

## > We are DEVELON

We trace our roots to 1937 as one of Korea's first large scale machine plant. Throughout time we have consistently delivered exceptional products and solutions.

DEVELON is a bold name that reflects our core ambition to continue developing onwards and leaving behind a positive footprint in our world. Moving forward, we seek to be part of our customers and partners' endeavor to build a better world.

Powered by **Innovation**



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[develon-ce.com](http://develon-ce.com)

# DEVELON

Excavator

# DX400LC-7B



# DX400LC-7B

Built upon the design principle of 'Reducing customers' operating expenses while enhancing equipment durability to maximize customer profitability,' the 7B series product ensures that customers can sustain excavator performance equal to or superior to competing models. Through dedicated research and development, DEVELON prioritizes the creation of cutting-edge equipment capable of accommodating oil products; thus demonstrating steadfast commitment to fulfilling the needs and aspirations of its customers.

## Engine

The DX400LC-7B equipped with an engine from SCANIA offers notable advantages such as enhanced fuel efficiency, reduced fuel consumption, and exceptional durability by augmenting the versatility of engine components; thus reducing costs associated with repairs and maintenance.

## Fuel consumption

Advanced control technologies employed in both hydraulic system and engine contribute to decreased fuel consumption.

## Improved ability to adapt to oil products

The capability to adapt to low-quality oil products is significantly improved by enhancing the filter efficiency of the oil filter system and spraying more anti-abrasion and anti-corrosion materials on the key parts.

## Dramatically improved chassis reliability

The chassis reliability has undergone significant enhancement, ensuring steadfast and secure digging operations even during prolonged tasks.

## Adoption of state-of-the-art cabin

The cabin with the latest design increases comfort with a wide view and low-noise environment.

## LED lights on the main frame and boom

The installation of LED lights can improve visibility at night for operators as well as work efficiency.

## Hydraulic system

High-performance and high-durability components are used in the main pump control valve. The response speed has been increased through the use of a negative control system. Energy loss was reduced by increasing the thickness of the control valve hole.

DX400LC-7B guarantees operation efficiency, reduced fuel consumption, and increased profits for customers using the equipment for mining and civil engineering projects.

## Strong front-working device

Durability is improved by increasing the plate thickness of the key parts and applying advanced manufacturing processes.

## Fully automated fuel heating

An automatic activation mechanism was added to the fuel heating function for automatically heating fuel in cold regions.

## Fully automatic temperature control system

Frost formation on the glass in winter is prevented by arranging the vents reasonably and securing the suitability of operation by using the ergonomic cooling and heating air circulation system.

## Maintenance

Parts requiring frequent maintenance have been strategically positioned for easy reach, with the human-centered design enhancing serviceability.

## Cab protection fence

Installation of protective fence at the lower section of the cab  
Front protective fence also available as an option

## Bucket

A reinforced bucket suitable for excavator tracks was selected to secure excellent durability in high-load working environments, enabling long hours of operation.

## Boom

The strength and durability of the boom were enhanced by applying thick reinforced steel plates and high-strength casts.

## Separation of water tank and oil cooling

By significantly enhancing heat dissipation capabilities, cleaning and maintenance tasks are made easier.

## Arm

The durability of the arm was enhanced by increasing the thickness of the steel plate on the arm and using reinforcement bars and wear-resistant reinforcement steel plates.



