



YANMAR

MIDI-EXCAVATOR

Vi080-1



Operating weight	8065 kg
Engine gross power	41,5 kW / 56,2 HP at 1900 rpm
Digging force (arm)	40,8 kN
Digging force (bucket)	63,5 kN

UNMATCHED COMPACTNESS FOR UNLIMITED ACCESS



COMPACTNESS

A true concentrate of technology and innovation, the Vi080-1 is a true zero tail swing midi-excavator which offers the performance of a large excavator while enjoying the benefits of a compact machine.



ROBUST AND RELIABLE YANMAR ENGINE

Well proven Yanmar 4TNV engines: 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.



ViPPS HYDRAULIC SYSTEM

The Vi080-1 is equipped with a ViPPS hydraulic system which cumulates the flow of separate pumps in order to obtain the optimal combination in terms of speed, power, smoothness and balance. This hydraulic system configuration allows smooth and simultaneous operation of working movements, even while traveling.



BEST COMPONENTS

Developed in Japan with renowned components for top quality. Design and performance of the components made for long service life.





COMFORTABLE CABIN

Upgraded operator station: increased leg room, a "Universal Design" concept developed by Yanmar for an enhanced comfort and productivity, electronic instrumentation, great ergonomics and air suspension seat in standard.



EASY OPERATION

Control levers ideally located for exceptional movement precision. The VI080-1 benefits of the proportional control of the tail swing, via the proportional switch located on the right-hand joystick.



SERVICEABILITY

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



HIGH PERFORMANCE

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

UNMATCHED COMPACTNESS



THE VI080-1 OFFERS THE PERFORMANCE OF A LARGE EXCAVATOR WHILE ENJOYING THE BENEFITS OF A COMPACT EXCAVATOR. PARTICULARLY SUITED FOR WORK IN URBAN AREAS, IT CAN OPERATE WITH CONFIDENCE AND EFFICIENCY ALONG THE WALLS AND IN CONFINED SPACES WHERE THE MACHINES IN ITS WEIGHT CLASS DO NOT HAVE ACCESS.



**YANMAR
TRUE ZTS**

ADVANTAGES OF THE ViO DESIGN

Neither the counterweight, nor the front part of the upper frame project beyond the track width. With its front part designed not to extend over, the Vi080-1 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.

MAXIMUM STABILITY AND EXCEPTIONAL LIFTING FORCE

The Vi080-1 is equipped with the VICTAS® system whose strength lies in the increase of the support surface and increase in tracking through the use of asymmetric crawlers. This system, patented by Yanmar, reduces track degradation, makes displacements quieter and reduces vibration. Associated with the use of a large counterweight and excellent weight distribution, it provides the same or even higher stability than conventional machines in the same weight class, as well as remarkable lifting capacities.



UNIQUE UNDERCARRIAGE

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



DUAL AXIS POSITION OF THE ARM CYLINDER

When using a quick hitch, the dual position of the arm cylinder axis makes for scalable kinematics and prevents collisions with the boom while maintaining digging force.



ADVANCED TECHNOLOGY

Based on unique experience and expertise, Yanmar technology ensures excellent performance while respecting the environment. The Vi080-1 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

With a net power of 39.3 kW at 1900 rpm, Yanmar's 4TNV98C-WBV engine is the result of our continuous efforts to achieve technological advances in fuel consumption and emissions. With the Vi080-1, Yanmar gives priority to the environment and to fuel savings:

- + 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 drop back to idle if the operator doesn't touch the operating levers for 4 seconds.
- + An Eco-Mode (in standard) effectively controls the motor speed, thus allowing a very low fuel consumption. Particularly useful when working require little power and low speed of movement, the Eco-mode saves fuel and reduces operating costs.



IMPROVED HYDRAULIC CONTROL FOR EASIER HANDLING AND GREATER EFFICIENCY

VIPPS® HYDRAULIC CIRCUIT (VIO PROGRESSIVE 3 PUMP SYSTEM)

The ViO80-1 uses a ViPPS hydraulic system. This configuration uses 1 double, variable displacement, piston pump and 2 gear pumps. The 3 main pumps totalize a maximum flow of 193,8 l/min, available for main machine operating movements. The flows of these pumps are cumulated in the Main Control Valves, according to the ViPPS system, to obtain the optimal combination in terms of speed, power, smoothness and balance. The ViPPS system allows smooth and simultaneous performance of all operations, even while traveling, in order to have the ultimate working tool.

