



**YANMAR**

MIDI-EXCAVATOR

# Vi080-2PB



Operating weight	8810 kg
Engine	39,3 / 41,5 kW at 1900 rpm
Digging force (arm)	40,8 kN
Digging force (bucket)	63,5 kN



# A unique boom concept for enhanced performance



## COMPACTNESS

A true concentrate of technology and innovation, the Vi080-2PB offers the performance of a large excavator while leveraging the benefits of a compact excavator.



## UNIQUE ARTICULATED BOOM CONCEPT

The articulated boom, with its additional articulation, improves drastically the performance in lifting, moving and placing loads. It also enhances the maneuverability and ability to place a load with precision.



## 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 Vi080-2PB 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

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



## HIGH PERFORMANCE

Upgrade of the powerline components (hydraulic pump, control valve): no compromise between power and compactness. Improvement of the load chart due to the articulated boom.



## EASY OPERATION

Control levers ideally located for exceptional movement precision. The Vi080-2PB benefits of the proportional control of the boom swing, via the roller switch located on the right-hand joystick.



## 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 on the right-hand joystick.



## EASE OF MAINTENANCE

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

# UNMATCHED COMPACTNESS

DESIGNED TO WORK EFFECTIVELY ON A WIDE VARIETY OF JOBSITES, THE Vi080-2PB COMBINES COMPACTNESS, POWER, VERSATILITY, COMFORT AND RELIABILITY.

## 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 Vi080-2PB is a true zero tail swing excavator offering below advantages:

- + 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.



## 2-PIECE ARTICULATED BOOM

The Vi080-2PB is equipped with a single top mounted articulation cylinder which offers the following significant advantages:

- + Total protection of the cylinder rod against damages.
- + Dead weight reduced by 50%, which improves the stability of the Vi080-2PB.
- + Greasing points, daily maintenance and Total Cost of Ownership also reduced by 50%.
- + Compact boom design with less hydraulic components, resulting in the best possible visibility in the market place.

## EASY TO USE

In order to improve operator comfort, Yanmar decided to place the command of boom articulation on the left control pedal. This choice facilitates the simultaneous use of articulated boom and work attachments operated with the joysticks.

## UNIQUE DESIGN

Yanmar decided to revert the boom articulation cylinder. Since the Vi080-2PB operates at high working pressure, it offers outstanding break-out force. This particular cylinder position and orientation allows accelerating the boom lift movement, while slowing down the lowering movement, important for accurate positioning of loads.





## NO COMPROMISE ON PERFORMANCE

The Vi080-2PB offers exceptional performance: its digging depth of 4420 mm\* and digging forces of 63,5 kN (bucket) and 40,8 kN (short arm) allow it to work quickly and efficiently even under the most severe conditions.

### STABILITY

The Vi080-2PB 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 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.





# POWERLINE

Based on unique experience and expertise, Yanmar technology delivers excellent performance while respecting the environment. The Vi080-2PB 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 Vi080-2PB benefits from the most advanced technology developed by the leading industrial diesel engines manufacturer. The 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-WBV engine is the result of our continuous efforts to achieve technological progress in fuel consumption and emissions. With the Vi080-2PB, 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.





## VIPPS® HYDRAULIC CIRCUIT (VIO PROGRESSIVE 3 PUMP SYSTEM)

The Vi080-2PB 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.



## EASE OF USE

### ADJUSTABLE PROPORTIONAL CONTROL OF THE AUXILIARY CIRCUITS

Standard equipment of the Vi080-2PB includes two auxiliary hydraulic circuit lines. 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.



- 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)
- 7 Arti-boom pedal



# 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



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





## AIR SUSPENSION SEAT

The Vi080-2PB 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 Vi080-2PB 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 Vi080-2PB 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 Vi080-2PB 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 Vi080-2PB 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 Vi080-2PB 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 Vi080-2PB 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 Vi080-2PB 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

