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^3 (0.31 ~ 0.99 yd^3)

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.

* The above image may differ from the actual product.

NEWLY ADDED FEATURE

DX140LC

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

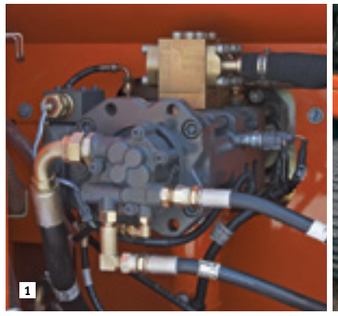
The performance of the DX140LC has a direct effect on its productivity. Its new "Common Rail" engine and new EPOS™ controlled hydraulic system have combined to create an unbeatable hydraulic excavator, with a cost/performance ratio that makes the DX140LC even more appealing.

* The above image may differ from the actual product.

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


2


3

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.

DURABILITY & RELIABILITY

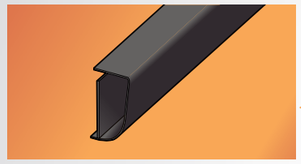
DX140LC

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.

* The above image may differ from the actual product.

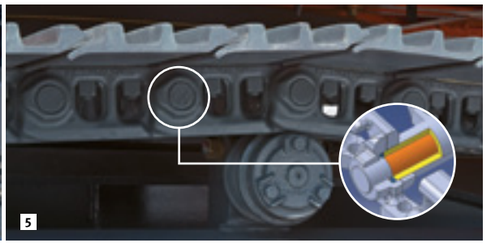
D-TYPE FRAME

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.

FUEL EFFICIENCY

DX140LC

* The above image may differ from the actual product.

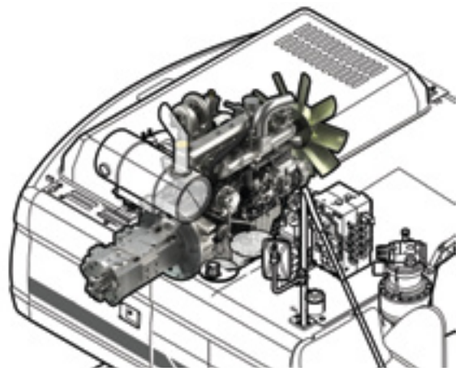
RELIEF CUTOFF

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.

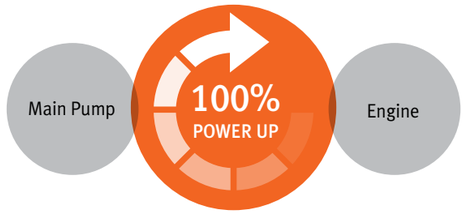
OPTIMIZED LEVER CONTROL & AUTO IDLE

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 respones time of the system, unnecessary fuel consumption. Matching response time between pump and engine efficiently reduces unnecessary fuel consumption as well as exhaust fumes.



OPERATOR COMFORT

DX140LC

The work rate of the hydraulic excavator is directly linked to the performence 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.

* The above image may differ from the actual product.

MONITOR

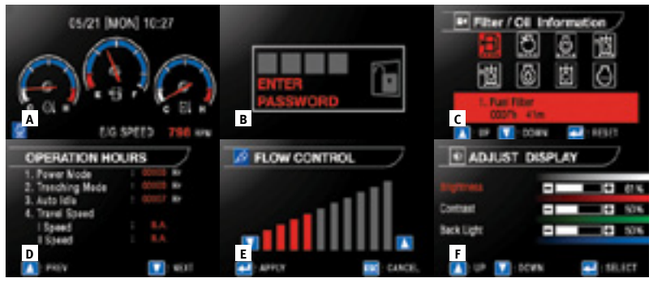
3 power modes for maximum efficiency
- Power mode
- Standand mode
- Economy mode

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

1 Control panel

2 Navigation modes
- Rearview camera, Display selector

3 Working modes
- Auto-idle & Flow rate control



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)

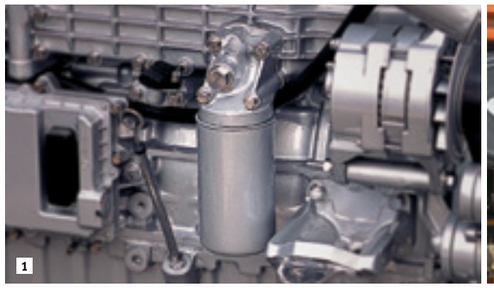
Equipped with various functions of adjustment forth and back and, and lumbar support, it reduces the vibration of equipment transmitted during work in an effective way. Also for considering winter working environment, Seat warmer functions equipped.

