

DOOSAN

Crawler Excavators |
DX225/235LC-5/DX235NLC-5



Maximum power: 166 HP
Operating weight: 22.1/22.8/22.4 t
Max. bucket capacity: 1.49 m³



Doosan Group – Building your tomorrow today

▣ Doosan – a global company

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 40,000 employees in 38 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 3,700 distributors worldwide
- Dramatic growth over the past decade, with 14% average annual revenue growth since 2000 and rising from €2.4 billion in 1998 to €15.9 billion in 2014

▣ 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



Special Applications



Wheel Loaders



Wheeled Excavators



Compact Excavators



Crawler Excavators

Raise profits, productivity & fuel efficiency

▶ **Do not compromise! Doosan has built a strong reputation based on the quality, reliability and durability of its construction machinery.**

If you are looking to get your work done with a durable brand you can trust – and be backed by unmatched support – look no further than our DX225LC-5, DX235LC-5 & DX235 NLC-5. They simply make business sense – as well as an efficient & comfortable work environment.

Ⓞ **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.
Major components for engine, swing device, travel device & pump (Doosan Mottrol) are designed and manufactured by Doosan.



Ⓞ **Productivity:** State-of-the-art bucket and arm digging forces.
New Trimble-ready option simplifies installation of Trimble 2 or 3D Grade Control System (DX225LC-5 only).

Ⓞ **Safety:** Rear camera and large side mirrors, powerful lighting, & anti-slip steps and platforms. Guard rails on upper structure.
ROPS (Roll Over Protective Structure) & FOGS (Falling Object Guard) cab with top and front cab guards (ISO 10262).

Ⓞ **Special applications:** Different types of booms, arm sizes, two-piece booms, front dozer (DX225LC5 only) & super long reach configurations are available to efficiently carry out any task your business requires.

Ⓞ **Easy-to-use attachments:** As standard, 1- & 2-way auxiliary hydraulic lines for opening & closing tools (with pedal & joystick control), along with flow & pressure control directly from the control panel.
Additionally, 10 pre-sets are available to record specific settings.



☉ **Comfort:** One of the most spacious cabs in the market, with low noise & vibration levels and excellent all-round visibility. 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.

☉ **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, provides an additional reduction of up to 5%.



DOOSAN **CONNECT**

☉ **Telematics:** as standard, Doosan Connect system with dual mode (satellite, GSM).

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

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

☉ **Logical Layout:** All major hydraulic components are strategically located close together to reduce friction loss and pressure drops.

☉ **500 mm heavy-duty shoes standard on DX235NLC-5.**

☉ **Undercarriage durability:** Forged steel and deep-hardened top rollers – oil-lubricated rollers – heat-treated sprocket – deep-hardened, heat-treated, grease lubricated & longer life track chains.



Undercarriage available: 2.99m for DX225LC-5 & DX235LC-5, 2.54m for DX235NLC-5. DX235LC-5 & NLC-5 are fitted with same upper-carriage width of only 2.54m. This gives the DX235LC-5 a much shorter tail swing than a conventional 20t machine.

Top performance and fuel efficiency



▣ The power to raise productivity

The DX225LC-5, DX235LC-5 & DX235NLC-5 take even the heaviest tasks in their stride with efficient, dependable performance that saves you time and money:

- Improved hydraulic system uses the engine 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 DX225LC-5, DX235LC-5 & DX235NLC-5 are 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. The 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.

A Forceful, Responsive Design

The 3 models feature a negative flow control hydraulic system. In simple terms, negative flow control decreases pump flow when oil pressure increases and vice versa. The net result: the pump and valve operate in harmony with less energy and less wear and tear.

