





Mini-excavator



Vi045

Operating weight : 4430 kg Arm digging force : 2150 kgf Bucket digging force : 3350 kgf

Yanmar, inventor of the ZTS m in







Mini-excavator



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Zero Tail Swing

Design principles

- Full swing of the machine inside the size of the crawlers.
- Perfectly round shape of counterweight and bonnets.
- Zero swing radius :
 - front swing radius with boom swing: 1830 mm;
 - rear swing radius : 975 mm.



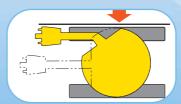
Yanmar, inventor of the ZTS m in





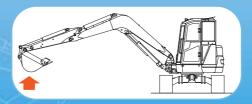
Advantages for the user

- Maximum superb all-round visibility.
- No dead angle in the upper structure.
- Possibility to work in narrow areas, where a conventional machine is not able to work:
- increased productivity: the operator can concentrate on his work without paying attention to the bulk of the machine;
- easy excavation along walls;
- decreased damage risks on the machine.



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.



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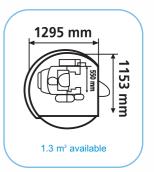


Comfort and safety

Spacious and ergonomic pilot system

- Perfect position of joysticks, armrests and travel levers with pedals.
- Comfortable, multi-adjustable seat : sliding seat, reclining backrest and weight.
- Separate pedals for using the auxiliary power take-off line and swinging the boom. Sturdy covers which serve as footrests.









Cabin version

- Windscreen in 2 parts mounted on steel structures: quick opening and closing with blocking in high and low position.
- Defroster, heater, ventilation, inside lighting, windscreen washer.
- · Easy access thanks to grabrails.

Maximum operator safety

- Canopy and cabin meet the requirements of the strictest safety standards :
- ROPS (Roll Over Protective Structure);
- FOPS 1 (Falling Object Protective Structure);
- TOPS (Tip-Over Protective Structure).
- Shock absorber on boom cylinder, arm cylinder, offset cylinder, swing and travelling motors.
- Large safety lever on access to control position: in the raised position it prevents all working movements and travel.
- Modern, user-friendly instrument panel, giving instant warning to the operator of any anomalies that may occur.

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Performance

Exceptional stability

- The VICTAS® system (patented by Yanmar) consists in increasing the bearing surface by increasing the track path and using asymmetric crawlers.
- Main advantages :
 - increased lateral stability;
 - increased lifting capacity;
 - reduced ground damage;
 - reduced track wear;
 - quiet, vibration-free movement.



Reliability and acc

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 new TNV series exceeds the most stringent emissions standards.



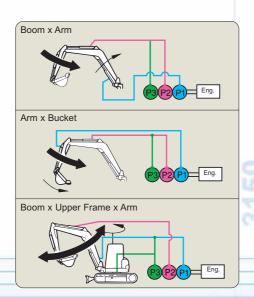






"VIPPS®" hydraulic circuit (ViO Progressive 3 Pumps System)

- Hydraulic circuit fitted with a variable-flow dual piston pump, a gear pump and a multiple-combination directional control valve:
 - increased working speed due to the cumulative pump capacities :
 - smooth, simultaneous operation of all functions, even when travelling.

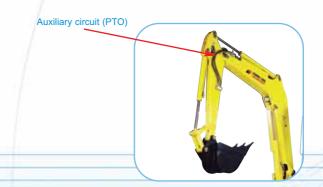


Environmentally friendly

- Combination of a high-performance Yanmar engine and the VIPPS® hydraulic system :
 - increased productivity;
- reduced fuel consumption;
- less noise;
- less exhaust fumes.
- Exhaust gas vented vertically.

Auxiliary circuit (PTO)

- Dual auxiliary circuit to add various accessories: hydraulic rock breaker, swivelling ditch cleaning buckets, concrete share, auger, etc.
- Pedal lock for use with manual hydraulic tools.



accessibility

Miscellaneous protective devices

- Integrated working lamp:
- reduces risk of damage;
- provides better visibility at bottom of trenches.
- Careful routing of hydraulic pipes and hoses on top of the boom.
- Protection on boom and blade cylinders.

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 control valve by removing side panel.









