products range

VXE VXT series

0.9 | 1.9 Ton.

EN

Models inside

9VXE | 12VXE | 17VXE
15VXT | 16VXT | 17VXT | 19VXT

IHIMER
THINK GLOBAL, ACT LOCAL

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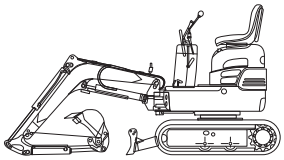
IHI GROUP

9VXE

Micro-excavator: where others cannot reach



The micro-excavator 9VXE, the new ultra-compact model, utilizes the technology of higher class machines.
Power and speed of digging are assured when working i n confined spaces: in small restructuring work, in operations of digging and maintenance of sewerage systems, also in tunnels where larger machines cannot operate, but also in the gardening and nursery sector.

ZERO-TAIL TO ADAPT TO EVERY SITUATION
Thanks to its extremely short rear turning radius of 485 mm, while slewing the chassis frame turns within the clearance of the tracks with the carriage extended and allows greater safety both for the machine and for the operator.
If the carriage is closed access into confined spaces is facilitated. The auxiliary system version is available as an optional for the hydraulic breaker and other attachments.

YANMAR 10HP DIESEL ENGINE
The YANMAR TNV series engine and the hydraulic circuit that uses two gear pumps assure a high operating speed and simultaneous movements.
The engine with a low speed of rotation, enables the utmost efficiency with low consumption and limits polluting emissions according to the antipollution requirements of EPA Tier 4.
The exploitation index is reduced to improve durability and reliability over time.

TWO TRAVELLING SPEEDS
The two travelling speeds (1.7/3.5 km/h) enable efficient travelling and maximum manoeuvrability during operations on site along with fast driving.
The pedal of the second speed is easy to use.

A NEW DESIGN FOR THE UNDERCARRIAGE
The new design permitsan increase in traction during work and greater durability.

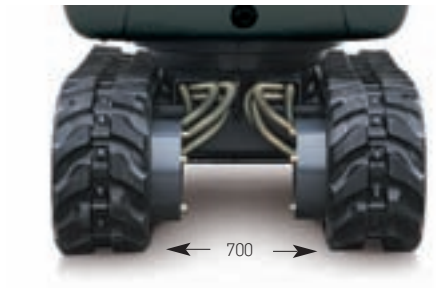
SLEWING ENGINE
Despite the machine's small size, the slewing engine is equipped with an automatic brake to lock the turret in any position.

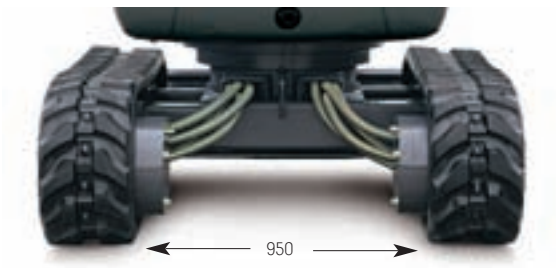
COMPACT DIMENSION

Front turning radius
with swing: **950 mm.**
Rear turning radius:**485 mm.**

Technical features	9VXE
Operating weight w/RS	965 kg
Standard bucket width/capacity	370 mm/0,022 m^3
Undercarriage width	700/950 mm
Rear turning radius	485 mm
Max. digging depth/with long arm	1570/1770 mm

VARIABLE GAUGE UNDERCARRIAGE





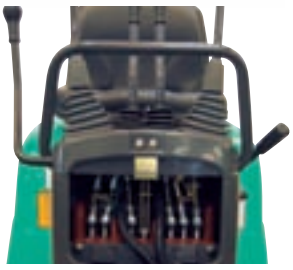
COMFORT AND SAFETY

Designed around the operator, the driving position is comfortable thanks to the adjustable seat and ergonomic controls.
The driving seat can be accessed from both sides.
The 9VXE is equipped with DCS Direct Control System controls that assure maximum precision.
The control pedals of the auxiliary circuit and swing are separate. Both pedals can be folded back thereby increasing the space at the operator's feet.
The control monitor is easy to read.
A safety device checks access to the driving seat, if the lever is lifted it prevents movements of the boom.
A front bar assures the operator a safe and protected driving seat; at the rear the machine is well protected by a cast bumper.