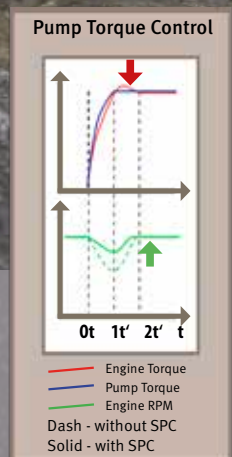
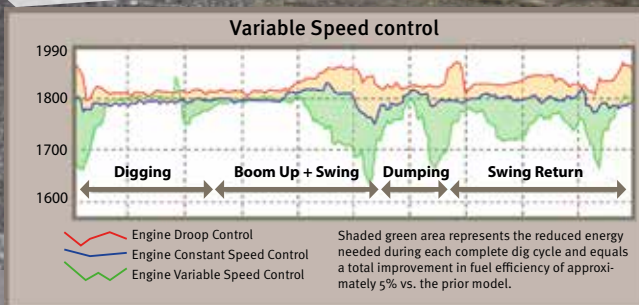
EFFICIENT FUEL MANAGEMENT

- 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 can easily be programmed from 3 to 60 minutes, to reduce unnecessary fuel consumption and exhaust emissions, and to lower operating costs
- 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 viscous clutch, resulting in lower fan noise & better fuel efficiency



Trimble READY

NEW SPC



New Trimble Ready® option: To enable faster and easier installation of Trimble® 2D or 3D Grade Control System components with no welding, re-painting, drilling or disassembly required.

SPC (Smart Power Control): two systems (Variable Speed Control and Pump Torque Control) work together to improve efficiency while maintaining productivity.

Operating in comfort

▣ The ideal workspace – designed around you

The DX225LC-5, DX235LC-5 & DX235NLC-5 are 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 Crawler Excavators are powered by industry-leading engines that save on fuel and meet the latest Stage IV European 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.

Straight travel pedal

For straight machine movement – ensures comfort during on hill operation or front equipment combined movements such as boom/arm or boom/swing.

Two-way proportional pedal

1 & 2-way auxiliary hydraulic line as standard, along with flow & pressure control directly from the control panel. For maximum comfort when operating attachments - operator can easily set his preference in the control panel to operate with the rollers on joystick or with the pedal.

Advanced Joystick technology

Ergonomic, advanced & simple-to-operate - Doosan's 'Whole Proportional' system delivers ultra-precise & smooth control over all movements. The orientation of the roller and buttons is adjustable. Buttons make working with a 2-way-flow grapple, thumb, and shear simple. The left joystick has a button that sets engine speed to idle when you are not working.

Heated air suspension seat (standard)

Adjustable and provides lumbar support. The air suspension system reduces vibrations. And the seat heating system is activated at the touch of a button.

Air conditioning with climate control

Choose from 5 different modes to regulate airflow as the system adjusts air temperature & fan speed to maintain the selected temperature. Recirculated air function is also available.

Auxiliary input as standard

For connecting external devices and playing music through the cab speakers.

MP3/USB radio

Optional MP3/USB radio or MP3/USB radio with CD player.

Storage space

The new cab has 7 storage compartments - including hot/cool box, storage box for magazine/papers, and a cup holder.

CabSus mount

The cab's new suspension system dampens vibrations and provides outstanding protection against impact (better than conventional viscous suspension system).



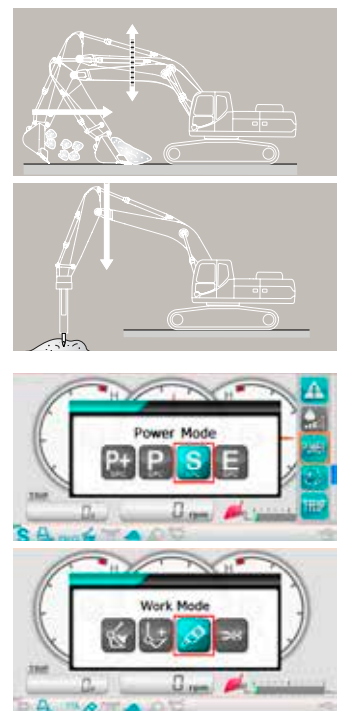
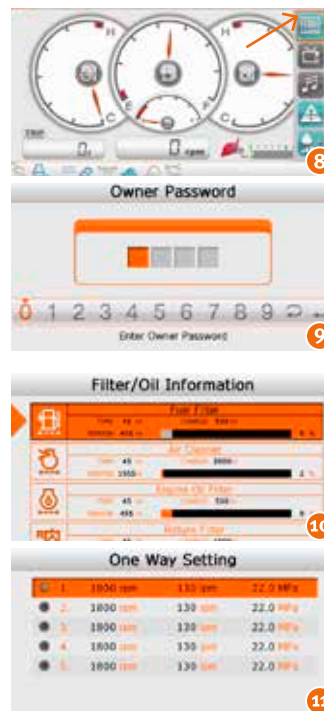
1. Large sun roof
2. Sun visor
3. Storage compartment for sunglasses
4. Window grip
5. Hot/cool box
6. Upper front window is strut-assisted for easy, reliable adjustment and integrates a sun shade
7. Photo sensor detects radiant energy from the sun and adjusts temperature automatically
8. Improved visibility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

