

DOOSAN

Construction Equipment

DX490 / 530LC-5B

Originally imported

Rated power	257kW (345HP) / 1,800rpm
Operational weight	49,500kg / 50,800kg
Bucket capacity	2.14m ³ / 2.72~3.2m ³



The best model for mining industry, highly reliable and durable, boasting the best fuel efficiency in its class

With its stylish and classy appearance, the DX490LC-5B/DX530LC-5B equipped with a reliable, low-emission and efficient engine, fuel economy and operational performance have been greatly improved.

Engine

- Characterized by high fuel efficiency, superior durability, high versatility and easy to repair
- Energy-saving and environmentally-friendly
- Meets Tier 3 emission standard

Hydraulic System

More reliable hydraulic parts and higher system pressure and flow rate ensure strong performance.

Adaptable to Poor-Quality Fuel

The improved filtering efficiency of the fuel filtering system, and the addition of abrasion-proof, corrosion-resistant material to key components makes the product fully compatible with poor-quality fuel.

Track Width Adjustment

Track width can be adjusted according to the environment in order to ensure operational stability and facilitate equipment transportation.

New Cab

The newly-designed cab offers better visibility and comfort and lower noise.

User-Friendly Lighting Settings

User-friendly lighting settings ensure security and convenience during nighttime operations.

Fuel Consumption

Designed for low fuel consumption and equipped with an SPC (Smart Power Control) and other fuel-saving units, the DX490LC-5B/DX530LC-5B consumes 10% less fuel than previous models.

Largely Enhanced Undercarriage Reliability

The strengthened undercarriage structure offers reliable quality during long operating periods.

Rigid Front Operation Unit

The thickness of key components has been increased and advanced manufacturing technology has been adopted for improved durability.

Fully Automatic Climate Control System

Ergonomic heating/cooling air recirculation system ensures easy operation; optimally located air vents prevent frosting

DX490_{LC-5B}

DX530_{LC-5B}

The superior operational speed, control performance and innate convenience of the DX series effectively ensures high efficiency and alleviates the operator's fatigue, while the innovative centralized layout enhances user convenience.

Centralized Layout

Centralized maintenance items and human-oriented design further facilitates maintenance.

Independent Radiator and Oil cooler

Significantly improve cooling performance, and facilitate cleaning and maintenance.

Boom

Integral structure and reinforced boom enhance strength and durability.

Arm

Reinforced arm plate thickness coupled with the reinforcing rib and wear-resistant plate extends durability of the arm.

Bucket

Enhanced design of new bucket offers excellent durability in heavy duty operation, effectively enabling long operational periods.



FUEL EFFICIENCY

Featuring a design focused on low fuel consumption, the DX490LC-5B/ DX530LC-5B is equipped with a high-performance engine and hydraulic components, combined with advanced the SPC (Smart Power Control) mode. Effectively compensates rising fuel costs, and benefits customers!

Up to 6 modes including (P. Mode/S. Mode/E. Mode) + SPC are available working mode can be freely selected based on actual operational conditions in order to maximize fuel efficiency and effectively reduce fuel costs.



Engine

The Scania engine, monolithic structure of the pump nozzle, and unique centrifugal filter deliver numerous benefits including high reliability, enhanced fuel efficiency and ease of maintenance, low failure rates, and reduced maintenance costs.

Manufacturer	Scania
Power	257 kW (345 HP) / 1,800 rpm
Emission certification	to meet Tier 3 emission standards
Number of cylinders	6
Displacement	12.7 l



EPOS System

Power mode (P), Standard mode (S) and Economy mode (E) can be selected according to the actual working conditions. Meanwhile, by means of auto idle and intelligent control of main pump flow and hydraulic system pressure, low fuel consumption is realized.

SPC Mode

Smart sensing of actual work loads and automatically adjustable engine speed and main pump torque deliver greater operational efficiency and lower fuel consumption.

PERFORMANCE

DX490LC-5B/DX530LC-5B

The 490 DX LC-5B features the largest bucket in its series to increase operational efficiency

The 530 DX LC-5B is equipped with a standard 2.72 m³ bucket. (A 3.2 m³ bucket is available as an option.)

