

DOOSAN

Wheeled Excavators

DX100W-7

Maximum power	100 hp
Operating weight	10.7~11.1 t
Bucket capacity	0.28 m ³
Emission standard	Stage V



TECHNICAL SPECIFICATIONS

ENGINE

Designed to deliver superior performance and fuel efficiency, the Doosan D34 diesel engine fully meets the latest Stage V emission regulations. To optimize machine performance, the engine uses high-pressure fuel injectors, air-to-air inter-cooler and electronic engine controls. 4-cycle water-cooled, wastegate turbocharged, Diesel Oxidation Catalyst (DOC), Selective Catalytic Reduction (SCR) and Diesel Particulate Filter (DPF).

Model

Doosan D34

No. of cylinders

4

Rated power at 2000 rpm

SAE J1995 75 kW (100 hp)

Max. torque at 1400 rpm

43.8 kgf·m

Idle (low - high)

1000 - 2100 rpm

Displacement

3409 cm³

Bore × stroke

98 mm × 113 mm

Starter

12 V / 2.5 kW

Batteries – Alternator

12 V, 150 Ah – 12 V, 140 A

Air filter

Double element air cleaner and pre-filtered Cyclone Turbo dust separator

UNDERCARRIAGE

Extremely robust construction throughout – made of high-quality durable materials with all welded structures designed to limit stresses. Lateral chassis welded and rigidly attached to undercarriage. Heat-treated connecting pins. Heavy-duty front axle with automatic or operator-controlled (on/off/auto) front axle oscillation lock.

Tire dimensions

8.25 - 20-14 PR

Overall width

2450 mm

Wheel base

2240 mm

Tread width

1944 mm

Oscillation angle

± 6° (without fender)

± 3.2° (with fender)

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.

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

Maximum system pressure

Work 286 kgf/cm²

Travel 408 kgf/cm²

Pumps	Type	Max. flow at 2000 rpm	Relief valve settings
Main	Axial piston	200 l/min	295 bar
Pilot	Gear	23.2 l/min	28 bar
Steering	Gear	36.6 l/min	125 bar
Brake	Gear	13.2 l/min	125 bar
Travel	Axial piston	112 l/min	435 bar

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)
Lower boom	1	115 × 70 × 775
Upper boom	2	100 × 55 × 410
Arm	1	100 × 65 × 846
Bucket	1	85 × 55 × 690
F-Cradle + R-Dozer	2	100 × 60 × 179
F-Dozer + R-Stabilizer	4	
F-Stabilizer + R-Stabilizer	4	
Chocking	2	75 × 75 × 100
Boom swing	1	110 × 60 × 684

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 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: 72 dB(A)

Measured: 73 dB(A)

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

Declared: 97 dB(A)

Measured: 98 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
- Increased swing torque reduces swing time
- The swing brake for parking is activated by spring and released hydraulically

Maximum swing speed

10.5 rpm

Maximum swing torque

1820 kgf·m

ARM

Arm Type	Length (mm)	Weight (kg)	Digging force (ISO) (kN)
Standard	2250	242	36.5

BUCKET

Bucket Type	Capacity (m ³) ISO	Width (mm)		Weight (kg)	Digging force (ISO) (kN)
		With side cutters	W/O side cutters		
Standard	0.28	816	700	235	58.6

FLUID CAPACITIES

Fuel tank	160 l
Cooling system	16 l
AdBlue® (DEF) tank	20 l
Hydraulic oil tank	140 l
Engine oil	12.6 l
Swing device	1.5 l

DRIVE

The wheels are driven by a bent axial piston engine via a 2-speed powershift transmission. In addition to the 2-speed powershift transmission there is also an economy mode and a switch for the creep speed. A button makes it possible to pass from high to low in work mode. Two travel speed ranges offer a choice between increased torque or high speed.