VARIABLE GAUGE UNDERCARRIAGE
Thanks to its extensible frame (700 - 950 mm) the 9VXE ensures high versatility.
Access is permitted into really limited spaces and extending the carriage in very few seconds provides a high safety level and considerable operational stability.

ROLLERS
Rollers with a double, outer side, support reduce wear on the tracks, improve load distribution and increase operational stability.

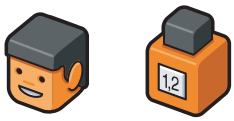
RETRACTABLE DOZER BLADE EXTENSION (optional)
The blade width can be easily adjusted, offering the flexibility to fix the job. Adjustment is simple and easy with two fastening pins.



WORK OUTFIT
The remarkable geometry of the boom movement and the minimal distance between bucket and dozer blade enable performing excavation operations even close to the dozer blade.
The lifting cylinder is supported by a safety plate and all the feed pipes of the cylinders of the bucket and swing mechanism are well protected.
The auxiliary hydraulic circuit with the system is combined for using many hydraulic attachments.

FULL ACCESSIBILITY
The fully opening engine bonnet provides an easy view of most of the engine and allows easy accessibility to the various components for operations of inspection and maintenance.
The battery has reduced maintenance.
The resin tank has been designed to avoid damage from rust and the aluminium radiator ensures a greater exchange of heat and high resistance to corrosion.
The high capacity air filter increases the length of time between maintenance.

EASIER MAINTENANCE
Easy maintenance even if the dimensions are ultra-compact.



12VXE

Small and powerful

The 12VXE is a completely new concept: small enough to pass through a door. Robust enough to do jobs above its category. An exceptional machine. With its 12.9 hp engine and digging depth of 2010 mm it handles heavy work in the most challenging conditions with ease.

YANMAR 12.9 HP DIESEL ENGINE
The 3-cylinder engine runs at low speed with a reduced exploitation index for improved durability and long-term reliability. The air filter with its high filtering capacity is composed of a double cartridge that reduces maintenance and increases the reliability of the engine. The fuel circuit is equipped with a diesel filter with a water separator, ensuring a long engine life. The high efficiency of the engine combined with an advanced hydraulic system ensures low fuel consumption and low running noise, and limits polluting emissions according to the antipollution requirements of EPA Tier 4.

SAFETY
The TOPS certified rollbar cage (an optional FOPS cover is available) ensures outstanding working visibility.
The boom movements are softened by the Anti-Shock valve in the hydraulic circuit. In the phase of lifting the 1st boom the shock of stopping at the boom's limit stop is reduced by the cylinder shock-absorbing system. The slew brake motor prevents accidental arm movements during transport or when the machine Is parked. The arm is controlled by the LH joystick. The auxiliary circuit control pedal is equipped with a tilt-away guard which acts both as a foot rest and circuit lock for remote operation.

TWO TRAVELLING SPEEDS
The two travelling speeds (2.3 / 4.0 kph) enable moving quickly on site along with maximum manoeuvrability.

The 12VXE can drive through doors no more than 90 cm wide. The rollbar can also be removed in just a few minutes to facilitate passing through low clearance areas.

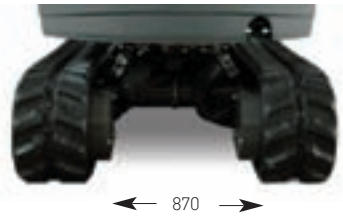
REAR FRAME WITHIN CLEARANCE
While slewing, the chassis frame turns within the clearance of the tracks with the carriage extended, allowing greater safety for the machine and for the operator. With the carriage closed, the machine can access even the most restricted spaces. With a width of 870 mm and a tilt-back rollbar, the machine is perfect for restructuring interiors.

