

# DEVELON

Mini Excavator

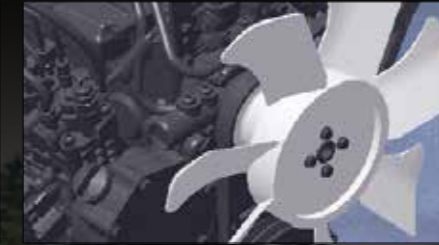
# DX80R



# NEW FEATURES

The new DX80R hydraulic excavator has all the advantages of the previous model, and now offers additional added value to the operator.

The new DX80R was developed with the concept of "providing optimum value to the end user." In concrete terms, this translates into : Increased production and improved fuel economy due to the electronic optimization of the hydraulic system and the new generation engine.



Improved ergonomics which increase operator comfort, along with excellent all around visibility ensure a safe and pleasant working environment. Improved reliability through the use of high performance materials combined with new methods of structural analysis, thus reducing operating costs. Reduced maintenance increases machine availability and reduces operating costs of the excavator.



# COMFORT

This standard-duty machine, offers a spacious operators cabin which is normally only found in medium and heavy-duty machines. The working controls in the cabin are ergonomically designed to ensure operator convenience and comfort.

## COMFORTABLE OPERATORS CABIN

The operating controls are arranged in a convenient and ergonomic fashion, to ensure maximum operating efficiency. A large capacity air-conditioning system has been installed for operator comfort in all weathers. The spacious cabin provides the operator with a wide field of view for the best possible working conditions.

## FIXED-TYPE INSTRUMENT PANEL

The centralized display panel provides comprehensive information about the status of the machine in an easy to read format. The high quality display panel can see all information at a glance.

## HIGH-OUTPUT AIR-CONDITIONER & DEMISTER

A high capacity air-conditioner has been installed with vents located both in front and behind the operator's seat to maximize the efficiency of the air-onditioning efficiency. A defroster has been installed to prevent the front windshield from becoming frosted in the cold weather ensuring safer operation.



## LARGED CABIN ENTRANCE

A large door & clear entrance space ensure easy access into and out of the machine. A large open floor space means any inconvenience from operating equipment is minimized.



## CONTROL STAND

The left and right control stands are ergonomically placed for convenient operation. The uni-body plastic design provides the operator with a spacious and comfortable cabin environment.



## 2-STAGE SLIDING SEAT / TILTING SEAT

Since the seat cushion position and angle can be adjusted in addition to the 2-step slide control function, the seat can be adjusted in accordance with personal preference. Comfort is further improved with adjustable lumbar support and with the option of a seat heater.



## SWITCHES

The ergonomically placed switches maximizes convenience for the operator.



## DOZER CONTROL

The dozer control lever is positioned in the right-hand control stand to ensure easy and convenient operation.

## A/C CONTROL PANEL

A/C panel has the intuitive design, allowing the operator can access this panel easily.



## FLOOR PLATE (RUBBER MAT)

The boom swing pedal, breaker(1&2way) pedal and foot rest are installed in a very spacious and convenient location. In addition the rubber mat contributes to an easy clean and comfortable enviroment.



## JOYSTICK

The hydraulic joystick levers have very comfortable grips and allow the operator to perform precise operations very easily. As there are 3 switches on each lever, attachment can be easily operated.



## WIDE STORAGE SPACE



## SEAT BACK POCKET



## RUBBER MOUNTING

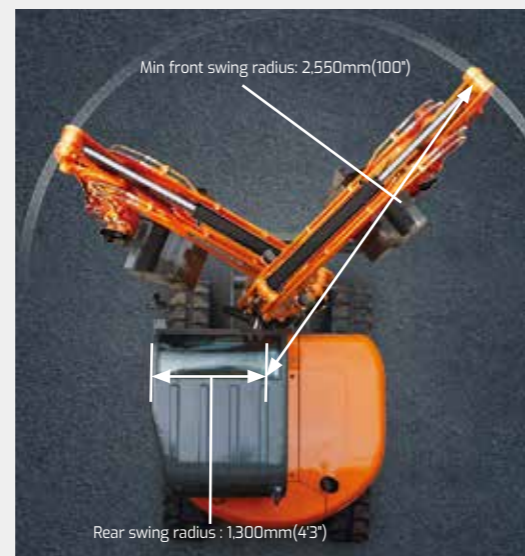
# PERFORMANCE

DX80R ensures best performance with a powerful excavating force and a high-tech hydraulic system for better operating efficiency at any work site! Excellent performance is its basic feature!