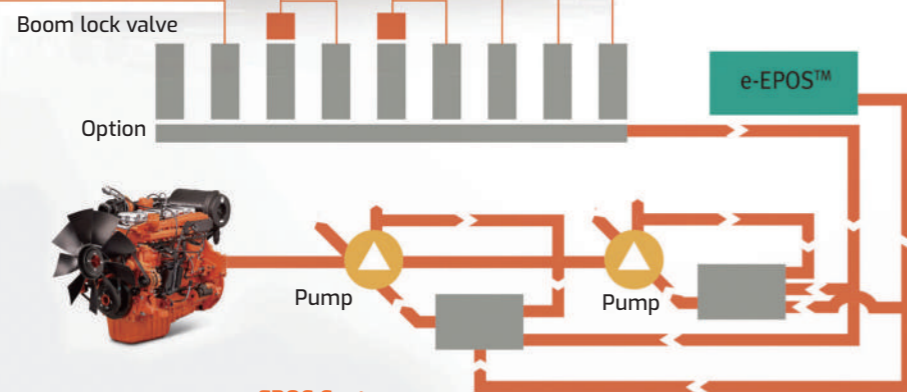
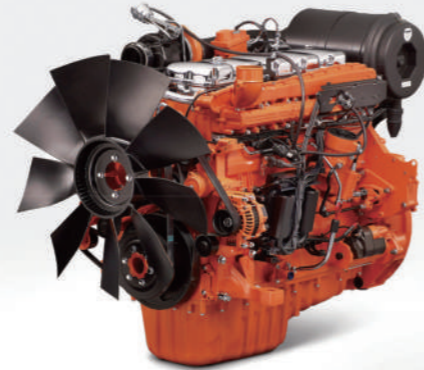
# FUEL EFFICIENCY

The robust engine output, combined with DEVELON's proprietary EPOS (Smart Control System) and SPC (Smart Power System) technologies, lets operators achieve optimal efficiency while simultaneously curbing fuel consumption. SCANIA's electronically controlled direct injection engine boasts of multiple filters and separators. Additionally, the oil discharge nozzles are coated with a specialized substance for enhanced protection against subpar oil products.

## Engine

- SCANIA's electronically controlled direct injection engine
- Low rpm and high torque
- Uses pump nozzle technology suitable for the global environment
- Low fuel consumption

Manufacturer	SCANIA
Efficiency	232 kW (315 PS)/ 1,800 rpm
Emission	Complies with tier 3 emission standard
No. of Cylinders	5
Displacement	9.3 l



## SPC Mode

Through the automatic adjustment of engine rotational speed and main pump torque when the machine operates under the demanding conditions of actual work scenarios, the smart detection equipment enhances operational efficiency while simultaneously reducing fuel consumption.

## EPOS System

Depending on the actual working conditions, operators have the option to select from Power Mode (P), Standard Mode (S), and Economic Mode (E). Through simultaneous smart control of automatic idling, main pump flow rate, and hydraulic system pressure, both power loss and fuel consumption levels are reduced.

# FUEL EFFICIENCY



## Excellent job handling performance

In designing this equipment, DEVELON meticulously considered the demands of challenging work environments such as mines. By integrating a cutting-edge, high-powered engine, DEVELON ensures that the vehicle excels even in the most demanding conditions, delivering unparalleled performance.



## Unparalleled digging capability

This machine boasts of unmatched digging capability, offering versatility across various work environments including mines.



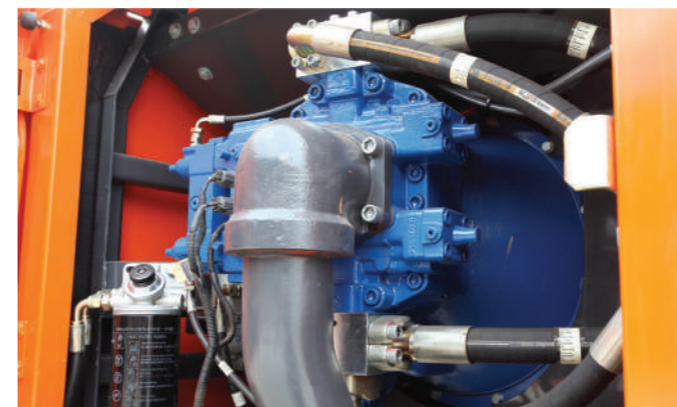
## Rapid loading times

The machine realizes remarkably swift loading and unloading times thanks to the rapid movement of the boom and arm as well as substantial swing torque.



## Outstanding Safety Features

The DX400LC-7B features wide tracks and extended crawlers, distributing its weight evenly for enhanced stability. This design enables the machine to execute excavation tasks on inclines with exceptional safety. Its remarkable lateral lifting power ensures secure handling of heavy loads.



## Efficient Hydraulic System

Equipped with a large-capacity (2 X 282 l/min) Rexroth hydraulic pump from Germany, the excavator operates with heightened efficiency. The upgraded hydraulic pump enhances durability and reliability, enabling the excavator to perform tasks with optimal operating efficiency.