Travel speed 1st gear (low/high)

5.4 / 16.9 km/h

Travel speed 2nd gear (low/high)

12.9 / 37.4 km/h

Maximum traction force

4.2 t

Minimum turning radius

5738 mm (4 wheel steering: 3697 mm)

Gradeability

35° / 70%

BRAKES

Dual multi-disc circuit with sintered metal discs for extended service life. Braking system activated by a pump and accumulator circuits. Automatic brakes for standard, released when pressing the transmission pedal. Spring-applied hydraulically released parking brake mounted on the transmission shaft.

Accumulators

0.75 l – 30 bar

TECHNICAL SPECIFICATIONS

COMPONENT WEIGHTS

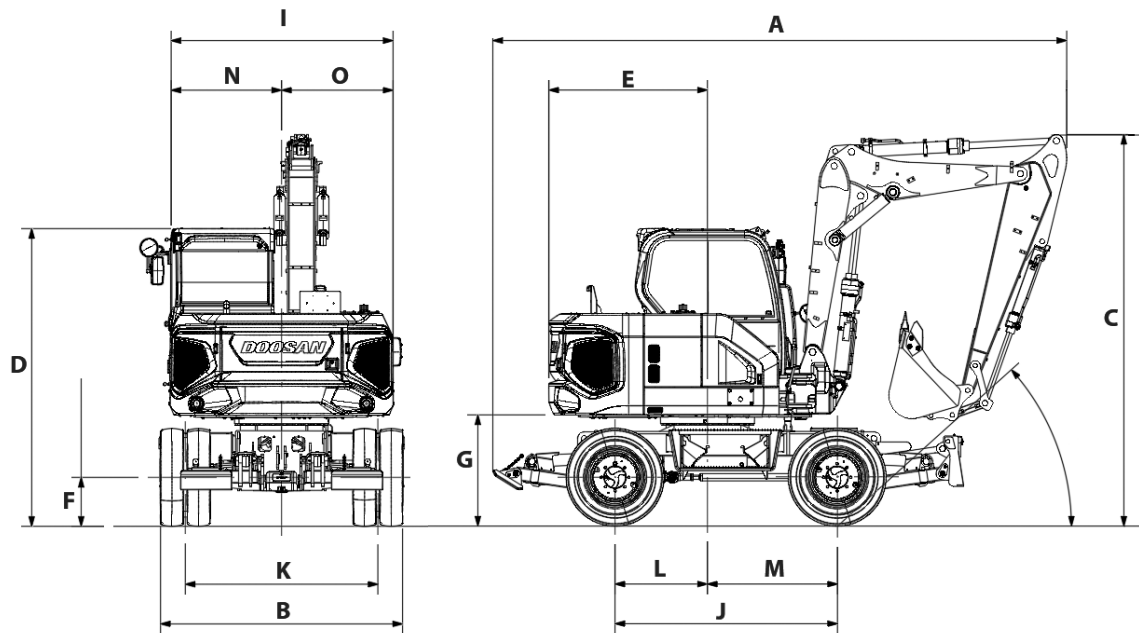
Item	Weight (kg)	Remarks
Upper structure	3997	Without front assembly and counterweight
Cabin assembly	600	With operator (75 kg), without OPG (100 kg)
Undercarriage – including front cradle and rear dozer	3719	With swing bearing, double tire, 2 wheel steering, without fender (174 kg)
Dozer	596	
Dozer cylinder	70	2 × 35 kg
Front axle	413	
Rear axle – non-steering	414	
Rear axle – steering (optional)	520	
Tire and rim assembly – double tire	672	4 × 168 kg
Tire and rim assembly – single tire (optional)	496	4 × 124 kg
Undercarriage – including front dozer and rear stabilizer	4109	With swing bearing, double tire, 2 wheel steering, without fender (174 kg)
Dozer	596	
Dozer cylinder	70	2 × 35 kg
Stabilizer	421	
Stabilizer cylinder	70	2 × 35 kg
Undercarriage – including front and rear stabilizer	3933	With swing bearing, double tire, 2 wheel steering, without fender (174 kg)
Stabilizer	421	Front and rear
Stabilizer cylinder	140	4 × 35 kg
Front assembly	1607	
Lower boom	275	
Upper boom	259	
Boom cylinder for lower boom	109	
Boom cylinder for upper boom	81.4	2 × 40.7 kg
Arm	241	
Arm cylinder	77	
Bucket	234.5	
Bucket cylinder	58	
Counterweight	1350	

