121 kW (162 HP) at 2000 rpm

24600 kg

1.10 m^3

SOLAR255LCV | Crawler Excavator

Courtesy of Machine.Market

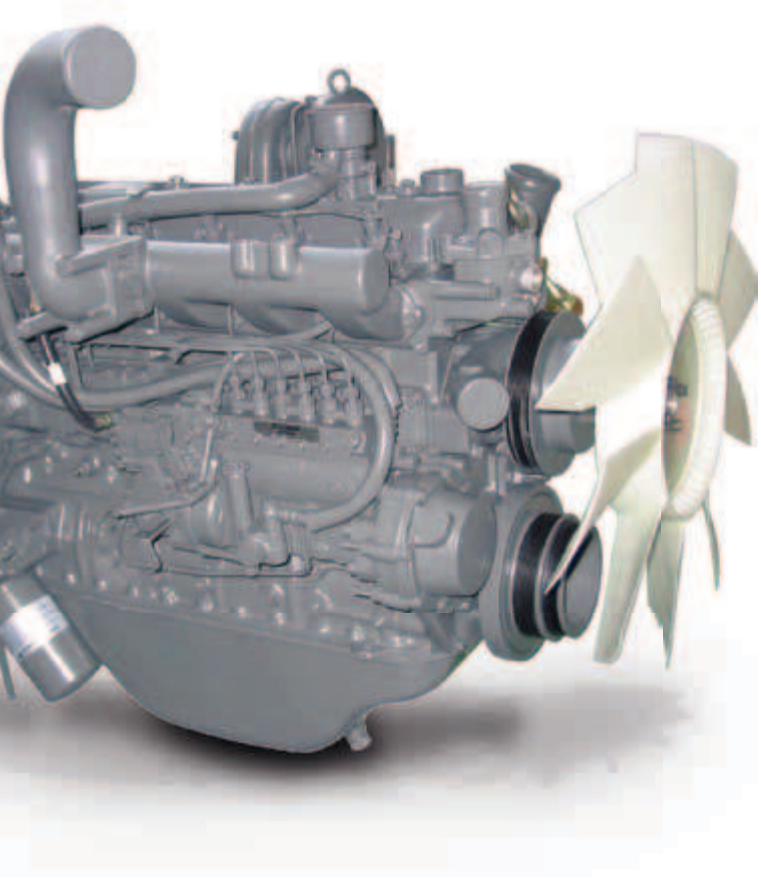
Groundbreaking performance

The SOLAR255LCV hydraulic excavator delivers the performance you need to increase your productivity and maximise your profits day after day. It is powered by a highly efficient air-to-air intercooler engine which delivers the highest power output in its class. The engine is controlled by a new, improved e-EPOS (Electronic Power Optimising System) to increase your operating capacity while lowering the machine's fuel consumption.

DOOSAN SOLAR-V EXCAVATORS – SMOOTH POWER, UNBEATABLE PRODUCTIVITY.

Doosan's Solar-V excavators are designed to meet all the demands of your working day. They deliver mighty power that maximises your productivity and profits. Their efficient engines perform smoothly while keeping noise and emissions low. Meanwhile, operators can be assured of a safe and comfortable working environment with simple operation and maintenance.

Courtesy of Machine.Market



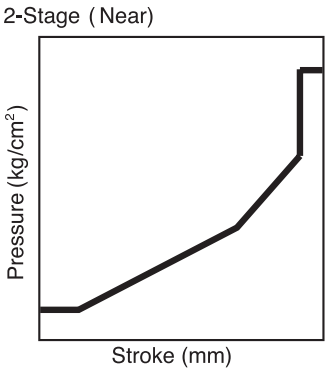
AIR-TO-AIR INTERCOOLER ENGINE

- Highly efficient, delivering the highest power output in its class.
- Environmentally friendly.
- Meets European Stage IIIB regulations governing the reduction of harmful NOx and PM emissions.

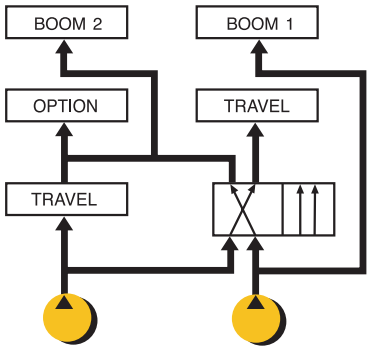
Compatible with European noise regulations

A high-capacity fan blade allows for less rotations and thus less noise. This is combined with an efficient muffler to further reduce noise levels.

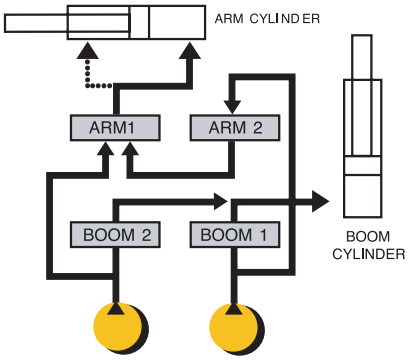
Improved manoeuvrability and control



New, technologically advanced control valve and joystick valves create speedy, smooth and responsive control.