## Superior Gradeability

Advanced driving components deliver robust driving power and ample chassis-to-ground clearance, enhancing driving and slope-climbing performance particularly on rugged terrain.

# COMFORT



## 360-degree all-around driving visibility

The cab's glass windows have been made larger, providing operators with a 360-degree view while they perform their tasks. In particular, the large glass window on the right side of the cabin provides an unobstructed view of objects in the lower inner perimeter of the cabin.

By reducing noise inside and outside the cab, operator convenience was improved.

## 1 The cab is equipped with an operator's seat adjustment mode, allowing the operator to control the seat position easily.

The vibration-proof suspension seat can be adjusted both forward and backward as well as height-wise to accommodate the operator's weight.

## 2 Automobile-grade air conditioning system

The fully automated temperature control provides a comfortable driving environment for the operator while also relieving fatigue.

## 3 Handle

Through ergonomic design, the manipulability of the handle was improved, enhancing ease of operation. Additionally, the wipers can be controlled manually using the buttons located on the right side of the handle.



The implementation of an "operator-centered" design concept has effectively reduced noise and vibrations within the cab, resulting in significantly lower levels of both. Simultaneously, the addition of a multifunction control panel and a crucial all-season air-conditioning unit has heightened comfort and convenience.



Another customer convenience feature is the 8 inch LCD monitor that provides operators with various kinds of information about the vehicle's state.

- a. Short-distance odometer: Fuel consumption, driving time, average fuel consumption, and daily average fuel consumption can be selected for viewing.
- b. Check for warning information: Warning information can be read by selecting the equipment warning information on the instrument panel.
- c. Oil filter information: total use time and replacement period of key consumable parts.



## 5 SPC (Smart Power Control) selection switch

By selecting the smart power control fuel reduction mode, customers can significantly reduce fuel consumption; thus increasing their profitability.

## Audio control buttons

The centralized placement of the audio control buttons ensures easy access.

## 6 Convenient glove compartment and power supply

The cab features a convenient small glove compartment and a 12V USB charging station, allowing the operator to store personal items and charge mobile phones. Additionally, a quick start switch button on the air conditioner enables swift activation of the air conditioning unit.



## 9 work lights for operation

9 Powerful work lights ensure convenience and safety during night operations.

# RELIABILITY

## Enhanced reliability through advanced design and rigorous testing

Utilizing advanced computer-aided 3D design, simulation tests, repetitive configuration tests, and equipment reliability assessments, the machine's lifespan has been significantly extended. This meticulous approach not only enhances the machine's reliability but also creates substantial added value for our customers.



### Redesigned high-strength, wear-resistant mining bucket

To bolster the machine's performance in rugged mining conditions, significant upgrades were made to the strength, wear resistance, and lifespan of the bucket. A comprehensive redesign was undertaken, aligning the bucket with the excavator tracks to enhance digging force. Critical components such as lip plate, side plate, and back plate were reinforced with high-strength steel to bolster wear resistance. Additionally, side teeth, bucket teeth, and lip plate guard were incorporated into the design to fortify the bucket's ability to withstand the extreme rigors of mining operations.



### Reinforced main frame structure

The cross-sectional area was increased, optimal material was used, plate thickness was increased, and lifespan was extended.

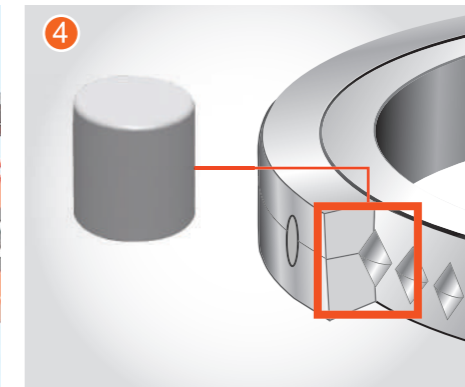
### Improved chassis and connecting rod structures

Potential cracking problems that could appear due to faulty welding were addressed by integrating the upper and lower plates of the chassis with the connecting rod.



### Lubrication points

To improve the vehicle's adaptability to working in harsh, dust-filled environments, more lubrication points were added to the arm joints.



### Roller-type swing bearing

The use of roller-type swing bearings translates into greater load-bearing capability and improved reliability and durability.