## BOOM SWING

The convenient boom swing function provides the ability to work in very narrow locations, and the robustly designed swing bracket and large boom swing cylinder ensures powerful and stable boom swing performance.



## YANMAR 4TNV98

The 54.6 HP (SAE J1349, net) or 53.4 HP (SAE J1349, net) for tropical environment engine produces outstanding power and is known for its durability and excellent operation in high-load applications. In addition its low noise and low emissions make it suitable for operation in noise sensitive areas and at night.



## RPM DIAL / AUTO IDLE

Electronic engine rpm control allows the optimum engine rpm to be set for the work being done, and the standard auto idle function helps to reduce fuel wastage.



## DOZER BLADE

Welded, unitized blade provides durability even under harsh working conditions.



## ARM CYLINDER

A large arm cylinder ensures powerful excavating force, for optimum digging performance.



## HIGHER GRADEABILITY AND WORK CAPABILITY

Thanks to the strong tractive effort combined with excellent engine power and the highest swing torque in its class, the DX80R shows distinguished capability when working on a slope.



## MAIN CONTROL VALVE

The machine can be precisely controlled in both single and combined operations. In combined operations, the circuit ensures the optimal flow of oil to each function irrespective of load. The boom holding function prevents the boom from selflowering.

# RELIABILITY



## INTEGRATED TRACK SPRING AND IDLER

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



## LOWER TRACK ROLLER

Forged rollers offer up to 75% greater strength compared to cast items, improving their wear resistant properties.



## FABRICATED TRACK GUIDE

The track guides which protect the vital track components are fabricated components and can be easily replaced.



## 1 STRONG BOOM AND ARM ASSEMBLY

The shape of the boom has been optimized by finite elements design, allowing uniform load distribution throughout the structure, to ensure excellent durability and reliability.

In the arm assembly great strength has been gained by using cast elements and reinforcement around the bosses to give increased life.

## 2 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.

## 3 FRAME

The frame design adds strength and minimizes distortion due to shocks.



The reliability of a machine contributes to its overall lifetime operating costs. DEVELON uses computer-assisted design techniques, highly durable materials and structures which are tested under extreme conditions, to achieve this. Durability of materials and longevity of structures are our first priorities.

#### 1 RUBBER TRACKS

The rubber tracks not only offer greater non-slip and grip capabilities but are also less harmful to pavements and road surfaces in urban environments than conventional steel shoes. These rubber tracks can be easily installed or removed with the idler, sprocket, and other main parts.

#### 2 BUSHING

A highly lubricated metal (sintered bushing) is used for the boom, arm, and bucket pivots in order to extend the greasing intervals to up to 250 hours and increase the bush life.

#### 3 POLYMER SHIM

As polymer shims are adopted, the connection and wear on the lateral surface of pin joints is prevented.

#### 4 FRONT OIL LEAKAGE PREVENTING VALVE

The operating method of the valve is such that oil does not leak even under high pressure, thereby ensuring the stable work performance.

#### 5 BUCKET

Hardened bucket teeth provide durability and can be easily unbolted for strengthening or replacing, ensuring the stable work performance.

#### 6 FRONT LAMP



# MAINTENANCE

The most advanced technology developed by DEVELON was integrated into the DX80R excavator providing powerful performance and simple, easy maintenance. This provides the operator with convenient maintenance check points and maximizes the work efficiency of the DX80R.



