

**DOOSAN**

Construction Equipment

# DX420LCA-K

Engine Power	(SAE J1349, Net) 203.0 kW @ 2,000 rpm
Operational Weight	42,330 ~ 42,900 kg
Bucket Capacity (SAE/PCSA)	1.51 ~ 2.47 m <sup>3</sup>



# OPTIMAL DURABILITY AND TOTAL RELIABILITY WITH NEW ENGINE

## DX420LCA-K

The brand new DX420LCA-K is equipped with Doosan's newly developed DX12 engine, which is even more durable than before and will allow you to operate the machine with perfect stability even with the heaviest workloads.

The high swing speed and EPOS-driven hydraulic system will also play a crucial part in further boosting your productivity. The use of high-performance materials combined with new methods of structural stress analysis have increased component lifespan and greatly enhanced reliability. With various new options designed for your comfort and safety, including a 7-inch monitor and centralized fuel filtration, this renewed machine will be your most trusted business partner always.



### 1 ADVANCED HD CABIN (OPTIONAL)

ROPS, FOPS cabins are available as optional features. The DX420LCA-K's high-class interior is fitted with a range of innovative new features including MP3, joystick, air suspension seat, etc.



### 2 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.)



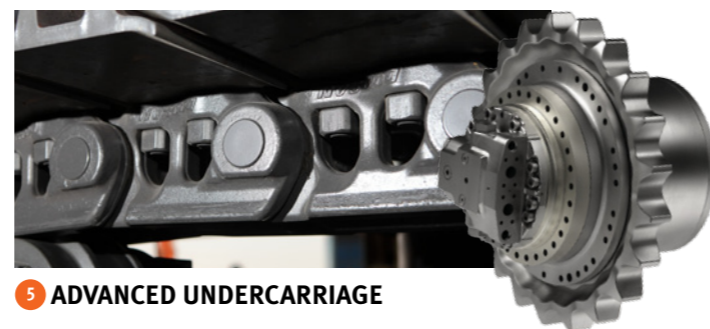
### 3 ADVANCED H-CLASS BUCKET

The H-class bucket, optimally designed and made of high-strength steel, is offered as a standard feature. A side cutter & chamfer have been added, and an inner plate has been attached.



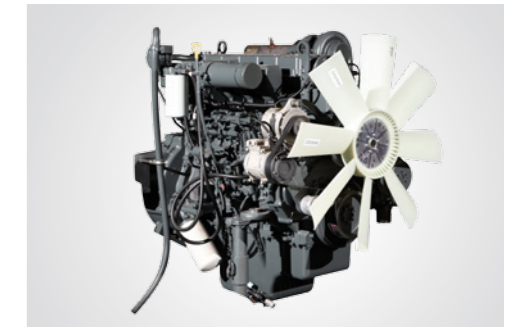
### 4 PRE-CLEANER

The adoption of a rotor type pre-cleaner has increased filtering efficiency.



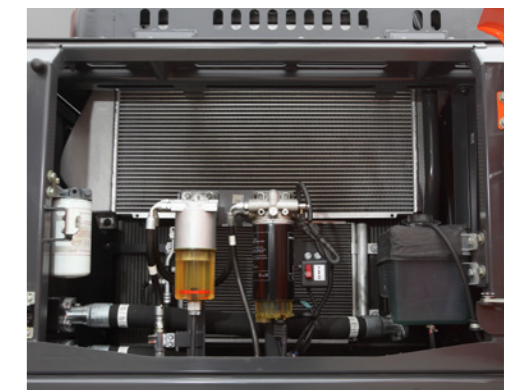
### 5 ADVANCED UNDERCARRIAGE

The sprocket structure and tooth have been strengthened to prevent debris and increase durability.



### 6 ENGINE

Equipped with an all-new engine with greater durability, the DX420LCA-K enables the operator to operate the machine with heavy workloads with optimal stability.



### 7 CENTRALIZED FUEL FILTRATIONS

The water separator, pre-fuel filter and main filter are located in one place to provide greater convenience and ease of maintenance, guaranteeing longer engine life as well.



### 9 ELECTRIC FUEL TRANSFER PUMP [ETP] (OPTIONAL)

The adoption of pump switch enables easy refueling of the machine after inspection or repair.



### 8 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 (Extra Filter + Pre Filter + Main Filter).



# INDUSTRY-LEADING PERFORMANCE AND PRODUCTIVITY

## DX420LCA-K

### Best-in-Class Productivity with Unparalleled Lifting Capacity and Machine Stability

How the DX420LCA-K performs has a direct impact on productivity. The combination of a newly improved engine and a redesigned EPOS-driven hydraulic system with an attractive cost-performance ratio is unrivalled by any other hydraulic excavators in its class.



### DOOSAN ENGINE-DX12

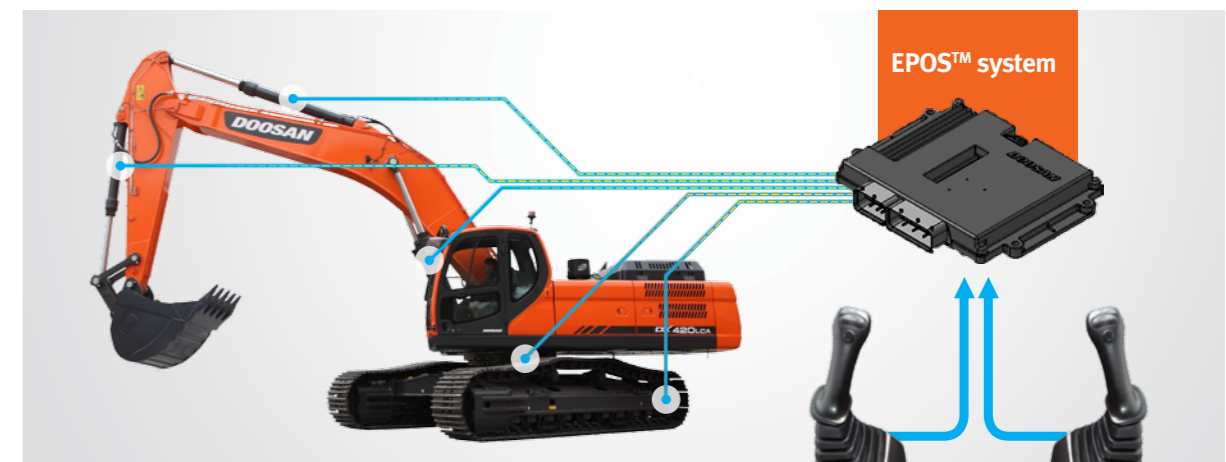
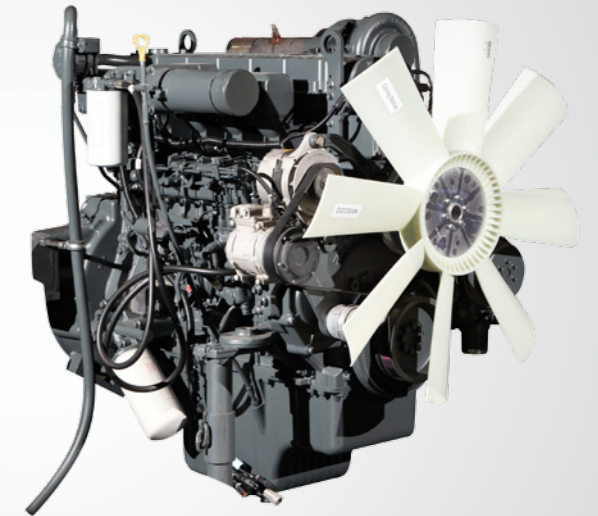
The DX12 is a whole new mechanical engine built on Doosan's continuously evolving engine technology.

