

# World Class meets First Class Bobcat & Doosan



**Bobcat**<sup>®</sup>



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The illustrations do not necessary show the product in standard version.  
All products and equipment are not available in all markets.  
Materials and specifications are subject to change without prior notice.



**Doosan Infracore**  
Construction Equipment

# DX80R

Engine Power : 40.4 kW(54.2HP)@2,000rpm (SAE J1349, net)

Operational Weight : 8,330 kg (18,364 lb)-rubber

Bucket capacity(SAE) : 0.28 m<sup>3</sup> (0.366 cu.yd)



Photo may include optional equipment

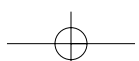


# DX 80R



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 :





## Doosan DX80R Hydraulic Excavator : A New Model with Novel Features

**Increased production and improved fuel economy** is attributed to the electronic optimization of the hydraulic system and the new generation engine.

**Improved ergonomics** increases comfort and excellent all around 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, which leads to increased component life expectancy, thus reducing operating costs.

**Reduced maintenance** increases the availability and reduces operating costs of the excavator.

# Comfort

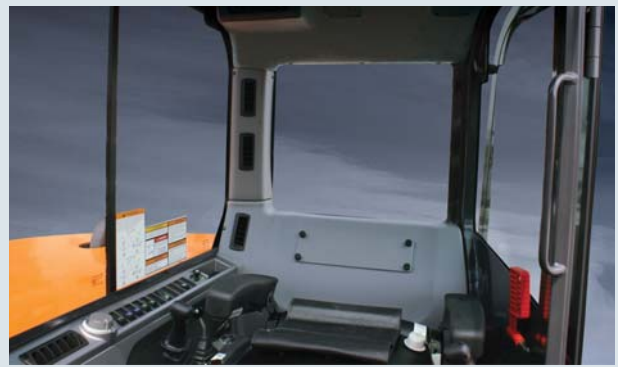
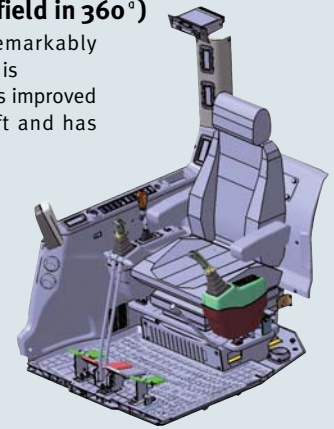
## DX80R

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



### Good visibility (visual field in 360°)

The operator's cabin is remarkably increased and good visibility is ensured thanks to the access improved by applying chassis to left and has excellent all round visibility.



### Comfortable Operating Area

The internal operating controls are arranged in a convenient and ergonomic fashion. This allows for maximized operating efficiency. A large capacity air-conditioning system has been installed for operator comfort in all seasons. The open and spacious cabin provides the operator with a wide field of view for the best possible working conditions.



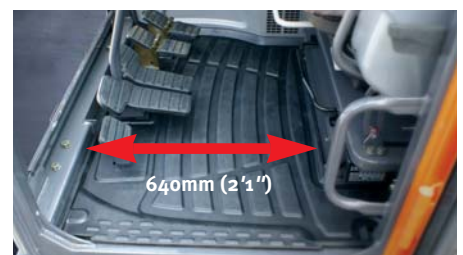
### Fixed-Type Instrument Panel

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



### High-Output Air-Conditioner and Defroster

The air-conditioner capacity has been greatly improved and the vents have been installed at both the front and rear of the operator's seat to maximize air-conditioning efficiency. A defroster has been installed to prevent the front windshield from becoming frosted in the cold season resulting in safer operation.



### Enlarged entrance and exit

As entrance and exit are enlarged, accessibility is improved for getting on and off the vehicle. Since the front workspace is maximized, the inconvenience in operating equipment is minimized.



#### Control Stand

The left and right control stands are ergonomically placed for convenient operation. The control stand surfaces have ample room to install several option switches. The uni-body plastic design provides the operator with a spacious and comfortable cabin environment.



