

**DOOSAN**

Construction Equipment

# DX140LC

Engine Power	SAE J1349, net 71 kW (95 HP) @ 1,850 rpm
Operational Weight	14,000 kg (30,864 lb)
Bucket Capacity (SAE/PCSA)	0.24 ~ 0.76 m <sup>3</sup> (0.31 ~ 0.99 yd <sup>3</sup> )



# DOOSAN DX140LC HYDRAULIC EXCAVATOR : A NEW MODEL WITH NOVEL FEATURES

## DX140LC



The new DX140LC hydraulic excavator has all the advantages of the previous model, The key phrase used during the development of the DX140LC was “giving optimum value to the end user.”

INCREASED PRODUCTION, and improved fuel economy is attributed to the electronic optimization of the hydraulic system and the new generation DOOSAN engine (Tier III/ Stage III).

IMPROVED ERGONOMICS, increases comfort and excellent all round visibility ensuring a safe and pleasant working environment.

IMPROVED RELIABILITY, is achieved through the use of high performance materials combined with new methods of structural stress analysis, and leads to increased component life expectancy, thus reducing running costs.

REDUCED MAINTENANCE, increases the availability and reduces operating costs of the excavator.



**ADVANCED FRONT BUSH**

- EM bushing (Enhanced Macro-surface)
- Pocket & Dimple surface pattern : Optimized greasing & Trap foreign object
- Wear resistant solid lubricant coating : Noise free & enhanced anti-seizure property
- 30% longer life time than competitors



**ADVANCED H-CLASS BUCKET**

- Doosan new H-class bucket has the best strength of steel & the optimized design
- Add side cutter / add chamfer and inner plate at member part
- Increase bucket solidity and change casting type



**ADVANCED HD CABIN (OPTIONAL)**

- ROPS, FOPS optional
- The latest interior (MP3, Joystick, Air suspension seat, etc.)



**7 INCH MONITOR**

- New, user-friendly LCD color monitor with full access to machine settings and maintenance data.
- Operator can see rear view through new monitor (If customer selects rear view camera option)



**ADVANCED UNDERCARRIAGE**

- Strengthen Sprocket structure and tooth
- Structure to prevent debris



**TROPICAL HYDRAULIC OIL (ISO VG 68)**

- Maintain best performance of your machine by keeping optimum viscosity in tropical area.

\* The above image may differ from the actual product.



# PERFORMANCE & PRODUCTIVITY

## DX140LC

The performance of the DX140LC has a direct effect on its productivity. Its new "Common Rail" engine and new EPOS™ controlled hydraulic system have combined to create an unbeatable hydraulic excavator, with a cost/performance ratio that makes the DX140LC even more appealing.



### DOOSAN ENGINE(DL06)

At the heart of the hydraulic excavator is the new "Common Rail" DOOSAN DL06 engine. It is combined with the new EPOSTM (Electronic Power Optimizing system) electronic control system, for optimum power and fuel saving.

The new engine produces 95 hp(71 kW / 96 PS) at only 1,850 rpm, and more torque, due to its careful design combined with the use of common rail injection and 4 valves per cylinder. These features help optimize combustion and minimize pollution through reduced Nox & particulate emissions.

Increased torque allows efficient use of the power of the hydraulic system.

- Faster working cycles increase productivity.
- Increased torque means the excavator is able to move more easily.
- Energy efficiency reduces fuel consumption.



### 1 HYDRAULIC PUMP

The Main pump has a capacity of 2 x 114 l/min reducing cycle time while a high capacity gear pump improves pilot line efficiency.



### 2 TRAVEL DEVICE

In house travel device provides simple internal structure and increases efficiency of the performance. Thicker sprocket minimizes incoming debris and provides higher durability.



### 3 DOZER BLADE (OPTIONAL)

The pin type design allows the dozer blade to be mounted on the front and/or rear and is used for leveling, clean-up work and for stabilizing the machine during digging applications. The large dozer bottom and parallel design provide minimized ground pressure.

### EXCAVATOR CONTROL

Improved Excavator control by new EPOS™ system. The brains of the hydraulic excavator, the EPOS™, have been improved, through a CAN (Controller Area Network) communication link, these units are now perfectly synchronised.

\* The above image may differ from the actual product.



# DURABILITY & RELIABILITY

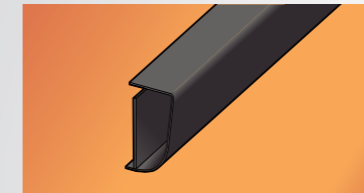
## DX140LC

The reliability of a product contributes to its overall lifetime operating costs. DOOSAN uses computer-assisted design techniques, highly durable materials and structures then test these under extreme conditions.



### D-TYPE FRAME

The D-type frame and chassis frame add strength and minimize distortion due to shocks.



### X-CHASSIS

The X-chassis frame section has been designed using finite element and 3-dimensional computer simulation, to ensure greater durability and optimum structural integrity. The swing gear is solid and stable.



### 1 ADVANCED BUSHING

A highly metal sintered bushing and EM bushing are used for all front pivot points in order to increase the lifetime and durability. Extend the greasing intervals to 250 hours. (except bucket parts)

### 2 ULTRA-HARD WEAR-RESISTANT DISC

New materials have been used in order to increase the wear resistance and to increase the service intervals. The longevity is greatly increased by the addition of wear plates on the inside and outside of the bucket lugs.

### 3 POLYMER SHIM

A polymer shim is added to the bucket pivot to promote extended pin and bushing life.

### 4 INTEGRATED TRACK SPRING AND IDLER

The track spring and the idler have been joined directly to achieve high durability and improved maintenance convenience.

### 5 TRACKS

The chain is composed of self-lubricating sealed links isolated from all external contamination. The tracks are locked by mechanically bolted pins.

\* The above image may differ from the actual product.



### RELIEF CUTOFF

The pump continues to supply flow even when the maximum pressure on the system is reached due to severe working environments and large workloads. Relief cutoff technology of DX225LCA prevents transfer of unnecessary flow to maintain powerful working level at the maximum value while reducing consumption of fuel.



