

DX140LCA DX140AF



YOUR NEW DAILY WORK PARTNER DX140LCA & DX140AF



MEET OUR DX140LCA AND DX140AF, NEWLY IMPROVED AND DEVELOPED WITH DOOSAN'S RENOWNED MECHANICAL ENGINE FOR YOUR EVERYDAY OPERATION



11 DB58TIS DOOSAN ENGINE

most widely-used engines in Doosan. Doosan DB58TIS engine has already gained recognition in the market for reliability, low fuel consumption and easy



2 WATER SEPARATOR

The fuel water separator filters out water from fuel, enhances the engine's durability, and reduces quality problems caused by the presence of water in fuel.





3 NEW DECALS

Bigger and more visible decals make DX140LCA/AF stand out anywhere of your job site.





7-INCH MONITOR

The new, user-friendly LCD color monitor provides a clearer rear view and allows full access to machine settings and maintenance data. (Rear view camera is optional.)



NEW GP (GENERAL PURPOSE) BUCKET

GP bucket installed onto DX140LCA/AF as a base spec with open type side cutters allows you to efficiently perform loading operations.





10 REINFORCED UNDERCARRIAGE FOR BETTER DURABILITY ONLY DX140AF



DX140AF, THE RIGHT MACHINE FOR YOUR FOREST WORK





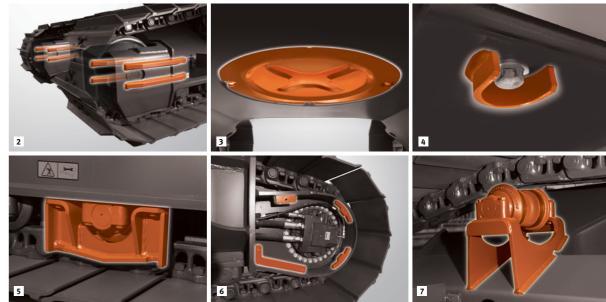
REINFORCED UNDERCARRIAGE FOR BETTER DURABILITY

1 WIDER, HIGHER UNDERCARRIAGE FOR THE STABLE WORK.



1 Track gauge: 2,200mm • Tumbler distance: 3,180mm

- Shoe width: 600 / 800 / 900 / 960mm
- Ground clearance: 592mm



2 STRENGTHENED IDLER BRACKET

The idler bracket has been fitted with a reinforced bar to further protect the main components from external impacts.

1 HEAVY DUTY UNDERCOVER

The reinforced forestry undercover, pressed in an "x" shape, is specially designed to minimize external stress and to protect the excavator's main components from diverse external impacts resulting from rough surface environments.

4 CHANGED BOLT PROTECTOR

All bolts are protected by bolt protectors.

4 A DEDICATED TRACK GUARD FOR FORESTRY

Installed on each side (2 per side) to protect the tracks, enabling more stable work.

SECURED TRAVEL MOTOR BY FOREST-DEDICATED T/M MOUNT

The travel motor, protected by a reinforced forest-dedicated travel motor mount to prevent it from being damaged by the typically harsh environment of logging sites.

6 REINFORCED UPPER ROLLER AND MOUNT

Redesigned and strengthened mount to withstand the DX140AF's powerful traction, stably fixes the upper roller inside and outside to ensure reliable operation.



RELIABLE COMPONENTS FOR SUPERIOR PERFORMANCE

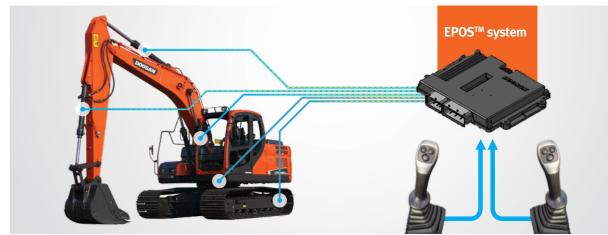




DOOSAN ENGINE (DB58TIS) FOR POWERFUL PERFORMANCE

DX140LCA and DX140AF are equipped with a 22-ton class engine (DB58TIS), the company's renowned in-house engine, to deliver superior performance to the existing 14-ton class machine engines. The DB58TIS is a simple yet powerful mechanical engine that minimizes machine downtime as it is easy to manage and repair at your job sites located far from any maintenance facility. Also, this Doosan engine is perfectly harmonized with the hydraulic system to ensure superior power that is needed to perform diverse tasks reliably and quickly even in harsh environments.