OPERATING WEIGHT

(with 0.28 m³ bucket, articulated boom (1890 mm lower boom + 1880 mm upper boom), 2250 mm arm and 1350 kg counterweight)

Operating weight	11073 kg	10788 kg	10682 kg	11073 kg
Steering type	2 wheel	4 wheel	2 wheel	2 wheel
Wheel type	double	double	double	double
Chassis attachment – front	dozer	cradle	cradle	stabilizers
Chassis attachment – rear	stabilizers	dozer	dozer	stabilizers

DIMENSIONS



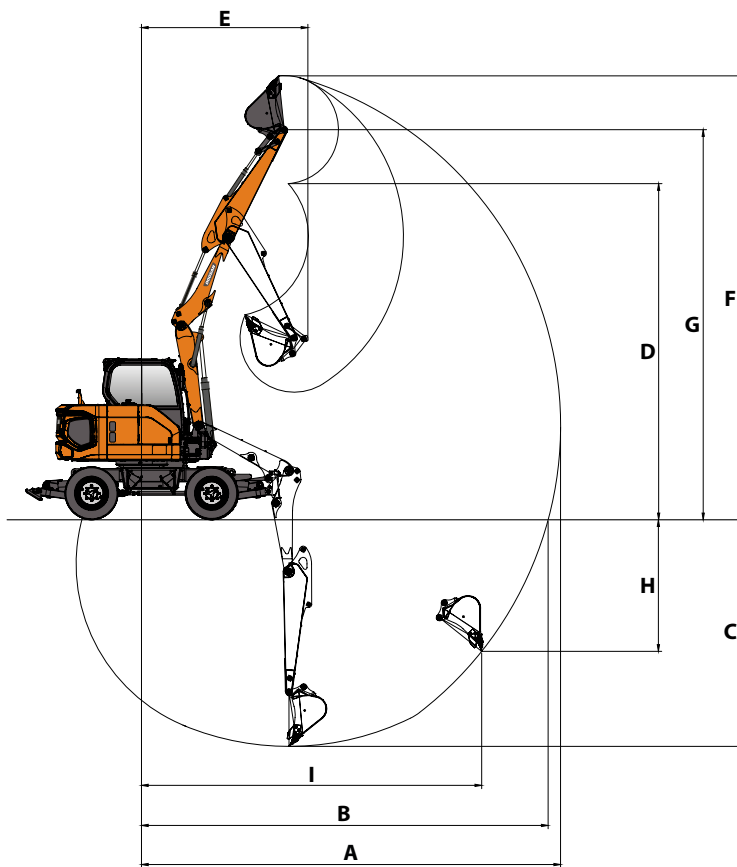
DIMENSIONS

	Unit	Single tire	Double tire
		Rear dozer	Rear stabilizer
A Overall length (travel*)	mm	5809	5687
A' Overall length (transport**)	mm	7319	7281
B Overall width	mm	2450	2450
C Overall height (travel*)	mm	3941	3952
D Overall height (to top of cab)	mm	3000	3011
E Tail swing radius	mm	1600	1600
F Minimum ground clearance	mm	317	328
G Upper structure ground clearance	mm	1099	1110
L/M Center to wheel	mm	932 / 1308	932 / 1308
I Upper structure width	mm	2250	2250
J Wheel base	mm	2240	2240
K Tread width	mm	1987	1944
Dozer blade – max. lifting height	mm	350	350
Dozer blade – max. lowering depth	mm	175	175
Dozer blade – height	mm	500	500

