DOOSAN

Mini Excavators |

DX35Z

Maximum power: 26.1 hp
Operating weight: 3.66 t
Max. bucket capacity: 0.11 m³

Doosan DX35z hydraulic excavator with high performance

A model with novel features

The DX35z (zero tail swing) hydraulic excavator offers additional value to the operator. The DX35z 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 achieved with the electronic optimization of the hydraulic system and the new generation engine
- Improved ergonomics, increased comfort and excellent all round visibility ensuring a safe and pleasant working environment
- Improved reliability, using high performance materials combined with new methods of structural stress analysis, have lead to increased component life expectancy, thus reducing running costs
- Reduced maintenance increases the availability and lowers the operating costs of the excavator

The highest performance is guaranteed in any working condition

The advanced hydraulic system combined with a powerful engine provides the biggest break out and tractive forces for efficient operation.
As a result the DX35z provides outstanding performance, work efficiency and the ability to adapt to any work environment.

E/G control lever

The engine speed lever convenient location allows easy engine control.

3TNV88 engine

The DX35z has a powerful and eco-friendly heart, that always provides high operating efficiency and pleasant working conditions.

Powerful digging force (bucket)

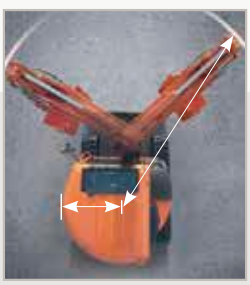
Powerful, efficient, and with increased digging force.
Bucket digging force: 3000 kgf

Dozer blade

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

Boom swing

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



Rear swing radius:
850 mm

Minimum front swing radius:
2184 mm

Right swing angle: 50°

Left swing angle: 70°

Comfort

The cabin has been ergonomically designed with comfort in mind

Starting a fresh, the newly designed DX35z provides the operator with maximum comfort and various convenient features. The DX35z is the result of an innovative technical design!

The cabin space is more comfortable than any other excavator in its class.

Comfortable sliding seat

Control stand tilting function

Comfortable operating cabin

A ROPS-TOPS roomy, independant minimal shock and low noise operator's cab with safety glass provides all-round visibility. The right side window opens for ventilation and the front window slides up.

Monitor

The centralized display panel provides comprehensive information about the machine in an easy to read format. The high quality display panel is waterproof and all information can be seen at a glance.
The ergonomically placed switches maximize convenience for the operator.

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.

Joystick

The hydraulic joystick levers have very comfortable grips that allow the operator to perform precise operations very easily.

Arm rest

A fully adjustable suspension seat provides operator comfort during long working days.

Cup holder

The conveniently located cup holders add to the operator's comfort.

Defroster

The high capacity defroster, installed on the right, eliminating both frost and moisture very efficiently, provides a safer working condition for the operator. (Cabin type only)

Floor plate (rubber mat)

The breaker pedal (left) and boom swing pedal (right) are installed in a very spacious and convenient location. In addition, the rubber floor mats contribute to a very comfortable environment. The door opening has been increased by removing the lower lip which provides easy cleaning of the interior.

Maintenance

Simple and easy

The status and condition of all components can be seen at a glance. The convenient and easy serviceability is really distinguished. The most advanced technology developed by Doosan Infracore Co., Ltd. was integrated into the DX35z excavator for powerful performance and simple, easy maintenance. This provides the operator with convenient maintenance check points and maximizes the work efficiency of the DX35z.

Easy maintenance

Access to the various coolers is very easy, making cleaning more convenient. The washer fluid level can be checked easily.

Air cleaner

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

Air breather

The hydraulic system was designed to prevent the pump from cavitating.

Strengthened boom

The shape of the boom has been optimally designed using finite elements and 3-dimensional computer simulation, allowing the loads to be better distributed 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 is gained by using cast elements and reinforcement around the bosses to increase the life of the component.

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.

D-type frame

The D-type frame and chassis frame add strength and minimize distortion due to shocks.

Engine room

The engine compartment is designed for easier service and the sturdy sound proofing inside the engine cover reduces the noise to provide a more comfortable environment for the operator and those around it.

Bucket

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

Oil gauge

Hydraulic oil level can be easily checked through the gauge on the side of the hydraulic tank.