EXCAVATOR CONTROL

Excavator control improved by the New $\mathsf{EPOS}^{\mathsf{TM}}$ system

As the brain of the hydraulic excavator, the EPOSTM (Electronic Power Optimizing system) has been improved and perfectly synchronized with the newly adopted CAN (Controller Area Network) communication link.



LARGER TRAVEL DEVICE FOR INCREASED TRACTION FORCE ONLY DX140AF

Equipped with a higher-class travel engine than the conventional 14-ton excavator, the travel device offers superior traction and is perfectly matched to the mechanical 6-liter Doosan engine (DB58TIS), providing reliable traction in any environment including wetlands, rough terrain and slopes.



EASY MAINTENANCE ANYTIME, ANYWHERE







CENTRALIZED PARTS FOR EASY ACCESS

The DX140LCA and DX140AF are designed to improved productivity by minimizing on-site maintenance. The radiators and filters are well arranged on one side for easy maintenance. The Upper and side doors enable easier access to the main parts for convenient maintenance.







3-STAGE FUEL FILTRATION SYSTEM, PERFECT MATCH FOR YOUR FUEL QUALITY

The DX140AF is fitted with a 3-stage fuel filtration system to prevent engine system damages caused by the use of low-quality fuel containing contaminants, thereby reducing engine failure and increasing uptime.

- 1 Water Separator with large capacity storage
- 2 Pre Fuel Filter with water separator
- Main Fuel Filter

TELEMATICS SERVICE (OPTIONAL)

GLOBAL PARTS NETWORK

TELECOMMUNICATIONS

Data flow from machine to web







BENEFITS

Location



FUNCTIONS



Reports Periodic operation report Utilization







- · Total operation hour
- · Operation hour by mode

Operation hour by m	ode			
testaries 2946.2m		lactorest	14	-
Operation flows by Made (file)	199	696216s (1964	From Standard	One
Total Date .		im .	Stan	40
Section 8	10.	1344	Flored Flored	100.000
Net Star Summer				
teaturised 20966s	-	telment	-	
Fuel Shadilin White	Title	37654	Frank	91
Note: MR	199	01.	Rosteri	01
Total Street				

Fuel Efficiency* · Fuel level · Fuel consumption





Preventive maintenance by item replacement cycle

Filter & Oil Management

	anator anator	209.4	Degree Oct Filter	12	Hydraulic CEFFilms	Plot		600000	SECTION 1	green
- ×	ander :				Control State	Filtret				0.0
		451	Engine Oil Filter	Field Filter	Hydraufic Olifiber	Plut Filter	AF Charter	Contact Filter	Engine Cit	Hydradi GE
D be	mater	270.5	Engine Oil Filter	Fuel Filter	Hybradic Octribut	Plat Filter	Alf Circular	Contact Filter	Engine Cid	Hydradi Oil
D De	mater	65.2	Engine Oil Filter	Fuel Filter	Hebadic Oil Film	Files Files	Air Cleaner	Contact	Engine Oil	Hydradi Of
De De	pentor	240.1	Engine Oil Filter	Feb.	Hebasic Oitibe	Pilot Filter	Air Clearer	Coolet Files	Engine Cal	Hydradi Cil



Warning & Alert

- · Detect machine warnings
- Antenna disconnection
- Geo/Time fence



^{*} Functions may not be applied to all models. Please contact your sales representative to get more information of the service.

