**DOOSAN** 

**Construction Equipment** 

# **DX360LC-7B**



## **DOOSAN**

Hyundai Doosan Infracore

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# THE WINNING PLAYER IN GENERAL WORK





### **ENGINE**

The SCANIA DC09 series engine delivers high work reliability and fuel efficiency. It has the advantages of easy maintenance and low operating cost.

### REINFORCED CHASSIS STRUCTURE

The optimized design of the chassis structure has improved the overall work stability and durability of the lower part. The chassis that becomes longer using 9 lower rollers effectively helps in loading work.

### **FULLY AUTOMATIC FUEL HEATING**

Fuel heating is designed to be fully automatic and is automatically started in cold areas.

### **LIGHTING SAFETY**

Enhanced lighting system helps to improve visibility for night work. The lamps are mounted in 9 places including 7 in the front and 2 in the rear.

### **CAB GUARDRAIL**

Cab guardrail has been equipped to improve safety in harsh environments.

### SEPARATION OF WATER BOX AND OIL COOLING

A variable-speed independent cooling system controlled by hydraulic pressure is adopted to monitor the temperature in real time.

# **FUEL EFFIENCY**

### **VBO (VIRTUAL BLEED OFF) SYSTEM**

VBO system is Doosan's own hydraulic system based on "Doosan electronic controlled pump"

Generally, most excavators use hydraulic system, transferring the energy by using hydraulic flow. In order to facilitate the rapid response to the joystick signal, this hydraulic flow is continuously generated from the pump even when the excavator is not in operation. The weakness of this system is the fuel loss and internal abrasion. On the contrary, VBO system 'virtually' generates the hydraulic flow through the electronic sensor. Due to its means, customer can be benefited from VBO system in every way. Not to mention the fuel efficiency and the safe sustenance of the system, but also immediate response and

### SPC (SMART POWER CONTROL) SYSTEM

SPC is a predictive powertrain control system, which automatically identifies working mode and adjusts engine RPM to supply proper pump torque. To Reduce the unnecessary waste of fuel consumption, it analyzes and manages gear steps and the set the speed. SPC relieves the driver's workload and contributes to a fuel-efficient working style.

### **EPOS**<sup>™</sup> (ELECTRONIC POWER OPTIMIZING) SYSTEM

control unit and the hydraulic system.

A CAN (Controller Area Network) system enables a constant flow of information between the engine and hydraulic system, to ensure power is delivered exactly as needed.

The smart EPOS<sup>™</sup> provides a perfectly synchronized

communication link between the engine's electronic



# **FEATURES**



### 1. EXCELLENT WORK PERFORMANCE

The design for harsh construction sites such as mines and the latest engine equipped with strong power ensure excellent work performance.



### 2. REINFORCED BOOM AND ARM

Strength and durability have been remarkably improved by adopting an integrated structure and a thicker boom plate. The arm plate has been made thicker, and the durability of the arm has been significantly improved using the stiffener and wear-resistant stiffener.



### 3. EXCELLENT WORK STABILITY

The wide gauge and long crawler provide excellent work stability in slopes, strong lateral lifting force during heavy-duty work by distributing weight reasonably.



### 4. ADVANCED ELECTRONIC CONTROL VBO HYDRAULIC PUMP

The operation response is increased by mounting the large-capacity, electrically controlled VBO hydraulic main pump. The VBO system realizes the effect of high efficiency and low fuel consumption.



### 5. MORE POWERFUL DRIVING FORCE

The chassis and driving device support powerful driving performance, making it possible to work on rough terrain.

# **COMFORT**



1 The operator can adjust the air suspension seat forward and backward and seat support capacity according to the operator's weight. The comfort of the seat is increased using hot wire function, considering operation in winter.

