



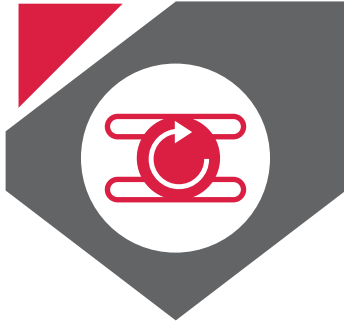
YANMAR

MINI-EXCAVATOR

ViO20-4

2290/2405 kg





> COMPACTNESS

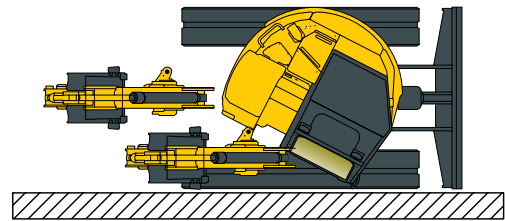
ViO20-4

The ViO20 is a real Zero Tail Swing machine: neither the counterweight nor the front part of the upper frame exceed the width of the crawlers.



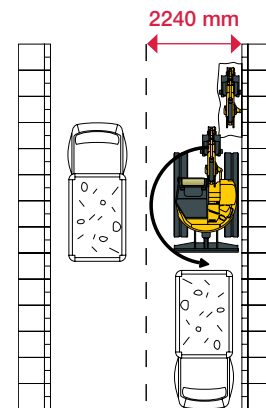
Design principles

- > No counterweight overhang the rear.
- > Front swing radius with boom swing: 1550 mm.
- > Rear swing radius: 690 mm.
- > Width of the machine reduced to 1380 mm.



Advantages for the user

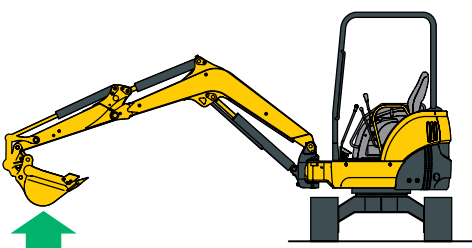
- > Possibility to work in narrow areas, where a conventional machine is not able to work.
- > Possibility to work along a wall.
- > No dead angle in the upper structure: maximum all-round visibility.
- > Safety and productivity for the operator.
- > Easier transport thanks to reduced width.
- > Operations are perfectly adapted to urban areas: the machine does not obstruct all lanes of traffic.



Excellent weight distribution

The use of a large counterweight, asymmetric crawlers (VICTAS® system) and high tensile equipment allows:

- > Equalled stability, even higher than that of a conventional machine of the same weight.
- > Increased lifting capacity.



Asymmetric crawlers (patented VICTAS® System)

- > Increased foot print without the increase of machine width.
- > Higher sideward stability and higher lift capacity.
- > Noise and vibration free travel.
- > Less ground damage.



> HIGH PERFORMANCE

ViO20-4



Combining long experience and unrivalled expertise, YANMAR's technology ensures environmental performance and high efficiency.



3TNV76-NBVA

A new-generation Yanmar "TNV" (Totally New Value) engine

Improvement and modernisation of TNE series, which is already well-known for its "clean and quiet" profile:

- > Reduced emissions for an even cleaner engine.
- > Noise reduction for an even quieter engine.
- > Improved starting (warms up faster).

The engine 3TNV76-NBVA meets Stage II emissions regulations of the European Commission (EC) and Tier 4 emissions regulations of the American Environment Protection Agency (EPA).

Higher productivity for the operator

- > Separate pedals for 3rd circuit and boom swing + forward and backward travelling possible with feet: possibility to combine various working movements and travelling.
- > Single-action auxiliary circuit with pedal to add accessories (for example: hydraulic breaker, auger...).
- > Second speed.
- > Dual-action auxiliary circuit with the right joystick allowing a higher precision (for example: swivelling ditch cleaning bucket).

Hydraulic circuit Load-Sensing. Variable flow piston pump

- > Precise working movements.
- > Simultaneous operations.
- > Safety and productivity, particularly for operations requiring accuracy: grading.
- > 3rd hydraulic circuit to arm end.



Single-action auxiliary circuit with pedal

Second speed





> COMFORT & SAFETY

Vi020-4

All-round comfort and convenience. The many easy to use features include a comfortable seat with retractable seat belt, sensitive lever controls and uncomplicated lever arrangement.

