

DOOSAN

Wheeled Excavators |
DX190W-5



Maximum power: 173.5 hp
Operating weight: 18.8 t
Max. bucket capacity: 0.93 m³



Doosan Group – Building your tomorrow today

Be part of the great Doosan family

The Doosan Group - founded in 1896 and headquartered in Seoul, South Korea - is one of the fastest-growing companies in the world:

- With more than 37,500 employees in 38 countries, we are a major player in a variety of industries worldwide.
- A global leader in the Infrastructure Support Business (ISB), with 56 subsidiaries and 3,700 distributors worldwide.
- Dramatic growth over the past two decades, with an annual Doosan Group revenue rising from €2.4 billion in 1998 to €12.8 billion in 2016.

Doosan Group – a top player worldwide



Doosan Infracore

- Among the world's Top 5 manufacturers of construction equipment



Doosan Bobcat

- A leading company in the design, manufacture, marketing, distribution and service of small equipment and attachments for construction, agriculture, and landscaping
- Leading position in the global compact equipment market
- N° 1 in North America for SSL, CTL and MEX



Doosan Heavy Industries & Construction

- World N° 1 in desalination plant construction
- World N° 1 in heat recovery steam generator market
- World N° 1 in mould & tool steel
- World N° 3 in crankshafts



Doosan Engineering & Construction

- A pioneering leader in construction of residential and public buildings, civil works and industrial facilities.
- World N° 1 chemical process equipment products



Doosan Infracore Construction Equipment

Creating construction equipment for over 40 years

For over 40 years, we've been building a global production and business network to become one of the world's foremost construction equipment manufacturers.

A solid partner, close to you

A truly global player in every respect, we have large-scale factories, sales subsidiaries and dealers all over the world.



Doosan facilities in Europe

▣ **From machine manufacturer... to full solution provider**

To ensure the highest trade-in and residual values, our parts and service support professionals maintain the performance, productivity and reliability that you expect of our products throughout their lifetime.

▣ **Ask your dealer for a full range of services designed especially for you!**

As your local specialist, your dealer ensures that you receive the maximum benefit from our integrated package. Plan ahead to ensure the success of your equipment!



Doosan approved attachments



Genuine parts



Extension of warranty



Financial solutions



Maintenance contract



Telematics



Monitoring systems



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Advanced Services

- Articulated Dump Trucks
- Mini excavator
- Crawler Excavator
- Wheeled Excavator
- Wheel Loaders



▣ **Experience the Doosan product range!**



Articulated Dump Trucks



Wheel Loaders



Wheeled Excavators



Mini Excavators



Crawler Excavators

Raise profits, productivity & fuel efficiency

High productivity & low cost of ownership

Delivers higher productivity & reduced fuel consumption in an efficient & comfortable work environment.

⊕ **Work lights:** As standard: 2 front frame, 4 front & 2 rear cab-mounted, 2 boom mounted and 1 rear side.

⊕ **Reliability:** Reinforced castings and forged steel pivot points and reinforced heavy-duty arm and boom to withstand high-impact materials. Large, robust boom and arm cylinders for smooth, powerful operation. Advanced pin & bushing technology.

⊕ **Productivity:** Highest in this class in the market for digging power, lifting capacities & traction.

⊕ **Plug & play:** Machine Guidance options available with major brands' ready kits (Trimble, Leica, Xsite etc.) and can differ by model and region.

⊕ **Safety:** Rear camera as standard and side camera as option, large side mirrors, powerful lighting, anti-slip steps. Guard rails on upper structure.

⊕ **Various applications:** Highest hydraulic capacity in its class in the market. For any attachments & work you'll get this extra power you need.

DOOSAN **CONNECT**

⊕ **Telematics:** Monitor your fleet online. As standard, Doosan Connect system with dual mode (satellite, GSM). Check productivity, fuel consumption, system warnings, maintenance status, etc.

⊕ **Front axle oscillation:** For more comfort. Can be automatically or manually activated for better lifting or digging.

⊕ **Frame durability:** Chassis frame and stabiliser frames have been reinforced to reduce stress and improve durability.



☉ **Comfort:** One of the most spacious cabs in the market, with low noise & vibration levels and excellent all-round visibility. Extra-large door for easy access. Fully adjustable heated air suspension seat, air conditioning with climate control as standard.

☉ **Controllability:** Exclusive jog shuttle switch, 4 work & 4 power modes, proportional control, user-friendly 7" TFT LCD colour monitor. 2 speeds (high, low + creep) with cruise control and 3 front axle oscillation lock modes (On/Off/Auto)

☉ **Power:** Exceptionally powerful - with high torque at low revs - the Stage IV compliant Doosan DLo6P engines are free from Diesel Particulate Filter (DPF) and associated regeneration system for more fuel efficiency.

☉ **Efficient fuel management:** The evolution of the Doosan DLo6 to DLo6P allows up to 5% fuel saving. A new SPC (Smart Power Control) system, combined with settable engine shut-off & auto-idle, provides an additional reduction of up to 5%.

☉ **Electric fan clutch:** For optimum cooling, fan speed is controlled electronically by a fan clutch, resulting in lower fan noise and better fuel efficiency.

☉ **Easy maintenance:** Easy access to all compartments. Maintenance data directly available from control panel.

☉ **Advanced filtration:** Highest efficiency filters & cleaners remove water, dust & particles to protect your investment optimally.



Stable & comfortable: Longest wheel base on the market for a stability and a driving performance that makes the whole difference. Option 2.75 m width axles is also available.

Efficient & safe: Excellent ground clearance for better protection in rough terrain.

Top performance and fuel efficiency



▣ The power to raise productivity

The DX190W-5 takes even the heaviest tasks in its stride with efficient, dependable performance that saves you time and money:

- Improved hydraulic system uses the engine's power more effectively, maximising pump output and offering more comfort, smoothness and accuracy
- Increased digging power, lifting capacities and traction force combine for performance you can rely on, day after day
- Greater fuel efficiency means you can keep costs down and reduce environmental impact



OPTIMISED POWER MANAGEMENT

The DX190W-5 is equipped with a Doosan engine. Famous for excellent fuel efficiency, reliability and long service life, it combines exceptional power output and high torque at low revs. Engine is fitted with common rail fuel injection combined with a wastegate turbocharger, which increases the density of the air, enabling the engine to produce more power.

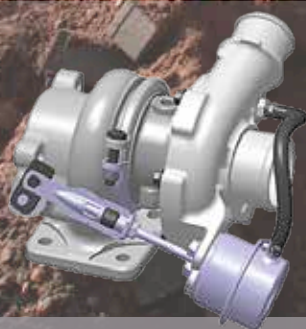
Selective Catalytic Reduction (SCR) technology - combined with a Diesel Oxidation Catalyst (DOC) - ensures compliance with Stage IV regulations. As there is no need for a particulate filter, there is no need for regeneration.