Grease piping

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

Rubber tracks

The rubber tracks offer greater non-slip and grip capabilities, are less harmful to sidewalks and road surfaces in urban environments. These rubber shoes can be easily installed or removed with the idler, sprocket and other main parts.

Technical specifications

Engine

	DX35z
Model	YANMAR, 3TNV88
No. of cylinders	3
Piston displacement	1642 cm³
Nominal flywheel power	19.5 kW (26.1 hp) at 2200 rpm (SAE J1349) 19.5 kW (26.1 hp) at 2200 rpm (DIN 6271)
Max torque	11.2 kgf·m (110 Nm) at 1200 rpm
Bore × stroke	88 mm × 90 mm
Alternator	12 V / 40 Ah

Fluid capacities

	DX35z
Fuel tank	42 l
Cooling system (radiator capacity)	5 l
Engine oil	6.3 l
Final drive (each)	0.5 l
Hydraulic tank	40 l

Environment

Noise levels comply with environmental regulations (dynamic values).

Noise emission

	DX35z
Noise level LwA (2000/14/EC), guaranteed	94 dB(A)
Noise level LpA (ISO 6396)	81 dB(A)

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. Lifetimelubricated track rollers, idlers with floating seals. Hydraulic track adjusters with shock-absorbing recoil springs.

Number of rollers and track shoes

	DX35z
Lower rollers (per side)	4
Track shoes	Rubber
Overall track length	2123 mm
Shoe width	300 mm

Hydraulic system

This original design enables both independent and combined operations of all functions, joystick control type operations.

Pumps

Pump	Type	DX35z Max. flow
Main	2 variable displacement axial piston pumps	2 × 38.5 l/min
	+ 1 fixed displacement gear pump	25.3 l/min (swing, boom swing & dozer)
Pilot	Gear pump	11.2 l/min

Maximum system pressure

	DX35z
Boom / arm / bucket	230 kgf/cm² (225 bar)
Travel	230 kgf/cm² (225 bar)
Swing	200 kgf/cm² (196 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. A two position swing lock secures the upper structure for transportation.

Swing speed

	DX35z
Swing speed	9.5 rpm
Rear swing radius	850 mm

Drive

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

Speed & traction

	DX35z
Travel speed (low - high)	2.4 - 4.6 km/h
Maximum traction force (low - high)	2400 - 4500 kgf
Maximum gradeability	30° / 58 %

Digging forces (ISO)

At power boost.

	DX35z	
Bucket - m³	0.11	
Arm length - mm	1200	1330
Bucket (PCSA) - kgf	3000	3000
Arm - kgf	2100	1900

Weight

DX35z with 2405 mm boom, 1200 mm arm, 0.11 m³ bucket (SAE), 300 mm shoe.

	DX35z
Operating weight	3660 kg
Ground pressure	0.33 kgf/cm²

Lifting capacities

DX35Z

Dozer up

Unit: 1000 kg	A	2.0 m		3.0 m		4.0 m		Max. reach		
	B									A (m)
Boom: 2405 mm Arm: 1200 mm Bucket: SAE 0.11 m³ (CECE 0.094 m³) Shoe: 300 mm	4.0 m							*0.77	*0.77	2.76
	3.0 m			*0.67	*0.67			0.48	0.47	3.76
	2.0 m			0.70	0.69	0.43	0.42	0.39	0.38	4.21
	1.0 m			0.67	0.65	0.42	0.41	0.36	0.36	4.34
	0.0 m	1.23	1.18	0.64	0.63	0.41	0.40	0.38	0.38	4.18
	-1.0 m	1.25	1.20	0.64	0.63			0.47	0.46	3.68
	-2.0 m	1.30	1.25					*0.84	0.83	2.59