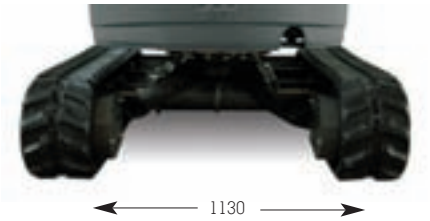
COMPACT SIZE
The perfect combination of small size and high power. The 12VXE gives access to previous inaccessible spaces, for working in interiors or passing through buildings to access internal gardens or courtyards which are otherwise almost impossible to get to.

EASY ACCESS AND MAINTENANCE
The 12VXE's vertically-opening engine hood provides easier access and visibility of most of the engine along with easy accessibility for daily inspection (oil-filters-belts) and maintenance. The battery requires reduced maintenance. The diesel tank is generously sized to allow the machine to be run for an entire day in normal use.
It is easy to access for refilling and protected with a key-operated cap. The pumps are equipped with pressure-gauge points to facilitate monitoring hydraulic pressure values.

COMPACT SIZE

Front turning radius with swing: **1440 mm**.
Machine width in narrow configuration: **870 mm**.





VARIABLE GAUGE UNDERCARRIAGE

The 12VXE's variable gauge undercarriage (870-1130 mm) guarantees excellent safety and working stability in digging and side lifting operations on sites with very little room for manoeuvre and on broken ground or steep gradients. The circular tube improves extension while reducing backlash.

Technical features	12VXE
Operating weight w/RS rollbar	1260 kg
Bucket width/capacity	400 mm / 0.025 m^3
Undercarriage width	870 / 1130 mm
Rear turning radius	550 mm
Max. digging depth	2010 mm

COMFORT AND SAFETY

The operator position is especially comfortable, thanks to the adjustable wrap-around seat design and wrist supports and ergonomic control layout. It is equipped as standard with servo-assisted joysticks that ensure the utmost precision. Two safety levers control access to the driving seat and, if lifted, inhibit all the machine working and travelling controls.
The multifunction analogue control display - hour meter, fuel level, oil temperature and warning lights - is user friendly and facilitates the work of less expert operators, thus increasing their productivity.

EXTENDABLE CARRIAGE AND BLADE

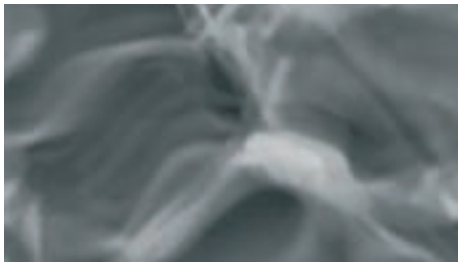
When the machine is used with the carriage retracted, the two blade extensions lock in the retracted position in front of the blade. A lever with mode selector controls the movement of the blade and the track width.

DIGGING PERFORMANCE WORTHY OF LARGER MACHINES

The positioning of the 1st excavator arm cylinder (above the arm to protect against damage), together with the design of the pin and the reduced clearance of the bucket articulation, increase digging performance to 2010 mm, a very high performance category for such a compact model.

PROTECTION FOR COMPONENTS

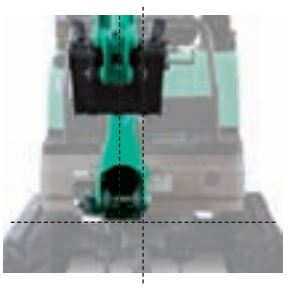
The hydraulic circuits, including the auxiliary circuit for use with a variety of hydraulic attachments, run inside the arm and foremost arm to protect against damage. Blade and arm cylinder protection. Burst-proof sheaths, pipes protected with a metal coil and "multilayer cut-proof" bucket control pipes.