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 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, 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. "Short stroke" joysticks enable easy, precise control of all operations
4. Exclusive jog shuttle switch
5. Automatic travel speed switch
6. Working lights switch
7. USB plug with auxiliary input for connecting an external music player
8. Climate control & HVAC
9. Remote control of radio
10. Wipers control
11. 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. Side view camera is also available.



Rear & 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. Major components for engine, swing device, travel device & pump (Doosan Mottrol) are designed and manufactured by Doosan, so that essential machine functions are perfectly matched for a highly reliable and productive excavator.



Extra-strong X-chassis

Designed using Finite Element Analysis and 3D computer simulation, the X-shaped undercarriage ensures optimum structural integrity and durability.

Undercarriage durability

- The chain is composed of sealed, self-lubricating links for long-term dependability
- The track spring and idler are joined for long-lasting performance and easy maintenance
- Cast steel heavy-duty sprockets guarantee the highest resistance
- Track rollers lubricated for life

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.

All major hydraulic components are located close together

This positioning leads to reduced friction loss and pressure drops as well as more hydraulic horsepower for the heavy-lifting, ground-breaking work you need to do.

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 making the cleaning and cartridge change intervals greater

Heavy-duty shoes

On the DX235NLC-5 the shoes are heavy-duty and have a thickness of 12 mm, particularly ideal for rough applications.

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.



Air cleaner



Cyclonic air pre-cleaner

Cyclonic air pre-cleaner: air filter life & engine efficiency are directly related to the amount of debris ingested through the engine's air intake. Therefore, a cyclonic air pre-cleaner (as standard) is the first stage of an air intake system that prevents the majority of heavier-than-air particles from entering. Self-cleaning and maintenance-free, the system is able to expel all types of mixed debris, including mud, snow, rain, leaves, sawdust, chaff, etc.

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. To get the most out of your machine, choose the package you need from a broad range of service agreements. 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
- Cab's air-conditioning filter is lockable and placed on the cab's side for easy access
- Battery cut-off switch to easily disconnect the battery for long-term storage
- The hour meter display can be easily checked from ground level
- Shut-off valves on the pre-filter piping line and fuel tank drain piping 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
- Compartments feature wide service doors and heavy-duty hardware to keep them open

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.

Environmentally Friendly

To reduce waste, the 3 models are built to be re-built with major structures and components that can be re-manufactured.

Permanent monitoring

The 3 models have a pre-start monitoring system that shows you coolant, hydraulic oil, and engine oil levels as well as fluid and filter change intervals to keep the machine in top performing condition.

Full solution provider

- The Doosan Connect Telematic system is available as standard
- Protection+ : extended warranty covering parts, travel and service available
- 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 & easy Diesel filling

Connected to the ECU, sensors in tank detect low level of AdBlue® & any system malfunction. Smart refuel, an on-board pump system, lets you fill the machine quickly from an external source (like a fuel drum) - the system stops automatically when the fuel tank is full or the fuel source is empty - eliminating guess work and premature wear.

Centralised greasing points

To make maintenance easier.



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 Turbocharged, Exhaust Gas Recirculation (EGR) & Selective Catalytic Reduction (SCR) with no Diesel Particulate Filter (DPF).

DX225LC-5, DX235LC-5 & DX235NLC-5	
Model	Doosan DLo6P
No. of cylinders	6
Rated power at 1800 rpm	
(SAE J1995)	124 kW (166 HP)
(SAE J1349)	121 kW (162 HP)
(ISO 9249)	121 kW (164 PS)
Max. torque at 1400 rpm	77 kgf.m (755 Nm)
Idle (low - high)	800 [±10] - 1900 [±25] rpm
Piston displacement	5890 cm ³
Bore × stroke	100 mm × 125 mm
Starter	24 V × 6 kW
Batteries - Alternator	2 × 12 V, 150 Ah - 24 V, 80 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.