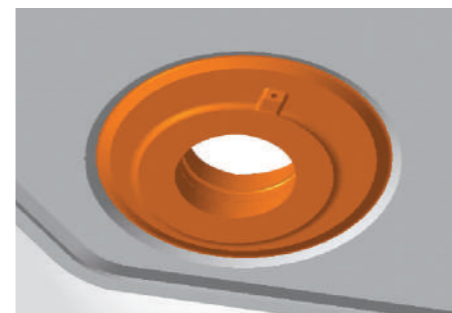


### Arm & boom reinforcement design

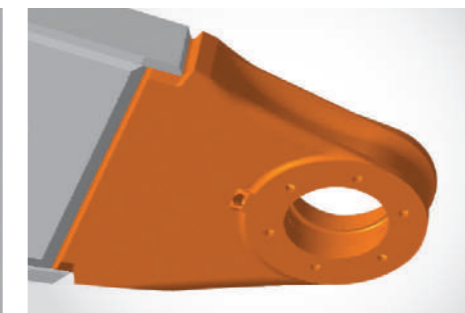
The thicknesses of the arm and boom steel plates have been increased by 16% compared to previous product versions.

### Structural optimization

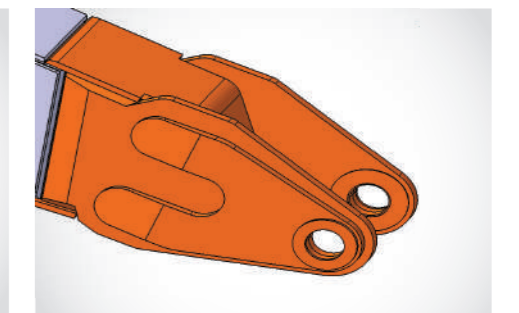
The load-bearing area was expanded by adding a concentrated cluster of joints in the front section, and the product lifespan was extended by increasing the thickness of the plates and improving the manufacturing process.



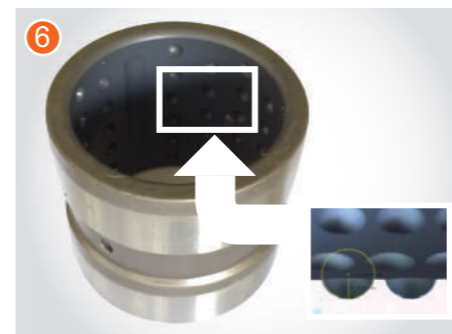
Arm center knuckle



Arm end knuckle



Boom end



### Bushings with superior wear-resistant properties

The surface of the bushings was coated with a self-lubricating material to improve lubrication and debris dispersal capability considerably. By enhancing the anti-friction performance, the useful life of the bushings was extended.



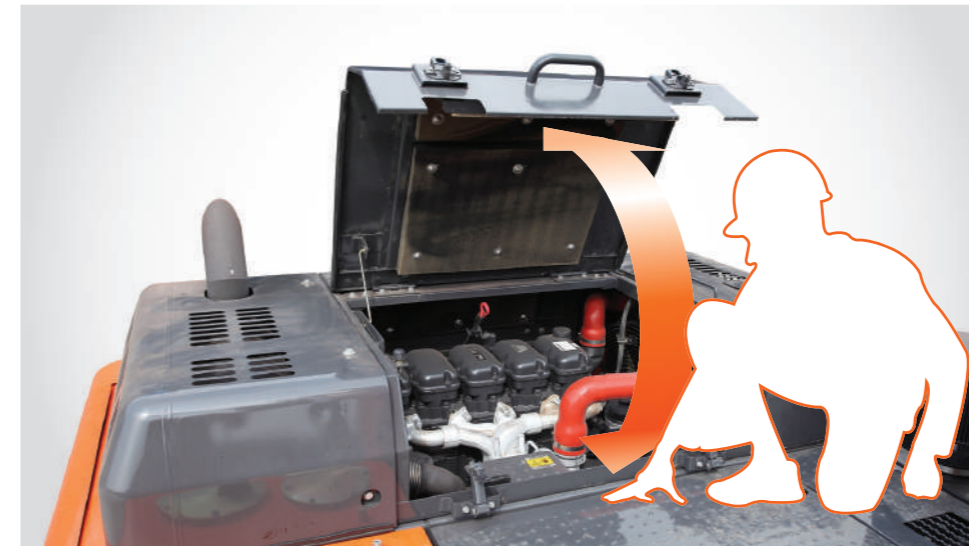
### Cylinder

- By increasing the durability of the cylinder that drives the front lifting mechanism, maintenance and repair costs were lowered, enabling the vehicle to be operated longer and more continuously.
- Sealing was improved through the adoption of a sealing method that uses a double-lip seal structure.

