

Doosan Infracore

Doosan Infracore Europe S.A. 1A, Rue Achille Degrâce, 7080 Frameries, Belgium Tel : +32-65-61-3230 Fax : +32-65-67-7338

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 Europe S.A. Germany

 Heinrich-von- Stephan str. 2 40764 Langenfeld , Germany

 Tel : +49-2173-2035-210

 Fax : +49-2173-2035-219

Doosan Infracore France

+

ZAC de La Clef Saint Pierre - Buroplus 2 1A Avenue Jean d'Alembert 78990 Elancourt, France Tel : +33-(0)1-30-16-21-41 Fax : +33-(0)1-30-16-21-44 **Seoul Office :** Doosan Tower 27th FL. 18-12, Euljiro-6Ga, Jung-Gu, Seoul, Korea 100-730 Tel : +82-2-3398-8114 Fax : +82-2-3398-8117 www.doosaninfracore.com

Doosan Infracore America Corporation 2905 Shawnee Industrial Way, Suwanee, Georgia 30024, U. S. A Tel : +1-770-831-2200 Fax : +1-770-831-0480

Doosan Infracore China Co., Ltd. #28, Wuzhishan Road, Eco. & Tech, Development Zone, Yantai, Shandong, China Tel : +86-535-638-2000 Fax : +86-535-638-2004

Doosan Infracore South Africa (PTY) LTD. 60C Electron Road, Isando 1600, Johannesburg, South Africa Tel : 27-11-974-2095 Fax : 27-11-974-2778

Doosan Infracore Middle East Center (Dubai) P.O.Box 183127, Al-Serkal Building, Air Port Road, Dubai, U.A.E Tel:+971-4-295-2781~2 Fax:+971-4-295-2783

Doosan Infracore Latinamerica oficina (Colombia) Dia gonal 127 A No. 17-14, oficina 302 Bogota, Colombia Tel : +571-216-1655 Fax : +571-648-7700



PBP S055W5PV 0703

The illustrations do not necessary show the product in standard version. All products and equipments are not available in all markets. Materials and specifications are subjects to change without prior notice.



Doosan Infracore Construction Equipment

SOLAR55WV

Engine Power : DIN 6271,net 40.4kw (54.9 ps)@2,400 rpm SAE J1349,net 40.4kw (54.1 HP)@2,400 rpm Operational Weight : 5,550 kg (12,235 lb) Bucket capacity(PCSA) : 0.07~0.19 m³ (0.09~0.25 cu.yd)



+

Powerful force and flexible operation the real value for customers.

Powerful engine and state-of-the-art mechanism ensures maximum work efficiency.

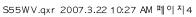
Convenient and easy operation-another value for customers.

The comfortable cab for operator and various convenient equipments, our model presents the standard of excavator in the 21st century.

DOOSAN

Easy and simple maintenance and check ensures you more convenience and satisfaction.

Once bonnet is opened, all parts can be seen at a glance. now daily check becomes your another enjoyment.





The highest performance is guaranteed irrespective c

The most advanced hydraulic circuit for powerful excavation and work efficiency as well as the powerful engine for the biggest pulling up force and tractive force- the innovative work performance of Solar55W-V Plus ensures you the highest work efficiency with excellent adaptation to the spot.



Powerful Digging Force Powerful digging force of 4,060kgf(ISO) from the 54.1HP (SAE J1349,net) engine achieves excellent performance quickly within a short time under any working conditions. In addition, a engine control lever is installed on the left control stand in the cabin to make it easy to control working speed.



Gradeability

+

The travel speed of 25km/h and accelerating performance combine to assure excellent performance in traveling in downtown or moving from / to worksites, and its excellent graderability is manifested when traveling on an uphill.



Engine control lever

As Engine control lever is placed at position easy to operate, operator can operate it without being interfered while 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 digging or lifting operations requiring high pressure and large hydraulic flow or grading operations requiring low pressure and small hydraulic flow rate.

e of work condition.

Dozer Blade Control Lever

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





Two Way Piping Line Installed

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



Highest Dump Height

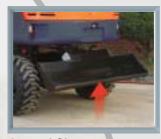
The maximum dump height of 4,212mm is the highest among the same-grade machines and enables easy loading operation onto a 15-ton dump truck.

Bucket

Hardened bucket claws provide outstanding durability and they can be easily unbolted for removal, straightening or replacing.

Large-Capacity Fuel Tank

This machine is equipped with a largecapacity fuel tank (120 liter) enabling continuous operation for two days before refueling. The fuel port has been raised in height to prevent oil leak when operating on a slope.