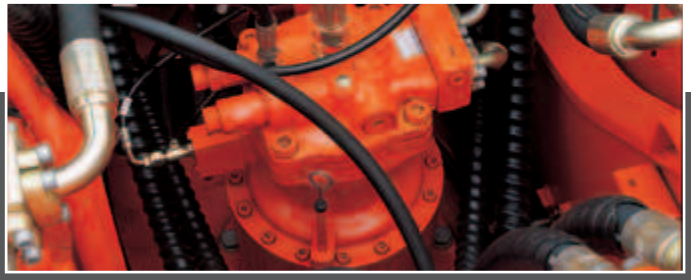
An advanced hydraulic circuit design separates the oil flows for travel and boom function. This allows precise and safe operation when handling loads during travel.



The circuits for the boom, arm and bucket are optimised to assure smooth and confident control during combination work.

Joystick grip with 2 switches

Spare switches are installed on both joystick grips to allow control of an additional attachment.

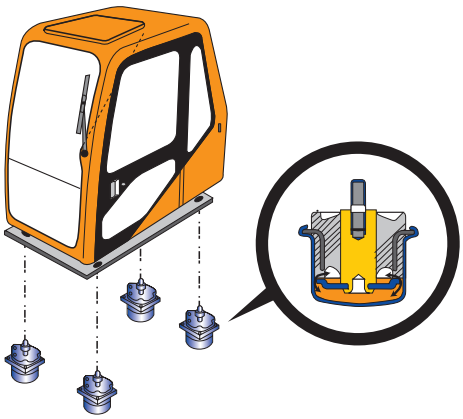


Swing anti-rebound valve

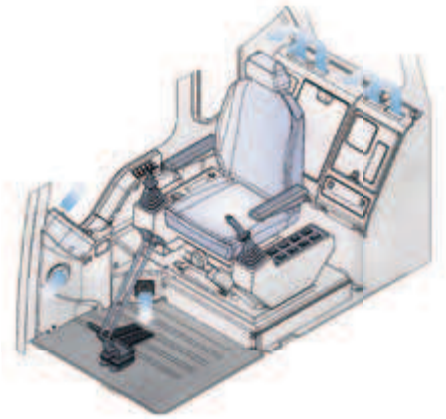
A swing anti-rebound valve is installed as standard equipment. This allows the operator to stop the upper structure at the desired position, greatly improving operating efficiency.

Top-class working environment

The wide, spacious cab meets ISO standards and is ergonomically designed to provide the operator with a safe and comfortable working environment. Noise and vibrations are minimised, while all-round visibility has been increased.



Reduced noise and vibration
By using a total isolation sealing design, outside noise has been reduced to levels comparable to those of a modern car.
Vibration felt by the operator has also been reduced by using a viscous sealed mounting system and designing the frame, cabin and seat to absorb major and minor vibrations.



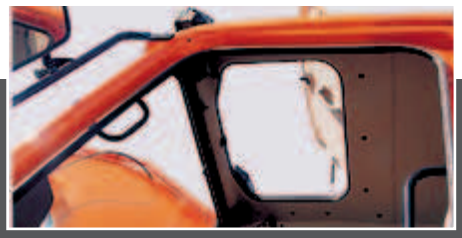
Efficient air conditioning/heating
The air conditioner/heater system features a one-touch selector switch and a multi-vent circulation system for greater cooling/heating performance. The front window defroster system has been improved for better visibility in all working conditions.

- Easily replaceable air filter
- Larger cool air intake vents
- Fresh air/recirculation control system
- Modular electric fan condenser compartment

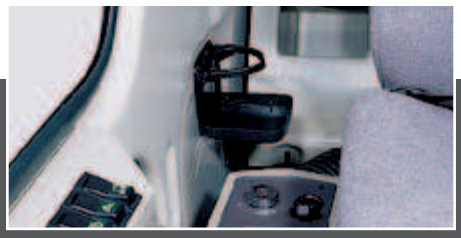
Optimised visibility
The right-hand window is large and the windshield's crosswise strut is narrow. This gives a wide field of vision.

Increased foot space
Careful ergonomic positioning of instruments, controls, and accessories is combined with 300 mm of seat slide to provide ample space for the operator's feet and legs.

Long windshield wiper blade
For better visibility, a long wiper blade is used to clear a larger area of the front windshield.



Large ceiling cover
The ceiling cover can be opened to provide the operator with a full view of the bucket operation, even at maximum height.



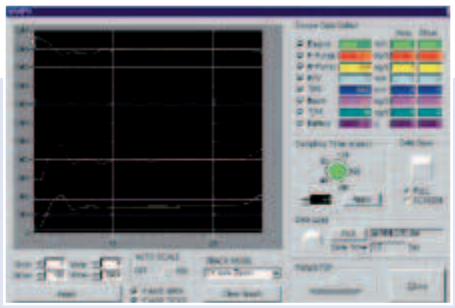
Cup holder
A folding drink holder allows the operator to easily store a cup or can.

Spare power socket
A 12 V power socket allows you to charge a cellular phone or power a small 12 V DC electrical device.