Comfortable 2-stage sliding seat    Comfortable tilting seat

#### Suspension Seat

Since the seat cushion position and cushion angle can be adjusted in addition to the 2-step slide control function, the seat can be controlled in accordance with personal preference convenience is further improved via the seat back pocket, lumbar support. (Seat heater - Option)



#### Switch

The ergonomically placed switches maximizes convenience for the operator.



#### A/C Control Panel

As semi-automatic air conditioner is applied in 5 switching modes, it can be controlled in the position and performance desired by operator.



#### Dozer Control

The Dozer Control Lever is positioned above the right-hand control stand to secure easy and convenient access.



#### Floor Plate (Rubber mat)

The foot rest pedal and boom swing pedal are installed in a very spacious and convenient location. In addition, the rubber floor mats contribute to a very comfortable environment.



#### Joystick

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



Wide Storage space



Seat back pocket



Rubber mounting

# Performance

DX80R

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! Overall safety and convenience are also key factors when considering excellent performance.

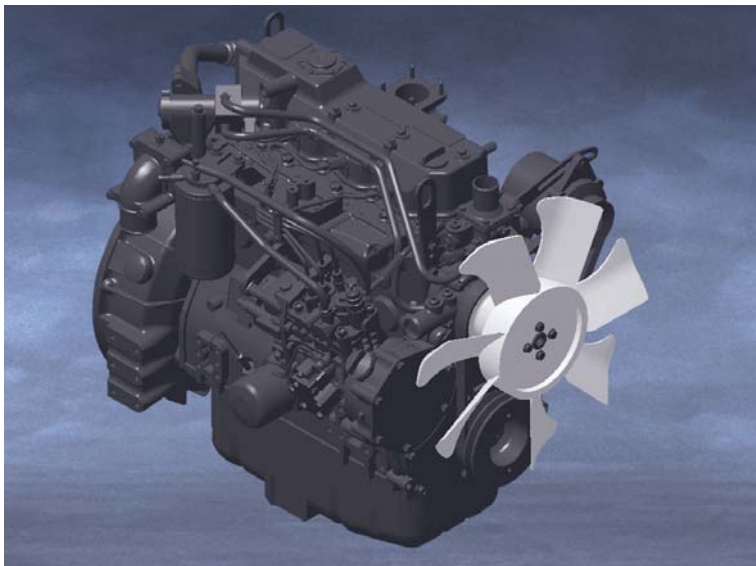
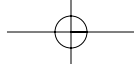


## Boom swing

The convenient boom swing function provides the ability to work in very narrow areas. The newly designed swing bracket and the boom swing cylinder size ensures powerful and stable boom swing performance.







#### YANMAR 4TNV98

The 54.2HP(SAE J1349, net) engine produces outstanding power and is known for its durability. This results in excellent operation in high-load operations. In addition, it features a low noise and low emissions suitable for operation in noise sensitive areas and at night.



#### RPM dial / Auto idle

Thanks to electronic engine rpm control, the optimal engine rpm can be set as per workload and engine rpm can be minutely adjusted as per load. Since auto idle function is applied as standard, fuel is saved considerably.



#### Blow out

As the temperature of air flowing into cabin is lowered by discharging the air flowing from outside to radiator, agreeable work environment is ensured in the cabin.



#### Dozer Blade

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



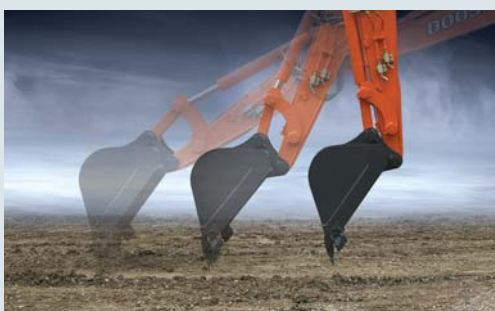
#### Arm cylinder

As the size of arm cylinder is increased by 5% compared to the existing model, excavating force and jack up performance are enhanced, thereby improving the equipment movability.



#### Higher greadability and work capability

Thanks to the strong driving force based on high performance engine power and the highest swing limit angle in the same class, the product shows distinguished capability in working on the slope.