REGULATION OF HYDRAULIC SYSTEM BASED ON ENGINE SPEED

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



OUTSTANDING PERFORMANCES

FEATURES OF A LARGE EXCAVATOR IN A COMPACT FORMAT

The breakout forces of 63.5 kN (bucket) and 40.8 kN (arm) are exceptional for an 8 ton excavator with zero tail swing. Associated with a digging depth of 4130 mm (3780 mm for vertical wall) and excellent traction force, they allow the ViO80-1 to carry out major work such as laying pipes or excavation and clearing operations for large area such as the laying of pipeline pipes or the excavation and clearing of large areas.

REGULATION OF HYDRAULIC SYSTEM BASED ON ENGINE SPEED

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

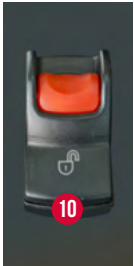


CONFORT



LARGE AND COMFORTABLE CABIN

Designed to meet the operator needs, the Vi080-1 cab is large and pleasant. The attention paid to the work environment and ergonomics makes you feel comfortable during long days on site. The increased visibility and a comfortable operator station allow the operator to be even more productive while reducing fatigue.



CONTROL PANEL



- 1 Beacon light
- 2 Light 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



PERFECT COCKPIT ERGONOMICS

The architecture inside the cab Vi080-1 has been studied to improve the operator driving position and to facilitate its work, particularly on the long and challenging work sites. The wrist supports are adjustable. The wide travel pedals and hydraulic control levers are fluid and easy to use. Ideally located, the control levers offer exceptional movement precision.

AIR CIRCULATION

The Vi080-1 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 demisting. The air filters are easily accessible for an improved maintenance.

AIR SUSPENSION SEAT

The Vi080-1 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.

STORAGE SPACES

The Vi080-1 offers many storage possibilities conveniently placed: cup and bottle holder, utility box, document storage... The operator has all his personal belongings within reach.

EASE OF USE



- 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)

ADJUSTABLE PROPORTIONAL CONTROL OF THE AUXILIARY CIRCUITS

The Vi080-1 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.

AUTOMATIC 2ND SPEED

The Vi080-1 has an automatic second speed for long displacements. A power switch keeps the machine in 1st gear for difficult passages (slope, counter-rotation, etc...).



SAFETY

The structure of the Vi080-1 cabin has been designed to meet the ROPS certification (Roll-Over Protective Structure) as well as the FOPS (Falling Object Protective Structure) level 1.

ALL AROUND VISIBILITY

The large Vi080-1 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 work site and makes work more efficient.

The Vi080-1 is equipped with 5 rear and side mirrors. The operator can control the work area as well as the area around the machine without moving from his seat.

The front part of the roof is transparent and provides full control of the bucket to the operator during loading or demolition.



LED LIGHTING: EFFICIENCY AND LOW CONSUMPTION

In order to work safely, efficiently and with accuracy in the darkness, the Vi080-1 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 Vi080-1 benefits from a large cabin entrance. 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 position.

A large footstep with antislip system also upgrades the accessibility to the machine and the safety of the operator.





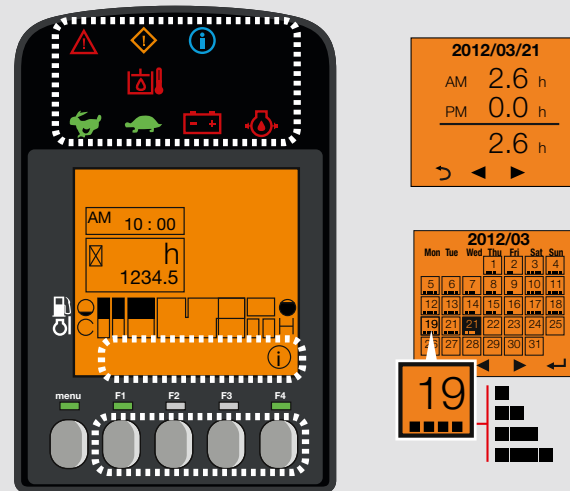
RELIABILITY

The Vi080-1 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 covers provide an optimal protection and longer service life. Furthermore, a lot of care has been paid to the hose routing on the working equipment. These measures enhance the service life and reduce downtime of the machine.

DIGITAL INTERFACE

The Vi080-1 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 provides the customer with useful information through LED lamps, or indications about important elements like fuel consumption, fuel gauge, coolant temperature gauge, etc... The interface assists the customer for maintenance intervals and to program such interventions. It also works as a diagnostic tool in case of malfunction by sending an error code and an information icon on the display.



MAINTENANCE



EASY ACCESS

Daily maintenance has to be performed easily. 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 Vi080-1 is designed for working, and therefore its service intervals are reduced to a minimum.

