YANMAR

MIDI-EXCAVATOR

ViO82

Operating weight	8 200 kg
Engine gross power	41.5 kW / 55.6 HP at 1900 rpm
Digging force (arm)	40.8 kN
Digging force (bucket)	63.5 kN

The urban excavator redefining performance

COMPACTNESS

A true concentrate of technology and innovation, the Vi082 offers the performance of a large excavator while leveraging the benefits of a compact excavator.

POWERFUL YANMAR ENGINE

The Vi082 uses the newest version of the Yanmar TNV engines. It is a Yanmar 4-cylinder engine with direct injection and common rail system. This engine is also equipped with a cooled EGR and a DPF, which allow the machine to meet EU emission regulations. Auto-deceleration and Eco-mode are available in standard.

BEST COMPONENTS

Designed in Japan with components renowned for top quality and durability, throughout a long service life.

NEW HYDRAULIC SYSTEM

The Vi082 hydraulic system is based on the aggregated power regulation of two independent variable flow piston pumps and a multiple combination directional control valve.

EASE OF MAINTENANCE

5 hoods or openings which allow easy access for components maintenance. Fast and easy daily checks or servicing.

COMFORTABLE CABINE

Upgraded operator station: large leg room, Yanmar "Universal Design" for an enhanced comfort and productivity, new electronic instrumentation, improved ergonomics and air suspension seat in standard.

EASY OPERATION

Control levers ideally located for exceptional movement precision. The Vi082 benefits of the proportional control of the boom swing, via the roller switch located on the right-hand joystick.

HIGH PERFORMANCE

Upgrade of the powerline components (hydraulic pump, control valve): no compromise between power and compactness.

UNMATCHED COMPACTNESS

DESIGNED TO WORK EFFECTIVELY ON A WIDE VARIETY OF JOBSITES, THE VIO82 COMBINES COMPACTNESS, POWER, VERSATILITY, COMFORT AND RELIABILITY.

YANMAR TRUE ZTS

ADVANTAGES OF THE ViO DESIGN

Neither the standard counterweight, nor the front part of the upper frame sticks out of the track width. With its front part designed not to hang over, the Vi082 is a true zero tail swing excavator:

+ Smooth swing even in confined spaces
+ Operation with confidence and efficiency along the walls
+ Improved safety for both the operator and the side workers: critical on the jobsites.
+ Rear blind spot reduced to a minimum: enhances again the safety for the workers around the machine.

STABILITY

MAXIMUM STABILITY
AND EXCEPTIONAL LIFTING FORCES

Although the operating weight of the ViO82 is 8200 kg, the machine is also equipped with a large counterweight to provide the same or even higher stability than conventional machines in the same weight class, as well as remarkable lifting capacities.

Furthermore, the ViO82 is equipped with a standard boom swing. As the boom can swing up to 60 degrees on both sides, the excavator faces the work area when digging a ditch, thus improving the work efficiency and its lifting capacity.

UNIQUE UNDERCARRIAGE

The X-shaped box-section structure of the undercarriage provides excellent torsional stiffness. The frame is designed for maximum robustness. All the components of the undercarriage have been sized to increase the durability and the service life of the machine and reduce its Total Cost of Ownership.

PERFORMANCE

Based on unique experience and expertise, Yanmar technology delivers excellent performance while respecting the environment. The Vi082 combines power, flexibility and precision. Its versatility makes it the ideal partner to improve your productivity, regardless of the work site complexity you are facing (excavation, grading, demolition, backfilling...).

NEW GENERATION ELECTRONICALLY CONTROLLED YANMAR ENGINE

The Vi082 benefits from the most advanced technology developped by the leading industrial diesel engines manufacturer. The 55,6 HP TNV engine is equipped with common rail direct injection system. The fuel injection is managed and fine-tuned by the Electronic Control Unit, ensuring cleaner combustion and optimized engine working conditions.

