



Doosan Infracore
Construction Equipment

Solar 55V Plus

Engine Power: 38,1 kW (52 Hp) / 2.200 rpm

Operating Weight: 5.500 kg

Bucket capacity (SAE): 0,173 m³



Performance

SOLAR 75-V ensures best performance with powerful excavating force and high-tech hydraulic system for better operation efficiency at any work site! Excellent performance is its basic feature! Its excellent performance with safety and convenience taken into account will help safe and convenient operation.

Composite Operation Capability Improved

Maximum combined operation capability is guaranteed by a sophisticated engine and hydraulic control system. This system allows the engine and hydraulic system to be controlled to fit various working environments

such as excavating or lifting operations requiring high pressure and large hydraulic flow or grading operations requiring low pressure and small hydraulic flow.



Boom Swing

The convenient boom swing function allows work in very narrow areas. The newly designed swing bracket and the increased boom cylinder size ensures powerful and stable boom swing performance.

Left: 80° / Right: 50°

Highest Dump Height

The maximum dump height of 4.048 mm is the highest among the same-grade machines and enables easy loading operation onto a 15-ton dump truck.

Powerful Excavating Force

Powerful excavating force of 3,9 tons from the 52 Hp engine achieves excellent performance quickly under any working conditions. In addition, a rpm controlling lever installed on the left in the cabin makes control working speed easy.



Breaker-Dedicated Line Installed

The hydraulic pipes have been installed up to the front end of the arm as standard equipment, for easy installation of the hydraulic breaker. A lock device is mounted on the end of the hydraulic line to prevent leakage of hydraulic oil when connecting the breaker.



Low-Noise High-Power Engine

The 52 Hp engine produces outstanding power and is known for its durability. This results in excellent operation in high-load operations. In addition, it features a low noise and low emissions suitable for operation in noise sensitive areas and at night.





Bucket End and Dozer Blade Arrangement

The bucket end is designed to reach the dozer blade when the arm is folded. This feature improves efficiency in grading operation as well as stone lifting operation.



Large-capacity Dozer Blade

This machine is equipped with a large-capacity dozer blade (350 x 1.880 mm) ensuring excellent earth-moving operation. Its powerful dozer bridge force can be used efficiently for operations on a slope.

Minimum Road Clearance

The maximum road clearance has been raised to 350 mm to reduce possible damage to the bottom when traveling on a rough road or logging operation.



RPM control lever



Dozer Blade Control Lever

The dozer blade control lever is positioned above the right-hand control stand to secure easy and convenient access.

Large-Capacity Fuel Tank

This machine is equipped with a large-capacity fuel tank (120 l) enabling continuous operation for two days before refueling. The fuel port has been raised to prevent leak when operating on a slope.

Working Environment

This standard-duty machine, offers a spacious operating area that is only found in medium and heavy-duty machines. The working controls in the cabin are ergonomically designed to ensure convenient operation and operator comfort.



Comfortable Operating Area

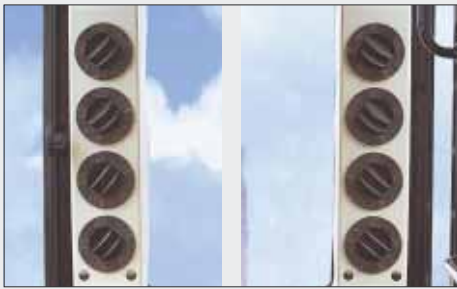
The internal operating controls are arranged in a convenient and ergonomic fashion. This allows for maximized operating efficiency. A large capacity air-conditioning system has been installed for operator comfort in all seasons. The open and spacious cabin provides the operator with a wide field of view for the best possible working conditions.



Rectangular Structure Cabin

For safety purposes and to protect the operator against falling objects, the cabin structure is designed in a rectangular shape, ensuring operator safety.





High-Output Air-Conditioner and Defroster

The air-conditioner capacity has been greatly improved and the vents have been installed at both the front and rear of the operator's seat to maximize air-conditioning efficiency. A defroster has been installed to prevent the front windshield from becoming frosted in the cold season resulting in safer operation.