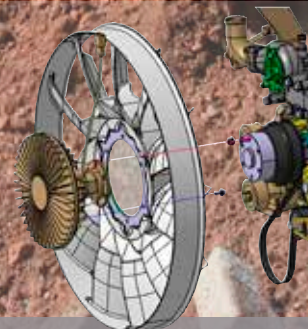
If the engine is the heart of the excavator, the e-EPOS is its brain - providing a perfectly synchronised communication link between the engine's ECU (Electronic Control Unit) and the hydraulic system. A CAN (Controller Area Network) system enables a constant flow of information between engine and hydraulic system, so that power is delivered exactly as needed.

EFFICIENT FUEL MANAGEMENT

- Choice between 4 power modes and 4 working modes guarantees optimum performance in all conditions
- SPC (Smart Power Control): reduces engine RPM during low load demand & ensures pump torque control, thus ensuring fuel efficiency and low emissions
- Engine auto-shut-off: shuts down the engine after the machine has been idling for a specified time
- Electronic control of fuel consumption optimises efficiency
- Auto-idle function saves fuel
- Eco guidance in real-time: eco gauge provides information about fuel consumption relative to machine performance in real-time. By trying to keep the right-hand LED bar from rising, the operator can teach himself how to save fuel and work efficiently
- For optimum cooling, fan speed is controlled by a electrical viscous fan clutch resulting in a lower fan noise & better fuel efficiency



Wastegate turbocharger: Diverts exhaust gases away from the turbine wheel to better regulate max boost pressure & protect engine. Also reduces lag time before turbo begins to spool/create boost maximising torque, plus reduces wear in high rpm & low load conditions. Turbocharger increases the density of the air, enabling the engine to produce more power with few effects from altitude.



Electrical viscous fan clutch: For optimum cooling, fan speed is controlled electronically by a fan clutch, resulting in lower fan noise and better fuel efficiency.

Operating in comfort

▣ The ideal workspace – designed around you

The DX190W-5 is designed to provide you with the best possible working conditions. The pressurised cab is ISO-certified for your safety. Its spacious interior offers a fully adjustable, heated air suspension seat. Comfortably seated, you have easy access to several storage compartments and a clear all-round view of the worksite. Noise and vibration levels have been reduced, while air conditioning and automatic climate control allow you to keep working for hours on end without feeling tired.



Best-in-class operator environment

Doosan Wheeled Excavators are powered by industry-leading engines that save on fuel and meet the latest Stage IV European regulations in addition to all noise regulations.

The low levels of cab vibration and noise provide exceptional operator comfort - and the cab air is filtered to ensure a healthy work environment.

Comfortable & safe workspace

Doosan offers one of the most spacious cabs in the market. The cab also features Roll Over Protective Structure (ROPS) - meeting the ISO 12117-2 standard - in the event the machine rolls over.

Fully adjustable steering column

The easily adjustable and narrow steering column ensures optimal visibility.

Heated air suspension seat (standard)

In addition to being adjustable and providing lumbar support, the seat has an air suspension system to reduce vibrations. It also features a seat heating system (activated at the touch of a button). A storage box has been placed under the seat for extra convenience.

Air conditioning with climate control

The operator can choose from 5 different modes to regulate the airflow, while the system adjusts the air temperature & fan speed to maintain the operator's selected temperature. A recirculated air function is also available.

MP3/USB radio

MP3 player (MP3/USB radio with CD player optional).

Storage space

The new cab contains 7 storage compartments including one hot/cool box (linked to the HVAC system).

CabSus mount

The cab's new suspension system (CabSus mount) dampens high vibrations and provides outstanding protection against impact. The system absorbs shocks and vibrations much more effectively than a conventional viscous suspension system.



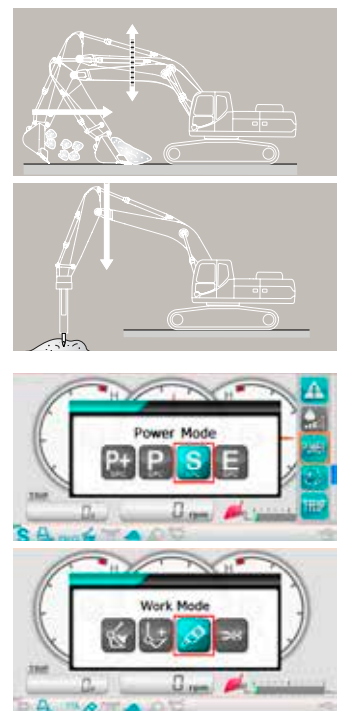
1. Large sun roof
2. Sun visor
3. Storage compartment for sunglasses
4. Window grip
5. Hot/cool box
6. Heating switch
7. Upper front window includes a sun shade and is strut-assisted for easy reliable adjustment
8. Photo sensor detects radiant energy from the sun and adjusts temperature automatically
9. Joysticks and switches are integrated in adjustable control consoles
10. Blinker & wiper control
11. Improved visibility on the bottom right
12. Separate seat height adjustment lever and cushion tilting function
13. Accelerator pedal
14. Brake pedal
15. Pedal for auxiliary control 1 & 2 ways
16. Flat spacious easy-to-clean floor
17. Engine emergency stop switch

Total control in all simplicity

▣ The highest standards of efficiency at your fingertips

The advanced & user-friendly technologies are just some of the many advantages of this new generation. The ergonomic controls and the easy-to-view colour monitor place the machine firmly in your hands.

- The new multi-function 7" TFT LCD monitor displays a comprehensive range of useful technical information, allowing you to check the machine's status and settings at a glance
- Highly sensitive & low-effort joysticks and clear convenient controls enable you to work safely, smoothly & confidently with minimum effort for increased comfort, efficiency and production
- Doosan's unique jog shuttle switch gives you easy, precise control over all machine functions
- Proportional auxiliary flow means precision control, smoothness & efficiency when using attachments



TFT LCD colour monitor panel

The upgraded 7" Thin-Film-Transistor (TFT is a technology that improves image quality) LCD panel features a day and night display. The user-friendly monitor 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. All functions are totally controllable, directly via the screen or using the exclusive jog shuttle switch.

1. Fuel consumption level: current, total & daily average fuel consumption
2. Fuel level
3. AdBlue® level
4. Eco symbol: changes colour when operating conditions change (idle, normal or loading)
5. Eco gauge: shows the average fuel efficiency
6. Engine coolant and hydraulic oil temperatures
7. Warning symbols
8. New shortcut menu: displayed on the right for rapid access to main functions
9. Optional anti-theft password-controlled starting
10. Oil filter information
11. Attachment management: stores up to 10 different attachment presets, enabling the operator to set hydraulic flow & pressure according to his needs

Dynamic power management

- Automatic travel speed function
- Activating the power boost control system increases digging force by 10%
- A one-touch deceleration button immediately reduces engine speed to low or idle
- Auto-idling starts 4 seconds after all controls are returned to neutral - decreasing fuel consumption and reducing noise levels in the cab

Intelligent floating boom mode (optional)

The "intelligent floating boom" function allows the boom to move up & down freely according to the application:

- Hydraulic breaker setting: during boom down operation, the boom moves down freely under its own weight, which reduces vibration and stress on the machine & increases breaker life
- Fully floating mode: during boom down selection, the boom is allowed to rise & fall as required while the bucket is drawn across the ground

4 Work modes & 4 Power modes

Deliver the needed power according to your specific application while minimising fuel consumption:

- 1-way mode, 2-way mode, Digging mode and Lifting mode
- Power-plus mode, Power mode, Standard mode, Economy mode



Simple control: Doosan's exclusive jog shuttle switch for easy and precise control over all machine functions.