Superior combined operating capacity



Accurate and Efficient Combined Operations

Best-in-the-class digging force, travel traction force and lifting force can effectively improve operational efficiency, while rational fuel distribution ensures smoother combined operations.



Power Boost Button

The power boost button can be used to instantly increase the boom lifting speed or travel traction force, thus ensuring a swift and efficient response to complex conditions.



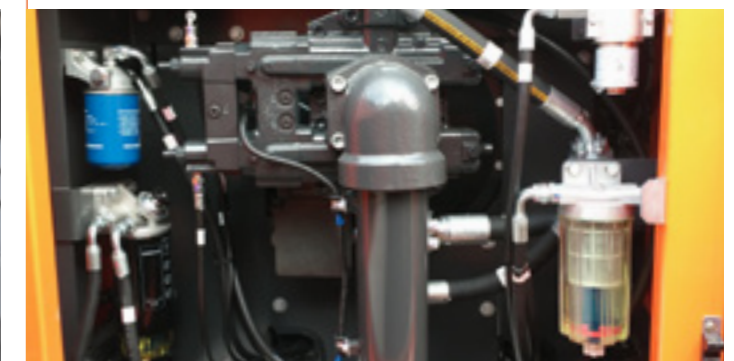
Swing Speed and Control

Best-in-the-class swing torque ensures more powerful swing and effective combined operations.



Compact Swing Motor

The compact swing motor significantly reduces swing vibrations and provides greater swing torque, thereby enabling efficient work performance.



New Hydraulic Pump

Equipped with a new high-capacity, high-efficiency hydraulic pump to dramatically increase operational efficiency, and a large-capacity gear pump for efficient pilot control.

The newly-designed cab offers better visibility and quieter, more comfortable working conditions.

1 The new seat adjustment mode enhances operational efficiency.

Shock-resistant suspension seat can be adjusted frontward and backward, or automatically adjusted based on the weight of the operator.

3 Joystick lever

Joystick levers are ergonomically designed for easy, comfortable handling.

2 Full Automatic Climate control system

Automatic temperature control provides the operator with a comfortable driving environment and reduces driver fatigue.



Engine Emergency Stop

When the engine fails and cannot be shut down, you can use the Emergency Stop control button positioned under the seat (as shown in the illustration) to stop the engine and avoid potential hazards.

New dashboard The newly designed dashboard displays more information, making it easier to understand the equipment status.



The hi-tech color LCD monitor system displays all types of operational information, improving the operator's convenience.

- a. Trip monitor : displays readings for fuel consumption, operational time, average fuel consumption, daily fuel consumption.
- b. Warning information confirmation : To check the warning information, select it on the dashboard and confirm the details.
- c. Filter information : main consumables of the equipment, replacement cycle and remaining time can be confirmed on the dashboard; and remaining time can be reset and replacement cycle can be changed here.

Comfortable and luxurious space, centralized switch design

A metallic trim panel of the type used in advanced cars has been incorporated into the design, and various switches have been centralized, greatly increasing operational convenience and productivity.



SPC (Smart Power Control) mode selection switch

Application of the SPC mode significantly reduces fuel consumption and further benefits customers.

Audio button

Centralization of the control buttons has greatly improved operational convenience.



Convenient storage space and power supply unit

The adoption of a convenient storage box for small items, a 12V power supply unit for the safe storage and recharging of mobile phones and other small electrical appliances, and the Quick start switch of the air conditioner further enhance convenience.



Low-noise cooling system design

Noise inside and outside the cab is significantly reduced, thereby enhancing the operator's comfort and convenience.



USB interface

The USB interface adjacent to the radio can be connected to MP3s, etc. for practical and entertainment purposes.

Significant increase of quality and durability!



Optimized and reinforced bucket

- The bucket has been optimized and reinforced to deliver excellent durability in heavy duty operation, effectively ensuring long operational periods.
- Its overall design enables close contact with digging tracks, facilitating excavation works.
 - Lip plates and side plate are made with more wear-resistant materials.
 - The bottom of the bucket is also fitted with wear-resistant reinforcing plates.