Spacious and ergonomic pilot system

- > Perfect position of joysticks, armrests and travel levers.
- > Luxurious adjustable operators seat with headrest (forward and aft adjustment, backrest inclination adjustment, and weight adjustment).
- > Canopy and cabin fully compliant with safety norms: ROPS (Roll Over Protective Structure), FOPS 1 (Falling Object Protective Structure) and TOPS (Tip-Over Protective Structure).
- > Large safety lever on access to operating position: locks working movements and travel (in raised position).
- > Battery isolator in standard.
- > Dual or single-action auxiliary circuit to add various accessories (swivelling ditch cleaning buckets...).



> Safety lever.



> Battery isolator.



Cabin version

- > Windscreen in 2 parts, stored overhead. Sliding side windows.
- > Wide access to the operating position.
- > Defroster, heater, ventilation, inside lighting, windscreen washer.



> Integrated working lamp.

Other equipment



Storage space



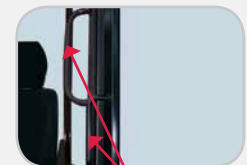
Fixing points on track frame and blade to facilitate transportation on trailers



Travelling pedals



Evacuation hammer



Large hand grips

> RELIABILITY & ACCESSIBILITY

ViO20-4



Simple maintenance structure for fast and easy access wherever it's needed.



> Cylinder protection on boom.



> The blade hydraulic cylinder is covered by a protective shield.

Easy access to maintenance points

- > Large rear bonnet allowing access to all engine components and hydraulic pumps.
- > Daily check points gathered under the front bonnet (top up oil, water, diesel).
- > Quick access to test points of all hydraulic circuits from the pilot system.



Strong protective devices

- > Flexible hoses protected by external covers.
- > Careful routing of hydraulic pipes and hoses on top of boom.





> TECHNICAL SPECIFICATIONS

ViO20-4

Engine

Yanmar Diesel 3 cylinders	3TNV76-NBVA
Rated Output	15.2 kw / 20.7 HP / 2500 rpm
Displacement	1115 cm ³
Max. torque	68.6 N.m. / 1800 rpm

Load-Sensing hydraulic circuit

System capacity	39 l
Hydraulic tank capacity	26 l
Max. pressure	210 bar
Variable flow piston pump	55 l/mn
Straight travelling	
Direct return to hydraulic tank	
Accumulator	

Performances

Travelling speed	4.3 / 2.5 km/h
Swing speed	9.7 rpm
Digging force (arm/bucket)	1200 / 1900 kgf
Boom swing (L/R)	47° / 75°
Ground pressure*	0.29 / 0.28 kg/cm ²
Grade ability	30°
Shoe width	250 mm
Ground clearance	280 mm
Blade (width x height)	1380 x 290 mm

* Cabin/Canopy

Miscellaneous

Fuel tank	28.5 l
Cooling system	2.9 l
Transport dimensions (L x w x h)	3895 x 1380 x 2458 mm
Noise Level LwA (2000/14/EC & 2005/88/EC)	92/92 dBA*

* Cabin/Canopy

Optional equipment

- > Special paint
- > Safety devices on cylinders + Overloading warning device
- > Anti-theft device (with key / with keyboard)
- > GPS tracker
- > Quick coupler on the 3rd circuit
- > Bio oil
- > 2 LED lights on the front of the cabin
- > 1 LED + 1 LED flashing rotary fixed on the back of the cabin
- > Beacon light with magnetic base
- > Radio with USB plug
- > Skai seat
- > Central greasing
- > Mechanical quick hitch
- > Standard, ditch cleaning and swivelling buckets
- > Hydraulic breaker

PTO	Theoretical data at 2500 rpm	
	Pressure	Oil flow
	0 ~ 190 bar	48 ~ 18 l/mn
	0 ~ 190 bar	48 ~ 18 l/mn

> The output reduces as the pressure increases.