SMARTASSIST Remote

SMARTASSIST REMOTE

SmartAssist Remote is the new fleet management system developed by Yanmar which gives you optimal visibility on your equipment location and status using the latest telematic technology. This compact piece of equipment, available on Vi080-1, will help you maximize your work potential. By providing realtime information, it gives you total control and lets you monitor and manage your machines remotely via a PC or Smartphone.

EQUIPMENT



[STANDARD EQUIPMENT]

PERFORMANCE

4TNV98C Yanmar diesel | Direct injection | Engine Control Unit (ECU) | Eco-Mode | Auto-Deceleration System | ViPPS Hydraulic system (ViO Progressive System) | 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 wrist support | Foot rests | Wide travel pedals | Windshield with 2 fully retractable parts | Sliding double right-side window | Transparent upper front part | Integrated sunshades | Wipers | 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 | Evacuation hammer | Anchor points | 3 mirrors | Horn | Blade cylinder supply hose into two parts | Complete protection of the cylinders (bucket, boom, arm 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 (+/- 3) | Kit flat face hydraulic quick connectors | Clamshell bucket circuit | Additional counterweight (+400 kg) | Quick couplers | 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 skai covers, air suspension and headrest | Seat cover | Documentation box | Central greasing

SECURITY AND DURABILITY

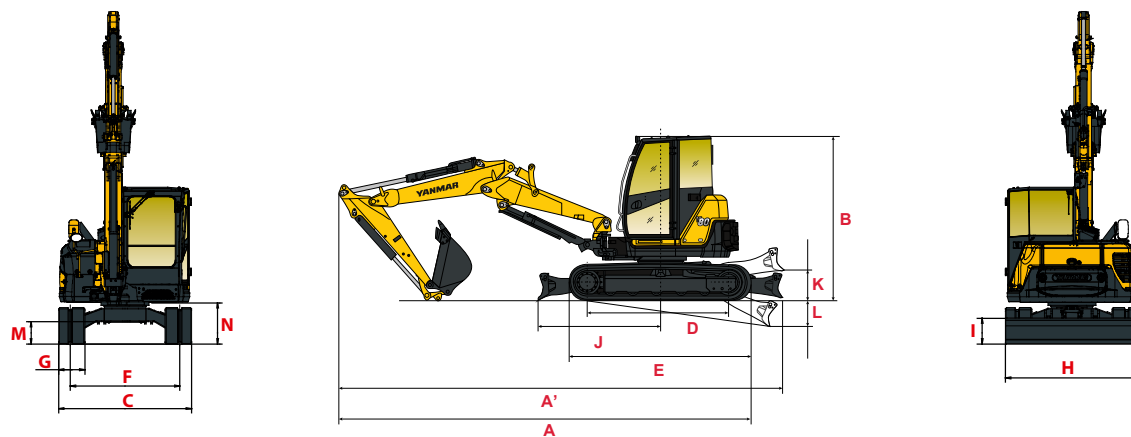
Safety valves for lifting + overload warning | FOPS 2 protection (front + top guard) | Anti-theft device (key/keyboard) | GPS Tracking | Travel alarm

[ATTACHMENTS]

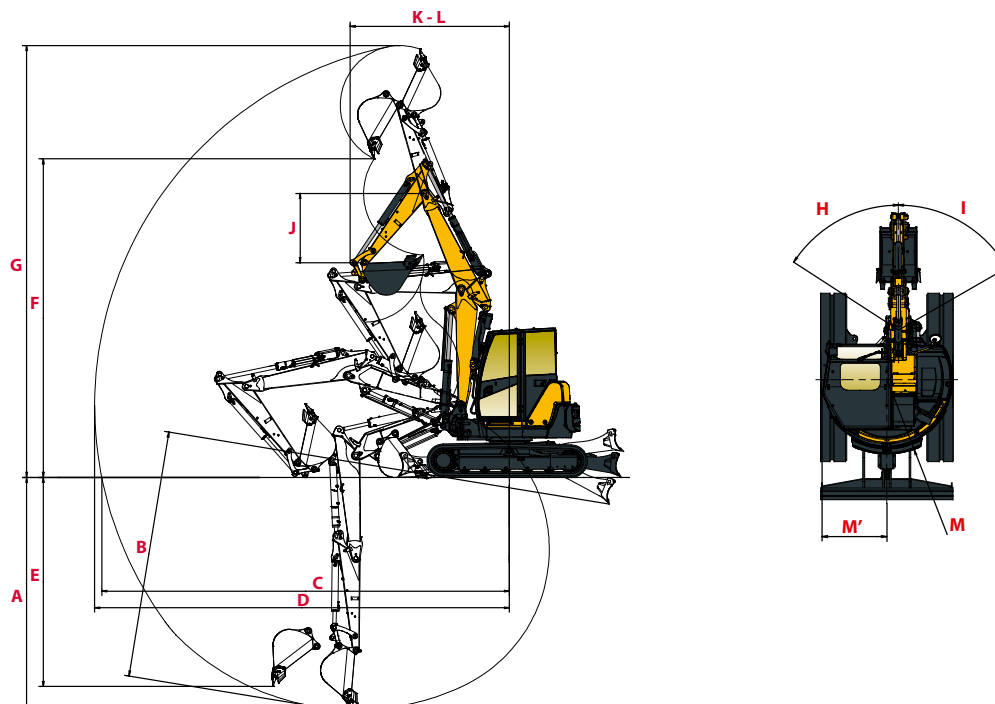
Yanmar gives you the attachment that fit your needs and match the safety standards in force in your country: mechanical quick coupler, hydraulic quick coupler, powertilt, standard, grading or symmetric buckets, hydraulic breaker, tiltrotators...