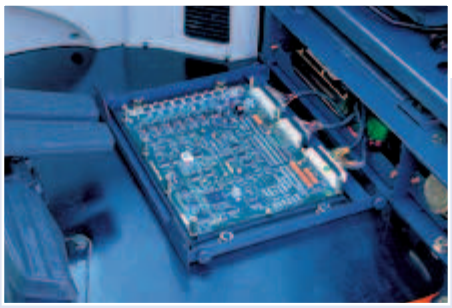
Courtesy of Machine.Market

Easy maintenance

Quick and easy service checks help to prolong the excavator's life expectancy. They also maximise uptime, ensuring your hydraulic excavator is on site and ready for work when you need it.

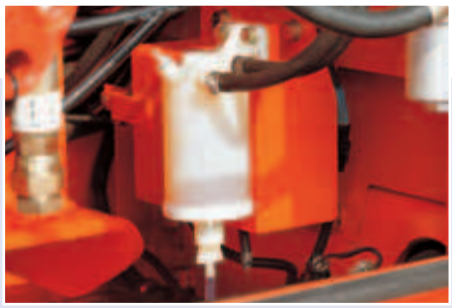


PC monitoring (SMS)
The machine's e-EPOS control system can be connected to a laptop. The operator can then display data such as pump pressure and engine rpm. These, along with other machine status data can be stored and printed.



Electrical control access box
The electrical control access box features a pull-out style drawer for easy service and maintenance.

Engine oil drain valve
The engine oil drain valve with quick coupler provides fast and environmentally sound serviceability.



Water separator
The water separator is transparent and easily accessible from the ground, allowing easy maintenance of the fuel system.

Easy radiator cleaning
Wide clearance between the oil cooler and radiator allows easy insertion of the air nozzle during cleaning.

Courtesy of Machine.Market

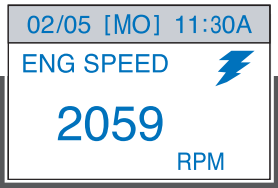
Advanced control

The SOLAR255LCV features a clear, user-friendly LCD monitor panel. This allows the operator to view machine status and important data. Two work modes are available, allowing easy selection of the best operating parameters for the job.

Easy work mode selection

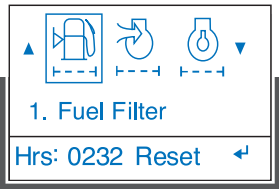
The operator can select from two modes, ensuring optimal performance for the job at hand.

- Digging Mode allows for versatility and is ideally suited to general excavation, ground levelling, and dump truck loading.
- Trenching Mode is suitable for trenching or excavation of side walls, operations which require heavy swing work.



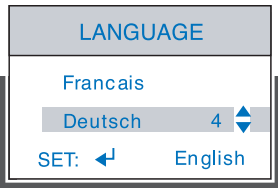
Digital clock

The time, day and date are displayed in an easy to read format.



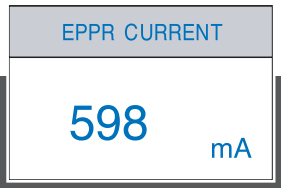
Filter/oil operating hour display

The usage hours for 9 filters and oils can be displayed. This allows easy monitoring of replacement intervals.



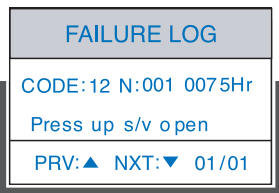
Multi-language display

The menu can be displayed in multiple languages.



Real-time machine data display

Information such as pump delivery pressure and engine speed is clearly displayed.



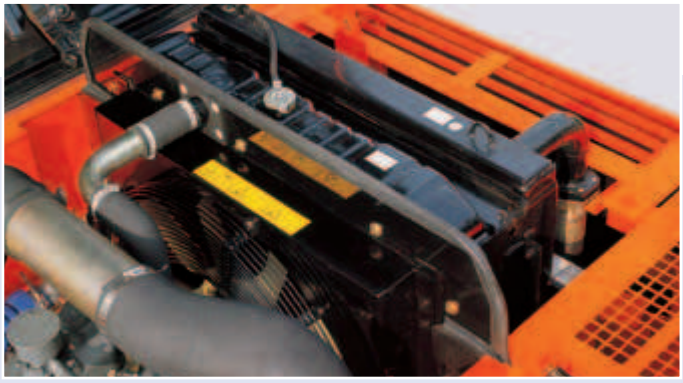
Self-diagnosis and fault history

Real-time and historic data on any machine faults are stored and displayed to enable correct diagnosis and quick repair.

Solid reliability

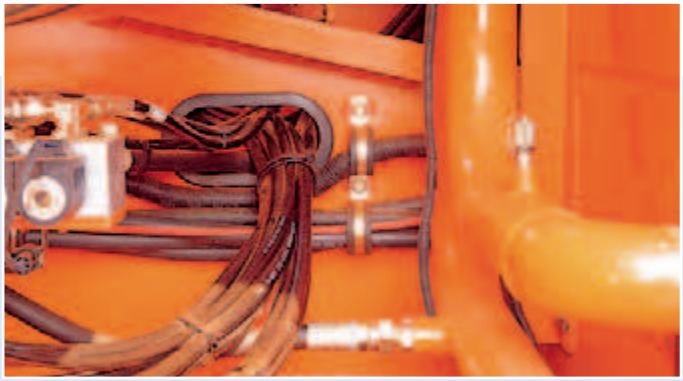
Like all our machines, the SOLAR255LCV has been thoroughly tested at our sophisticated world-class test centre. Our engineers work tirelessly to ensure safety, durability and day-to-day performance that you can depend on.