#### Main control valve

The machine can be precisely controlled in the single and complex operation. For complex operation, the circuit that ensures the optimal front operation is adopted. Thanks to boom holding function, it prevents the boom from self-lowering.

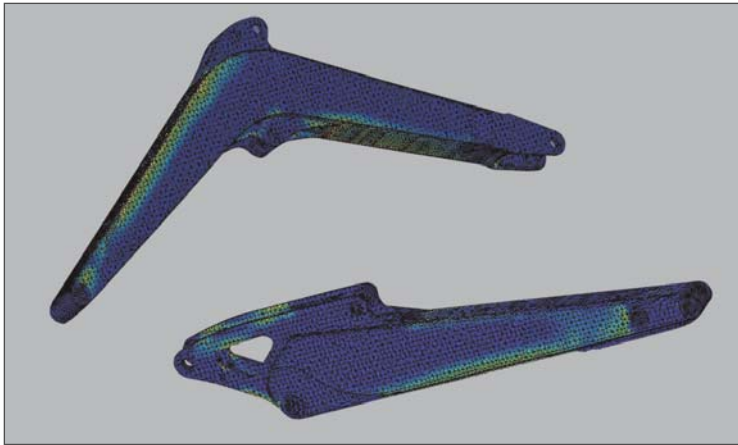


# Reliability

## DX80R

The reliability of a machine contributes to its overall lifetime operating costs. DOOSAN uses computer-assisted design techniques, highly durable materials and structures which are tested under extreme conditions.

Durability of materials and longevity of structures are our first priorities.

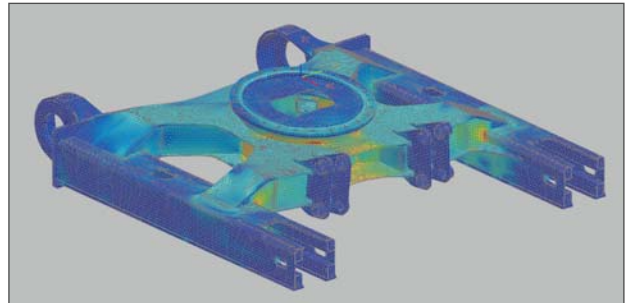


### Strengthened Boom

The shape of the boom has been optimized by finite elements design, allowing uniform load distribution throughout the structure. This combined with increased material thickness means improved durability and reliability by limiting element fatigue.

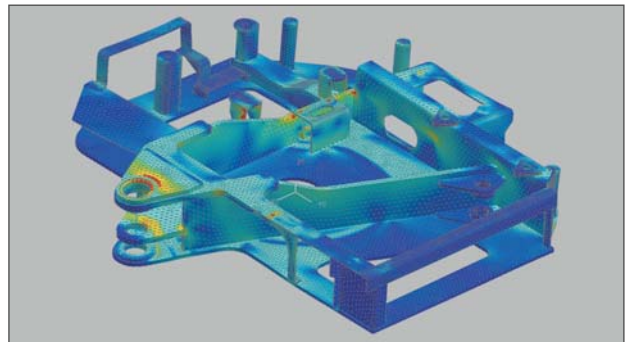
### Arm Assembly

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



### 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.



### Frame

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



### Rubber tracks

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



### Bushing

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



### Polymer shim

As polymer shim is adopted, the connection and wear on the lateral surface of pin joint is prevented when operating front.



### Front oil leakage preventing valve

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

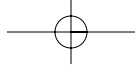


### Bucket

Hardened bucket teeth provide durability and can be easily unbolted for removal, straightening or replacing.



### Front lamp



**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**  
As casting product is replaced by forging product, strength is increased by 75% compared to the existing model, thereby improving wearproof property.



**Prefabricated Track Guard**  
The track guard, which protects the vital track components is a prefabricated component and allows for easy replacement.



# Maintenance

## DX80R

The most advanced technology developed by Doosan 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**



**Countweight & hood**

As a cast counterweight is applied, deformation by impact is minimized. Thanks to the bonnet made of metton, the engine is further protected from external obstacle.



**Easy maintenance**

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



**Grease Piping**

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



**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 behind the operator's seat providing a clean environment and easy access.