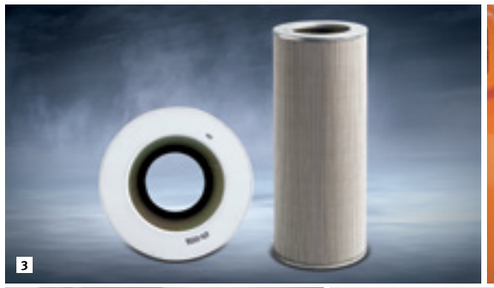
3 REAR CAMERA

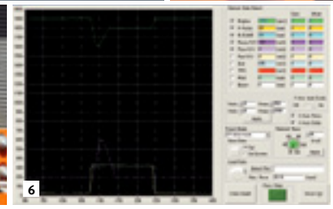
EASY MAINTENANCE

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.

* The above image may differ from the actual product.







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 GREA SE INLE TS FOR EASY MAINTENANCE

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

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™ 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

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 PARTS NETWORK

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.

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 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**

ATTACHMENTS

DX140LC

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.

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)
GENERAL PURPOSE BUCKET	0.39 / 0.51 / 0.81 / 0.92 / 1.05 / 1.17 / 1.28 m^3
HEAVY DUTY BUCKET	0.73 / 0.90 / 1.07 / 1.24 / 1.32 / 1.49 m^3
SEVERE DUTY BUCKET	0.91 / 1.07 / 1.23 m^3

DEMOLITION

Hydraulic Breaker

Fixed Pulverizer

Rotating Crusher

	Model	Weight	Tool diameter	Frequency
HYDRAULIC BREAKER	DXB90H	1,000 kg	107 mm	820 BPM
	Model	**Weight**	**Max. Jaw opening**	**Force at Tip**
FIXED PULVERIZER	FP14	1,100 kg	680 mm	51 t
ROTATING CRUSHER	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
MULTI-GRAPPLE		MG14	1,050 kg	1,744 mm	4.6 t	0.45 m^3
STONE GRAPPLE		SG14	761 kg	1,800 mm	-	0.34 m^2
WOOD GRAPPLE	L / P	WG14	700 / 630 kg	1,800 mm	-	0.48 m^2
LOG GRAPPLE	L / P	LG14	835 / 810 kg	1,800 mm	-	0.42 m^2
ORANGE GRAPPLE		OG14	1,170 kg	1,890 mm	-	0.30 m^3

L : Link type
P : Pendulum type

EARTH MOVING

Clamshell Bucket

Plate Compactor

Ripper

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

CONNECTING

Quick Coupler

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

TECHNICAL SPECIFICATIONS

ENGINE

Model

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 : DL06C)

Number of cylinders

6

Nominal flywheel power

71 kW(95HP) @ 1,850 rpm (SAE J1349, net)

Max torque

44.5 kgf.m(436 Nm) at 1,400 rpm

Piston displacement

5,890 cc (359 cu.in)

Bore & stroke

⌀100 mm x 125 mm (3.9" X 4.9")

Starter

24 V / 4.5 kW

Batteries

2 x 12 V / 100 Ah

Air cleaner

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).

Sound level guarantee

101 dB(A) (2000/14/EC)

Cab sound level

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 : 590 kg (1,300 lb)	14,770 kg (32,562 lb)
STD. + 600 mm (2")	2,600 mm : 602 kg (1,327 lb)	15,007 kg (33,084 lb)
STD. + 700 mm (2'4")	2,700 mm : 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.

Main pumps

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)

Pilot pump

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

Maximum system pressure

Boom/arm/Bucket :
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.

Number of rollers and track shoes per side

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.