Dozer up

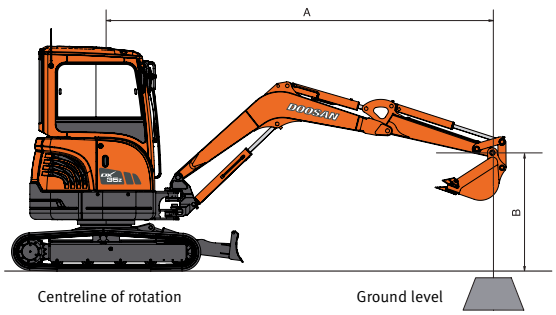
Unit: 1000 kg	A	2.0 m		3.0 m		4.0 m		Max. reach		
	B									A (m)
Boom: 2405 mm Arm: 1330 mm Bucket: SAE 0.11 m³ (CECE 0.094 m³) Shoe: 300 mm	4.0 m							*0.71	*0.71	2.95
	3.0 m							0.46	0.45	3.89
	2.0 m			0.71	0.69	0.43	0.42	0.37	0.36	4.33
	1.0 m			0.67	0.65	0.42	0.40	0.35	0.34	4.45
	0.0 m	1.22	1.18	0.64	0.62	0.41	0.40	0.36	0.36	4.30
	-1.0 m	1.24	1.19	0.64	0.62			0.44	0.43	3.82
	-2.0 m	1.28	1.24					0.74	0.73	2.80

Dozer down

Unit: 1000 kg	A	2.0 m		3.0 m		4.0 m		Max. reach		
	B									A (m)
Boom: 2405 mm Arm: 1200 mm Bucket: SAE 0.11 m³ (CECE 0.094 m³) Shoe: 300 mm	4.0 m							*0.77	*0.77	2.76
	3.0 m			*0.67	*0.67			*0.73	0.47	3.76
	2.0 m			*0.88	0.69	*0.75	0.41	*0.74	0.38	4.21
	1.0 m			*1.18	0.65	*0.84	0.40	*0.78	0.36	4.34
	0.0 m	*1.29	1.18	*1.34	0.63	*0.89	0.39	*0.82	0.38	4.18
	-1.0 m	*2.17	1.20	*1.26	0.63			*0.87	0.46	3.68
	-2.0 m	*1.31	1.25					*0.84	0.83	2.59

Dozer down

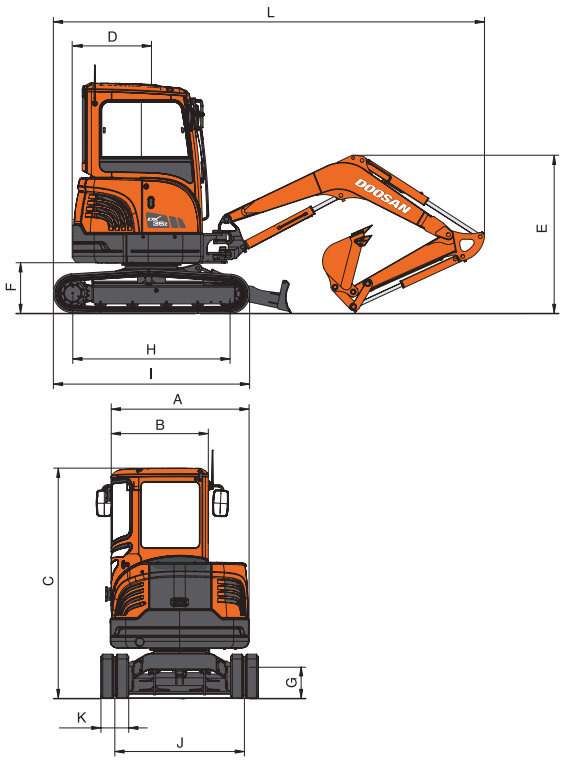
Unit: 1000 kg	A	2.0 m		3.0 m		4.0 m		Max. reach		
	B									A (m)
Boom: 2405 mm Arm: 1330 mm Bucket: SAE 0.11 m³ (CECE 0.094 m³) Shoe: 300 mm	4.0 m							*0.71	*0.71	2.95
	3.0 m							*0.69	0.45	3.89
	2.0 m			*0.82	0.69	*0.71	0.42	*0.71	0.36	4.33
	1.0 m			*1.14	0.65	*0.81	0.40	*0.74	0.34	4.45
	0.0 m	*1.46	1.18	*1.33	0.62	*0.88	0.40	*0.79	0.36	4.30
	-1.0 m	*2.26	1.19	*1.28	0.62			*0.85	0.43	3.82
	-2.0 m	*1.49	1.24					*0.86	0.73	2.80