1. Power Boost switch & One-touch deceleration switch
2. Thumb wheel switch allows proportional control of attachments
3. FNR selector switch
4. "Short stroke" joysticks enable easy, precise control of all operations
5. Axle RAM lock
6. Exclusive jog shuttle switch
7. Working lights switch
8. Smart Power Control
9. Travel speed selector switch
10. Climate control
11. Remote control of radio
12. Parking brake
13. Floating boom switch
14. Power socket 12V

Your safety: Standard cab and boom lights, large side mirrors and rear view camera improve all-round visibility and thus safety. Other standard safety features: anti-slip plates, automatic overheating alarm warning, low oil pressure sensor, engine emergency cut-off switch, auxiliary mode switch (allows a safe level of hydraulics operation in case of EPOS failure), overload warning device. Optional travel/swing alarm and side view camera are also available.



Rear and side view cameras



Work lights

Reliability, the habit of a lifetime

▣ Designed for long-term all-round heavy-duty performance

In your profession, you need equipment you can depend on. At Doosan, we use highly specialised design and analysis tools to make sure our machines are as robust and durable as can be. Our materials and structures undergo stringent testing for strength and resilience under the most extreme conditions.

And we continually manufacture the most durable machines to ensure lower cost of ownership.



Undercarriage durability

A rigid, welded frame provides excellent durability. Efficient routing of hydraulic lines, transmission and rear differential protection and heavy-duty axles make the undercarriage perfect for wheeled excavator applications. An oscillating axle lock is available.

New drive line concept

The new travel motor and powershift transmission control in the drive line provide comfortable travel due to increased smoothness, improved hydraulic retarding and improved gear shifting.

Advanced disc brake system

The new improved system allows a more efficient braking of the machine. This eliminates the rocking effect associated with working on wheels. The ZF axles are designed for low maintenance, and the oil change intervals have been increased to 2000 hours, further reducing owning and operating costs.

Heavy-duty axles

The front axle offers wide oscillating and steering angles. The transmission is mounted directly on the rear axle for protection and optimum ground clearance. As option are available 2.75 m wide axles for further stability in lifting operations & when working over trenches.

Advanced filtration

- Fuel filters & water separator: a filter-type high-performance water separator effectively captures moisture in the fuel, reducing impurities and helping minimise any fuel-related issues. Pre-filters and dual main filters as standard minimise fuel system failures
- Air cleaner: The large capacity forced air cleaner removes over 99% of airborne particles, reducing the risk of engine contamination and extending the cleaning and cartridge change intervals

Pin & bushing advanced technology

Highly lubricated metal is used for the boom pivot to increase the component's lifetime and lengthen greasing intervals. The bucket pivot features EM (Enhanced Macrosurface) bushings, which have a tailored surface pattern and self-lubricating coating to optimise greasing and make removal of debris more efficient. Ultra-hard wear-resistant discs & bucket pivot polymer shim increase durability even more.

Strengthened boom & arm

Finite Element Analysis has been used to calculate the best load distribution throughout the boom structure. Combined with thicker material, this means that element fatigue is limited and both reliability and component life are increased.

To better protect the base of the arm, reinforced bars have been added and the arm centre and end boss have been strengthened.

When doing lifting work, be sure to observe local regulations. Never use a lifting device not permanently marked with a Rated Lifting Load (RL)



Exclusive parallel dozer and independent stabiliser design:

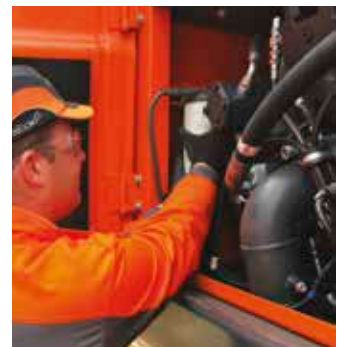
1. Large reinforced covers protect the dozer and stabiliser cylinders
2. The dozer blade design facilitates pulling and mixing of materials
3. The Stabilisers are kept well within the machine envelope and the position of the pins is kept high to avoid bumping while moving over the ground
4. Parts in contact with the ground have been carefully designed to prevent damage to the surface
5. Wide pads to reduce ground pressure
6. Lifting eyes on dozer for secure transport, additional 4 eyes are on the undercarriage

Simple maintenance with maximum uptime

▣ Excellent service accessibility

Short maintenance operations at long intervals mean you can depend on your equipment being available on site when it's needed. Our machines are designed for simple routine maintenance, while skilled Doosan technicians are available to provide extra support, should you need it. Choose the package you need from a broad range of service agreements to get the most out of your machine. Uptime, productivity and residual value are all maximised, making these excavators an economical and rewarding choice.

Building further on the success of the Stage IIIB engines, the new Stage IV Doosan DLo6P engine has no need for a DPF filter to meet the Stage IV emissions requirements - which means no maintenance required, so more uptime!



Maintenance access made simple

- Large guard rails are installed along with anti-slip steps and plates, for safer, easier access to the whole upper structure
- The cab's air-conditioning filter is lockable and placed on the side of the cab for easy access
- A battery cut-off switch makes it easy to disconnect the battery during long-term storage
- The hour meter display can be easily checked from ground level
- Shut-off valves have been fitted on the pre-filter piping line and fuel tank drain piping to make servicing easier and prevent pollution from leakage
- Engine parts can be easily reached via the top and side panels
- For extra accessibility and servicing convenience, all filters (engine oil filter, fuel pre-filter, fuel filter and pilot filter) are located in the pump compartment

Longer service intervals

More than 99.5% of foreign particles are filtered out in oil return filters and engine oil filters - so the oil & filter change interval is longer.

Global Doosan network

With a worldwide network of Doosan dealers & Parts Distribution centres, your Doosan excavator can be serviced & maintained wherever you are.

Full solution provider

- The Doosan Telematic system is available as standard - offering you all of the features for reading out vehicle operating & production parameters remotely, and providing you with complete peace of mind
- Protection+ : extended warranty covering parts, travel and service (check with your local dealer)
- Maintenance contract: your dealer will support you with routine service at regular intervals
- Genuine parts: manufactured and tested to ensure they always meet the same high quality standards as the original components

SCR Tank

Connected to the ECU, sensors in tank detect low level of AdBlue® & any system malfunction

Centralised greasing points

To make maintenance easier, the greasing points have been centralised.