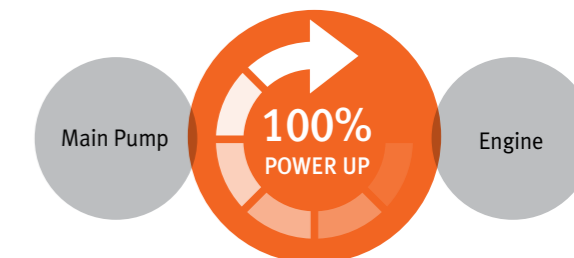
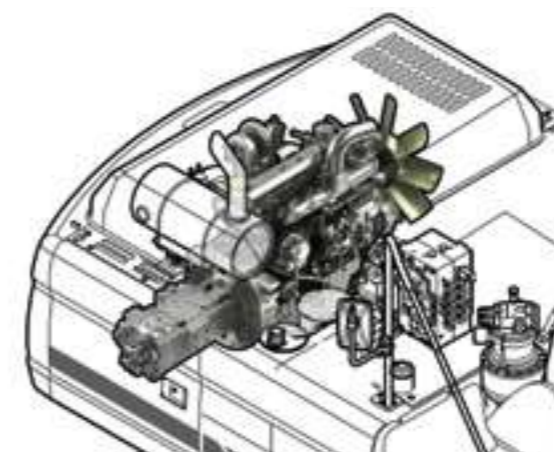
### OPTIMIZED LEVER CONTROL & AUTO IDLE

When operator takes a break and leaves the control joystick fixed, both of the engine and the pump are kept in standby mode and prevents unnecessary fuel consumption.



### PUMP MATCHING TECHNOLOGY

Engine & pump matching, the new technology of Doosan, fully resolves problems; low responses time of the system, unnecessary fuel consumption. Matching response time between pump and engine efficiently reduces unnecessary fuel consumption as well as exhaust fumes.



\* The above image may differ from the actual product.



# OPERATOR COMFORT

# DX140LC

The work rate of the hydraulic excavator is directly linked to the performance of its operator. DOOSAN designed the DX140LC by putting the operator at the centre of the development goals. The result is significant ergonomic value that improves the efficiency and safety of the operator.



## MONITOR



3 power modes for maximum efficiency  
- Power mode  
- Standard mode  
- Economy mode

1 Control panel

2 Navigation modes  
- Rearview camera, Display selector

3 Working modes  
- Auto-idle & Flow rate control

3 work modes to suit your application  
- 1-way mode  
- 2-way mode  
- Digging mode



## CONTROL PANEL

A Standard screen

B Anti-theft protection

C Filter/oil information

D Operation history

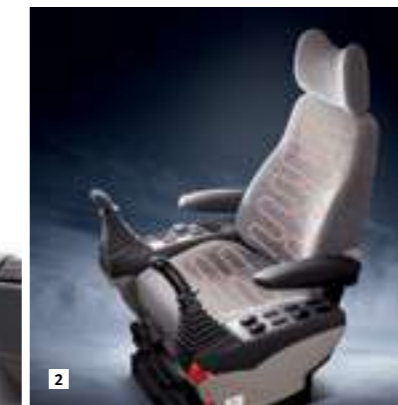
E Flow rate control

F Contrast control



## 1 CONTROL LEVER

Very precise control of the equipment increases versatility, safety and facilitates tricky operations requiring great precision. Leveling operations and particularly the movement of suspended loads are made easier and safer. The control levers have additional electrical buttons for controlling other additional equipment (for example, grabs, crushers, grippers, etc.)



## 2 AIR SUSPENSION SEAT (OPTIONAL)

Equipped with various functions of adjustment forth and back and, and lumbar support, it reduces the vibration of equipment transmitted during work in an effective way. Also for considering winter working environment, Seat warmer functions equipped.



## 3 REAR CAMERA

\* The above image may differ from the actual product.



# EASY MAINTENANCE

# DX140LC

Short maintenance operations at long intervals increase the availability of the equipment on site. DOOSAN has developed the DX140LC with a view to high profitability for the user.



### 1 ENGINE OIL FILTER

The engine oil filter offers a high level of filtration allowing the oil change interval to be increased to 500 hours. It is easy to access and is positioned to avoid contaminating the surrounding environment.

### 2 EASY MAINTENANCE

Access to the various radiators is very easy, making cleaning easier. Access to the various parts of the engine is from the top and via side panels.

### 3 HYDRAULIC OIL RETURN FILTER

The protection of the hydraulic system is made more effective by the use of glass fiber filter technology in the main oil return filter. This means that with more than 99.5% of foreign particles filtered out, the oil change interval is increased.

### 4 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.

### 5 WATER SEPARATOR

High efficiency and large capacity water separator protect the engine by removing most moisture from the fuel.

### 6 PC MONITORING (DMS)

A PC monitoring function enables connection to the EPOSTM system, allowing various parameters to be checked during maintenance, such as pump pressures, engine rotation speed, etc. and these can be stored and printed for subsequent analysis.

### 7 CENTRALIZED GREASE INLETS FOR EASY MAINTENANCE

The boom & arm grease inlets are grouped for easy access.

\* The above image may differ from the actual product.



