DOOSAN

Wheeled Excavators |

DX140W-5

Maximum power: 137 HP
Operating weight: 14.4 t
Max. bucket capacity: 0.76 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 43100 employees in 34 countries we are a major player in a variety of industries worldwide
- We are a global leader in the Infrastructure Support Business (ISB) with 56 subsidiaries and 3700 distributors worldwide
- Dramatic growth over the past decade with 23% average annual revenue growth since 2000 and rising from €2.4 billion in 1998 to €18.0 billion in 2011

Doosan Group – a top player worldwide

Doosan Engines

- World N° 2 in medium-speed marine diesel engines

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 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 Infracore

- Among the world's Top 5 manufacturers of construction equipment
- World N° 1 in compact loaders
- World N° 1 in attachments
- World N° 1 in portable air compressors

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

Simplicity works when it comes to Doosan's 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.

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

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.

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 with 2 × 170 l/m. For any attachments & work you'll get this extra power you need.

Connectivity: Core TMS as standard helps monitor the machine's condition remotely and plan maintenance.

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: Doosan is the only supplier offering the smoothness reliability & power of a 6 cylinder engine in this class. You'll be amazed by the difference it makes and how low the fuel consumption is! Testing is adopting it! Exceptionally powerful – with high torque at low revs - the Stage IV compliant Doosan DL06P engines are free from Diesel Particulate Filter (DPF) and associated regeneration system for more fuel efficiency.

Efficient fuel management: The evolution of the Doosan DL06 to DL06P 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: Features longest wheel base on the market for stability and a driving performance that makes the whole difference. And all this while offering an outstanding turning radius.

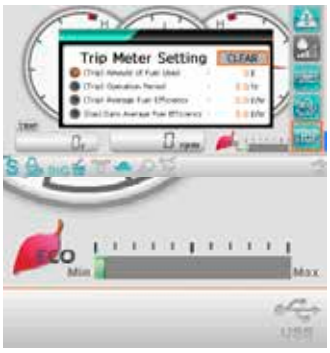
Efficient & safe: Excellent ground clearance for better protection in rough terrain.

Top performance and fuel efficiency

The power to raise productivity

The DX140W-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 DX140W-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.

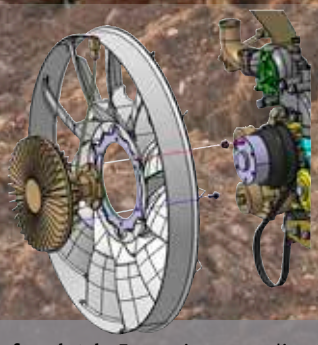
Selective Catalytic Reduction (SCR) technology - combined with a Diesel Oxidation Catalyst (DOC) - ensures compliance with Stage IV regulations. As there is no need for a particulate filter there is no need for regeneration.

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 DX140W-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.

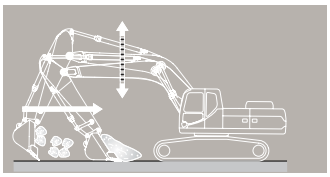
1. Large sun roof
2. Sun visor
3. Storage compartment for sunglasses
4. Window grip
5. Hot/cool box
6. Heating switch
7. Upper front window includes a sun shade and is strut-assisted for easy reliable adjustment
8. Photo sensor detects radiant energy from the sun and adjusts temperature automatically
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

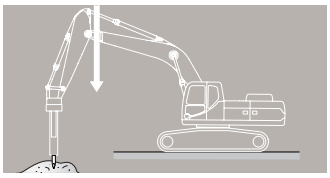
Total control in all simplicity

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

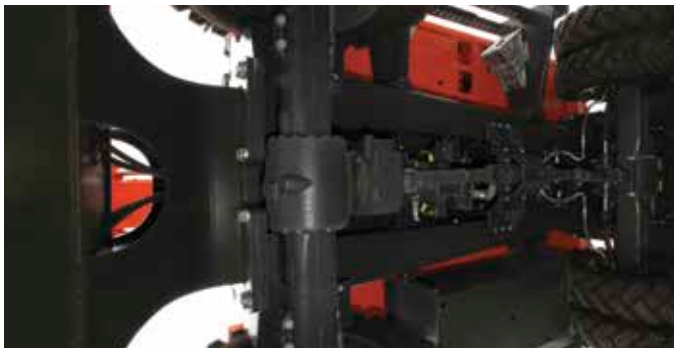
Work lights

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.