#### Compressor

Sufficient space is provided for easy fan belt tension adjustment or replacement. As check-up intervals are considerably increased to 250Hrs by attaching a B-type belt, servicing is made far more convenient.



#### Engine mounting rubber

As a sandwich-typed engine mounting rubber with excellent durability and dustproof property is adopted, the engine's vibration is not transmitted to the machine.

# DX80R

# Technical specifications

## ENGINE

<b>Model</b>	4TNV98-ZWDB8
<b>Number of cylinders</b>	4
<b>Nominal flywheel power</b>	40.4 kW(54.2HP) @ 2,000 rpm (SAE J 1349, net)
<b>Max torque</b>	22.7~24.7 kgf.m / 1,400 rpm
<b>Piston displacement</b>	3,319cc (202.5 cu.in)
<b>Bore &amp; stroke</b>	φ98 mm x 110 mm (3.8" X 4.3")
<b>Starter</b>	12 V x 3.0 kW
<b>Batteries</b>	1 x 12 V / 100 Ah
<b>Alternator</b>	12 V / 60 A

## HYDRAULIC CYLINDERS

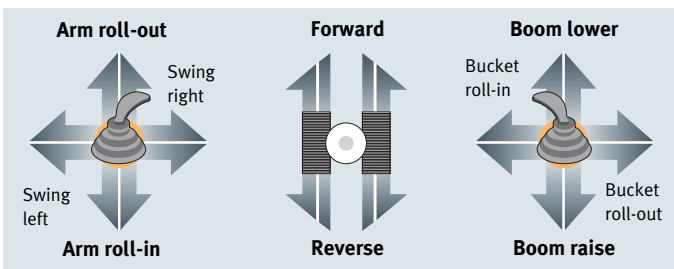
High-strength piston rods and tubes are used.  
A cylinder cushion mechanism is provided for the boom and arm cylinders to assure shock-free operation and extend the life of the cylinders.

Cylinders	Quantity	Bore X Rod diameter X stroke
Boom	1	115 X 75 X 775mm(4.5" X 3.0" X 2'7")
Arm	1	100 X 65 X 866mm(3.9" X 2.6" X 2'10")
Bucket	1	85 X 55 X 690mm(3.3" X 2.2" X 2'3")

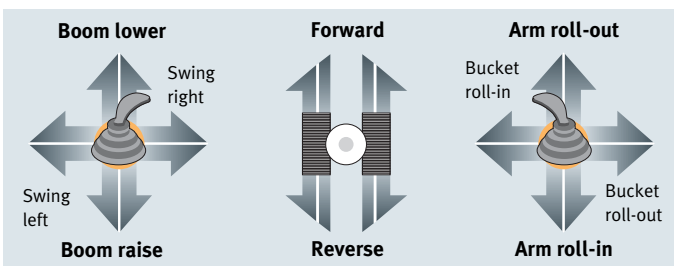
## CONTROL.2 IMPLEMENT LEVERS

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.

### ISO



### BHL



## HYDRAULIC SYSTEM

Variable displacement axial piston tandem type pump.  
Gear pump and control valve (10-spool) of section block construction.  
This original design enables both independent and combined operations of all function, joystick control type operations.

<b>Main pumps</b>	Variable displacement axial piston pump max flow: 144 ℓ /min (38 US gpm, 31.7 Imp gpm)
<b>Pilot pump</b>	Gear pump - max flow: 22 ℓ /min (5.81 US gpm, 4.84 Imp gpm)
<b>Maximum system pressure</b>	Boom/Arm/Bucket: 300 kgf/cm <sup>2</sup> (294 bar) Travel: 280 kgf/cm <sup>2</sup> (275 bar) Swing: 220 kgf/cm <sup>2</sup> (215 bar)

## 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>	1,300mm(4'3")

## 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 stress-relieved 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	98dB(A)(2000/14/EC)
<b>LpA Operator noise</b>	74dB (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")

Arm Length	Operating Weight	Ground Pressure
1,700 mm (5'7")-rubber	8,330 kg (18,364 lb)	0.39kgf/cm <sup>2</sup> (38 kpa, 5.5 psi)
1,700 mm (5'7")-steel	8,380 kg (18,606 lb)	0.39kgf/cm <sup>2</sup> (38 kpa, 5.5 psi)