# TELEMATICS SERVICE (OPTIONAL)

# GLOBAL PARTS NETWORK

## TELECOMMUNICATIONS

Data flow from machine to web



**TELEMATICS SERVICE TERMINAL**

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



**TELECOMMUNICATION**

GPS, EPOS™ data is sent to designated server by GSM, Satellite telecommunication



**DOOSAN TELEMATICS SERVICE WEB**

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

## BENEFITS

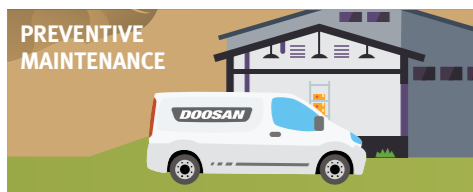
**JOB SITE MANAGEMENT**



**WORK EFFICIENCY MANAGEMENT**



**PREVENTIVE MAINTENANCE**



**PROACTIVE SERVICE**



## FUNCTIONS

**Location**

- GPS
- Geo-fence



**Reports**

- Periodic operation report
- Utilization



**Operation Trend**

- Total operation hour
- Operation hour by mode



**Fuel Efficiency\***

- Fuel level
- Fuel consumption



**Filter & Oil Management**

- Preventive maintenance by item replacement cycle



**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

### Customer

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

### Dealer

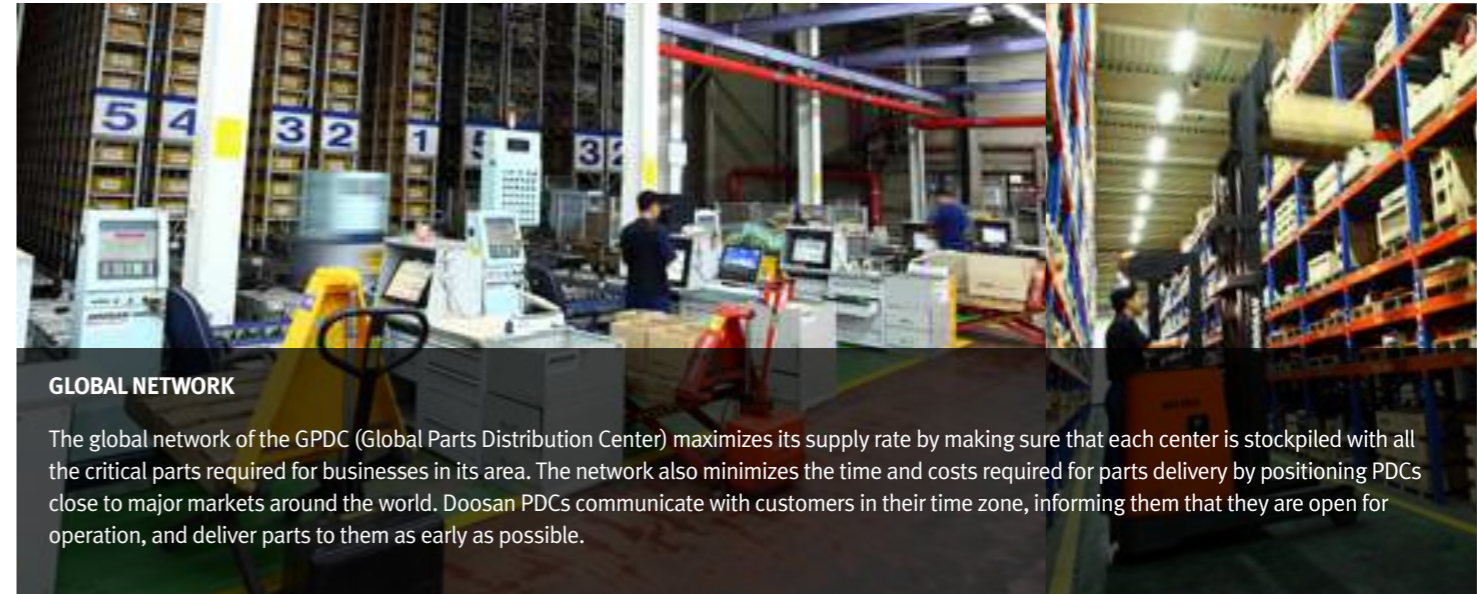
- Better service for customers
- Provide better quality of service
- Maintain machine value
- Better understanding of market needs

### Doosan

- 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 seven other PDCs include one in China (Yantai), one in the USA (Chicago), one in Brazil (Campinas), two in Europe (Germany and the UK), one in the Middle East (Dubai), and one in Asia (Singapore).




## PDC BENEFIT




**Distribution Cost Reduction**




**Maximum Parts supply rate**



**Shortest distance/time parts delivery**



**Real-time service support**



**Minimum downtime**

Heavy Construction Bucket, which is also called Heavy Duty bucket, is the most commonly used bucket in the construction equipment market and is designed mainly for use in heavy construction but also used in low density mining and quarry application.

**Hinge**  
Optimized reinforced construction for high strength and performance matched to the machine's power.

**Adapter**  
Corner adapter Positioned under Side cutter to increase strength.

**Wrapper (Shell)**  
Shape increases heel clearance and decreases wear rate.

**Horizontal Bottom Wear Plates**  
Protects bottom section and reinforces bucket for greater strength and rigidity. Designed for easily replacement during maintenance repair.

**Lip Plate (Cutting Edge)**  
Beveled edge for better penetration and 500BHN material for high abrasion resistance.

**Tooth (Tip)**  
Designed with mechanical properties that maintain hardness for long wear life in tough digging applications.

**Side cutter**  
Designed for better penetration and used high wear resistant material.

**Side Wear Plates**  
Side plates meet up with bottom wear plates for seamless corner protection.



### General Purpose bucket

which is also called 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.



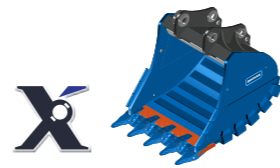
### Heavy Duty bucket

which is also called Heavy Duty bucket, is the most commonly used bucket in the construction equipment market and is designed mainly for use in heavy construction but also used in low density mining and quarry application.



### Severe Duty bucket

which is also called Severe Duty bucket. The bucket is designed for use in high density mining and quarry application using high strength and high abrasion resistance materials. It can be used in the toughest of applications.



### Extra Severe Duty Bucket

which is also called X class bucket. The bucket is designed for use in high density mining and quarry application using high strength and high abrasion resistance materials. It can be used in the toughest of applications.

**TOOTH**

**GD (General Duty) Tooth**  
Optimized design for Doosan's GP and the new General Construction bucket. Suitable for machines ranging from 14 to 70 tons. Recommended for general construction and utility loading applications.

**HD (Heavy Duty) Tooth**  
Optimized design for the Heavy Construction bucket. Suitable for machines ranging from 14 to 70 tons. Recommended for most applications including excavating, trenching, loading and medium density quarries and mining.

**SD (Severe Duty) Tooth**  
Optimized design for the Severe Mining bucket and the Xtreme Mining bucket. Suitable for machines ranging 22 to 70 tons. Recommended for extremely tough quarries and mining application.

## BUCKET



General Purpose (GP) Heavy Duty (H class) Severe Duty (S class)

	Capacity (SAE/PCSA)
<b>GENERAL PURPOSE BUCKET</b>	0.39 / 0.51 / 0.81 / 0.92 / 1.05 / 1.17 / 1.28 m <sup>3</sup>
<b>HEAVY DUTY BUCKET</b>	0.73 / 0.90 / 1.07 / 1.24 / 1.32 / 1.49 m <sup>3</sup>
<b>SEVERE DUTY BUCKET</b>	0.91 / 1.07 / 1.23 m <sup>3</sup>

## DEMOLITION



Hydraulic Breaker Fixed Pulverizer Rotating Crusher

	Model	Weight	Tool diameter	Frequency
<b>HYDRAULIC BREAKER</b>	DXB90H	1,000 kg	107 mm	820 BPM
	Model	Weight	Max. Jaw opening	Force at Tip
<b>FIXED PULVERIZER</b>	FP14	1,100 kg	680 mm	51 t
<b>ROTATING CRUSHER</b>	RC14	1,250 kg	720 mm	51 t

## MATERIAL HANDLING



Multi-Grapple Stone Grapple Wood Grapple Log Grapple Orange Grapple

	Model	Weight	Max Jaw opening	Max. Closing Force	Capacity
<b>MULTI-GRAPPLE</b>	MG14	1,050 kg	1,744 mm	4.6 t	0.45 m <sup>3</sup>
<b>STONE GRAPPLE</b>	SG14	761 kg	1,800 mm	-	0.34 m <sup>2</sup>
<b>WOOD GRAPPLE</b>	L / P WG14	700 / 630 kg	1,800 mm	-	0.48 m <sup>2</sup>
<b>LOG GRAPPLE</b>	L / P LG14	835 / 810 kg	1,800 mm	-	0.42 m <sup>2</sup>
<b>ORANGE GRAPPLE</b>	OG14	1,170 kg	1,890 mm	-	0.30 m <sup>3</sup>

