

TECHNICAL SPECIFICATIONS

DX35Z-7

ENGINE

Designed to deliver superior performance and fuel efficiency, the Develon 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/cm²

Travel 250 kgf/cm²

Swing 220 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 | 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.

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

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%

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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 |

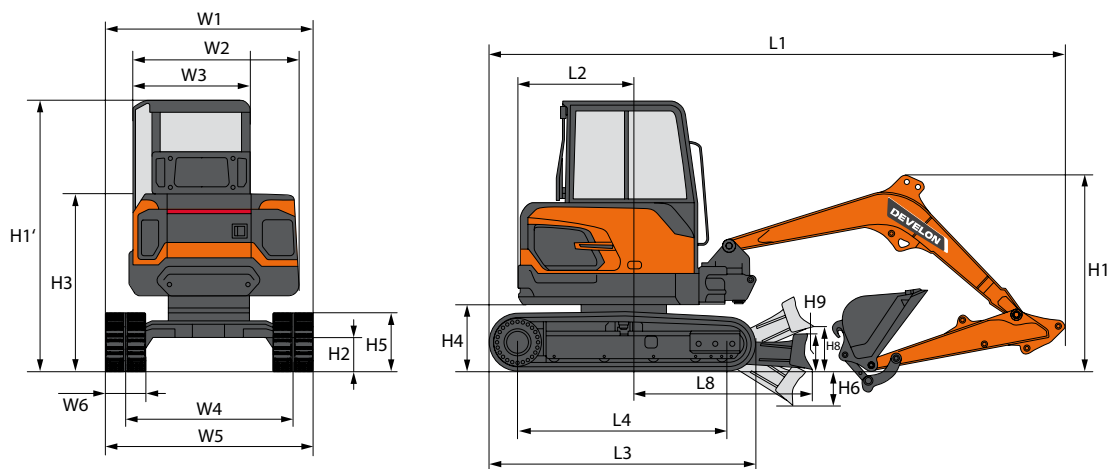
DIGGING FORCES (ISO) – BUCKET BREAKOUT FORCE

| | Capacity (SAE) (m³) | Bucket breakout force (kN) | Bucket breakout force (kg) |
|---------|---------------------|----------------------------|----------------------------|
| DX27Z-7 | 0.08 | 21.8 | 2220 |
| | 0.06 | 21.8 | 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 |

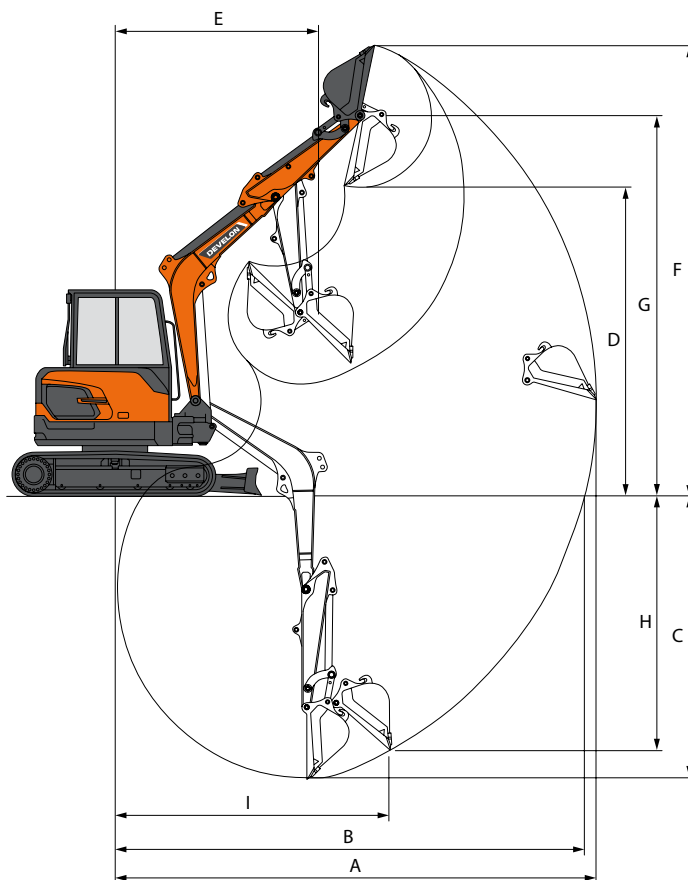
DIMENSIONS



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 | 66.5 / 53.5 | | | | |

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 |