Control Levers and Switches

Hydraulic joystick type lever is adopted for convenient control, and ensures precise control and excellent maneuverability. Various switches are centrally arranged to the right side of the seat for improved accessibility.

Various Convenience Devices



Flexible Antenna



Footwear Storage Box



Handle Release Device



Foot Rest/Travel Pedal



Cup Holder



Fixed-Type Instrument Panel

Compact and elegantly designed central instrument panel makes it easy to check for various implements.

Front Defroster and Lower Vent



Left and Right Control Stands



Maintenance

Sturdy SOLAR 55-V Plus

Special and scrupulous care has been given to ensure trouble free operation and easy maintenance.



Engine Oil Filter

The engine oil filter is attached to the engine body and extends out for easy maintenance.



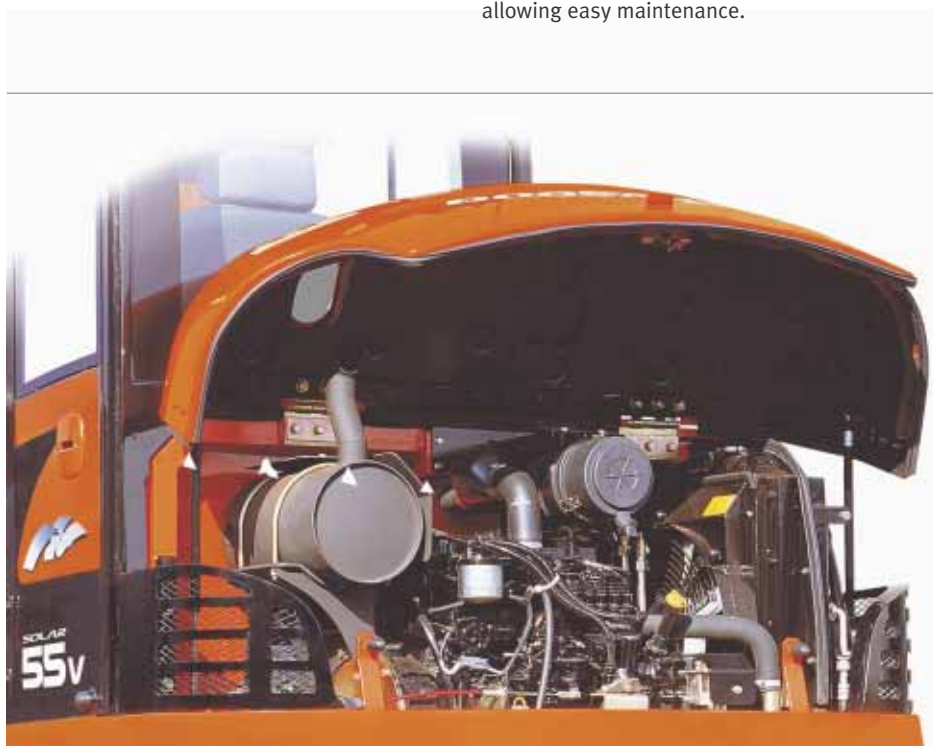
Dual-Filter Air Cleaner

The high-performance dual-filter air cleaner eliminates dust from entering the engine. The cover is a one-touch open/close type allowing easy maintenance.



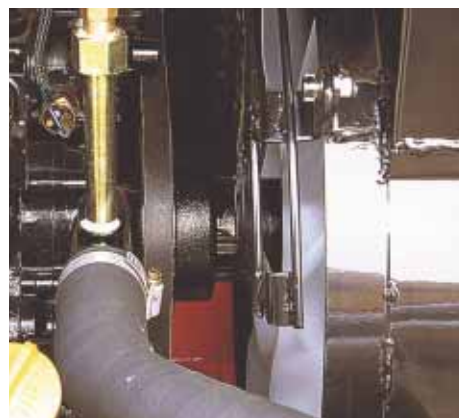
Radiator

The large-capacity radiator provides excellent performance in severe and continuous operations. Simply removing the counterweight enables the radiator to be removed for easy maintenance.



