YANMAR

ViO57-6B

MINI EXCAVATOR



Operating weight	5505 kg
Engine	4TNV86CT-PBV with DPF
Digging force (arm)	24,4 kN
Digging force (bucket)	41,9 kN

NO COMPROMISE BETWEEN COMPACTNESS AND POWER



COMPACTNESS
Yanmar, inventor of the ViO concept, has an unmatched experience in developing Zero Tail Swing excavators.

NEW BOOM DESIGN
New design with a box structure in order to improve durability.

POWERFUL 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 Stage V emission regulations. Auto deceleration and Eco-mode are available in standard.

BEST COMPONENTS
Developed in Japan with renowned suppliers for top quality. Design and performance of the components made for heavy-duty job sites and long service life.

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

CABIN
Upgraded operator station: increased leg room, Universal Design, new electronic instrumentation, improved ergonomics and greatly improved noise level.

EASY OPERATION
Control levers ideally located for exceptional movement precision. Double adjustable proportional control of both auxiliary circuits. Standard equipment also includes an “auto-deceleration” feature, and an “Eco-Mode” to improve fuel consumption.

HIGH PERFORMANCE
Upgrading of the powerline components (engine, hydraulic pump, control valve): this will allow Yanmar customers to perform heavy-duty jobs in confined spaces.

EXCELLENT STABILITY
Robust X-frame design of the undercarriage, increased operating weight and new boom design: impressive level of stability, especially on the side.

WORKGROUP
New design of the workgroup, with changed kinematics and structure of the boom. “Master Pin” developed for better durability, longer service life and an improved TCO.

UNMATCHED COMPACTNESS



The ViO57-6B benefits from Yanmar unique experience in developing Zero Tail Swing excavators. Since the invention of the ViO concept in 1995, Yanmar has remained the leader in designing the most compact excavators.



The ViO57-6B is probably the most compact excavator in its class, providing Yanmar customers with true peace of mind, especially in urban environment where space is limited.

The new design of the ViO57-6B boom also offers a very compact turning radius.

ADVANTAGES OF THE VIO DESIGN

- Improved safety for both the operator and the side workers : critical on the jobsites.
- Rear blind spot reduced to a minimum: enhances the safety for the workers around the machine.

NEW BOOM DESIGN

If the length of the boom stays at 2950 mm, its form has been radically changed, improving the lifting force of the ViO57-6B by 10 %. This new design also reduces the weight of the structure by 40 kg and increases the stability of the machine.
The box type structure of the boom enhances its robustness and therefore its durability and service life. The base and the swing post of the boom have been strengthened, which improves its service life even more and reduces its Total Cost of Ownership.

THE BEST BOOM AND ARM PROTECTION ON THE MARKET

The ViO57-6B benefits from a unique and complete protection of all its boom, arm and bucket cylinders. All cylinder tubes and rods are protected by a spring type steel plate, which reduces drastically the Total Cost of Ownership of the machine.





PERFORMANCE



The ViO57-6B benefits from an improved powerline: the combination of the new more powerful engine new Stage V powerful engine with Diesel Particulate Filter, the hydraulic pumps (+ 14 %) and a new control valve improve the cycle-times by more than 10 %.

VIPPS HYDRAULIC CIRCUIT (VIO PROGRESSIVE 3 PUMP SYSTEM)

The hydraulic circuit of the ViO57-6B has an aggregated power regulation equipped with two variable flow piston pumps and a multiple combination directional control valve. Pumps engage automatically depending on the performed operation, 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 traveling.

EASY OPERATION

ADJUSTABLE PROPORTIONAL CONTROL OF THE AUXILIARY CIRCUITS

Standard equipment of the ViO57-6B includes an auxiliary hydraulic circuit. It is operated via a proportional control located on the joystick which adapt the flow and the direction of the oil flow. Additionally the circuit has an easy-to-operate potentiometer which adjusts the oil flow to the optimal requirement for each and every attachment.

TRANSMISSION

The ViO57-6B benefits also from a drive motor developing 10% more torque, improving cycle times and productivity, especially in levelling applications. Standard equipment also includes the new “automatic 2-speed” drive motors which shift automatically up and down depending upon the effort required.
The operator is automatically provided with the best solution in terms of speed or pushing force, making operation easier and improving the operator comfort



POWERFUL YANMAR ENGINE

The Vi057-6B benefits from the most advanced technology of the leading manufacturer of industrial diesel engines. The 34,5 HP TNV engine is equipped with direct injection to create clean burning power. It has fully-electronic control to provide the Vi057-6B with total intelligent engine control. The engine is also equipped with a common rail system to allow fine-tuned electronic control of fuel injection.