L : Link type  
P : Pendulum type

## EARTH MOVING



Clamshell Bucket Plate Compactor Ripper

	Model	Weight	Max. Jaw opening	Capacity
<b>CLAMSHELL BUCKET</b>	CB14	900 kg	1,455 mm	0.37 m <sup>3</sup>
	Model	Weight	Base plate (WxL)	Impulse force
<b>PLATE COMPACTOR</b>	PC14	804 kg	740 x 1,050 mm	6.4 t
	Model	Weight	Length	
<b>RIPPER</b>	RP14	245 kg	1,057 mm	

## CONNECTING



Quick Coupler

	Model	Weight	Bucket Pin dia.	Working rage (Pin to Pin)
<b>QUICK COUPLER</b>	QC14	170 kg	65 mm	380 ~ 440 mm

# TECHNICAL SPECIFICATIONS

## ENGINE

<b>Model</b>
Doosan DL06*
“Common Rail” engine with direct fuel injection and electronic control, 4 valves per cylinder, vertical injectors, water cooled, turbo charged with air to air intercooler. The emission levels are well below the values required for phase III. (Tier II <span> </span> : DL06C)

<b>Number of cylinders</b>
6

<b>Nominal flywheel power</b>
71 kW(95HP) @ 1,850 rpm (SAE J1349, net)

<b>Max torque</b>
44.5 kgf.m(436 Nm) at 1,400 rpm

<b>Piston displacement</b>
5,890 cc (359 cu.in)

<b>Bore &amp; stroke</b>
∅100 mm x 125 mm (3.9” X 4.9”)

<b>Starter</b>
24 V / 4.5 kW

<b>Batteries</b>
2 x 12 V / 100 Ah

<b>Air cleaner</b>
Double element with auto dust evacuation.

\*According to engine regulation, Doosan provides two kinds of engine. (Tier-3 engine : DL06 / Tier II engine : DL06C)

## ENVIRONMENT

Noise levels comply with environmental regulations (dynamic values).

<b>Sound level guarantee</b>
101 dB(A) (2000/14/EC)

<b>Cab sound level</b>
71 dB(A) (ISO 6396)

## WEIGHT

Boom 4,600 mm (15’1”)    Arm 2,500 mm (8’2”)    Bucket SAE 0.51 m3 (0.67 yd³)

Shoe width	Operating weight	Ground pressure (kgf/cm²)
500 mm (1’8”)	13,800 kg (30,423 lb)	0.43 kgf/cm² (42 kpa, 6.11 psi)
600 mm (2”)	14,000 kg (30,864 lb)	0.36 kgf/cm² (35 kpa, 5.12 psi)
700 mm (2’4”)	14,200 kg (31,305 lb)	0.30 kgf/cm² (29 kpa, 4.26 psi)

### Weight with Dozer Blade

STD. - Boom 4,600 mm (15’1”)    Arm 2,500 mm (8’2”)    Bucket SAE 0.51 m3 (0.67 yd³)

Shoe width	Dozer Blade weight	Operating weight
STD. + 500 mm (1’8”)	2,500 mm <span> </span> : 590 kg (1,300 lb)	14,770 kg (32,562 lb)
STD. + 600 mm (2”)	2,600 mm <span> </span> : 602 kg (1,327 lb)	15,007 kg (33,084 lb)
STD. + 700 mm (2’4”)	2,700 mm <span> </span> : 615 kg (1.356 lb)	15,245 kg (33,609 lb)

※When the dozer blade is installed, additional weight may be occurred by track frame, dozer cylinder, dozer unit, pin assembly, track shoe.

## HYDRAULIC SYSTEM

The heart of the system is the e-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 e-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.
- Two operating modes, two power modes.
- Button control of flow in auxiliary equipment circuits.
- Computer-aided pump power control.

<b>Main pumps</b>
2 variable displacement axial piston pumps max flow: 2 x 114 l /min (2 X 30.1 US gpm, 2 X 25.1 Imp gpm)

<b>Pilot pump</b>
Gear pump - max flow: 27.75 l /min ( 7.33 US gpm, 6.1 Imp gpm)

<b>Maximum system pressure</b>
Boom/arm/Bucket <span> </span> : Normal mode: 330 kgf/cm²(324 bar) Power mode: 350 kgf/cm²(343 bar) Travel: 330 kgf/cm²(324 bar) Swing: 245 kgf/cm²(240 bar)

## 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 1,085mm(4.3” X 3.0” X 3’7”)
Arm	1	115 X 80 X 1,108mm(4.5” X 3.1” X 3’8”)
Bucket	1	100 X 70 X 900mm(3.9” X 2.8” X 2’11”)

## 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 grouser. Heat-treated connecting pins. Hydraulic track adjuster with shock-absorbing tension mechanism.

<b>Number of rollers and track shoes per side</b>
Upper rollers: 1 Lower rollers: 7 Shoes: 46 Total length of track: 3,755mm (12’4”)

## SWING MECHANISM

- An axial piston motor with two-stage planetary reduction gear is used for the swing.
- Increased swing torque reduces swing time.
- Internal induction-hardened gear.
- Internal gear and pinion immersed in lubricant bath.
- The swing brake for parking is activated by spring and released hydraulically.

**Swing speed: 0 to 10.7 rpm**

## DRIVE

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

<b>Travel speed (fast/slow)</b>
4.7/3.0km/h (2.9/1.9 mph)

<b>Maximum traction force</b>
7,300 / 11,800 kgf (16,094 / 26,014 lbf)

<b>Maximum grade</b>
35° / 70%

## REFILL CAPACITIES

<b>Fuel tank</b>
280 l (74.0 US gal, 61.6 Imp gal)

<b>Cooling system (Radiator capacity)</b>
20 l (5.3 US gal, 4.4 Imp gal)

<b>Engine oil</b>
25 l (6.6 US gal, 5.5 Imp gal)

<b>Swing drive</b>
3.8 l (1.0 US gal, 0.84 Imp gal)

<b>Travel drive (each)</b>
3 l (0.8 US gal, 0.66 Imp gal)

<b>Oil tank</b>
150 l (39.6 US gal, 33 Imp gal)