Ground Clearance The minimum ground

clearance has been raised by (290mm) in order to minimize possible damage to the undercarriage when traveling on rough ground or working at a slope. In addition, the blade's ground clearance is high to the extent that it doesn't interfere with curb stones installed at the road side when performing road repairing or road construction work.



Axle Osilation

The machine's center of gravity needed when traveling, swinging, or performing other various operations is repositioned to the rear side so that the machine may not be shaken to assure high-grade stability, and the upward/downward adjustment angle of the front axle is so great that the machine performs stably at a rough or uneven ground.





Large-capacity Dozer Blade

This machine is equipped with a large-capacity dozer blade (412 x 1,920 mm) ensuring excellent earth-moving operation. Its powerful dozer blade force can be used efficiently for operations on a slope.

-{



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.



4TNV94L-PDBWE

Solar55W-V Plus, Which has the powerful and eco-friendly heart, always provides high operation efficiency and pleasant work condition.

Boom Swing

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

Cab space in the new concept of comfortable and cozy c

Ruling out the conventional concept of small equipment, Solar55W-Vplus provides operator with maximum comfort and various convenient apparatus. Solar55W-VPlus The very product born by innovative technology of excavator! Cab space more comfortable and cozy than any other equipments.



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.



The handle with tilting function

Because the handle with tilting function can be adjustable forward & backward according to operator's figure & location, The best operation & always minimum operator's fatigue in the optimum condition.



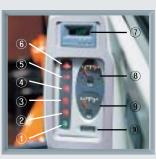
Rectangular Structure Cabin

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

TOPS (Tip-Over Protection Structure) (ISO 12117) FOPS (Falling-Object Protection Structure) (ISO 3449:LEVEL-1)

The Solar55W-V Plus cabin has been incorporated with the high strength TOPS feature which meets international standards to protect the operator from being injured by the cabin structure in the event of a tip-over.in addition, the operator is protected from heavy falling objects by the FOPS cabin,which meets international standards. These safety features provide a safe haven for the operator to work in.

y design of human engineering.



Monitor

Thanks to centralized panel which is simple and sophisticated, work state and condition of various equipments can be checked at a glance. This high grade gauge panel with waterproof function shows excellent readability.

Gauges

- 1) Preheat Completion Indicator Light
- ② Fuel Level Warning Light
- ③ Air Cleaner Clogging Warning Light
- ④ Engine Overheat Warning Light
- (5) Battery Charge Warning Light
- ⑥ Engine Oil Pressure Warning Light
- Digital Clock
- ⑧ Engine Coolant Temperature Gauge⑨ Fuel Gauge
- 10 Hour Meter



Switches

As all switches are placed in compliance with human engineering,the convenience is maximized for operator.



• Vents are located in the left and right side of the rear sections.



• Front Defroster and Lower Vent

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.



Suspension Seat

Responding to the weight of operator, the suspension with excellent shock-absorbing power provides him with high cushion to ensure comfort in spite of operation for long time.



Joy-Stick

The hydraulic joy stick lever with agreeable grip touch and easy operation ensures excellent performance in minute operation. Especially, the two (left) & three (right) buttons on the top of joy stick are very convenient for diverse attachment works.



Left and Right Control Stands Control Stand

Left and right control stand designed by human engineering lay-out ensures not only easy operation but also sufficient space to install option switch. Furthermore, being designed in the single body type of plastic material, it provides operator with comfortable cab space.





Floor plate on which travelling pedal and foot rest installed ensures easy work due to its sufficient space. Additionally, mat made of rubber is placed to provide operator with neat and comfortable interior.



Console Box

As console box is installed to make interior neat, comfortable and neat interior is guaranteed by receiving diverse personal belongings such as tools, working shoes, etc.



Cup Holder Cup holder ensures easy operation and rest.

Arm Rest

Arm rest protects operator from fatigue while operating for long time. Height is adjustable in accordance with physical condition.



The condition of all equipments is checked at a glance. This easy and simple maintenance is really distinguis h

The powerful performance of excavator developed by the most advanced technology of Doosan Infracore Co. Ltd. is integrated in the Solar55W-VPlus to ensure simple and easy maintenance. Providing operator with the highest service so that he can check for himself, Solar55W-VPlus maximizes work efficiency.



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.



Radiator

+

The large-capacity radiator provides excellent performance in severe and continuous operations. The assemblable dust net on oil-cooler front side prevents overheating from filth.



Air-Conditioner Belt

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



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

maintenance.



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

hed.

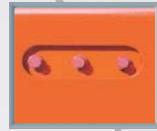




Sleeve Protector Sleeve protector with high resistance to wear is equipped to prevent the highpressure hose from being damaged or broken and working oil from splashing when it is damaged.