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.

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 DL06P 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
(readable 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).

	DX140W-5
Model	Doosan DL06P
No. of cylinders	6
Rated power at 2000 rpm	
(SAE J1995)	102.2 kW (137.0 HP)
(SAE J1349)	92.7 kW (132.1 HP)
Max. torque at 1400 rpm	60 kgf·m
Idle (low - high)	800 [±10] - 2080 [±25] rpm
Piston displacement	5890 cm³
Bore × stroke	100 mm × 125 mm
Starter	24 V × 6 kW
Batteries - Alternator	2 × 12 V 150 Ah - 24 V 80 Ah
Air filter	Dry double element

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. 10.00-20-14PR (OTR) double tyres with tyre spacer. Heavy-duty front axle with automatic or operator-controlled (on/off/auto) front axle oscillation lock.

	DX140W-5
Tyres dimensions	10.00 - 20-14 PR
Overall width	2500 mm
Wheel base	2800 mm
Tread width	1944 mm
Oscillation angle	± 7.94°

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.

	DX140W-5
Accumulators	0.75 l - 3 MPa

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

	DX140W-5
Main pumps (2)	Parallel bent-axis axial piston
Maximum flow at 2000 rpm	2 × 170 l/min
Maximum system pressure	
Work	34.3 MPa
Travel	36.3 MPa

Pumps

Pump	Type	Max. flow @ 2000 rpm	Relief valve pressure
Main (2)	Parallel bent-axis axial piston	2 × 170 l/min	-
Pilot	Gear	24.1 l/min	4 MPa
Steering	Gear	35.5 l/min	18.5 MPa
Brake	Gear	13.6 l/min	15.7 MPa

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	110 × 75 × 1035
Two-piece boom upper	2	110 × 75 × 975
Two-piece boom lower	1	140 × 85 × 720
Arm	1	115 × 80 × 1092
Bucket one-piece boom	1	95 × 65 × 900
Bucket two-piece boom	1	70 × 100 × 900

Component weights

Item	Weight (kg)	Remarks
Upper structure without front	7280	With counterweight
Undercarriage	4690	Including stabilisers/blade front cradle and rear dozer
Front assembly	2361	
Counterweight	2150	
Boom	738	4400 mm
Arm	370	2100 mm
Bucket	413	0.59 m³
Boom cylinder	106	
Arm cylinder	151	
Bucket cylinder	87	
Dozer	672	
Dozer cylinders	42	
Stabiliser	970	
Stabiliser cylinder	74	

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

	DX140W-5
Swing speed	11.4 rpm
Maximum swing torque	3744 kgf·m

Drive

The wheels are driven by an bent axial piston engine via a two-speed powershift 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

	DX140W-5
Travel speed (creep / low / high)	3.5 / 10 / 37 km/h
Maximum traction force	8.1 ton
Minimum turning radius	64 m
Gradeability	32° (62%)

Fluid capacities

	DX140W-5
Fuel tank	280 l
Cooling system	20 l
Engine oil	22 l
Swing device	3 l
Hydraulic tank	102 l
Urea tank	31.5 l

Cab

ROPS cab large and roomy interior. 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) and side view camera (optional).

Noise emission

	DX140W-5
A-weighted emission sound pressure level at the operator's position LpAd (ISO 6396:2008)	70 dB(A)
A-weighted sound power level LwAd (2000/14/EC)	101 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.