ELECTRICAL CONTROL SYSTEM EGR AND DPF

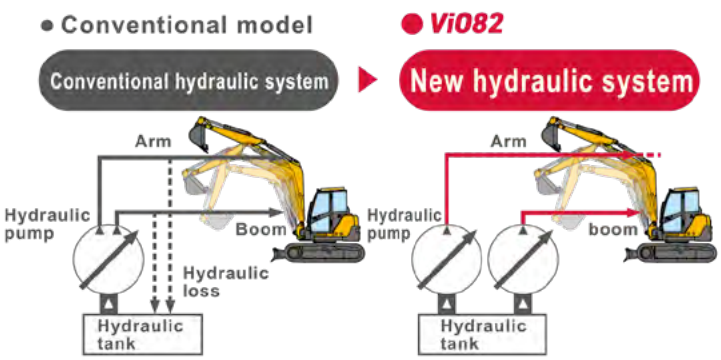
Yanmar's 4TNV98C-WBV1 engine is the result of our continuous efforts to achieve technological progress in fuel consumption and emissions. With the Vi082, Yanmar gives priority to the environment and to fuel savings.
The cooled EGR (Exhaust Gas Recirculation) reduces drastically the nitrogen oxides (NOx) and the DPF (Diesel Particulate Filter) and cleans up exhaust emissions (PM). Yanmar has successfully developed an exclusive regeneration system in order to prevent clogging and cleaning down-time.

- An ECU manages the RPM according to the torque, optimizing the engine load. This enables to save fuel while increasing the productivity of the machines.
- An Auto-Deceleration system (in standard) further reduces fuel consumption by enabling the engine to switch back to idle if the operator doesn't touch the operating levers for 4 seconds.
- An Eco-Mode (in standard) effectively controls the engine speed, thus allowing a very low fuel consumption. This feature is particularly useful when duty cycle requires require little power and low speed of movement, the Eco-mode saves fuel and reduces operating costs.

NEW VIPPS2I® HYDRAULIC SYSTEM
(VIO PROGRESSIVE PUMP SYSTEM 2-PUMP INDEPENDENT)

The Vi082 hydraulic system, is based on the aggregated power regulation of two independent variable flow piston pumps and a multiple combination directional control valve.

The 2 independent pumps, controlled individually according to the load, supply only the required quantity of hydraulic fluid for the performed operation. This system provides greater ease of use for the operator together with a reduction of loss of hydraulic pressure, even during combined operations of arm and boom. It allows smooth and simultaneous performance of all the operations.



REGULATION OF HYDRAULIC SYSTEM
BASED ON ENGINE SPEED

The new electronic hydraulic pump regulator adjusts its flow rate based on engine performance. This engine power is perfectly exploited and machine performance is optimized.

EASE OF USE

ADJUSTABLE PROPORTIONAL CONTROL
OF THE AUXILIARY CIRCUITS

The Vi082 is equipped in standard with two auxiliary hydraulic lines with proportional control on joystick combined with fine adjustment. The proportional control adapts the hydraulic flow of oil to the use and needs of each attachment. The operator takes perfect control of attachments.

1. Control of the 1st auxiliary hydraulic circuit
2. Flow adjustment via potentiometer of the 1st auxiliary circuit
3. Control of the 2nd auxiliary hydraulic circuit
4. Flow adjustment via potentiometer of the 2nd auxiliary circuit
5. Engine power controlled electronically by a potentiometer
6. Right hand side control panel (A/C and switches)

COMFORT

LARGE AND COMFORTABLE CABIN

Putting the operator at the centre of its design initiatives, Yanmar developed the « Universal Design » concept which provides comfort for enhanced productivity. In combination with increased leg room, it enables to improve the comfort and safety of the operator. Functional controls and switches are ergonomically arranged for easy reach.

CONTROL PANEL

UD UNIVERSAL DESIGN

1. Beacon light
2. Lights switch
3. Auto Deceleration system
4. Eco-Mode
5. Travel speed switch
6. Working light
7. Wipers
8. DPF
9. Overload warning
10. Quick hitch

AIR SUSPENSION SEAT

The Vi082 is equipped in standard with an air suspended seat to offer an optimal comfort for a machine of this weight class. Fully adjustable and with a headrest, it reduces body tension and fatigue.

AIR CIRCULATION

The Vi082 has an air conditioning that can work at a comfortable temperature whatever the weather. Vents are placed to ensure a homogeneous temperature within the cab and a perfect window defrosting.

The air filters are easily accessible for an improved maintenance.

STORAGE SPACES

The Vi082 offers many storage possibilities conveniently placed: cup and bottle holder, utility box, document storage... The operator has all his personal belongings within reach.

SAFETY

The structure of the Vi082 cabin has been designed to meet the ROPS certification (Roll-Over Protective Structure) as well as the FOPS (Falling Object Protective Structure) level 1.