**TILTING CABIN FOR EASY MAINTENANCE**



## COUNTERWEIGHT & HOOD

A cast counterweight is used which means deformation by impact is minimized. The bonnet made of metton further protects the engine from external damage.



## EASY MAINTENANCE

Access to the radiator and coolers is very easy, making cleaning simple. Access to the various parts of the engine is from the side.



## GREASE PIPING

Centralized grease piping is designed for easy maintenance of the swing bearing and swing cylinder bushes.



## RADIATOR

The large-capacity radiator provides excellent performance in severe and continuous operations.



## OIL FILTER/FUEL FILTER

The engine oil filter is attached to the engine body and extends out for easy maintenance.



## AIR CLEANER

The large capacity forced air cleaner removes over 99% of airborne particles, reducing the risk of engine contamination, making the cleaning and cartridge change intervals greater.



## CONVENIENT FUSE BOX

The fuse box is conveniently located in a section of the storage compartment below the operator's seat.



## A/C COMPRESSOR

Sufficient space is provided for easy fan belt tension adjustment or replacement, and the use of a B-type belt leads to servicing intervals of 250HRS.



## ENGINE MOUNTING RUBBER

A sandwich-type engine mounting rubber with excellent durability and dustproof properties are used to ensure that engines vibration is not transmitted to the machine.

# MY DEVELON

## Telematics Service (OPTIONAL)

**TELECOMMUNICATIONS** Data flow from machine to web



### TELEMATICS TERMINAL

The 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

### MY DEVELON

Users can monitor the machine status from DEVELON Website & Mobile App

**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

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



#### OPERATION

You can easily access and manage equipment information and maintenance costs on the platform anytime, anywhere. Retrieve details such as location, uptime, utilization, and fuel costs based on field data, enabling efficient work planning by considering the progress at the job site.



#### HEALTH

Based on reliable manufacturer information, you can have checklists for each usage cycle and receive replacement cycle reminders for consumable parts. In the event of equipment defects, you will receive notifications and can request service immediately. This ensures swift service support from certified DEVELON dealers and minimizes machine idle time.



#### E-COMMERCE

You can purchase a variety of digital products and certified genuine parts for your equipment online. Elevate your experience by subscribing to our exclusive digital services.



#### LIBRARY

Saving your time to find all the documents about your equipment. We provide monthly operation reports, manuals, parts books and more. This helps you to access to a wide range of information and knowledge of your equipment.

\*This service can be accessed in certain countries, and the scope of service may differ depending on your country and region.

# 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.

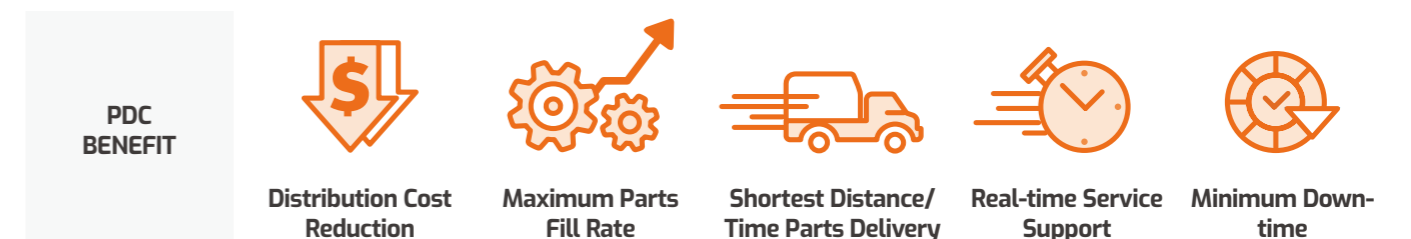
## THE GLOBAL PARTS DISTRIBUTION CENTER NETWORK

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).