## BUCKET

Capacity		Width		Weight
PCSA, heaped	CECE heaped	Without side cutters	With side cutters	
0.28m <sup>3</sup> (0.366yd <sup>3</sup> )	0.24m <sup>3</sup> (0.31yd <sup>3</sup> )	707mm (2'4")	812mm (2'8")	232 kg (511 lb)
0.20m <sup>3</sup> (0.26yd <sup>3</sup> )	0.18m <sup>3</sup> (0.24yd <sup>3</sup> )	540mm (1'9")	646mm (2'1")	209 kg (459 lb)

## DRIVE

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>Travel speed (fast/slow)</b>	4.6/2.9 km/h (2.9 /1.8 mph)
<b>Maximum traction force</b>	6.2/3.6ton (13,668/7,937 lbf)
<b>Maximum grade</b>	30° / 58%

## REFILL CAPACITIES

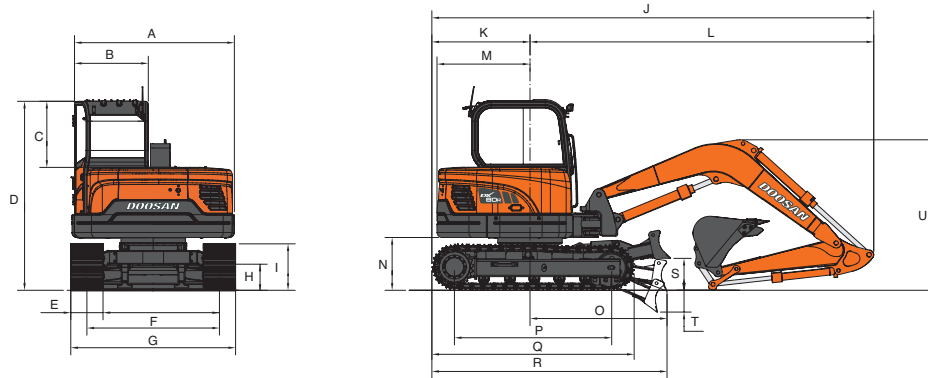
<b>Fuel tank</b>	110 ℓ ( 20.6 US gal, 17.15 Imp gal)
<b>Cooling system (Radiator capacity)</b>	10 ℓ (2.64 US gal, 2.20 Imp gal)
<b>Engine oil</b>	11.6 ℓ (3.06 US gal, 2.55 Imp gal)
<b>Hydraulic system</b>	127 ℓ (33.5 US gal, 27.9 Imp gal)
<b>Hydraulic tank</b>	65 ℓ (17.2 US gal, 14.3 Imp gal)

<b>Fuel tank</b>	110 ℓ ( 20.6 US gal, 17.15 Imp gal)
<b>Cooling system (Radiator capacity)</b>	10 ℓ (2.64 US gal, 2.20 Imp gal)
<b>Engine oil</b>	11.6 ℓ (3.06 US gal, 2.55 Imp gal)
<b>Final drive (each)</b>	1.2 ℓ (0.32 US gal, 0.26 Imp gal)
<b>Hydraulic system</b>	127 ℓ (33.5 US gal, 27.9 Imp gal)
<b>Hydraulic tank</b>	65 ℓ (17.2 US gal, 14.3 Imp gal)