The Vi082 is equipped in standard with a FOPS2 Top Guard for an enhanced protection in harsh environment.

ALL-AROUND VISIBILITY

The large Vi082 cabin windows provide the operator with excellent visibility around the machine. The front windshield, divided into two parts, is fully retractable and the windows on the right side slide. The operator can easily communicate with other workers. The 360° visibility ensures optimum safety on the jobsite and makes work more efficient.

The Vi082 is equipped with five mirrors to help the operator control the work area without moving from his seat.

LED LIGHTING : EFFICIENCY AND LOW CONSUMPTION

In order to work safely, efficiently and with accuracy in the darkness, the Vi082 comes standard with 3 LED lights positioned in the inner part of the boom and at the front of the cabin. The LED technology provides a powerful light while reducing energy consumption which increases the service life of the battery. In option, a beacon light can be added to the rear of the cab.

ACCESSIBILITY

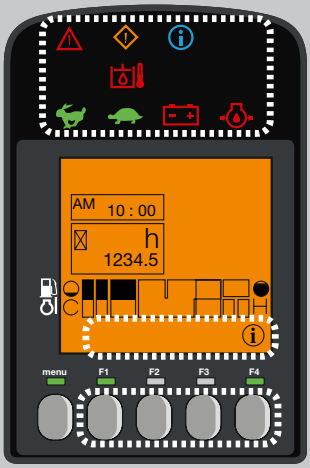
The Vi082 benefits from a large cabin door clearance. This passage makes the entrance and the exit easier and improves significantly the operator's comfort and safety.

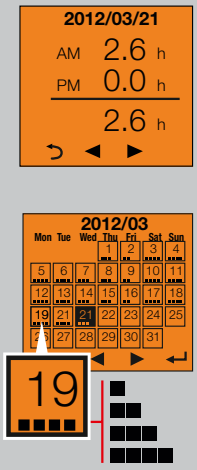
Entrance and exit are even more facilitated by 3 handrails which are ideally designed and positioned to fit the operator's posture and grip reach. A large footstep with antislip system also contributes to a safe machine accessibility for the operator.

RELIABILITY

The Vi082 perfectly meets the reputation for quality and durability of the Yanmar machines. The excellent accessibility to components and speed of maintenance and cleaning operations allow achieving excellent levels of on-site availability. Assured of his machine's performance, the operator can calmly work.

The structure of the undercarriage, as well as the steel wovers provide an optimal protection and longer service life. Furthermore, a lot of care has been brought to the hose routing on the working equipment. These measures enhance the service life and reduce downtime of the machine.





DIGITAL INTERFACE

The Vi082 is equipped with a digital interface which informs the operator in real time about the status of his machine. Perfectly integrated into the right-hand console, the 3.3" screen provides excellent visibility. The interface displays useful information to the user through LED lamps, or indication about key elements like fuel consumption, fuel gauge, coolant temperature gauge, etc... The interface assists the customer in monitoring maintenance intervals and scheduling related interventions. It also works as a diagnostic tool in case of malfunction by sending an error code and an information icon to the display.

MAINTENANCE

EASY ACCESS

Daily maintenance has to be performed smoothly. There is one easy-to-open engine bonnet and the right-hand side cover is mounted on one hinge to open easily. This gives an access to all major elements: air filter, compressor, radiator, refuelling pump, battery, fuel tank, hydraulic oil tank alternator, engine oil dipstick, water separator, coolant level, etc... A flat floor mat makes cleaning easier.

LONG SERVICE INTERVALS

The Vi082 is designed for working, and therefore its service intervals are reduced to a minimum.

EQUIPMENT

[STANDARD EQUIPMENT]

PERFORMANCE

4TNV98C-WBV1 Yanmar diesel | Direct injection | Diesel Particulate Filter | Engine Control Unit (ECU) | Eco-Mode | Auto-Deceleration System | ViPPS2i Hydraulic system (ViO Progressive System 2-Pump Independent) | Proportional 3rd and 4th hydraulic circuit lines to boom end with potentiometer to fine tune the flow (32l/min - 120l/min) | Safety valves on blade, boom and arm cylinders | Automatic 2nd speed | Battery quick connector | External hydraulic oil gauge | SmartAssist Remote (GPS and fleet management system) | 2 front LED working lights on the cabin + 1 LED light integrated into the boom.