MPDC : Mother Parts Distribution Center

PDC : Parts Distribution Center



PDC BENEFIT

Distribution Cost Reduction

Maximum Parts Fill Rate

Shortest Distance/Time Parts Delivery

Real-time Service Support

Minimum Downtime



# TECHNICAL SPECIFICATIONS

## ENGINE

<b>Model</b>	4TNV98
<b>Number of cylinders</b>	4
<b>Nominal flywheel power</b>	39.9 kW (53.4 HP) @ 2,000 rpm (SAE J1349 net, Tropical) 40.4 kW (54.6 HP) @ 2,000 rpm (SAE J1349 net, Global)
<b>Max torque</b>	23.17~25.24 kg.m / 1,300 +/- 100 rpm
<b>Piston displacement</b>	3,319 cc (202.5 cu.in)
<b>Bore &amp; stroke</b>	ø 98 mm x 110 mm
<b>Starter</b>	212 V x 3.0 kW
<b>Batteries</b>	1 x 12 V / 100 AH
<b>Alternator</b>	12 V / 60 AH

## HYDRAULIC CYLINDERS

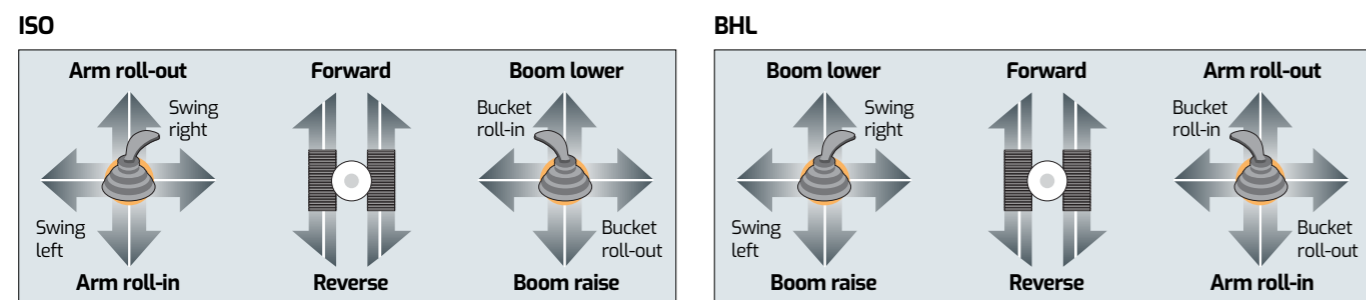
High-strength piston rods and tubes are used. A cylinder cushion mechanism is provided for the boom and arm cylinders to assure shock-free operation and extend the life of the cylinders.

### [ One-piece Boom ]

Cylinders	Quantity	Bore x Rod diameter x stroke
Boom	1	115 X 75 X 775 mm
Arm (short)	1	100 X 65 X 866 mm
Bucket	1	85 X 55 X 690 mm

## CONTROL 2 IMPLEMENT LEVERS

Travel lever pedal pilot pressure control type. In ISO type, right lever is boom and bucket, left lever for swing and arm control. In BHL type right lever is arm and bucket, left lever for swing and boom control if pattern change equipped.



## HYDRAULIC SYSTEM

Single variable displacement axial piston pump with tandem gear pump. 10 spool main control valve of sandwich construction. This original design enables both independent and combined operations of all functions. Pilot joystick and pedal control type operation.

<b>Main pumps</b>	Variable displacement axial piston pump Max flow: 144 ℓ/min (38 US gpm, 31.7 lmp gpm)
<b>Pilot pump</b>	Gear pump -max flow: 22 ℓ/min (5.81 US gpm, 4.84 lmp gpm)
<b>Maximum system pressure</b>	285 kg/cm <sup>2</sup>

## SWING MECHANISM

High-torque, axial piston motor with planetary reduction gear bathed in oil. Swing circle is single-row, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant. Swing parking brake is spring-set, hydraulic-released disc type.

<b>Swing speed</b>	9.6 rpm
<b>Rear swing radius</b>	1300 mm

## SUPER-STRUCTURE REVOLVING FRAME

A deep, full-reinforced box section. Heavy gauge steel plates used for ruggedness.