DIMENSIONS



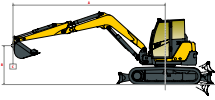
A Overall length	6410 / 6450* mm	H Overall blade width	2260 mm
A' Overall length with blade at the back	6920 / 6960* mm	I Overall blade height	450 mm
B Overall height	2710 mm	J Blade distance	1990 mm
C Overall width	2270 mm	K Max. lifting height above the ground	460 mm
D Length of track on ground	2290 mm	L Max. lowering depth from the ground	480 mm
E Undercarriage length	2890 mm	M Minimum ground clearance	380 mm
F Lane	1870 mm	N Ground clearance under counterweight	700 mm
G Track width	450 mm		



A Max. digging depth - Blade lifted	4130 / 4500* mm	H Boom swinging base to left	57°
B Max. digging depth - Blade lowered	4430 / 4790* mm	I Boom swinging base to right	60°
C Max. digging reach on ground	6820 / 7160* mm	J Arm length	1650 / 2000* mm
D Max. digging reach	6960 / 7290* mm	K Front turning radius	2470 / 2520* mm
E Max. vertical wall	3780 / 4130* mm	L Front turning radius with boom swing	2130 / 2170* mm
F Max. unloading height	4700 / 4950* mm	M Rear turning radius	1135 mm
G Max. cutting height	6810 / 7020* mm	M' Rear turning radius with additional counterweight	1265 mm

