Maximum power: 24.8 hp
Operating weight: 3.499 t
Max. bucket capacity: 0.11 m³
Doosan DX35Z high-performance hydraulic excavator

A model with novel features

Developed with the concept of 'providing optimum value to the end-user', the DX35Z (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 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
- High-performance materials, combined with new methods of structural stress analysis, have improved reliability and 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 all working conditions

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 delivers outstanding performance, work efficiency, and the ability to adapt to any work environment.

Engine speed lever

The conveniently located engine speed lever allows easy engine control.

Kubota D1703-M-DI-Ef03 engine

The DX35Z has a powerful and eco-friendly heart, which always provides high operating efficiency and pleasant working conditions.

Powerful digging force (bucket)

Powerful, efficient, and with increased digging force with standard arm. Bucket digging force: 20790 N

Dozer blade

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

Boom swing

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

Second speed, auto-shift and auto-idle

The travel motors automatically return to high speed after downshifting under load. This allows smoother turns and easier dozing work. Auto-idle is available as an option to reduce fuel consumption.

Rear swing radius: 875 mm
Minimum front swing radius: 2267 mm
Right swing angle: 55°
Left swing angle: 75°
Slew rate: 8.6 rpm
Comfort

The cab has been ergonomically designed with comfort in mind
Starting fresh, the DX35Z is the result of an innovative technical design! The cab space is more comfortable than any other excavator in its class - and the variety of convenient features provide the operator with maximum comfort.

Comfortable operating cab
A roomy ROPS-TOPS, 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.

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 cab environment.

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

Thumb control for boom swing and auxiliary hydraulics
A thumb control is integrated in the joystick for better metering of the boom swing and the proportional auxiliary hydraulics.

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

Cup holder
The conveniently located cup holder adds to the operator’s comfort.

Air conditioning
The Doosan advanced climate control system keeps you comfortable even in extreme weather conditions. The heat and air-conditioning vents allow you to direct airflow where you need it most.

Transportability
Easy to transport with the new integrated upper-structure tie-down points.
Maintenance

Simple and easy
The status and condition of all components can be seen at a glance. The convenient and easy serviceability is really impressive. 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 DX35Z’s work efficiency.

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

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.

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.

Rubber tracks
The rubber tracks offer greater non-slip and grip capabilities, and 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.

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.
Technical specifications

★ Engine

**DX35Z**

- **Make/model**: Kubota/D1703-M-DI-EF03 Stage V
- **Fuel/cooling**: Diesel/Liquid, forced circulation
- **No. of cylinders**: 3
- **Piston displacement**: 1642 cm³
- **Nominal flywheel power**: 18.2 kw (24.8 hp) at 2200 rpm (ISO 14396)
- **Max torque**: 97.4 Nm (SAE)
- **Bore × stroke**: 87 mm × 92.4 mm
- **Alternator**: 12 V / 90 Ah

★ Hydraulic system

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

★ Fluid capacities

**DX35Z**

- **Cooling system (radiator capacity)**: 8 l
- **Engine lubrication plus oil filter**: 5.2 l
- **Fuel tank**: 52 l
- **Hydraulic tank**: 8.3 l
- **Hydraulic system**: 39.7 l
- **Final drive case (each)**: 0.5 l

★ Environment

Noise levels comply with environmental regulations (dynamic values).

★ Noise emission & vibration

**DX35Z**

- **Noise level LpA (EU Directive 2006/42/EC)**: 77 dB(A)
- **Noise level LwA (EU Directive 2006/14/EC)**: 94 dB(A)
- **Whole body vibration (ISO 2631-1)**: 0.11 ms⁻²
- **Hand-arm vibration (ISO 5349-1)**: 0.34 ms⁻²

★ 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 system

**DX35Z**

- **Boom swing, left**: 75°
- **Boom swing, right**: 55°
- **Slew rate**: 8.6 rpm

★ Drive

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

★ Speed & traction

**DX35Z**

- **Travel speed (low - high)**: 2.6 - 4.7 km/h
- **Traction force**: 3480 kgf
- **Gradeability**: 30°

★ Digging forces (ISO 6015)

At power boost.