Battery cut-off switch



Guard rails



SCR Tank



Hour meter
(from ground level)

Technical specifications

Engine

Designed to deliver superior performance and fuel efficiency the Doosan Stage IV diesel engine fully meets the latest emissions regulations. To optimise machine performance the engine uses high-pressure fuel injectors air-to-air inter-cooler and electronic engine controls. 4-Cycle Water-Cooled Wastegate Turbocharger Exhaust Gas Recirculation (EGR) DOC (Diesel Oxidation Catalyst) and AOC (Ammonia Oxidation Catalytic).

DX190W-5	
Model	Doosan DLo6P
No. of cylinders	6
Rated power at 1900 rpm	
(SAE J1995)	129.4 kW (173.5 hp)
(SAE J1349)	125.0 kW (167.6 hp)
(ISO 9249)	125.0 kW (167.6 hp)
Max. torque at 1400 rpm	77 kgf·m (755 Nm)
Idle (low - high)	800 [±10] - 2000 [±25] rpm
Piston displacement	5890 cm ³
Bore × stroke	100 mm × 125 mm
Starter	24 V × 6 kW
Batteries - Alternator	2 × 12 V, 100 Ah - 24 V, 60 A
Air filter	Double element air cleaner and pre-filtered Turbo dust separator

Undercarriage

Extremely robust construction throughout - made of high-quality, durable materials, with all welded structures designed to limit stresses. Lateral chassis welded and rigidly attached to undercarriage. Heat-treated connecting pins. 10.00-20-16PR (OTR) double tyres with tyre spacer. Heavy-duty front axle with automatic or operator-controlled (on/off/auto) front axle oscillation lock.

Front axle oscillation

DX190W-5	
	+/- 8° with automatic ram lock

Hydraulic cylinders

High-strength steel piston rods and cylinder bodies. Shock-absorbing mechanism fitted in all cylinders for shock-free operation and extended piston life.

Cylinders	Quantity	Bore × rod diameter × stroke (mm)
One-piece boom	2	120 × 85 × 1180
Arm for one-piece boom	1	125 × 90 × 1470
Two-piece boom, lower	1	160 × 95 × 760
Two-piece boom, upper	2	120 × 85 × 1015
Arm for two-piece boom	1	125 × 90 × 1470
Bucket	1	110 × 75 × 1030
Blade	2	110 × 70 × 170
Stabilisers	2	130 × 80 × 397

Component weights

Item	Weight (kg)	Remarks
Upper structure without front	9590	With counterweight
Undercarriage	5733	Including swing bearing
Front assembly	2990	
Counterweight	3480	
Boom	1143	5200 mm
Arm	535	2200 mm
Arm	532	2300 mm
Arm	554	2600 mm
Arm	644	3100 mm
Two-piece boom, lower	506	1940 mm
Two-piece boom, upper	873	3820 mm
Dozer	863	
Dozer cylinder (each)	84	
Stabiliser	1221	Including cylinders
Stabiliser cylinder (each)	113	

Hydraulic system

The e-EPOS (Electronic Power Optimising System) is the brain of the excavator - minimising fuel consumption and optimising the efficiency of the hydraulic system for all working conditions.

To harmonise the operation of the engine and the hydraulics, the e-EPOS is connected to the engine's electronic control unit (ECU) via a data transfer link.

- The hydraulic system enables independent or combined operations
- 2 travel speeds offer either increased torque or high speed
- Cross-sensing pump system for fuel savings
- Auto-deceleration system
- 4 operating modes, 4 power modes
- Flow and pressure control of auxiliary hydraulic circuits from control panel
- Computer-aided pump flow control

Maximum system pressure

DX190W-5	
Swing motor	27 MPa
Travel/Work	35.0 / 35.0 MPa
Boom, arm, arti, opt	38 MPa

Pumps

Pump	Type	Max. flow @ 1900 rpm	Relief valve pressure
Main (2)	Parallel, Bent-Axis, Axial piston	2 × 200 l/min	-
Pilot	Gear	26.1 l/min	4 MPa
Steering	Gear	65.5 l/min	19.5 MPa
Brake	Gear	21.3 l/min	15.4 MPa

Fluid capacities

DX190W-5	
Fuel tank	310 l
Cooling system (radiator)	24 l
Hydraulic oil tank	116 l
Engine oil	25 l
Swing drive	5 l
Front axle hub	2 × 2.5 l
Rear axle hub	2 × 2.5 l
Front Axle Case	10.5 l
Rear Axle Case	14 l
Transmission	2.5 l
Urea tank	31.5 l

► Swing mechanism

The swing mechanism uses an axial piston motor, driving a 2-stage planetary reduction gear bathed in oil for maximum torque.

- Swing bearing: single-row, shear type ball bearing with induction hardened internal gear
- Internal gear and pinion immersed in lubricant
- Increased swing torque reduces swing time
- The swing brake for parking is activated by spring and released hydraulically

► Swing speed & torque

	DX190W-5
Maximum swing speed	10.9 rpm
Maximum swing torque	4836 kgf·m

► Drive

The wheels are driven by an axial piston engine via a hydrostatic drive with 2 speed power shift transmission. In addition to the two-speed powershift transmission, there is also an economy mode and a switch for the creep speed. A button makes it possible to pass from high to low in work mode.

Two travel speed ranges offer a choice between increased torque or high speed.

► Speed & traction

	DX190W-5
Travel speed (creep - low - high)	3 - 8.5 - 35 km/h
Maximum traction	11.6 t
Minimum turning radius	7.0 m
Gradeability	72% (35.7°)

► Buckets

Bucket Type	Capacity (m³) SAE	Width (mm)		Weight (kg)	One-piece boom 5.2 m			Two-piece boom 5.44 m
		With side cutters	W/O side cutters		Arm 2.2 m	Arm 2.6 m	Arm 3.1 m	Arm 2.3 m
GP	0.38	640	604	428	A	A	A	A
	0.45	775	727	452	A	A	A	A
	0.57	913	865	507	A	A	A	A
	0.70	1063	1015	553	A	A	B	B
	0.76	1063	1015	587	A	B	C	C
	0.80	1127	1079	601	B	C	C	C
	0.93	1315	1267	650	C	D	D	D

A: Suitable for materials with a density less than or equal to 2100 kg/m³

B: Suitable for materials with a density less than or equal to 1800 kg/m³

► Cab

ROPS cab, large and roomy interior. One-way travel pedal with FNR switch on the right joystick. Audio system with remote control, independently adjustable joystick consoles. Excellent all-round visibility, transparent roof hatch, 2-piece sliding door window, narrow and easily adjustable steering column. The removable lower front glass can be stored behind the seat. Interior lighting. The pressurised and filtered cab air is supplied by numerous vents. Climate-control provides fast defrosting and high cooling and heating performance. Viscous/spring mounted suspension cushions reduce vibrations. Heated air suspension seat with adjustable seat suspension, height, tilt, recline and forward-backward settings. Adjustable, easy to read 7 LCD colour monitor provides real-time information on machine functions and diagnostic information and is switchable to rear view camera (std) or side view camera (optional).