Buckets

Bucket Type	Capacity (m³) SAE	Width (mm)		Weight (kg)	One-piece boom 4.4 m	One-piece boom 4.6 m		Two-piece boom 4.988 m	
		With side cutters	W/O side cutters		Arm 2.1 m	Arm 2.1 m	Arm 2.5 m	Arm 2.1 m	Arm 2.5 m
GP	0.24	534	468	292	A	A	A	A	A
	0.39	820	736	350	A	A	A	A	A
	0.45	911	824	389	A	A	A	A	A
	0.51	991	907	398	A	A	A	A	A
	0.59	1081	997	420	A	A	A	A	A
	0.64	1167	1083	443	A	A	A	A	B
	0.76	1220	1120	437	A	A	B	B	C
HD	0.42	827	762	462	A	A	A	A	A
	0.49	913	848	497	A	A	A	A	A
	0.54	981	916	517	A	A	A	A	A

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
C: Suitable for materials with a density less than or equal to 1500 kg/m³
D: Suitable for materials with a density less than or equal to 1200 kg/m³
Based on ISO 10567 and SAE J296 arm length without quick-coupler. For reference only.

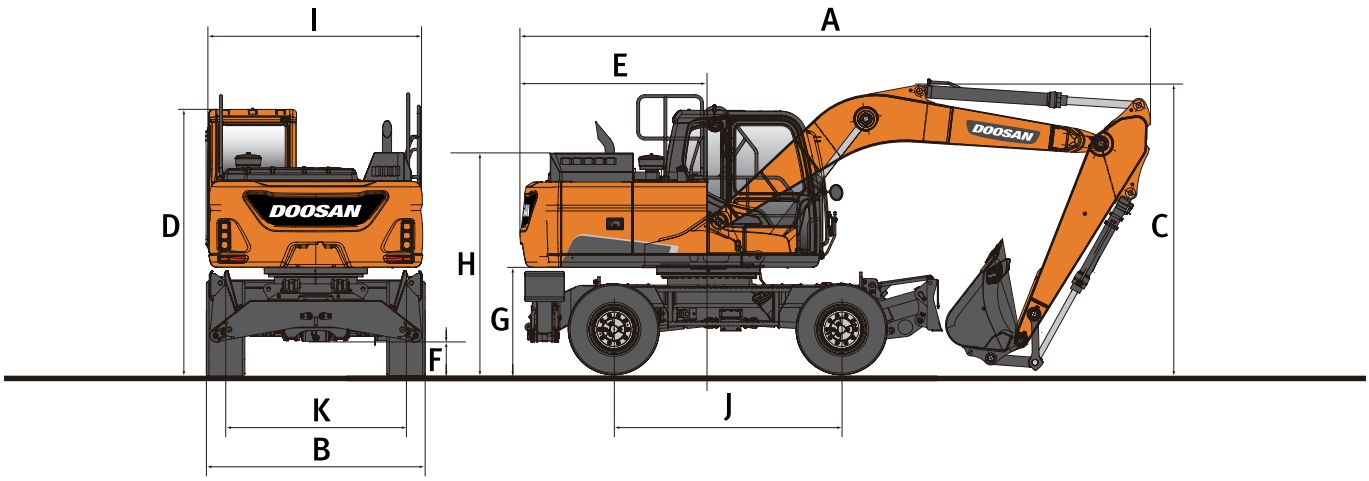
Weight

Including standard digging bucket 0.59 m³

Boom (mm)	Arm (mm)	Chassis - Front	Chassis - Rear	Total weight (kg)
1-piece boom (4600)	2100	-	Dozer	14450
		Dozer	Stabiliser	15600
		Stabiliser	Dozer	15600
		Stabiliser	Stabiliser	16200
		-	Dozer	14450
		Dozer	Stabiliser	16200
		Stabiliser	Dozer	16200
		Stabiliser	Stabiliser	16200
1-piece boom (4600)	2500	-	Dozer	14450
		Dozer	Stabiliser	15600
		Stabiliser	Dozer	15600
		Stabiliser	Stabiliser	16200
		-	Dozer	14450
		Dozer	Stabiliser	16200
		Stabiliser	Dozer	16200
		Stabiliser	Stabiliser	16200