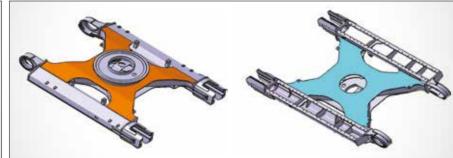


# RELIABILITY

### NEWLY DESIGNED HIGH-STRENGTH, HIGHLY WEAR-RESISTANT, MINING-TYPE BUCKET

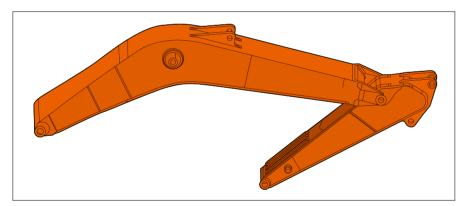
The new bucket designed in consideration of extreme working conditions has significantly improved strength, wear resistance and service life. Highly wear-resistant steel sheet was applied to parts that can be easily abraded. At the same time, the side teeth, bucket teeth and lip plate guard were designed to suit the mining operation.





### REINFORCED STRUCTURE

The cracking problem caused by poor welding has been solved with the integrated design of the chassis, upper plate, lower plate, and connecting rod. The cross section is increased, the materials are adjusted, the plate is made thicker and the service life is extended.



### **REINFORCED BOOM & ARM**

Strength and durability have been remarkably improved by adopting an integrated structure and a thicker boom plate.

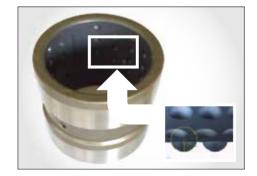
The arm plate has been made thicker, and the durability of the arm has been significantly improved using the stiffener and wear-resistant stiffener.



The adaptability to harsh dust work conditions has been improved by increasing the lubrication point of the arm connection unit.



### **WEAR-RESISTANT BUSHING**





### **CYLINDER**

Maintenance costs are reduced by increasing the cylinder durability of the front work. It secures long-term and continuous work capability.

### **WORK RELIABILITY**

In case of equipment stopping due to high temperature, the reliability of the hydraulic system is improved by adjusting the cooling efficiency in real time according to the working situation.



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# **EASY MAINTENANCE**





**GROUND LEVEL MAINTENANCE** 

Ilt can be maintained more easily thanks to the position of the oil filter.

### LIGHTWEIGHT ENGINE COVER

The engine cover designed to be opened by phase provides safety and excellent convenience.





### LOADING HANDLE FOR SAFETY

The integrated molding-type lift handle provides strong vibration resistance and good quality. The standing area is increased, and safety is improved by using a high-strength steel plate with black flower patterns for the maintenance stand.



**OIL TANK COVER**Fuel loss can be effectively prevented with the double locking design.



FIREWALL INSTALLED BETWEEN THE ENGINE AND PUMP



Hydraulic oil: 4,000 hours Engine oil filter: 4,000 hours Engine oil: 5,000 hours

### **DoosanCONNECT® Telematics Service (OPTIONAL)**

### **TELECOMMUNICATIONS** Data flow from machine to web



TELEMATICS SERVICE TERMINAL

Telematics Service terminal is installed to machine / connected to EPOS™



**TELECOMMUNICATION** 

GPS, EPOS<sup>™</sup> data is sent to sedignated server by GSM, Satellite telecommunication



DOOSAN TELEMATICS SERVICE WEB

Doosan, Dealer, Customer can easily monitor the GPS, EPOS<sup>™</sup> data from Core Telematics Service web

TELEMATICS SERVICE BENEFITS Doosan and dealer support customers to improve work efficiency with timely and responsive services

#### CUSTOMER

Improve work efficiency

- · Timely and preventive service
- · Improve operator's skills by comparing work pattern
- · Manage fleet more effectively

#### **DEALER**

Better service for customers

- · Provide better quality of service
- · Maintain machine value
- · Better understanding of market needs

Responsive to customer's voice

- · Utilize quality-related field data
- · Apply customer's usage profile to deveping

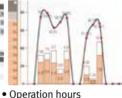
### FUNCTIONS(WEB/APP) Doosan Telematics Service provides various functions to support your great performance













• Fuel information • GPS









Fault code/warning

• ADT Productivity

Reports

FUNCTION		EXCAVATOR	WHEEL LOADER	ADT	
GPS	· Location · Geo-fence	All models	All models	All models	
Operation hours	· Daily, Weekly, Monthly report	All models	All models	All models	
Operation hours	Total operation hours     Operation hours by mode	All models	All models	All models	
Maintenance parts	Preventive maintenance     by item replacement cycle	All models	All models	All models	
Fault code/ Warning	Fault code     Machine Warnings on Gauge Panel	All models	All models	All models	
Fuel information	Fuel level     Fuel consumption	All models	All models	All models	
Dump capacity	Dump tonnage     Count of Work Cycle	N/A	N/A	All models	

#### Some features may be districted, depending the models and regions. For more information, please contract your regional dealer

### **GLOBAL PARTS NETWORK**

### **OUALITY-PROVEN MAIN COMPONENTS**

Doosan provides fast and precise worldwide delivery of genuine Doosan parts through its global PDC (parts distribution center) network.