## UNDERCARRIAGE

Tractor type undercarriage. Heavy-duty track frame, all welded stressrelieved structure. Top grade materials are used for toughness. Side frames are welded, securely and rigidly, to the track frame. Lifetime-lubricated track rollers, idlers with floating seals.

## OPERATOR'S CAB

A roomy, independent, shock and noise-free operator's cab, four-side safety glass windows gives all-round visibility. Front window slides up and stores in the roof and side window can be opened for ventilation. Fully adjustable suspension seat. Air conditioner. ISO standard cab.

<b>LwA External noise</b> (Guaranteed Sound Power Level)	98 dB (A) (2000/14/EC)
<b>LpA Operator noise</b>	74 dB (A) (ISO 6396)

## WEIGHT

Boom 3,380 mm (11'1") / Bucket SAE 0.28 m<sup>3</sup> (0.366 yd<sup>3</sup>) / Shoe 450 mm (1'6")

<b>Arm Length</b>	1,700 mm rubber / 1,700 mm steel
<b>Operating Weight</b>	8,330 kg
<b>Ground Pressure</b>	0.39kgf/cm <sup>2</sup> (38 kpa, 5.5 psi) / 0.39kgf/cm <sup>2</sup> (38 kpa, 5.5 psi)

## BUCKET

	Capacity		Width		Weight (kg)
	PCSA heaped	CECE heaped	Without side cutters	With side cutters	
	0.28 m <sup>3</sup>	0.24 m <sup>3</sup>	707 mm	812 mm	232 kg
	0.20 m <sup>3</sup>	0.18 m <sup>3</sup>	540 mm	646 mm	199 kg

## DIGGING FORCE

Bucket (PCSA)	0.20 m <sup>3</sup>	0.28 m <sup>3</sup>
<b>Digging force</b>	5,600 kgf 54.9 kN 12,346 lbf	5,600 kgf 54.9 kN 12,346 lbf
<b>Arm (ISO)</b>	1,700 mm	2,250 mm
<b>Digging force</b>	4,200 kgf 41.2 kN 9,259 lbf	3,500 kgf 34.4 kN 7,716 lbf

## EDRIVE

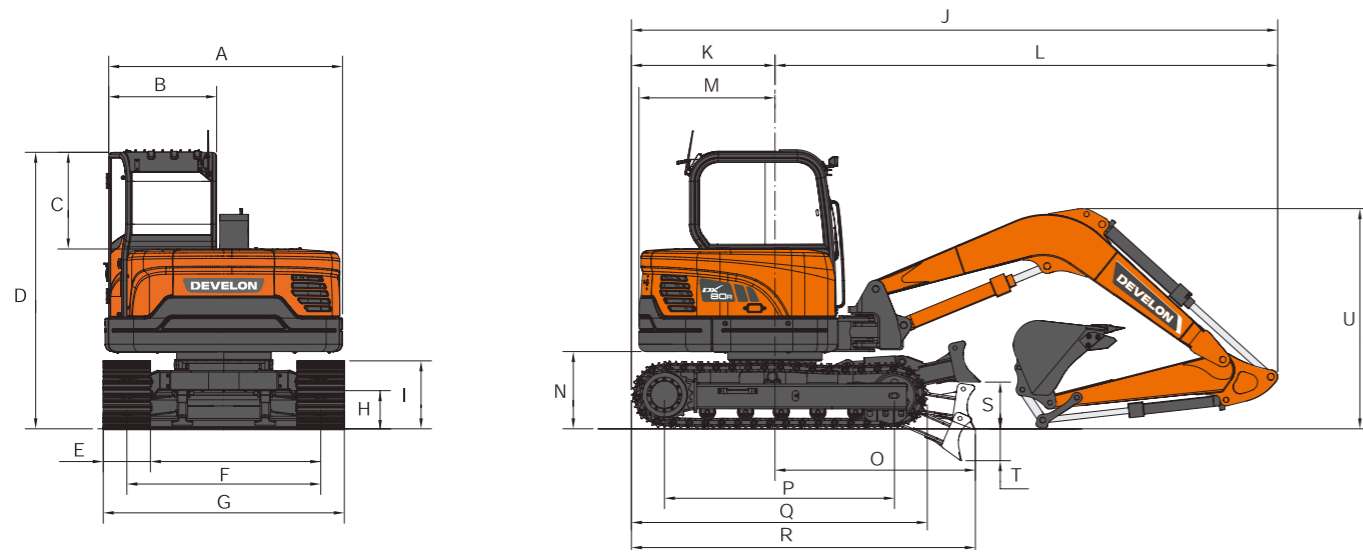
Each track is driven by an independent, high-torque, axial piston motor through planetary reduction gears. Two levers of foot pedal control provide smooth travel or counter-rotation upon demand.