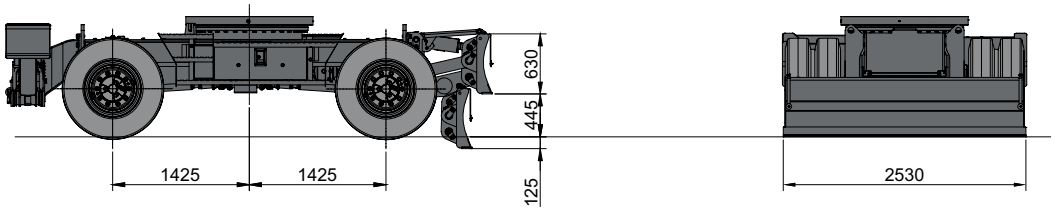
Boom (mm)	Arm (mm)	Chassis - Front	Chassis - Rear	Total weight (kg)
1-piece boom (4400)	2100	-	Dozer	14450
		-	Dozer	14450
		Dozer	Stabiliser	15600
		Stabiliser	Dozer	15600
2-piece boom (4988)	2100	-	Dozer	15050
		Dozer	Stabiliser	16200
		Stabiliser	Dozer	16200
		Stabiliser	Stabiliser	16750
	2500	-	Dozer	15050
		Dozer	Stabiliser	16200
		Stabiliser	Dozer	16200
		Stabiliser	Stabiliser	16750

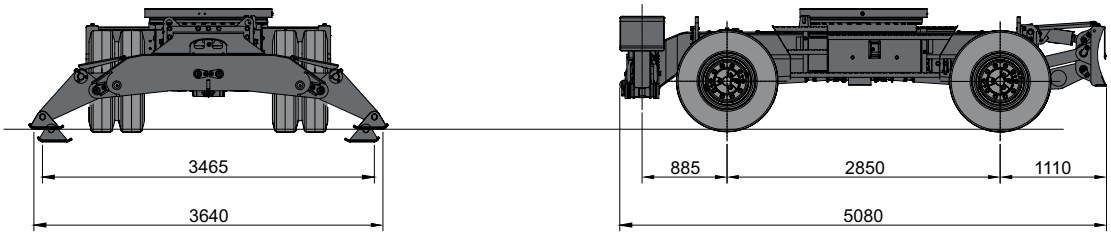
Dimensions

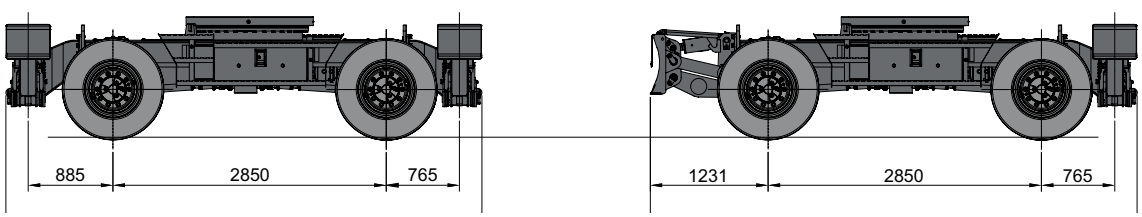


Dimensions

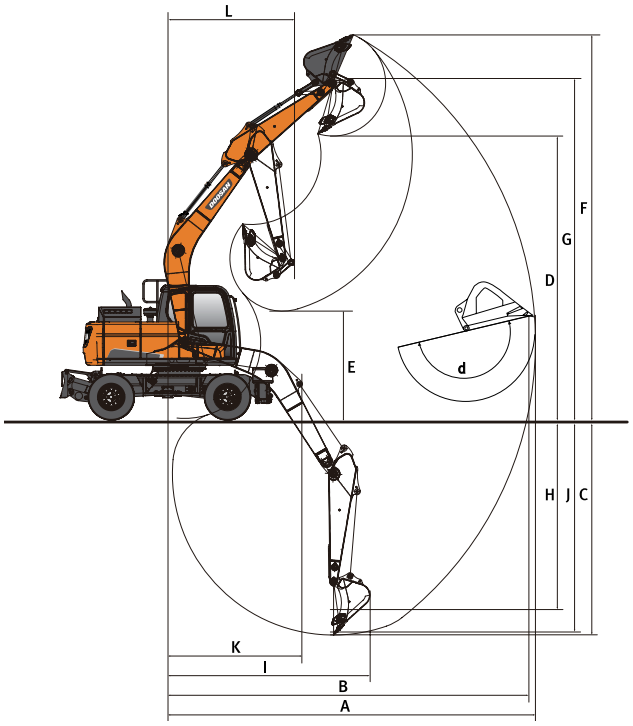
		One-piece boom			Two-piece boom	
Boom length - mm		4400	4600		4988	
Arm length - mm		2100	2100	2500	2100	2500
A	Shipping length - mm	7420	7630	7585	8010	7975
B	Shipping width - mm	2500	2500	2500	2500	2500
C	Shipping height (boom) - mm	2995	2865	3210	2940	3105
D	Height over cab - mm	3052	3052	3052	3052	3052
E	Tail swing radius - mm	2205	2205	2205	2205	2205
F	Ground clearance - mm	347	347	347	347	347
G	Counterweight clearance - mm	1215	1215	1215	1215	1215
H	Engine cover height - mm	2212	2212	2212	2212	2212
I	Upper housing width - mm	2490	2490	2490	2490	2490
J	Wheel base - mm	2800	2800	2800	2800	2800
K	Tread width - mm	1944	1944	1944	1944	1944