TELEMATICS SERVICE BENEFITS

Improve work efficiency

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

Better service for customers

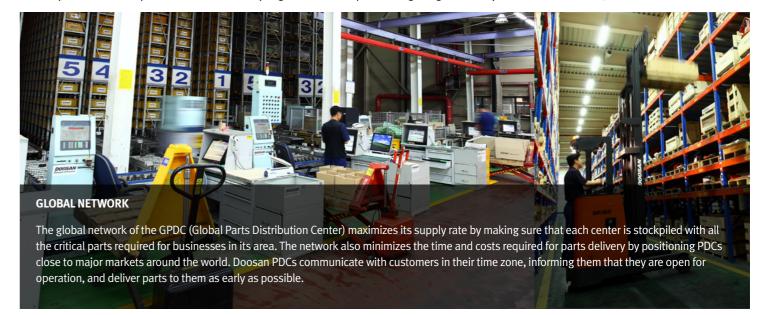
- · Provide better quality of service
- · Maintain machine value
- · Better understanding of market needs

Responsive to customer's voice

- · Utilize quality-related field data
- · Apply customer's usage profile to developing new machine

GLOBAL PDC (PARTS DISTRIBUTION CENTER) NETWORK

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



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), two in the USA (Chicago and Miami), one in Brazil (Campinas), two in Europe (Germany and the UK), one in the Middle East (Dubai), and one in Asia (Singapore).



PDC BENEFIT



Reduction

Distribution Cost Maximum Parts supply rate



Shortest

distance/time parts delivery







downtime

TECHNICAL SPECIFICATIONS

ENGINE

Model

DOOSAN DB58TIS

Type

4 - cycle, turbo charged, air to water intercooler

Number of cylinders

6

RATED HORSE POWER

74 kW (100 PS) @ 1,850 rpm [DX140LCA] 74 kW (100 PS) @ 1,900 rpm [DX140AF]

Max torque

42 kgf.m @ 1,400 rpm

Piston displacement

5,785 cc

Bore & stroke

Ø 102 mm X 118 mm [DX140LCA] Ø 100 mm X 125 mm [DX140AF]

STARTING MOTOR

24 V X 4.5 kW

Batteries

12 V X 2 / 100 AH

Air cleaner

Double element

HYDRAULIC SYSTEM

The heart of the system is the EPOS[™] (Electronic Power Optimizing System). It allows the efficiency of the system to be optimized for all working conditions and minimizes fuel consumption. The new EPOS[™] is connected to the engine electronic control via a data transfer link to harmonize the operation of the engine and hydraulics.

- The hydraulic system enables independent or combined operations.
- Two travel speeds offer either increased torque or high speed tracking.
- Cross-sensing pump system for fuel savings.
- Auto deceleration system.
- Button control of flow in auxiliary equipment circuits.
- Computer-aided pump power control.

Main pumps

Tandem, Axial Piston
Max flow: 2 X 114 l/min
Displacement: 61.6 X 2 cc/rev

Pilot pump

Gear pump - max flow : 26.4 l/min Pilot pump : 15 cc/rev Relief valve pressure : 40 kgf/cm²

Main relief Pressure

Normal Working: 330 kgf/cm² Pressure-Up, Travel: 350 kgf/cm²

HYDRAULIC CYLINDERS

The piston rods and cylinder bodies are made of high-strength steel. A shock absorbing mechanism is fitted in all cylinders to ensure shock-free operation and extend piston life.

Cylinders	Quantity	Bore x Rod diameter x stroke						
Boom	2	110 X 75 X 1,085 mm						
Arm	1	115 X 80 X 1,099 mm						
Bucket	1	100 X 70 X 900 mm						

SWING MECHANISM

High-torque, axial piston motor with planetary reduction gear bathed in oil. Swing circle is singlerow, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant.

- 3,655 kgf.m [DX140AF]

Max. Swing speed - 10.9 rpm [DX140LCA] - 10.1 rpm [DX140AF]

Max. Swing Torque - 3,330 kgf.m [DX140LCA]

WEIGHT

Triple grouser

	Shoe width	GROUND PRESSURE	MACHINE WEIGHT
DX140LCA	700 mm TG	0.30 kgf/cm ²	14,000 kg
	600 mm TG	0.35 kgf/cm ²	13,890 kg
DX140AF	960 mm SG	0.26 kgf/cm ²	17,500 kg
	900 mm SG	0.28 kgf/cm ²	17,200 kg
	800 mm SG	0.31 kgf/cm ²	16,900 kg

UNDERCARRIAGE

Chassis are of very robust construction, all welded structures are designed to limit stresses. High-quality material used for durability. Lateral chassis welded and rigidly attached to the undercarriage. Track rollers lubricated for life, idlers and sprockets fitted with floating seals. Tracks shoes made of induction-hardened alloy with triple grousers. Heat-treated connecting pins. Hydraulic track adjuster with shockabsorbing tension mechanism.