Courtesy of Machine.Market



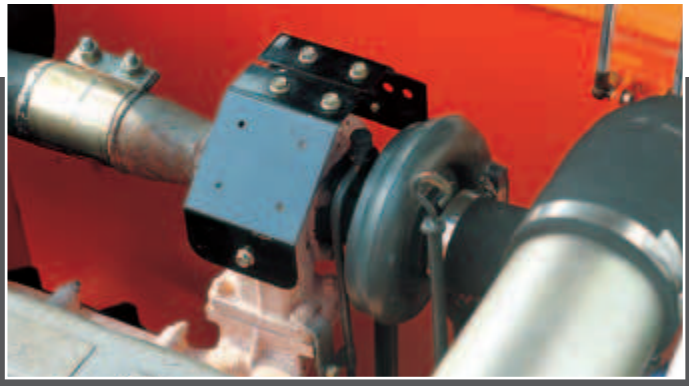
360° fan guard
A metal mesh guard surrounds the fan blade to prevent accidental injury.

Emergency throttle cable
An emergency throttle cable is mounted in the cabin. This can be used to control engine speed manually if the engine speed control dial should malfunction.



Rubber-coated wire harness clamps
Electric wire harnesses have been mounted with rubber-coated clamps to decrease vibration damage.

Rubber pipe clamps
Rubber pipe clamps are used to reduce noise and absorb vibrations. They also prevent cracks and increase durability.



Heat shield panel for turbo charger
A heat shield has been installed over the turbo charger. This prevents the operator from accidentally touching hot surfaces while checking the engine area.

Technical specifications

✱ Engine

• Model

DOOSAN DB58TIS

• Type

Water-cooled, 4-stroke, direct injection

• Aspiration

Turbo-charged, Air-to-air intercooled

• No. of cylinders

6

• Rated flywheel horse power

121 kW (162 HP) at 2000 rpm

• Piston displacement

5785 cc

• Maximum torque

68 kgf/m (666 Nm) at 1400 rpm

• Bore x stroke

102 mm × 118 mm

• Starting system

24 V electric motor

• Batteries

2 × 12 V × 100 AH

✱ Hydraulic system

Doosan's e-EPOS (Electronic Power Optimising System) achieves maximum efficiency over a full range of working conditions and reduces fuel consumption.

- Hydraulic system ensures efficient independent and combined operations
- Automatic 2 speed travel system for high traction force and travel speed
- Cross-sensing and fuel saving pump system
- Auto-idle system
- 2 working / 2 power mode selection system
- Computer aided engine pump control

• Main pumps

2 variable displacement axial piston pumps
Max. oil flow: 2 x 224 l/min

• Pilot pump

Gear pump
Max. oil flow: 30 l/min

• Swing motor

Relief valve: 279 bar

• Main relief valves

Boom/Arm/Bucket
Normal: 324 bar (330 kgf/cm^2)
Power boost: 343 bar (350 kgf/cm^2)
Travel circuit: 324 bar (330 kgf/cm^2)

✱ Hydraulic cylinders

High-strength piston rods and tubes are used. Cylinder cushion mechanism is provided for all cylinders to ensure shock-free operation and extend life of cylinder.

Cylinders	Quantity	Bore x rod diameter x stroke
Boom	2	130 x 90 x 1320 mm
Arm	1	140 x 100 x 1705 mm
Bucket	1	130 x 90 x 1050 mm

✱ Superstructure revolving frame

Deep, fully-reinforced box section. Heavy-gauge steel plates used for ruggedness.

✱ Cab

Spacious, independent, shock-free and noise-free. Complies with ISO standards. 4 side safety glass windows give all-round visibility. Front window slides up and stores in roof. Side window opens for ventilation. Fully adjustable suspension seat. Air conditioned.

Noise Level (dynamic value)

• LWA External noise

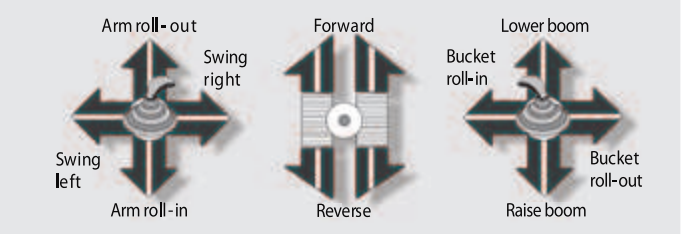
Guaranteed Sound Power Level 105 dB(A) (2000/14/EC)
Measured Sound Power Level 104 dB(A) (2000/14/EC)

• LpA Operator noise

74 dB(A) (ISO 6396)

✱ Implement control levers

Pilot pressure control type. Right lever for boom and bucket control. Left lever for swing and arm control.



