

DOOSAN

Mini Excavators

DX27Z-7 DX35Z-7

	DX27Z-7	DX35Z-7
Maximum power	18.4 kW	18.4 kW
Operating weight	2798 kg	3995 kg
Bucket capacity	0.06 m ³	0.11 m ³
Emission standard	Stage V	Stage V





DOOSAN

DX 272





DOOSAN DX27Z-7 AND DX35Z-7 MINI EXCAVATOR:

MEET THE NEW GENERATION OF DOOSAN MACHINES

Lift your business to the next level with the DX27Z-7 and DX35Z-7 Doosan excavators.

Exceptionally powerful, yet environmentally friendly, the DX27Z-7 and DX35Z-7 excavators feature extraordinary fuel efficiency.

RAISE PROFITS, PRODUCTIVITY & FUEL EFFICIENCY

TOP PERFORMANCE IN A VERSATILE PACKAGE

- A compact & powerful machine for the best adaptability to any work site.
- Large hydraulic capacity of a tool carrier.
- Works in narrow spaces thanks an ultra-compact design and boom swing.
- Designed specifically for heavy duty applications it gives hours of low cost.
- Newly adopted dozer blade makes more dozer lifting height & dozer digging depth.

EFFICIENCY

The new DX27Z-7 and DX35Z-7 offer really high level of efficiency, in any application, thanks to a brand new design. The DX27Z-7 offers the best compactness in the market, where the DX35Z-7 offers the best compromise between compactness and lifting performance, when heavy lifting is needed.

CONTROLLABILITY

- Smooth and precise hydraulic offering high to drive all attachment needed on the job site.
- Operator can proportionally control flow rate.
- 2 Travel speeds with automatic autoshift.
- Foldable travel pedals can utilize a wide range of foot space when not using pedals.
- Control of boom swing by pedal.





EASY MAINTENANCE

- Easy access from ground level to all components, filters and refilling points.
- The DX27Z-7/DX35Z-7 was designed to be easy to keep on the job.
- Offers easy access to filters, fluids and all service points — including the engine, pump package, valve bank, cooling system and plumbing.
- Quick and easy machine diagnosis allows you to monitor critical systems in real time from the 5.7" digital control panel in the cab.

PRODUCTIVITY

Superior digging, pulling and traction forces to face every job site.

SAFETY

- Rear View Camera (optional)
- Powerful LED lights and full visibility on the job site with large glass door
- Boom & Arm Lock Valve
- ROPS Cabin
- OPG Guard (optional)

COMFORT

- One of the most spacious cabs in the market, with low noise & vibration levels and excellent all-round visibility.
- Large glass door for easy access and better visibility.
- Fully adjustable heated air suspension seat, air conditioning with climate control as standard.

POWER

The new Doosan Stage V engine, with DOC and DPF, is exceptionally powerful – with high torque at low revs.



DOOSAN DX27Z-7/DX35Z-7 HIGH-PERFORMANCE HYDRAULIC EXCAVATOR

Offers a host of redesigned features and new technologies to ensure smooth operation, superior productivity and stability, top-class operator comfort and improved fuel efficiency. This powerful machine will give your job site a huge boost.

ALL-ROUND VERSATILITY AND IMPROVED FUEL EFFICIENCY

A MODEL WITH NOVEL FEATURES

Developed with the concept of 'providing optimum value to the end-user', the DX27Z-7/DX35Z-7 (zero tail swing) hydraulic excavator offers additional value to the operator. In concrete terms, this translates into:

- Increased production and improved fuel economy achieved with an electronic control for the hydraulic system and for the 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 increased component life expectancy, thus reducing running costs
- Reduced maintenance increases the excavator's availability and lowers the operating costs

GUARANTEED HIGHEST PERFORMANCE IN ANY WORK ENVIRONMENT

The advanced hydraulic system, combined with a powerful engine, provides the biggest digging and tractive forces for efficient operation. As a result, the DX27Z-7/DX35Z-7 provides outstanding performance, work efficiency and the ability to adapt to any work environment.

DOOSAN D17 ENGINE

The DX27Z-7/DX35Z-7 has a powerful and eco-friendly heart, always providing high operating efficiency and pleasant working conditions.

BOOM SWING

The boom swing function allows you to work in very narrow areas.

POWERFUL DIGGING FORCE (BUCKET)

Powerful, efficient, and with increased digging force can face every job site condition.