Its quality and durability have been significantly improved against the previous engine, delivering greater maximum engine output through various system improvements, and thereby reducing the engine's workload during machine operation.

Doosan has also improved the engine's components to eliminate any possibility of failure in the field.

The improved design and materials of key components such as the engine block, cylinder head and piston has extended the engine's lifespan to a significant extent.

The new engine represents a breakthrough to even greater operational comfort, safety and productivity.



### EXCAVATOR CONTROL

Excavator control improved by the New EPOS™ system

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



### LIFTING CAPACITY

Incomparable Lifting Capacity

The counterweight and undercarriage are built on the solid structure of this huge and powerful machine to create the best lifting capacity in its class.

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



# DURABILITY & STABILITY

## DX420LCA-K

Manufactured with surprisingly strong materials and structures, the DX420LCA-K is unrivalled in durability and safety, allowing it to pass rigorous performance tests under extreme conditions. Whenever you work in a tough environment, you can count on Doosan's DX420LCA-K.



### HEAVY DUTY BOOM & ARM

With its state-of-the-art computer-aided design technology, Doosan's machines are manufactured from highly durable materials and adopted structural design, enabling the machines to pass rigorous performance testing under the harshest conditions.

- A Center Boss Plate**  
- Size increased
- B Boom End Bracket**  
- Single piece of casting type
- C Arm Bottom Plate**  
- Increase plate thickness
- D Arm Side Plate**  
- Increased plate thickness
- E Arm Back Plate**  
- Reinforced bar
- F Heavy Duty Bucket**  
- New bucket with effective design
- G Boom Plate**  
- Increased boom foot height and decreased width  
- Increased plate thickness



### EM BUSHING

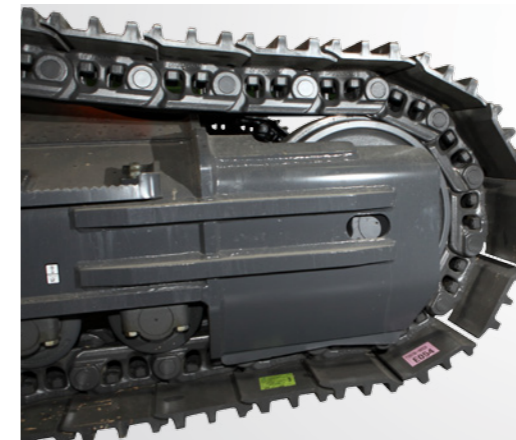
The boom pivot is made with a highly lubricated metal to increase the lifespan and extend greasing intervals to 250 hours.



### ABRASION-RESISTANT ARM END DISK

New disks have been adopted to increase wear resistance and service intervals.

### STABILITY



### INTEGRATED TRACK SPRING AND IDLER

The track spring and idler have been joined directly for even greater durability and improved maintenance convenience.

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



DOOSAN's efficient dynamics feature a  
**"NEW CONTROL LOGIC"  
 FOR GREATER FUEL  
 EFFICIENCY!**



**RELIEF CUTOFF**

DX420LCA-K is equipped with a relief cutoff system that automatically detects excess hydraulic pressure in the cylinder and controls it by redirecting a portion of the hydraulic flow running into the cylinder back to the main pump, thereby eliminating the risk of cylinder damage due to excess pressure. The Relief Cutoff function ensures that the DX420LCA-K is permanently maintained in the optimal state.



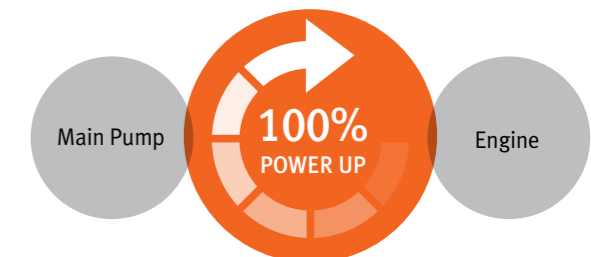
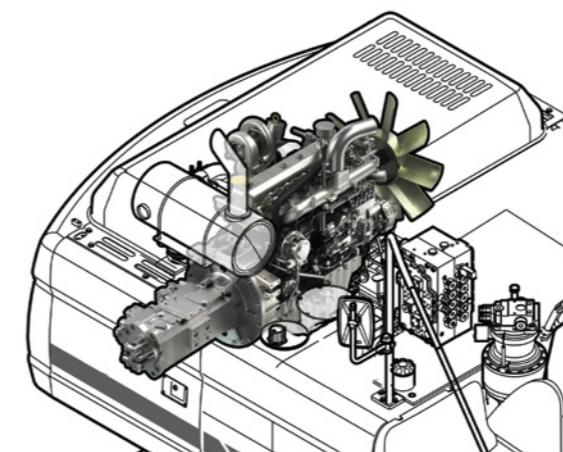
**AUTO IDLE**

DX420LCA-K is equipped with the Auto Idle function which automatically puts the engine and pump into the Standby mode when it detects a pause during operation. This function helps reduce fuel consumption by lowering idling RPM.



**PUMP MATCHING TECHNOLOGY**

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



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



# OPERATOR COMFORT

# DX420LCA-K

More space, wider visibility, better air conditioning, and a very comfortable seat - all these elements allow the operator to work safely and comfortably for long hours in the best possible conditions.



## MONITOR



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

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

- 1 Gauges
- 2 Navigation modes, rear view camera, Display selector
- 3 Working modes, auto-idle & flow rate control



## CONTROL PANEL

- A Standard screen
- B Anti-theft protection
- C Flow rate control
- D Operation history
- E Contrast control
- F Filter/oil information



### 1 SIMPLE OPERATION

Levelling operations, the movement of lifted loads and tricky maneuvers are all controlled easily and precisely with the control levers. The buttons integrated into the levers can also be used to operate additional equipment such as grabs, crushers and grapples and to activate the power boost function.

### 2 SLIDING SEAT

### 3 REAR VIEW CAMERA (OPTIONAL)



### 4 AIR CONDITIONING WITH CLIMATE CONTROL

The high-performance air conditioning adjusts and electronically controls the flow of air according to the work conditions. The choice of five operating modes will keep even the most demanding operator happy and satisfied.



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



# EASY MAINTENANCE

## DX420LCA-K

Short maintenance operations at long intervals increase the machine's availability onsite at all times. DOOSAN has developed the DX420LCA-K to deliver even higher profitability to the customer.



### PRE CLEANER

The installation of a rotor type pre-cleaner has increased filtering efficiency by 5~10%.



### FUEL PRE-FILTER WITH WATER SEPARATOR

High-efficiency fuel filtration is attained by the use of multiple filters. These include a fuel pre-filter fitted with a water separator that removes moisture, dirt and debris from the fuel. A fuel drain valve has been installed to facilitate maintenance.



### AIR FILTER WITH PRE-FILTERED DUST SEPARATOR

The large-capacity forced air cleaner removes over 99% of airborne particles, thereby reducing the risk of engine contamination and further increasing the intervals between cleaning and cartridge replacement. The pre-cleaning system uses centrifugal force to eliminate dust.

### ACCESSIBLE PARTS

Access to the various radiators is very easy, making cleaning quicker and simpler. The engine parts can be reached easily from the top and side panels.