COMFORT

LCD interface | Adjustable and reclining seat with fabric covers, air suspension and headrest | Air conditioning | Adjustable armrests | Footrest | Wide travel pedals | Windshield with 2 fully retractable parts | Sliding double right-side window | Transparent upper front part | Foldable sun visor | Wiper | Windshield washer | Automatic ceiling lamp | Radio with USB port | 2 x 12V outlet | Storage boxes.

SAFETY AND DURABILITY

Handrails | Safety lever | Seat belt with retractor | Safety valves for lifting + overload warning | Evacuation hammer | Anchor points | 5 mirrors | Horn | FOPS2 top guard | Blade cylinder supply hose into two parts | Protection of the cylinders (boom and blade) | Hoses protected by abrasion resistant sleeves | Lockable covers | Electric refuelling pump.

MISCELLANEOUS

Fuel gauge | Toolbox | Toolkit | Grease pump.

[OPTIONAL EQUIPMENT]

EQUIPMENT AND PERFORMANCE

Steel crawlers | Pads for steel crawlers | Long arm (+350 mm) | Additional counterweight (+400 kg) | Prolongation 3rd and 4th hydraulic circuits lines to arm end | Clamshell bucket circuit | Quick hitch line 150-165 bar | Quick couplers | Kit flat face hydraulic quick connectors | Bio oil | 1 LED beacon fixed or with magnetic base | Kit 1 rear LED light + 1 beacon fixed | Improved fuel filtration.

COMFORT AND EASE OF USE

Adjustable and reclining seat with skaï covers, air suspension and headrest | Seat cover | Documentation box | Central greasing.

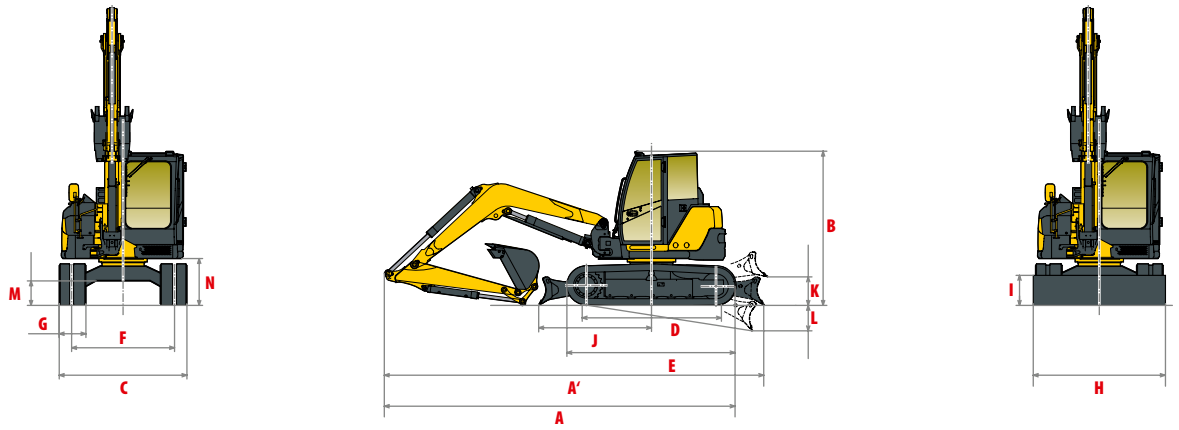
SECURITY AND DURABILITY

FOPS 2 Front guard | Anti-theft device (key/keyboard) | GPS Tracking | Travel alarm | Removable battery cut-off switch.