- Track rollers lubricated for life
- Idlers and sprockets fitted with floating seals
- Track shoes made of induction-hardened alloy with triple grouser
- Heat-treated connecting pins
- Hydraulic track adjuster with shock-absorbing tension mechanism

> Number of rollers and track shoes per side

DX225LC-5, DX235LC-5 & DX235NLC-5	
Upper rollers (standard shoe)	2
Lower rollers	8
Number of links & shoes per side	49
Link pitch	190 mm
Overall track length	4445 mm

Weight

	Shoe width (mm)	DX225LC-5	DX235LC-5	DX235NLC-5	DX225LC-5	DX235LC-5	DX235NLC-5
		Operating weight (t)			Ground pressure (kgf/cm ²)		
Triple grouser	500 HD (Std)	-	-	22.4	-	-	0.57
	600 HD	-	-	22.8	-	-	0.49
	600 (Std)	22.1	22.8	-	0.47	0.49	-
	700	22.4	23.1	-	0.41	0.42	-
	800	22.7	23.4	-	0.36	0.37	-
	900	23.0	23.7	-	0.33	0.34	-

Component weights

Item	Unit	DX225LC-5	DX235LC-5	DX235NLC-5	Remarks
Upper structure without front	kg	10278	10985	10685	With counterweight
Lower structure assembly	kg	7711	7613	7711	DX235LC-5: 600 mm - DX235NLC-5: HD 500 mm shoe
Front assembly	kg	4127	4127	4127	
Counterweight	kg	4300	5000	4700	DX235NLC-5 two-piece boom: counterweight 5000 kg
Boom	mm / kg	5700 / 1461 SLR 8500 / 1889	5700 / 1461		Including bushing
Boom, two piece	mm / kg	5850 / 1952			Including bushing
Arms	mm / kg	3500 / 794 - 2400 / 568 2-piece: 2400 / 568 2900 / 562 SLR: 6200 / 1055	2400 / 568 - 2900 / 652		Including bushing
Dozer blade (2990 mm)	kg	889	-		For 600 mm shoes. Dozer cylinder (each): 90kg

Hydraulic system

The e-EPOS (Electronic Power Optimising System) is the brain of the excavator - minimising fuel consumption and enabling the efficiency of the hydraulic system to be optimised 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

> Pumps & system pressure

DX225LC-5, DX235LC-5 & DX235NLC-5	
Main pumps, type:	2 × variable displacement tandem axial piston pumps
Maximum flow at 1800 rpm	2 × 206.5 l/min
Pilot pump, type:	Gear pump
Maximum flow at 1800 rpm	27 l/min
Relief valve settings:	
Pressure up	350 kg/cm ²
Travel	330 kg/cm ²
Swing	270 kg/cm ²
Pilot	40 kg/cm ²

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)	
		DX225LC-5	DX235(N)LC-5
One-piece boom	2	125 × 85 × 1263	130 × 90 × 1263
Arm	1	140 × 100 × 1450	140 × 100 × 1450
Bucket	1	120 × 80 × 1060	125 × 85 × 1060
Two-piece boom, lower	2	130 × 90 × 1263	130 × 90 × 1263
Two-piece boom, upper	1	150 × 100 × 1870	150 × 100 × 1870
Arm, two-piece boom	1	140 × 100 × 2010	140 × 100 × 2010

➤ 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

➤ Swing speed & torque

DX225LC-5, DX235LC-5 & DX235NLC-5	
Maximum swing speed	10.9 rpm
Maximum swing torque	8400 kgf/m

➤ Drive

Each track is driven by an independent, high-torque axial piston motor through a planetary reduction gearbox. Two levers / foot pedals guarantee smooth travel with counter-rotation on demand.

The track frame protects the travel motor, brake and planetary gears. The multi-disc track brakes are spring-applied and hydraulic released.