Fan Belt Easy Tension Adjustment and Replacement

The spacious area around the fan belt enables easy tension adjustment and replacement. The mounted B-type belt has a greatly extended replacement interval.





Air Bleeder

The mounted large-capacity air bleeder prevents possible damage to the pump from cavitation.



Large-capacity Free Cleaner

The mounted large-capacity free cleaner helps minimize air load pressure to heighten engine efficiency.



Fuel Level Gauge

The fuel level gauge has been relocated to the lower section and makes it easy to check the remaining fuel level.

Air-Conditioner Belt

Idle pulley is mounted so that it is easy to adjust belt tension and replace the belt.



Bonnet Protecting Cover

An over-sized protective cover is installed on both lower sides of the counterweight to prevent possible damage to the bonnet when operating in a mountainous region or any place having many obstacles. Also, a net protecting the engine compartment prevents entry of foreign objects.

Auto Fuel Dispense Pump

To reduce inconvenience in dispensing fuel at the work site, an auto fuel dispense pump has been installed.

Prefabricated Track Guard

The track guard, which protects the vital track components is a prefabricated component and allows easy replacement.



Technical Data



* Engine

• Model	
YANMAR 4TNV94L	
• Type	
Water-cooled, 4-cycle, direct injection	
• Aspiration	
Natural	
• Number of cylinders	
4	
• Rated flywheel horse power	
DIN 6271	38,1 kW (52 Ps) at 2.200 rpm
SAE J1349	38,1 kW (51,8 Hp) at 2.200 rpm
• Piston displacement	
3.045 cm ³	
• Maximum torque	
20 kgf.m (190,2 Nm) at 1.400 rpm	
• Bore and stroke	
94 x 110 mm	
• Starting system	
12 V electric motor	
• Batteries	
1 x 12 V x 100 Ah	

* Hydraulic system

- 2 variable displacement axial piston tandem type pumps.
- 2 gear pumps and control valve (9-spool) of section block construction.

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

• Main pumps	
2 variable displacement axial piston pumps.	
Max. oil flow	9,9 l/min
• Pilot pump - Gear pump	
Max. oil flow	21 l/min
• Swing motor	
Relief valve	216 bar (220 kgf/cm ²)
• Main relief valves	
Boom/Arm/Bucket	206 bar (210 kgf/cm ²)
Travel circuit	206 bar (210 kgf/cm ²)

* Super-structure revolving frame

A deep, full-reinforced box section. Heavygauge steel plates used for ruggedness.

* Hydraulic cylinders

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

Cylinders	Q'ty	Bore x Rod dia. x Stroke
Boom	1	115 x 70 x 720 mm
Arm	1	95 x 60 x 880 mm
Bucket	1	85 x 55 x 600 mm
Dozer	1	100 x 60 x 183 mm
Boom swing	1	110 x 55 x 558 mm

* Operator's cab

A roomy, independent, shock and noise-free operator's cab, 4 side safety glass windows give all-round visibility. Front window slides up and stores in the roof and side window can be opened for ventilation. Fully adjustable suspension seat. Air conditioner. ISO standard cab.

Noise Levels (dynamic value)

• LwA external noise:

– Guaranteed Sound Power Level	101 dB (A) (2000/14/EC)
– Measured Sound Power Level	100 dB (A) (2000/14/EC)

• LpA operator noise:

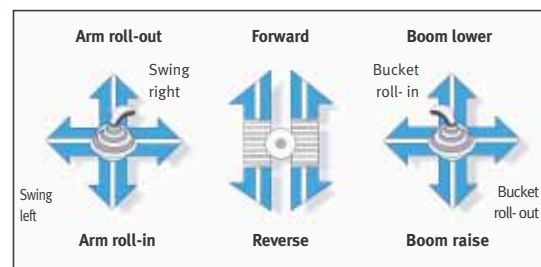
79 dB (A) (ISO6396)

* 2 Travel pedals with levers

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

* Controls 2 implement levers

Pilot pressure control type. Right lever is boom and bucket control, left lever for swing and arm control.



