



YANMAR

Vi038-6

MINI-EXCAVATOR



Operating weight

3575 kg (canopy) / 3695 kg (cabin)

Engine gross power

18.9 kW / 25.3 HP at 2200 rpm

Digging force (short arm / long arm)

20.4 kN / 18.1 kN

Digging force (bucket)

32.1 kN

OPTIMIZATION OF YOUR PERFORMANCE IN NARROW AREAS





COMPACTNESS

Yanmar, inventor of the ViO concept, has an unmatched experience in developing Zero Tail Swing excavators. The ViO38-6 is a true Zero Tail Swing mini-excavator that allows a full rotation of the upper frame within the width of the crawlers for maximum safety.



NEW GENERATION YANMAR ENGINE

Latest generation of Yanmar TNV engines: electronically-controlled 3-cylinder engine with direct injection to improve performance, fuel consumption and emission levels. Auto-deceleration and Eco-mode are available in standard.



COMFORTABLE CABIN

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



BEST COMPONENTS

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



EASY OPERATION

Control levers ideally located for exceptional movement precision. The ViO38-6 benefits of the proportional control of the boom swing, via the proportional switch located on the right-hand joystick.



VIPPS HYDRAULIC SYSTEM

The ViO38-6 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 to allow smooth and simultaneous performance of all the operations, even while traveling.



HIGH PERFORMANCE

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



EASE OF MAINTENANCE

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

UNMATCHED COMPACTNESS



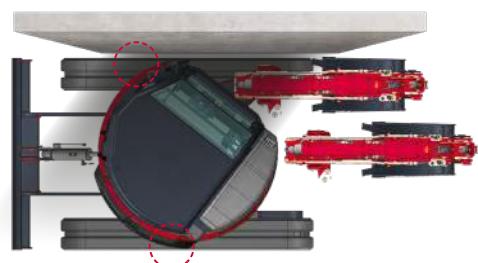
The Vi038-6 is providing Yanmar customers with true peace of mind, especially in urban environment where space is limited.



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 Vi038-6 has a very small turning radius.

- ✚ 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



IMPROVED STABILITY AND LIFTING CAPACITY

Although the operating weight of the Vi038-6 is reduced to 3 695 kg*, the optimal mass distribution enables to improve the loading chart of the machine in most positions, especially in the front positions. Furthermore, the boom of the Vi038-6 was completely redesigned in order to improve also its lifting capacity and digging performance and to provide a longer service life.

*With cabin and rubber crawlers

COMFORT



UD SPACIOUS AND COMFORTABLE CABIN

Putting the operator at the centre of its design initiatives, Yanmar developed the « Universal Design » concept which gives you comfort for enhanced productivity. Combined to an increased leg room, it enables to improve the comfort and safety of the operator. Operating controls and switches are ergonomically arranged for easy reach.

ALL AROUND VISIBILITY

The Vi038-6 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 Vi038-6 is equipped with two mirrors to help the operator control the work area without moving from his seat.

AIR SUSPENSION SEAT IN STANDARD

The Vi038-6 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.

PERFORMANCE



NEW GENERATION ELECTRONICALLY CONTROLLED YANMAR MOTOR

With an output of 18.9 kW at 2200 rpm, Yanmar's 3TNV88-ESBV engine is the result of our continuous efforts to achieve technological advances in fuel consumption and emissions. With the ViO38-6, 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 which is reduced by 300 rpm, thus allowing a very low fuel consumption.

VIPPS HYDRAULIC SYSTEM (ViO PROGRESSIVE 3 PUMP SYSTEM)

The ViO38-6 is equipped with a ViPPS (ViO Progressive 3 Pump System) hydraulic system. This hydraulic system main characteristic is the use of 4 hydraulic pumps, 2 variable displacement pumps and 2 gear pumps, (including one for joysticks) in order to deliver a total flow of as much as 111 l/min.

To complete the system, Yanmar is using a control valve based on the ViPPS principle, which cumulates the flow of separate pumps in order to obtain the optimal combination in terms of speed, power, smoothness and balance. The ViPPS system allows smooth and simultaneous performance of all the operations, even while traveling in order to have the ultimate working tool.



EASE OF USE

PROPORTIONAL CONTROL OF THE AUXILIARY CIRCUIT

Standard equipment of the ViO38-6 includes an auxiliary hydraulic circuit which is operated via a proportional control located on the joystick which adapt the flow and the direction of the oil flow.

SECOND SPEED

The second speed switch has also been relocated on the blade lever in order to facilitate the use of the machine.



SAFETY

The structure of the Vi038-6 cabin has been designed to meet the ROPS (Roll-Over Protective Structure) certification as well as the FOPS (Falling Object Protective Structure) level 1.