➤ Speed & traction

DX225LC-5, DX235LC-5 & DX235NLC-5	
Travel speed (low - high)	3.0 - 5.5 km/h
Maximum traction	27.5 t
Maximum gradeability	35° / 70%

➤ Buckets

Bucket Type	Capacity (m³) SAE	Width (mm)		Weight (kg)	DX235LC-5 / DX235NLC-5					
		With side cutters	W/O side cutters		One-piece boom 5.7 m				Two-piece boom 5.85 m	
					Arm 2.4 m Shoe 600 mm / HD 500 mm	Arm 2.9 m Shoe 600 mm / HD 600 mm	Arm 2.4 m Shoe 800 mm	Arm 2.9 m Shoe 800 mm	Arm 2.4 m Shoe HD 500 mm	Arm 2.9 m Shoe HD 600 mm
GP	0.51	772	722	529	A / A	A / A	A / -	A / -	- / A	- / A
	0.81	1128	1065	654	A / A	A / A	A / -	A / -	- / A	- / A
	0.92	1236	1173	697	A / A	A / A	A / -	A / -	- / A	- / A
	1.05	1372	1309	751	A / B	A / C	A / -	A / -	- / B	- / B
	1.17	1493	1430	809	A / C	B / C	A / -	B / -	- / C	- / C
	1.28	1607	1544	848	B / C	C / D	B / -	B / -	- / C	- / D
HD	0.73	982	916	732	A / -	A / -	A / -	A / -	-	-
	0.90	1130	1064	804	A / -	A / -	A / -	A / -	-	-
	1.07	1286	1220	864	A / -	B / -	A / -	A / -	-	-
	1.24	1438	1372	923	B / -	C / -	B / -	B / -	-	-
	1.32	1516	1450	967	B / -	C / -	B / -	C / -	-	-

Bucket Type	Capacity (m³) SAE	Width (mm)		Weight (kg)	DX225LC-5					
		With side cutters	W/O side cutters		One-piece boom 5.7 m			Two-piece boom 5.85 m		SLR Boom 8.5 m
					Arm 2.4 m Shoe 600 mm	Arm 2.9 m Shoe 600 mm	Arm 3.5 m Shoe 600 mm	Arm 2.4 m Shoe 600 mm	Arm 2.9 m Shoe 600 mm	Arm 6.2 m Shoe 800 mm
DC	0.45	-	1500	357	-	-	-	-	-	A
GP	0.39	820	736	330	-	-	-	-	-	A
	0.51	772	722	529	A	A	A	A	A	-
	0.81	1128	1065	654	A	A	A	A	A	-
	0.92	1236	1173	697	A	A	A	A	A	-
	1.05	1372	1309	751	A	A	B	A	B	-
	1.17	1493	1430	809	A	B	C	B	C	-
	1.28	1607	1544	848	B	C	D	C	C	-
HD	0.73	982	916	732	A	A	A	A	A	-
	0.90	1130	1064	804	A	A	A	A	A	-
	1.07	1286	1220	864	A	B	C	A	B	-
	1.24	1438	1372	923	B	C	D	C	C	-
	1.32	1516	1450	967	C	C	D	C	D	-
	1.49	1666	1600	1039	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

➤ Fluid capacities

	DX225LC-5	DX235LC-5 & DX235NLC-5
Fuel tank	400 l	339 l
Cooling system (radiator)	38.4 l	38.4 l
Urea (def) tank	31.5 l	31.5 l
Hydraulic oil tank	195 l	200 l
Engine oil	27 l	27 l
Swing drive	5.0 l	5.0 l
Travel device	2 × 3.0 l	2 × 3.0 l

➤ Cab

The air-conditioning and heating systems are integrated for optimal climate control. An automatically-controlled fan supplies the pressurised and filtered cab air, which is distributed throughout the cab from multiple vents.

The heated air suspension, adjustable operator's seat includes a seat belt. The operator can adjust the ergonomic seat and joystick console separately according to his preferences.