TECHNICAL SPECIFICATIONS

ViO20-4

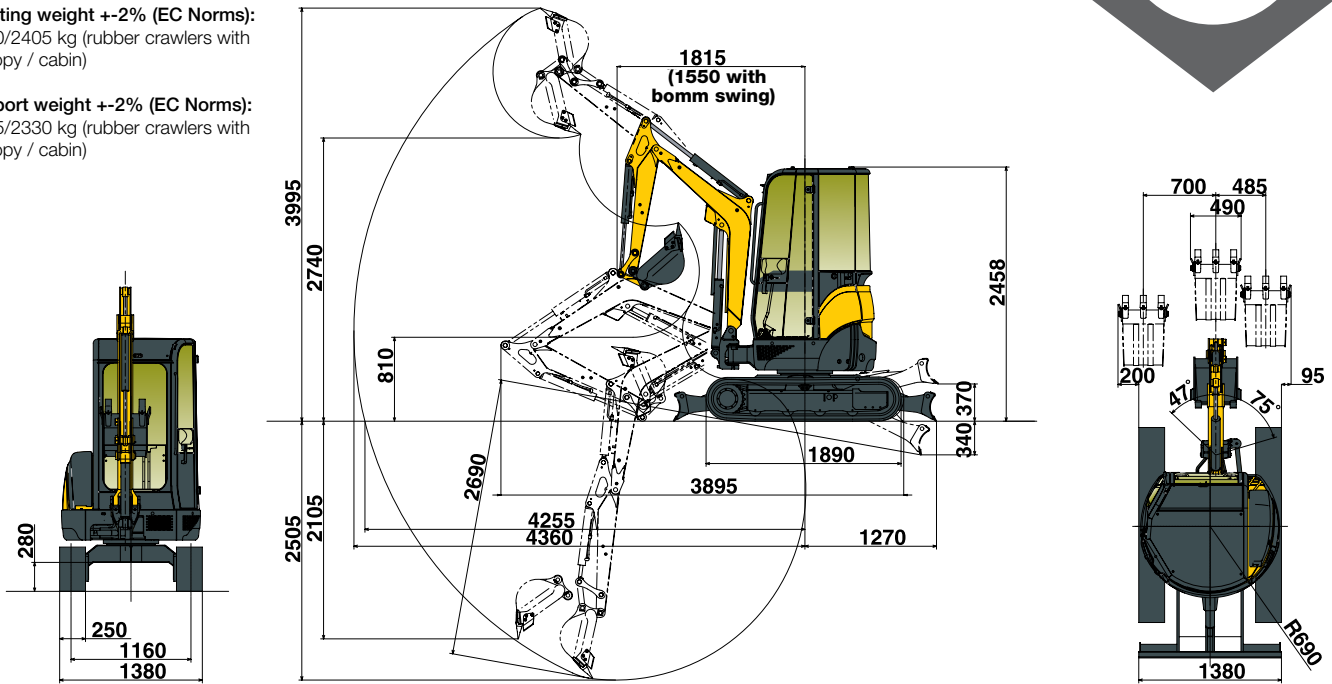


Operating weight +-2% (EC Norms):

> 2290/2405 kg (rubber crawlers with canopy / cabin)

Transport weight +-2% (EC Norms):

> 2215/2330 kg (rubber crawlers with canopy / cabin)



Subject to any technical modifications. Dimensions given in mm with standard Yanmar bucket.

Blade on ground

A	Maxi		3.0 m		2.5 m		2.0 m		C
B									
3.4	*390	*390	-	-	-	-	-	-	
2.5	290	*405	-	-	*335	*335	-	-	
2.0	245	*405	320	*400	*390	*390	-	-	
1.5	215	*425	305	*530	*495	*495	-	-	
1.0	200	*425	270	*510	420	*615	605	*790	
0	210	*460	290	*600	390	*770	515	*1095	
-1.0	275	*475	-	-	375	*700	515	*980	
-1.5	360	*500	-	-	-	-	540	*735	

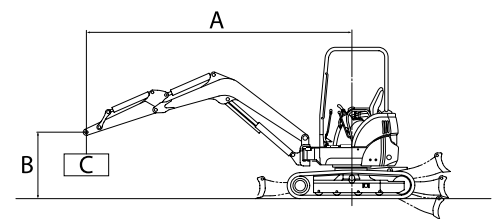
Machine with canopy, rubber crawlers, bucket of 52 kg (490 mm).

A: Overhang from rotational axis (m).

B: Height of hooking point (m).

C: Safe working load (kg).

(+ 4% with cab).



Blade above ground

A	Maxi		3.0 m		2.5 m		2.0 m		C
B									
3.4	*390	*390	-	-	-	-	-	-	
2.5	290	320	-	-	*335	*335	-	-	
2.0	245	275	320	*400	*390	*390	-	-	
1.5	215	245	305	335	*495	*495	-	-	
1.0	200	240	270	350	420	470	605	*790	
0	210	245	290	335	390	440	515	605	
-1.0	275	305	-	-	375	435	515	620	
-1.5	360	440	-	-	-	-	540	615	



Tipping load, rating over front



Tipping load, rating over side 90°

The data contained in these tables represent the lifting capacity in accordance with ISO standard 10567. They correspond to 75% of the maximum static tipping load or 87% of the hydraulic lifting power. Data marked * are the hydraulic limits of the lifting power.



YANMAR



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