Air Breather We designed the hydraulic system for prevent the pump from cavitaion.



Grease Piping

Integrated grease piping is designed to easily maintenance to boom swing cylinder, swing reduction gear, swing bearing & pinion gear.



Water separator The transparent glass water separator is mounted at a location easily accessible from the ground allowing easy maintenance of the fuel system.



Fuel Level Gauge

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



Bonnet Protector

An over-sized protector is installed on both 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.

Engine Bonnet (Hood) / Engine room

Engine compartment is designed for easier service and the Engine room sturdy rubber inside the engine cover reduces the noise to give comfortable environment to operator and the resident in urban areas.





Engine oil drain The engine oil drain with quick coupler provides fast and enviromentally serviceability.

Technical Data

Engine

Model
Type Water-cooled, 4-cycle,
direct injection .
Aspiration Natural
No. of cylinders 4
Rated flywheel horse power
DIN 6271, gross
DIN 6271, net 40.4 KW (54.9 PS) at 2,400 rpm
SAE J1995, gross 42.4 KW (56.8 HP)
SAE J1349, net 40.4 KW (54.1 HP) at 2,400 rpm
Displacement
Maximum torque 21 kgf.m (205 Nm, 151 lbf.ft) @ 1,600 rpm
Bore and stroke
Starting system 12V Electric motor
Batteries 1 ×12V ×100 AH

Hydraulic system

2 Variable displacement axial piston tandem type pumps.2 Gear pumps and control valve (10-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 pump.
Max. oil flow	2 ×60 ℓ/min
	(2×13.2 UK gpm,
	2 ×15.8 US gpm)
Pilot pump	Gear pump
Max. oil flow	21.4 ℓ/min
	(4.7 UK gpm,
	5.6 US gpm)
Steering pump	Gear pump
Max. oil flow	38.9 ℓ/min
	(8.6 UK gpm,
	10.3 US gpm)
Swing motor	
Relief valve	216 bar
	(3,129 psi, 220 kgf/cm ²)

Main relief valves

Boom/Arm/Bucket	225.5 bar
	(3,271.4 psi, 230 kgf/cm ²)
Travel circuit ·····	225.5 bar
	(3,271.4 psi, 230 kgf/cm ²)
A	

Hydraulic cylinders

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

Cylinders	Q'ty	Bore ×Rod dia. ×Stroke
Boom	1	110 ×60 ×710mm (4.33" ×2.36" ×2'4")
Arm	1	$85\!\times\!55\!\times\!860mm$ (3.35" $\times\!2.17$ " $\times2'10$ ")
Bucket	1	$80\!\times\!50\!\times\!600mm$ (3.15" $\times\!1.97"\!\times\!2'$)
Dozer	1	110 \times 60 \times 175mm (4.33" \times 2.36" \times 6.9")
Boom swing	1	110 \times 55 \times 547mm (4.33" \times 2.16" \times 1'10")

100

Super-structure revolving frame

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

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)

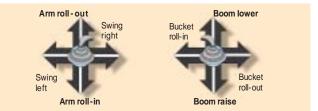
LwA External noise

Guaranteed Sound Power Level					
Measured Sound Power Level					
LpA Operator noise					

100 dB (A) (2000/14/EC) 99 dB (A) (2000/14/EC) 79 dB (A) (ISO 6396)

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 single-row, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant. Swing parking brake is spring-set, hydraulic-released disc type.

Swing speed	0 to 9.1 rpm(min ⁻¹)
Rear swing radius	1,650 mm(5'5")

Onive

Fully hydrostatic driven, 2 speed mechanical shift transmisson, variable displacement, high torque, axial piston motor, foot pedal controls provide smooth travel, hub reduction type front steering axle and rear rigid axle.

Travel speed (High/Low) 25/8.1 km/h (15.5/5.0 mph) *A maximum speed restriction of 20 km/h is available as an option.

Maximum tra	ction force	 3,400 kgf ((7,496 lbf)
Gradeability		 30°(58%)	continuous

Undercarriage

Heavy-duty frame, all-welded stress-relieved structure. Top grade materials used for toughness. Specially heat-treated connecting pins. 12-16.5-12PR(OTR) tubeless single tires, Front axle oscillating hydraulically.

Brake

Full sealed wet discs service brakes operated fully hydraulic and rear axle sealed wet discs parking brake operated hydraulically.

🔼 Weight

Equipped with 3.0m(9'10") boom, 1.6m(5'3") arm, and 0.173m³(0.22yd³; PCSA heaped) bucket and rear dozer.