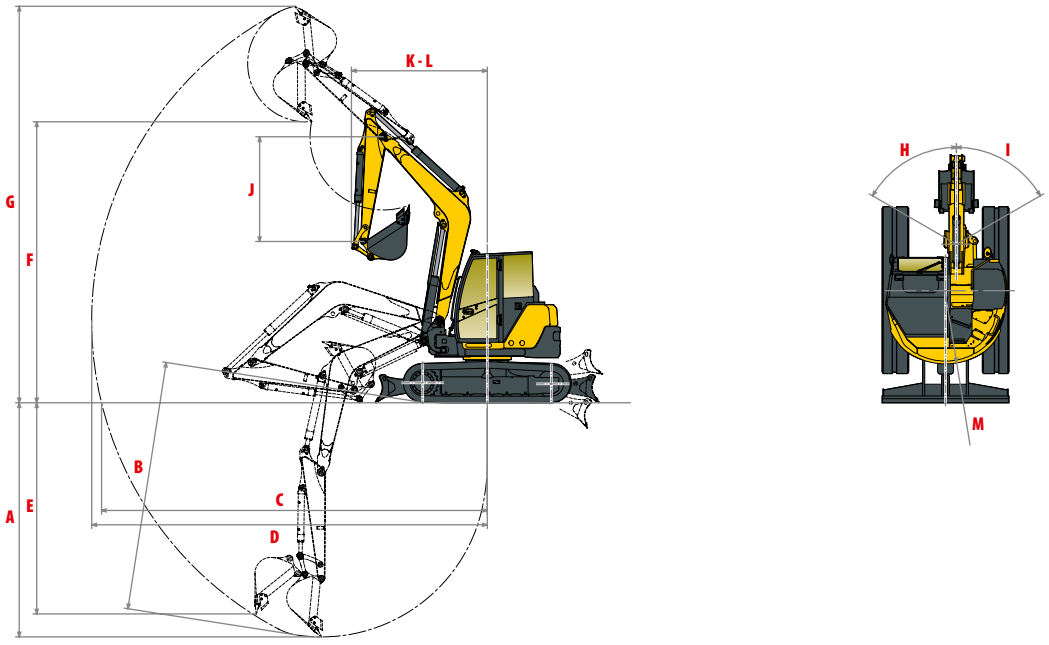
[ATTACHMENTS]

Yanmar proposes you the attachment that fit your needs and match the safety standards in force in your country: mechanical quick coupler, hydraulic quick coupler, powertilt, standard, grading or symmetric buckets, hydraulic breaker, tiltrotators...

DIMENSIONS



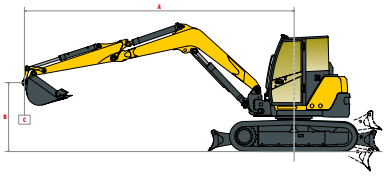
A	Overall length	6 410 / 6 450* mm	**H**	Overall blade width	2 270 mm
A'	Overall length with blade at the back	6 920 / 6 960* mm	**I**	Overall blade height	435 mm
B	Overall height	2 785 mm	**J**	Blade distance	1 990 mm
C	Overall width	2 270 mm	**K**	Max. lifting height above the ground	460 mm
D	Length of track on ground	2 290 mm	**L**	Max. lowering depth from the ground	480 mm
E	Undercarriage length	2 890 mm	**M**	Minimum ground clearance	390 mm
F	Lane	1 870 mm	**N**	Ground clearance under counterweight	700 mm
G	Track width	450 mm			



A	Max. digging depth - Blade lifted	4 150 / 4 500* mm	**H**	Boom swinging base to left	57°
B	Max. digging depth - Blade lowered	4 440 / 4 790* mm	**I**	Boom swinging base to right	60°
C	Max. digging reach on ground	6 820 / 7 160* mm	**J**	Arm length	1 650 / 2 000* mm
D	Max. digging reach	6 960 / 7 290* mm	**K**	Front turning radius	2 470 / 2 520* mm
E	Max. vertical wall	3 800 / 4 130* mm	**L**	Front turning radius with boom swing	2 130 / 2 170* mm
F	Max. unloading height	4 680 / 4 910* mm	**M**	Rear turning radius	1 135 mm
G	Max. cutting height	6 790 / 7 020* mm	**M'**	Rear turning radius with additional counterweight	1 265 mm

** with long arm*

LIFTING FORCE



Tipping load, rating over front

Tipping load, rating over side 90°

Cabin, standard arm

Blade on ground

A	(A=)	Max.		5 m		4 m		3 m		Min	
B											
5 m	4236	*1890	*1890	-	-	*1910	*1910	-	-	-	-
4 m	5088	1230	*1800	1270	*1820	*1830	*1830	-	-	-	-
3 m	5587	1040	*1790	1260	*1850	*2060	*2060	*2600	*2600	-	-
2 m	5841	940	*1790	1190	*2030	1650	*2500	2390	*3750	2680	*3800
1 m	5886	910	*1810	1170	*2160	1600	*2810	2230	*3860	2290	*4070
0 m	5730	940	*1840	1120	*2180	1510	*2890	2200	*3960	2670	*4180
-1 m	5350	1040	*1840	1130	*2030	1520	*2730	2220	*3710	-	-
-2 m	4680	1250	*1770	-	-	1540	*2180	2280	*3050	-	-