DOZER BLADE

Welded, unitized blade provides durability even under harsh working conditions. Automatically controlled blade floating for quick and easy leveling operations.

SECOND SPEED AND AUTO-SHIFT

The travel motors automatically return to high speed after downshifting under load. This allows smoother turns and easier dozing work.





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13

10

12

11

7

6

1. Sunvisor
2. Window grip
3. Parallel wiper
4. Display monitor
5. Doosan Smart Touch
6. Redesigned pedals
7. Flat, spacious, easy-to-clean floor
8. Keyless start (Doosan Smart Key)
9. Joysticks and switches integrated in adjustable control consoles
10. Seat with heating option
11. Improved visibility of the bottom
12. Storage compartment for sunglasses
13. Seperate seat height adjustment level and cushion tilting function

THE IDEAL WORKSPACE – DESIGNED AROUND YOU

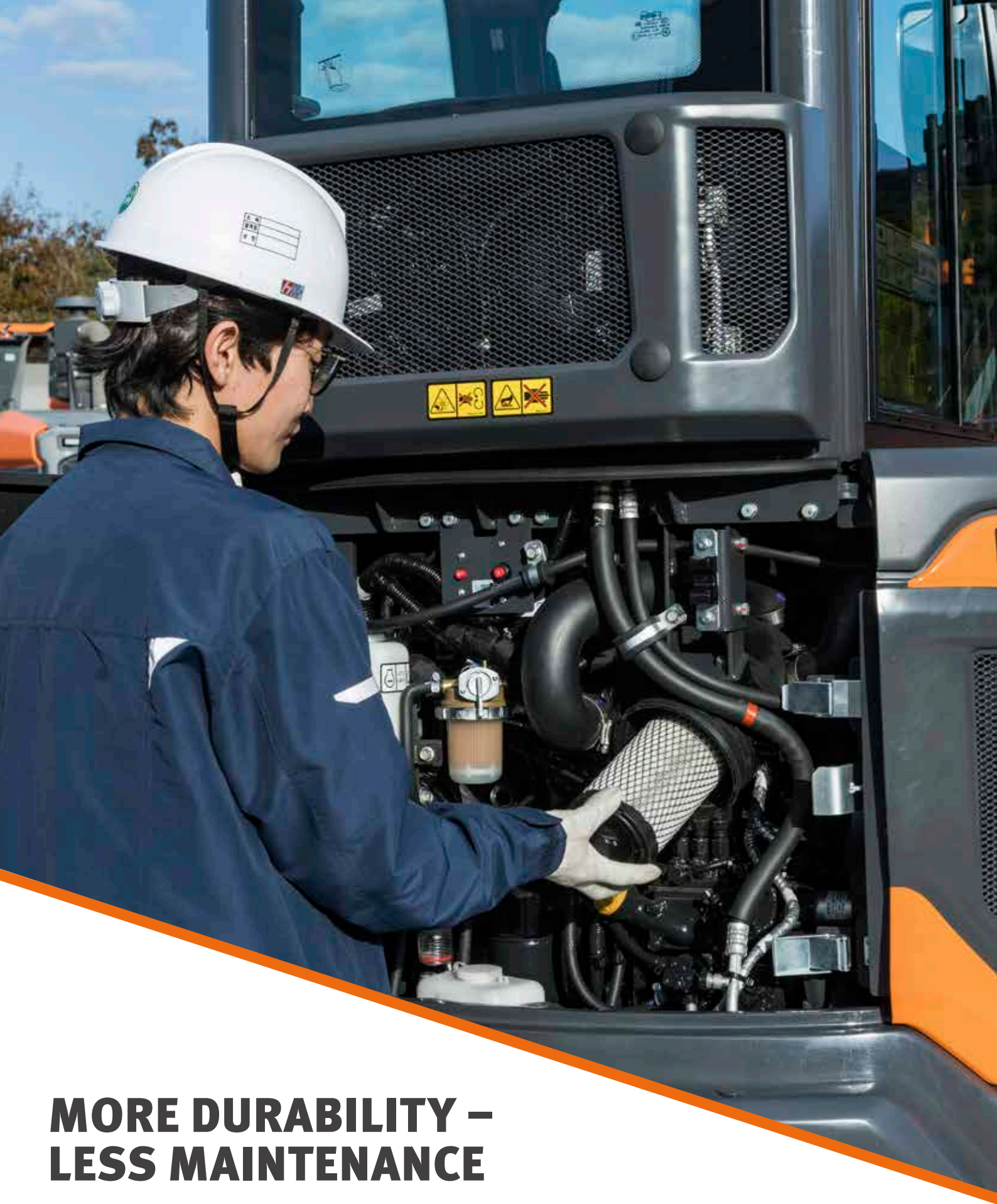
THE CABIN HAS BEEN ERGONOMICALLY DESIGNED WITH COMFORT IN MIND

The DX27Z-7/DX35Z-7 is designed to provide you with the best possible working conditions. The sophisticated pressurised ROPS cab is ISO-certified for your safety. Its spacious interior offers a fully adjustable and comfortable seat. Comfortably seated, you have easy access to several storage compartments and a clear all-round view of the worksite. Noise and vibration levels are reduced while air conditioning allows you to maximise your productivity and return on investment. Air conditioner (optional) performance has improved by applying more nozzles than equivalent equipment.

MORE DURABILITY – LESS MAINTENANCE

A reinforced chassis provides strength, while the optimised boom shape ensures uniform load distribution for more durability. Top quality materials, the most advanced computer-aided design and endurance testing under the most demanding conditions ensure your excavator will keep on performing. The DX27Z-7/DX35Z-7 is designed for low maintenance with longer intervals resulting in more machine availability on site while skilled Doosan-trained technicians are available to provide extra support when needed.





MORE DURABILITY – LESS MAINTENANCE

The most advanced technology developed by Doosan Infracore s.r.o was integrated into the DX27Z-7 & DX35Z-7 excavators for powerful performance and simple, easy maintenance. This provides the operator with convenient maintenance check points and maximizes the DX27Z-7 & DX35Z-7's work efficiency.

BEST MAINTENANCE ACCESS

MAINTENANCE ACCESS MADE SIMPLE

- A battery cut-off switch makes it easy to disconnect the battery during long-term storage