* Long arm

LIFTING FORCES



Tipping load,
rating over front



Tipping load,
rating over side 90°

Standard counterweight, standard arm																
A	Blade on ground								Blade above ground							
	Max	5 m		4 m		3 m		Max	5 m		4 m		3 m			
B																
5 m	1730	1750	-	-	1740	1750	-	-	1720	1740	-	-	1740	1720	1720	1720
4 m	1100	1680	1190	1680	1770	1780	-	-	1090	1150	1190	1250	1770	1750	1720	1720
3 m	960	1690	1210	1780	1740	2080	2490	2500	950	1010	1200	1270	1720	2060	2480	2480
2 m	880	1660	1190	1920	1740	2480	2500	3400	870	920	1190	1260	1730	1860	2460	2650
1 m	870	1680	1140	2080	1630	2860	2230	3860	860	900	1140	1210	1620	1720	2190	2350
0 m	910	1710	1110	2130	1580	2920	2220	3880	890	940	1100	1160	1560	1630	2180	2320
-1 m	990	1690	1110	2010	1590	2740	2370	3750	970	1100	1100	1140	1560	1650	2340	2540
-2 m	1200	1610	-	-	1590	2260	2620	3740	1190	1270	-	-	1570	1640	2600	3000
-3 m	1360	1350	-	-	-	-	1560	1560	1360	1650	-	-	-	-	1560	1550
Standard counterweight, long arm																
A	Blade on ground								Blade above ground							
	Max	5 m		4 m		3 m		Max	5 m		4 m		3 m			
B																
5 m	1610	1610	-	-	1530	1530	-	-	1610	1610	-	-	1530	1530	-	-
4 m	1050	1570	1240	1530	1570	1570	-	-	1060	1080	1250	1280	1570	1570	-	-
3 m	920	1560	1210	1630	1810	1810	-	-	890	920	1220	1260	1810	1810	-	-
2 m	820	1560	1160	1800	1640	2210	2520	3130	820	860	1160	1230	1640	1740	2530	2640
1 m	790	1570	1120	1950	1540	2530	2250	3680	790	830	1120	1180	1530	1640	2250	2420
0 m	800	1600	1060	2030	1470	2700	2160	3840	800	840	1060	1160	1450	1600	2140	2370
-1 m	880	1630	1050	2030	1410	2730	2150	3750	870	820	1060	1110	1420	1540	2150	2380
-2 m	1020	1580	1060	1690	1440	2360	2160	3190	1000	1070	1040	1120	1420	1510	2140	2320
Additional counterweight, standard arm																
With tiltrotator*								Without tiltrotator								
A	Blade on ground				Blade above ground				Blade on ground				Blade above ground			
	Max.	5 m		4 m		3 m		Max.	5 m		4 m		3 m			
B																
5 m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 m	886	1442	1156	1532	1746	1832	-	-	1100	1690	1370	1780	1960	2080	2490	2500
2 m	806	1412	1136	1672	1746	2232	-	-	1020	1660	1350	1920	1960	2480	2820	3460
1 m	786	1432	1096	1832	-	-	-	-	1000	1680	1310	2080	1850	2860	2560	3860
0 m	836	1462	1056	1882	-	-	-	-	1050	1710	1270	2130	1790	2920	2540	3880
-1 m	926	1442	1046	1126	-	-	-	-	1140	1690	1270	2010	1800	2740	2690	3750
-2 m	-	-	-	-	-	-	-	-	1370	1610	-	-	1800	2260	2950	3740
-3 m	-	-	-	-	-	-	-	-	1360	1360	1350	-	-	-	1560	1560
Additional counterweight, long arm																
A	Blade on ground								Blade above ground							
	Max	5 m		4 m		3 m		Max	5 m		4 m		3 m			
B																
5 m	1610	1610	-	-	1530	1530	-	-	1610	1610	-	-	1530	1530	-	-
4 m	1200	1570	1410	1530	1570	1570	-	-	1200	1240	1410	1450	1570	1570	-	-
3 m	1030	1560	1380	1630	1810	1810	-	-	1060	1070	1380	1430	1810	1810	-	-
2 m	950	1560	1320	1800	1850	2210	2860	3130	950	990	1320	1410	1850	1970	2860	2990
1 m	920	1570	1280	1950	1770	2530	2570	3680	920	970	1280	1350	1760	1860	2570	2780
0 m	930	1600	1220	2030	1690	2700	2490	3840	940	980	1220	1330	1680	1830	2470	2730
-1 m	1010	1630	1210	2030	1630	2730	2470	3750	1020	1070	1220	1280	1640	1770	2470	2740
-2 m	1160	1580	1220	1690	1670	2360	2490	3190	1180	1240	1200	1290	1640	1750	2470	2680

[The data in this table represents the lifting capacity in accordance with IOS 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/cm ²)
Cabin version / Rubber crawlers	7990 kg	8065 kg	0,36
Cabin version / Steel crawlers	8050 kg	8125 kg	0,36
With additional counterweight	+ 400 kg		0,4
With FOPS II protection	+ 100 kg		-

[ENGINE]

Type	4TNV98C-WBV
Fuel	Diesel
Net Power	39,3 kW / 53,5 HP at 1900 rpm
Gross Power	41,5 kW / 56,2 HP at 1900 rpm
Displacement	3,318 l
Maximum torque	229 - 241 N.m
Cooling	Water-cooling
Starter	3 kW
Battery	12 V - 92 Ah
Alternator	12 V - 80 A

[HYDRAULIC SYSTEM]

Maximum pressure	255 bars
1 double piston pump with variable flow	2 x 70,3 l/min
1 gear pump	53,2 l/min
1 gear pump for pilot line	19 l/min

PTO	Theoretical data	
	Pressure (bar)	Flow (l.min ⁻¹)
2 ways	0 - 240	120 - 32
1 way	0 - 240	120 - 32



Oil flow decreases as the pressure increases

[PERFORMANCE]

Travel speed	2,5 / 4,5 km/h (2,3 / 4,1 km/h with steel crawlers)
Rotation speed	9 rpm
Digging force (arm)	40,8 kN / 35,9 kN with long arm
Digging force (bucket)	63,5 kN
Gradability	30°
Noise Level (2000/14/CE&2005/88/CE)	LWAG: 98 dBA ; LPAG: 73 dBA

[UNDERCARRIAGE]

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

[CAPACITIES]

Fuel tank	115 l
Coolant	9,3 l
Engine oil	11,2 l
Hydraulic circuit	112 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 particle filter: **9000 hours**]



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