Working range



Working range

		One-piece boom			Two-piece boom	
Boom length - mm		4400	4600		4988	
Arm length - mm		2100	2100	2500	2100	2500
A	Max. digging reach - mm	7585	7765	8235	8210	8670
B	Max. digging reach (ground) - mm	7375	7560	8040	8020	8490
C	Max. digging depth - mm	4490	4620	5020	5025	5455
D	Max. loading height - mm	5905	6060	6510	6715	7175
E	Min. loading height - mm	2625	2836	2465	3365	3015
F	Max. digging height - mm	8195	8340	8850	9060	9565
G	Max. bucket pin height - mm	7125	7275	7730	7930	8395
H	Max. vertical wall depth - mm	3445	3480	4265	3840	4410
I	Max. radius vertical - mm	5480	5695	5555	5825	5680
J	Max. digging depth (8´level) - mm	4215	4345	4805	4905	5345
K	Min. radius 8´line - mm	2105	2240	2315	865	865
L	Min. swing radius - mm	2340	885	505	2650	2850
d	Bucket angle - °	173.7	173.7	173.7	173.7	173.7

Digging forces (ISO)

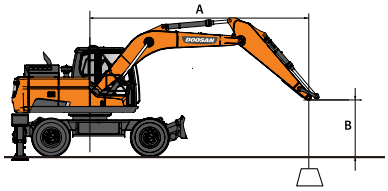
	One-piece boom			Two-piece boom	
Boom length - mm	4400	4600		4988	
Arm length - mm	2100	2100	2500	2100	2500
BUCKET (Normal/Press. Up) - ton	10.00/10.57	10.00/10.57	10.00/10.57	11.08 / 17.71	11.08 / 17.71
ARM (Normal/Press. Up) - ton	7.59/8.03	7.59/8.03	6.53/6.9	7.59/8.03	6.53/6.9