- The hour meter display can be easily checked from ground level
- For extra accessibility and servicing convenience, all filters (engine oil filter, fuel pre-filter, fuel filter and pilot filter) are accessible from ground level.

AIR BREATHER

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

STRENGTHENED BOOM

Using finite elements and 3-dimensional computer simulation, the shape of the boom has been optimally designed for better load distribution throughout the structure. This enhancement, combined with increased material thickness, limit element fatigue for improved durability and reliability.

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.

RUBBER TRACKS

The rubber tracks offer greater non-slip and grip capabilities, and are less harmful to sidewalks and road surfaces in urban environments.

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 working around the machine.

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.

EXTERNAL FUEL CAP

The external lockable fuel cap makes refueling easy and safe. For extra convenience, a warning beep sounds when the maximum fuel level has been reached.

TRANSPORTABILITY

Both models are compact and easy to transport.



TECHNICAL SPECIFICATIONS

DX27Z-7

ENGINE

Designed to deliver superior performance and fuel efficiency, the Doosan D17 diesel engine fully meets the latest Stage V emission regulations. To optimize machine performance, the engine uses high-pressure fuel injectors, natural aspiration, and electronic engine controls. 4-Cycle Water-Cooled, with EGR.

Model

D17

No. of cylinders

3

Rated power at 2400 rpm

ISO 14396 18.4 kW (25 hp)

Max. torque at 1600 rpm

97 N.m

Idle (low - high)

1300 - 2400 rpm

Displacement

1647 cm³

Bore × stroke

87 mm × 92.4 mm

Starter

12 V / 1.7 kW

Batteries - Alternator

1 × 12 V, 55 Ah – 13.5 V, 75 A

Air filter

Double element air cleaner

UNDERCARRIAGE

Extremely robust construction throughout - made of high-quality, durable materials, with all welded structures designed to limit stresses.

- 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

Upper rollers (standard shoe)

1

Lower rollers

3

Number of links & shoes per side

44

HYDRAULIC SYSTEM

The e-EPOS (Electronic Power Optimising System) is the brain of the excavator – minimising fuel consumption and optimizing the efficiency of the hydraulic system for all working conditions. To harmonize the operation of the engine and the hydraulics, the e-EPOS is connected to the engine's electronic control unit (ECU) via a data transfer link.