THE BEST BOOM AND ARM PROTECTION ON THE MARKET

The Vi038-6 benefits from a unique and complete protection of all its boom and arm 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.

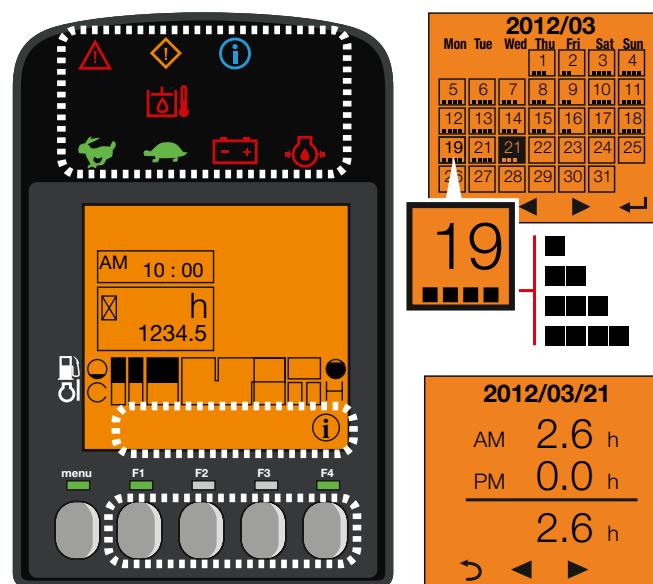


LED LIGHTING: EFFICIENCY AND LOW CONSUMPTION

In order to work safely, efficiently and with accuracy in the darkness, the Vi038-6 is equipped in standard with 1 LED light positioned in the inner part of the boom.

DIGITAL INTERFACE

The Vi038-6 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 way 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, refueling pump, battery, fuel tank, hydraulic oil tank alternator, engine oil dipstick, water separator, coolant level, etc... A flat floor mat makes cleaning easier.



EQUIPMENT

[STANDARD EQUIPMENT]

PERFORMANCE

Engine 3TNV88-ESBV Yanmar diesel | Direct injection | Engine Control Unit (ECU) | Eco-Mode | Auto-Deceleration System | VIPPS Hydraulic system (ViO Progressive 3 Pump System) | Third circuit with proportional control to arm end | External hydraulic oil gauge | 1 LED light integrated into the boom | Long arm (1620 mm).

COMFORT AND EASE OF USE

LCD interface | Adjustable and reclining seat with fabric covers, pneumatic 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 | Wiper | Windshield washer | Automatic ceiling lamp | Storage boxes | 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 | Quick coupler to disconnect the battery | 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 | Short arm (1370 mm) | Third & fourth circuit with adjustable proportional control by potentiometer | Clamshell bucket circuit | Line high pressure 150 bar for hydraulic quick coupler | Quick couplers | Additional counterweight (+150 kg) | Bio oil | 2 front LED working lights (cabin and canopy) | 1 rear LED work light + 1 LED flashing rotary fixed (cabin and canopy) | 1 LED flashing rotary fixed on cabin or canopy | Beacon light with magnetic base.

COMFORT AND EASE OF USE

Air conditioning | Yanmar seat cover | Radio | Central greasing | Documentation box.

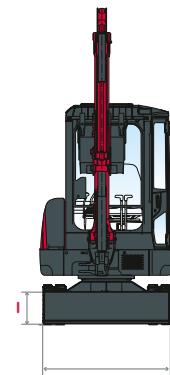
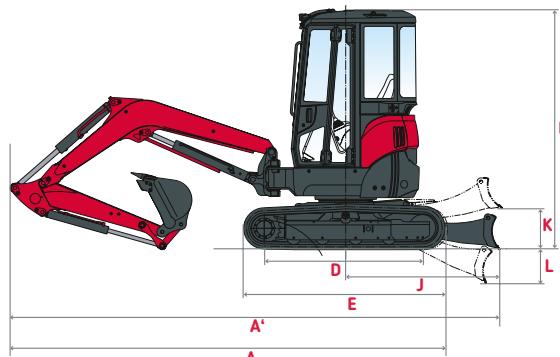
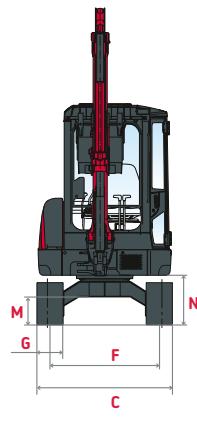
SECURITY AND DURABILITY