Travel speed (fast/slow)

4.7/3.0km/h (2.9/1.9 mph)

Maximum traction force

7,300 / 11,800 kgf (16,094 / 26,014 lbf)

Maximum grade

35˚/ 70%

REFILL CAPACITIES

Fuel tank

280 l (74.0 US gal, 61.6 Imp gal)

Cooling system (Radiator capacity)

20 l (5.3 US gal, 4.4 Imp gal)

Engine oil

25 l (6.6 US gal, 5.5 Imp gal)

Swing drive

3.8 l (1.0 US gal, 0.84 Imp gal)

Travel drive (each)

3 l (0.8 US gal, 0.66 Imp gal)

Oil tank

150 l (39.6 US gal, 33 Imp gal)

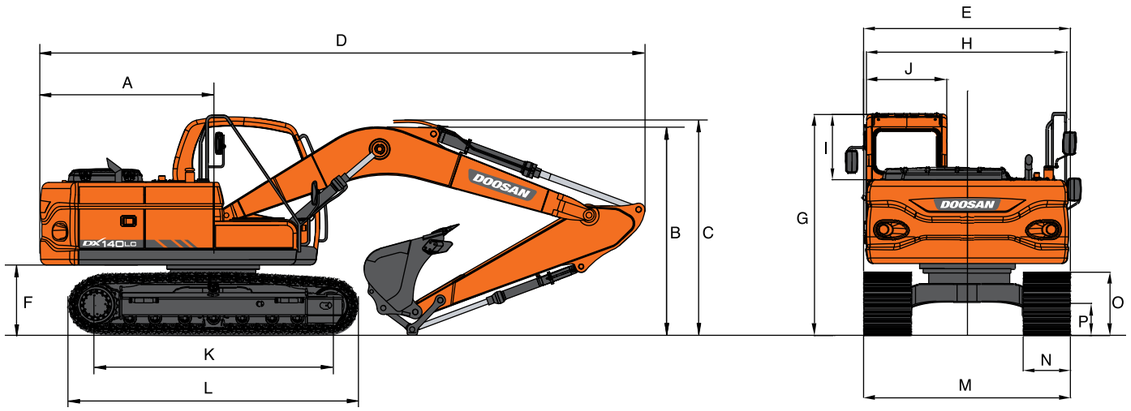
BUCKET

Bucket Type	Capacity (m³)		Width (mm)		TRACK	STD Track						
					C/W (ton)	2.2						
					SHOE (mm)	600						
						4.0m Boom		4.6m Boom			Arti Boom (4.988m)	
	SAE/ PCSA	CECE	W/O Cutter	With Cutter	Weight (kg)	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
	0.76	0.65	1,255	1,339	437	C	C	C	D	D	D	X
DC	0.45	0.38	1,500	1,500	357	A	A	A	A	A	A	A
	0.54	0.46	1,800	1,800	405	A	A	A	A	B	B	C
Heavy Duty Bucket	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

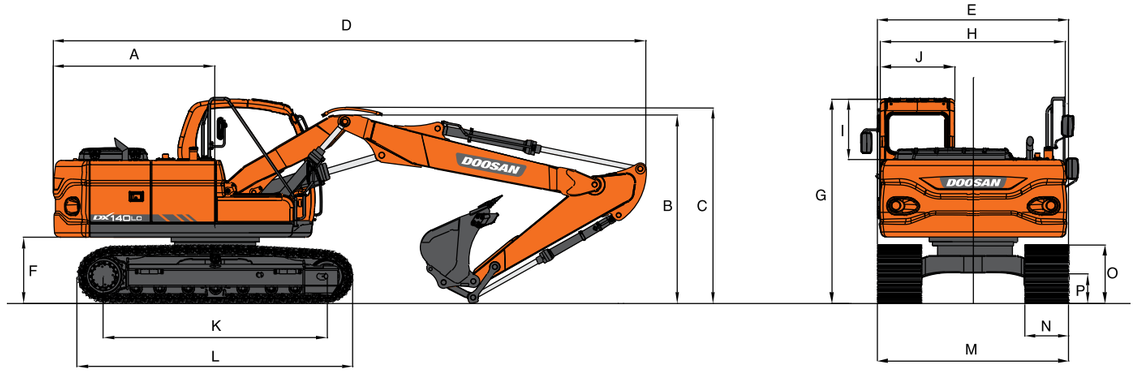
Boom type (One-piece)			4,600mm (15'1")	
Arm type		2,100mm (6'11")	2,500mm (8'2")	3,000mm (9'10")
Bucket type (PCSA)		0.51m³	0.51m³	0.39m³
A	Tail Swing Radius	→	2,200mm (7'3")	←
B	Shipping Height (Boom)	2,515mm (8'3")	2,630mm (8'8")	3,030mm (9'11")
C	Shipping Height (Hose)	2,570mm (8'5")	2,710mm (8'11")	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)	0.22m³	0.35m³	0.40m³	0.45m³	0.51m³	0.55m³	0.65m³
Digging force (ISO)	11,100 kgf	11,100 kgf	11,100 kgf	11,100 kgf	11,100 kgf	11,100 kgf	11,100 kgf
	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 (SAE)	9,600 kgf	9,600 kgf	9,600 kgf	9,600 kgf	9,600 kgf	9,600 kgf	9,600 kgf
	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)		0.51m³		0.51m³
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")		←

