



YANMAR

MIDI-EXCAVATOR

ViO80-1



Engine	4TNV98C-WBV
Net power	53,5 HP
Operating weight	8.065 kg
Digging force (bucket)	63,5 kN

ViO80-1



> COMPACTNESS

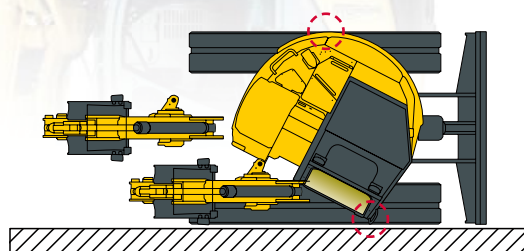
A true concentrate of technology and innovation, ViO80-1 offers the performance of a large excavator while enjoying the benefits of a compact excavator. Designed to work effectively on a wide variety of sites, it combines compactness, power, versatility, comfort and reliability.

UNMATCHED
COMPACTNESS
FOR
UNLIMITED
ACCESS



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 ViO80-1 has a very small turning radius. It can thus operate with confidence and efficiency along the walls and in confined spaces where the machines in its weight class do not have access.





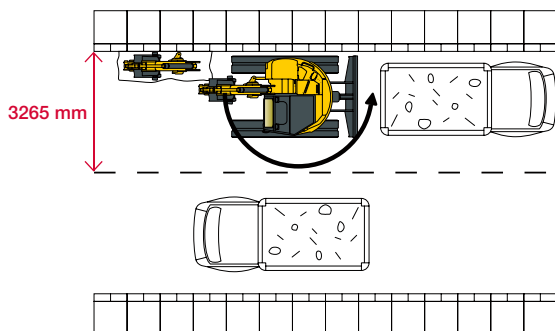
MAXIMUM STABILITY AND EXCEPTIONAL LIFTING STRENGTH

The ViO80-1 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.



Ideal for urban jobsites

The ViO80-1 is particularly suited for work in urban areas: no need to block the two lanes of traffic.



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.





› WORK PERFORMANCE

Based on our unique experience and expertise, Yanmar technology ensures excellent performance while respecting the environment. The ViO80-1 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...).

OUTSTANDING PERFORMANCES FOR A MIDI-EXCAVATOR OF THIS SIZE

Features of a large excavator in a compact format

The breakout forces of 63.5 kN at the bucket and 40.8 kN at the lever arm are exceptional for an 8 ton excavator with no rear overhang. 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 areas.

Improved working speed

The new hydraulic circuit on the ViO80-1 can increase the excavation, loading speeds, and increase productivity. The operator can perform nearly 18% more work per hour compared to the previous model ViO80.

IMPROVED HYDRAULIC CONTROL FOR EASIER HANDLING AND GREATER EFFICIENCY

VIPPS® Hydraulic circuit (ViO progressive 3 pump system)

The ViO80-1 is equipped with a hydraulic circuit with aggregated power regulation equipped with three variable flow piston pumps and a multiple combination directional control valve. Pumps engage automatically depending on the operation being performed, providing greater ease of use for the operator. On one hand, the combination of the pump flows can increase the work speed and on the other hand, the system allows smooth and simultaneous performance of all the operations, even while travel.

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.

FLEXIBILITY, ACCURACY AND VERSATILITY

Adjustable proportional control of the auxiliary circuits

The ViO80-1 is equipped in standard with two auxiliary circuits with proportional control on joystick with adjustment using potentiometers. The proportional control adapts the flow of oil to the use and the needs of each attachment. The operator thus has a perfect control of accessories (reclining buckets, brush cutters, hydraulic hammers ...).

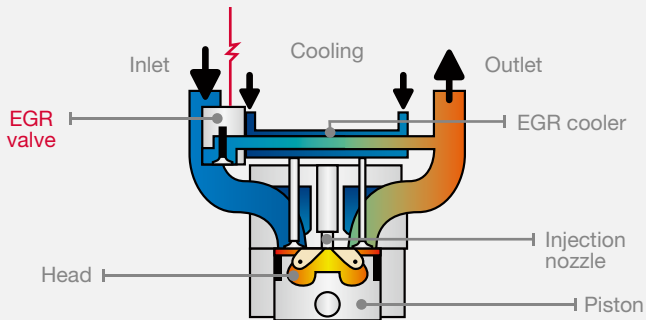


NEW POWERFUL AND ENVIRONMENTALLY FRIENDLY YANMAR ENGINE

Power and cleanliness

The ViO80-1's new Yanmar diesel engine with direct injection has an output of 41.5 kW (56.2 hp) and meets the Phase IIIB and Tier 4 emission standards. It is equipped with an electronic control unit and a common rail system that achieves an excellent power/consumption/noise ratio by electronic control of fuel injection.