► Noise emission

	DX190W-5
A-weighted emission sound pressure level at the operator's position, LpAd (ISO 6396:2008)	Declared: 70 dB(A)
A-weighted sound power level, LwAd (2000/14/EC)	Guaranteed: 100 dB(A) Measured: 99 dB(A)

Note – Declared single-number noise emission values are the sum of measured values and the associated uncertainty, and they represent upper boundaries of the range of values which is likely to occur in measurements.

► Brakes

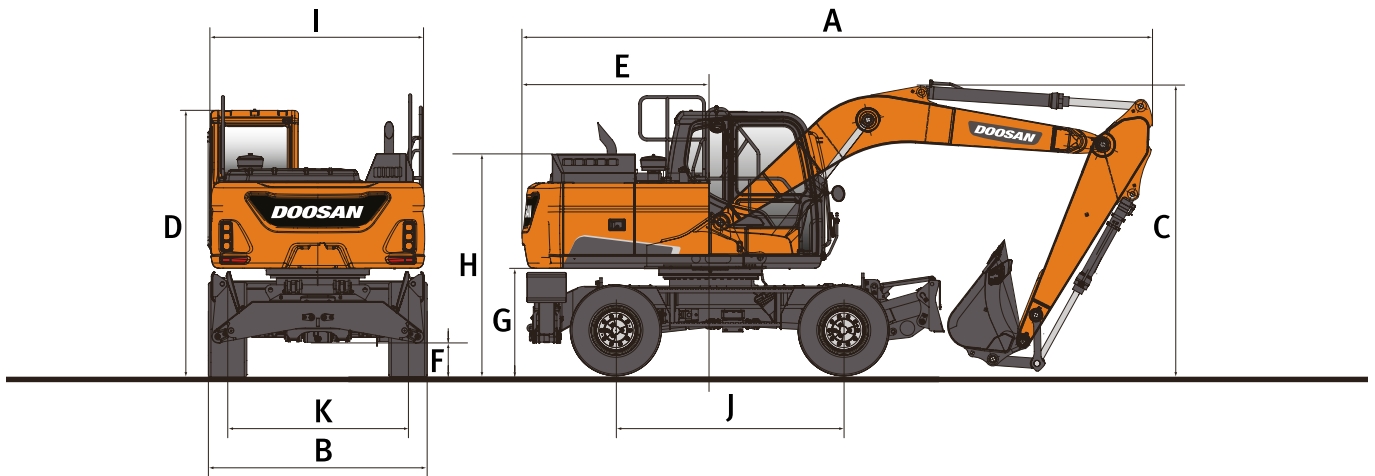
Dual multi-disc circuit with sintered metal discs for extended service life. Braking system activated by a pump and accumulator circuits. Spring-applied, hydraulically released parking brake mounted on the transmission shaft.

► Weight

+ 60 kg for wide axles version

Boom (mm)	Arm (mm)	Bucket (m³)	C/W (tonne)	Chassis - Front	Chassis - Rear	Total weight (kg)
One-piece boom (5200)	2200	0.8	3.5	Cradle	Dozer	19000
		0.8	3.5	Dozer	Stabiliser	19800
		0.8	3.5	Stabiliser	Dozer	19800
		0.8	3.5	Stabiliser	Stabiliser	20500
	2600	0.8	3.5	Cradle	Dozer	19000
		0.8	3.5	Dozer	Stabiliser	19800
		0.8	3.5	Stabiliser	Dozer	19800
		0.8	3.5	Stabiliser	Stabiliser	20500
	3100	0.8	3.5	Cradle	Dozer	19000
		0.8	3.5	Dozer	Stabiliser	19800
		0.8	3.5	Stabiliser	Dozer	19800
		0.8	3.5	Stabiliser	Stabiliser	20500
Two-piece boom (5440: 1940 + 3820)	2300	0.8	3.5	Cradle	Dozer	19000
		0.8	3.5	Dozer	Stabiliser	19800
		0.8	3.5	Stabiliser	Dozer	19800
		0.8	3.5	Stabiliser	Stabiliser	20500