5,550kg(12,235 lb)	
kg	lb
Arm : 1,600mm(5'3") 122	269
Boom : 3,000mm(9'10")	586
Upper Structure	6,027
Counter weight	529

Service refill capacities

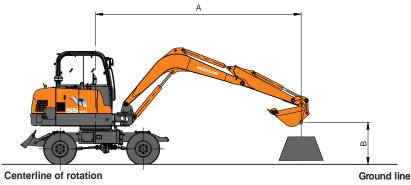
Lit	ers	US gal	Imp gal
Fuel tank	120	31.7	26.4
Cooling system ·····	10	2.64	2.2
Lubrication Lit	ers	US gal	Imp gal
Engine oil ·····	9.2	2.43	2.02
Swing drive	1.5	0.39	0.33
Final drive(each)	1.5	0.39	0.33
Hydraulic tank	80	21.1	17.6

Buckets

			Width		
Capacity	y		Recommendation		
PCSA, heaped	CECE, heaped	Without side cutters	With side cutters	Weight	1.6 m (5'3") Arm
0.07 m ³	0.06 m ³	300 mm	362 mm	109 kg	_
(0.09 yd³)	(0.08 yd³)	(1')	(1'2")	(240 lb)	
0.173 m³	0.15 m³	654 mm	724 mm	170 kg	_
(0.22 yd ³)	(0.20 yd ³)	(2'2")	(2'5")	(375 lb)	
0.19 m³	0.17 m³	712 mm	784 mm	180 kg	_
(0.25 yd³)	(0.22 yd ³)	(2'4")	(2'7")	(397 lb)	

Lifting Capacities

Dozer Up



A : Load radius from centerline of rotation B : Load point height Boom : 3.0 m (9'10") Arm : 1.6 m (5'3") Bucket: PCSA 0.173m³ (CECE 0.15m³)

-(

Metric

Metrie	C									U	nit : 1,000 kg
A(m)		2	3	3		4	5	;		Max. Reach	
B(m)		¢‡¤	H	¢‡•	Ľ	Ç i ≏	B	¢‡≏	Ľ	Ģ ∙	A(m)
4					*0.95	*0.94			0.77	0.75	4.55
3					*1.11	0.92			0.79	0.62	5.04
2	*2.63	2.60	*1.87	1.38	1.38	0.88	0.96	0.61	0.86	0.56	5.26
1	*1.28	*1.28	2.11	1.29	1.33	0.84	0.94	0.59	0.87	0.55	5.26
0	*2.18	*2.18	2.06	1.25	1.31	0.82	0.93	0.58	0.92	0.58	5.02
-1	*3.37	2.43	2.05	1.25	1.30	0.81			1.08	0.68	4.52
-2	*4.22	2.48	2.08	1.27					1.55	0.96	3.61

Feet							Unit : 1,000 lb
A(ft)	1	10'	15'		Max. Reach		
B(ft)	8	c‡⊨0	₽	t‡=	H	⇔	A (ft)
15'					*1.73	*1.73	13.48
10'			*2.44	1.62	*1.73	1.37	16.48
5'	4.62	2.87	2.42	1.54	1.92	1.21	17.35
0'	4.42	2.69	2.35	1.47	2.04	1.27	16.48
-5'	4.43	2.70			2.77	1.73	13.49

Note 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.

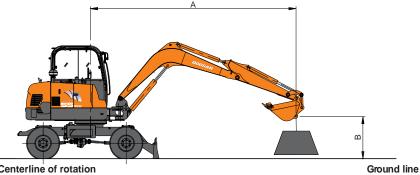
: Rating over front

tating over side or 360 degree

0 : Ground



Dozer Down



A : Load radius from centerline of rotation B : Load point height Boom : 3.0 m (9'10") Arm : 1.6 m (5'3") Bucket: PCSA 0.173m³ (CECE 0.15m³)

-(

Centerline of rotation

Metric

Metric Unit : 1,000 kg											
A(m)	2		3		4		5		Max. Reach		
B(m)		¢‡•	H	⇔	쁍	⇔		LJ••	8	⇔	A (m)
4					*0.95	*0.95			*0.77	0.77	4.55
3					*1.11	0.98	*0.88	0.67	*0.79	0.66	5.04
2	*2.63	*2.63	*1.87	1.48	*1.41	0.94	*1.25	0.66	*0.86	0.60	5.26
1	*1.28	*1.28	*2.58	1.39	*1.74	0.90	*1.39	0.64	*0.99	0.59	5.26
0	*2.18	*2.18	*2.93	1.35	*1.95	0.88	*1.33	0.63	*1.23	0.62	5.02
-1	*3.37	2.65	*2.92	1.35	*1.98	0.87			*1.65	0.73	4.52
-2	*4.22	2.71	*2.52	1.37					*1.93	1.04	3.61