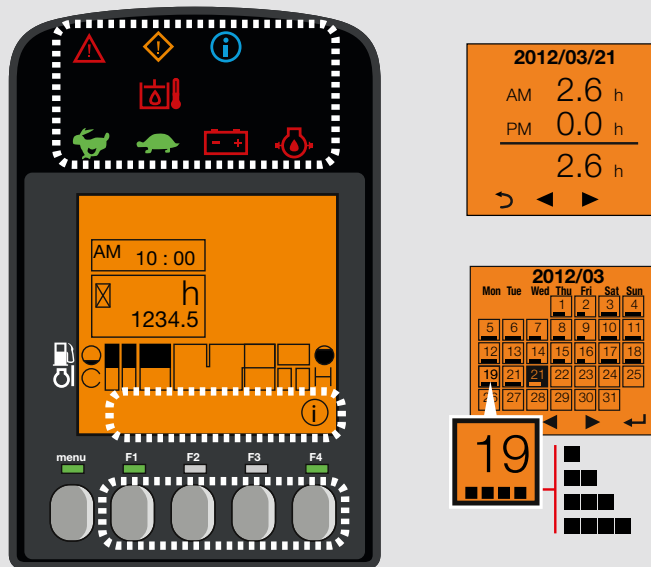
The Vi080-2PB perfectly meets the reputation for quality and durability of the Yanmar machines. The excellent accessibility to components and speed of maintenance and cleaning operations allow achieving excellent levels of onsite availability. Assured of his machine's performance, the operator can calmly 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 brought to the hose routing on the working equipment. These measures enhance the service life and reduce downtime of the machine.

## DIGITAL INTERFACE

The Vi080-2PB 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 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 on 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 Vi080-2PB 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, using the latest telematic technology, which provides optimal visibility on your equipment location and status. This compact piece of equipment, available on Vi027-6, 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-WBV Yanmar diesel | Direct injection | Diesel Particulate Filter | Engine Control Unit (ECU) | Eco-Mode | Auto-Deceleration System | Additional counterweight (+400 kg) | 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 | 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 | 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 | 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 ski covers, air suspension and headrest | Seat cover | Documentation box | Central greasing.

### SECURITY AND DURABILITY

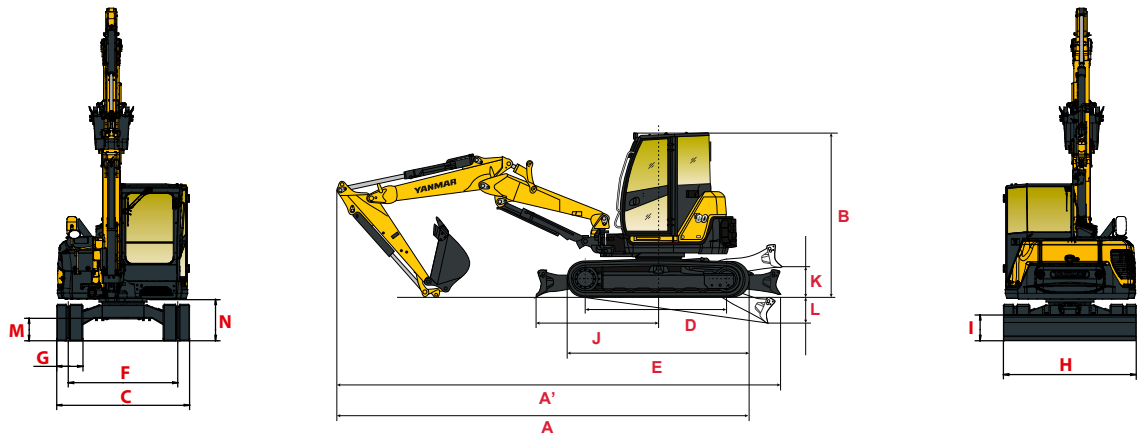
FOPS 2 Front guard | Anti-theft device (key/keyboard) | GPS Tracking | Travel alarm | Removable battery cut-off switch | SmartAssist Remote (GPS and fleet management system).