### REMOTE GREASING POINTS

Centralization of the arm and boom greasing points has made maintenance easier. Remote greasing points are gathered on the boom and arm.



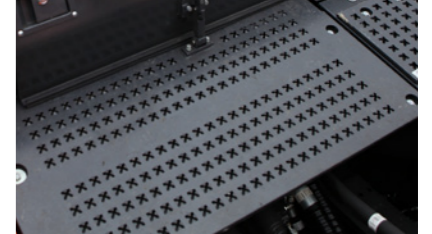
### HYDRAULIC OIL RETURN FILTER

Protection of the hydraulic system has been made more effective by applying glass fiber filter technology to the main oil return filter. More than 99.5% of foreign particles are filtered out, significantly increasing the interval between changes of oil.



### CONVENIENT FUSE BOX

The fuse box is conveniently located in a section of the storage compartment behind the operator's seat to provide a clean environment and easy access.



### CAT WALK ADOPTED AS STANDARD FEATURE ON DX420LCA-K

The upper structure features a larger anti-slip surface for greater safety.

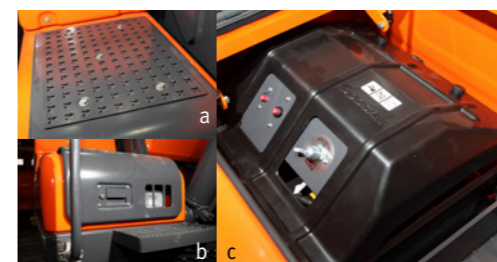


### NEW HANDRAIL & GUARDRAIL

Every guard now has its own handrail, ensuring greater safety during maintenance.

### NEW BATTERY BOX

The DX420LCA-K's battery box is designed with a larger anti-slip surface, guaranteeing safe operation even on slippery ground under wet and rainy conditions. In addition, the cut-off switch and spring are situated within easy reach to enable safer and more convenient control of maintenance.



\* 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

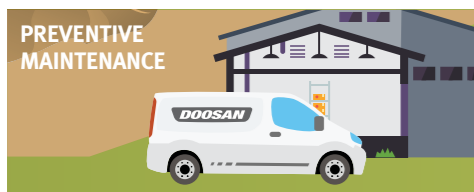
**JOB SITE MANAGEMENT**



**WORK EFFICIENCY MANAGEMENT**



**PREVENTIVE MAINTENANCE**



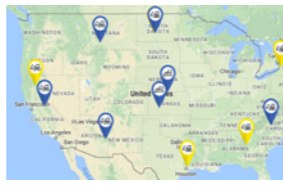
**PROACTIVE SERVICE**



## FUNCTIONS

**Location**

- GPS
- Geo-fence




**Operation Trend**

- Total operation hour
- Operation hour by mode



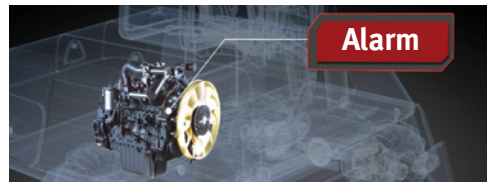
**Filter & Oil Management**

- Preventive maintenance by item replacement cycle




**Warning & Alert**

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



**Reports**

- Periodic operation report
- Utilization



**Fuel Efficiency\***

- Fuel level
- Fuel consumption



\* 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

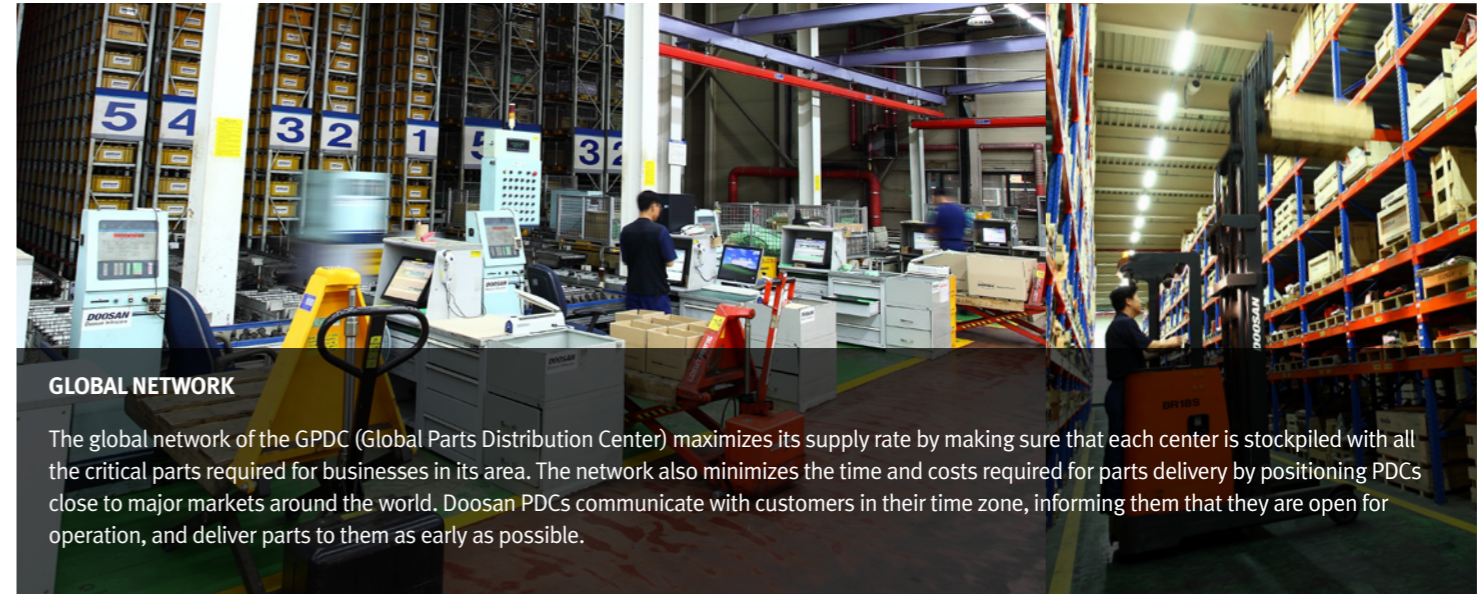
- Better service for customers
- Provide better quality of service
- Maintain machine value
- Better understanding of market needs