Lifting capacities

DX140W-5

W/O Bucket

Unit: 1000 kg	A / B	Chassis Frame Attachment	1.5 m		3.0 m		4.5 m		6.0 m		Max. reach		A
One-piece boom 4.4 m Arm 2.1 m Counterweight 2.2 t	6.0 m	R-Dozer Up					3.61*	3.61*			3.14*	3.14*	4.63
		R-Dozer Down					3.61*	3.61*			3.14*	3.14*	
		F-Dozer + R-Stabilizer Down					3.61*	3.61*			3.14*	3.14*	
		F-Stabiliser + R-Stabiliser Down					3.61*	3.61*			3.14*	3.14*	
	4.5 m	R-Dozer Up					5.65*	3.66			2.97*	2.55	5.68
		R-Dozer Down					5.65*	4.06			2.97*	2.82	
		F-Dozer + R-Stabilizer Down					5.65*	5.65*			2.97*	2.97*	
		F-Stabiliser + R-Stabiliser Down					5.65*	5.65*			2.97*	2.97*	
	3.0 m	R-Dozer Up			9.58*	6.36	6.65*	3.5	4.15*	2.29	3.07*	2.18	6.19
		R-Dozer Down			9.58*	7.21	6.65*	3.89	4.15*	2.54	3.07*	2.42	
		F-Dozer + R-Stabilizer Down			9.58*	9.58*	6.65*	5.88	4.15*	3.78	3.07*	3.07*	
		F-Stabiliser + R-Stabiliser Down			9.58*	9.58*	6.65*	6.65*	4.15*	4.15*	3.07*	3.07*	
	1.5 m	R-Dozer Up			10.02*	5.84	7.06	3.31	4.48	2.22	3.39*	2.06	6.31
		R-Dozer Down			10.02*	6.66	7.52*	3.7	5.28	2.47	3.39*	2.3	
		F-Dozer + R-Stabilizer Down			10.02*	10.02*	7.52*	5.67	5.61*	3.7	3.39*	3.39*	
		F-Stabiliser + R-Stabiliser Down			10.02*	10.02*	7.52*	6.83	5.61*	4.39	3.39*	3.39*	
	0.0 m	R-Dozer Up			10.78*	5.68	6.91	3.2	4.42	2.17	4.07*	2.14	6.07
		R-Dozer Down			10.78*	6.5	7.74*	3.58	4.79*	2.42	4.07*	2.39	
		F-Dozer + R-Stabilizer Down			10.78*	10.78*	7.74*	5.54	4.79*	3.65	4.07*	3.6	
		F-Stabiliser + R-Stabiliser Down			10.78*	10.78*	7.74*	6.69	4.79*	4.34	4.07*	4.07*	
	-1.5 m	R-Dozer Up	8.49*	8.49*	10.01*	5.71	6.89	3.18			5.19	2.51	5.39
		R-Dozer Down	8.49*	8.49*	10.01*	6.52	6.94*	3.57			5.43*	2.8	
		F-Dozer + R-Stabilizer Down	8.49*	8.49*	10.01*	10.01*	6.94*	5.52			5.43*	4.25	
		F-Stabiliser + R-Stabiliser Down	8.49*	8.49*	10.01*	10.01*	6.94*	6.67			5.43*	5.07	
	-3.0 m	R-Dozer Up			6.73*	5.87					4.84*	3.74	4.09
		R-Dozer Down			6.73*	6.69					4.84*	4.2	
		F-Dozer + R-Stabilizer Down			6.73*	6.73*					4.84*	4.84*	
		F-Stabiliser + R-Stabiliser Down			6.73*	6.73*					4.84*	4.84*	
One-piece boom 4.6 m Arm 2.5 m Counterweight 2.5 t	7.5 m	R-Dozer Up									2.77*	2.77*	3.93