## [ ATTACHMENTS ]

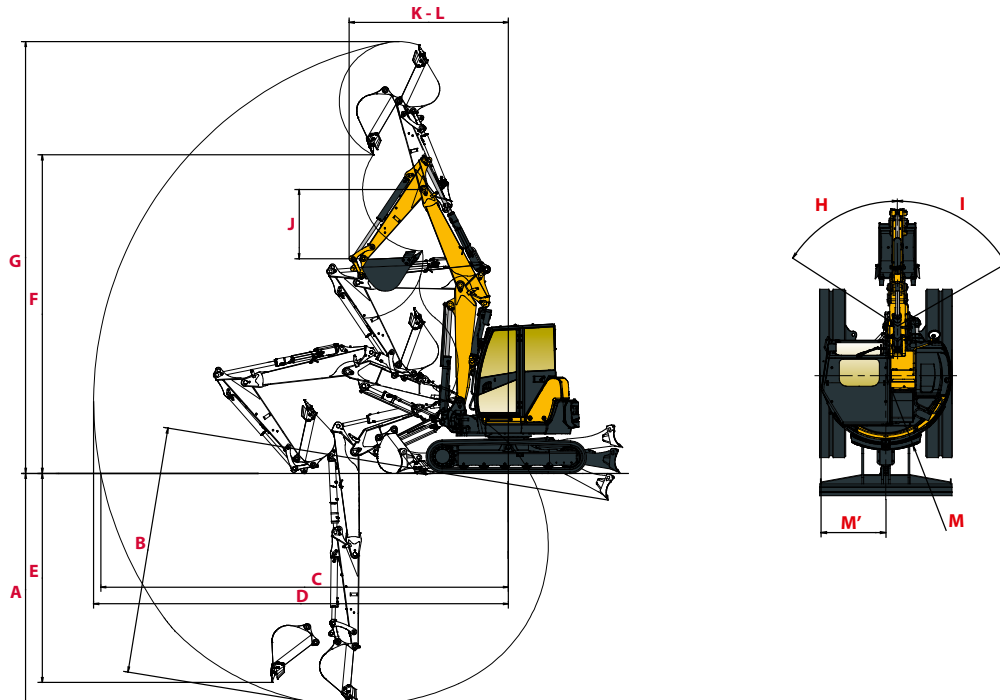
Yanmar proposes you the attachment that fits your needs and matches the safety standards in force in your country: mechanical quick coupler, hydraulic quick coupler, powertilt, standard, grading or symmetric buckets, hydraulic breaker, tiltrotators...



# DIMENSIONS

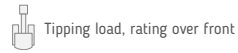
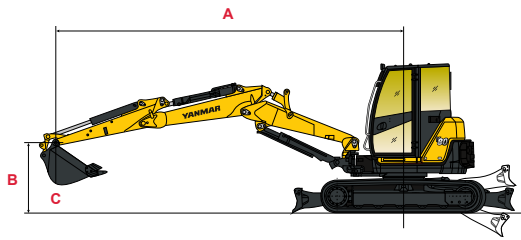


<b>A</b> Overall length	5290 mm	<b>H</b> Overall blade width	2270 mm
<b>A'</b> Overall length with blade at the back	7280 mm	<b>I</b> Overall blade height	450 mm
<b>B</b> Overall height	2680 mm	<b>J</b> Blade distance	1990 mm
<b>C</b> Overall width	2270 mm	<b>K</b> Max. blade height above the ground	460 mm
<b>D</b> Length of track on ground	2290 mm	<b>L</b> Max. lowering blade depth	480 mm
<b>E</b> Undercarriage length	2890 mm	<b>M</b> Minimum ground clearance	390 mm
<b>F</b> Lane	1870 mm	<b>N</b> Ground clearance under counterweight	700 mm
<b>G</b> Track width	450 mm		



<b>A</b> Max. digging depth - Blade lifted	4160 mm	<b>H</b> Boom swinging base to left	57°
<b>B</b> Max. digging depth - Blade lowered	4420 mm	<b>I</b> Boom swinging base to right	60°
<b>C</b> Max. digging reach on ground	7310 mm	<b>J</b> Arm length	1650 mm
<b>D</b> Max. digging reach	7440 mm	<b>K</b> Minimum front swing radius	2860 mm
<b>E</b> Max. vertical wall	3770 mm	<b>L</b> Minimum front swing radius with boom swing	2480 mm
<b>F</b> Max. dumping height	5710 mm	<b>M'</b> Rear boom swing with additional counterweight	1265 mm
<b>G</b> Max. cutting height	7750 mm		