#### 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.



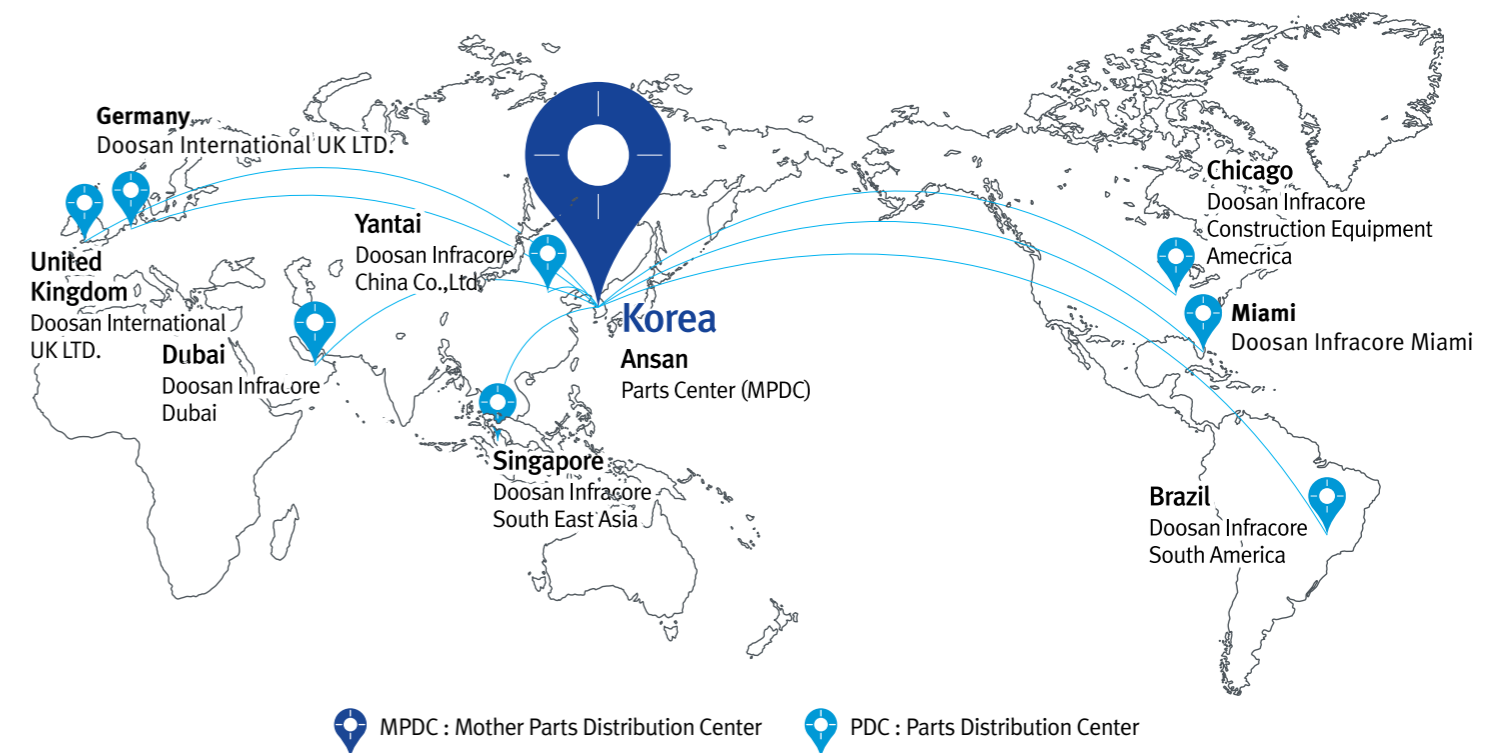
**GLOBAL NETWORK**

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


### The Global Parts

#### Distribution Center Network

PDCs had been set up as shown below, including Mother PDC in Ansan, Korea. The eight other PDCs include one in China (Yantai), 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



- 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.



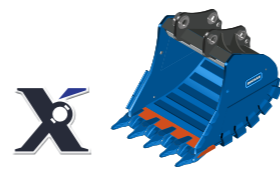
### Heavy Duty bucket

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**

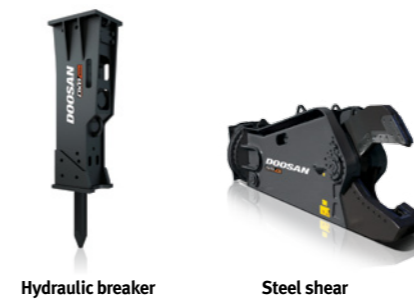
Optimized design for the Severe Mining bucket and the Xtreme Mining bucket. Suitable for machines ranging 22 to 70 tons. Recommended for extremely tough quarries and mining application.

## BUCKET



	Model	Suitable excavator	Capacity (Width) [m <sup>3</sup> (mm)]
General purpose bucket	GP	DX420	1.44 (1,273)/1.68 (1,429)/1.90 (1,546.5)/2.16 (1,745)
ROCK Bucket	ROCK	DX420	1.51 (1,497)
Heavy duty bucket	H class	DX420	1.64 (1,290)/1.92 (1,464)/2.14 (1,600)/2.47 (1,804)
Severe duty bucket	S class	DX420	1.77 (1,364)/2.02 (1,518)
Extra severe duty bucket	X class	DX420	1.77 (1,384)

## DEMOLITION



	Model	Suitable excavator	Weight [kg]	Tool dia. [mm]	Operating pressure [kg/cm <sup>2</sup> ]	Oil flow [l/min]	Frequency [bpm]
Hydraulic breaker	DXB420	DX420	3,356	165	165~185	200~280	330~600

	Model	Suitable excavator	Weight [kg]	Crushing Force [t]	Jaw opening width [mm]
Steel shear	SS48	DX420	4,586	626	706

## MATERIAL HANDLING



	Model	Suitable excavator	Weight [kg]	Capacity [m <sup>3</sup> ]	Jaw opening width [mm]
Stone grapple	SG42	DX420	2,400	0.78 (m <sup>3</sup> )	2,500
Orange grapple	OG42	DX420	2,080	0.8	2,260
Clamshell bucket	CB42	DX420	2,220	1.55	2,385

## OTHERS



	Model	Suitable excavator	Weight [kg]	Pin dia. [mm]
Quick coupler	DXQ420S	DX420	820	110

	Model	Suitable excavator	Weight [kg]	Shank thickness [mm]
Ripper	RT52	DX420	1,150	130

# TECHNICAL SPECIFICATIONS

## ENGINE

<b>Model</b>	Doosan DX12TI
	Water-cooled, Turco-charged, Mechanical governor
<b>Number of cylinders</b>	6
<b>Rated horse power</b>	218.0 kW @ 2,000 rpm (SAE J1995, Gross) 203.0 kW @ 2,000 rpm (SAE J1349, Net)
<b>Max torque</b>	127 kgf.m @ 1,300 rpm
<b>Idle (low - high)</b>	1,000[+/-25]- 2,050[+ 50] rpm
<b>Piston displacement</b>	11.1 l
<b>Bore x stroke</b>	∅ 123 mm x 155 mm
<b>Starter</b>	24 V / 7.0 kW
<b>Batteries</b>	2 x 12 V / 150 Ah
<b>Air filter</b>	Double element

## HYDRAULIC CYLINDERS

Piston rods and cylinder bodies of high-strength steel. Shock-absorbing mechanism fitted in all cylinders for shock-free operation and extended piston life.

Cylinders	Quantity	Bore x Rod diameter x stroke
Boom	2	165 x 115 x 1,460
Arm	1	180 x 120 x 1,820
Bucket	1	160 x 110 x 1,320

## ARM DIGGING FORCES

Model	Arm	Length (mm)	Weight (kg)	Digging Force (ton)	
DX420LCA-K	HD Arm	3,250	1,593	[SAE] 19.5/21.3	[ISO] 18.4/20.2
	Short Arm 1	2,600	1,362	[SAE] 24.2/16.5	[ISO] 22.8/25.0
	Short Arm 2	2,950	1,486	[SAE] 21.6/23.7	[ISO] 20.5/22.4
	Long Arm	3,950	1,765	[SAE] 16.8/18.4	[ISO] 16.0/17.5