✱ 2 travel pedals with levers

Pilot pressure control type. Independent drive at each track allows counter-rotation of the tracks. Levers are detachable.

✱ Swing mechanism

High-torque, axial piston motor with planetary reduction gear bathed in oil. Swing circle is a single-row, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant. Spring applied hydraulically released parking brake.

- Swing speed 0 to 10.9 rpm
- Rear swing radius 3035 mm

✱ Drive

Each track is driven by an independent, high-torque, axial piston motor through planetary reduction gears. Smooth travel or counter-rotation delivered upon demand using two levers or foot pedal control.

• Travel speed (high/low)

5.0 / 3.5 km/h

• Maximum traction force

21100 kgf

• Gradeability

35° (70%) continuous

✱ Brakes

Two oil disc brakes on final drive input shafts. Spring-set, hydraulic-released disc type parking brake.

✱ Undercarriage

Tractor type undercarriage. Heavy-duty track frame, all welded stress-relieved structure. Top grade materials used for toughness. Side frames are welded, securely and rigidly, to the track frame. Lifetime-lubricated track rollers, idlers and sprockets with floating seals. Track shoes of induction-hardened rolled alloy with triple grousers. Specially heat-treated connecting pins. Hydraulic track adjusters with shock-absorbing recoil springs.

• Number of rollers and shoes (per side) on ground contact area

Upper rollers:	2
Lower rollers:	10 (standard shoe)
Track shoes:	51 (standard shoe)
Overall track length:	4635 mm

✱ Fluid capacities

• Fuel tank

370 l

• Cooling system

36 l

• Engine oil

19 l

• Swing drive (each)

11 l

• Final drive (each)

5 l

• Hydraulic system

290 l

• Hydraulic tank

155 l

✱ Weight

Boom: 5900 mm • Arm: 3000 mm • Bucket: PCSA 1.10 m^3 • Shoe: 600 mm

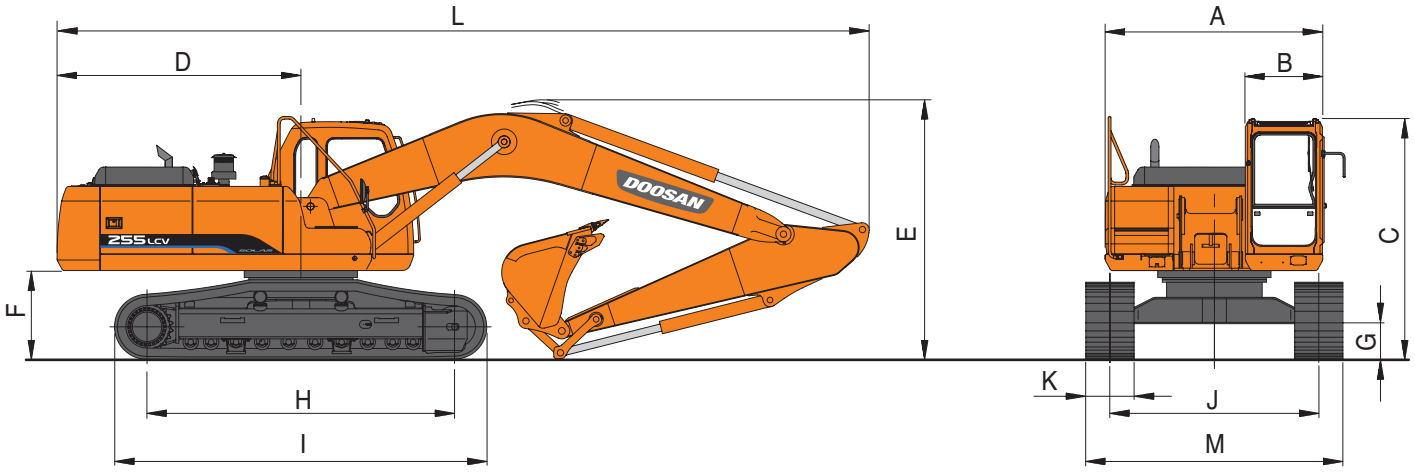
Shoe type	Shoe width (mm)	Operating weight (kg)	Ground pressure (kg/m^2)
Triple grouser	600 (std)	24600	0.49
	700	24900	0.43
	800	25200	0.38
	900	25500	0.34

✱ Buckets

Capacity (m^3)		Width (mm)		Weight (kg)	Boom: 5900 mm			
PCSA, heaped	CECE, heaped	Without side cutters	With side cutters		Arm: 2000 mm	Arm: 2500 mm	Arm: 3000 mm	Arm: 3500 mm
0.50	0.45	688	778	530	A	A	A	A
0.81	0.70	1058	1168	690	A	A	A	A
0.93	0.80	1180	1290	730	A	A	A	A
1.05	0.90	1302	1412	790	A	A	A	B
1.10	0.95	1260	1370	815	A	A	A	C
1.17	1.00	1428	1538	830	A	A	B	C
1.29	1.10	1560	1670	885	A	A	B	C