Blade above ground

A	(A=)	Max.		5 m		4 m		3 m		Min	
B											
5 m	4236	*1890	*1890	-	-	*1910	*1910	-	-	-	-
4 m	5088	1230	1280	1280	1320	*1830	*1830	-	-	-	-
3 m	5587	1040	1070	1240	1300	*2060	*2060	*2600	*2600	-	-
2 m	5841	930	980	1190	1250	1640	1760	2380	2640	2660	2830
1 m	5886	900	950	1160	1200	1580	1650	2190	2350	2290	2470
0 m	5730	930	980	1130	1170	1500	1580	2200	2340	2660	2870
-1 m	5350	1030	1070	1120	1160	1510	1570	2210	2370	-	-
-2 m	4680	1250	1310	-	-	1520	1640	2270	2480	-	-

Cabin, standard arm, additional counterweight

Blade on ground

A	(A=)	Max.		5 m		4 m		3 m		Min	
B											
5 m	4236	*1890	*1890	-	-	*1910	*1910	-	-	-	-
4 m	5088	1390	*1800	1440	*1820	*1830	*1830	-	-	-	-
3 m	5587	1180	*1790	1400	*1850	*2060	*2060	*2600	*2600	-	-
2 m	5841	1060	*1790	1350	*2030	1860	*2500	2700	*3750	2990	*3800
1 m	5886	1030	*1810	1320	*2160	1800	*2810	2560	*3860	2600	*4070
0 m	5730	1070	*1840	1290	*2180	1710	*2890	2520	*3960	3050	*4180
-1 m	5350	1180	*1840	1280	*2030	1720	*2730	2530	*3710	-	-
-2 m	4680	1420	*1770	-	-	1740	*2180	2590	*3050	-	-

Blade above ground

A	(A=)	Max.		5 m		4 m		3 m		Min	
B											
5 m	4236	*1890	*1890	-	-	*1910	*1910	-	-	-	-
4 m	5088	1390	1450	1440	1490	*1830	*1830	-	-	-	-
3 m	5587	1180	1220	1400	1470	*2060	*2060	*2600	*2600	-	-
2 m	5841	1060	1120	1350	1420	1860	2000	2700	3000	2990	3200
1 m	5886	1030	1090	1320	1370	1800	1880	2520	2700	2600	2820
0 m	5730	1070	1130	1290	1340	1710	1820	2520	2700	3050	3300
-1 m	5350	1180	1230	1280	1340	1720	1800	2530	2730	-	-
-2 m	4680	1420	1500	-	-	1740	1870	2590	2830	-	-

Cabin, long arm

Blade on ground

A	(A=)	Max.		6 m		5 m		4 m		3 m	
B											
5 m	4705	1370	*1720	-	-	-	-	*1710	*1710	-	-
4 m	5470	1060	*1630	-	-	1250	*1630	*1660	*1660	-	-
3 m	5930	910	*1630	-	-	1220	*1710	1740	*1910	-	-
2 m	6170	840	*1640	880	*1670	1170	*1900	1650	*2310	2540	*3160
1 m	6215	810	*1660	860	*1720	1130	*2070	1550	*2680	2340	*3850
0 m	6065	830	*1700	850	*1730	1090	*2150	1480	*2840	2250	*3990
-1m	5715	900	*1710	-	-	1070	*2070	1460	*2770	2240	*3880
-2 m	5102	1060	*1680	-	-	1090	*1770	1470	*2350	2270	*3320

Blade above ground

A	(A=)	Max.		6 m		5 m		4 m		3 m	
B											
5 m	4705	1370	1460	-	-	-	-	*1710	*1710	-	-
4 m	5470	1060	1130	-	-	1250	1320	*1660	*1660	-	-
3 m	5930	910	970	-	-	1220	1300	1740	1870	-	-
2 m	6170	840	890	880	930	1170	1250	1650	1770	2540	2790
1 m	6215	810	860	860	910	1130	1200	1550	1670	2340	2560
0 m	6065	830	890	850	900	1090	1160	1480	1600	2250	2470
-1m	5715	900	960	-	-	1070	1150	1460	1570	2240	2460
-2 m	5102	1060	1130	-	-	1090	1160	1470	1590	2270	2490