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

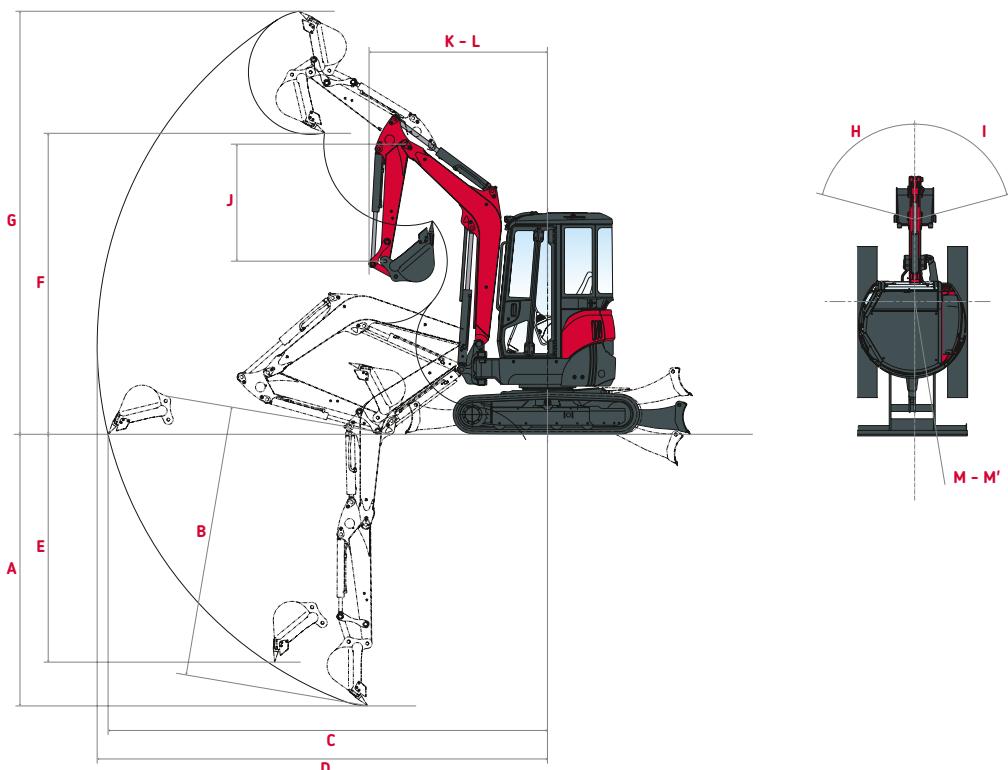
[ATTACHMENTS]

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



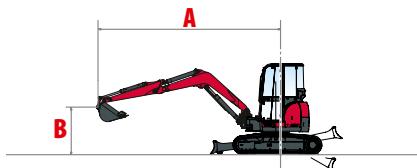
A Overall length	H Overall blade width	1740 mm
A' Overall length with blade at the back	I Overall blade height	380 mm
B Overall height	J Blade distance	1630 mm
C Overall width	K Max. blade height above the ground	425 mm
D Length of track on ground	L Max. lowering depth from the ground	370 mm
E Undercarriage length	M Minimum ground clearance	320 mm
F Lane	N Minimum ground clearance under upper frame	545 mm
G Track width	300 mm	



A Max. digging depth - Blade lifted	H Boom swinging base to left	43°
B Max. digging depth - Blade lowered	I Boom swinging base to right	65°
C Max. digging reach on ground	J Arm length	1370 mm / 1620 mm*
D Max. digging reach	K Front turning radius	2020 mm / 2100 mm*
E Max. vertical wall	L Front turning radius with boom swing	1810 mm / 1870 mm*
F Max. unloading height	M Rear turning radius	775 mm
G Max. cutting height	M' Rear turning radius with additional counterweight	850 mm

* Standard arm / long arm

LIFTING CAPACITY

Tipping load,
rating over frontTipping load,
rating over side 90°

Cabin, Standard counterweight, long arm

A (A=)		Max.	Blade on ground				Blade above ground					
			3,5 m	3 m	2,5 m	2 m	Max.	3,5 m	3 m	2,5 m	2 m	
B		⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	
3 m	4253	480	*815	*720	*720	-	-	-	-	490	560	
2 m	4654	410	*845	640	*885	*925	*925	*780	*780	-	410	450
1 m	4771	375	*835	600	*1090	755	*1305	970	*1680	-	365	450
0 m	4629	385	*865	560	*1235	685	*1500	875	*1955	1180	*2465	400
-1 m	4195	440	*905	540	*1205	685	*1470	875	*1825	1180	*2375	430
-1,5 m	3834	500	*940	550	*1090	725	*1345	885	*1640	1215	*2080	490
-2 m	3323	695	*845	-	-	755	*1050	1030	*1395	-	-	640
										715		
											745	
											785	
											1080	
											1020	
											-	
											-	