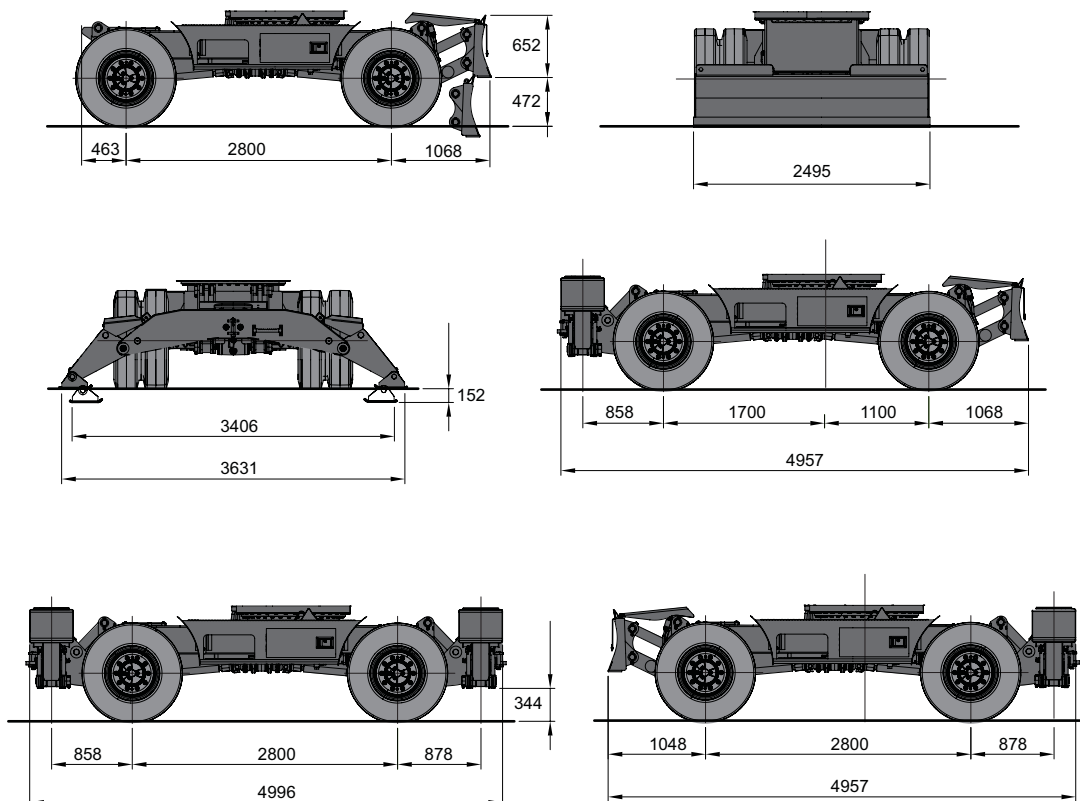
Dimensions



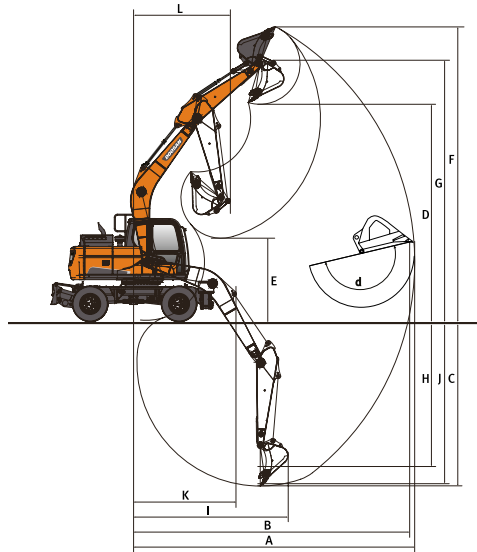
Dimensions

Boom length - mm Arm length - mm	One-piece boom			Two-piece boom	
	2200	2600	3100	5440	2600
A Shipping length - mm	8897	8750	8520	9065	9070
B Shipping width - mm	2530 / 2750*	2530 / 2750*	2530 / 2750*	2530 / 2750*	2530 / 2750*
C Shipping height (boom) - mm	3030	2840	3130	3170	3190
D Height over cab - mm	3134	3134	3134	3134	3134
E Counterweight swing clearance - mm	2555	2555	2555	2555	2555
F Ground clearance - mm	347	347	347	347	347
G Counterweight clearance - mm	1249	1249	1249	1249	1249
H Engine cover height - mm	2296	2296	2296	2296	2296
I Upper housing width - mm	2530	2530	2530	2530	2530
J Wheel base - mm	2650	2650	2650	2650	2650
K Tread width - mm	1914 / 2114*	1914 / 2114*	1914 / 2114*	1914 / 2114*	1914 / 2114*

* wide axles option



Working range



Working range





	One-piece boom			Two-piece boom	
	5200			5440	
Boom length - mm					
Arm length - mm	2200	2600	3100	2300	2600
Bucket capacity - m ³	0.8	0.8	0.8	0.8	0.76
A Max. digging reach - mm	8875	9255	9610	9340	9645
B Max. digging reach (ground) - mm	8660	9050	9415	9150	9450
C Max. digging depth - mm	5320	5725	6225	5610	5915
D Max. loading height - mm	6520	6765	6780	7460	7705
E Min. loading height - mm	3020	2595	2095	3375	3265
F Max. digging height - mm	9195	9440	9380	10270	10510
G Max. bucket pin height - mm	7935	8180	8195	8875	9120
H Max. vertical wall depth - mm	4365	4740	4785	4630	4900
I Max. radius vertical - mm	6170	6330	6805	5680	5810
J Max. digging depth (8° level) - mm	5095	5530	6035	5505	5815
K Min. radius 8° line - mm	2740	2755	2705	930	935
L Min. swing radius - mm	3035	3170	3180	3110	3265
d Bucket angle - °	182	182	182	182	182

Digging forces (ISO)

	One-piece boom			Two-piece boom	
	5200			5440	
Boom length - mm					
Arm length - mm	2200	2600	3100	2300	2600
Bucket capacity - m ³	0.8	0.8	0.8	0.8	0.76
BUCKET (Normal/Press. Up) - ton	13.1/13.8	13.1/13.8	13.1/13.8	13.1/13.8	13.1/13.8
ARM (Normal/Press. Up) - ton	10.8/11.4	9.3/9.8	8.6/9.0	10.0/10.6	9.3/9.8

Doosan Buckets

4 More. More choice - More durable - More strength - More performance!

General Construction Bucket	Heavy Construction Bucket	Severe Mining Bucket	X-treme Mining Bucket
			
The General purpose bucket is designed for digging and re-handling soft to medium materials (e.g. materials with low wear characteristics such as top-soil, loam, coal).	The Heavy duty bucket is designed for mass excavations in dense materials such as hard packed clay, shot limestone, limited rock content and gravel.	The Severe duty bucket is designed for durability in digging compact materials like loose or blasted rock, hard packed clay and stone.	The X-treme duty bucket is designed as a long-life version of the Severe duty bucket for digging in the most abrasive materials.