* Swing mechanism

High-torque, axial piston motor with planetary reduction gear bathed in oil. Swing circle is singlerow, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant. Swing parking brake is spring-set, hydraulicreleased disc type.

• Swing speed

0 to 9,1 rpm

• Rear swing radius

1.650 mm

* Drive

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

• Travel speed (High/Low)

3,9/2,2 km/h

• Maximum Tractive Force

4.900 kgf

• Gradeability

35° (57%) continuous

* Brake

Two oil disc brake on final drive input shafts. Spring applied hydraulically released, when machine is stationary, brakes are set automatically, operating either travel lever disengages brakes.

* Safety

- Safety glass windows
- Electric type horn
- Spring-set/hydraulic-released disc type travel parking brake
- Main relief valves, make-up valves
- Overload relief valves, hydraulic brake valves
- Engine coolant temperature gauge
- Monitor for before starting (engine oil level, engine coolant level and hydraulic oil level)
- Monitor for during operation (engine oil pressure, engine coolant temperature, alternator charge, air cleaner clogging and fuel minimum level)
- Alarm buzzer (engine oil pressure and engine coolant temperature)
- Working lights pilot lamp
- Lever lock

* Weight

Equipped with 3,0 m boom, 1,6 m arm, and 0,173 m³ (SAE heaped) bucket and 400 mm shoes.

	Shoe width (mm)	Operating weight (kg)	Ground pressure (kgf/cm ²)
Triple grouser	400	5.500	0,31
Rubber	400	5.400	0,30

* Buckets

Capacity (m ³)		Width (mm)		Weight (kg)
SAE, heaped	CECE, heaped	Without side cutters	With side cutters	
0,173	0,15	654	724	170
0,109	0,06	300	362	109

* Standard equipment

• Hydraulic system

Breaker piping

• Cabin & Interior

Air conditioner

• Others

Electric fuel supply pump

* Optional equipment

• Safety

Boom lock valve

• Others

Two way piping

Rubber track

Accumulator

* Undercarriage

Tractor type undercarriage. Heavy-duty track frame, all welded stress-relieved structure. Top grade materials are 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 heart-treated connecting pins. Hydraulic track adjusters with shockabsorbing recoil springs.

• Number of rollers and shoes (each side)