Cabin, additional counterweight, long arm

A (A=)		Max.	Blade on ground				Blade above ground					
			3,5 m	3 m	2,5 m	2 m	Max.	3,5 m	3 m	2,5 m	2 m	
B		⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	
3 m	4253	530	*815	*720	*720	-	-	-	-	540	615	
2 m	4654	455	*845	710	*885	*925	*925	*780	*780	-	455	500
1 m	4771	420	*835	665	*1090	835	*1305	1075	*1680	-	410	495
0 m	4629	435	*865	625	*1235	765	*1500	980	*1955	1330	*2465	445
-1 m	4195	490	*905	605	*1205	765	*1470	980	*1825	1330	*2375	480
-1,5 m	3834	560	*940	615	*1090	805	*1345	990	*1640	1360	*2080	550
-2 m	3323	765	*845	-	-	835	*1050	1135	*1395	-	-	715
										790		
											825	
											875	
											1185	
											1135	
											-	
											-	

Canopy, standard counterweight, long arm

A (A=)		Max.	Blade on ground				Blade above ground					
			3,5 m	3 m	2,5 m	2 m	Max.	3,5 m	3 m	2,5 m	2 m	
B		⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	
3 m	4253	455	*815	*720	*720	-	-	-	-	465	535	
2 m	4654	390	*845	615	*885	*925	*925	*780	*780	-	390	425
1 m	4771	360	*835	575	*1090	720	*1305	925	*1680	-	350	430
0 m	4629	365	*865	535	*1235	650	*1500	830	*1955	1120	*2465	380
-1 m	4195	415	*905	510	*1205	650	*1470	830	*1825	1120	*2375	405
-1,5 m	3834	475	*940	520	*1090	690	*1345	840	*1640	1150	*2080	465
-2 m	3323	665	*845	-	-	720	*1050	985	*1395	-	-	610
										680		
											710	
											745	
											1035	
											970	
											-	
											-	

Canopy, additional counterweight, long arm

A (A=)		Max.	Blade on ground				Blade above ground					
			3,5 m	3 m	2,5 m	2 m	Max.	3,5 m	3 m	2,5 m	2 m	
B		⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	⊖ ↗	
3 m	4253	510	*815	*720	*720	-	-	-	-	520	590	
2 m	4654	435	*845	680	*885	*925	*925	*780	*780	-	435	475
1 m	4771	405	*835	640	*1090	800	*1305	1030	*1680	-	395	475
0 m	4629	415	*865	600	*1235	730	*1500	940	*1955	1270	*2465	425
-1 m	4195	470	*905	580	*1205	730	*1470	940	*1825	1270	*2375	460
-1,5 m	3834	535	*940	590	*1090	770	*1345	950	*1640	1300	*2080	525
-2 m	3323	735	*845	-	-	800	*1050	1090	*1395	-	-	685
										755		
											790	
											835	
											1140	
											1085	
											-	
											-	

[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.]

TECHNICAL SPECIFICATIONS

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

	Transport weight	Operating weight	Ground pressure (operating weight)
Canopy version / Rubber crawlers	3500 kg	3575 kg	0,337 kgf/cm ²
Canopy version / Steel crawlers	3600 kg	3675 kg	0,346 kgf/cm ²
Cabin version / Rubber crawlers	3620 kg	3695 kg	0,347 kgf/cm ²
Cabin version / Steel crawlers	3720 kg	3795 kg	0,356 kgf/cm ²
With additional counterweight		+ 150 kg	-

[ENGINE]

Type	3TNV88-ESBV
Fuel	Diesel
Net Power	18.5 kW / 24.8 HP at 2 200 rpm
Gross Power	18.9 kW / 25.3 HP at 2 200 rpm
Displacement	1 642 l
Maximum torque	85.5 – 94.5 N.m
Cooling	Water-cooling
Starter	12 V – 1.7 kW
Battery	12 V – 65 Ah
Alternator	12 V – 55 A

[HYDRAULIC SYSTEM]

Maximum pressure	220 bars
1 double piston pump with variable flow	2 x 37 l/min
1 gear pump	26.2 l/min
1 gear pump for pilot line	10.8 l/min

PTO	Measured data at max engine speed		Oil flow decreases as the pressure increases
	Pressure	Flow	
2 ways	0 – 220 bar	63.2 – 1 l/min	
1 way	0 – 220 bar	37 – 1 l/min	

[PERFORMANCE]

Travel speed	2.7 / 4.5 km/h
Rotation speed	9.5 rpm
Digging force (short arm / long arm)	20.4 kN / 18.1 kN
Digging force (bucket)	32.1 kN
Gradability	30°
Noise Level (2000/14/CE&2005/88/CE)	Lwag: 94 dBA ; Lpag: 81 dBA

[UNDERCARRIAGE]

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

[CAPACITIES]

Fuel tank	41 l
Coolant	4.2 l
Engine oil	7.3 l
Hydraulic circuit	62 l
Hydraulic tank	40 l

[MAINTENANCE FREQUENCY]

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



YANMAR



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