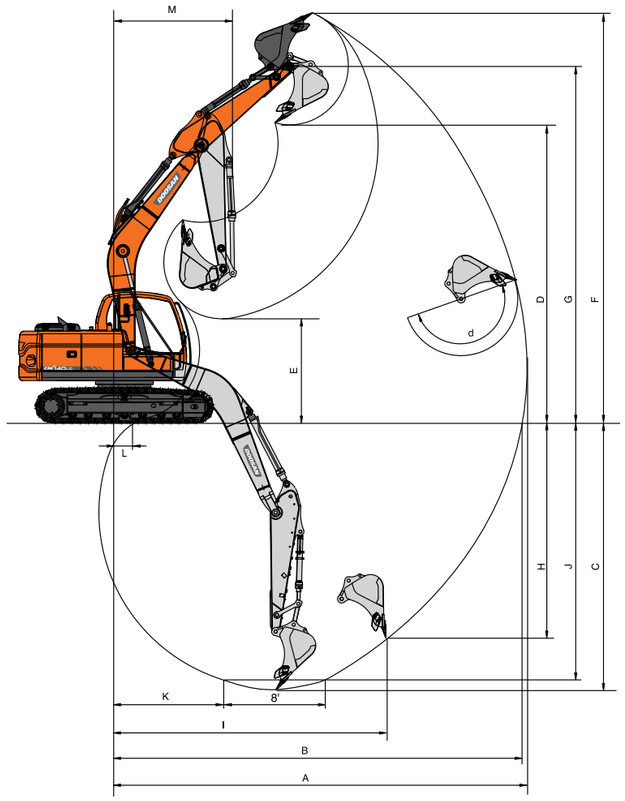
DIGGING FORCE

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

At power boost (ISO)

WORKING RANGES

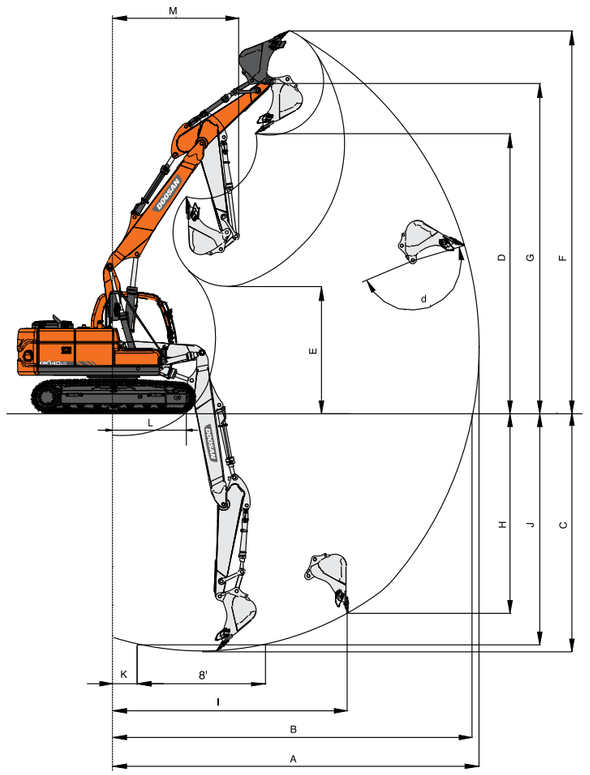
[One-piece Boom]