- 2 travel speeds offer either increased torque or high speed
- Cross-sensing pump system for fuel savings
- Auto-deceleration system
- 3 operating modes
- Flow and pressure control of auxiliary hydraulic circuits from control panel
- Computer-aided pump flow control

Main pumps

Variable axial pistons pumps 2 × 28.8 l/min

Gear pump 1 × 19.2 l/min

Pilot pump

Gear pump

Maximum flow at 2400 rpm 10.8 l/min

Relief valve settings

Implement 220 kgf/cm²

Travel 220 kgf/cm²

Swing 170 kgf/cm²

Pilot 23 kgf/cm²

HYDRAULIC CYLINDERS

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

Cylinders	Quantity	Bore × rod diameter × stroke (mm)
Boom	1	70 × 40 × 575
Arm	1	70 × 40 × 506
Bucket	1	65 × 35 × 435
Dozer	1	85 × 40 × 129
Boom swing	1	80 × 45 × 643

CAB

The air-conditioning and heating systems are integrated for optimal climate control. An automatically-controlled fan supplies the pressurized and filtered cab air, which is distributed throughout the cab from multiple vents.

The heated air suspension, adjustable operator's seat includes a seat belt. The operator can adjust the ergonomic seat and joystick console separately according to his preferences.

A-weighted emission sound pressure level at the operator's position, LpAd (ISO 6396:2008)

Declared: 78 dB(A)

A-weighted sound power level, LwAd (2000/14/EC)

Declared: 97 dB(A)

Measured: 96 dB(A)

SWING MECHANISM

The swing mechanism uses an axial piston motor, driving a 2-stage planetary reduction gear bathed in oil for maximum torque.

- Swing bearing: single-row, shear type ball bearing with induction hardened internal gear
- Internal gear and pinion immersed in lubricant

Maximum swing speed

9.3 rpm

Maximum swing torque

868.3 kgf·m

WEIGHT & GROUND PRESSURE

	Machine weight (kg)	Ground pressure (kgf/cm²)
300 mm rubber shoes	2798	0.28

FRONT ATTACHMENTS

	Length (mm)	Weight (kg)	Digging forces (ISO) (ton)
Std. boom	2090	96.5	–
Std. arm	1300	55	1.30
Short arm	1100	47	1.45

FLUID CAPACITIES

Fuel tank	43 l
Cooling system (radiator)	4.8 l
Hydraulic oil tank	38 l
Engine oil	5.8 l
Travel device	2 × 0.9 l

DRIVE

Each track is driven by an independent, high-torque axial piston motor through a planetary reduction gearbox. Two levers / foot pedals guarantee smooth travel with counter-rotation on demand. The track frame protects the travel motor, brake and planetary gears. The multi-disc track brakes are spring-applied and hydraulic released.

Travel speed (low - high)

2.4 - 4.2 km/h

Maximum traction

3.13 t

Maximum gradeability

25° / 70%

TECHNICAL SPECIFICATIONS

DX35Z-7

ENGINE

Designed to deliver superior performance and fuel efficiency, the Doosan DN1.7 diesel engine fully meets the latest Stage V emission regulations. To optimize machine performance, the engine uses high-pressure fuel injectors, natural aspiration, and electronic engine controls. 4-Cycle Water-Cooled, with EGR.

Model

DN1.7

No. of cylinders

3

Rated power at 2200 rpm

ISO 14396 18.4 kW (25 hp)

Max. torque at 1600 rpm

97 N.m

Idle (low - high)

1300 - 2350 rpm

Displacement

1647 cm³

Bore × stroke

87 mm × 92.4 mm

Starter

12 V / 1.7 kW

Batteries - Alternator

1 × 12 V, 55 Ah – 13.5 V, 75 A

Air filter

Double element air cleaner

UNDERCARRIAGE

Extremely robust construction throughout - made of high-quality, durable materials, with all welded structures designed to limit stresses.

- 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

Upper rollers (standard shoe)

1

Lower rollers

3

Number of links & shoes per side

44

Link pitch

101.6 mm

HYDRAULIC SYSTEM

The e-EPOS (Electronic Power Optimising System) is the brain of the excavator – minimising fuel consumption and optimizing the efficiency of the hydraulic system for all working conditions. To harmonize the operation of the engine and the hydraulics, the e-EPOS is connected to the engine's electronic control unit (ECU) via a data transfer link.