**DX35Z**

- **Digging force, standard arm (ISO 6015)**: 20790 N
- **Digging force, long arm (ISO 6015)**: 18080 N
- **Digging force, bucket (ISO 6015)**: 33430 N
- **Drawbar pull**: 34132 N

★ Weight

**DX35Z**

- **Operating weight with cab and bucket (ISO 6016)**: 3499 kg
- **Ground pressure with rubber tracks**: 0.33 kgf/cm²
- **Transport mass (no attachment)**: 3335 kg
- **Weight reduction with canopy**: -118 kg
- **Additional weight for cab with HVAC**: 19 kg
- **Additional weight for steel tracks**: 96 kg
- **Additional weight for long arm**: 12 kg
- **Additional weight for heavy counterweight**: 291 kg
# Lifting capacities

**DX35Z**

- **With cab • standard arm (1325 mm) • standard counterweight • without bucket**

<table>
<thead>
<tr>
<th>Lift Point Height [m]</th>
<th>Lift at max. radius (kg)</th>
<th>Lift radius (R) (kg)</th>
<th>Lift at max. radius (kg)</th>
<th>Lift radius (R) (kg)</th>
<th>Max. radius [R] (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Over blade, blade down</td>
<td>Over side, blade up</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>2.0 m 3.0 m 4.0 m</td>
<td>2.0 m 3.0 m 4.0 m</td>
<td>2.0 m 3.0 m 4.0 m</td>
<td>2.0 m 3.0 m 4.0 m</td>
<td></td>
</tr>
<tr>
<td>3.0 m</td>
<td>702*</td>
<td>-</td>
<td>325</td>
<td>-</td>
<td>3950</td>
</tr>
<tr>
<td>2.0 m</td>
<td>759*</td>
<td>-</td>
<td>257</td>
<td>-</td>
<td>4420</td>
</tr>
<tr>
<td>1.0 m</td>
<td>816*</td>
<td>-</td>
<td>241</td>
<td>-</td>
<td>4560</td>
</tr>
<tr>
<td>0.0 m</td>
<td>928*</td>
<td>2017*</td>
<td>250</td>
<td>821</td>
<td>289</td>
</tr>
<tr>
<td>-1.0 m</td>
<td>965*</td>
<td>2283*</td>
<td>302</td>
<td>900</td>
<td>4420</td>
</tr>
</tbody>
</table>

- **With cab • long arm (1625 mm) • heavy counterweight • without bucket**

<table>
<thead>
<tr>
<th>Lift Point Height [m]</th>
<th>Lift at max. radius (kg)</th>
<th>Lift radius (R) (kg)</th>
<th>Lift at max. radius (kg)</th>
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<th>Max. radius [R] (mm)</th>
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<tr>
<td></td>
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<td></td>
<td>2.0 m 3.0 m 4.0 m</td>
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<td>2.0 m 3.0 m 4.0 m</td>
<td>2.0 m 3.0 m 4.0 m</td>
<td></td>
</tr>
<tr>
<td>4.0 m</td>
<td>602*</td>
<td>-</td>
<td>602*</td>
<td>-</td>
<td>3480</td>
</tr>
<tr>
<td>3.0 m</td>
<td>638*</td>
<td>-</td>
<td>612*</td>
<td>-</td>
<td>3560</td>
</tr>
<tr>
<td>2.0 m</td>
<td>686*</td>
<td>705*</td>
<td>473</td>
<td>705*</td>
<td>4760</td>
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<tr>
<td>1.0 m</td>
<td>726*</td>
<td>705*</td>
<td>410</td>
<td>710*</td>
<td>4760</td>
</tr>
<tr>
<td>0.0 m</td>
<td>787*</td>
<td>712*</td>
<td>387</td>
<td>713*</td>
<td>4700</td>
</tr>
<tr>
<td>-1.0 m</td>
<td>861*</td>
<td>2293*</td>
<td>456</td>
<td>1372</td>
<td>4770</td>
</tr>
</tbody>
</table>

- **Center line of rotation**
- **Ground level**

1. The nominal forces are based on the SAE J1097 standard.
2. * = The nominal loads are based on hydraulic capacity.
3. The nominal loads do not exceed 87% of the hydraulic capacity or 75% of the capacity of the swing.
Dimensions & working range