ELECTRICAL CONTROL SYSTEM EGR AND DPF

The Yanmar engine is fully compliant with EU Stage V requirement. This is achieved through two additional features. The first is the cooled EGR (Exhaust Gas Recirculation) which reduces drastically the nitrogen oxides (NOx).

The second is the DPF (Diesel Particulate Filter) to clean up exhaust emissions (PM). Yanmar has successfully developed an exclusive regeneration system in order to combat clogging and cleaning down-time.

- The Eco-Mode effectively controls the motor speed which is reduced by 300 rpm, thus allowing a very low fuel consumption.
- The engine drops back to idle if the operator doesn't touch the operating levers for 4 seconds. Environmental performance (noise and emissions) and fuel consumption are even more improved.





STABILITY

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 upgraded:

- Increase of the idler width by 25%
- Increase of the track rollers diameter by 14% and width by 13%
- Increase of the sprocket width by 29%

These improvements increase the durability and the service life of the machine and reduce its TCO.

This new undercarriage design and an optimized mass distribution contribute to improve the stability of the ViO57-6B.

MACHINE HEIGHT

The redesign of the undercarriage contributes to reduce the machine height to an optimal 2,54 m, which facilitates transportation of the machine. It also improves the ground clearance by 28 % to 345 mm.



SAFETY

The structure of the Vi057-6B cabin has been designed to meet the ROPS (Roll-Over Protective Structure) certification as well as the FOPS (Falling Object Protective Structure) level 1.

LED LIGHTING: EFFICIENCY AND LOW CONSUMPTION

In order to work safely, efficiently and with accuracy in the darkness, the Vi057-6B is equipped in standard with 1 LED light positioned in the inner part of the boom. The LED technology provides a powerful light while reducing energy consumption which increases the service life of the battery. In option, two LED lights can be added at the front of the cabin as well as one LED rear light and a beacon.



MAINTENANCE

EASY ACCESS

Daily maintenance has to be performed easily. The engine bonnet and the right-hand sidecover are easy to open. This gives an access to all major elements: air filter, radiator, refueling pump, battery, fuel tank, hydraulic oil tank alternator, engine oil dipstick, water separator, coolant level, etc...

LONG SERVICE INTERVALS

Yanmar excavators are designed for working and therefore we increase the service intervals.



BEST COMPONENTS

All Vi057-6B components are designed in order to make it reliable, durable and capable of performing demanding work.



COMFORT



SPACIOUS AND COMFORTABLE CABIN

Putting the operator in the center of its design initiatives, Yanmar developed the “Universal Design” concept which is focused on ergonomics like door handle, handrails, door lock and hood handle. Combined to an increased leg room, it enables to improve the comfort and safety of the operator.



IMPROVED AIR CIRCULATION

The air distribution and circulation in the cabin has been improved through the optimal location of six vents. The defrost function ensures perfect demisting of the cabin. A fresh air / recirculation function has been added and both air filters are easily accessible. These changes improve greatly the operator’s comfort, especially in hot weather conditions.

Available in option, the ViO57-6B air conditioning has also been greatly improved through the increase of the cooling performance of the unit and increase of the ventilation performance.

ALL-AROUND VISIBILITY

The ViO57-6B design provides an ergonomic environment, excellent visibility and exceptional safety. The shape of the cabin provides the operator with an optimal 360° visibility in order to improve the safety on the jobsite and to make work more efficient.

The ViO57-6B is equipped with three mirrors to help the operator control the work area without moving from his seat.