# MAINTENANCE

## Serviceability that is convenient, fast, and economical

Advanced maintenance equipment offers convenience and ensures that the vehicle remains operational for the operator.



### Engine cover designed with human-centered design principles

Departing from the unibody structure of previous engine covers, the engine cover consists of 3 independently moving parts to increase the durability and manipulability of the cover.



### Installation of firewall between the engine and the pump

A supplementary firewall has been installed to prevent the spread of fire between the engine and the pump.



### Convenient maintenance

Protection and maintenance work have become even easier as a result of relocating the oil filter to the surface of the engine cover where it is more accessible for the operator.



### Dual oil-water separator

The addition of a secondary oil-water separator not only enhances fuel filtering performance but also provides added protection for the engine's functions.



### Fuel tank cover

The dual-locking mechanism can deter theft of fuel stored in the tank.



### Extended useful lives of consumable items

Hydraulic oil: 4000 hours  
Engine oil filter: 500 hours  
Engine oil: 500 hours

### Ride handle and anti-slip cover

Convenience of maintenance is improved by increasing the ride handle adopting the latest black anti-slip plate and increasing its area. The anti-slip performance has become even better through the use of embossing patterns engraved onto the anti-slip plate.



# DEVELON FLEET MANAGEMENT

## Telematics Service (OPTIONAL)

**TELECOMMUNICATIONS** Data flow from machine to web



### TELEMATICS TERMINAL

Terminal device is installed and connected to a machine to get machine data.



### TELECOMMUNICATION

DEVELON provides Dual mode (Cellular, Satellite) communication to maximize communication coverage



### DEVELON FM WEB

User can monitor machine status from DEVELON FM Web

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

#### CUSTOMER

Improve work efficiency

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

#### DEALER

Better service for customers

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

#### DEVELON

Responsive to customer's voice

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

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



· GPS



· Fuel information



· Preventive maintenance



· Operation hours



· Fault code / warning



· ADT Productivity



· Reports

FUNCTION	EXCAVATOR	WHEEL LOADER	ADT
GPS	All models	All models	All models
Operation hours	All models	All models	All models
Maintenance parts	All models	All models	All models
Fault code / Warning	All models	All models	All models
Fuel information	All models	All models	All models
Dump capacity	N/A	N/A	All models

# GLOBAL PARTS NETWORK

## QUALITY-PROVEN MAIN COMPONENTS

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

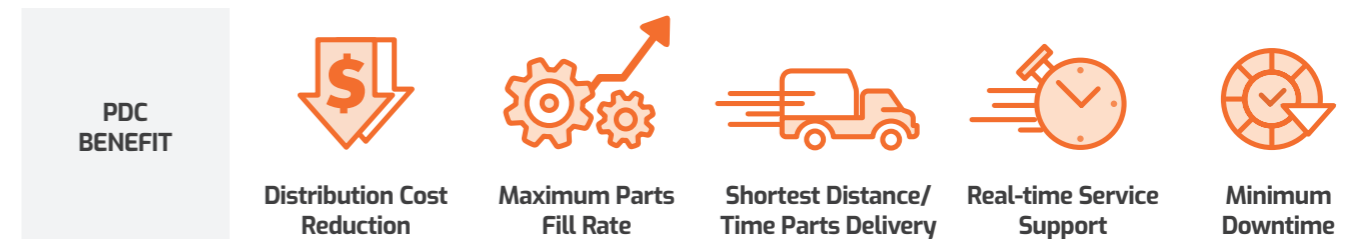


### GLOBAL NETWORK

The global network of the GPDC (Global Parts Distribution Center) maximizes its fill 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. Develon 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 ten other PDCs include one in China (Yantai), three in USA (Atlanta, Seattle and Miami), two in Europe (Germany and the UK), one in the Middle East (Dubai), two in Asia (Singapore and Indonesia) and one in Brazil (São Paulo).