## BUCKET DIGGING FORCES

Bucket Type	Capacity (m³)		Width (mm)		Digging Force (NOM./Press.up, ton)
	SAE/PCSA	CECE	With Cutter	W/O Cutter	
GP	1.29	1.44	1,273	1,192	[SAE] 22.5/24.6 [ISO] 25.2/27.6
	1.5	1.68	1,429	1,348	
	1.7	1.9	1,547	1,466	
	1.92	2.16	1,745	1,664	
ROCK	1.31	1.51	-	1,498	[SAE] 21.1/23.9 [ISO] 25.2/27.6
H Class	1.48	1.64	1,290	1,256	[SAE] 23.3/25.5 [ISO] 26.0/28.5
	1.72	1.92	1,464	1,430	
	1.91	2.14	1,600	1,566	
	2.21	2.47	1,804	1,770	
S Class	1.6	1.77	1,364	1,364	[SAE] 22.9/24.3 [ISO] 25.8/27.3
	1.81	2.02	1,518	1,518	
X Class	1.6	1.77	1,384	1,384	

## HYDRAULIC SYSTEM

The brain of the excavator is the EPOSTM (Electronic Power Optimizing System). It allows the efficiency of the hydraulic system to be optimised for all working conditions and minimises fuel consumption. The EPOSTM is connected to the engine's electronic control unit (ECU) via a data transfer link to harmonise 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
- Cross-sensing pump system for fuel savings
- Auto deceleration system
- Three operating modes, three power modes
- Button control of flow in auxiliary hydraulic circuits
- Computer-aided pump flow control

### Main pumps

Parallel, Bentaxis, Piston  
Max. flow : 2 x 315 l/min

### Pilot pump

Gear  
Max. flow : 27.4 l/min  
Relief valve pressure : 40 kgf/cm²

### Maximum system pressure

Main Relief Valve Pressure : 320/350 kgf/cm²  
Travel Crossover Relief Valve Pressure : 350 kgf/cm²  
Swing Crossover Relief Valve Pressure : 280 kgf/cm²

## SWING MECHANISM

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

**Max. Swing speed** - 9.1 rpm

**Max. Swing Torque** - 13,510 kgf.m

## UNDERCARRIAGE

Very robust construction of all chassis elements. All welded structures designed to limit stresses. High-quality, durable materials. Lateral chassis welded and rigidly attached to undercarriage. Track rollers lubricated for life. Idlers and sprockets fitted with floating seals. Track 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 (standard shoe) : 2

Lower rollers : 9

Track shoes : 50

## DRIVE

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

### Travel speed (High / low)

5.5/3.3 km/h

### Maximum traction force

33.7/18.0 ton

### Gradeability

70%

## REFILL CAPACITIES

### Fuel tank

620 l

### Cooling system (radiator capacity)

44.7 l

### Engine oil

31 l

### Swing drive

2 x 4 l

### Final drive

2 x 10 l

### Hydraulic tank

550 l

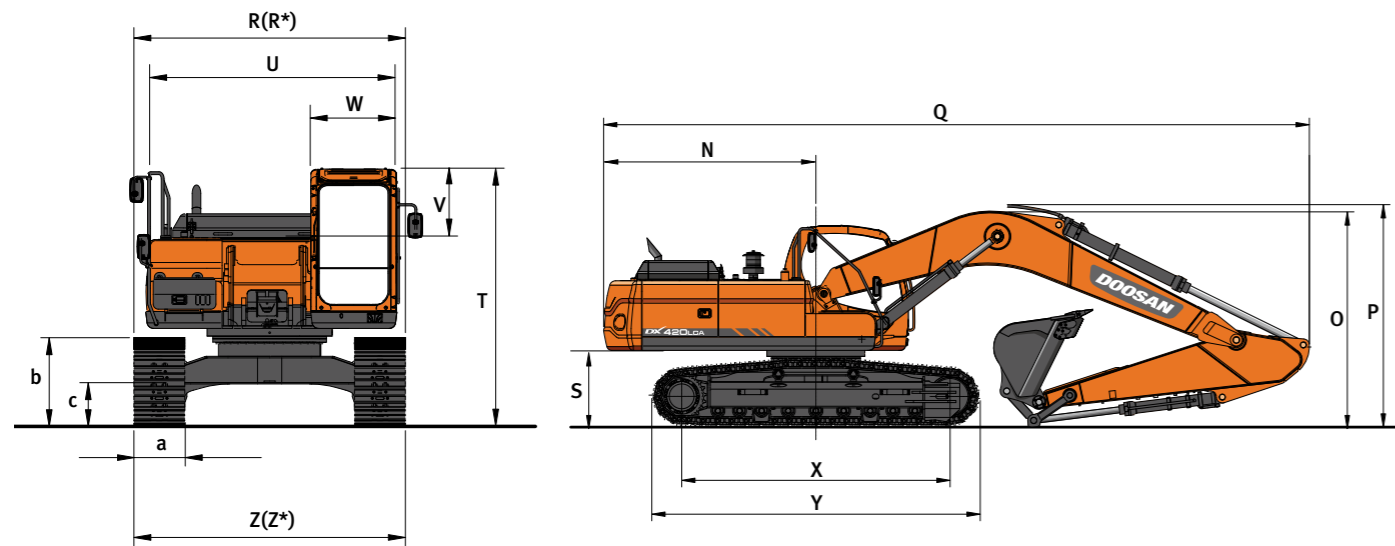
## BUCKET

Bucket type	Capacity (m³)		Width (mm)		Weight (kg)	Track						
	SAE/PCSA	CECE	With cutter	W/O cutter		STD track				600		
						8.0		10.0		600		600
GP	1.51	1.31	1,497	N/A	1,623	600						
						6.7m HD Boom				6.7m HD Boom		
						2.6m Arm	2.95m Arm	3.25m HD	3.95m Arm	2.6m Arm	2.95m Arm	3.25m HD
						A	A	A	A	A	A	A
ROCK	1.68	1.50	1,310	N/A	1,019	600						
						6.7m HD Boom				6.7m HD Boom		
						2.6m Arm	2.95m Arm	3.25m HD	3.95m Arm	2.6m Arm	2.95m Arm	3.25m HD
						X	X	X	X	X	X	X
H Class	1.64	1.48	1,256	1,290	1,575	600						
						6.7m HD Boom				6.7m HD Boom		
						2.6m Arm	2.95m Arm	3.25m HD	3.95m Arm	2.6m Arm	2.95m Arm	3.25m HD
						A	A	B	C	A	A	A
S Class	1.92	1.72	1,430	1,464	1,701	600						
						6.7m HD Boom				6.7m HD Boom		
						2.6m Arm	2.95m Arm	3.25m HD	3.95m Arm	2.6m Arm	2.95m Arm	3.25m HD
						A	A	B	C	A	A	A
X Class	2.14	1.91	1,566	1,600	1,829	600						
						6.7m HD Boom				6.7m HD Boom		
						2.6m Arm	2.95m Arm	3.25m HD	3.95m Arm	2.6m Arm	2.95m Arm	3.25m HD
						B	B	C	D	A	A	B
S Class	2.47	2.20	1,770	1,804	1,976	600						
						6.7m HD Boom				6.7m HD Boom		
						2.6m Arm	2.95m Arm	3.25m HD	3.95m Arm	2.6m Arm	2.95m Arm	3.25m HD
						C	C	D	D	B	B	C
X Class	1.77	1.59	1,364	1,364	2,150	600						
						6.7m HD Boom				6.7m HD Boom		
						2.6m Arm	2.95m Arm	3.25m HD	3.95m Arm	2.6m Arm	2.95m Arm	3.25m HD
						B	C	C	D	A	B	B
X Class	2.02	2.64	1,518	1,518	2,284	600						
						6.7m HD Boom				6.7m HD Boom		
						2.6m Arm	2.95m Arm	3.25m HD	3.95m Arm	2.6m Arm	2.95m Arm	3.25m HD
						A	B	C	C	A	A	B
X Class	1.77	1.59	1,364	1,384	2,349	600						
						6.7m HD Boom				6.7m HD Boom		
						2.6m Arm	2.95m Arm	3.25m HD	3.95m Arm	2.6m Arm	2.95m Arm	3.25m HD
						A	B	C	C	A	A	B
Maximum load pin-on (payload + bucket) (mm)						6,219	5,918	5,512	5,039	7,206	6,864	6,426

his bucket recommendation is based on machine stability considering the tipping load with certain density of handling material, and should be strictly followed. It's more recommendable to use a smaller size of bucket than recommendation under the severe working condition and application to avoid the durability risks.