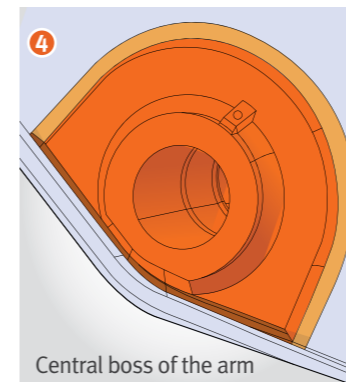
Strengthened boom and arm

The plate thickness of the boom and arm has been increased by more than 16% compared to the previous-generation products.

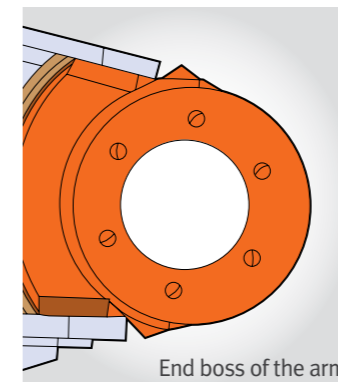


Cooling capacity significantly increased

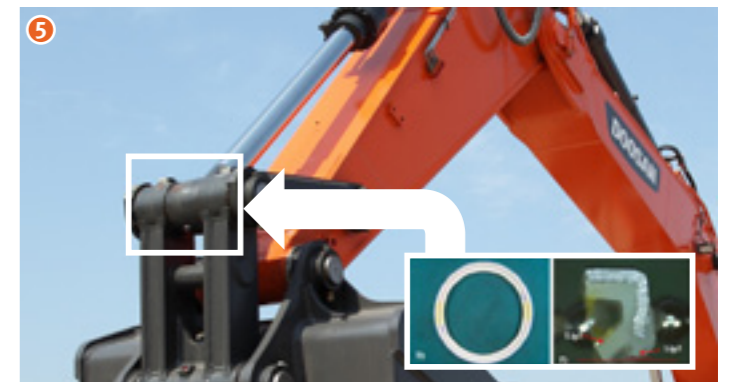
The separate radiator and oil cooler structure, and enlarged size of the ventilation hole deliver substantially improved cooling capacity.



Central boss of the arm



End boss of the arm



New structural design improves durability

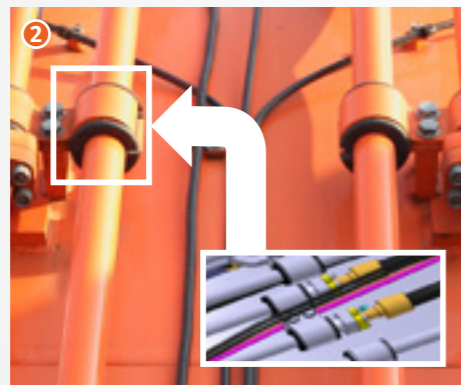
Integral structures have been adopted to eliminate welding points and increase the contact areas of sheet metals, thereby improving durability. The new designed bosses and cylinder head reduces stress per unit area, greatly improving durability.

Enhanced cylinder

- The durability of front operating unit's cylinder has been enhanced to reduce maintenance costs and deliver long-term operational sustainability.
- The seal ring on the cylinder bottom features a dual-lip sealing structure for better sealing performance.



The improved filtering efficiency of the fuel filter system has made the engine more adaptable to low-quality fuels.



Boom - pipeline

Piping vibration has been greatly reduced by shortening the fixed tube clamp spacing, thereby improving durability and reducing oil leakage.



Wear resistant bushing

The surface of bushing is coated with a self-lubricating substance to realize optimum lubrication and debris cleaning, thereby improving anti-seizure capacity and extending life expectancy.



More reliable counterweight bracket and robust baseboard

The more reliable counterweight bracket and robust baseboard can easily cope with poor working conditions to ensure reliability and long-term operational efficiency.

- 6 fixed bolts with enlarged horizontal bolt spacing make the counterweight more stable, and prevent falling off due to long-term vibration.
- The more secure and robust base plate design can permanently protect core components from damage, while the reinforced cover plate, high-strength and durable mounting bolts ensure security and stability.



Convenient, fast, economic layout

Novel and convenient layout settings enhance customer convenience.



Extended consumable replacement cycle

Hydraulic oil: 4,000 hours
 Engine oil filtering element: 500 hours
 Engine oil: 500 hours

User-friendly engine hood design

The integral structure of the previous generation has been replaced with 3 separate sub-structures, making the equipment more durable and easier to handle. The maintenance parts have been centralized in the main pump room for easy removal and maintenance; the fuel filter has been reconfigured for greater convenience, and can be easily accessed by maintenance staff standing on the ground.