# DX80R

## Dimensions & Working range

### DIMENSIONS

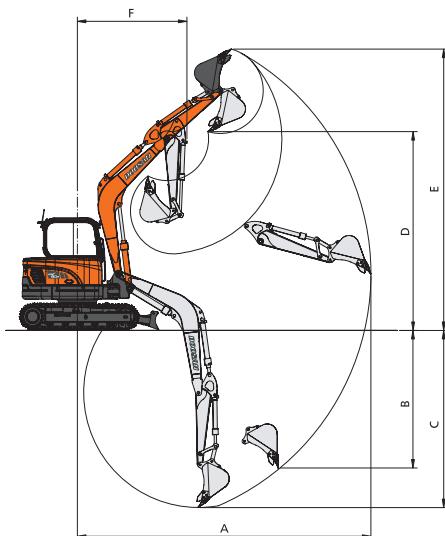


Boom type	3,380mm(11'1")	
Arm type	1,700mm(6'2")	2,250mm(7'5")
A	2,266mm(7'5")	←
B	1,030mm(3'5")	←
C	923mm(3)	←
D	2,638mm(8'8")	←
E	450mm(1'6")	←
F	1,850mm(6'1")	←
G	2,300mm(7'7")	←
H	362mm(1'2")	←
I	648mm(2'2")	←
J	6,167mm(20'3")	6,265mm(20'7")
K	1,370mm(4'6")	←
L	4,797mm(15'9")	4,890mm(16'5")
M	1,298mm(4'3")	←
N	737mm(2'5")	←
O	1,912mm(6'3")	←
P	2,200mm(7'2")	←
Q	2,823mm(9'3")	←
R	3,282mm(10'9")	←
S	446mm(1'6")	←
T	304mm(1')	←
U	2,085mm(6'11")	2,410mm(7'11")

### DIGGING FORCE (ISO)

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

### WORKING RANGE

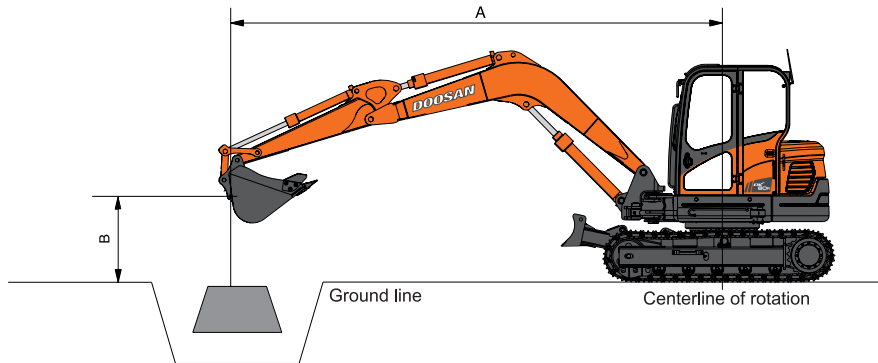


Boom type	3,380mm(11'1")	
Arm type	1,700mm(6'2")	2,250mm(7'5")
Bucket type (SAE)	0.28m <sup>3</sup> (0.366yd <sup>3</sup> )	0.28m <sup>3</sup> (0.366yd <sup>3</sup> )
A Max. digging reach	6,965mm(22'8")	7,480mm(24'5")
B Max. vertical wall depth	3,220mm(10'8")	3,730mm(12'4")
C Max. digging depth	4,150mm(13'9")	4,675mm(15'6")
D Max. loading height	4,720mm(15'3")	5,085mm(16'4")
E Max. digging height	6,715mm(21'9")	7,070mm(22'10")
F Min. swing radius	2,500mm(8'2")	2,700mm(8'7")



## DX80R

## Lifting Capacity



## [ Dozer up ]

**Metric** Boom : 3,380mm (11'1") Arm : 1,700mm (5'7") Bucket : 0.28m<sup>3</sup> (0.366 yd<sup>3</sup>) Shoe : 450mm (1'6") Unit : 1,000kg

A(m)	2		3		4		5		Max. Reach		A(m)
B(m)											
5					*1.71	*1.71			*1.68	1.51	4.41
4					*1.71	*1.71	*1.75	1.23	*1.60	1.13	5.23
3					*2.04	1.74	*1.85	1.21	*1.63	0.96	5.71
2			*3.75	2.59	*2.55	1.66	*2.07	1.18	*1.73	0.88	5.95
1			*4.83	2.43	*3.05	1.59	*2.30	1.14	*1.90	0.86	5.98
O (Ground)	*1.95	*1.95	*4.97	2.37	*3.30	1.54	*2.43	1.11	*1.98	0.89	5.81
-1	*3.73	*3.73	*4.76	2.36	*3.24	1.53	*2.36	1.10	*2.06	0.98	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 : 1,000lb