### Dimensions

<table>
<thead>
<tr>
<th></th>
<th>DX35Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Blade height</td>
<td>mm 322</td>
</tr>
<tr>
<td>B Clearance under counterweight</td>
<td>mm 540</td>
</tr>
<tr>
<td>C Height to top of engine cover</td>
<td>mm 1557</td>
</tr>
<tr>
<td>D Tumbler distance</td>
<td>mm 1647</td>
</tr>
<tr>
<td>E Center line to blade</td>
<td>mm 1528</td>
</tr>
<tr>
<td>F Front length - std arm</td>
<td>mm 3787</td>
</tr>
<tr>
<td>G Front length - long arm</td>
<td>mm 3796</td>
</tr>
<tr>
<td>J Blade width</td>
<td>mm 1750</td>
</tr>
<tr>
<td>K Overall height</td>
<td>mm 2468</td>
</tr>
<tr>
<td>L Track width</td>
<td>mm 300</td>
</tr>
<tr>
<td>M Machine center line to working equipment center line, left-hand rotation</td>
<td>mm 575</td>
</tr>
<tr>
<td>N Machine center line to working equipment center line, right-hand rotation</td>
<td>mm 795</td>
</tr>
<tr>
<td>O Minimum turning radius - std arm</td>
<td>mm 1788</td>
</tr>
<tr>
<td>D Minimum turning radius - long arm</td>
<td>mm 1841</td>
</tr>
<tr>
<td>P Rear swing radius - std arm/std counterweight</td>
<td>mm 875</td>
</tr>
<tr>
<td>Q Working width at maximum right-hand rotation</td>
<td>mm 1841</td>
</tr>
<tr>
<td>R Working width at maximum left-hand rotation</td>
<td>mm 1805</td>
</tr>
</tbody>
</table>

### Working range

<table>
<thead>
<tr>
<th></th>
<th>DX35Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Max. bucket angle</td>
<td>° 185</td>
</tr>
<tr>
<td>B Max. forward reach - std arm</td>
<td>mm 5351</td>
</tr>
<tr>
<td>B Max. forward reach - long arm</td>
<td>mm 5633</td>
</tr>
<tr>
<td>C Max. digging reach - std arm</td>
<td>mm 5230</td>
</tr>
<tr>
<td>C Max. digging reach - long arm</td>
<td>mm 5520</td>
</tr>
<tr>
<td>D Min. front swing radius - std arm</td>
<td>mm 2267</td>
</tr>
<tr>
<td>D Min. front swing radius - long arm</td>
<td>mm 2324</td>
</tr>
<tr>
<td>E Blade lift height</td>
<td>mm 382</td>
</tr>
<tr>
<td>F Blade cutting depth</td>
<td>mm 456</td>
</tr>
<tr>
<td>G Max. height with arm retracted - std arm</td>
<td>mm 3708</td>
</tr>
<tr>
<td>G Max. height with arm retracted - long arm</td>
<td>mm 3708</td>
</tr>
<tr>
<td>H Max. digging height - std arm</td>
<td>mm 4804</td>
</tr>
<tr>
<td>H Max. digging height - long arm</td>
<td>mm 4985</td>
</tr>
<tr>
<td>I Max. dump height - std arm</td>
<td>mm 3340</td>
</tr>
<tr>
<td>I Max. dump height - long arm</td>
<td>mm 3521</td>
</tr>
<tr>
<td>J Max. vertical wall depth - std arm</td>
<td>mm 2136</td>
</tr>
<tr>
<td>J Max. vertical wall depth - long arm</td>
<td>mm 2414</td>
</tr>
<tr>
<td>K Max. digging depth - std arm</td>
<td>mm 3117</td>
</tr>
<tr>
<td>K Max. digging depth - long arm</td>
<td>mm 3417</td>
</tr>
</tbody>
</table>

### Standard and optional equipment

#### Cab & interior
- Dix textile suspension seat
- Hydraulic joystick controls
- Proportional fingertip auxiliary and boom swing offset hydraulic control
- Control console locks
- Cupholder
- Foldable and ergonomic pedals
- Retractable seat belt
- Air conditioning (cab with HVAC)
- AM/FM MP3 stereo Bluetooth radio
- TOPS/ROPS/FOPS cab with heater

#### Safety
- Battery disconnect
- Full fuel warning alarm
- Horn
- Engine/hydraulic monitor with shutdown
- Upper structure four-point tie down
- Object handling device (safety valves + overload warning device + lifteye)
- Travel motion alarm

#### Cab & interior
- Dix textile suspension seat
- Hydraulic joystick controls
- Proportional fingertip auxiliary and boom swing offset hydraulic control
- Control console locks
- Cupholder
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- Retractable seat belt
- Air conditioning (cab with HVAC)
- AM/FM MP3 stereo Bluetooth radio
- TOPS/ROPS/FOPS cab with heater

### Other
- 1500 mm dozer blade
- 300 mm rubber tracks
- Adjustable double acting auxiliary hydraulic (AUX 1) with quick couplers on arm with blind caps
- Auto idle
- Blade float feature
- Two-speed travel with Auto shift
- Water separator
- Work light (boom)
- 2nd AUX hydraulics (boom, arm) on arm with blind caps
- Additional lights (1+1)
- Direct-to-tank-AUX line
- Heavy counterweight with long arm

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.