Additional Hand rails and non-skid panel

The addition of a boarding hand rails and a new, black, large-area non-skid panel has improved service convenience.



The engine hood features a detachable design and a newly-added foot pedal for easy daily inspection, facilitating field maintenance. Furthermore, all components are highly universal, dramatically reducing replacement fitting costs.



Fuel tank cap

The double-locking design effectively prevents fuel theft incidents.



Increased capacity of the windshield washer fluid reservoir

The capacity of the windshield washer fluid reservoir has been doubled, allowing easy filling of washer fluid.

TECHNICAL SPECIFICATIONS

DX490LC-5B / DX530LC-5B

Main Specifications

Engine		Drive and Brakes	
Model	DC13	Steering control	Foot pedal and lever all-in-one control
Type	In-line	Driving method	Hydraulic drive
Intake	Turbocharged	Travel motor	Axial plunger hydraulic motor
Number of cylinders	6	Travel speed (High/Low)	5.3/3.1 km/h
Cylinder diameter	130 mm		
Piston stroke	160 mm		
Rated power	257 kW (345 HP) / 1,800 rpm		
Swing System		Travel Section	
Driving method	Hydraulic drive	Center frame	X - Frame
Deceleration mechanism	Planetary gear reduction	Track frame	Cabinet type cross-sectional structure
Rotation speed	8.3 rpm	Track seal	Self-lubricating track
		Track adjustment (High/Low)	Grease filling
		Track shoes	53 blocks each side
		Riding wheel	3 each side
		Supporting wheel	9 each side

Operational Weight

Working weight (approximate) includes 7,100 mm HD boom, 3,350 mm HD arm, SAE full bucket 2.14 m³ bucket, operator, lubricant, cooling fluid, filled fuel tank and standard settings.

Track link	Operational weight	Ground pressure
600 mm	49.5 ton	86 kPa

Working weight (approximate) includes 6,300 mm HD boom, 2,900 mm HD arm, SAE 2.72 m³ bucket when full, operator, lubricant, cooling fluid, filled fuel tank and standard settings.

Track link	Operational weight	Ground pressure
600 mm	50.8 ton	90 kPa

Hydraulic System

Hydraulic Motor	
Travel motor	Axial plunger type X 2
Swing motor	Axial plunger type X 2
Main Pump	
Type	Variable axial plunger pump
Maximum flow	2*355 ℓ /min
Relief Valve Setting Value	
Hydraulic circuit of the working unit	330 kgf/cm ²
Hydraulic travel circuit	330 kgf/cm ²
Hydraulic rotary circuit	300 kgf/cm ²
Boost hydraulic circuit	350 kgf/cm ²

Cylinder

Boom	2-170 mm X 115 mm X 1,650 mm
Bucket arm	1-190 mm X 130 mm X 1,980 mm
Bucket	1-170 mm X 115 mm X 1,341 mm

Maximum Digging Force (ISO)

	DX490LC-5B	DX530LC-5B
Bucket	29.2 / 31.0 ton	27.2 / 28.8 ton
Bucket arm	21.7 / 23.0 ton	23.8 / 25.2 ton

Fuel Tank Capacity

Fuel tank	Hydraulic oil tank
685 ℓ	390 ℓ

Coolant/Lubricant Capacity (replacement)

Radiator	Engine	Travel deceleration gear oil	Swing reducer
51 ℓ	45 ℓ	2 X 10 ℓ	2 X 5 ℓ

OPTIONAL COMPONENTS



Track

Deeper gripping depth of track shoes for mines produces greater travel traction force, and ensures easy operations on hard/rocky ground.



Fuel Filler Pump

Fueling can be conducted more quickly and easily, and operational continuity effectively ensured.



Rear View Camera

Optional rear cameras can be fitted to view the conditions behind the equipment, thereby enhancing safety.



Rotating Beacon and Rear Lamp

Rotating Beacon and rear lamp ensures greater security during operation.



Oil Bath Air Filter

Foreign particles in the air can be filtered more effectively in harsh conditions, thus improving the engine's durability.