A particulate filter traps particulate matter contained in exhaust gas and burns them during its automatic regeneration. Its operation without additives reduces maintenance costs.



Electrical control system EGR

The exhaust gas is partially cooled and mixed with the incoming air in order to lower the oxygen concentration in the intake air. This system lowers the combustion temperature and reduces emissions of nitrogen oxides (NOx) while boosting fuel efficiency.

REDUCED FUEL CONSUMPTION

Auto-Idle

A self-deceleration mechanism (disconnectable) reduces engine speed when the ViO80-1 does not work. When the control levers are not used for 4 seconds, the engine automatically drops to idle. When they are moved again, the engine returns to the previous speed. Environmental performance (noise and emissions) and fuel consumption are even more improved.

Eco Mode

The Eco mode effectively controls the motor speed, thus allowing a very low fuel consumption. Particularly useful when working require little power and low speed of movement (levelling a field using a ditching bucket ...), the Eco mode saves up to 17% less fuel, thereby reducing operating costs.





> COMFORT

Designed to meet the operator needs, the ViO80-1 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.

UNEQUALLED COMFORT FOR MORE EFFICIENCY

Large and comfortable cabin

The ViO80-1 cab interior is very spacious. The large legroom allows the operator to work comfortably for long hours. The entrance, which is also very large, provides easy cab access and exit.

Wide air suspension seat standard

The wide seat with headrest is fitted with a standard air suspension and can slide back and forth alone or simultaneously with the levers. It allows the operator to find an optimal working position depending on their size and girth while reducing shocks and vibrations.

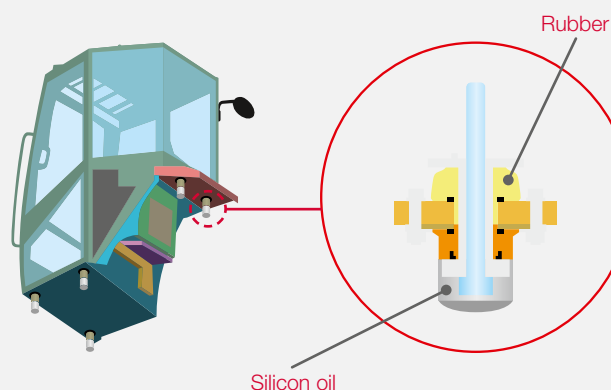
Improved air conditioning

The ViO80-1 air conditioning can work at a comfortable temperature whatever the weather. Vents are placed so as to ensure a homogeneous temperature within the cabin. The use of outside air increases the cabin pressure and reduces dust penetration. The defrost function ensures perfect demisting of the windscreen.



Quiet cabin

The ViO80-1 cab is mounted on an innovative and sophisticated silent block anti-vibration and noise-reduction system. The sound level reaching the operator is reduced (73 dB(A)). The 5 support points absorb even significant vibrations.



Standard equipment also includes: a radio with USB port, several handrails, numerous storage spaces, an automatic ceiling, a bottle holder, two 12-volt sockets, a coat rack, a toolkit...

MANY FEATURES FOR IMPROVED EASE OF CONTROL

Perfect cockpit ergonomics

The architecture inside the cab ViO80-1 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.

Automatic 2nd speed

The ViO80-1 has an automatic second speed for long displacements. A power switch keeps the machine in 1st gear for difficult passages (slope, counter-rotation, etc...).



360° visibility for safe and efficient work

The large ViO80-1 cabin windows and shape of the hoods 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. It also reduces the risk of damaging the machine, especially in tight spaces or congested job sites.

Optimum visibility during loading operations

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

A panoramic vision for a better control of the work environment

The ViO80-1 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.





> SAFETY

Because one is more effective in a safe and secure environment, the safety of the operator and people working around the machine is one of our priorities. The ViO80-1 is equipped with many facilities that enable to work with confidence.

A WORKING ENVIRONMENT THAT IS BOTH PRACTICAL AND SECURE

Cabin conform to ISO standards

The ViO80-1 cab has been designed to increase operator safety and confidence. The use of a very rigid ROPS and strong resistance for the cab enhances operator safety in a roll-over. The cabin also conforms to the FOPS I standard for protective structures against falling objects. It can optionally be equipped with a FOPS II guard.

LED lighting: efficiency and low consumption

In order to work efficiently and accurately in darkness, ViO80-1 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 and increasing the life of the battery. An optional beacon and additional LED headlight can be added to the rear of the cab.