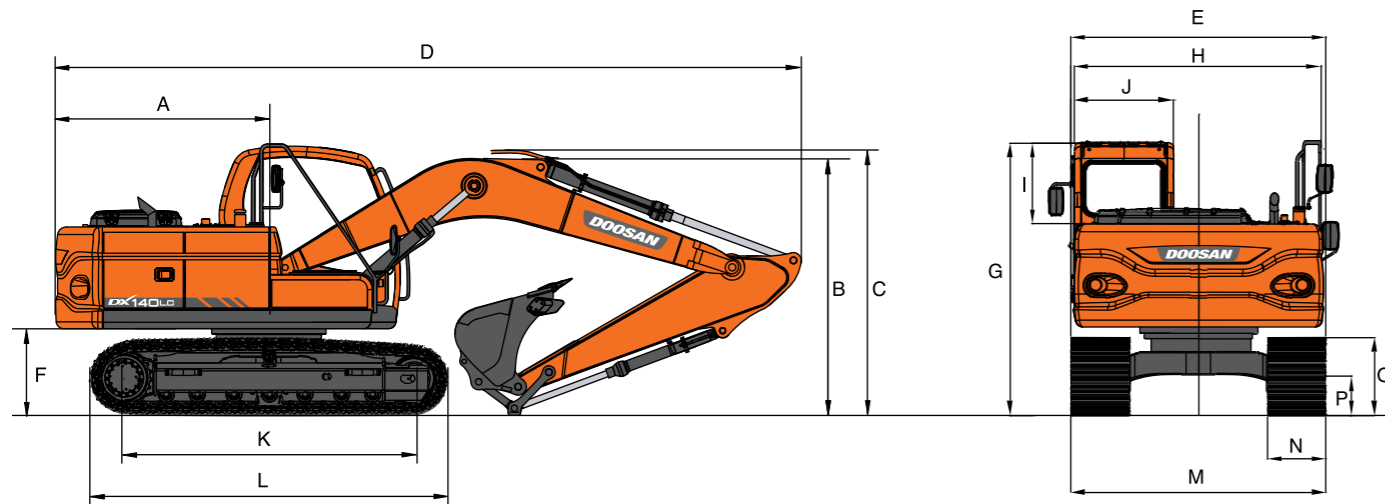
## BUCKET

Bucket Type	Capacity (m³)		Width (mm)		TRACK				STD Track			
					C/W (ton)		2.2					
					SHOE (mm)		600					
Weight (kg)	4.0m Boom		4.6m Boom		Arti Boom (4.988m)							
	1.9m Arm	2.1m Arm	2.1m Arm	2.5m Arm	3.0m Arm	2.1m Arm	2.5m Arm					
General Purpose Bucket	0.24	0.22	458	534	292	A	A	A	A	A	A	A
	0.39	0.35	736	820	350	A	A	A	A	A	A	A
	0.45	0.40	821	911	389	A	A	A	A	A	A	A
	0.51	0.45	907	991	398	A	A	A	A	B	A	B
	0.59	0.51	997	1,081	420	A	B	A	B	C	B	C
	0.64	0.55	1,083	1,167	443	B	C	B	C	C	C	D
DC	0.76	0.65	1,255	1,339	437	C	C	C	D	D	D	X
	0.45	0.38	1,500	1,500	357	A	A	A	A	A	A	A
Heavy Duty Bucket	0.54	0.46	1,800	1,800	405	A	A	A	A	B	B	C
	0.21	0.20	450	N/A	313	A	A	A	A	A	A	A
	0.31	0.29	600	N/A	372	A	A	A	A	A	A	A
	0.42	0.38	750	N/A	420	A	A	A	A	A	A	A
	0.52	0.47	900	N/A	478	A	A	A	B	B	B	C
	0.60	0.53	1,000	N/A	510	B	C	B	C	C	C	D
	0.67	0.60	1,100	N/A	542	C	C	C	C	D	D	X
	0.74	0.66	1,200	N/A	585	D	D	C	D	X	D	X
Maximum load pin-on(payload+bucket)						1,683	1,587	1,739	1,549	1,415	1,503	1,343

Based on ISO 10567 and SAE J296, arm length without quick change clamp  
A : Suitable for materials with density of 2100 kg/m³ (3500 lb/yd³) or less  
B : Suitable for materials with density of 1800 kg/m³ (3000 lb/yd³) or less  
C : Suitable for materials with density of 1500 kg/m³ (2500 lb/yd³) or less  
D : Suitable for materials with density of 1200 kg/m³ (2000 lb/yd³) or less  
X : Not recommended

# DIMENSIONS

## [ One-piece Boom ]



### DIMENSIONS

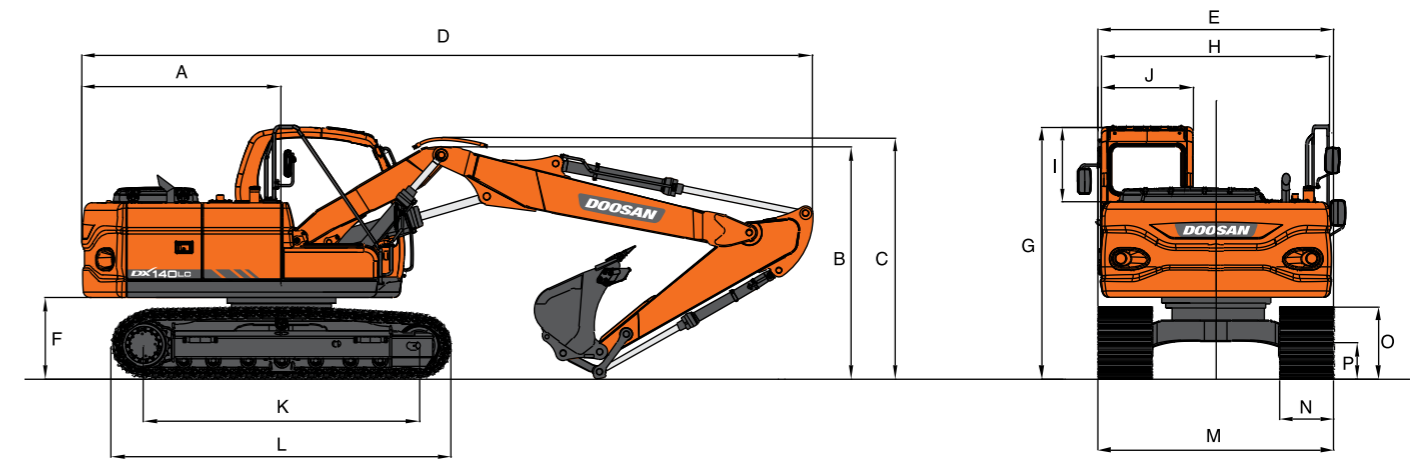
Boom type (One-piece)	4,600mm (15'1")		
Arm type	2,100mm (6'11")	2,500mm (8'2")	3,000mm (9'10")
Bucket type (PCSA)	0.51m <sup>3</sup>	0.51m <sup>3</sup>	0.39m <sup>3</sup>
A Tail Swing Radius	→	2,200mm (7'3")	←
B Shipping Height (Boom)	2,515mm (8'3")	2,630mm (8'8")	3,030mm (9'11")
C Shipping Height (Hose)	2,570mm (8'5")	2,710mm (8'11")	3,090mm (10'2")
D Shipping Length	7,690mm (25'3")	7,680mm (25'2")	7,640mm (25'1")
E Shipping Width	→	2,590mm (8'6")	←
F C/Weight Clearance	→	894mm (2'11")	←
G Height Over Cab.	→	2,773mm (9'1")	←
H House Width	→	2,540mm (8'4")	←
I Cab. Height above House	→	835mm (2'9")	←
J Cab. Width	→	960mm (3'2")	←
K Tumbler Distance	→	3,034mm (9'11")	←
L Track Length	→	3,755mm (12'4")	←
M Undercarriage Width	→	2,590mm (8'6")	←
N Shoe Width	→	600mm (2')	←
O Track Height	→	728mm (2'5")	←
P Car Body Clearance	→	410mm (1'4")	←