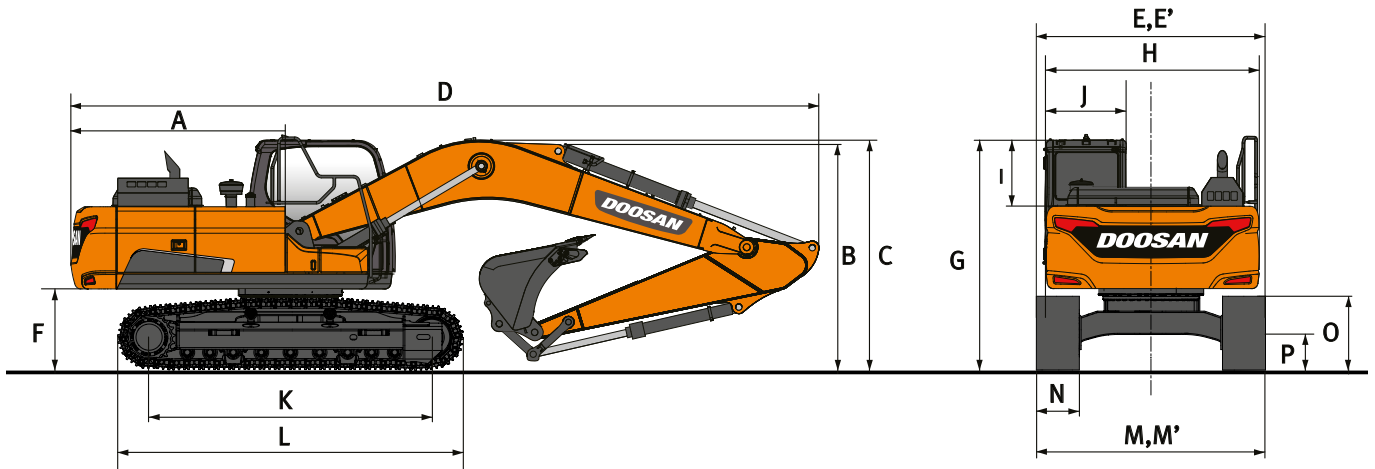
➤ Noise emission

	DX225LC-5	DX235LC-5 & DX235NLC-5
A-weighted emission sound pressure level at the operator's position, LpAd (ISO 6396:2008)	70 dB(A)	69 dB(A)
A-weighted sound power level, LwAd (2000/14/EC)	Declared : 103 dB(A) Measured : 101 dB(A)	Declared : 102 dB(A) Measured : 100 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.

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.