Lifting capacities

DX190W-5

W/O Bucket

Unit: 1000 kg	A B	Chassis Frame Attachment	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		Max. reach		A	
			☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		☐
One-piece boom 5.2 m Arm 3.1 m Counterweight 3.48 t	7.5 m	R-Dozer Up												5.19	3.36	5.89
		R-Dozer Up - 2.75 m Axles												5.21	3.67	
		R-Dozer Down												5.27 *	3.69	
		F-Dozer + R-Stabilizer Down												5.27 *	5.27 *	
	6.0 m	F-Stabiliser + R-Stabiliser Down												5.27 *	5.27 *	
		R-Dozer Up								5.03 *	3.29			3.82	2.45	7.06
		R-Dozer Up - 2.75 m Axles								5.03 *	3.59			3.83	2.69	
		R-Dozer Down								5.03 *	3.61			5.15 *	2.7	
	F-Dozer + R-Stabilizer Down								5.03 *	5.03 *			5.15 *	4.11		
	4.5 m	F-Stabiliser + R-Stabiliser Down								5.03 *	5.03 *			5.15 *	5.04	
		R-Dozer Up								4.94	3.18	3.42	2.17	3.22	2.03	7.76
		R-Dozer Up - 2.75 m Axles								4.96	3.48	3.43	2.39	3.23	2.24	
		R-Dozer Down								5.45 *	3.49	5.18 *	2.4	5.18 *	2.25	
	F-Dozer + R-Stabilizer Down								5.45 *	5.31	5.18 *	3.68	5.18 *	3.47		
	3.0 m	F-Stabiliser + R-Stabiliser Down								5.45 *	5.45 *	5.18 *	4.53	5.18 *	4.28	
		R-Dozer Up			11.74 *	8.34	7.44	4.59	4.74	2.99	3.34	2.1	2.93	1.82	8.12	
		R-Dozer Up - 2.75 m Axles			11.74 *	9.33	7.47	5.05	4.76	3.29	3.35	2.31	2.95	2.02		
		R-Dozer Down			11.74 *	9.4	7.74 *	5.08	6.21 *	3.3	5.46 *	2.32	4.86	2.03		
	F-Dozer + R-Stabilizer Down			11.74 *	11.74 *	7.74 *	7.74 *	6.21 *	5.1	5.46 *	3.6	5.28 *	3.17			
	1.5 m	F-Stabiliser + R-Stabiliser Down			11.74 *	11.74 *	7.74 *	7.74 *	6.21 *	6.21 *	5.46 *	4.45	5.28 *	3.92		
		R-Dozer Up								6.96	4.17	4.52	2.79	3.24	2	8.18
		R-Dozer Up - 2.75 m Axles								6.99	4.63	4.54	3.09	3.25	2.22	
		R-Dozer Down								9.44 *	4.65	7.03 *	3.1	5.43	2.23	
	F-Dozer + R-Stabilizer Down								9.44 *	7.53	7.03 *	4.88	5.81 *	3.5		
	0.0 m	F-Stabiliser + R-Stabiliser Down								9.44 *	9.44 *	7.03 *	6.09	5.81 *	4.34	
		R-Dozer Up			8.32 *	6.95	6.66	3.91	4.35	2.65	3.18	1.93	2.9	1.77	7.96	
		R-Dozer Up - 2.75 m Axles			8.32 *	7.87	6.69	4.36	4.38	2.94	3.18	2.15	2.92	1.97		
		R-Dozer Down			8.32 *	7.94	10.38 *	4.39	7.57 *	2.95	5.35	2.16	4.89	1.98		
	F-Dozer + R-Stabilizer Down			8.32 *	8.32 *	10.38 *	7.23	7.57 *	4.72	6.00 *	3.43	5.60 *	3.15			
	-1.5 m	F-Stabiliser + R-Stabiliser Down			8.32 *	8.32 *	10.38 *	9.28	7.57 *	5.92	6.00 *	4.26	5.60 *	3.91		
		R-Dozer Up	7.38 *	7.38 *	11.84 *	6.94	6.55	3.82	4.28	2.58				3.19	1.94	7.43
		R-Dozer Up - 2.75 m Axles	7.38 *	7.38 *	11.84 *	7.87	6.59	4.27	4.3	2.87				3.2	2.16	
		R-Dozer Down	7.38 *	7.38 *	11.84 *	7.93	10.37 *	4.29	7.52	2.89				5.41	2.17	
	F-Dozer + R-Stabilizer Down	7.38 *	7.38 *	11.84 *	11.84 *	10.37 *	7.12	7.59 *	4.64				5.79 *	3.45		
	-3.0 m	F-Stabiliser + R-Stabiliser Down	7.38 *	7.38 *	11.84 *	11.84 *	10.37 *	9.17	7.59 *	5.84				5.79 *	4.3	
		R-Dozer Up	11.39 *	11.39 *	13.47	7.08	6.6	3.86	4.32	2.62				3.88	2.37	6.50
R-Dozer Up - 2.75 m Axles		11.39 *	11.39 *	13.48 *	8.01	6.63	4.31	4.34	2.91				3.9	2.63		
R-Dozer Down		11.39 *	11.39 *	13.48 *	8.08	9.36 *	4.34	6.75 *	2.92				5.92 *	2.64		
F-Dozer + R-Stabilizer Down	11.39 *	11.39 *	13.48 *	13.48 *	9.36 *	7.17	6.75 *	4.68				5.92 *	4.21			
-4.5 m	F-Stabiliser + R-Stabiliser Down	11.39 *	11.39 *	13.48 *	13.48 *	9.36 *	9.22	6.75 *	5.88				5.92 *	5.26		
	R-Dozer Up			9.60 *	7.4	6.64 *	4.06						5.72 *	3.58	4.96	
	R-Dozer Up - 2.75 m Axles			9.60 *	8.35	6.64 *	4.52						5.72 *	3.96		
	R-Dozer Down			9.60 *	8.41	6.64 *	4.54						5.72 *	3.99		
F-Dozer + R-Stabilizer Down			9.60 *	9.60 *	6.64 *	6.64 *						5.72 *	5.72 *			
				9.60 *	9.60 *	6.64 *	6.64 *						5.72 *	5.72 *		

Two-piece boom 5.44 m Arm 2.3 m Counterweight 3.48 t	7.5 m	R-Dozer Up					5.12 *	5.12 *					5.59 *	3.58	5.52
		R-Dozer Up - 2.75 m Axles					5.14 *	5.14 *					5.61 *	3.94	
		R-Dozer Down					5.12 *	5.12 *					5.59 *	3.94	
		F-Dozer + R-Stabilizer Down					5.12 *	5.12 *					5.59 *	5.59 *	
	6.0 m	F-Stabiliser + R-Stabiliser Down					5.12 *	5.12 *					5.59 *	5.59 *	
		R-Dozer Up					5.25 *	5.07	4.96	3.18			4.02	2.54	6.75
		R-Dozer Up - 2.75 m Axles					5.27 *	5.27 *	5.01	3.5			4.06	2.82	
		R-Dozer Down					5.25 *	5.25 *	5.12 *	3.5			5.37 *	2.81	
	4.5 m	F-Dozer + R-Stabilizer Down					5.25 *	5.25 *	5.12 *	5.12 *			5.37 *	4.33	
		F-Stabiliser + R-Stabiliser Down					5.25 *	5.25 *	5.12 *	5.12 *			5.37 *	5.34	
		R-Dozer Up					6.40 *	4.77	4.85	3.07			3.36	2.1	7.49
		R-Dozer Up - 2.75 m Axles					6.41 *	5.26	4.89	3.39			3.4	2.34	
	R-Dozer Down					6.40 *	5.27	5.50 *	3.39			5.36 *	2.33		
	F-Dozer + R-Stabilizer Down					6.40 *	6.40 *	5.50 *	5.22			5.36 *	3.63		
	3.0 m	F-Stabiliser + R-Stabiliser Down					6.40 *	6.40 *	5.50 *	5.50 *			5.36 *	4.49	
		R-Dozer Up					7.19	4.34	4.65	2.89	3.31	2.06	3.07	1.89	7.86
		R-Dozer Up - 2.75 m Axles					7.24	4.82	4.69	3.21	3.35	2.29	3.1	2.12	
		R-Dozer Down					8.15 *	4.83	6.25 *	3.21	5.48 *	2.29	5.13	2.11	
	F-Dozer + R-Stabilizer Down					8.15 *	7.76	6.25 *	5.02	5.48 *	3.58	5.46 *	3.32		
	1.5 m	F-Stabiliser + R-Stabiliser Down					8.15 *	8.15 *	6.25 *	6.25	5.48 *	4.43	5.46 *	4.11	
		R-Dozer Up					6.79	4	4.47	2.73	3.24	1.99	2.99	1.83	7.92
		R-Dozer Up - 2.75 m Axles					6.85	4.47	4.51	3.04	3.27	2.22	3.02	2.05	
		R-Dozer Down					9.68 *	4.48	7.03 *	3.04	5.46	2.22	5.02	2.04	
	F-Dozer + R-Stabilizer Down					9.68 *	7.37	7.03 *	4.83	5.81 *	3.5	5.62 *	3.23		
	0.0 m	F-Stabiliser + R-Stabiliser Down					9.68 *	9.45	7.03 *	6.05	5.81 *	4.35	5.62 *	4.01	
		R-Dozer Up					6.63	3.86	4.36	2.63	3.2	1.95	3.1	1.89	7.70
		R-Dozer Up - 2.75 m Axles					6.68	4.33	4.4	2.94	3.23	2.19	3.13	2.12	
		R-Dozer Down					10.39 *	4.34	7.54 *	2.94	5.42	2.18	5.22	2.11	
	F-Dozer + R-Stabilizer Down					10.39 *	7.2	7.54 *	4.72	6.00 *	3.47	5.81 *	3.35		
	-1.5 m	F-Stabiliser + R-Stabiliser Down					10.39 *	9.28	7.54 *	5.93	6.00 *	4.31	5.81 *	4.17	
		R-Dozer Up					6.63	3.86	4.34	2.61			3.46	2.12	7.14
		R-Dozer Up - 2.75 m Axles					6.69	4.33	4.38	2.93			3.49	2.37	
		R-Dozer Down					10.30 *	4.34	7.57 *	2.93			5.87	2.36	
	F-Dozer + R-Stabilizer Down					10.30 *	7.21	7.57 *	4.71			6.00 *	3.74		
							10.30 *	9.28	7.57 *	5.92			6.00 *	4.66	