Additional Equipment



Safety lever to access the cockpit



Seat belt with retractor



Electric engine stop (emergency stop)



Anchor points for transport



Engine air cooling evacuation facing up (protection of people and the surrounding plants)



Evacuation hammer



RELIABILITY <

The ViO80-1 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 RELIABILITY NEEDED FOR IMPROVED PRODUCTIVITY AND REDUCED OPERATING COSTS

All ViO80-1 components were designed in order to make it reliable, durable and capable of performing demanding work.

The structure of the undercarriage, as well as the durable steel covers, provide fool proof resistance for the chassis. The hoses are protected with abrasion-resistant sleeves. Their routing on the top of the boom and on the right side of the machine is particularly thought through to avoid the risk of torsion and limiting machine down time. The blade and boom cylinders are fully protected by steel plates. Cathaphoresis treatment of the steel parts provides excellent resistance to corrosion for the paint. Form stringers prevent the accumulation of soil and reduce the internal track wear.

Digital interface: for better control of the machine and greater productivity

The ViO80-1 is equipped with a digital interface that informs the operator in real time on the status of his machine. Perfectly integrated into the right-hand console, the 3.3" screen provides excellent visibility in bright sunlight or at night.

This interface allows you to manage working time, daily maintenance operations and to program interventions. It provides useful information on the operation of the machine, such as engine oil and coolant temperatures or fuel level and stores the important events.

It also warns the operator in case of malfunctioning of the machine (insufficient battery charge, abnormal oil pressure, clogged air filter...).





> MAINTENANCE

UNLIMITED ACCESS AND EASE OF MAINTENANCE TO REDUCE INSPECTION TIME AND MAINTENANCE

Easy access

The rear and side covers are easy to open and have large openings for easy reach to daily check points. The engine elements as well as the hydraulic filter and the air filter are under the back cover. The right covers provide access to the radiator, battery, fuel tank and hydraulic filling points. The fan and air conditioner belts are easy to adjust. Inside the cabin, the panel beneath the seat and the removable floor make it very easily to access the relays, fuses and the components located under the cab.

Easy cleaning

The ViO80-1 is designed to minimize maintenance time of its various elements. The corrugated radiator wall is designed to prevent it from being crushed. The cabin carpet is easy to clean and air conditioning filter, positioned in the cabin, can be easily removed for cleaning or replacement.



Fan belts are accessible through a hatch to the right of the cabin. The battery is protected by a metal plate behind the right back cover. The electrical components are under the seat.



YANMAR SERVICES



Our distributors provide you all the solutions you need: advice tailored to your situation, including full-service contracts, spare parts and maintenance.

> FINANCING

The **Y-Finance*** solutions guarantee the most competitive interest rates and help you determine the financing plan that best suits your needs.

* The offerings vary by country.

> WARRANTY

All new Yanmar excavators sold through our authorized network in Europe are protected for 12 months (or 1,000 hours, whichever comes first) by a manufacturer's warranty with an extension of 12 months (or 1,000 hours) for the drive train. We go further by proposing extended warranty contracts "Garantie PLUS" that offer various solutions for long-term coverage.

> PARTS

The original Yanmar parts are designed, tested and manufactured to ensure optimal quality and safety. By systematically using original spare parts, you can be sure to maintain the performance of your machine and avoid future costly repairs due to inadequate parts. You are sure that your machine is kept in perfect condition and you ensure a high resale value.

Available from our distributors, original Yanmar parts can be delivered within 24 hours.

> MAINTENANCE

Proximity, speed, quality and reliability are constant concerns for Yanmar dealers. We are committed to your peace of mind and we are committed to your satisfaction. The network of authorized Yanmar repair sites is present in all European countries. You can always find nearby mechanics trained and qualified to care for your machine. Authorized repairers provide contracts and routine maintenance services, perform emergency repairs and provide you with advice adapted to your needs.



> EQUIPMENT

> STANDARD EQUIPMENT

Engine

- 4TNV98C-WBV Yanmar diesel
- Meets Phase IIIB and Tier 4 standards
- Direct Injection
- Common Rail System
- EGR Electrical Control System
- Engine Control Unit (ECU)
- Particle filter with automatic regeneration (without additives)
- Water Separator
- Eco Mode
- Auto-Idle System (auto deceleration)
- Throttle using potentiometer

+

Hydraulic system

- VIPPS Hydraulic system (ViO progressive 3 pump system)
- 2 auxiliary circuits with adjustable proportional control by potentiometer
- Electronic regulation of hydraulic pumps
- Automatic 2nd speed
- Filter on steering hydraulic circuit
- External hydraulic oil gauge