### **GLOBAL NETWORK**

The global network of the GPDC (Global Parts Distribution Center) maximizes its supply rate by making sure that each center is stockpiled with all the critical parts required for businesses in its area. The network also minimizes the time and costs required for parts delivery by positioning PDCs close to major markets around the world. Doosan PDCs communicate with customers in their time zone, informing them that they are open for operation, and deliver parts to them as early as possible.

### THE GLOBAL PARTS DISTRIBUTION CENTER NETWORK

PDCs had been set up as shown below, including Mother PDC in Ansan, Korea. The eight other PDCs include one in China (Yantai), three in USA (Seattle, Atlanta and Miami), two in Europe (Germany and the UK), one in the Middle East (Dubai) and one in Asia (Singapore).













**Distribution Cost** Reduction

**Maximum Parts** supply rate

Real-time service Shortest distance/ time parts delivery support

Minimum downtime

### **TECHNICAL SPECIFICATION**

ITEMS		UNIT	OPT.1	OPT.2	OPT.3
Operating Weigh	nt	ton	36	35.9	36.5
Boom		mm	6,245	6,500 HD	6,500 HD
Arm		mm	2,600 2.9 HD 3.2 HD		
<b>Bucket Capacity</b>	(SAE)	m³	2.32 2.32 H class 1.94 H class		
System Pressure	9	kg/cm <sup>2</sup>	370		
Swing Speed		rpm	8.2		
Travel Speed (Hi	gh/Low)	km/h	5.0 / 3.0		
Gradeability		% (deg)		70 (35)	
Ground Pressure	9	kg/cm <sup>2</sup>	0.682	0.68	0.692
DIGGING FORCE(SAE)	BUCKET	ton	[SAE] 22.1 [ISO] 24.4	[SAE] 20.7 [ISO] 24.4	[SAE] 20.7 [ISO] 24.4
	ARM	ton	[SAE] 22.85 [ISO] 23.4	[SAE] 19.6 [ISO] 20.5	[SAE] 17.9 [ISO] 19.0

Engine	2

Model	SCANIA DC09 076A		
Rated power	214 kW (291 PS) @ 1,800 rpm (GROS		
	210 kW (286 PS) @ 1,800 rpm (NET)		
Max. torque	135 kgf.m @1,300 rpm		
Fuel Consumption	225 g/kW.hr @ RATED SPEED		
Displacement	9,300 cc		

### Swing System

Driving method	Hydraulic drive
Reduction engine	Planetary gear reducing
Swing operation brake	Wet multi-brake

### **Drive and Brakes**

Steering control	Pedal and control lever integrated control
Driving method	Hydraulic drive
Travel motor	Axial plunger motor
Brake operation	Hydraulic brake
Parking brake	Wet multi-brake

### Hydraulic System

Travel motor	Axial plunger type X2
Swing motor	Wet multi-brake
Main pump	
Displacement	194 cc/rev
Max. flow rate	2 - 350 Liter/min@100 bar, 1800 rpm

#### Safety valve set value

Hydraulic circuit of the working unit	350 kgf/cm2 (34.3 Mpa)
Hydraulic travel circuit	350 kgf/cm2 (34.3 Mpa)
Hydraulic rotary circuit	300 kgf/cm2 (29.4 Mpa)