Upper rollers	1
Lower rollers	5
Track shoes	39
Overall track length	2.497 mm

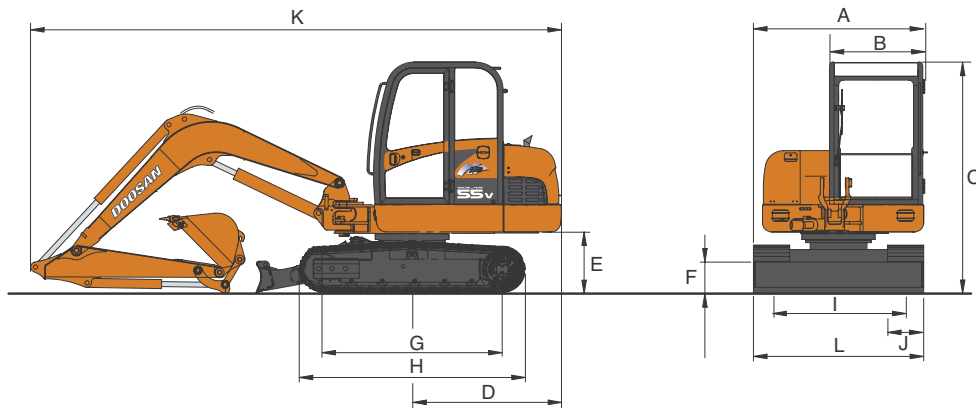
* Service refill capacities

Fuel tank	120 l
Cooling system	10 l

• Lubrication

Engine oil	9,7 l
Swing drive	1,5 l
Final drive (each)	1,4 l
Hydraulic tank	75 l

Dimensions & Working Ranges

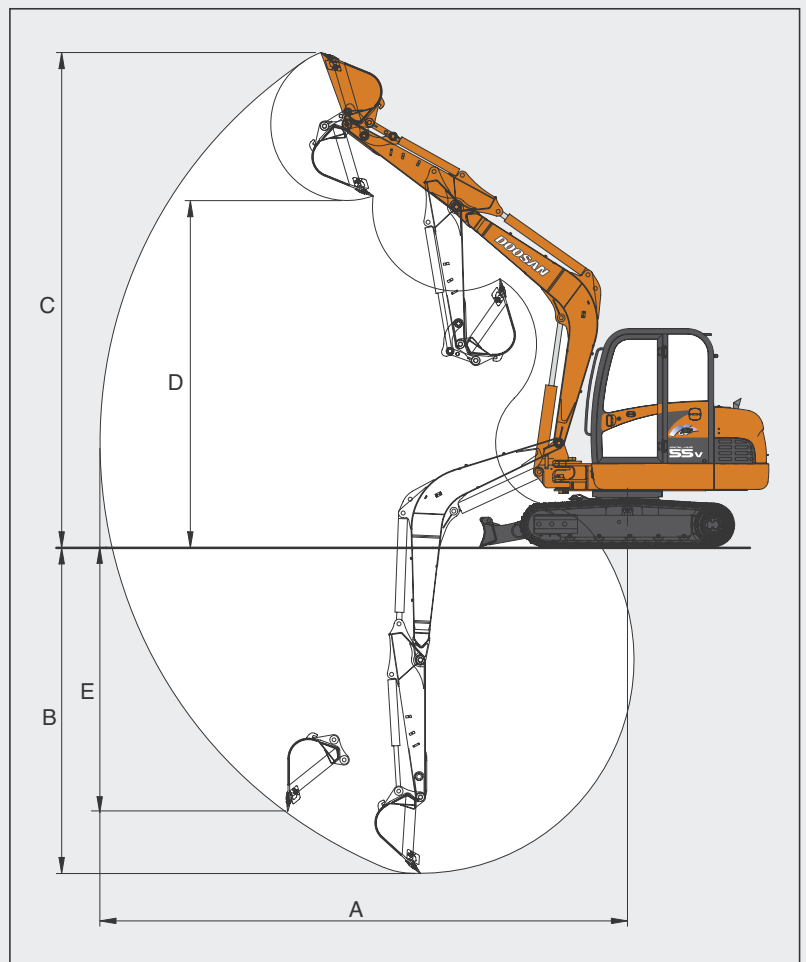


* Dimensions

A	Overall width of upper structure	1.885 mm
B	Overall width of cab	1.030 mm
C	Overall height	2.556 mm
D	Tail swing radius	1.650 mm
E	Clearance under counterweight	670 mm
F	Ground clearance	350 mm
G	Tumbler distance	1.990 mm
H	Track length	2.497 mm
I	Track gauge	1.480 mm
J	Track shoe width	400 mm
K	Overall length	5.850 mm
L	Overall track width	1.880 mm

* Digging forces (ISO)

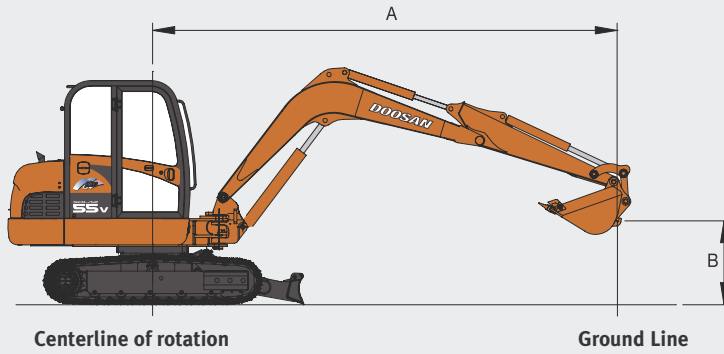
Arm	1,6 m
Bucket digging force	3.900 kgf 36,7 kN
Arm digging force	2.900 kgf 26,1 kN