Dimensions



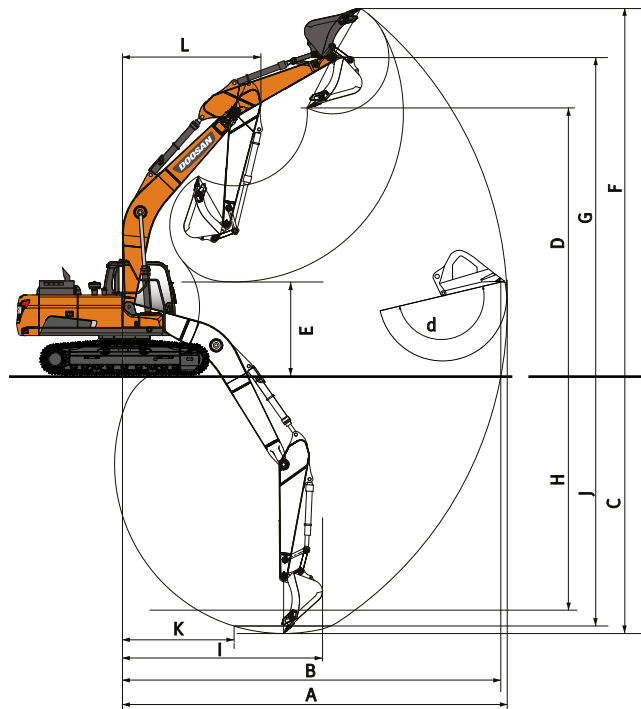
Dimensions

	DX235LC-5 & DX235NLC-5				DX225LC-5					
	One-piece boom		Two-piece boom		One-piece boom			Two-piece boom		SLR
	5700		5850 (3100 LB + 2800 UB)		5700			5850 (3100 LB + 2800 UB)		8500
Boom length - mm										
Arm length - mm	2400	2900	2400	2900	2400	2900	3500	2400	2900	6200
Bucket capacity - m ³	1.05	0.92	0.92	0.81	1.05	0.92	0.81	0.92	0.81	0.39
A Tail swing radius - mm	2755	2755	2755	2755	2795	2795	2795	2795	2795	2795
B Shipping height (boom) - mm	2970	2870	3100	3080	2965	2865	3130	3100	3080	3185
C Shipping height (hose) - mm	3130	3005	3100	3080	3130	3005	3330	3100	3080	3275
D Shipping length - mm	9505	8925	9655	9645	9545	9495	9545	9695	9685	12360
E Shipping width std. - mm	2990	2990	2990	2990	2990	2990	2990	2990	2990	2990
E' Shipping width narrow - mm	2540	2540	2540	2540	-	-	-	-	-	-
F Counterweight clearance - mm	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090
G Height over cab - mm	2985	2985	2985	2985	2980	2980	2980	2980	2980	2980
H House width - mm	2540	2540	2540	2540	2710	2710	2710	2710	2710	2710
I Cab height above house - mm	840	840	840	840	840	840	840	840	840	840
J Cab width - mm	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010
K Tumbler distance - mm	3650	3650	3650	3650	3650	3650	3650	3650	3650	3650
L Track length - mm	4445	4445	4445	4445	4445	4445	4445	4445	4445	4445
M Undercarriage width std. - mm	2990	2990	2990	2990	2990	2990	2990	2990	2990	2990
M' Undercarriage width narrow - mm	2540	2540	2540	2540	-	-	-	-	-	-
N Shoe width std. - mm	600	600	600	600	600	600	600	600	600	600
N' Shoe width narrow. - mm	500	500	500	500	-	-	-	-	-	-
O Track height - mm	945	945	945	945	945	945	945	945	945	945
P Ground clearance - mm	475	475	475	475	475	475	475	475	475	475

Digging forces (ISO)

	DX235LC-5 & DX235NLC-5				DX225LC-5					
	One-piece boom		Two-piece boom		One-piece boom			Two-piece boom		SLR
	5700		5850 (3100 LB + 2800 UB)		5700			5850 (3100 LB + 2800 UB)		8500
Boom length - mm										
Arm length - mm	2400	2900	2400	2900	2400	2900	3500	2400	2900	6200
Bucket capacity - m ³	1.05	0.92	0.92	0.81	1.05	0.92	0.81	0.92	0.81	0.39
BUCKET (Normal/Press. Up) - ton	15.5 / 16.5	15.5 / 16.5	15.5 / 16.5	15.5 / 16.5	14.3 / 15.2	14.3 / 15.2	14.3 / 15.2	14.3 / 15.2	14.3 / 15.2	9.4 / 10.0
ARM (Normal/Press. Up) - ton	11.9 / 12.6	10.2 / 10.8	11.9 / 12.6	10.2 / 10.8	11.9 / 12.6	10.2 / 10.8	9.1 / 9.7	11.9 / 12.6	10.2 / 10.8	5.6 / 6.0

Working range



Working range

	DX235LC-5 & DX235NLC-5				DX225LC-5					
	One-piece boom		Two-piece boom		One-piece boom			Two-piece boom		SLR
Boom length - mm	5700		5850 (3100 LB + 2800 UB)		5700			5850 (3100 LB + 2800 UB)		8500
Arm length - mm	2400	2900	2400	2900	2400	2900	3500	2400	2900	6200
Bucket capacity - m³	1.05	0.92	0.92	0.81	1.05	0.92	0.81	0.92	0.81	0.39
A Max. digging reach - mm	9465	9880	9680	10485	9460	9880	10385	9675	10110	15380
B Max. digging reach (ground) - mm	9275	9710	9495	10310	9275	9710	10215	9495	9940	15265
C Max. digging depth - mm	6080	6580	5985	6735	6080	6580	7185	5980	6440	11650
D Max. loading height - mm	6700	6840	8010	8645	6700	6840	6985	8010	8315	10845
E Min. loading height - mm	3010	2500	3920	3500	3010	2500	1895	3920	3325	1895
F Max. digging height - mm	9450	9555	10910	11545	9450	9555	9660	10905	11200	13075
G Max. bucket pin height - mm	8155	8295	9465	10115	8155	8295	8440	9465	9770	12075
H Max. vertical wall depth - mm	5360	5620	4950	4680	5360	5620	5970	4950	5325	9710
I Max. radius vertical - mm	6025	6380	6355	7765	6025	6380	6740	6355	6635	10065
J Max. digging depth (8° level) - mm	5865	6390	5860	6630	5865	6390	7005	5860	6330	11305
K Min. radius 8° line - mm	2840	2820	1710	1675	2840	2820	2785	1710	1710	3855
L Min. swing radius - mm	3575	3560	2790	2935	3575	3560	3615	2790	2625	4960
d Bucket angle - °	177	177	177	174	177	177	177	177	177	177