Based on ISO 10567 and SAE J296, arm length without quick change clamp  
A : Suitable for materials with density of 2,100 kg/m³ (3,500 lb/yd³) or less  
B : Suitable for materials with density of 1,800 kg/m³ (3,000 lb/yd³) or less  
C : Suitable for materials with density of 1,500 kg/m³ (2,500 lb/yd³) or less  
D : Suitable for materials with density of 1,200 kg/m³ (2,000 lb/yd³) or less  
- : Not recommended

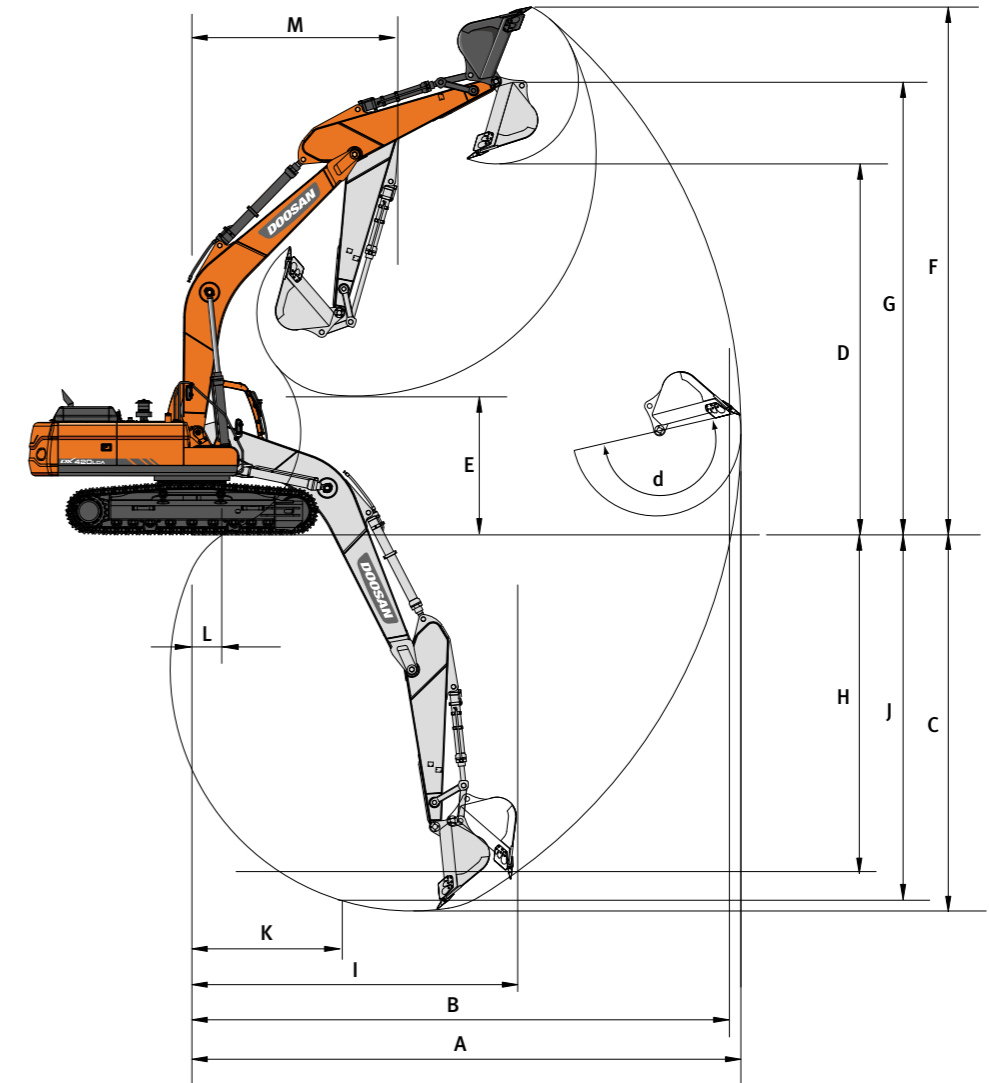
# DIMENSIONS



## DIMENSIONS

Boom type	(mm)		6,700			
Arm type	(mm)		3,250	2,950	2,600	3,950
Bucket type (SAE/PCSA)	(m <sup>3</sup> )		1.92H	1.92H	2.14H	1.64H
Shoe type	(mm)		600 TG			
Tail swing radius	(mm)	N	3,660	←	←	←
Shipping height (Boom)	(mm)	O	3,350	3,570	3,580	3,390
Shipping height (Hose)	(mm)	P	3,450	3,660	3,680	3,495
Shipping length	(mm)	Q	11,660	11,740	11,770	11,660
Shipping width (Std.)	(mm)	R	3,350	←	←	←
C/Weight clearance	(mm)	S	1,230	←	←	←
Height over cab.	(mm)	T	3,170	←	←	←
House width	(mm)	U	2,990	←	←	←
Cab. Height above house	(mm)	V	853	←	←	←
Cab. Width	(mm)	W	1,010	←	←	←
Tumbler distance	(mm)	X	4,250	←	←	←
Track length	(mm)	Y	5,200	←	←	←
Undercarriage width (Std.)	(mm)	Z	3,350	←	←	←
Shoe width	(mm)	a	600	←	←	←
Track height	(mm)	b	1,070	←	←	←
Car body clearance	(mm)	c	510	←	←	←