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)		0.51m³	0.51m³	0.39m³
A	Max. digging reach	7,845(25'9")	8,300(27'3")	8,680(28'6")
B	Max. digging reach at ground level	7,690(25'3")	8,156(26'9")	8,540(28')
C	Max. digging depth	5,250(17'3")	5,645(18'6")	6,150(20'2")
D	Max. dumping height	5,875(19'3")	6,300(20'7")	6,412(21')
E	Min. dumping height	2,569(8'4")	2,166(7'1")	1,700(5'6")
F	Max. digging height	8,195(26'11")	8,675(28'6")	8,745(28'8")
G	Max. bucket pin height	7,110(23'4")	7,535(24'9")	7,645(25'1")
H	Max. vertical wall depth	3,810(12'6")	4,560(15')	4,830(15'10")
I	Max. radius vertical	5,690(18'8")	5,555(18'3")	5,860(19'3")
J	Max. digging depth(8'level)	4,950(16'3")	5,420(17'9")	5,920(19'5")
K	Min. radius 8' line	1,850(6'1")	1,960(6'5")	1,855(6'1")
L	Min. digging reach	1,005(6'1")	265(10")	-305(-1")
M	Min. swing radius	2,345(7'8")	2,375(7'10")	2,585(8'6")
d.	Bucket angle (deg)	173˚	173˚	173˚

[Two-piece Boom]

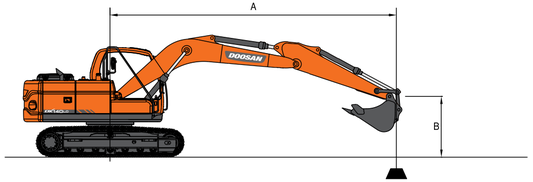


WORKING RANGE

Boom length		4,988mm(16'4") Two-piece Boom	
Arm type		2,100mm (6'11")	2,500mm (8'2")
Bucket type (pcsa)		0.51m³	0.51m³
A	Max. digging reach	8,380(27'6")	8,805(28'11")
B	Max. digging reach at ground level	8,235(27')	8,665(28'5")
C	Max. digging depth	5,440(17'10")	5,850(19'2")
D	Max. dumping height	6,420(21'1")	6,810(22'4")
E	Min. dumping height	2,925(9'7")	2,935(9'8")
F	Max. digging height	8,820(28'11")	9,235(30'4")
G	Max. bucket pin height	7,650(25'1")	8,040(26'5")
H	Max. vertical wall depth	4,815(15'10")	5,415(17'9")
I	Max. radius vertical	5,365(17'7")	5,270(17'3")
J	Max. digging depth(8'level)	5,530(18'2")	5,745(18'10")
K	Min. radius 8' line	795(2'7")	800(2'7")
L	Min. digging reach	2000(6'7")	1,615(5'4")
M	Min. swing radius	2,925(9'7")	2,935(9'9")
d.	Bucket angle (deg)	173˚	173˚

LIFTING CAPACITY

[One-piece Boom]



Metric

Boom : 4,600mm(15'1") Arm : 2,500mm(8'2") Bucket : SAE/PCSA 0.51m³(0.67yd³) Shoe : 600mm(2')