<b>LwA External sound level</b>	98 dB
<b>Maximum traction force</b>	6.2 / 3.6 ton
<b>Maximum grade</b>	30° / 70%

## REFILL CAPACITIES

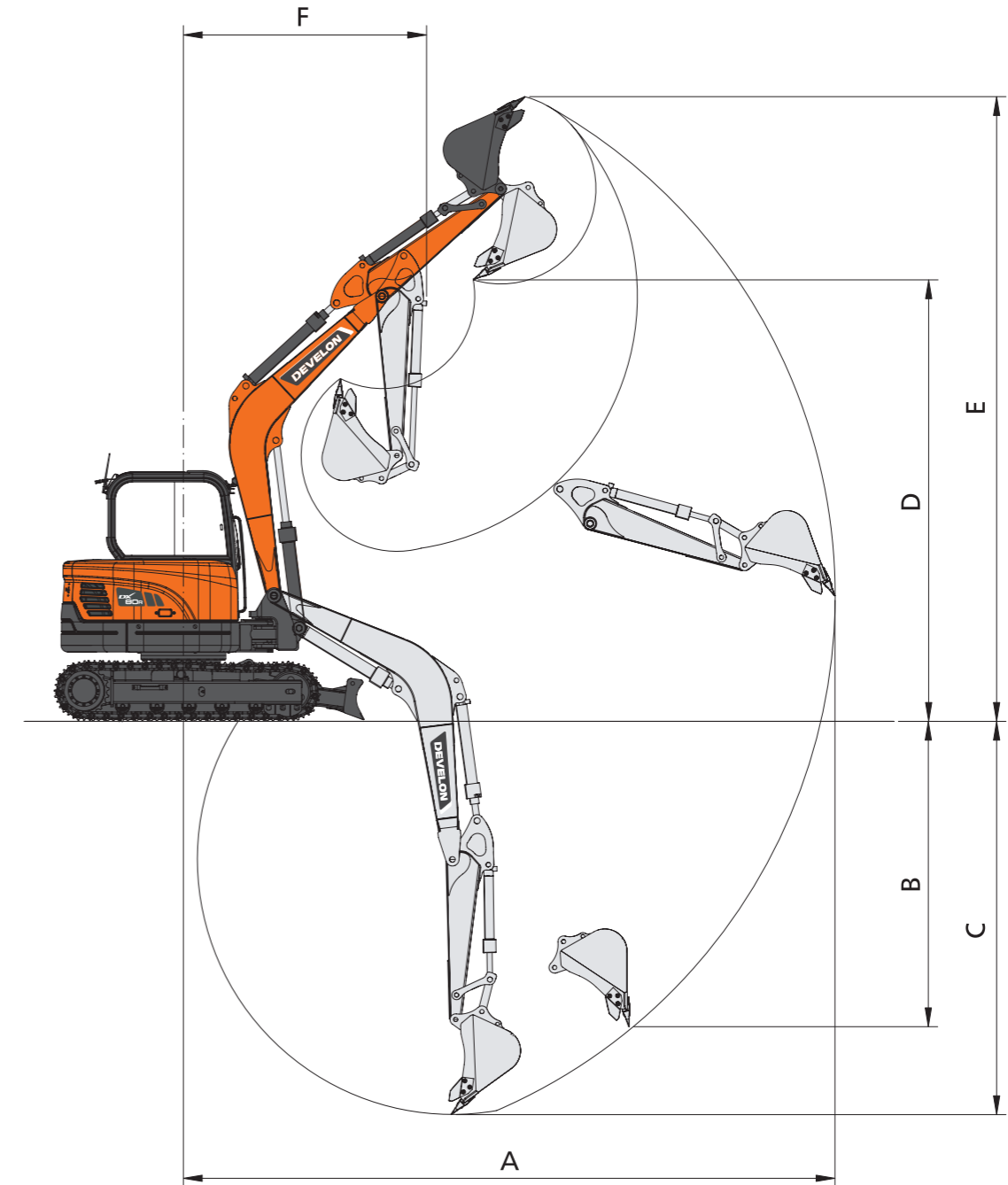
<b>Fuel tank</b>	110 ℓ
<b>Cooling system (Radiator capacity)</b>	10 ℓ
<b>Engine oil</b>	11.6 ℓ
<b>Final drive (each)</b>	1.2 ℓ
<b>Hydraulic system</b>	127 ℓ
<b>Hydraulic tank</b>	87 ℓ