Cabin, long arm, additional counterweight

Blade on ground

A	(A=)	Max.		6 m		5 m		4 m		3 m	
B											
5 m	4705	1540	*1720	-	-	-	-	*1710	*1710	-	-
4 m	5470	1200	*1630	-	-	1410	*1630	*1660	*1660	-	-
3 m	5930	1050	*1630	-	-	1380	*1710	*1910	*1910	-	-
2 m	6170	960	*1640	1010	*1670	1340	*1900	1860	*2310	2870	*3160
1 m	6215	940	*1660	990	*1720	1290	*2070	1760	*2680	2660	*3850
0 m	6065	960	*1700	980	*1730	1250	*2150	1700	*2840	2570	*3990
-1 m	5715	1040	*1710	-	-	1210	*2070	1600	*2770	2370	*3880
-2 m	5102	1220	*1680	-	-	1250	*1770	1680	*2350	2590	*3320

Blade above ground

A	(A=)	Max.		6 m		5 m		4 m		3 m	
B											
5 m	4705	1540	1650	-	-	-	-	*1710	*1710	-	-
4 m	5470	1200	1280	-	-	1410	1500	*1660	*1660	-	-
3 m	5930	1050	1110	-	-	1380	1470	*1910	*1910	-	-
2 m	6170	960	1030	1010	1070	1340	1430	1860	2000	2870	3140
1 m	6215	940	1000	990	1050	1290	1380	1760	1900	2660	2920
0 m	6065	960	1020	980	1040	1250	1340	1700	1830	2570	2830
-1 m	5715	1040	1110	-	-	1210	1290	1600	1720	2370	2610
-2 m	5102	1220	1300	-	-	1250	1340	1680	1820	2590	2850

[The data in this table represents the lifting capacity in accordance with ISO 10567. They do not include the weight of the bucket and correspond to 75% of the maximum static tipping load of the 87% of the hydraulic lifting capacity. Data marked with * are the hydraulic limits of the lifting force.]

SPECIFICATIONS

[WEIGHT +/- 2% (EN STANDARDS)]

	Transport weight*	Operating weight*	Ground pressure (Kgf/cm²)
Cabin version / Rubber crawlers	8 125 kg	8200 kg	0,36
Cabin version / Steel crawlers	8 185 kg	8260 kg	0,37
With additional counterweight	+ 400 kg		-
With FOPS II protection (front guard)	+ 44 kg		-

[ENGINE]

Type	4TNV98C-WBV1
Fuel	Diesel
Net Power	39,3 kW / 52,7 HP at 1900 rpm
Gross Power	41,5 kW / 55,6 HP at 1900 rpm
Displacement	3,318 l
Maximum torque	229 - 241 N.m
Cooling	Water-cooling
Starter	12 V - 3 kW
Battery	12 V - 115 Ah (for 20 hours)
Alternator	12 V - 80 A

[HYDRAULIC SYSTEM]

Maximum pressure	258 bars
1 piston pump with variable flow	124,6 l/min
1 piston pump with variable flow	124,6 l/min
1 gear pump for pilot line	19 l/min

PTO	Theoretical data	
	Pressure (bar)	Flow (l.min^{-1})
2 ways	0 - 245	44,6 - 121
1 way	0 - 245	44,6 - 121

Oil flow decreases as the pressure increases

[PERFORMANCE]

Travel speed [low / high]	2.5 / 5 km/h
Rotation speed	9,4 rpm
Digging force (arm)	40,8 kN
Digging force [bucket]	63,5 kN
Gradability	25°
Noise Level (2000/14/CE&2005/88/CE)	Lwag: 98 dBA ; Lpag: 78 dBA

[UNDERCARRIAGE]

Number of top rollers	1
Number of bottom rollers	5
Track tensioning system	Grease cylinder

[CAPACITIES]

Fuel tank	115 l
Coolant	9 l
Engine oil	10,5 l
Hydraulic circuit	116 l
Hydraulic tank	60 l

MAINTENANCE FREQUENCY

[Change engine oil and filter: **500 hours (1st) / every year**] [Change fuel filter: **500 hours**] [Change hydraulic oil filter: **1000 hours**] [Change hydraulic oil return filter: **500 hours**] [Change cooling fluid: **2000 hours**] [Clean particulate filter: **3000 hours**] [Change particulate filter: **9000 hours**]

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