Upper rollers(Standard shoe) - 1

Lower rollers - 7

Track shoes - 46 [DX140LCA]

- 44 [DX140AF]

Overall track length - 3,035 mm [DX140LCA]

- 3,180 mm [DX140AF]

DRIVE

Each track is driven by an independent, high-torque, axial piston motor through planetary reduction gear. Two levers or foot pedal control provide smooth travel or counter-rotation upon demand.

Travel speed (High / low) - 5.1 / 3.0 km/h [140LCA] - 4.3 / 2.5 km/h [140AF]

Maximum traction force - 15.5 ton [140LCA] - 16.4 ton [140AF]

Grade ability - 70%

REFILL CAPACITIES

Fuel tank - 267 l Cooling System - 20 l Engine Oil - 27 l Swing Drive - 3 l

Travel Device (each) - 2 X 2.2 l Hydraulic tank (FULL) - 267 l

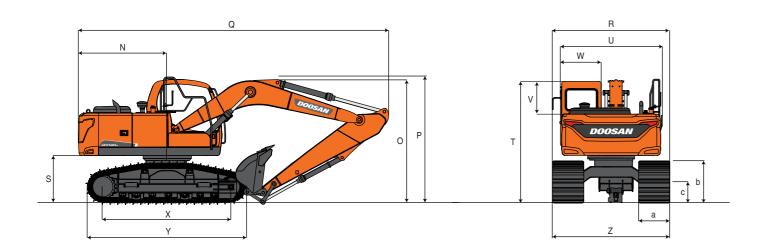
BUCKET

	Сарас	ity (m³)	Width	(mm)	District Force (NOM /DDFSS UD ton)
	SAE	CECE	W/O Cutter	With Cutter	Digging Force (NOM./PRESS.UP, ton)
OPT	0.58	0.51	1,023	1,107.8	SAE 9.0/9.6
OFI	0.58	0.51	1,025	1,107.0	ISO 10.3/10.9
STD	0.51	0.46	002.2	000.0	SAE 9.0/9.6
עוכ	0.51	0.46	903.2	990.9	ISO 10.3/10.9

DIGGING FORCES (ISO)

	Length	Weight	Digging force (Nom. / Press. up, ton)
CTD Arm	2 000 mm	490 E ka	SAE 5.5 / 5.8
STD. Arm	3,000 mm	489.5 kg	ISO 5.6 / 6.0
ODT Arm	2 F00 mm	40F 7 kg	SAE 5.9 / 6.3
OPT. Arm	2,500 mm	405.7 kg	ISO 6.1 / 6.5