# DIMENSIONS



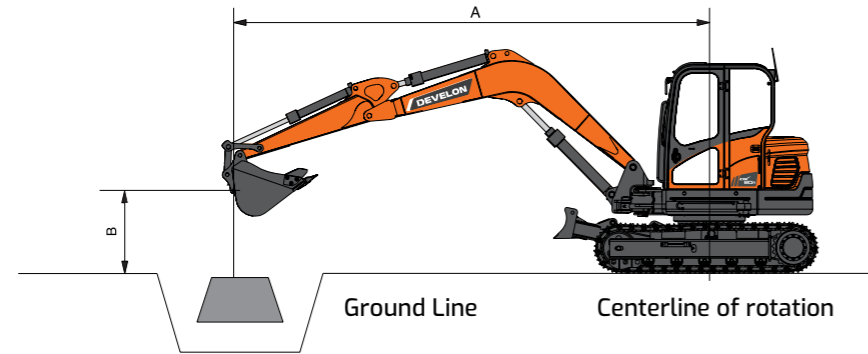
Boom type (One-piece)	3,380 mm	
Arm type	1,700 mm	2,250 mm
A	2,266 mm	←
B	1,030 mm	←
C	923 mm	←
D	2,638 mm	←
E	450 mm	←
F	1,850 mm	←
G	2,300 mm	←
H	362 mm	←
I	648 mm	←
J	6,167 mm	6,265 mm
K	1,370 mm	←
L	4,797 mm	4,890 mm
M	1,298 mm	←
N	737 mm	←
O	1,912 mm	←
P	2,200 mm	←
Q	2,823 mm	←
R	3,282 mm	←
S	446 mm	←
T	304 mm	←
U	2,085 mm	2,410 mm

# WORKING RANGES



Boom type (One-piece)	3,380 mm		
Arm type	1,700 mm	2,250 mm	
Bucket type (SAE)	0.28 m <sup>3</sup>	0.20 m <sup>3</sup>	
A	Max. digging reach	6,915 mm	7,430 mm
B	Max. vertical wall depth	3,245 mm	3,760 mm
C	Max. digging depth	4,180 mm	4,730 mm
D	Max. loading height	4,640 mm	4,990 mm
E	Max. digging height	6,625 mm	6,975 mm
F	Min. swing radius	2,550 mm	2,635 mm

# LIFTING CAPACITY



(DOZER UP)