Unit : 1,000kg

A(m) / B(m)	2		3		4		5		6		Max. Reach		A(m)
7					*3.73	*3.73					*2.88	*2.88	4.24
6					*3.39	*3.39	*3.59	2.92			*2.45	*2.45	5.32
5					*3.61	*3.61	*3.72	2.94	*2.57	2.11	*2.25	2.08	6.04
4			*4.25	*4.25	*4.31	4.22	*4.05	2.92	3.42	2.13	*2.17	1.81	6.53
3					*5.38	4.11	*4.61	2.87	3.40	2.11	*2.16	1.66	6.83
2					*6.57	3.99	4.55	2.80	3.37	2.08	*2.20	1.59	6.98
1					6.52	3.88	4.48	2.75	3.33	2.05	*2.29	1.58	6.97
0 (Ground)					6.45	3.82	4.44	2.70	3.31	2.03	*2.45	1.64	6.82
-1			*6.07	6.04	6.42	3.79	4.41	2.68	3.30	2.02	*2.71	1.77	6.51
-2	*5.42	*5.42	*9.89	6.08	6.43	3.80	4.42	2.69	3.31	2.03	*3.13	2.03	6.01
-3	*9.35	*9.35	*9.47	6.15	6.47	3.84	4.46	2.72			4.15	2.54	5.24
-4			*7.27	6.27	*5.01	3.94					*4.55	3.74	4.14

Feet

Unit : 1,000lb

A(ft) / B(ft)	10'		15'		20'		Max. Reach		A(ft)
25							*7.75	*7.75	10.61
20			*8.03	7.52			*5.46	*5.46	17.17
15			*8.44	7.52	*7.07	4.55	*4.87	4.29	20.58
10			*10.67	7.32	7.30	4.53	*4.75	3.67	22.38
5			11.56	7.04	7.20	4.44	*4.92	3.48	22.94
0 (Ground)			11.33	6.84	7.11	4.35	*5.41	3.61	22.38
-5	*17.99	13.00	11.27	6.79	7.09	4.34	7.01	4.29	20.14
-10	*20.42	13.19	11.37	6.88			9.23	5.66	17.10

Metric

Boom : 4,600mm(15'1") Arm : 3,000mm(9'10") Bucket : SAE/PCSA 0.51m³(0.67yd³) Shoe : 600mm(2')

Unit : 1,000kg

A(m) / B(m)	2		3		4		5		6		7		Max. Reach		A(m)
7													*2.44	*2.44	4.93
6							*3.18	3.06					*2.20	*2.20	5.88
5							*3.24	3.06	*3.20	2.24			*2.09	1.90	6.54
4					*3.61	*3.61	*3.62	3.03	3.53	2.23			*2.06	1.69	6.99
3			*5.76	*5.76	*4.74	4.24	*4.21	2.97	3.50	2.20	2.70	1.68	*2.08	1.56	7.28
2					*5.99	4.10	4.64	2.89	3.45	2.16	2.68	1.67	*2.14	1.50	7.41
1					6.61	3.96	4.56	2.82	3.41	2.12	2.66	1.65	*2.25	1.49	7.41
0 (Ground)			*5.12	*5.12	6.51	3.87	4.50	2.76	3.37	2.09	2.64	1.63	*2.43	1.53	7.27
-1			*6.60	6.04	6.45	3.82	4.46	2.73	3.35	2.07			2.65	1.63	6.98
-2	*5.23	*5.23	*9.26	6.05	6.44	3.82	4.45	2.72	3.35	2.06			2.95	1.83	6.52
-3	*8.09	*8.09	*10.28	6.11	6.47	3.84	4.47	2.74					3.51	2.18	5.85
-4	*12.22	*12.22	*8.69	6.21	*6.48	3.91							*4.70	2.91	4.88

Feet

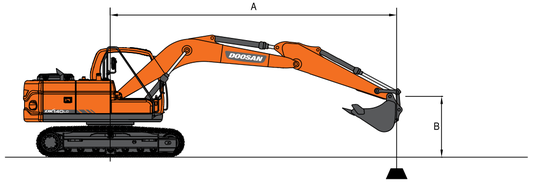
Unit : 1,000lb

A(ft) / B(ft)	10'		15'		20'		Max. Reach		A(ft)
25							*6.04	*6.04	13.49
20			*6.63	*6.63			*4.89	*4.89	19.06
15			*7.31	*7.31	*7.39	4.80	*4.57	3.96	22.17
10	*12.29	*12.29	*9.61	7.56	7.51	4.73	*4.57	3.46	23.84
5			11.76	7.23	7.37	4.60	*4.82	3.29	24.38
0 (Ground)	*11.99	*11.99	11.46	6.97	7.25	4.49	*5.35	3.38	23.85
-5	*17.92	12.97	11.34	6.86	7.19	4.44	6.14	3.79	22.18
-10	*22.20	13.12	11.39	6.91			7.86	4.87	19.01
-15	*15.54	13.52					*10.27	8.47	13.46

1. Ratings are based on SAE J1097
2. The load point is a hook located on the back of the bucket.
3. * Rated loads are based on hydraulic capacity.
4. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity.