TECHNICAL SPECI

Engine

| Yanmar Diesel 3 cylinders | 3TNV88-XBVA |
|---------------------------|--------------------------|
| Rated Output (DIN 6270B) | 22.6 kw/30.7 HP/2500 rpm |
| Displacement | 1642 cm ³ |
| Max. torque | 109.8 N.m./1300 rpm |

Hydraulic circuit

| System capacity | 65 I |
|--------------------------------|---------------|
| Max. pressure | 220 bar |
| Total pump capacity | 119.8 l/mn |
| Variable flow dual piston pump | 2 x 42 l/mn |
| 1 gear pump | 1 x 35.8 l/mn |

Performances

| Travelling speed | 4.7/2.5 km/h | Ground pressure* . | 0.286/0.29 kg/cm ² |
|----------------------------|---------------|--------------------|-------------------------------|
| Swing speed | 9.5 rpm | Grade ability | 30° |
| Digging force (arm/bucket) | 2150/3350 kgf | Shoe width | 350 mm |
| Boom swing (L/R) | 70°/70° | Ground clearance | 360 mm |
| | | | * rubber/steel crawlers |



Miscellaneous

| Fuel tank | 55 I |
|---|-----------------------|
| Cooling system | 6.7 I |
| Transport dimensions (L x w x h) | 5150 x 1970 x 2620 mm |
| Noise level LwA (2000/14/EC & 2005/88/E | C) 94 dBA |



Optional equipment

Special paint Bio Oil Air conditioning Long dipper arm (+ 300 mm) Arm extension (+ 800 mm)

4th hydraulic circuit Safety device for loading Anti-theft device FOPS 2 protection bars on cab roof

| РТО | Theo | retical data |
|------------|-------------|--------------|
| FIU | Pressure | 2500 rpm |
| | 0 ~ 220 bar | 77 ~ 33 l/mn |
| A A | 0 ~ 220 bar | 77 ~ 33 l/mn |



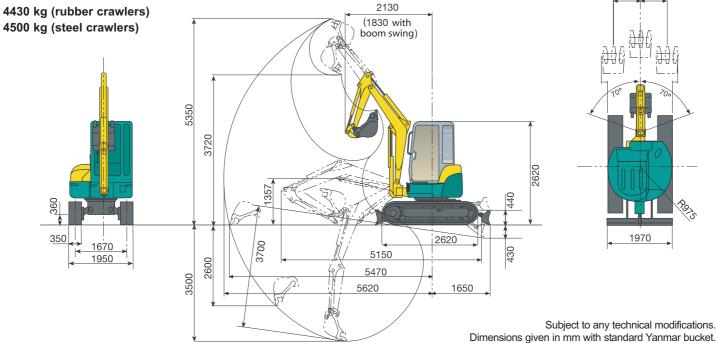


The output reduces as the pressure increases.

: IFICATIONS



Operating weight +-2%: 4430 kg (rubber crawlers)



| Blade on ground | | | | | | | | | |
|-----------------|-----|-------|-----|-------|-------|-------|-------|-------|---|
| A | Mi | axi | 4.0 |) m | 3.0 m | | 2.5 m | | |
| В | | | | H | | 4 | | | |
| 4.0 | 680 | *730 | - | - | - | - | - | | |
| 3.0 | 540 | *810 | 640 | *750 | - | | - | | |
| 2.0 | 440 | *870 | 620 | *940 | *1100 | *1100 | *1360 | *1360 | |
| 1.0 | 410 | *880 | 610 | *1100 | 990 | *1590 | 1280 | *2100 | С |
| 0 | 450 | *930 | 590 | *1190 | 950 | *1750 | 1210 | *2190 | |
| - 1.0 | 540 | *1010 | 570 | *1130 | 940 | *1680 | 1330 | *1960 | |
| - 2.0 | 870 | *1060 | _ | _ | 980 | *1190 | 1310 | *1550 | |

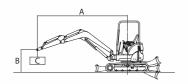
| Blade above ground | | | | | | | | | |
|--------------------|-----|------|-------|------|-------|-------|-------|-------|---|
| A | Ma | axi | 4.0 m | | 3.0 m | | 2.5 m | | |
| В | | | | | | J | | J | |
| 4.0 | 680 | *730 | - | - | - | - | - | - | |
| 3.0 | 530 | 570 | 640 | *750 | - | | - | | |
| 2.0 | 430 | 480 | 610 | 690 | 960 | *1100 | *1360 | *1360 | |
| 1.0 | 400 | 450 | 570 | 650 | 980 | 1060 | 1250 | *1440 | С |
| 0 | 430 | 480 | 570 | 630 | 930 | 1030 | 1170 | *1330 | |
| - 1.0 | 540 | 590 | 570 | 620 | 910 | 1020 | 1300 | *1270 | |
| - 2.0 | 860 | 900 | | | 1050 | 1050 | 1290 | *1550 | |

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.

Machine with cabin, rubber crawlers, bucket of 123 kg.

A: Overhang from rotational axis (m). B: Height of hooking point (m).

C: Safe working load (kg).





Tipping load, rating over front

Tipping load, rating over side 90°