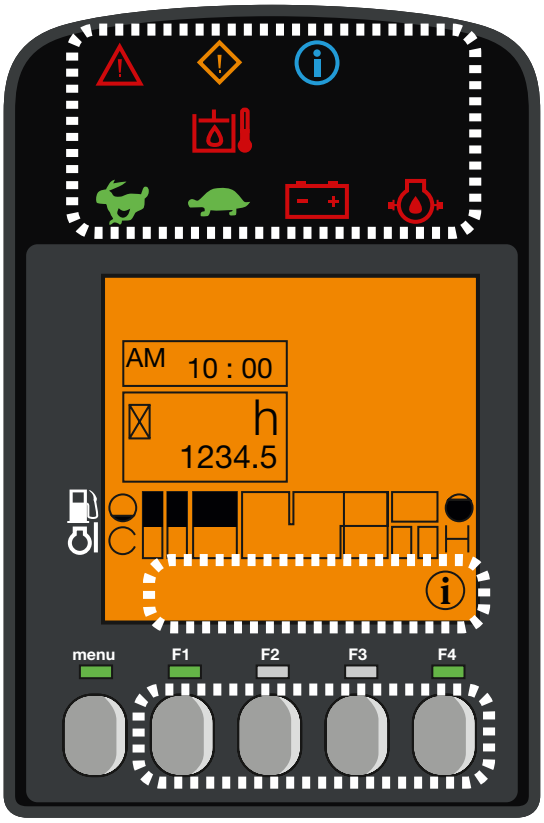
SILENT CABIN

The Yanmar engineers have put a lot of emphasis on innovative ways to reduce the noise level. They succeeded in reducing the noise level by 3 dB(A). These changes impact the comfort level of the operator.

COMFORTABLE ADJUSTABLE SEAT

The air suspension seat has numerous possibilities of adjustment to give the optimal seating position. The instrumentation panel has been redesigned as well as the armrests, which further enhance the operator's comfort.

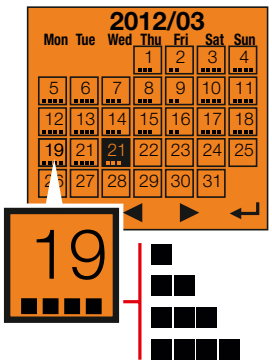


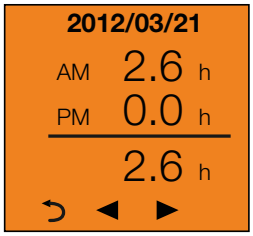


DIGITAL INTERFACE

The ViO57-6B 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.







SMARTASSIST REMOTE

SmartAssist Remote is the fleet management system developed by Yanmar, using the latest telematic technology, which provides optimal visibility on your equipment location and status.
This compact piece of equipment, available on ViO57-6B, will help you maximize your work potential. By providing real-time information, it gives you total control and lets you monitor and manage your machines remotely via a PC or Smartphone.

EQUIPMENT

[STANDARD EQUIPMENT]

PERFORMANCE

4TNV86CT-PBV (Yanmar diesel Stage V engine with DPF) | Direct Injection | Engine Control Unit (ECU) | Eco-Mode | Auto-Deceleration System | VIPPS Hydraulic system (ViO Progressive 3 Pump System) | Auxiliary circuit with adjustable proportional control by potentiometer to arm end | Automatic 2nd speed | Filter on steering hydraulic circuit | External hydraulic oil gauge | 1 LED light integrated into the boom | SmartAssist Remote.

COMFORT

LCD interface | 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 | Wipers | Windshield washer | Automatic ceiling lamp | 2 x 12V outlets | Storage boxes | Secure document storage | Holder.

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 (boom, arm and blade) | Hoses protected by abrasion resistant sleeves | Lockable covers.

MISCELLANEOUS

Fuel gauge | Toolbox | Toolkit | Grease pump.

[OPTIONAL EQUIPMENT]

EQUIPMENT AND PERFORMANCE

Steel crawlers | Pads for steel crawlers | Long arm (+290 mm) | Additional counterweight (+195 kg) | 2nd auxiliary circuit with adjustable proportional control by potentiometer | Line high pressure 165 bar for hydraulic quick coupler with piloted safety devices (double effect) | Quick couplers | Bio oil | 2 LED lights at the front of the cabin | 1 LED beacon | Kit 1 rear LED light + 1 beacon | Improved fuel filtration | 1/2 circuit.

COMFORT AND EASE OF USE

Reversible air conditioning | Adjustable and reclining seat with skaï covers, air suspension and headrest | Seat Cover | Radio | Electric refueling pump | Central greasing.