### DIGGING FORCE

Bucket (PCSA)	0.22m <sup>3</sup>	0.35m <sup>3</sup>	0.40m <sup>3</sup>	0.45m <sup>3</sup>	0.51m <sup>3</sup>	0.55m <sup>3</sup>	0.65m <sup>3</sup>
Digging force	11,100 kgf	11,100 kgf	11,100 kgf	11,100 kgf	11,100 kgf	11,100 kgf	11,100 kgf
(ISO)	109 kN	109 kN	109 kN	109 kN	109 kN	109 kN	109 kN
	24,471 lbf	24,471 lbf	24,471 lbf	24,471 lbf	24,471 lbf	24,471 lbf	24,471 lbf
Digging force	9,600 kgf	9,600 kgf	9,600 kgf	9,600 kgf	9,600 kgf	9,600 kgf	9,600 kgf
(SAE)	94 kN	94 kN	94 kN	94 kN	94 kN	94 kN	94 kN
	21,164 lbf	21,164 lbf	21,164 lbf	21,164 lbf	21,164 lbf	21,164 lbf	21,164 lbf

At power boost (ISO)

## [ Two-piece Boom ]



### DIMENSIONS

Boom type (Two-piece)	4,988 mm ( 16'4" )	
Arm type	2,100 mm (6'11")	2,500 mm (8'2")
Bucket type (PCSA)	0.51m <sup>3</sup>	0.51m <sup>3</sup>
A Tail Swing Radius	2,200mm (7'3")	←
B Shipping Height (Boom)	2,555mm (8'6")	2,680mm(8'10")
C Shipping Height (Hose)	2,655mm (8'9")	2,770mm(9'1")
D Shipping Length	8,060mm (26'5")	8,015mm(26'4")
E Shipping Width	2,590mm (8'6")	←
F C/Weight Clearance	894mm (2'11")	←
G Height Over Cab.	2,773mm (9'1")	←
H House Width	2,540mm (8'4")	←
I Cab. Height above House	835mm (2'9")	←
J Cab. Width	960mm (3'2")	←
K Tumbler Distance	3,034mm (9'11")	←
L Track Length	3,755mm (12'4")	←
M Undercarriage Width	2,590mm (8'6")	←
N Shoe Width	600mm (2')	←
O Track Height	728mm (2'5")	←
P Car Body Clearance	410mm (1'4")	←

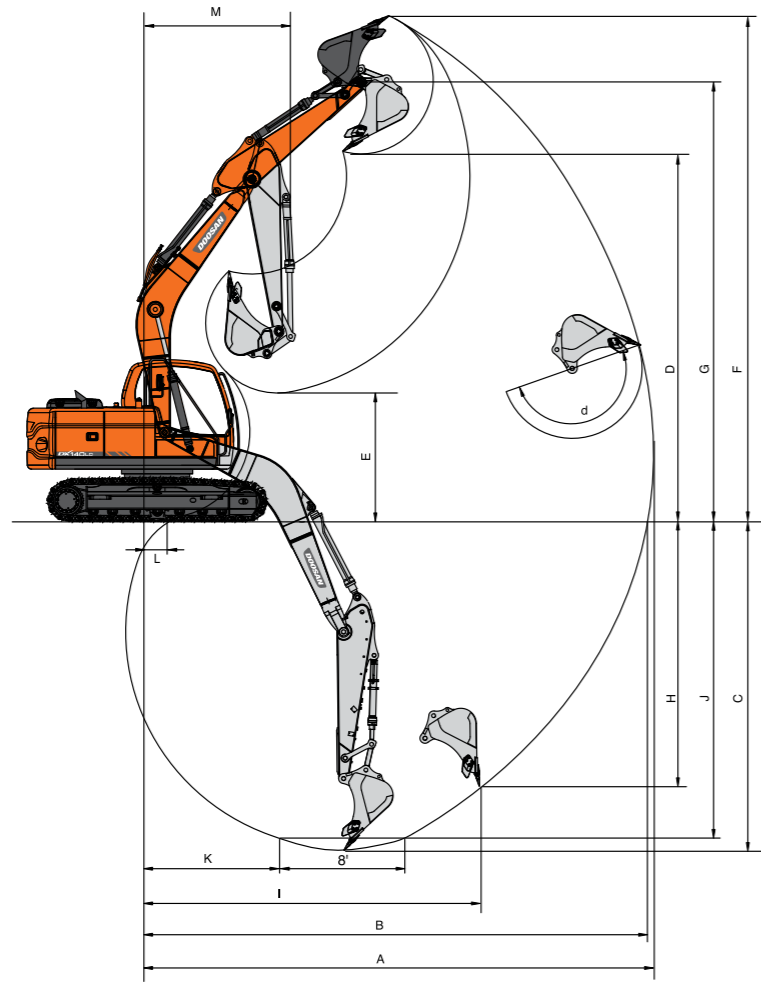
### DIGGING FORCE

Arm	2,100mm	2,500mm	3,000mm
Digging force	7,700 kgf	6,500 kgf	6,000 kgf
(ISO)	75.6 kN	63.8 kN	58.9 kN
	16,975 lbf	14,330 lbf	13,228 lbf
Digging force	7,300 kgf	6,300 kgf	5,800 kgf
(SAE)	71.7 kN	61.8 kN	56.9 kN
	16,094 lbf	13,889 lbf	12,787 lbf