Standard and optional equipment

Engine

Doosan DLo6P, Stage IV compliant, SCR, EGR, DOC, water-cooled diesel engine with Wastegate Turbocharger and air-to-air intercooler	●
Auto-idle function	●
Auto shut-off	●
No DPF	●

Hydraulic system

Boom and arm flow regeneration	●
Swing anti-rebound valves	●
Spare ports (valve)	●
One-touch power boost function	●
Smart Power Control (SPC)	●
Breaker piping	●
Cylinder cushioning & contamination seals	●
Control of auxiliary hydraulic flow and pressure from the display panel	●

Cab & Interior

Pressurised, sound-insulated and CabSus mounted cab	●
Heated, adjustable air suspension seat with adjustable headrest and armrest	●
Air conditioning with climate control	●
Pull-up type front window with sun roller blind and removable lower front window	●
Sliding left window	●
Intermittent upper and lower windshield wiper	●
Rain visor	●
Rear window defroster switch	●
Adjustable PPC wrist control levers for arm, boom, bucket and swing	●
Joysticks and pedals provide proportional control of auxiliary lines for attachments	●
Adjustable tiltable steering column	●
Pedal for auxiliary control 1 & 2 ways	●
Jog shuttle switch	●
7" (18 cm) TFT LCD colour monitor panel	●
Attachment management system	●
Engine speed (RPM) control dial	●
Automatic travel speed	●
4 operating modes & 4 working modes	●
Electric horn	●
Cigarette lighter	●
Ceiling light	●
Cup holder	●
Multiple storage compartments (e.g. document holder under seat)	●
Storage area (tools, etc.)	●
Hot and cool box	●
Flat, spacious, easy-to-clean floor	●
Master key	●
Anti-theft protection	●
12 V spare power socket	●
Serial communication port for laptop PC interface	●
Remote radio ON/OFF switch	●
Loudspeakers and connections for radio	●
MP3/USB radio or MP3/USB radio with CD player	○

Safety

Roll Over Protective Structure (ROPS)	●
Boom and arm cylinder safety valves	●
Overload warning device	●
Large guard rails on upper structure and steps	●
Rotating beacon	●
Rear-view camera	●
Punched metal anti-slip plates	●
Hydraulic safety lock lever	●
Safety glass	●
Hammer for emergency escape	●
Right and left rear-view mirrors	●
Lockable fuel cap and covers	●
Battery cut-off switch	●
Engine restart prevention system	●
Parking brake	●
Work lights (2 front frame, 4 front cab-mounted, 2 rear cab-mounted, 2 boom-mounted and 1 rear side)	●
Emergency engine stop switch and hydraulic pump control switch	●
FOGS cab - top and front cab guards (ISO 10262)	○
Front window upper and lower guards	○
Side-view camera	○

Other

Boom: 5200 mm one-piece boom – 2600 mm arm – 3480 kg counterweight	●
"Doosan Connect" Telematic system	●
Auto shut-off fuel filler pump	●
Double element air cleaner and pre-filtered Turbo dust separator	●
Fuel pre-filter with water separator sensor	●
Dust screen for radiator/oil cooler	●
Self-diagnostic function	●
Alternator (24 V, 60 A) - Battery (2 x 12 V, 100 Ah)	●
Hydrostatic drive with 2 speed power shift transmission	●
Remote greasing for swing circle and work group pivot points	●

Guards for work lights	●
Arms: 2200 mm or 3100 mm (for one-piece boom only)	○
Arms: 2300 mm or 2600 mm (for two-piece boom only)	○
Booms: two-piece boom 5440 mm	○
Doosan buckets: full range of GP, HD & Rock buckets	○
Doosan breakers and Doosan quick-couplers	○
Hydraulic piping for crusher, quick-coupler, clamshell, tilting and rotating buckets	○
Additional filter for breaker piping	○
Floating boom	○
Double pump flow	○
Engine coolant heater	○
Bio oil	○
Automatic lubrication system	○
Road homologation (depending on countries)	○

Undercarriage

Front clamshell cradle	●
Rear parallel dozer blade	●
Double tyres 10.00-20-16PR	●
Front axle oscillation lock modes (On/Off/Auto)	●
Lockable tool box (left side)	●
Rear & front chain tightening eyes	●
Wide axle 2750 mm	○
Front parallel dozer blade and front independent stabilisers	○
Rear independent stabilisers	○
Lockable tool box (right side)	○
Piston rod protection of stabiliser cylinders	○

Standard: ●
Optional: ○



Wide axles 2.75 m



Tool box



Double pump flow (for attachments requiring high hydraulic capacity)



Two-piece boom



Doosan buckets



Doosan breakers and quick-couplers

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.

**WORK EFFICIENCY
MANAGEMENT**

**JOB SITE
MANAGEMENT**

**PROACTIVE
SERVICE**

**PREVENTIVE
MAINTENANCE**

OPERATION TREND

Total operation hours and operation hours by mode

FUEL EFFICIENCY*

Fuel level and fuel consumption

LOCATION

GPS and geo-fence

REPORTS

Operation report & utilization

WARNING & ALERT

Detect machine warnings, antenna disconnection, and geo/time fence

FILTER & OIL MANAGEMENT

Preventive maintenance by item replacement cycle

TELEMATICS TERMINAL

Terminal device is installed and connected to a machine to get machine data.

TELECOMMUNICATION

Doosan provides Dual mode (Mobile, Satellite) communication to maximize communication coverage.

DOOSANCONNECT WEB

Users can monitor machine status from DoosanCONNECT Web.