DIMENSIONS

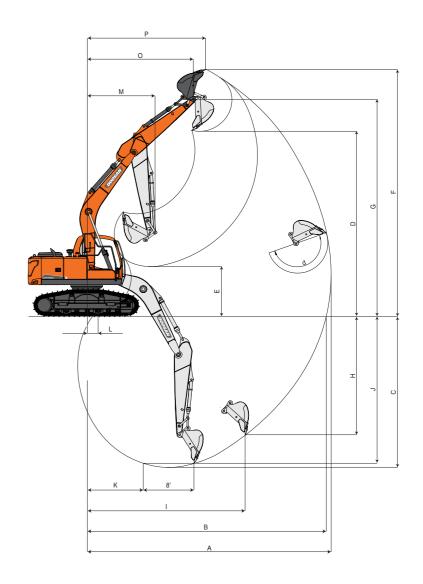


STANDARD

			DX140LCA	DX140AF
Boom Type	(mm)		4,600	4,600
Arm Type	(mm)		3,000	3,000
Bucket Type (SAE/PCSA)	(m³)		0.51	0.51
Tail Swing Radius	(mm)	N	2,205	2,203
Shipping Height (Boom)	(mm)	0	3,035	3,076
Shipping Height (Hose)	(mm)	Р	3,095	3,243
Shipping Length	(mm)	Q	7,645	7,703
Shipping Width (Std.)	(mm)	R	2,690	3,160
C/Weight Clearance *	(mm)	S	869	1,199
Height Over Cab.	(mm)	Т	2,780	3,090
House Width	(mm)	U	2,540	2,533
Cab. Height Above House	(mm)	V	830	832
Cab. Width	(mm)	W	1,010	1,010
Tumbler Distance	(mm)	Х	3,035	3,180
Track Length	(mm)	Y	3,750	4,045
Undercarriage Width	(mm)	Z	2,690	3,160
Shoe Width	(mm)	a	700	800
Track Height *	(mm)	b	743	1,068
Car Body Clearance *	(mm)	С	385	650

^{*} without Grouser - Grouser height : 25mm (for TG) [DX140LCA]

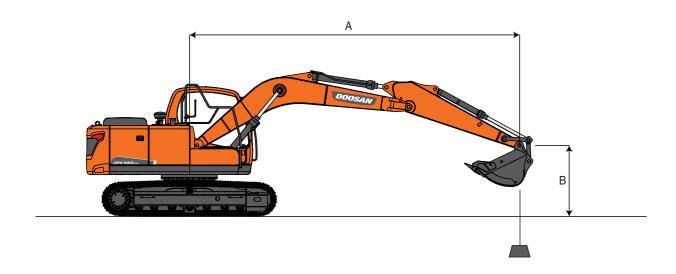
WORKING RANGES



WORKING RANGES

			DX140LCA	DX140AF
Boom Type (One Piece)	(mm)		4,600	4,600
Arm Type	(mm)		3,000	3,000
Bucket Type (SAE)	(m³)		0.51	0.51
MAX. digging reach	(mm)	А	8,651	8,651
Max. digging reach (Ground)	(mm)	В	8,527	8,461
MAX. digging depth	(mm)	С	6,144	5,814
Max. loading height	(mm)	D	6,420	6,750
Min. loading height	(mm)	E	1,726	2,056
Max. digging height	(mm)	F	8,801	9,129
Max. bucket pin height	(mm)	G	7,629	7,959
Max. vertical wall depth	(mm)	Н	1,947	1,617
Max. radius vertical	(mm)	I	7,916	7,916
Max. depth to 8'line	(mm)	J	5,916	5,587
Min. radius 8'line	(mm)	К	1,875	1,860
Min. digging reach	(mm)	L	20.6	559
Min.swing radius	(mm)	М	2,203	2,203
Reach to bucket pin center at maximum height	(mm)	0	4,117	4,117
Reach at maximum height	(mm)	Р	4,410	4,410
Bucket angle	(deg)	d	179	179

LIFTING CAPACITY



DX140LCA

Metric

Boom: 4.6m Arm: 3.0m Bucket: SAE 0.51 m³ heaped Shoe: 700mm Counter Weight: 2,200 kg