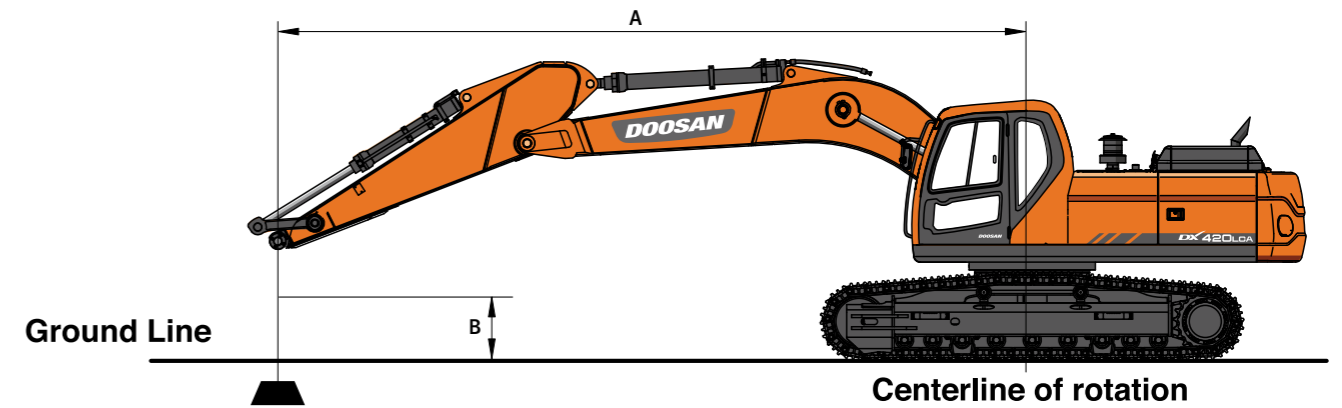
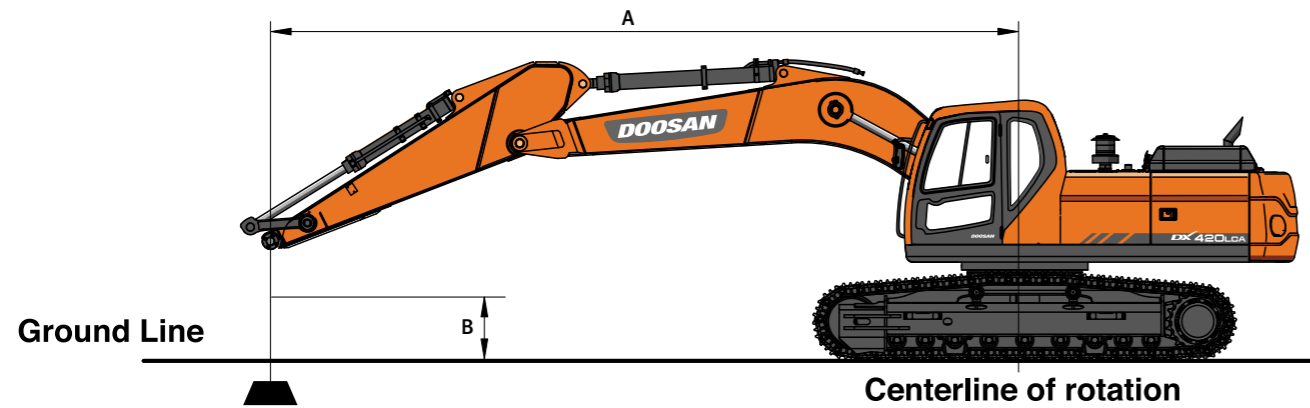
# WORKING RANGES



## WORKING RANGES

Boom type (One piece)	(mm)		6,700			
Arm type	(mm)		3,250	2,950	2,600	3,950
Bucket type (PCSA)	(m <sup>3</sup> )		1.92H	1.92H	2.14H	1.64H
Max. Digging reach	(mm)	A	11,495	11,200	10,880	12,170
Max. Digging reach (Ground)	(mm)	B	11,290	10,985	10,660	11,980
Max. Digging depth	(mm)	C	7,730	7,430	7,080	8,430
Max. Loading height	(mm)	D	7,795	7,615	7,460	8,200
Min. Loading height	(mm)	E	3,050	3,330	3,700	2,340
Max. Digging height	(mm)	F	10,920	10,725	10,560	11,350
Max. Bucket pin height	(mm)	G	9,520	9,340	9,190	9,930
Max. Vertical wall depth	(mm)	H	4,350	7,430	3,650	5,140
Max. Radius vertical	(mm)	I	9,440	9,315	9,170	9,700
Max. Depth to 8' line	(mm)	J	7,570	7,245	6,880	8,290
Min. Radius 8' line	(mm)	K	3,490	3,465	3,460	3,530
Min. Digging reach	(mm)	L	820	1,790	2,390	-200
Min. Swing radius	(mm)	M	4,380	4,405	4,380	4,440
Bucket angle	(deg)	d	177	←	←	←

# LIFTING CAPACITY



## STANDARD

### Metric

Boom : 6,700 mm (21' 11") Arm : 2,950 mm (9' 8") Bucket : Without bucket shoe : 600 mm (24") Unit : 1,000 kg

B(m)	3		4.5		6		7.5		9		Max. Reach		A(m)
	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	
9											11.50 *	11.50 *	5.98
7.5					11.11 *	11.11 *					10.81 *	8.57	7.39
6					12.02 *	11.88	10.85 *	8.26			10.60 *	6.93	8.29
4.5			18.08 *	17.33	13.64 *	11.21	11.54 *	7.96			9.68	6.08	8.84
3					15.40 *	10.49	12.28	7.6	9.24	5.75	9.06	5.64	9.11
1.5					16.65 *	9.95	11.94	7.29	9.08	5.61	8.89	5.5	9.13
0			18.08 *	14.8	16.51	9.67	11.72	7.1			9.16	5.63	8.89
-1.5			21.28 *	14.88	16.44 *	9.62	11.67	7.06			9.98	6.11	8.37
-3	23.27 *	23.27 *	18.86 *	15.15	14.79 *	9.77	11.19 *	7.22			11.12 *	7.2	7.52
-4.5	17.93 *	17.93 *	14.72 *	14.72 *	11.10 *	10.2					10.49 *	9.79	6.19

- Load point is the end of the arm.
  - Capacities marked with an asterisk (\*) are limited by hydraulic capacities.
  - Lift capacities shown do not exceed 75 % of minimum tipping loads or 87 % of hydraulic capacities.
  - The least stable position is over the side.
  - Lift capacities apply only to the machine as originally manufactured and normally equipped by the manufacturer.
  - The total mass of Machine is 40,331 kg included in this mass boom 6.7 m, arm 2.6 m, 8,000 kg counterweight, 2 kg bucket, all operating fluids and a 75 kg operator.
  - Lift capacities are in compliance with iso 10567.
- ☐ : Rating Over Front  
☐☐ : Rating Over Side or 360 Degree

## OPTION 1

### Metric

Boom : 6,700 mm (21' 11") Arm : 2,950 mm (9' 8") Bucket : Without bucket shoe : 600 mm (24") Unit : 1,000 kg

B(m)	3		4.5		6		7.5		9		Max. Reach		A(m)
	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	
9											10.66 *	10.66 *	6.46
7.5							10.12 *	8.43			10.16 *	7.88	7.78
6					11.39 *	11.39 *	10.35 *	8.3			10.01 *	6.47	8.63
4.5			16.98 *	16.98 *	13.05 *	11.3	11.11 *	7.98	9.4	5.9	9.11	5.7	9.17
3					14.90 *	10.56	12.05 *	7.6	9.22	5.73	8.55	5.3	9.43
1.5					16.32 *	9.96	11.92	7.27	9.03	5.56	8.39	5.16	9.45
0			19.88 *	14.7	16.47	9.62	11.66	7.04	8.91	5.45	8.61	5.27	9.22
-1.5	14.62 *	14.62 *	21.79 *	14.72	16.35	9.52	11.57	6.96			9.32	5.69	8.72
-3	24.95 *	24.95 *	19.62 *	14.95	15.20 *	9.62	11.68	7.05			10.75 *	6.6	7.91
-4.5	20.11 *	20.11 *	15.91 *	15.41	12.20 *	9.96					10.42 *	8.65	6.66

- Load point is the end of the arm.
  - Capacities marked with an asterisk (\*) are limited by hydraulic capacities.
  - Lift capacities shown do not exceed 75 % of minimum tipping loads or 87 % of hydraulic capacities.
  - The least stable position is over the side.
  - Lift capacities apply only to the machine as originally manufactured and normally equipped by the manufacturer.
  - The total mass of Machine is 40,455 kg included in this mass boom 6.7 m, arm 2.95 m, 8,000 kg counterweight, 2 kg bucket, all operating fluids and a 75 kg operator.
  - Lift capacities are in compliance with iso 10567.
- ☐ : Rating Over Front  
☐☐ : Rating Over Side or 360 Degree