: Rating Over Front

: Rating Over Side or 360 degree



Metric

Boom : 4,600mm(15'1") Arm : 2,500mm(8'2") Bucket : SAE 0.51m³(0.67yd³) Shoe : 600mm(2') Dozer blade : 2,590mm(8'6")

Unit : 1,000kg

A(m) / B(m)	2		3		4		5		6		Max. Reach		A(m)
7					*3.73	*3.73					*2.88	*2.88	4.24
6					*3.39	*3.39	*3.59	3.21			*2.45	*2.45	5.32
5					*3.61	*3.61	*3.72	3.23	*2.57	2.35	*2.25	*2.25	6.04
4			*4.25	*4.25	*4.31	*4.31	*4.05	3.21	3.39	2.36	*2.17	2.02	6.53
3					*5.38	4.51	4.58	3.16	3.37	2.34	*2.16	1.86	6.83
2					*6.57	4.38	4.51	3.10	3.33	2.31	*2.20	1.79	6.98
1					6.46	4.27	4.44	3.04	3.30	2.28	*2.29	1.78	6.97
0 (Ground)					6.39	4.21	4.39	3.00	3.27	2.26	*2.45	1.84	6.82
-1			*6.07	*6.07	6.36	4.18	4.37	2.98	3.26	2.25	*2.71	1.98	6.51
-2	*5.42	*5.42	*9.89	6.67	6.37	4.19	4.37	2.98	3.28	2.27	*3.13	2.26	6.01
-3	*9.35	*9.35	*9.47	6.74	6.41	4.23	4.42	3.01			4.11	2.82	5.24
-4			*7.27	6.86	*5.01	4.33					*4.55	4.11	4.14

Feet

Unit : 1,000lb

A(ft) / B(ft)	10'		15'		20'		Max. Reach		A(ft)
25							*7.75	*7.75	10.61
20			*8.03	*8.03			*5.46	*5.46	17.17
15			*8.44	8.24	*7.07	5.05	*4.87	4.78	20.58
10			*10.67	8.04	7.23	5.03	*4.75	4.11	22.38
5			11.45	7.76	7.12	4.94	*4.92	3.91	22.94
0 (Ground)			11.22	7.57	7.03	4.86	*5.41	4.05	22.38
-5	*17.99	14.28	11.16	7.51	7.02	4.85	6.94	4.80	20.14
-10	*20.42	14.48	11.26	7.60			9.14	6.27	17.10

Metric

Boom : 4,600mm(15'1") Arm : 3,000mm(9'10") Bucket : SAE 0.51m³(0.67yd³) Shoe : 600mm(2') Dozer blade : 2,590mm(8'6")

Unit : 1,000kg

A(m) / B(m)	2		3		4		5		6		7		Max. Reach		A(m)
7													*2.39	*2.39	4.87
6							*3.15	*3.15					*2.14	*2.14	5.83
5							*3.20	*3.20	*3.11	2.40			*2.04	*2.04	6.49
4					*3.63	*3.63	*3.58	3.24	3.42	2.39			*2.00	1.83	6.95
3			*5.78	*5.78	*4.71	4.56	*4.17	3.19	3.39	2.36	2.60	1.81	*2.02	1.70	7.23
2					*5.97	4.42	4.53	3.11	3.35	2.33	2.58	1.79	*2.09	1.63	7.37
1					6.49	4.29	4.45	3.04	3.30	2.29	2.56	1.77	*2.21	1.62	7.37
0 (Ground)			*5.04	*5.04	6.39	4.21	4.39	2.99	3.27	2.25	2.55	1.76	*2.39	1.67	7.22
-1			*6.59	*6.59	6.34	4.16	4.35	2.96	3.25	2.23			2.58	1.78	6.93
-2	*5.25	*5.25	*9.32	6.61	6.33	4.15	4.34	2.95	3.25	2.23			2.89	1.99	6.47
-3	*8.16	*8.16	*10.17	6.66	6.36	4.18	4.37	2.97					3.47	2.39	5.79
-4	*12.02	*12.02	*8.53	6.76	*6.33	4.24							*4.67	3.21	4.81