### Fuel tank volume

Fuel tank	Hydraulic oil tank	
610L	420 L	

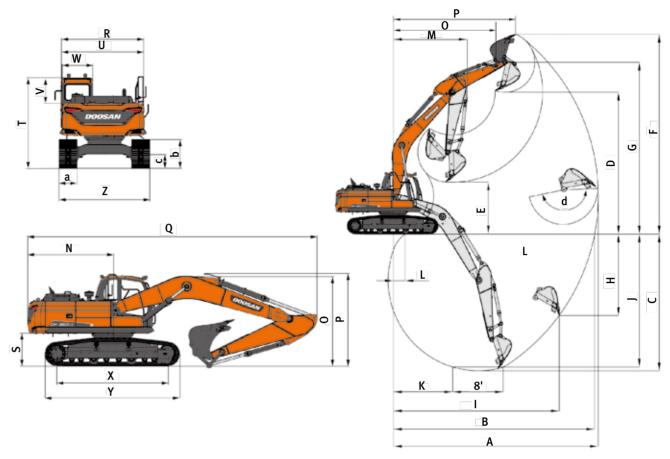
### Cooling liquid/lubricant volume (replacement)

Cooler	Engine	Driving reduction gear oil	Turning decelerator
45 L	36 L	2x7 L	1x8 L

### Oil cylinder

Boom	2-150 mm x 100 mm x 1,450 mm
Arm	1-170 mm x 120 mm x 1,805 mm
Bucket	1-145 mm x 95 mm x 1,300 mm

### **DIMENSION & WORKING RANGE**



ITEMS		UNIT		OPT.1	OPT.2	OPT.3
BOOM TYPE (	ONE PIECE)	mm		6,245	6,500	6,500
ARM TYPE	· · · · · · · · · · · · · · · · · · ·	mm		2,600	2,900	3,200
<b>BUCKET TYPE</b>	(SAE)	m <sup>3</sup>		2.32	2.32	1.94
	TAIL SWING RADIUS	mm	N	3,530	3,530	3,530
	SHIPPING HEIGHT (BOOM)	mm	0	3,605	3,490	3,360
	SHIPPING HEIGHT (HOSE)	mm	Р	3,705	3,560	3,445
	SHIPPING LENGTH	mm	Q	11,105	11,296	11,320
	SHIPPING WIDTH	mm	R	3,280	3,280	3,280
	COUNTER WEIGHT CLEARANCE (w/o grouser)	mm	S	1,180	1,180	1,180
	HEIGHT OVER CAB.	mm	T	3,100	3,100	3,100
Dimension	HOUSE WIDTH	mm	U	3,155	3,155	3,155
Dimension	CAB. HEIGHT ABOVE HOUSE	mm	V	853	853	853
	CAB. WIDTH	mm	W	1,010	1,010	1,010
	TUMBLER DISTANCE	mm	Х	4,040	4,040	4,040
	TRACK LENGTH	mm	Υ	4,940	4,940	4,940
	UNDERCARRIAGE WIDTH (STD.)	mm	Z	3,280	3,280	3,280
	SHOE WIDTH	mm	а	600	600	600
	TRACK HEIGHT (w/o grouser)	mm	b	970	970	970
	CAR BODY CLEARANCE (w/o grouser)	mm	С	480	480	480
	MAX. DIGGING REACH	mm	Α	10,233	10,924	11,160
	MAX. DIGGING REACH (GROUND)	mm	В	10,036	10,608	10,962
	MAX. DIGGING DEPTH	mm	C	6,668	7,182	7,485
	MAX. LOADING HEIGHT	mm	D	6,641	7,542	7,439
	MIN. LOADING HEIGHT	mm	Ε	3,243	3,192	2,856
	MAX. DIGGING HEIGHT	mm	F	9,859	10,527	10,524
Working	MAX. BUCKET PIN HEIGHT	mm	G	8,524	9,191	8,889
Range	MAX. VERTICAL WALL DEPTH	mm	Н	3,770	3,912	5,244
	MAX. RADIUS VERTICAL	mm	- 1	8,368	9,106	8,375
	MAX. DEPTH TO 8' LINE	mm	J	6,480	7,042	7,401
	MIN. RADIUS 8' LINE	mm	K	3,432	3,683	3,651
	MIN. DIGGING REACH	mm	L	1,254	1,507	1,011
	MIN. SWING RADIUS	mm	M	4,075	4,373	4,401
	MAX.LOADING REACH(MAX.HEIGHT)	mm	0	5,115	5,414	6,468

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