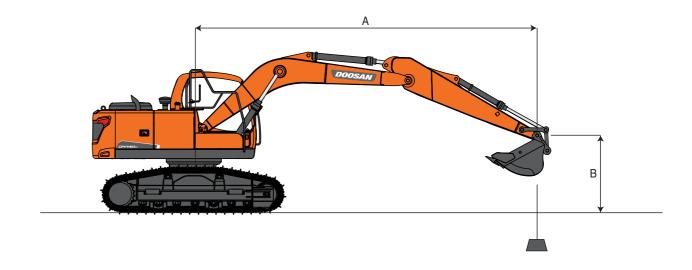
Unit: 1,000kg

: Rating Over Front

🚰 : Rating Over Side or 360 Degree

A(m)	m) 2			3	4	4		5	(6		Max. Reach	
B(m)	Ŧ	C	<u>F</u>	C	The state of the s	G	4	G	U	C	7	(A(m)
7							2.22	2.22			2.06 *	2.06 *	@ 5.3
6							2.96 *	2.96 *			1.89 *	1.89 *	@ 6.15
5							3.06 *	3.06	2.8 *	2.8	1.81 *	1.81 *	@ 6.73
4					3.45 *	3.45 *	3.41 *	3.41	3.27 *	3.27	1.80 *	1.80 *	@ 7.12
3			5.25 *	5.25 *	4.4 *	4.4	3.95 *	3.95	3.7	3.21	1.82 *	1.82 *	@ 7.36
2			7.47 *	7.47	5.52 *	5.52	4.59	4.09	4.07	3.12	1.89 *	1.89 *	@ 7.45
1			9.24 *	8.55	6.54	5.47	5.20	3.95	4.4	3.04	2.01 *	2.01 *	@ 7.4
(GROUND)			7.91 *	7.91	7.26	5.31	5.68	3.85	4.33	2.98	2.20 *	2.20 *	@ 7.21
-1	5.12	5.12	8.86 *	8.21	7.62	5.22	5.62	3.79	4.28	2.94	2.50 *	2.41	@ 6.87
-2	6.91 *	6.91 *	10.26 *	8.22	7.61	5.19	5.59	3.77	4.28	2.93	2.98 *	2.65	@ 6.35
-3	9.23 *	9.23 *	9.56 *	8.29	7.2	5.23	5.62	3.79			3.90 *	3.12	@ 5.6
-4	11.52 *	11.52 *	8.19 *	8.19	6.17 *	5.33					4.86 *	4.13	@ 4.52

- 1. LOAD POINT IS THE END OF THE ARM.
- 2. CAPACITIES MARKED WITH AN ASTERISK (*) ARE LIMITED BY HYDRAULIC CAPACITIES.
- 3. LIFT CAPACITIES SHOWN DO NOT EXCEED 75 % OF MINIMUN TIPPING LOADS OR 87 % OF HYDRAULIC CAPACITIES.
- 4. THE LEAST STABLE POSITION IS OVER THE SIDE.
- 5. THE TOTAL MASS OF MACHINE IS 15,100 kg INCLUDED IN THIS MASS BOOM 4.60 m, ARM 2.50 m, 2,200 kg COUTNERWEIGHT, BUCKET WEIGHT 0 kg, ALL OPERATING FLUIDS AND A 75 kg OPERATOR.
- 6. LIFT CAPACITIES ARE IN COMPLIANCE WIHT ISO 10567.



DX140AF

Metric

Boom: 4.6m Arm: 3.0m Bucket: SAE 0.51 m³ heaped Shoe: 800mm Counter Weight: 2,200 kg

Unit: 1,000kg

A(m)	:	2	3	3		4		5	(6		Max. Reach	
B(m)	T-	(T	(]	-	(L	<u>u</u>	(-	(]	<u>-</u>	(A(m)
7							2.22	2.22			2.06 *	2.06 *	@ 5.08
6							2.96 *	2.96 *			1.89 *	1.89 *	@ 6.00
5							3.06 *	3.06	2.8 *	2.8	1.81 *	1.81 *	@ 6.63
4					3.45 *	3.45 *	3.41 *	3.41	3.27 *	3.27	1.80 *	1.80 *	@ 7.06
3			5.25 *	5.25 *	4.4 *	4.4	3.95 *	3.95	3.7	3.21	1.82 *	1.82 *	@ 7.32
2			7.47 *	7.47	5.52 *	5.52	4.59	4.09	4.07	3.12	1.89 *	1.89 *	@ 7.44
1			9.24 *	8.55	6.54	5.47	5.20	3.95	4.4	3.04	2.01 *	2.01 *	@ 7.42
0 (GROUND)			7.91 *	7.91	7.26	5.31	5.68	3.85	4.33	2.98	2.20 *	2.20 *	@ 7.27
-1	5.12	5.12	8.86 *	8.21	7.62	5.22	5.62	3.79	4.28	2.94	2.50 *	2.41	@ 6.96
-2	6.91 *	6.91 *	10.26 *	8.22	7.61	5.19	5.59	3.77	4.28	2.93	2.98 *	2.65	@ 6.48
-3	9.23 *	9.23 *	9.56*	8.29	7.2	5.23	5.62	3.79			3.90 *	3.12	@ 5.79
-4	11.52 *	11.52 *	8.19 *	8.19	6.17 *	5.33					4.86 *	4.13	@ 4.79