Feet

Unit : 1,000lb

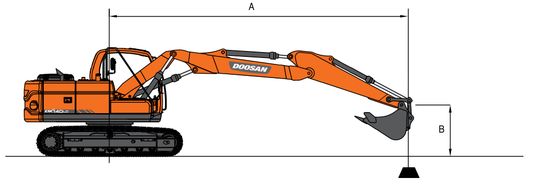
A(ft) / B(ft)	10'		15'		20'		Max. Reach		A(ft)
25							*5.95	*5.95	13.22
20			*6.56	*6.56			*4.76	*4.76	18.87
15			*7.23	*7.23	*7.22	5.14	*4.44	4.30	22.01
10	*12.34	*12.34	*9.53	8.12	7.28	5.08	*4.45	3.75	23.69
5			11.50	7.81	7.14	4.95	*4.71	3.57	24.23
0 (Ground)	*11.82	*11.82	11.22	7.56	7.03	4.85	*5.27	3.68	23.70
-5	*17.98	14.17	11.10	7.46	6.97	4.80	6.00	4.14	22.01
-10	*21.95	14.30	11.15	7.50			7.73	5.32	18.87
-15	*15.09	14.70					*10.54	9.67	13.00

1. Ratings are based on SAE J1097
2. The load point is a hook located on the back of the bucket.
3. * Rated loads are based on hydraulic capacity.
4. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity.

: Rating Over Front

: Rating Over Side or 360 degree

[Two-piece Boom]



Metric

Boom : 4,988mm(16'4") Arm : 2,500mm(9'10") Bucket : SAE 0.51m³(0.67yd³) Shoe : 700mm(2'4")

Unit : 1,000kg

A(m) / B(m)	3		4		5		6		7		Max. Reach		A(m)
7											*3.24	3.20	4.75
6					*2.79	*2.79					*3.03	2.31	5.73
5			*2.74	*2.74	*2.89	*2.89	*3.11	2.17			*2.84	1.89	6.41
4	*4.04	*4.04	*3.54	*3.54	*3.31	2.96	*3.25	2.16			2.74	1.65	6.87
3			*4.69	4.13	*3.94	2.88	3.46	2.12	2.65	1.59	2.54	1.52	7.16
2			*5.94	3.96	4.61	2.79	3.41	2.08	2.63	1.58	2.44	1.45	7.30
1			6.55	3.83	4.52	2.72	3.36	2.03	2.61	1.56	2.43	1.44	7.29
0 (Ground)			6.46	3.75	4.46	2.66	3.33	2.00	2.59	1.54	2.51	1.49	7.15
-1	*3.46	*3.46	6.43	3.73	4.43	2.64	3.31	1.98			2.68	1.60	6.85
-2	*6.65	5.99	6.45	3.74	4.43	2.64	3.32	1.99			3.02	1.81	6.38
-3			6.50	3.78	4.47	2.67					4.04	2.43	5.32

Feet

Unit : 1,000lb

A(ft) / B(ft)	10'		15'		20'		Max. Reach		A(ft)
25							*7.21	*7.21	12.76
20			*5.77	*5.77			*6.75	5.22	18.55
15			*6.67	*6.67	*6.95	4.64	*6.15	3.91	21.74
10			*9.15	7.36	7.43	4.55	5.61	3.36	23.45
5			11.65	6.98	7.28	4.41	5.35	3.18	23.99
0 (Ground)			11.37	6.74	7.15	4.29	5.53	3.28	23.45
-5	*11.46	*11.46	11.30	6.67	7.11	4.26	6.25	3.74	21.75
-10			11.41	6.77			9.28	5.57	17.04

1. Ratings are based on SAE J1097
2. The load point is a hook located on the back of the bucket.
3. * Rated loads are based on hydraulic capacity.
4. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity.

: Rating Over Front

: Rating Over Side or 360 degree

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

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

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

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