* Road homologation

** Dozer at ground, front at ground

WORKING RANGE













WORKING RANGE

	Unit	Articulated boom
Boom length	mm	1890 mm lower boom + 1880 mm upper boom
Arm length	mm	2250
Bucket capacity	m³	0.28
A Max. digging reach	mm	7820
B Max. digging reach (ground)	mm	7605
C Max. digging depth	mm	4245
D Max. dumping height	mm	6250
E Min. swing radius	mm	3105
F Max. digging height	mm	8265
G Max. bucket pin height	mm	7255
H Max. vertical wall depth	mm	3670
I Max. radius vertical	mm	4800
Boom swing angle (left)	°	60
Boom swing angle (right)	°	60

LIFTING CAPACITIES

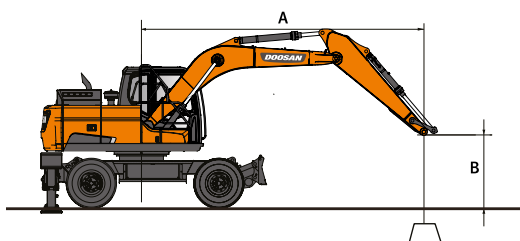
ARTICULATED BOOM • W/O BUCKET


(UNIT: 1000 KG)


A	Chassis Frame Attachment	1.5 m		3.0 m		4.5 m		6.0 m		Max. reach		
												A

Articulated boom (1890 mm lower boom + 1880 mm upper boom) • Arm 2250 mm • Counterweight 1350 kg

6.0 m	F-Cradle + R-Dozer Down					2.01 *	2.01 *			1.88 *	1.88 *	4.91
	F-Dozer + R-Stabilizer Down					2.01 *	2.01 *			1.88 *	1.88 *	4.91
	F-Stabilizer + R-Stabilizer Down					2.01 *	2.01 *			1.88 *	1.88 *	4.91
4.5 m	F-Cradle + R-Dozer Down					1.92 *	1.92 *	1.75 *	1.41	1.55 *	1.36	6.10
	F-Dozer + R-Stabilizer Down					1.92 *	1.92 *	1.75 *	1.54	1.55 *	1.49	6.10
	F-Stabilizer + R-Stabilizer Down					1.92 *	1.92 *	1.75 *	1.39	1.55 *	1.34	6.10
3.0 m	F-Cradle + R-Dozer Down					2.24 *	2.19	1.77 *	1.39	1.47 *	1.16	6.67
	F-Dozer + R-Stabilizer Down					2.24 *	2.24 *	1.77 *	1.52	1.47 *	1.27	6.67
	F-Stabilizer + R-Stabilizer Down					2.24 *	2.15	1.77 *	1.36	1.47 *	1.14	6.67
1.5 m	F-Cradle + R-Dozer Down					2.64 *	2.02	1.85 *	1.33	1.51 *	1.10	6.80
	F-Dozer + R-Stabilizer Down					2.64 *	2.22	1.85 *	1.46	1.51 *	1.21	6.80
	F-Stabilizer + R-Stabilizer Down					2.64 *	1.98	1.85 *	1.31	1.51 *	1.08	6.80
0.0 m	F-Cradle + R-Dozer Down			3.11 *	3.11 *	2.68 *	1.92	1.76 *	1.29	1.41 *	1.15	6.54
	F-Dozer + R-Stabilizer Down			3.11 *	3.11 *	2.68 *	2.11	1.76 *	1.42	1.41 *	1.27	6.54
	F-Stabilizer + R-Stabilizer Down			3.11 *	3.11 *	2.68 *	1.88	1.76 *	1.26	1.41 *	1.13	6.54
-1.5 m	F-Cradle + R-Dozer Down	3.36 *	3.36 *	3.40 *	3.40 *	2.15 *	1.91			1.17 *	1.17 *	5.81
	F-Dozer + R-Stabilizer Down	3.36 *	3.36 *	3.40 *	3.40 *	2.15 *	2.10			1.17 *	1.17 *	5.81
	F-Stabilizer + R-Stabilizer Down	3.36 *	3.36 *	3.40 *	3.40 *	2.15 *	1.87			1.17 *	1.17 *	5.81
-3.0 m	F-Cradle + R-Dozer Down									0.70 *	0.70 *	4.04
	F-Dozer + R-Stabilizer Down									0.70 *	0.70 *	4.04
	F-Stabilizer + R-Stabilizer Down									0.70 *	0.70 *	4.04



 : Rating over front.