## METRIC

Boom : 3,380 mm Arm : 1,700 mm Bucket : 0.28 m<sup>3</sup> Shoe : 450 mm

Unit : 1,000 kg

B(m)	A(m)		2		3		4		5		Max. Reach		A(m)			
	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹				
5											*1.71	*1.71		*1.68	1.51	4.41
4											*1.71	*1.71		*1.75	1.23	5.23
3											*2.04	1.74		*1.85	1.21	5.71
2					*3.75	2.59					*2.55	1.66		*2.07	1.18	5.95
1					*4.93	2.43					*3.05	1.59		*2.30	1.14	5.98
0					*4.97	2.37					*3.30	1.54		*2.43	1.11	5.81
-1					*3.73	*3.73	*4.76	2.36			*3.24	1.53		*2.36	1.10	5.42
-2					*5.75	4.89	*4.05	2.39			*2.81	1.54		*2.13	1.21	4.73
-3					*3.96	*3.96	*2.63	2.46						*2.09	1.92	3.52

## FEET

Unit : 1,000 kg

B(ft)	A(ft)		10		15		Max. Reach		A(ft)
	☺	☹	☺	☹	☺	☹	☺	☹	
15					*3.83	3.15			15.9
10					*4.19	3.09			18.8
5					*5.29	2.93			19.8
0					*6.04	2.80			19.1
-5					*9.61	5.10			16.9
-10					*5.47	5.29			11.3

## METRIC

Boom : 3,380 mm Arm : 2,250 mm Bucket : 0.28 m<sup>3</sup> Shoe : 450 mm

Unit : 1,000 kg

B(m)	A(m)		1		2		3		4		5		6		Max. Reach		A(m)
	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	
5																	5.14
4																	5.84
3																	6.27
2																	6.48
1																	6.51
0																	6.36
-1																	6.01
-2																	5.41
-3																	4.45

## FEET

Unit : 1,000 kg

B(ft)	A(ft)		5		10		15		20		Max. Reach		A(ft)
	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	
15													17.99
10													20.51
5													21.39
0													20.87
-5													18.80
-10													14.38

1. Ratings are based on SAE J1097

2. Load point is the end of arm.

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

## STANDARD EQUIPMENT

### Hydraulic system

- Arm flow regeneration
- Boom holding valve
- Spare spool

### Cabin & Interior

- Rubber cab mounts
- Air conditioning
- Adjustable suspension seat with head rest and adjustable arm rests
- Pull-up type front window and removable lower front window
- Room light
- Intermittent windshield wiper
- Storage box (including Cup holder)
- Engine speed(RPM) control dial
- Quick coupler piping
- Rotating piping
- 12V spare powers socket
- Serial communication port for laptop PC interface
- Joystick lever with 3 switches
- Aircon filter
- Antenna
- RADIO+MP3(STEREO)
- Mech. Suspension with heat
- Fogs guard
- Additional working lamp

### Safety

- Large handrails
- Seat belt
- Safety glass
- Hammer for emergency escape
- Emergency engine stop
- Accumulator
- Boom lock valve
- Arm lock valve
- Overload warning device
- Travel alarm
- Rotating beacon
- Side mirror

### Undercarriage

- Hydraulic track adjuster
- Track guards (Steel track)
- 450 mm shoe
- 2,300 mm dozer blade

### Others

- Double element air cleaner
- Engine overheat prevention system
- Engine restart prevention system
- Self-diagnostic system
- Alternator (12V, 60 amps)
- Electric horn
- Halogen working lights (boom mounted 2)
- Auto idle
- Spare parts
- Bucket (0.28 m<sup>3</sup> / PCSA)
- Fuel filter pump
- 1.286 Ton Counterweight

## OPTIONAL EQUIPMENT

In some markets optional equipment may not be available and may also be of standard type only. It is advisable to contact the local DEVELON dealer for information on availability and specific application requirements.

### Safety

- Dozer lock valve
- Pattern change valve

### Cabin & Interior

- Sunvisor
- Roof guard

### Others

- Rubber track
- Long arm (2,250 mm)
- Narrow bucket (0.20 m<sup>3</sup> / PCSA)
- Piping for clamshell

# 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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Certain specification(s) are based on engineering calculations and are not actual measurements. Specification(s) are provided for comparison purposes only and are subject to change without notice. Specification(s) for your individual Develon equipment will vary based on normal variations in design, manufacturing, operating conditions, and other factors. Pictures of Develon units may show other than standard equipment

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