A. Suitable for materials with density of 2000 kg/m^3 or less
B. Suitable for materials with density of 1600 kg/m^3 or less
C. Suitable for materials with density of 1100 kg/m^3 or less

Dimensions and working ranges

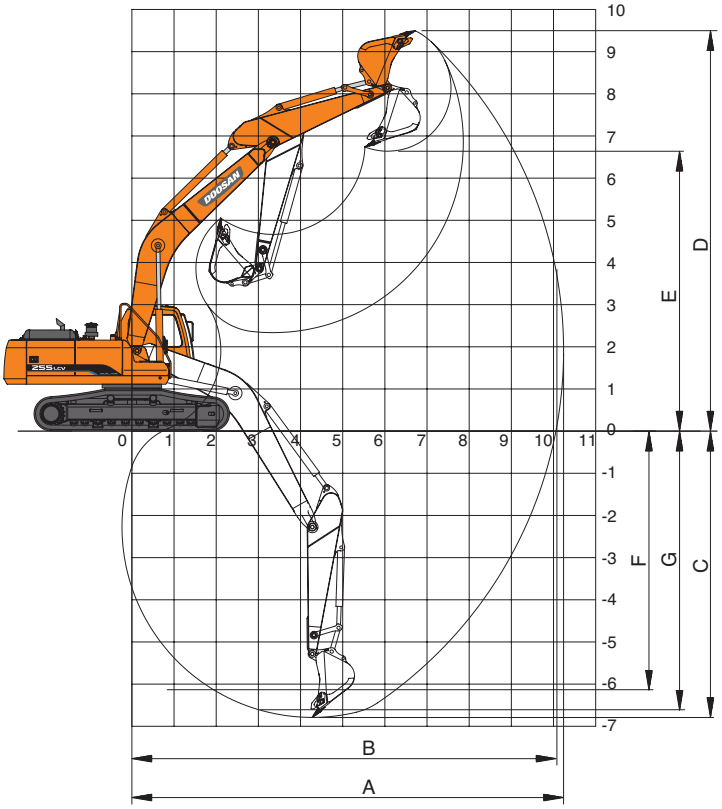


✱ Dimensions

Boom: 5900 mm • Arm: 3000 mm • Shoe: 600 mm

Boom length (1-piece) - mm		5900
Arm length - mm		3000
A	Overall width of upper structure - mm	2710
B	Overall width of cab - mm	960
C	Overall height of cab - mm	3000
D	Tail swing radius - mm	3035
E	Overall height - mm	3250
F	Clearance under counterweight - mm	1110
G	Ground clearance - mm	450
H	Tumbler distance - mm	3830
I	Track length - mm	4635
J	Track gauge (standard track) - mm	2600
J'	Track gauge (narrow track) - mm	2390
K	Track shoe width - mm	600
L	Overall length - mm	10110
M	Overall track width (standard track) - mm	3200
M'	Overall track width (narrow track) - mm	2990

✱ Working ranges



✱ Digging forces (maximum radial tooth forces)

Arm length - mm		2500	3000	3500
BUCKET*	kgf	15200	15200	15200
	kN	149	149	149
ARM*	kgf	13800	11800	10700
	kN	135	116	109

*At power boost

✱ Working ranges

Boom length (1-piece) - mm		5900		
Arm length - mm		2500	3000	3500
A	Max. digging reach - mm	9740	10240	10710
B	Max. digging reach at ground level - mm	9560	10060	10540
C	Max. digging depth - mm	6290	6790	7290
D	Max. digging height - mm	9180	9500	9720
E	Max. dumping height - mm	6360	6640	6860
F	Max. vertical wall digging depth - mm	5360	6080	6560
G	Max. digging depth - mm	6090	6620	7140

Standard and optional equipment

✱ Standard equipment

• Hydraulic system

- Boom and arm flow regeneration
- Boom and arm holding valves
- Swing anti-rebound valves
- Spare ports (valve)
- One-touch power boost

• Cab and interior

- Viscous cab mounts
- All weather sound-suppressed cab
- Air conditioner
- Adjustable suspension seat with headrest and adjustable armrest
- Pull-up type front window and removable lower front window
- Room light
- Intermittent windshield wiper
- Cigarette lighter and ashtray
- Cup holder
- Hot and cool box
- Graphic display monitor
- Fuel control dial
- AM/FM radio and cassette player
- Remote radio on/off switch
- 12 V spare power socket
- Serial communication port for laptop PC interface
- Joystick lever with 2 switches

• Safety

- Large handrails and step
- Punched metal anti-slip plates
- Seat belt
- Hydraulic safety lock lever
- Safety glass
- Hammer for emergency escape
- Right and left rear view mirrors
- 360° fan guard

• Other

- Double element air cleaner
- Pre-cleaner
- Water separator
- Dust screen for radiator
- Engine overheat prevention system
- Engine restart prevention system
- Self-diagnostic system
- Alternator (24 V, 50 A)
- Electric horn
- Halogen working lights (2 frame mounted, 2 boom mounted)
- Hydraulic track adjuster
- Track guards