At power boost (ISO)

# WORKING RANGES

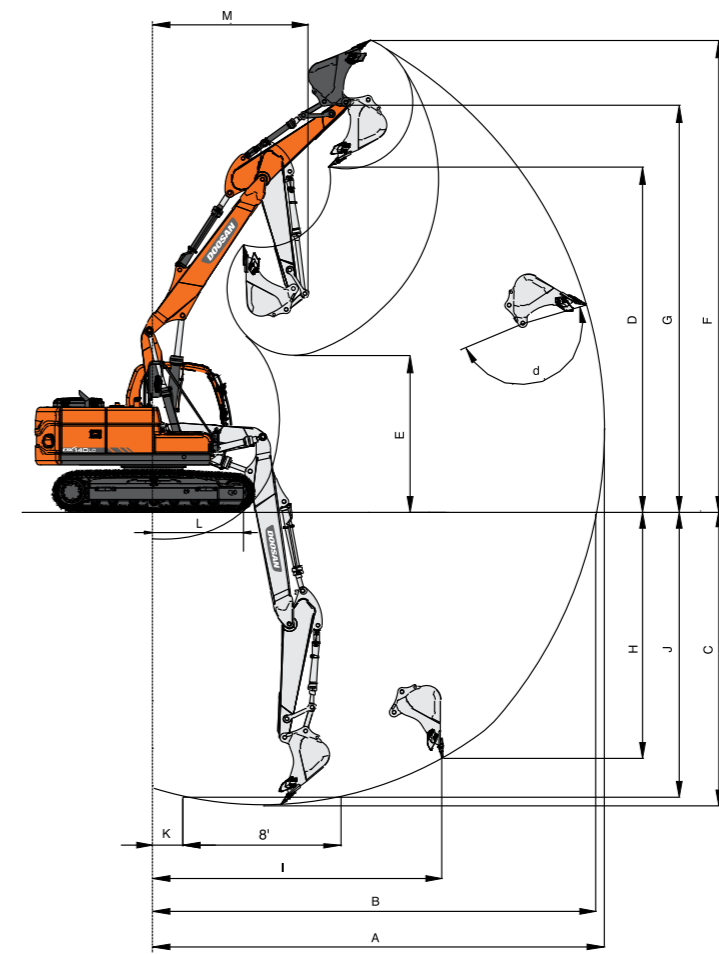
[ One-piece Boom ]



## WORKING RANGE

Boom length	4,600mm(15'1") One-piece Boom		
Arm type	2,100mm (6'11")	2,500mm (8'2")	3,000mm (9'10")
Bucket type (pcsa)	0.51m <sup>3</sup>	0.51m <sup>3</sup>	0.39m <sup>3</sup>
<b>A</b> Max. digging reach	7,845(25'9")	8,300(27'3")	8,680(28'6")
<b>B</b> Max. digging reach at ground level	7,690(25'3")	8,156(26'9")	8,540(28')
<b>C</b> Max. digging depth	5,250(17'3")	5,645(18'6")	6,150(20'2")
<b>D</b> Max. dumping height	5,875(19'3")	6,300(20'7")	6,412(21')
<b>E</b> Min. dumping height	2,569(8'4")	2,166(7'1")	1,700(5'6")
<b>F</b> Max. digging height	8,195(26'11")	8,675(28'6")	8,745(28'8")
<b>G</b> Max. bucket pin height	7,110(23'4")	7,535(24'9")	7,645(25'1")
<b>H</b> Max. vertical wall depth	3,810(12'6")	4,560(15')	4,830(15'10")
<b>I</b> Max. radius vertical	5,690(18'8")	5,555(18'3")	5,860(19'3")
<b>J</b> Max. digging depth(8'level)	4,950(16'3")	5,420(17'9")	5,920(19'5")
<b>K</b> Min. radius 8' line	1,850(6'1")	1,960(6'5")	1,855(6'1")
<b>L</b> Min. digging reach	1,005(6'1")	265(10")	-305(-1")
<b>M</b> Min. swing radius	2,345(7'8")	2,375(7'10")	2,585(8'6")
<b>d.</b> Bucket angle (deg)	173°	173°	173°

[ Two-piece Boom ]



## WORKING RANGE

Boom length	4,988mm(16'4") Two-piece Boom	
Arm type	2,100mm (6'11")	2,500mm (8'2")
Bucket type (pcsa)	0.51m <sup>3</sup>	0.51m <sup>3</sup>
<b>A</b> Max. digging reach	8,380(27'6")	8,805(28'11")
<b>B</b> Max. digging reach at ground level	8,235(27')	8,665(28'5")
<b>C</b> Max. digging depth	5,440(17'10")	5,850(19'2")
<b>D</b> Max. dumping height	6,420(21'1")	6,810(22'4")
<b>E</b> Min. dumping height	2,925(9'7")	2,935(9'8")
<b>F</b> Max. digging height	8,820(28'11")	9,235(30'4")
<b>G</b> Max. bucket pin height	7,650(25'1")	8,040(26'5")
<b>H</b> Max. vertical wall depth	4,815(15'10")	5,415(17'9")
<b>I</b> Max. radius vertical	5,365(17'7")	5,270(17'3")
<b>J</b> Max. digging depth(8'level)	5,530(18'2")	5,745(18'10")
<b>K</b> Min. radius 8' line	795(2'7")	800(2'7")
<b>L</b> Min. digging reach	2000(6'7")	1,615(5'4")
<b>M</b> Min. swing radius	2,925(9'7")	2,935(9'9")
<b>d.</b> Bucket angle (deg)	173°	173°



# STANDARD AND OPTIONAL EQUIPMENT

## STANDARD EQUIPMENT

### Boom & Arm

- 4.6 m Boom
- 2.5 m Arm

### Hydraulic system

- Boom and arm flow regeneration
- Boom and arm holding valves
- Swing anti-rebound valves
- Spare ports(Control valve)
- One-touch power boost

### Cabin & Interior

- Viscous cab mounts
- All weather sound suppressed type cab
- Air conditioner & Heater
- Adjustable suspension seat with head rest and adjustable arm rest
- Room light
- Intermittent windshield wiper
- Cigarette lighter and ashtray
- Cup holder
- High seat mount
- LCD color monitor panel
- E/G RPM control dial
- AM/FM radio + MP3 (USB)
- Remote radio ON/OFF switch
- 12V spare powers socket
- Serial communication port for laptop PC interface
- Joystick lever with 3 switches
- Sun visor
- Sun roof