Doosan Buckets

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

General Construction 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).

Heavy Construction Bucket



The Heavy duty bucket is designed for mass excavations in dense materials such as hard packed clay, shot limestone, limited rock content and gravel.

Severe Mining Bucket



The Severe duty bucket is designed for durability in digging compact materials like loose or blasted rock, hard packed clay and stone.

X-treme Mining Bucket



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 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)	●
One & two way auxiliary hydraulic line for opening & closing of tool (with pedal & joystick control)	●
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	●
Travel pedals and hand levers	●
Jog shuttle switch	●
7" (18 cm) TFT LCD colour monitor panel	●
Attachment management system	●
Engine speed (RPM) control dial	●
Automatic travel speed (slow / fast)	●
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 (from control panel)	●
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: DX235LC-5 & DX235NLC-5: 5700 mm – arm: 2400 mm	●
Boom: DX225LC-5: 5700 mm – arm: 2900 mm	●
Counterweight: DX235LC-5: 5000 kg	●
Counterweight: DX235NLC-5: 4700 kg – DX235NLC-5 two-piece boom: 5000 kg	●
Counterweight: DX225LC-5: 4300 kg	●
Counterweight: DX225LC-5 SLR: 5300 kg	○
Doosan Connect Telematic system	●
Auto shut-off fuel filler pump	●
Double element air cleaner and pre-filtered Cyclone 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 2-speed travel system with automatic shift	●
Remote greasing for swing circle and work group pivot points	●
Guards for work lights	●
Arms: DX235LC-5 & DX235NLC-5: one-piece boom: 2900 mm - two-piece boom: 2400 & 2900 mm	○
Arms: DX225LC-5: one-piece boom: 2400 & 3500 mm - two-piece boom: 2400 & 2900 mm - SLR: 6200 mm	○
Booms: two-piece boom 5850 mm - SLR (DX225LC-5) 8500 mm	○
Heavy-duty bottom cover	○
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	○
Straight travel pedal (not to be combined with two-piece boom)	○
Bio oil	○
Automatic lubrication system	○
Alarm for travel & swing	○
The Trimble Ready® option includes wiring and mounting brackets only. The Trimble Grade Control System is not included.	○

Undercarriage

Narrow undercarriage – DX235NLC-5	○
Hydraulic track adjuster	●
Normal track guards	●
Greased and sealed track links	●
500 mm HD 12 mm triple grouser shoe – DX235NLC-5	●
600 mm HD 12 mm triple grouser shoe – DX235NLC-5	○
600 mm triple grouser shoe – DX225LC-5 & DX235LC-5	●
700, 800, 900 mm triple grouser shoe – DX225LC-5 & DX235LC-5	○
Dozer blade – DX225LC-5: 2990/3090/3190/3290 mm for 600/700/800/900 mm triple shoes	○

Standard:	●
Optional:	○



Floating boom



Double pump flow (for attachments requiring high hydraulic capacity)



Straight travel pedal



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.

DOOSAN CONNECT



Doosan Connect Telematic system: is the technology of sending, receiving and storing information via telecommunication devices in conjunction with affecting control on remote objects. It will provide in a dual mode (satellite, GSM) many details about the performances of your equipment such as operation hours, fuel efficiency, GPS, fault code/warning and reports.



SIMPLICITY WORKS

WHEN IT COMES TO DOOSAN...