- 2 travel speeds offer either increased torque or high speed
- Cross-sensing pump system for fuel savings
- Auto-deceleration system
- 3 operating modes
- Flow and pressure control of auxiliary hydraulic circuits from control panel
- Computer-aided pump flow control

Main pump

Variable axial piston pump	2 × 37 l/min
Gear pump	20.7 l/min

Pilot pump

Gear pump	
Maximum flow at 2200 rpm	10.8 l/min

Relief valve settings

Implement	250 kgf/cm ²
Travel	250 kgf/cm ²
Swing	220 kgf/cm ²
Pilot	23 kgf/cm ²

HYDRAULIC CYLINDERS

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

Cylinders	Quantity	Bore × rod diameter × stroke (mm)
Boom	1	85 × 50 × 633
Arm	1	80 × 55 × 726
Bucket	1	70 × 45 × 600
Dozer	1	110 × 60 × 197
Boom swing	1	95 × 60 × 449

CAB

The air-conditioning and heating systems are integrated for optimal climate control. An automatically-controlled fan supplies the pressurized and filtered cab air, which is distributed throughout the cab from multiple vents.

The heated air suspension, adjustable operator's seat includes a seat belt. The operator can adjust the ergonomic seat and joystick console separately according to his preferences.

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The swing mechanism uses an axial piston motor, driving a 2-stage planetary reduction gear bathed in oil for maximum torque.

- Swing bearing: single-row, shear type ball bearing with induction hardened internal gear
- Internal gear and pinion immersed in lubricant

Maximum swing speed

8.3 rpm

Maximum swing torque

868.3 kgf·m

WEIGHT & GROUND PRESSURE

	Machine weight (kg)	Ground pressure (kgf/cm²)
300 mm rubber shoes	3995	0.36

FRONT ATTACHMENTS

	Length (mm)	Weight (kg)	Digging forces (ISO) (ton)
Std. boom	2535	136	–
Std. arm	1500	81.5	1.95
Short arm	1330	74.3	2.12

FLUID CAPACITIES

Fuel tank	43 l
Cooling system (radiator)	4.8 l
Hydraulic oil tank	38 l
Engine oil	5.8 l
Travel device	2 × 0.9 l

DRIVE

Each track is driven by an independent, high-torque axial piston motor through a planetary reduction gearbox. Two levers / foot pedals guarantee smooth travel with counter-rotation on demand. The track frame protects the travel motor, brake and planetary gears. The multi-disc track brakes are spring-applied and hydraulic released.

Travel speed (low - high)

2.4 - 4.2 km/h

Maximum traction

3.13 t

Maximum gradeability

25° / 70%

TECHNICAL SPECIFICATIONS

COMPONENT WEIGHTS (KG)

Item	DX27Z-7		DX35Z-7		Remarks
	STD	OPT	STD	OPT	
Upper structure without front (cab/canopy)	1448	1528	1603		Without counterweight
Counterweight	146		630		
Additional counterweight	60		100		
Lower structure assembly	886		1117		Rubber
Front assembly	316	369	492	499	
Boom assembly	96		145		
Arm assembly	53	54	100	107	
Bucket	49.6	58	86		
Boom cylinder	22	22.5	30		
Arm cylinder	21	21.5	31.5		
Bucket cylinder	15.7		24		
Dozer	92		184		
Dozer cylinder	16		16		

DIGGING FORCES (ISO) – ARM TEAROUT FORCE

	Boom (m)	Arm (m)	Arm tearout force (kN)	Arm tearout force (kg)
DX27Z-7	2.09	1.3	12.7	1300
		1.1	14.2	1450
DX35Z-7	2.54	1.5	19.1	1950
		1.33	20.8	2120