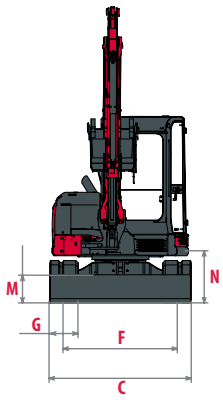
SECURITY AND DURABILITY

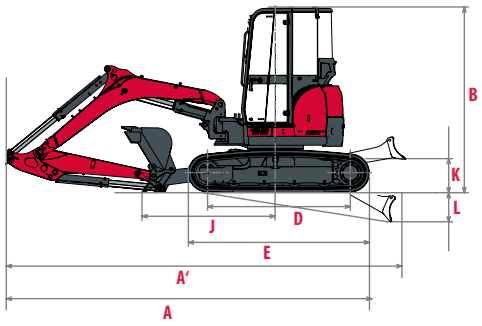
Safety valves for lifting + overload warning | FOPS 1 front protection | Anti-theft device (key/keyboard) | GPS Tracking | Translation alarm.

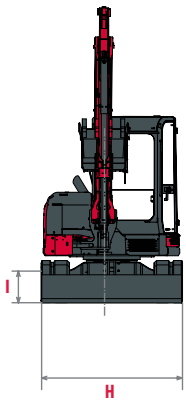
[ATTACHMENTS]

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, ditching bucket, swinging bucket, backhoe bucket, hydraulic breaker...

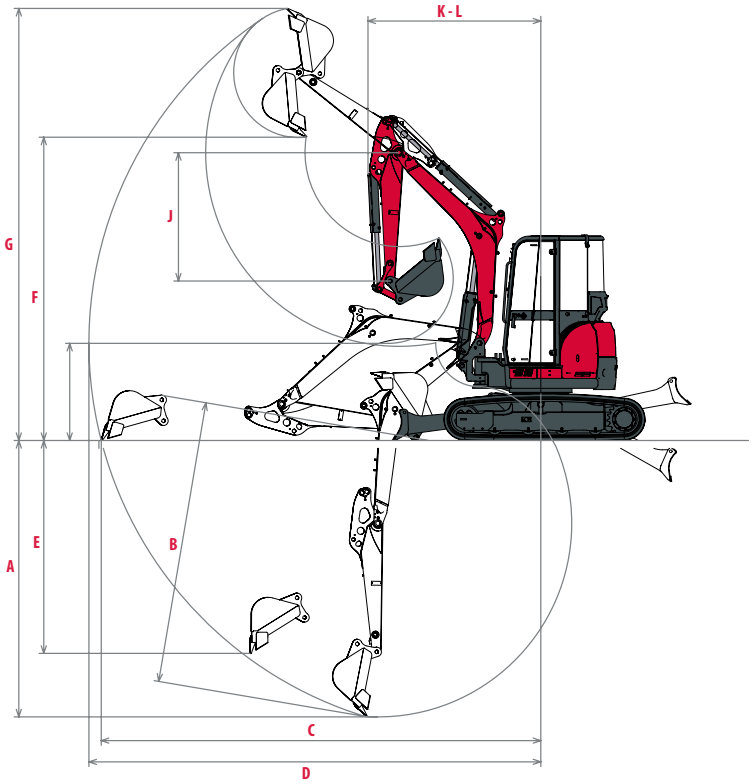
DIMENSIONS

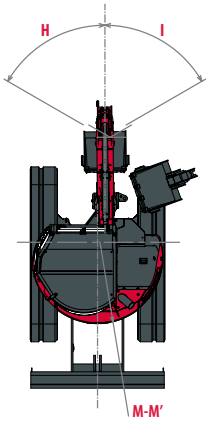






A	Overall length	5 515 / 5 595 * mm	**H**	Overall blade width	1 970 mm
A'	Overall length with blade at the back	6 075 / 6 155 * mm	**I**	Overall blade height	400 mm
B	Overall height	2 540 mm	**J**	Blade distance	1 890 mm
C	Overall width	1 990 mm	**K**	Max. lifting height above the ground	510 mm
D	Length of track on ground	2 070 mm	**L**	Max. lowering depth from the ground	535 mm
E	Undercarriage length	2 590 mm	**M**	Minimum ground clearance	345 mm
F	Lane	1 590 mm	**N**	Ground clearance under counterweight	625 mm
G	Track width	400 mm			