 : Rating over side or 360°.

- Lifting capacities are in compliance with ISO 10567:2007(E).
- The load point is at the end of the arm.
- * = The nominal loads are based on hydraulic capacity.
- The nominal loads shown do not exceed 75% of tipping loads or 87% of hydraulic lifting capacity.
- For lifting capacity with bucket, simply subtract the actual weight of the bucket from the values.
- The configurations indicated do not necessarily reflect the standard equipment of the machine.

STANDARD AND OPTIONAL EQUIPMENT

● Standard ○ Optional

Engine

- Doosan D34, Stage V compliant, SCR, DOC and DPF post treatment, water-cooled diesel engine with Wastegate Turbocharger and air-to-air intercooler
- Auto-idle function

Hydraulic system

- Boom and arm flow regeneration
- Swing anti-rebound valves
- Spare ports (valve)
- 2-way high flow auxiliary line
- 1-way breaker piping with direct return to tank
- Smart Power Control (SPC3)
- Cylinder cushioning & contamination seals

Cab & Interior

- Sound-insulated and CabSus mounted cab
- Adjustable air suspension seat with adjustable headrest and armrest
- Air conditioning with climate control
- Pull-up type front window sun roller blind and removable lower front window
- Sliding left & right window
- Intermittent windshield wiper
- Rear window defroster switch
- Adjustable PPC wrist control levers for arm, boom, bucket and swing
- Joysticks & pedal provide proportional control of auxiliary lines for attachments
- Adjustable tiltable steering column
- Pedal for auxiliary control 1 & 2 ways
- Jog shuttle switch
- Cruise control function
- DOOSAN Smart Touch – 8" touch screen, all-in-one
- Attachment management system
- Engine speed (RPM) control dial
- Automatic travel speed
- 3 operating modes, 3 power modes
- Electric horn
- Ceiling light
- Cup holder
- Multiple storage compartments (e.g. document holder under seat)
- Storage area (tools etc.)
- Flat, spacious, easy-to-clean floor
- Anti-theft protection
- 12 V spare power socket
- Serial communication port for laptop PC interface
- Remote radio ON/OFF switch
- DAB radio with Bluetooth streaming and handsfree call system

Safety

- Roll Over Protective Structure (ROPS)
- Boom and arm cylinder safety valves
- Overload warning device (OWD)
- Rotating beacon
- Rear and side view cameras
- Hydraulic safety lock lever
- Safety glass
- Hammer for emergency escape
- Right and left rear-view mirrors
- Lockable fuel cap and covers
- Battery cut-off switch
- Engine restart prevention system
- Parking brake
- Work lights
- Road lights
- LED work lights
- Falling Object Protective Structure (FOPS)
- LED light 1 additional lamp (on top of cab)
- 360° all-around view camera (AVM)
- Ultrasonic detection

Other

- Articulated boom (1890 mm lower boom + 1880 mm upper boom) – 2250 mm arm – 1350 kg counterweight
- DoosanCONNECT (telematic system)
- Electric fuel filler pump
- Double element air cleaner and pre-filtered Cyclone Turbo dust separator
- Fuel pre-filter with water separator sensor
- Screen for radiator/oil cooler
- Self-diagnostic function
- Alternator (12 V, 140 A) – Battery (12 V, 150 Ah)
- 4-speed travel system
- Remote greasing for swing circle and work group pivot points
- Guards for boom work lights
- Rotating piping (Pero)
- Clamshell piping
- Quick coupler piping
- Road homologation (depending on countries)

Undercarriage

- Front cradle
- Rear dozer blade
- Double tires 8.25 - 20-14 PR
- Front axle oscillation lock modes (on/off/auto)
- Lockable tool box
- Rear & front chain tightening eyes
- Front stabilizer + rear dozer
- Front dozer blade + rear stabilizer
- 4 stabilizers
- 4 wheel steering (Turning radius: 3.7 m)
- Bucket lock valve
- Single wide tires 500/45-20