* Working ranges

Boom length	3.100 mm
Arm length	1.800 mm
A. Max. digging reach	mm 6.152
B. Max. digging depth	mm 3.796
C. Max. digging height	mm 5.774
D. Max. dumping height	mm 4.048
E. Max. vertical wall digging depth	mm 3.070













Lifting Capacities



SOLAR **SSv** 













Dozer Up — Boom: 3.000 mm - Arm: 1.600 mm - Bucket: SAE 0,173 m³ Heaped (CECE 0,15 m³) - Shoe: 400 mm

Unit: 1.000 kg



A (m) \ B (m)	2		3		4		5		6		Max. Reach		
													A(m)
4					*0,96	0,84					*0,80	0,73	4,33
3					*1,05	0,83					*0,81	0,57	4,93
2	*3,02	2,39	*1,66	1,25	1,32	0,79	0,92	0,54			0,85	0,50	5,24
1	*1,08	*1,08	1,99	1,16	1,27	0,75	0,90	0,53			0,82	0,48	5,30
o (ground)	*1,80	*1,80	1,93	1,11	1,24	0,72	0,89	0,51			0,85	0,49	5,15
-1	*2,94	2,10	1,91	1,09	1,23	0,71					0,96	0,55	4,73
-2	4,05	2,14	1,93	1,11							1,25	0,73	3,97
-3	*3,06	2,23									*2,38	1,60	2,44

Dozer Down — Boom: 3.000 mm - Arm: 1.600 mm - Bucket: SAE 0,173 m³ Heaped (CECE 0,15 m³) - Shoe: 400 mm

Unit: 1.000 kg

A (m) \ B (m)	2		3		4		5		6		Max. Reach		
													A(m)
4					*0,96	0,84					*0,80	0,73	4,33
3					*1,05	0,83					*0,81	0,57	4,93
2	*3,02	2,39	*1,66	1,25	*1,33	0,79	*1,21	0,54			*0,87	0,50	5,24
1	*1,08	*1,08	*2,47	1,16	*1,67	0,75	*1,36	0,53			*0,98	0,48	5,30
o (ground)	*1,80	*1,80	*2,94	1,11	*1,94	0,72	*1,49	0,51			*1,19	0,49	5,15
-1	*2,94	2,10	*3,03	1,09	*2,03	0,71					*1,61	0,55	4,73
-2	*4,41	2,14	*2,76	1,11							1,84	0,73	3,97
-3	*3,06	2,23									*2,38	1,60	2,44

- Ratings are based on SAE J1097
- Load point is the hook on the back of the bucket
- * = Rated loads are based on hydraulic capacity
- Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity

 : Rating over front
 : Rating over side or 360 degree

DOOSAN Infracore Europe S.A.

1st, rue Achille Degrâce
7080 Frameries, Belgium
Tel : +32-65-61 32 30 • Fax : +32-65-67 73 38

DOOSAN Infracore France SA

Buroplus 2
Parc d'Activités de La Clef St Pierre
Avenue Jean d'Alembert, bâtiment n° 2
78990 Elancourt, France
Tel : +33-1-30 16 21 41 • Fax : +33-1-30 16 21 44

DOOSAN Infracore U.K., Ltd.

Doosan House, Unit 6, 3 Heol-Y-Gamlas, Parc Nantgarw,
Nantgarw, Cardiff CF15 7QU, U.K.
Tel : +44-1443-84-2273 • Fax : +44-1443-84-1933

DOOSAN Infracore Germany GmbH

Heinrich-von-Stephan-Str. 2
D-40764, Langenfeld, Germany
Tel : +49-2173-2035212 • Fax : +49-2173-2035219

Head Office

Doosan Tower 26th FL. 18-12, Euljiro-6Ga,
Jung-Gu, Seoul, Korea 100-730
Tel : +82-2-3389-8114 • Fax : +82-2-3389-8117

www.doosaninfracore.com

www.doosaneurope.com