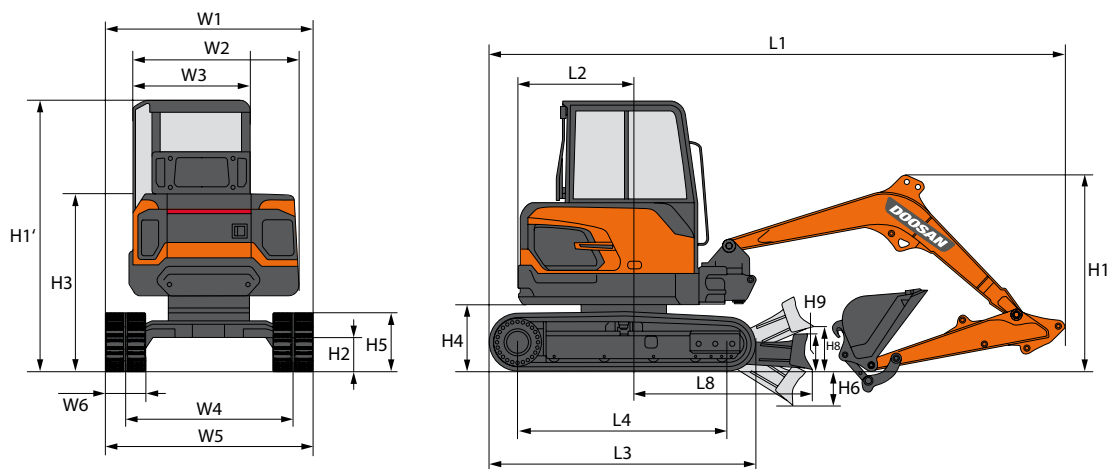
DIGGING FORCES (ISO) – BUCKET BREAKOUT FORCE

	Capacity (SAE) (m³)	Bucket breakout force (kN)	Bucket breakout force (kg)
DX27Z-7	0.08	23	2220
	0.06	23	2220
DX35Z-7	0.11	31.8	3240

BUCKETS

		Capacity (SAE) (m³)	Width (mm)		Weight (kg)
			With side cutters	W/O side cutters	
DX27Z-7	STD	0.08	476	450	58.5
	OPT	0.06	398	372	46
DX35Z-7	STD	0.11	576	550	85

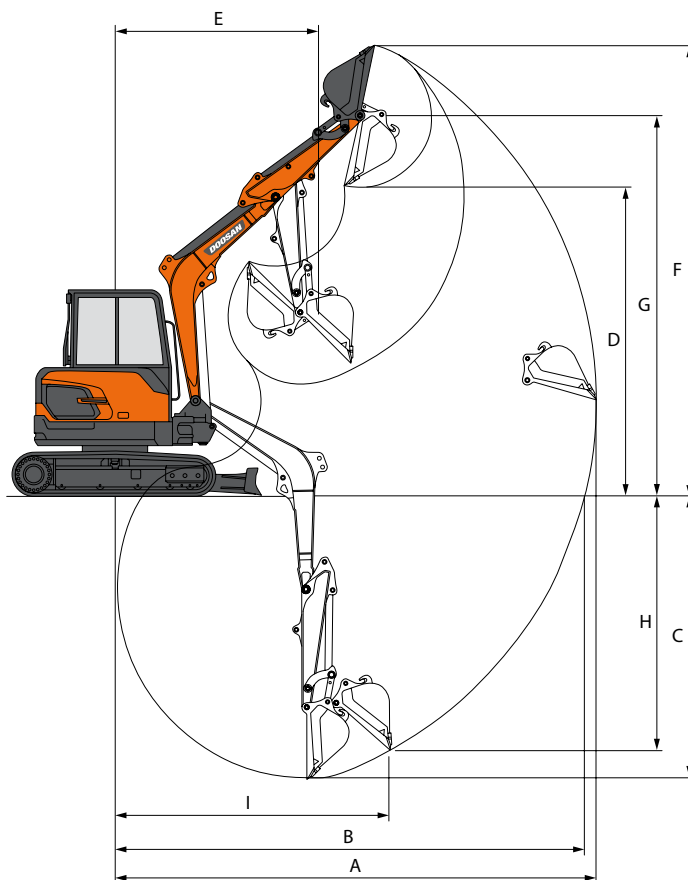
DIMENSIONS



DIMENSIONS

		Unit	DX27Z-7		DX35Z-7		
Front		-	Cab	Canopy	Cab		
Counterweight		-	Additional	-	Additional	-	
Boom length		mm	2090		2535		
Arm length		mm	1300	1100	1500	1330	
Bucket capacity (ISO)		m ³	0.06		0.11		
Undercarriage / Shoe		-	STD / Rubber		STD / Rubber		
L1	Overall length	mm	4191	4186	4777	4760	
H1	Overall height	Boom	mm	1688	1556	1679	1589
		Cab	mm	2448		2479	
W1	Overall width	mm	1550		1700		
R1	Rear swing radius	mm	855	790	945	875	
H2	Ground clearance	mm	217		235		
L2	Rear end distance	mm	855	790	945	875	
W2	House width	mm	1500				
W3	Cab width	mm	1062				
H3	Height over cover	mm	1471		1508		
H4	Counterweight clearance	mm	512		537		
H5	Track height	mm	451		475.5		
L3	Track length	mm	1960		2121		
L4	Tumbler distance	mm	1540		1700		
W4	Track gauge	mm	1250		1400		
W5	Undercarriage width	mm	1550		1700		
W6	Shoe width	mm	300				
H6	Dozer digging depth	mm	335		429		
H8	Dozer lift clearance	mm	383		410		
H9	Dozer blade height	mm	259		380		
L8	Distance to dozer end	mm	1450		1605		
Boom swing angle (left/right)		mm	55 / 70				