Feet							Unit : 1,000 lb
A(ft)	10'		1	5'	Max. Reach		
B(ft)	쁍	∷ ⊧⊡	H	∷ ≂	L.	⇔	A (ft)
15'					*1.73	1.73	13.48
10'			*2.44	1.73	*1.73	1.47	16.48
5'	*4.83	3.08	*3.09	1.65	*2.00	1.30	17.35
0'	*6.30	2.91	*3.64	1.58	*2.70	1.37	16.48
-5'	*6.00	2.91			*3.92	1.86	13.49

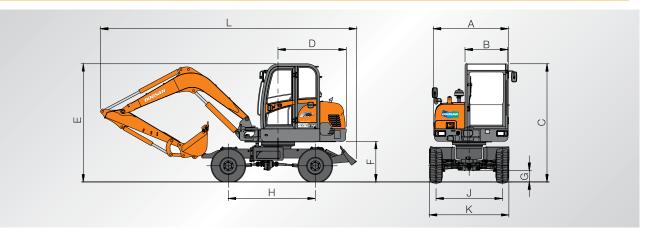
Note 1. Ratings are based on SAE J1097
 2. The load point is a hook located on the back of the bucket.
 3. " * "Rated loads are based on hydraulic capacity.
 4. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity.

E : Rating over front t Rating over side or 360 degree

0 : Ground

Dimensions & Working Ranges

Dimensions



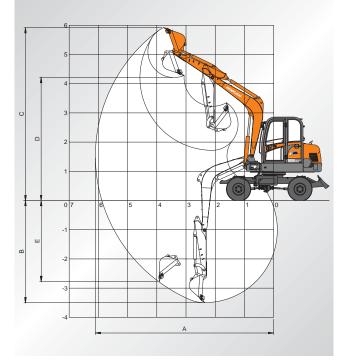
A Overall width of upper structure	1,820mm (6'0")
B Overall width of cab	1,030mm (3'5")
C Overall height of cab	2,856mm (9'4")
D Tail swing radius	1,650mm (5'5")
E Overall height	2,856mm (9'4")
F Clearance under counterweight	980mm (3'3")
G Ground clearance	290mm (11")
H Wheel base	2,100mm (6'11")
J Tread	1,600mm (5'3")
K Overall dozer blade width	1,920mm (6'4")
L Overall length	6,187mm (20'4")

Digging forces

 \rightarrow

	SAE	ISO
Bucket	3,627 kgf	4,060 kgf
digging	35.5 kN	39.8 kN
force *	7,996 lbf	8,951 lbf
Arm	2,596 kgf	2,676 kgf
digging	25.4 kN	26.2 kN
force *	5,723 lbf	5,900 lbf

Working ranges



* At power boost

Boom length	3.0m (9'10")
Arm length	1.6m (5'3")
A. Max. digging reach	6,102mm (20'0")
B. Max. digging depth	3,496mm (11'6")
C. Max. digging height	5,920mm (19'5")
D. Max. dumping height	4,212mm (13'10")
E. Max. vertical wall digging depth	2,770mm (9'1")

Standard & Optional Equipment

Standard equipment

Hydraulic system

· Boom swing system

Cabin & Interior

- Viscous cab mounts
- All weather sound suppressed type cab
- · Air conditioner
- Adjustable suspension seat with head rest and adjustable
 arm rest
- Pull-up type front window and removable lower front window
- Room light
- Intermittent windshield wiper
- · Cigarette lighter and ashtray
- Cup holder
- AM/FM radio and cassette player
- Joystick lever with 2 switches (LH)
- Joystick lever with 3 switches (RH)
- Sunvisor
- TOPS/FOPS cabin

Safety

- Seat belt
- · Hydraulic safety lock lever
- Safety glass
- Hammer for emergency escape

50L

- Right and left rearview mirrors
- Reverse travel alarm
- · Boom lock Valve

Others

- Double element air cleaner
- Pre-cleaner
- Water separator
- Dust screen for radiator
- Engine restart prevention system
- Alternator (12V, 60 amps)
- Electric horn
- · Halogen working lights
- (frame mounted 2, boom mounted 1) • Rear dozer blade

-(

- Tubless single tire
- Two way piping
- Electric fuel supply pump

Optional equipment

Safety

 \rightarrow

Rotating beacon

Others

- Narrow bucket : 300mm (0.07m³) PCSA
- Wide bucket : 690mm (0.19m³) PCSA
- Double Tire