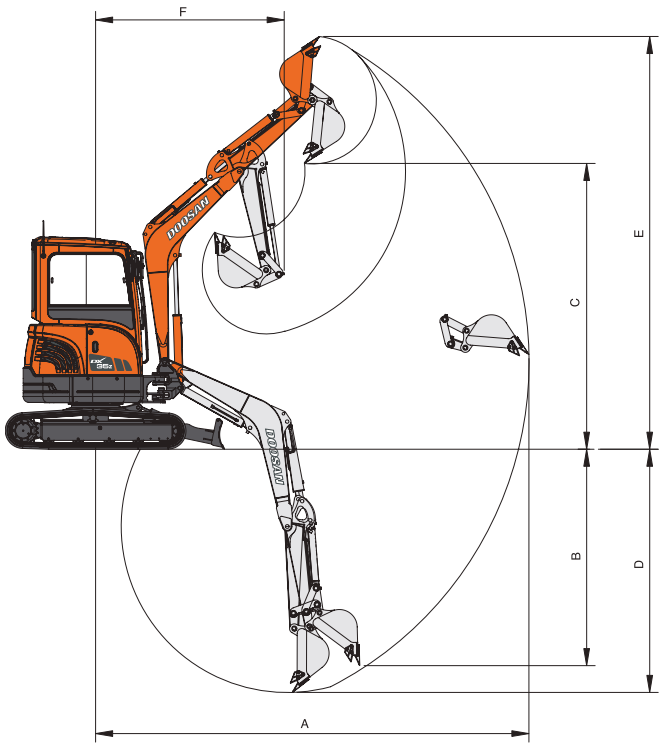


: Over front
: Over side or 360°

1. The nominal forces are based on the SAE J1097 standard.
2. The load point is the hook at the rear of the bucket.
3. * = The nominal loads are based on hydraulic capacity.
4. The nominal loads do not exceed 87% of the hydraulic capacity or 75% of the capacity of the swing.

Dimensions & working range





Dimensions

			DX35Z
	Boom type	mm	2405
	Arm	mm	1200
A	Overall width of upper structure	mm	1500
B	Overall width of cabin	mm	1030
C	Overall height of cabin	mm	2515
D	Tail swing radius	mm	850
E	Boom transport height	mm	1720
F	Clearance under counterweight	mm	575
G	Ground clearance	mm	310
H	Tumbler distance	mm	1700
I	Track length	mm	2123
J	Track gauge	mm	1400
K	Track shoe width	mm	300
L	Overall length	mm	4645

Working range

			DX35Z	
	Boom	mm	2405	
	Arm	mm	1200	1330
	Bucket type (SAE)	m³	0.11	0.11
A	Max. digging reach	mm	5090	5200
B	Max. vertical wall depth	mm	2560	2630
C	Max. loading height	mm	3350	3410
D	Max. digging depth	mm	3025	3155
E	Max. digging height	mm	4840	4880
F	Min. swing radius	mm	2210	2060

Standard and optional equipment

Cab & interior

All weather sound suppressed type cab	●
Adjustable suspension seat	●
Pull-up type front window and removable lower front window	●
Room light	●
Cigarette lighter	●
Cup holder	●
Heater and defroster	●
Fresh air filter	●
Storage box	●

Safety

ROPS & TOPS Cabin	●
Hydraulic safety lock lever	●
Side mirror	●
Safety glass	●
Hammer for emergency escape	●
ROPS & TOPS Canopy (4-Pillar)	○
Rotating beacon	○
Accumulator	○
Travel alarm	○

Other

Double element air cleaner	●
Water separator	●
Alternator (12 V, 40 Ah)	●
Electric horn	●
Working lights	
- Boom mounted 1	●
- Cabin mounted 2	●
Piping for hammer (One way) & for rotation (Two way)	●
Rubber shoe	●
Maintenance free battery	●
Track guards (front)	○
Piping for quick clamp	○
Lever pattern changing valve	○
Air-conditioner	○

Standard: ●
Optional: ○

Some of these options may be standard in some markets. Some of these options may not be available for certain markets. Please check with your local DOOSAN dealer for more information about availability or to adapt your machine to your application needs.

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