WORKING RANGE



WORKING RANGE

	Unit	DX27Z-7		DX35Z-7	
Boom length	mm	2090		2535	
Arm length	mm	1300	1100	1500	1330
Bucket capacity (SAE)	m³	0.06		0.11	
A Max. digging reach	mm	4845	4655	5515	5355
B Max. digging reach (ground)	mm	4720	4520	5400	5235
C Max. digging depth	mm	2845	2645	3445	3275
D Max. dumping height	mm	3065	2935	3700	3580
E Min. swing radius	mm	2095	2045	2145	2115
F Max. digging height	mm	4515	4385	5215	5095
G Max. bucket pin height	mm	3795	3665	4460	4345
H Max. vertical wall depth	mm	1690	1565	2045	1980
I Max. radius vertical	mm	3815	3670	4350	4215

STANDARD AND OPTIONAL EQUIPMENT

● Standard ○ Optional

Engine

- Doosan D17 - Common rail diesel engine with direct fuel injection, Stage V compliant
- Auto-idle function

Hydraulic system

- 2 × variable pistons pumps + 2 gears pumps
- Breaker piping with direct return to the tank
- 2-way high flow auxiliary line with settings from the display panel
- Cylinder cushioning & contamination seals
- Rotation line (Pero)
- Quick coupler line

Cab & interior

- 4-pillar canopy with 5.7 inch digital gauge panel for DX27Z-7
- Pressurized, sound-insulated heated cab for DX35Z-7
- Mechanical suspension seat
- Pull-up type front window and removable lower front window
- Sliding right windows with lock
- Ceiling light
- Intermittent windshield wiper (not for DX27Z-7 canopy)
- Multiple storage compartments
- Flat, spacious, easy-to-clean floor
- Cup holder
- Anti-theft protection
- 5.7 inch Digital Gauge Panel
- Electric horn
- Engine speed (RPM) control dial
- Hydrostatic 2-speed travel system with manual or automatic shift
- DAB radio with handsfree call system (not for DX27Z-7 canopy)
- USB charger & 12 V power socket
- Serial communication port for laptop PC interface
- Adjustable PPC for arm, boom, bucket and swing, with sliding proportional
- Control for attachments and auxiliary hydraulic buttons
- Travel pedals and hand levers
- Master key
- Pressurized, sound-insulated heated cab for DX27Z-7
- Air conditioning option for DX27/35 cab

Safety

- Roll Over Protective Structure (ROPS)
- Boom and arm cylinder safety valves
- Overload warning device
- Rotating beacon (exception DX27Z-7 canopy)
- Hydraulic safety lock lever
- Safety glass
- Hammer for emergency escape
- Emergency engine stop switch
- Reinforced cast steel pivot points
- Battery cut-off switch
- LED work light (1 on the boom)
- Lockable fuel cap
- LED work lights (2 on top of cab, 1 on top of DX27Z-7 canopy))
- Rear camera (available by kit)

Other

- DX27Z-7: 2090 mm mono boom – 1100 mm arm
- DX35Z-7: 2540 mm mono boom – 1330 mm arm
- DoosanCONNECT (telematic system)
- Boom cylinder guard
- Double element air cleaner
- Self-diagnostic function
- Battery (12 V, 55 Ah), alternator (12 V, 75 A)
- Remote greasing for swing circle and workgroup pivot points
- DX27Z-7: 2090 mm mono boom – 1300 mm arm – 60 kg additional counterweight
- DX35Z-7: 2540 mm mono boom – 1500 mm arm – 100 kg additional counterweight

Undercarriage

- Fixed undercarriage
- Hydraulic track adjuster
- 300 mm rubber tracks
- Dozer blade
- Greased and sealed track links

Powered by Innovation

DISCOVER MORE:
DX27Z-7



DX35Z-7



DOOSAN