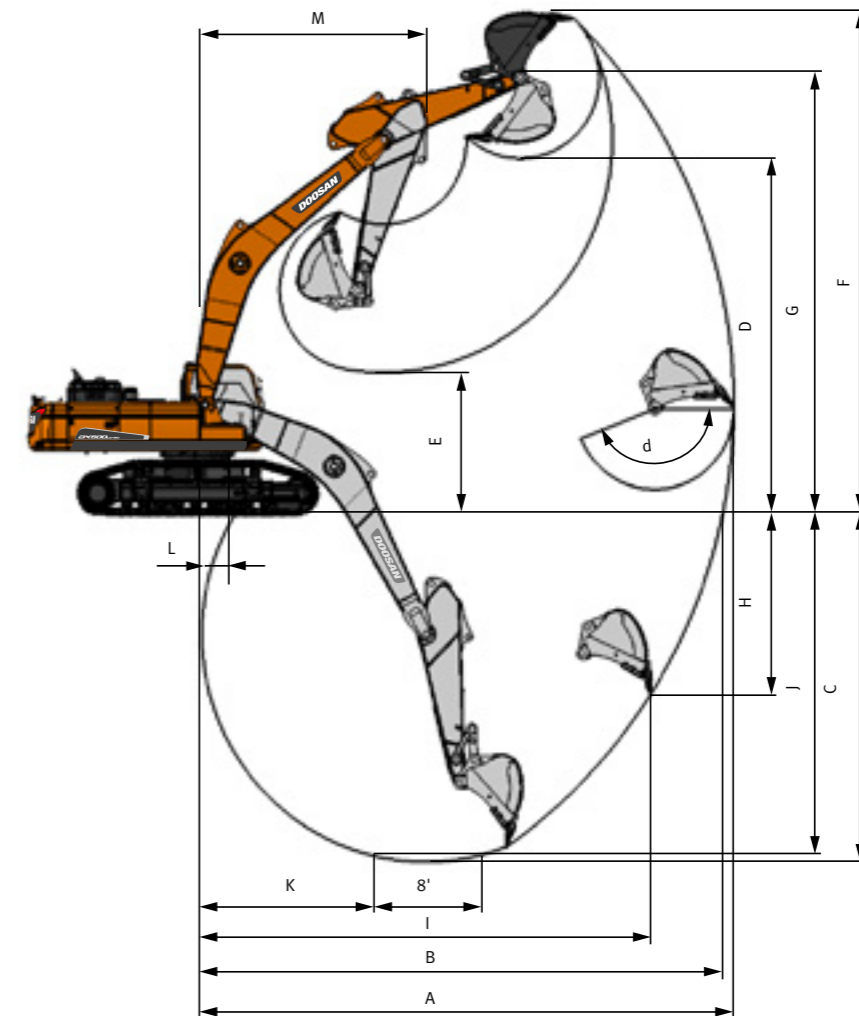
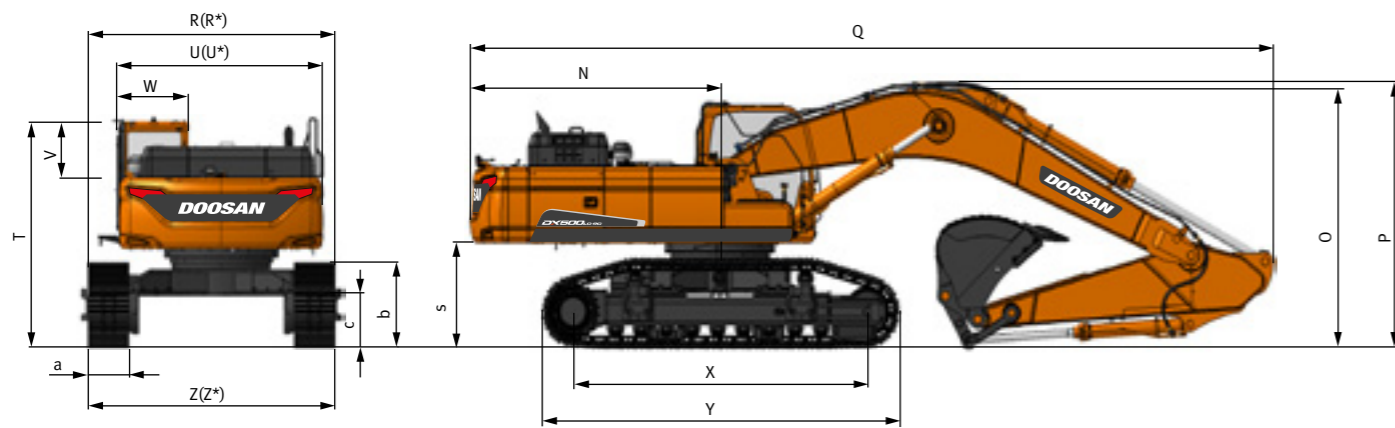
Large Capacity Bucket (3.2m³)