+

Cabin

- LCD Interface
- Cabin mounted on viscoelastic silent blocks
- Air conditioning
- Adjustable and reclining seat with

fabric covers, air suspension and headrest

- Adjustable wrist support
- Foot rests
- Wide travel pedals
- Windshield with 2 fully retractable parts
- Sliding double right side window
- Transparent upper front part
- Visor
- Wipers
- Windshield washer
- Automatic ceiling lamp
- Radio with USB port
- 2 x 12V outlets
- Storage Boxes
- Secure document storage
- Cup Holder

+

Undercarriage

- Asymmetric VICTAS tracks
- Blade cylinder supply hose into two parts

+

Safety

- Handrails
- Safety lever
- Seat belt with retractor
- Evacuation hammer
- Anchor points
- 5 mirrors
- Horn
- Travel beep

Lighting

- 1 LED light integrated into the boom
- 2 LED lamps on the front of the cab

+

Miscellaneous

- Electric refuelling pump with automatic stop
- Fuel gauge
- Double axis position of the arm cylinder
- Protection of the blade and boom cylinders
- Hoses protected by abrasion-resistant sleeves.
- Cataphoresis treated steel parts
- Locking Covers
- Toolbox
- Toolkit
- Grease pump

OPTIONAL EQUIPMENT

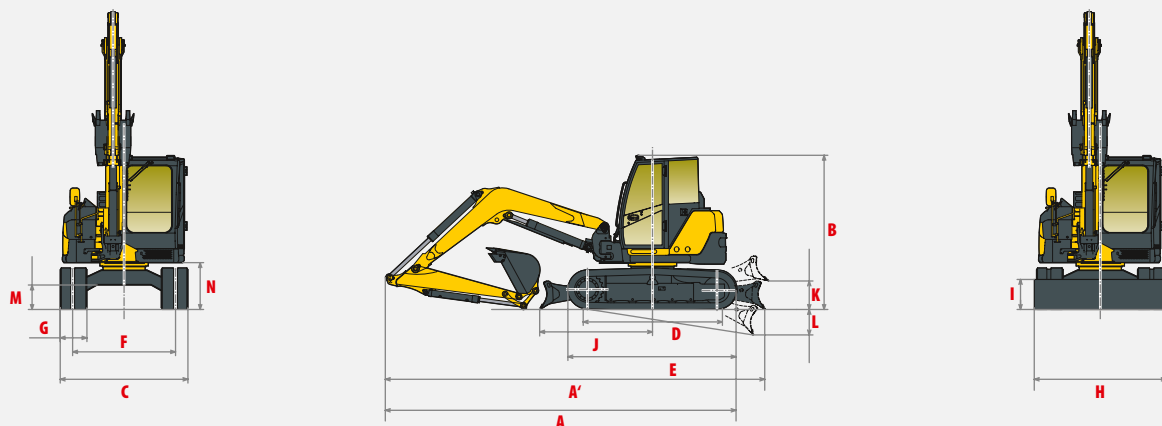
Special paint | Safety valves for lifting + overload warning | Long arm | Additional counterweight (+400 kg) | Prolongation of the auxiliary circuits to arm end | Quick couplings | Anti-theft (key/keyboard) | GPS Tracking | Centralised greasing | Skaï seat | LED rear light + flashing light | FOPSII protection grid

ACCESSORIES

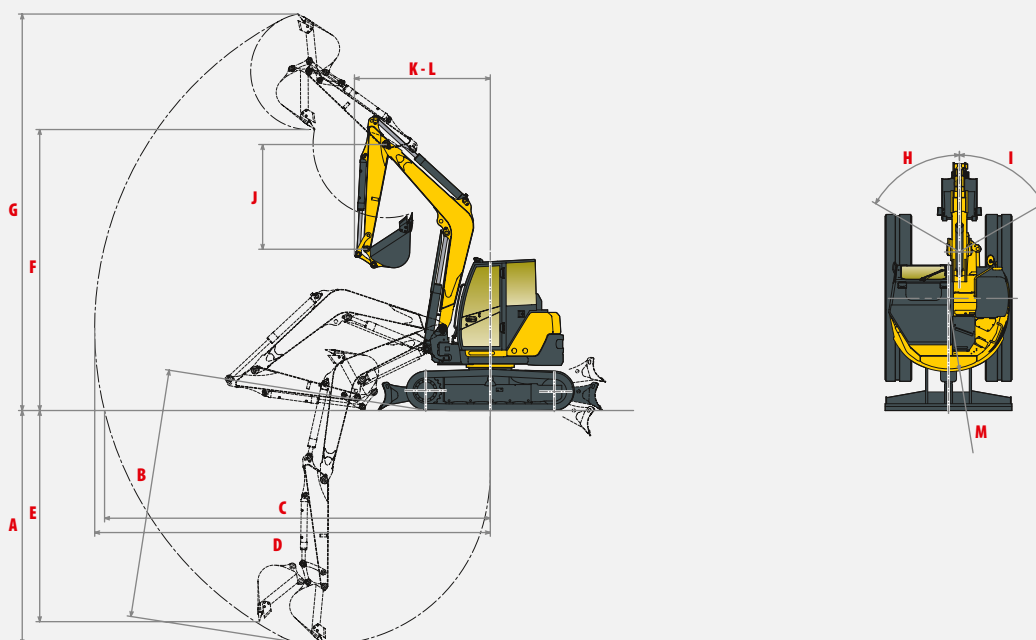
Yanmar gives you the accessories that fit your needs and match the safety standards in force in your country: mechanical quick coupler, hydraulic quick coupler, ditching bucket, swinging bucket, backhoe bucket, hydraulic hammer...



