan. We started out as a small store in Seoul in 1896 and have expanded into a global company. Today we are engaged in the infrastructure support business (ISB), which encompasses industrial facilities, machinery, heavy equipment and construction. You can also see the Doosan brand in various other industries.

You are invited to take a closer look at the new world that is being built by Doosan, visit us at: www.doosaninfracore.com and www.doosanequipment.eu

Doosan Infracore Construction Equipment

A partner you can trust



Finance your ambitions







Financial Solutions

Doosan Infracore Financial Services (DI FS) is specialised in creating financing solutions to meet a wide variety of needs.

Always a dealer near you

Our well-developed dealer network has the knowledge and experience to take the best care of our Doosan customers. No matter Contact your local dealer for more information. where you are, you'll get the service you expect - and can rely on!

Parts & Service

- Complete parts & service support for all Doosan products
- Highest quality genuine parts
- Large, dedicated staff of factory-trained aftermarket professionals in the field





www.doosanequipment.eu