A(ft)	10		15		Max. Reach		A(ft)		
B(ft)									
15					*3.83	3.15	*3.59	2.88	15.9
10					*4.19	3.09	*3.58	2.14	18.8
5	*9.36	5.38	*5.29	2.93	*3.98	1.91			19.8
O (Ground)	*10.87	5.10	*6.04	2.80	*4.36	1.96			19.1
-5	*9.61	5.10	*5.60	2.77	*4.63	2.37			16.9
-10	*5.47	5.29			*4.57	4.40			11.3

## [ Dozer up ]

**Metric** Boom : 3,380mm (11'1") Arm : 2,250mm (7'5") Bucket : 0.28m<sup>3</sup> (0.366 yd<sup>3</sup>) Shoe : 450mm (1'6") Unit : 1,000kg

A(m)	2		3		4		5		6		Max. Reach		A(m)
B(m)													
5							*1.48	1.23			*1.30	1.17	5.14
4							*1.43	1.24			*1.24	0.93	5.84
3					*1.62	*1.62	*1.57	1.21	*1.55	0.88	*1.25	0.81	6.27
2			*2.88	2.66	*2.16	1.68	*1.83	1.17	*1.65	0.86	*1.31	0.75	6.48
1			*4.26	2.46	*2.75	1.59	*2.12	1.13	*1.78	0.84	*1.43	0.73	6.51
O (Ground)	*1.85	1.85	*4.93	2.35	*3.15	1.52	*2.33	1.09	*1.86	0.82	*1.62	0.75	6.36
-1	*3.04	3.04	*4.94	2.31	*3.26	1.49	*2.39	1.07	*1.81	0.81	*1.80	0.81	6.01
-2	*4.51	4.51	*4.49	2.32	*3.05	1.49	*2.19	1.07			*1.88	0.95	5.41
-3	*5.84	4.84	*3.51	2.36	*2.38	1.51					*1.95	1.30	4.45

## Feet

Unit : 1,000lb

A(ft)	10		15		20		Max. Reach		A(ft)
B(ft)									
15									
10			*2.98	*2.98					
5	*7.73	5.49	*4.71	2.92	*3.74	1.83	*3.00	1.62	21.5
O (Ground)	*10.58	5.05	*5.77	2.75	*4.03	1.76	*3.58	1.65	20.10
-5	*10.27	4.97	*5.84	2.68			*4.07	1.92	18.10
-10	*7.46	5.08					*4.29	2.93	14.5

1. Load point is the end of the arm.

2. \*Rated loads are based on hydraulic capacity.

3. Rated loads do not exceed 87% of HYD. Capacity or 75% of tipping capacity.

: Rating Over Front

: Rating Over Side or 360 degree

# DX80R

## Standard & Optional equipment

### STANDARD EQUIPMENT

#### Hydraulic system

- Arm flow regeneration
- Boom holding valves
- Spare port(valve)

#### Cabin & Interior

- Rubber cab mount
- Air conditioner
- 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
- Storage box (including Cup holder)
- Engine speed(RPM) control dial
- AM/FM radio and cassette player (set)
- Remote radio ON/OFF switch
- 12V spare powers socket
- Serial communication port for laptop PC interface
- Joystick lever with 3 switches
- Aircon filter
- Antenna

#### Safety

- Large handrails
- Seat belt
- Hydraulic safety lock lever
- Safety glass
- Hammer for emergency escape
- Emergency engine stop
- Accumulator

#### Undercarriage

- Hydraulic track adjuster
- Track guards (Steel track)
- 450mm shoe
- 2,3000mm 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

### 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 Doosan dealer for information on availability and specific application requirements.

#### Safety

- Boom lock valve
- Arm lock valve
- Dozer lock valve
- Pattern change valve
- Overload warning device
- Travel alarm
- Rotating beacon
- Left review mirror

#### Others

- Piping for tilt
- Piping for quick clamp
- Fuel feed pump
- Rubber track
- Long arm (2,250 mm)
- Narrow bucket (0.20m<sup>3</sup>/PCSA)

#### Cabin & Interior

- Seat Heater
- AM/FM radio and MP3/CD player (each)
- Additional working lamp
- Sunvisor
- Fogs guard
- Roof guard