## OPTION 2

### Metric

Boom : 6,700 mm (21' 11") Arm : 2,600 mm (8' 6") Bucket : Without bucket shoe : 600 mm (24") Unit : 1,000 kg

B(m)	3		4.5		6		7.5		9		Max. Reach		A(m)
	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	
9											11.50 *	11.50 *	5.98
7.5					11.11 *	11.11 *					10.81 *	8.57	7.39
6					12.02 *	11.88	10.85 *	8.26			10.60 *	6.93	8.29
4.5			18.08 *	17.33	13.64 *	11.21	11.54 *	7.96			9.68	6.08	8.84
3					15.40 *	10.49	12.28	7.6	9.24	5.75	9.06	5.64	9.11
1.5					16.65 *	9.95	11.94	7.29	9.08	5.61	8.89	5.5	9.13
0			18.08 *	14.8	16.51	9.67	11.72	7.1			9.16	5.63	8.89
-1.5			21.28 *	14.88	16.44 *	9.62	11.67	7.06			9.98	6.11	8.37
-3	23.27 *	23.27 *	18.86 *	15.15	14.79 *	9.77	11.19 *	7.22			11.12 *	7.2	7.52
-4.5	17.93 *	17.93 *	14.72 *	14.72 *	11.10 *	10.2					10.49 *	9.79	6.19

- Load point is the end of the arm.
  - Capacities marked with an asterisk (\*) are limited by hydraulic capacities.
  - Lift capacities shown do not exceed 75 % of minimum tipping loads or 87 % of hydraulic capacities.
  - The least stable position is over the side.
  - Lift capacities apply only to the machine as originally manufactured and normally equipped by the manufacturer.
  - The total mass of Machine is 40,331 kg included in this mass boom 6.7 m, arm 2.6 m, 8,000 kg counterweight, 2 kg bucket, all operating fluids and a 75 kg operator.
  - Lift capacities are in compliance with iso 10567.
- ☐ : Rating Over Front  
☐☐ : Rating Over Side or 360 Degree

## OPTION 3

### Metric

Boom : 6,700 mm (21' 11") Arm : 3,950 mm (12' 11") Bucket : Without bucket shoe : 600 mm (24") Unit : 1,000 kg

B(m)	1.5		3		4.5		6		7.5		9		Max. Reach		A(m)			
	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐	☐	☐☐				
9													7.19 *	7.19 *	7.81			
7.5									8.41 *	8.41 *			6.76 *	6.32	8.92			
6									9.01 *	8.53	8.67 *	6.18	6.60 *	5.36	9.68			
4.5								11.33 *	11.33 *	9.91 *	8.16	9.07 *	6	6.65 *	4.8	10.15		
3								18.09 *	16.81	13.37 *	10.86	11.01 *	7.72	9.28	5.76	6.88 *	4.49	10.39
1.5								21.34 *	15.34	15.19 *	10.1	11.97	7.29	9.01	5.52	7.18	4.37	10.40
0					8.98 *	8.98 *	22.51 *	14.6	16.33 *	9.58	11.6	6.96	8.8	5.33	7.31	4.42	10.19	
-1.5	10.25 *	10.25 *	14.06 *	14.06 *	22.55 *	14.36	16.15	9.32	11.39	6.78	8.7	5.23	7.76	4.69	9.75			
-3	15.52 *	15.52 *	20.22 *	20.22 *	21.21 *	14.43	15.98 *	9.29	11.36	6.75	8.74	5.28	8.7	5.25	9.03			
-4.5	21.70 *	21.70 *	25.40 *	25.40 *	18.59 *	14.74	14.19 *	9.46	10.77 *	6.92			9.65 *	6.41	7.97			
-6			18.42 *	18.42 *	13.95 *	13.95 *	10.22 *	9.95					9.16 *	9.15	6.38			

- Load point is the end of the arm.
  - Capacities marked with an asterisk (\*) are limited by hydraulic capacities.
  - Lift capacities shown do not exceed 75 % of minimum tipping loads or 87 % of hydraulic capacities.
  - The least stable position is over the side.
  - Lift capacities apply only to the machine as originally manufactured and normally equipped by the manufacturer.
  - The total mass of Machine is 40,734 kg included in this mass boom 6.7 m, arm 3.95 m, 8,000 kg counterweight, 2 kg bucket, all operating fluids and a 75 kg operator.
  - Lift capacities are in compliance with iso 10567.
- ☐ : Rating Over Front  
☐☐ : Rating Over Side or 360 Degree

# STANDARD & OPTION

## STANDARD EQUIPMENT

### Boom & Arm

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- 6.7 m Boom (Heavy duty)
- 3.25 m Arm (Heavy duty)

### Hydraulic system

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- Boom and arm flow regeneration
- Boom and arm holding circuit
- 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
- Pull-up type front window and removable lower front window
- Room light
- Intermittent windshield wiper
- Cigarette lighter and ashtray
- Cup holder
- Hot & Cool box
- 7 inch LCD color monitor panel
- E/G RPM control dial
- AM/FM radio + MP3 (USB)
- Remote radio ON/OFF switch
- 12 V spare powers socket
- Serial communication port for laptop PC interface
- Joystick lever with 3 switches
- Sun visor
- Sun roof

### Safety

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- 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
- Battery protector cover

### Others

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- Double element air cleaner
- Water separator
- Dry type pre cleaner
- Fuel filter
- Dust screen for radiator/oil cooler
- Engine overheat prevention system
- Engine restart prevention system
- Self-diagnostic system
- Alternator (24 V, 60 amps)
- Electric horn
- Halogen working lights (frame mounted 1, boom mounted 2)
- Hydraulic track adjuster
- Track guards
- Greased and sealed track link
- Air breather filter of hydraulic oil tank

## 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

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- 2.6 m Arm
- 2.95 m Arm
- 3.95 m Arm

### Safety

---

- Boom and arm hose rupture protection valve
- Overload warning device
- Cabin Top/Front guard (ISO 10262, FOGS standard)
- Travel & swing alarm
- Rotating/Telescopic beacon
- Rear view camera
- Rear lamp for number plate

### Cabin & Interior

---

- Air suspension seat with heater
- Rain Shield
- High seat Mount
- Breaker pedal
- ROPS/FOGS Cabin
- Cabin front guard (Upper and lower guard)
- Steel roof cover
- Side mirror
- EMI Filter

### Others

---

- Piping for crusher
- Piping for quick clamp
- Piping option
  - Breaker with flow control valve - Crusher
  - Crusher with tilting - Rotating
  - Clamshell - Quick clamp
- Two pumps flow for attachment line
- 600 mm/750 mm/800 mm/900 mm shoe
- Lower wiper
- Fuel heater
- 80A alternato
- Fuel filler pump
- Electric fuel transfer pump
- Working lights
  - 4-front/2-rear on cabin
  - 2-front on cabin
  - 1 on counterweight
- Counterweight (6.6 Ton)
- Hydraulic oil
  - Cold weather (VG32)
  - Normal (VG46)
  - Tropical weather (VG68)
- Full length track guard
- Breaker filter
- Water separator with heater
- Oil washed pre cleaner
- Heavy duty under cover
- Cold weather starting kit
  - 110/220 V Plug heater
  - Diesel-Powered engine block heater
- Lever pattern change (ISO/BHL)
- Telematics system

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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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