✱ Optional equipment

• Safety

- Boom and arm hose rupture protection valve
- Overload warning device
- Cabin top/front guard (ISO 10262, FOGS standard)
- Travel alarm
- Travel and swing alarm
- Rotating beacon

• Cab and interior

- Sun visor
- Sun roof
- Joystick lever with 3 switches

• Other

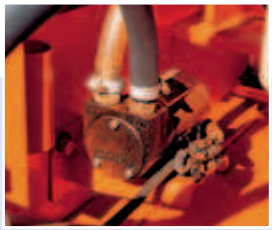
- 2.99 m narrow track
- Piping for hammer (one way)
- Piping for rotation
- Double fuel filter
- Greased and sealed track link
- Additional work lights on the cabin (① 2 front lamps, ② 4 front and 2 rear lamps)
- Large capacity alternator (24 V, 80 A)
- Electric fuel supply pump

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.

Boom and arm hose rupture protection valve

Sun visor

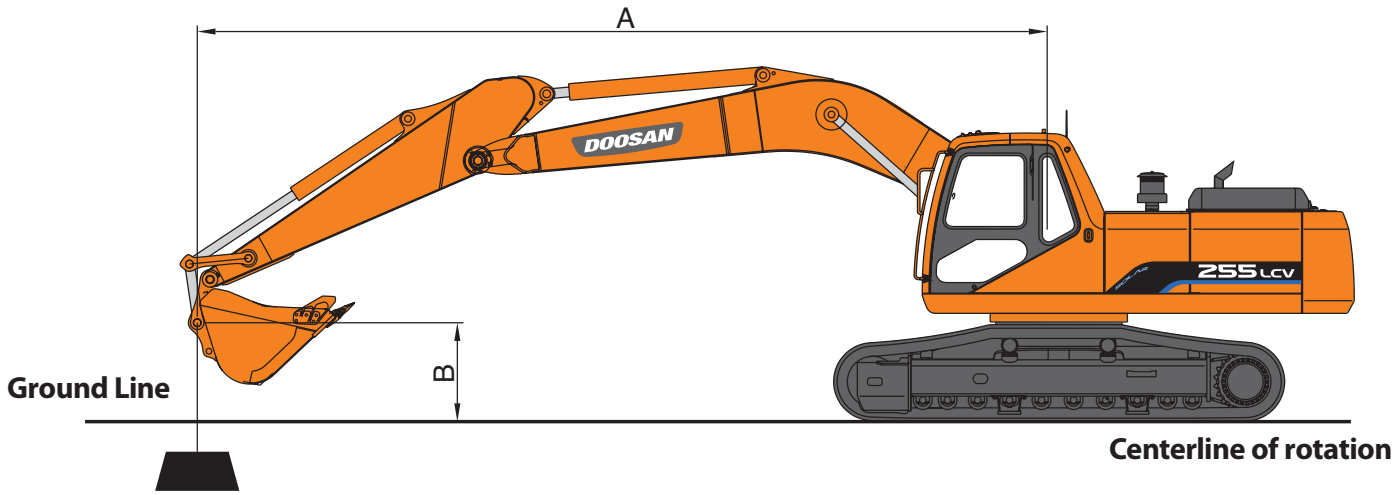
Additional work lights on the cabin



Electric fuel supply pump

Rotating beacon

Lifting capacities



Standard configuration

Boom: 5900 mm - Arm: 3000 mm - Bucket: PCSA 1.10 m³ heaped (CECE 0.95 m³) - Shoe: 600 mm

Units: 1000 kg

A (m) / B (m)	2		3		4		5		6		7		8		Max. reach		
																	A (m)
7											*4.46	*4.46			*3.60	*3.60	7.33
6											*5.03	*5.03			*3.61	*3.61	7.94
5											*5.30	5.01	*4.94	3.99	*3.68	3.67	8.39
4									*6.16	*6.16	*5.71	4.92	*5.43	3.94	*3.81	3.41	8.70
3			*14.32	*14.32	*10.07	*10.07	*8.07	*8.07	*6.93	6.12	*6.21	4.81	*5.74	3.87	*4.00	3.25	8.88
2			*6.75	*6.75	*12.07	11.10	*9.28	7.84	*7.71	5.94	*6.72	4.69	5.79	3.80	*4.26	3.17	8.95
1			*5.86	*5.86	*13.51	10.73	*10.29	7.60	*8.40	5.79	7.04	4.59	5.72	3.74	*4.61	3.16	8.90
0 (Ground)			*7.18	*7.18	*14.28	10.52	*10.97	7.44	8.86	5.67	6.95	4.51	5.66	3.69	4.94	3.22	8.74
-1	*6.21	*6.21	*9.31	*9.31	*14.50	10.43	*11.31	7.35	8.78	5.60	6.90	4.46	5.63	3.66	5.18	3.37	8.46
-2	*8.78	*8.78	*12.00	*12.00	*14.28	10.43	*11.29	7.32	8.75	5.57	6.88	4.44	5.63	3.66	5.59	3.63	8.04
-3	*11.60	*11.60	*15.36	*15.36	*13.63	10.49	*10.91	7.35	8.77	5.58	6.90	4.46			6.28	4.08	7.46
-4	*14.93	*14.93	*15.90	*15.90	*12.47	10.61	*10.05	7.43	*8.19	5.65					*7.04	4.84	6.68
-5			*13.29	*13.29	*10.56	*10.56	*8.44	7.58							*7.24	6.38	5.62

1. Ratings are based on SAE J1097.
2. The load point is a hook located on the back of the bucket.
3. * Rated loads are based on hydraulic capacity.
4. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity.