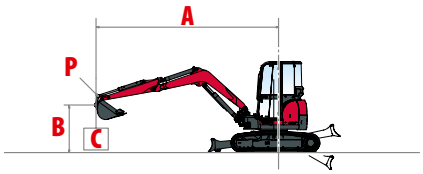




A	Max. digging depth - Blade lifted	3 650 / 3 945 * mm	**H**	Boom swinging base to left	70°
B	Max. digging depth - Blade lowered	3 900 / 4 185 * mm	**I**	Boom swinging base to right	70°
C	Max. digging reach on ground	5 910 / 6 185 * mm	**J**	Arm length	1 650 / 1 940 * mm
D	Max. digging reach	6 055 / 6 330 * mm	**K**	Front turning radius	2 160 / 2 320 * mm
E	Max vertical wall	1 090 * mm	**L**	Front turning radius with boom swing	1 760 / 1 880 mm
F	Max. dumping height	4 280 / 4 460 * mm	**M**	Rear turning radius	995 mm
G	Max. cutting height	5 720 / 5 900 * mm	**M'**	Rear turning radius with additional counterweight	1 070 mm

* With long arm.

LIFTING FORCE



Tipping load, rating over front

Tipping load, rating over side 90°

Standard arm

		Blade on ground										Blade above ground									
A	(A=)	Max.		5 m		4 m		3 m		2 m		Max		5 m		4 m		3 m		2 m	
B																					
4 m	4 290	940	*1 110	-	-	*1 095	*1 095	-	-	-	-	910	*1 110	-	-	*1 095	*1 095	-	-	-	-
3 m	4 890	725	*1 140	-	-	*1 140	*1 140	-	-	-	-	725	745	-	-	*1 140	*1 140	-	-	-	-
2 m	5 190	630	*1 160	695	*1 190	970	*1 355	*1 715	*1 715	-	-	630	690	660	765	940	1 060	*1 715	*1 715	-	-
1 m	5 250	610	*1 205	665	*1 265	910	*1 570	1 315	*2 285	-	-	600	670	655	745	900	1 000	1 315	1 500	-	-
0 m	5 080	630	*1 235	640	*1 275	845	*1 670	1 305	*2 430	2 100	*3 170	630	715	630	725	845	940	1 245	1 430	2 020	2 315
-1 m	4 650	715	*1 265	-	-	860	*1 600	1 235	*2 315	2 180	*3 265	695	775	-	-	860	940	1 245	1 400	2 160	2 385
-2 m	3 840	1 000	*1 195	-	-	-	-	1 255	*1 775	-	-	990	1 060	-	-	-	-	1 265	1 410	-	-

Standard arm, additional counterweight

		Blade on ground										Blade above ground									
A	(A=)	Max.		5 m		4 m		3 m		2 m		Max		5 m		4 m		3 m		2 m	
B																					
4 m	4290	1000	*1110	-	-	*1095	*1095	-	-	-	-	970	*1110	-	-	*1095	*1095	-	-	-	-
3 m	4890	770	*1140	-	-	*1140	*1140	-	-	-	-	780	810	-	-	*1140	*1140	-	-	-	-
2 m	5190	690	*1160	750	*1190	1040	*1355	*1715	*1715	-	-	680	760	720	820	1010	1140	*1715	*1715	-	-
1 m	5250	670	*1205	720	*1265	980	*1570	1430	*2285	-	-	650	730	700	800	970	1090	1430	1630	-	-
0 m	5080	680	*1235	700	*1275	920	*1670	1420	*2430	2330	*3170	680	770	690	780	910	1030	1350	1560	2240	2580
-1 m	4650	770	*1265	-	-	930	*1600	1340	*2315	2400	*3265	760	840	-	-	930	1020	1360	1530	2380	2650
-2 m	3840	1070	*1165	-	-	-	-	1370	*1775	-	-	1070	1150	-	-	-	-	1370	1540	-	-

Long arm

		Blade on ground										Blade above ground									
A	(A=)	Max.		5 m		4 m		3 m		2 m		Max		5 m		4 m		3 m		2 m	
B																					
5 m	3640	*1040	*1040	-	-	-	-	-	-	-	-	*1040	*1040	-	-	-	-	-	-	-	-
4 m	4630	770	*960	-	-	*930	*930	-	-	-	-	760	*960	-	-	*930	*930	-	-	-	-
3 m	5180	640	*1010	680	*1000	*1000	*1000	-	-	-	-	630	710	670	760	*1000	*1000	-	-	-	-
2 m	5460	570	*1040	670	*1070	940	*1210	*1530	*1530	-	-	560	610	650	720	930	1010	*1530	*1530	-	-
1 m	5526	550	*1070	640	*1160	890	*1450	1320	*2070	-	-	530	590	620	690	870	960	1280	1500	-	-
0 m	5360	560	*1110	620	*1230	830	*1620	1240	*2360	2050	*3150	550	620	610	670	820	930	1220	1410	2020	2230
-1 m	4960	630	*1160	-	-	850	*1610	1250	*2290	2090	*3390	620	680	-	-	820	910	1220	1360	2060	2410
-2 m	4230	770	*1180	-	-	830	*1320	1190	*1920	1980	*3000	750	840	-	-	810	910	1170	1320	1970	2500