## 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.

### Boom & Arm

- 4.0 m Boom
- 4.988 m Arti Boom
- 1.9 m Arm
- 2.1 m Arm
- 3.0 m Arm

### Safety

- Cabin Top/Front guard(ISO 10262, FOGS standard)
- Travel & swing alarm
- Telescopic beacon
- Lock valve
- Rear view camera
- Rear lamp for number plate

### Cabin & Interior

- Air suspension seat
- Rain Shield
- Low seat mount
- Breaker pedal
- ROPS/FOGS Cabin
- Cabin front guard (Upper and lower guard)
- Steel roof cover
- Side mirror

### Safety

- Large handrails and step
- Convex metal anti-slip plates
- Seat belt
- Hydraulic safety lock lever
- Safety glass
- Hammer for emergency escape
- Right and left rearview mirrors
- Travel alarm
- Rotating beacon
- Battery protector cover

### Others

- Double element air cleaner
- Fuel filter
- Dust screen for radiator/oil cooler
- Engine overheat prevention system
- Engine restart prevention system
- Self-diagnostic system
- Alternator(24V, 60 amps)
- Fuel filler pump
- Electric horn
- Halogen working lights(frame mounted 1, boom mounted 2)
- Hydraulic oil tank air breather filter
- Long & Fixed track

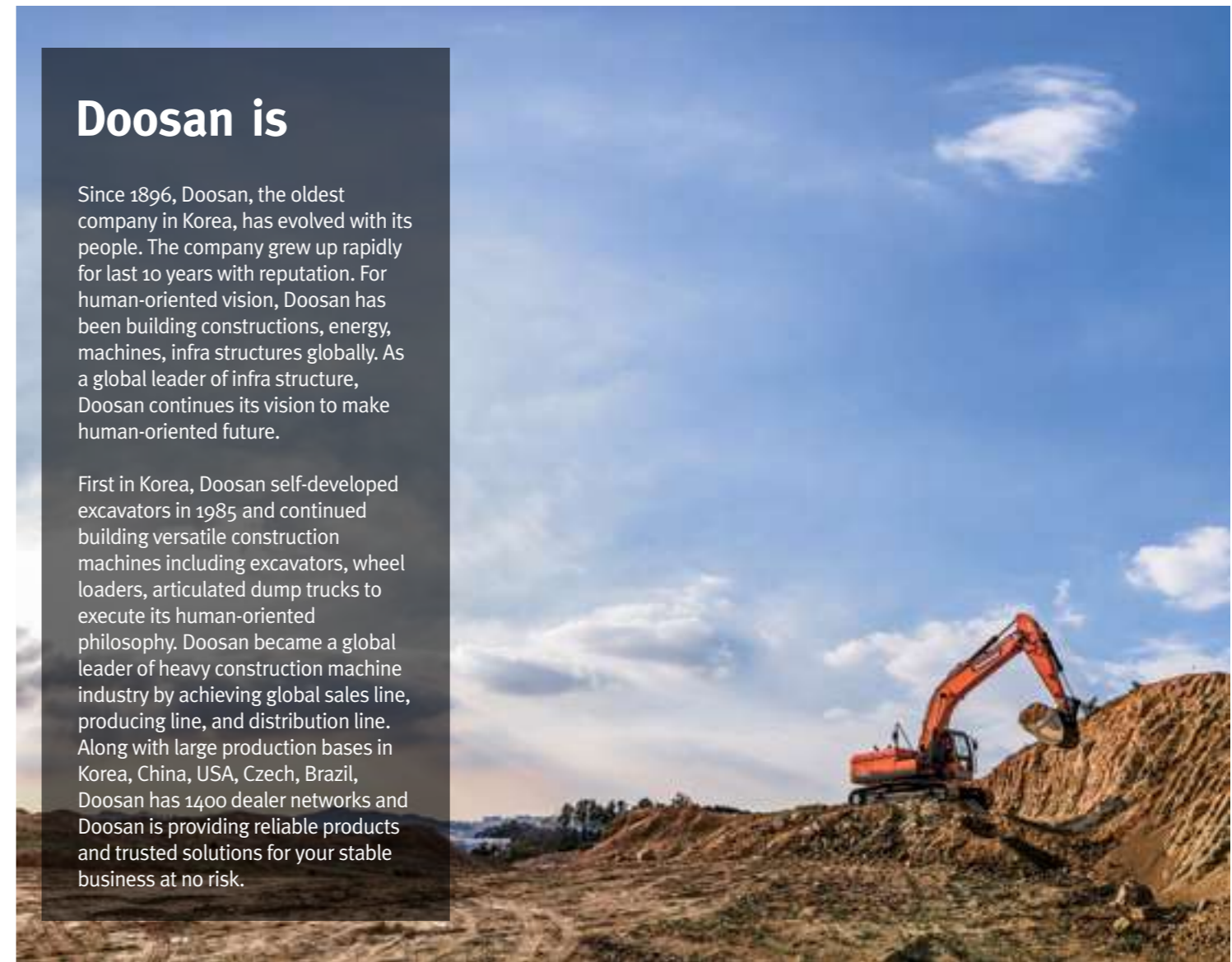
### Others

- Piping for crusher
- Piping for quick clamp
- Piping option
  - Breaker with flow control valve - Crusher
  - Crusher with tilting - Rotating
  - Clamshell - Quick Clamp
- 500mm / 700mm shoe
- Lower wiper
- 80A alternator
- Working Lights
  - 4-front/2-rear on cabin
- Noise Kit
- Hydraulic Oil
  - Cold weather (VG32)
  - Normal (VG46)
  - Tropical weather (VG68)
- Breaker filter
- Additional Water separator
- Water separator with heater
- Heavy duty under cover
- Dozer blade
  - 2500 mm dozer
  - 2600 mm dozer
  - 2700 mm dozer
- Short & Fixed / High Car Body Clearance track

## Doosan is

Since 1896, Doosan, the oldest company in Korea, has evolved with its people. The company grew up rapidly for last 10 years with reputation. For human-oriented vision, Doosan has been building constructions, energy, machines, infra structures globally. As a global leader of infra structure, Doosan continues its vision to make human-oriented future.

First in Korea, Doosan self-developed excavators in 1985 and continued building versatile construction machines including excavators, wheel loaders, articulated dump trucks to execute its human-oriented philosophy. Doosan became a global leader of heavy construction machine industry by achieving global sales line, producing line, and distribution line. Along with large production bases in Korea, China, USA, Czech, Brazil, Doosan has 1400 dealer networks and Doosan is providing reliable products and trusted solutions for your stable business at no risk.



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