# TECHNICAL SPECIFICATIONS

## ENGINE

Engine	
Model	DC09
Type	Direct fuel injection and electronic control
Intake	Turbocharged
Number of cylinders	5
Bore	130 mm
Stroke	140 mm
Rated Power	232 kW (315 PS) / 1,800 rpm

Swing System	
Driving system	Hydraulic
Deceleration unit	Planetary gear reducing
Swing brake	Wet multi-disc brake
Swing speed	8.2 rpm

Driving and Braking device	
Steering control	Pedal plate and joystick integrated control
Driving method	Hydraulic
Travel motor	Axial piston hydraulic motor
Travel speed (high/low)	4.9/2.9 km/h
Operation brake	Hydraulic brake
Parking brake	Wet multi-disc brake

Undercarriage	
Center frame	X-frame
Track frame	box-type
Track seal	self-lubricating track
Track adjustment(High/Low)	buffer tensioning
Track shoes	48 each side
Roller	2 each side
Track roller	8 each side

## OPERATING WEIGHT

The operating weight (approximate value) includes the 6,500 mm HD boom, 2,900 mm HD arm, SAE full bucket with 1.71 m<sup>3</sup> capacity, operator, lubricants, coolant, fully filled fuel tank, and standard configuration.

Crawler shoe	600 mm
Operating weight	37,650 kg
Ground contact pressure	0.69 kg/cm <sup>2</sup>

Cylinder	Quantity	Bore x Rod diameter x stroke
Boom	2	150 X 100 X 1,430 mm
Arm	1	170 X 120 X 1,812 mm
Bucket	1	150 X 100 X 1,278 mm

### 1 FOPS

A FOPS improves safety of operator in the cab by blocking falling objects.



## HYDRAULIC SYSTEM

Hydraulic Motor	
Travel motor	Axial plunger type X 2
Swing brake	Wet multi-disc brake

Main Pump	
Type	Axial plunger pump
Maximum flow	2 X 282 l/min

Safety valve setting	
Work device hydraulic circuit	350 kgf/cm <sup>2</sup> (34.3 Mpa)
Travel hydraulic circuit	350 kgf/cm <sup>2</sup> (34.3 Mpa)
Swing hydraulic circuit	300 kgf/cm <sup>2</sup> (29.4 Mpa)

Maximum digging force (ISO)	
6,500mm HD boom, 2,900mm HD arm, SAE full bucket with 2.15m <sup>3</sup> capacity	
Bucket	26.0 ton (254.8 kN)
Arm	20.4 ton (200.0 kN)

Oil tank capacity	
Fuel tank	Hydraulic oil tank
610 l	420 l

Coolant/lubricant capacity (replacement)	
Radiator	45 l
Engine	36 l
Transmission oil	2 X 5.5 l
Rotation reducer	1 X 7 l