The digging force of the arms and bucket, as well as the lifting force of the boom, has been maximized in order to provide the highest possible operational efficiency with the most appropriate configuration as and when required for mining and excavation works.

TECHNICAL SPECIFICATIONS

DX490LC-5B/DX530LC-5B

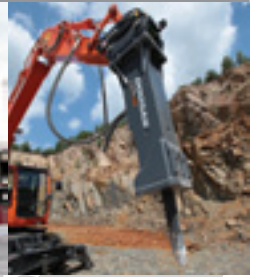
Technical Specifications



			DX490LC-9C	DX530LC-9C
Tail swing radius	(mm)	N	3,800	←
Transport height (to boom top)	(mm)	O	3,580	4,125
Transport height (to hose top)	(mm)	P	3,705	4,165
Transport length	(mm)	Q	12,230	11,530
Transport width	(mm)	R	3,340	←
Ground clearance of the counterweight	(mm)	S	1,460	←
Total height (to cab top)	(mm)	T	3,350	←
Turntable width	(mm)	U	2,990	←
Turntable width (CAT WALK)		U'	3,296	←
Cab height (above the turntable)	(mm)	V	845	←
Overall cab width	(mm)	W	1,010	←
Central distance between the idler and the sprocket	(mm)	X	4,475	←
Track length	(mm)	Y	5,455	←
Total width	(mm)	Z	3,340 / 3,900**	←
Track width	(mm)	a	600	←
Track height	(mm)	b	1,305 / *1,233	←
Min. ground clearance	(mm)	c	770	←

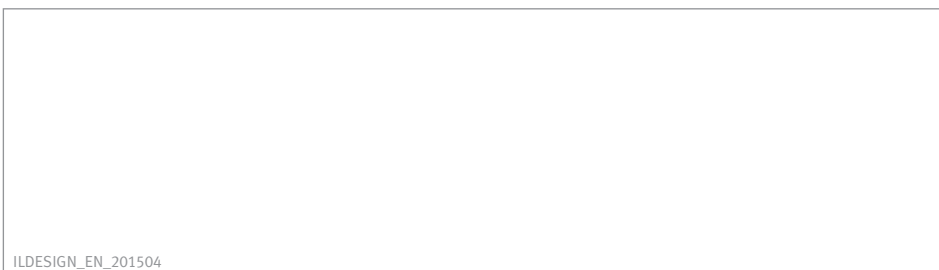
Note: **undercarriage contraction/expansion *Not including boss of the track shoes

			DX490LC-9C	DX530LC-9C
Max. digging reach	(mm)	A	12,055	10,765
Max. digging reach at ground level	(mm)	B	11,865	10,475
Max. digging depth	(mm)	C	7,740	6,765
Max. loading height	(mm)	D	7,915	6,750
Min. loading height	(mm)	E	3,130	2,980
Max. digging height	(mm)	F	10,787	9,705
Max. height of the bucket pivot	(mm)	G	9,690	8,555
Max. vertical wall depth	(mm)	H	4,370	1,155
Max. vertical radius	(mm)	I	9,970	10,095
Max. digging depth on 8 feet flat ground	(mm)	J	7,635	6,535
Min. digging depth on 8 feet flat ground	(mm)	K	3,895	3,175
Min. digging reach	(mm)	L	840	1,160
Min. swing radius	(mm)	M	5,210	4,755
Bucket reach angle	(°)	d	189.1	186.2



Doosan worldwide factories

- Heavy Equipment Factory
- Compact Equipment Factory
- Attachment Factory



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