- 1. * RATED LOADS ARE BASED ON HYDRAULIC CAPACITY.
- 2. RATED LOADS DO NOT EXCEED 87% OF HYD. CAPACITY OR 75% OF TIPPING CAPACITY.

: Rating Over Front

🚰 : Rating Over Side or 360 Degree

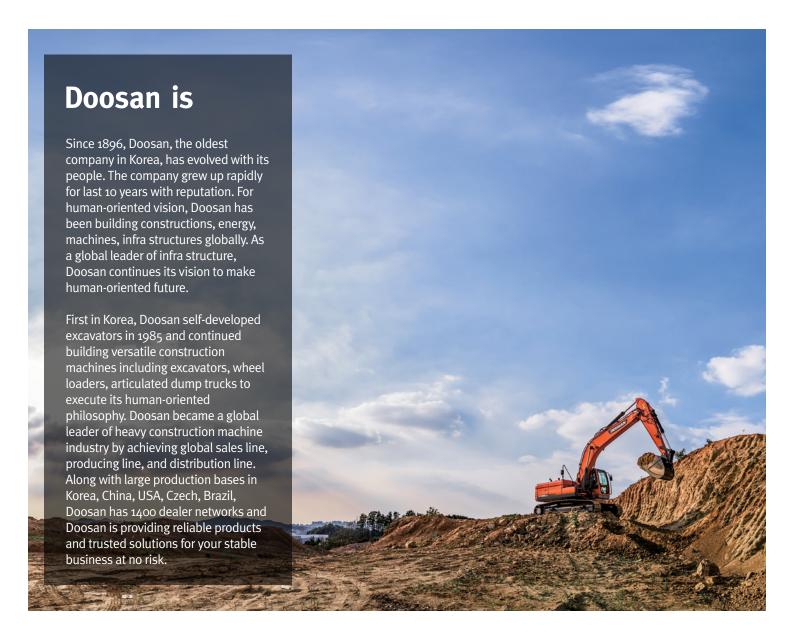
OPTIONAL EQUIPMENT

Some of optional equipments may be standard in some markets. Some of this optional equipment is not available in some markets. You must check with the local DOOSAN dealer to know about the availability or to release the adaptation following the needs of the applications

Arm	Rotating Piping (PERO)	
• 3.0m Forestry Arm with Bucket Cylinder	Rotating Piping (PERO)	
• 3.0m Forestry Arm without Bucket Cylinder		
• 2.5m Arm	Quick Coupler Piping	
Bucket	Quick Coupler Piping	
• 0.51m³ bucket	Alarm	
• 0.58m³ bucket	Alarm for Travel and Swing	
Only Dummy Link No Bucket	Alarm for Travel Only	
Track Shoe	Additional Working Lamp	
• 600 mm Shoe (Triple Grouser)	• 2 Additional Working Lamp (HAL)	
• 700 mm Shoe (Triple Grouser)	Non Additional Working Lamp	
• 800 mm Shoe (Single Grouser) ONLY DX140AF	3 1	
• 900 mm Shoe (Single Grouser) ONLY DX140AF	Camera	
• 960 mm Shoe (Single Grouser) ONLY DX140AF	Rear View Camera	
One-Way Piping	Rear Lamp	
One Way Piping	• Rear Lamp	
Two Way Piping	,	
	Rotating Beacom	
	Telescopic Beacon	
	Rotating Beacom	
	Cabin Roof Cover	
	Plastic Roof Cover	

Steel Roof Cover







Doosan Infracore Korea Office (HQ) 27F, Doosan Tower, 275, Jangchungdan-ro, Jung-gu, Seoul, Korea(04563) www.doosaninfracore.com/ce/

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