Long arm, additional counterweight

		Blade on ground										Blade above ground									
A	(A=)	Max.		5 m		4 m		3 m		2 m		Max		5 m		4 m		3 m		2 m	
B																					
5 m	3640	*1040	*1040	-	-	-	-	-	-	-	-	*1040	*1040	-	-	-	-	-	-	-	-
4 m	4630	840	*960	-	-	*930	*930	-	-	-	-	830	*960	-	-	*930	*930	-	-	-	-
3 m	5180	700	*1010	740	*1000	*1000	*1000	-	-	-	-	690	770	730	830	*1000	*1000	-	-	-	-
2 m	5460	620	*1040	730	*1070	1020	*1210	*1530	*1530	-	-	610	670	710	790	1010	1100	*1530	*1530	-	-
1 m	5520	600	*1070	700	*1160	970	*1450	1440	*2070	-	-	580	650	680	760	950	1050	1400	1640	-	-
0 m	5360	620	*1110	680	*1230	910	*1620	1360	*2360	2290	*3150	610	680	670	740	900	1020	1340	1550	2260	2510
-1 m	4960	690	*1160	-	-	930	*1610	1370	*2290	2330	*3390	680	750	-	-	900	1000	1340	1500	2300	2690
-2 m	4230	850	*1180	-	-	910	*1320	1310	*1920	2220	*3000	830	920	-	-	890	1000	1290	1460	2210	2780

[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)]

	Weight	Ground pressure
Operating weight (rubber tracks)	5505 kg	0,31 kgf/cm²
Transport weight (rubber tracks)	5430 kg	0,30 kgf/cm²
With steel tracks	5535 kg	0,31 kgf/cm²
With additionnal counterweight	+ 195 kg	-

[ENGINE]

Type	4TNV86CT-PBV (Stage V engine with DPF)
Fuel	Diesel
Net Power	33,5 kW (at 2200 rpm)
Gross Power	34,5 kW (at 2200 rpm)
Displacement	2 091 l
Maximum torque	162,4 - 176,6 N.m
Cooling	Water cooling
Starter	12 V – 2,3 kW
Battery	12 V – 100 Ah
Alternator	12 V – 55 A

[HYDRAULIC SYSTEM]

Maximum pressure	245 bar
1 double piston pump with variable flow	2 x 45,8 l.min^{-1}
1 gear pump	37 l.min^{-1}
1 gear pump for pilot line	10,8 l.min^{-1}

PTO	Theoretical data at 2200 rpm	
	Pressure	Flow
2 way	0 – 245 bar	37 – 82,8 l.min^{-1}
1 way	0 – 245 bar	37 – 82,8 l.min^{-1}

Oil flow decreases as the pressure increases

[PERFORMANCE]

Travel speed	2,2 – 4,4 km/h
Rotation speed	10 rpm
Digging force (arm)	24,4 / 22,2 kN (with long arm)
Digging force (bucket)	41,9 kN
Traction force	55,8 kN
Gradability	30°
Noise level (2000/14/CE & 2005/88/CE)	80 dB(A) / 94 dB(A)

[UNDERCARRIAGE]

Number of top rollers	1
Number of bottom rollers	4
Track tensioning system	Grease adjuster

[CAPACITIES]

Fuel tank	66 l
Coolant	7,4 l
Engine oil	7,4 l
Hydraulic circuit	74 l
Hydraulic tank	38 l

[MAINTENANCE FREQUENCY]

[Change engine oil and filter: **50 hours (1st) / 500 hours (2nd)**] [Change fuel filter: **250 hours**] [Change hydraulic oil: **1000 hours**]
[Change hydraulic filter: **50 hours (1st) / 500 hours (2nd)**] [Change cooling fluid: **2000 hours**] [Cleaning particle filter : **3000 hours**]
[Change particle filter : **9000 hours**]



Yanmar Compact Equipment EMEA

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