		R-Dozer Down									2.77*	2.77*	
		F-Dozer + R-Stabilizer Down									2.77*	2.77*	
		F-Stabiliser + R-Stabiliser Down									2.77*	2.77*	
	6.0 m	R-Dozer Up					3.98*	3.97			2.27*	2.27*	5.55
		R-Dozer Down					3.98*	3.98*			2.27*	2.27*	
		F-Dozer + R-Stabilizer Down					3.98*	3.98*			2.27*	2.27*	
		F-Stabiliser + R-Stabiliser Down					3.98*	3.98*			2.27*	2.27*	
	4.5 m	R-Dozer Up					4.68*	3.88	3.54*	2.49	2.13*	2.13*	6.44
		R-Dozer Down					4.68*	4.3	3.54*	2.75	2.13*	2.13*	
		F-Dozer + R-Stabilizer Down					4.68*	4.68*	3.54*	3.54*	2.13*	2.13*	
		F-Stabiliser + R-Stabiliser Down					4.68*	4.68*	3.54*	3.54*	2.13*	2.13*	
	3.0 m	R-Dozer Up			8.98*	6.73	6.30*	3.69	4.75	2.42	2.15*	1.95	6.90
		R-Dozer Down			8.98*	7.61	6.30*	4.1	4.84*	2.68	2.15*	2.15*	
		F-Dozer + R-Stabilizer Down			8.98*	8.98*	6.30*	6.14	4.84*	3.95	2.15*	2.15*	
		F-Stabiliser + R-Stabiliser Down			8.98*	8.98*	6.30*	6.30*	4.84*	4.65	2.15*	2.15*	
	1.5 m	R-Dozer Up					7.28*	3.47	4.65	2.33	2.29*	1.86	7.01
		R-Dozer Down					7.28*	3.87	5.49	2.59	2.29*	2.07	
		F-Dozer + R-Stabilizer Down					7.28*	5.89	5.55*	3.85	2.29*	2.29*	
		F-Stabiliser + R-Stabiliser Down					7.28*	7.08	5.55*	4.55	2.29*	2.29*	
	0.0 m	R-Dozer Up			8.23*	5.91	7.15	3.33	4.57	2.26	2.59*	1.92	6.79
		R-Dozer Down			8.23*	6.75	7.68*	3.73	5.4	2.52	2.59*	2.13	
		F-Dozer + R-Stabilizer Down			8.23*	8.23*	7.68*	5.73	5.64*	3.77	2.59*	2.59*	
		F-Stabiliser + R-Stabiliser Down			8.23*	8.23*	7.68*	6.91	5.64*	4.47	2.59*	2.59*	
	-1.5 m	R-Dozer Up	6.29*	6.29*	10.47*	5.91	7.1	3.29	4.56	2.25	3.22*	2.16	6.20
		R-Dozer Down	6.29*	6.29*	10.47*	6.75	7.22*	3.69	5.06*	2.51	3.22*	2.41	
		F-Dozer + R-Stabilizer Down	6.29*	6.29*	10.47*	10.47*	7.22*	5.69	5.06*	3.76	3.22*	3.22*	
		F-Stabiliser + R-Stabiliser Down	6.29*	6.29*	10.47*	10.47*	7.22*	6.86	5.06*	4.46	3.22*	3.22*	
	-3.0 m	R-Dozer Up			7.93*	6.03	5.47*	3.36			4.34*	2.85	5.11
		R-Dozer Down			7.93*	6.88	5.47*	3.76			4.34*	3.18	
		F-Dozer + R-Stabilizer Down			7.93*	7.93*	5.47*	5.47*			4.34*	4.34*	
		F-Stabiliser + R-Stabiliser Down			7.93*	7.93*	5.47*	5.47*			4.34*	4.34*	