: Rating over front
: Rating over side or 360 degrees
0 : Ground

Option 1

Boom: 5900 mm - Arm: 2500 mm - Bucket: PCSA 1.29 m³ heaped (CECE 1.10 m³) - Shoe: 600 mm **Units: 1000 kg**

A (m) / B (m)	2		3		4		5		6		7		8		Max. reach		
																	A (m)
7															*4.88	*4.88	6.65
6											*5.46	4.94			*4.91	4.56	7.32
5									*5.96	*5.96	*5.68	4.88			*5.04	4.05	7.80
4							*7.48	*7.48	*6.60	6.16	*6.05	4.80	*5.73	3.83	*5.26	3.73	8.13
3					*11.10	*11.10	*8.67	7.95	*7.32	5.98	*6.50	4.70	5.76	3.78	5.39	3.53	8.33
2					*12.90	10.82	*9.78	7.67	*8.04	5.82	*6.96	4.59	5.70	3.72	5.27	3.43	8.40
1					*14.00	10.53	*10.63	7.47	*8.64	5.68	6.95	4.50	5.64	3.66	5.27	3.42	8.35
0 (Ground)			*6.84	*6.84	*14.42	10.40	*11.14	7.34	8.78	5.59	6.88	4.44	5.60	3.63	5.41	3.51	8.18
-1	*6.88	*6.88	*10.06	*10.06	*14.35	10.37	*11.29	7.28	8.72	5.53	6.84	4.40			5.72	3.70	7.87
-2	*10.27	*10.27	*13.71	*13.71	*13.88	10.41	*11.09	7.28	8.71	5.53	6.85	4.40			6.27	4.05	7.42
-3	*13.90	*13.90	*16.43	*16.43	*12.97	10.50	*10.48	7.34	*8.58	5.57					7.23	4.65	6.79
-4	*18.26	*18.26	*14.36	*14.36	*11.50	10.66	*9.31	7.45							*7.57	5.78	5.92
-5					*9.05	*9.05									*7.66	*7.66	4.69

Option 2

Boom: 5900 mm - Arm: 3500 mm - Bucket: PCSA 0.93 m³ heaped (CECE 0.80 m³) - Shoe: 600 mm **Units: 1000 kg**

A (m) / B (m)	2		3		4		5		6		7		8		9		Max. reach		
																			A (m)
7																	*3.09	*3.09	7.88
6													*4.13	4.09			*309	*3.09	8.45
5											*4.89	*4.89	*4.84	4.05			*3.14	*3.14	8.87
4											*5.32	4.97	*5.10	3.98	*3.79	3.25	*3.23	3.14	9.16
3							*7.40	*7.40	*6.45	6.18	*5.84	4.85	*5.44	3.90	*4.55	3.20	*3.37	3.00	9.34
2			*10.95	*10.95	*11.12	*11.12	*8.68	7.92	*7.28	5.99	*6.39	4.72	*5.80	3.82	4.81	3.15	*3.56	2.93	9.4
1			*7.29	*7.29	*12.81	10.81	*9.80	7.65	*8.04	5.81	*6.91	4.60	5.72	3.74	4.76	3.10	*3.82	2.91	9.36
0 (Ground)	*3.85	*3.85	*7.57	*7.57	*13.88	10.53	*10.63	7.45	*8.65	5.67	6.95	4.50	5.65	3.68	4.72	3.07	*4.17	2.96	9.20
-1	*5.82	*5.82	*9.03	*9.03	*14.37	10.39	*11.13	7.32	8.76	5.57	6.88	4.44	5.61	3.63			*4.65	3.08	8.93
-2	*7.93	*7.93	*11.13	*11.13	*14.38	10.34	*11.28	7.27	8.70	5.52	6.84	4.40	5.59	3.62			5.07	3.29	8.54
-3	*10.31	*10.31	*13.85	*13.85	*13.96	10.37	*11.08	7.27	8.70	5.52	6.84	4.40					5.61	3.64	8.00
-4	*13.10	*13.10	*16.94	*16.94	*13.06	10.46	*10.46	7.32	*8.56	5.56	6.89	4.45					6.51	4.21	7.28
-5	*16.60	*16.60	*14.74	*14.74	*11.53	10.62	*9.26	7.44	*7.42	5.67							*6.85	5.27	6.32
-6			*11.38	*11.38	*8.96	*8.96											*6.96	*6.96	4.98

1. Ratings are based on SAE J1097.
2. The load point is a hook located on the back of the bucket.
3. * Rated loads are based on hydraulic capacity.
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: Rating over front
: Rating over side or 360 degrees
0 : Ground

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DI CE - Drève Richelle 167 - B-1410 Waterloo, Belgium