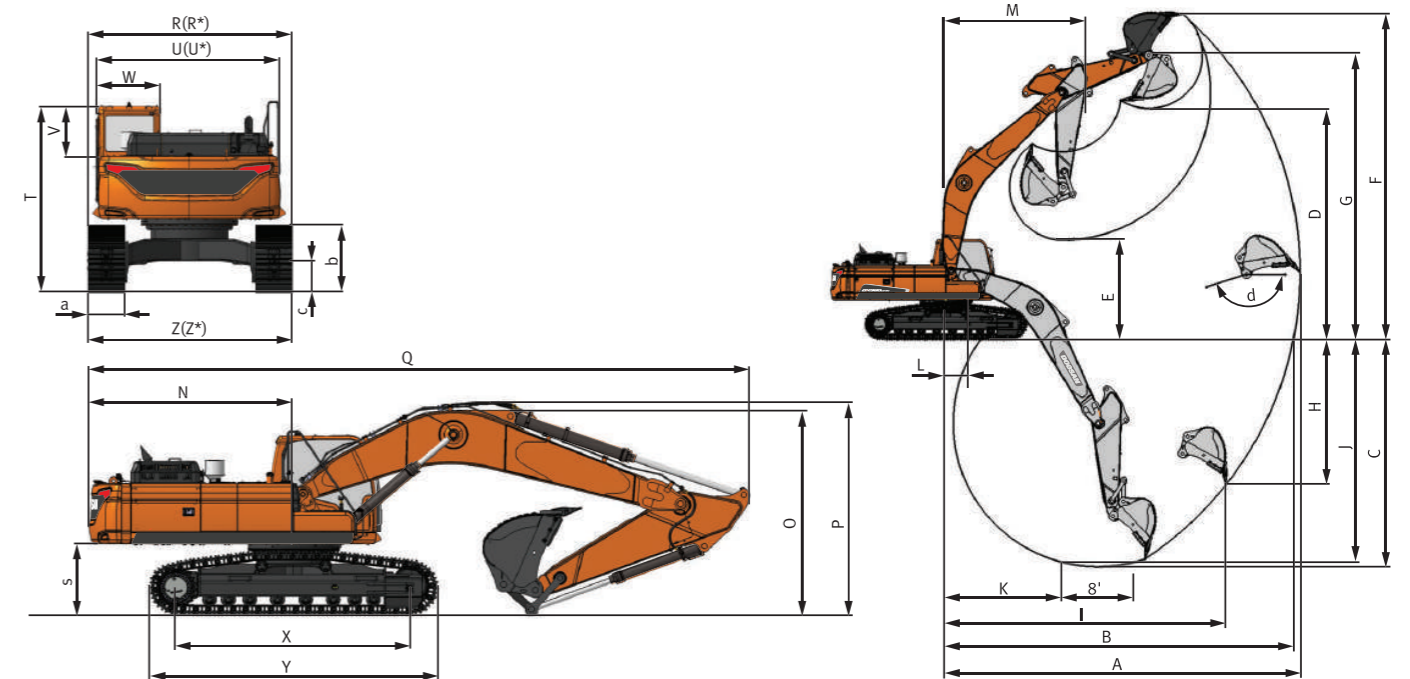
## OPTION



### DEVELON Hydraulic HammerCrusher

Through excellent quality and service, the new HB series hammer crusher offers the best combination of DEVELON attachments to customers.

# DIMENSIONS & WORKING RANGES



Boom length	(mm)	6,500
Arm length	(mm)	2,900
Bucket capacity	(m <sup>3</sup> )	1.95/2.15
Tail swing radius	(mm) N	3,530
Shipping height (Boom)	(mm) O	3,630
Shipping height (Hose)	(mm) P	3,720
Shipping length	(mm) Q	11,380
Shipping width	(mm) R	3,350
Counterweight clearance	(mm) S	1,250
Overall height (Cabin)	(mm) T	3,200
House width	(mm) U	3,155
Cabin height (Above turntable)	(mm) V	835
Cabin width	(mm) W	1,035
Tumbler distance	(mm) X	4,050
Track length	(mm) Y	4,975
Undercarriage width	(mm) Z	3,350
Shoe width	(mm) a	600
Track height	(mm) b	1,135
Car body clearance	(mm) c	545

Maximum digging reach	(mm) A	10,966
Maximum digging reach (ground)	(mm) B	10,761
Maximum digging depth	(mm) C	6,923
Maximum loading height	(mm) D	7,002
Minimum loading height	(mm) E	2,941
Maximum digging height	(mm) F	10,106
Maximum bucket pin height	(mm) G	8,765
Maximum vertical wall digging depth	(mm) H	3,023
Maximum radius vertical	(mm) I	9,675
Maximum depth to 8' line	(mm) J	6,809
Minimum radius 8' line	(mm) K	3,834
Minimum digging reach	(mm) L	70.5
Minimum swing radius	(mm) M	4,525
Bucket angle	(°) d	173

\* The extruded area of the crawler is not included.



### 2 Rear-view camera

A rear-view camera is offered to customers as an option. With the installation of this camera, operators can check the rear view of the worksite through the instrument panel—a feature that contributes to the safety of operating the vehicle.

### 3 Oil bath filter

The oil bath filter improves engine durability by filtering impurities in the air that are present in harsh working environments.