: Rating over front.
: Rating over side or 360°.

1. Lifting capacities are in compliance with ISO 10567:2007(E).
2. The load point is at the end of the arm.
3. * = The nominal loads are based on hydraulic capacity.
4. The nominal loads shown do not exceed 75% of tipping loads or 87% of hydraulic lifting capacity.
5. For lifting capacity with bucket simply subtract the actual weight of the bucket from the values.
6. The configurations indicated do not necessarily reflect the standard equipment of the machine.

Lifting capacities

DX140W-5

W/O Bucket

Unit: 1000 kg	A / B	Chassis Frame Attachment	1.5 m		3.0 m		4.5 m		6.0 m		Max. reach		A
Two-piece boom 4.988 m Arm 2.5 m Counterweight 2.5 t	7.5 m	R-Dozer Up					3.34*	3.34*			2.83*	2.83*	4.69
		R-Dozer Down					3.34*	3.34*			2.83*	2.83*	
		F-Dozer + R-Stabilizer Down					3.34*	3.34*			2.83*	2.83*	
		F-Stabiliser + R-Stabiliser Down					3.34*	3.34*			2.83*	2.83*	
	6.0 m	R-Dozer Up					4.14*	4	2.81*	2.48	2.41*	2.41*	6.10
		R-Dozer Down					4.14*	4.14*	2.81*	2.75	2.41*	2.41*	
		F-Dozer + R-Stabilizer Down					4.14*	4.14*	2.81*	2.81*	2.41*	2.41*	
		F-Stabiliser + R-Stabiliser Down					4.14*	4.14*	2.81*	2.81*	2.41*	2.41*	
	4.5 m	R-Dozer Up					4.81*	3.86	4.28*	2.47	2.27*	1.93	6.92
		R-Dozer Down					4.81*	4.28	4.28*	2.73	2.27*	2.15	
		F-Dozer + R-Stabilizer Down					4.81*	4.81*	4.28*	4.03	2.27*	2.27*	
		F-Stabiliser + R-Stabiliser Down					4.81*	4.81*	4.28*	4.28*	2.27*	2.27*	
	3.0 m	R-Dozer Up					5.87*	3.6	4.74	2.37	2.27*	1.72	7.35
		R-Dozer Down					5.87*	4.02	4.76*	2.63	2.27*	1.92	
		F-Dozer + R-Stabilizer Down					5.87*	5.87*	4.76*	3.92	2.27*	2.27*	
		F-Stabiliser + R-Stabiliser Down					5.87*	5.87*	4.76*	4.63	2.27*	2.27*	
	1.5 m	R-Dozer Up					6.93*	3.35	4.61	2.25	2.39*	1.64	7.45
		R-Dozer Down					6.93*	3.75	5.23*	2.51	2.39*	1.84	
		F-Dozer + R-Stabilizer Down					6.93*	5.79	5.23*	3.79	2.39*	2.39*	
		F-Stabiliser + R-Stabiliser Down					6.93*	6.93*	5.23*	4.5	2.39*	2.39*	
	0.0 m	R-Dozer Up					7.06	3.19	4.51	2.17	2.65*	1.69	7.24
		R-Dozer Down					7.45*	3.6	5.36	2.43	2.65*	1.89	
		F-Dozer + R-Stabilizer Down					7.45*	5.61	5.49*	3.7	2.65*	2.65*	
		F-Stabiliser + R-Stabiliser Down					7.45*	6.81	5.49*	4.41	2.65*	2.65*	
	-1.5 m	R-Dozer Up			8.71*	5.7	7.01	3.15	4.49	2.15	3.16*	1.88	6.70
		R-Dozer Down			8.71*	6.54	7.26*	3.56	5.30*	2.41	3.16*	2.1	
		F-Dozer + R-Stabilizer Down			8.71*	8.71*	7.26*	5.57	5.30*	3.68	3.16*	3.16*	
		F-Stabiliser + R-Stabiliser Down			8.71*	8.71*	7.26*	6.76	5.30*	4.39	3.16*	3.16*	
	-3.0 m	R-Dozer Up			8.74*	5.83	6.19*	3.22			4.37*	2.37	5.71
		R-Dozer Down			8.74*	6.68	6.19*	3.62			4.37*	2.65	
		F-Dozer + R-Stabilizer Down			8.74*	8.74*	6.19*	5.64			4.37*	4.03	
		F-Stabiliser + R-Stabiliser Down			8.74*	8.74*	6.19*	6.19*			4.37*	4.37*	

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.

Standard and optional equipment

Engine

Doosan DL06P 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	○
Guard rails (ISO 2867:2011)	○

Other

Boom: 4400 mm – arm: 2100 mm – counterweight: 2150 kg	●
"CORE TMS" 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 80 A) - Battery (2 × 12 V 150 Ah)	●
Hydrostatic drive with 2-speed power shift transmission	●
Remote greasing for swing circle and work group pivot points	●
Guards for work lights	●
Arms: 2500 mm (only with 4600 m one-piece boom)	○
Booms: 4600 one-piece boom 4988 mm two-piece boom (including 2.5 t counterweight)	○
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 cradle	●
Front parallel dozer blade and rear independent stabilisers	○
Rear parallel dozer blade	●
2 or 4 independent stabilisers with cylinder protection	○
Double tyres 10-20 14 PR	●
Front axle oscillation lock modes (On/Off/Auto)	●
Piston rod protection of stabiliser cylinders	●
Lockable tool box (left side)	●
Rear & front chain tightening eyes	●
Lockable tool box (right side)	○
Single tyres 18-19.5-20 PR	○

Standard: ●
Optional: ○

Engine coolant heater

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.

The "CORE TMS" Doosan Telematic system: is the technology of sending receiving and storing information via telecommunication devices in conjunction with controlling remote objects. In dual mode (satellite GSM) the system provides many details about the performance of your equipment including: operation hours fuel efficiency GPS fault code/warning and reports.

Now showing at: products.doosanequipment.eu *www.doosanequipment.eu*

DOOSAN

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