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	2030 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 boom swing	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 swing radius	1135 mm
G » Max. cutting height	6810 / 7020* mm	M' » Rear swing radius with additional counterweight	1265 mm

*Long arm

Subject to technical modifications. Dimensions in mm with specific Yanmar bucket.



> LIFTING FORCE



Tipping load,
rating over front



Tipping load,
rating over side 90°

Standard counterweight, standard arm																
Blade on ground									Blade above ground							
A	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																
Blade on ground									Blade above ground							
A	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							
Blade on ground									Blade above ground							
A	Max.		5 m		4 m		3 m		Max.		5 m		4 m		3 m	
B																
5 m	-	-	-	-	-	-	-	-	1730	1750	-	-	1740	1750	-	-
4 m	-	-	-	-	-	-	-	-	1260	1280	1350	1350	1680	1770	1780	-
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	1350	-	-	1560	1560

Additional counterweight, long arm																
Blade on ground									Blade above ground							
A	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

* Rototilt of 285 kg

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 or 87% of the hydraulic lifting capacity. Data marked with * are the hydraulic limits of the lifting force.



SPECIFICATIONS <



WEIGHT +/- 2% (CE STANDARDS)

	Weight	Ground pressure
Operating weight (rubber tracks)	8,065 kg	0.358 kg/cm ²
Transport weight (rubber tracks)	7,990 kg	0.358 kg/cm ²
With steel tracks	+ 60 kg	0.360 kg/cm ²
Additional counterweight	+ 400 kg	0.4 kg/cm ²
With FOPS II protection	+ 100 kg	0.362 kg/cm ²



ENGINE

Type	4TNV98C-WBV
Fuel	Diesel
Net Power	39.3 kilowatts / 53.5 hp / 1,900 rpm
Gross Power	41.5 kilowatts / 56.2 hp / 1,900 rpm
Displacement	3,318 cm ³
Maximum torque	241 Nm / 1300 rpm
Cooling	Liquid
Starter	3 kW
Battery	12 V – 92 Ah
Alternator	12 V - 80 A



HYDRAULIC SYSTEM

Maximum pressure	255 bar
1 double piston pump with variable flow	2 x 70.3 l/min
1 piston pump with variable flow	53.2 l/min
1 gear pump	19 l/min

PTO	Theoretical data at 1900 rpm	
	Pressure	Oil flow
	0 ~ 240 bar	120 ~ 32 l/min
	0 ~ 240 bar	120 ~ 32 l/min



Oil flow decreases as the pressure increases



PERFORMANCE

Travel speed	2.5 / 4.5 km/h (2.3 / 4.1 km/h with steel tracks)
Rotation speed	9 rpm
Digging force (arm)	40,8 kN (4,160 kgf) / 35,9 kN (3,360 kgf) with long arm
Digging force (bucket)	63.5 kN (6,480 kgf)
Traction force	61 kN
Grade ability	30°
Noise level (2000/14/CE & 2005/88/CE)	73 dB(A) / 98dB(A) (LwA)



UNDERCARRIAGE

Number of top rollers	1
Number of bottom rollers	5
Track tensioning system	Using grease pump



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: **250 hours** | Change fuel filter: **500 hours** | Change hydraulic oil filter: **1,000 hours** |
 Change hydraulic oil filter: **1,000 hours** | Change cooling fluid: **1,000 hours** | Clean particulate filter: **3,000 hours** |
 Change particle filter: **9,000 hours**



YANMAR



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