# LIFTING FORCE



Tipping load, rating over front



Tipping load, rating over side 90°

## Cabin, rubber tracks, with additional counterweight

### Blade down

A	Max		6 m		5 m		4 m		Min							
B	(A=)															
6 m	3708	*	2735	*	2735	-	-	-	-	-	-					
5 m	4030		1420	*	2120	-	-	-	*	2280	*	2280	-	-		
4 m	5656		1100	*	1835	-	-	1425	*	1985	*	2280	*	2280	-	-
3 m	6098		975	*	1685	980	*	1715	1340	*	2035	1920	*	2545	-	-
2 m	6326		875	*	1515	950	*	1695	1260	*	2090	1725	*	2710	-	-
1 m	6365		840	*	1405	910	*	1635	1190	*	2075	1605	*	2735	-	-
0 m	6220		865	*	1220	895	*	1430	1145	*	1945	1525	*	2510	-	-
-1 m	5875	*	985	*	985	-	-	1120	*	1620	1510	*	2080	2105	*	2395
-2 m	5283	*	640	*	640	-	-	* 965	*	965	* 1400	*	1400	* 1435	*	1435

## Cabin, rubber tracks, with additional counterweight

### Blade up

A	Max		6 m		5 m		4 m		Min					
B														
6 m	*	2735	*	2735	-	-	-	-	-	-				
5 m		1400		1480	-	-	-	*	2280	*	2280	-	-	
4 m		1085		1140	-	-	1415	1490	*	2280	*	2280	-	-
3 m		990		965	975	995	1335	1385	1915	2010	-	-	-	-
2 m		860		925	940	1010	1255	1370	1725	1880	-	-	-	-
1 m		850		890	910	965	1185	1260	1580	1660	-	-	-	-
0 m		850		885	900	940	1130	1185	1515	1610	-	-	-	-
-1 m	*	985	*	985	-	-	1115	1150	1155	1590	2085	*	2395	
-2 m	*	640	*	640	-	-	* 965	* 965	* 1400	* 1400	* 1435	*	1435	

[ 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 (kPa [Kg/cm <sup>2</sup> ])
Rubber crawlers	8735 kg	8810 kg	0,39
Steel crawlers	8795 kg	8870 kg	0,39

\*With additional counterweight of 400 kg

## [ ENGINE ]

Type	4TNV98C-WBV
Fuel	Diesel
Net power (kW)	39,3 at 1900 rpm
Gross power (kW)	41,5 at 1900 rpm
Displacement (L)	3,318 l
Maximum torque	229 - 241 N.m
Cooling	Water
Starter (V-kW)	12 - 3
Battery (V-Ah)	12 - 115
Alternator (V-A)	12 - 80

## [ HYDRAULIC SYSTEM ]

Maximum pressure	258 bars
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 for pilot line	19 l/min

PTO	Theoretical data at 1 900 rpm	
	Pressure (bar)	Flow (l.min <sup>-1</sup> )
<b>2 ways</b>	0 - 240	120 - 32
<b>1 way</b>	0 - 240	120 - 32



Oil flow decreases as the pressure increases

## [ PERFORMANCE ]

Travel speed (low / high)	2,5 - 4,5 km/h (rubber tracks) / 2,3 - 4,1 km/h (steel tracks)
Rotation speed	9 tours/Min
Digging force (short arm)	40,8 kN
Digging force (bucket)	63,5 kN
Gradability	25°
Noise level (2000/14/CE & 2005/88/CE)	98 / 73 dBA

## [ UNDERCARRIAGE ]

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

## [ CAPACITIES ]

Fuel tank (L)	115
Coolant (L)	9
Engine oil (L)	11,2
Hydraulic circuit (L)	118
Hydraulic tank (L)	60

## MAINTENANCE FREQUENCY

[ Change engine oil and filter: **500 hours** ] [ Change fuel filter: **500 hours** ] [ Clean particulate filter: **1000 hours** ] [ Change particle filter: **9 000 hours** ] [ Change cooling fluid: **2 000 hours** ]



**YANMAR**



Yanmar Compact Equipment Europe  
25, rue de la Tambourine, 52100 SAINT-DIZIER  
France

[ycee-contact@yanmar.com](mailto:ycee-contact@yanmar.com)

[www.yanmarconstruction.eu](http://www.yanmarconstruction.eu)

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