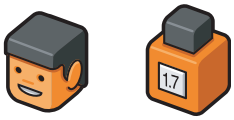
HYDRAULIC CIRCUIT
The circuit includes two variable capacity pumps integrated with the Straight Travel system on the blade section, and a separate gear pump for the servo-controls, thus guaranteeing a perfect balance of operating speed and force. Precise and simultaneous manoeuvres are assured with no loss of power or drop in engine speed.
The 12VXE succeeds in moving forward while performing working operations without losing any linearity in the trajectory.

AUXILIARY HYDRAULIC LINES
The auxiliary hydraulic circuit for hydraulic attachments such as a hydraulic breaker, shears, hydraulic grippers and drills is supplied as standard as far as the 2nd arm.
A deviator valve selects single - or double - action operation.

WORKLIGHT
The arm mounts a worklight for a perfect view of the dig.



ASYMMETRIC ARM
The 12VXE is a zero tail-swing model with the arm position markedly asymmetrical with the fifth wheel, which increases the operator's view of the dig. The swing unit is optimally canted for off-axis digging.



17VXE

Mini-excavator: where others cannot reach

The mini-excavator 17VXE, the new ultra-compact model, utilizes the technology of higher class machines. Power and speed of excavation are assured when working in confined spaces: in small restructuring work, in operations of excavation and maintenance of sewerage systems, in tunnels where larger machines cannot operate, but also in the gardening and nursery sector.

3TNV70 YANMAR 14HP DIESEL ENGINE
The 3-cylinder engine has a low speed of rotation and a reduced exploitation index to improve durability and reliability over time. The air filter with its high filtering capacity is composed of a double cartridge that reduces maintenance and increases the reliability of the engine. The fuel circuit is equipped with a diesel filter with a water separator, ensuring a long engine life. The high efficiency of the engine combined with an advanced hydraulic system ensures low fuel consumption and less noise and limits polluting emissions according to the antipollution requirements of EPA Tier 4.

TWO TRAVELLING SPEEDS
The two travelling speeds (2.1/4.0 km/h) enable moving quickly on site along with maximum manoeuvrability.

SAFETY
The canopy ensures a full view for the operator.
The boom movements are softened by the Anti-Shock valve in the hydraulic circuit. In the phase of lifting the 1st boom the shock of stopping at the boom's limit stop is reduced by the cylinder shock-absorbing system. A similar system comes into action in the phase of fifth wheel rotation as well.
The self braking motor prevents accidental movement when the operator is away. The pedals controlling the auxiliary circuit and swing are separate and strengthened with sturdy guards with the function of a footrest.

REAR FRAME WITHIN CLEARANCE
While slewing, the chassis frame turns within the clearance of the tracks with the carriage extended, allowing greater safety for the machine and for the operator. If the carriage is closed access into confined spaces is facilitated.
It is available in the rubber track or iron track version, with a canopy with 4 pillars with TOPS-FOPS protection (conforming to EU safety regulations).

SOLIDITY AND STABILITY
The long carriage (1570 mm) besides helping reduce the specific pressure on the ground also ensures great front stability even with the blade raised.
The travelling unit is integrated in the width of the tracks.

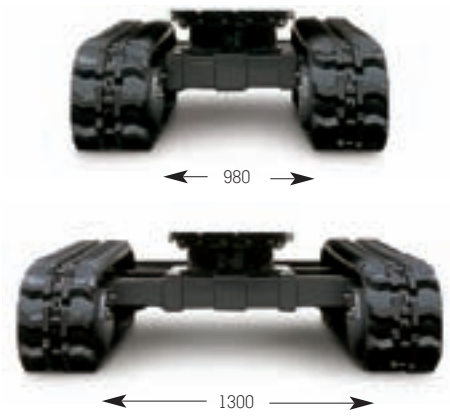
FULLY VERSATILE
The special geometry of the boom and the movement combined with the minimal distance between bucket and dozer blade enable excavating and loading materials of a large size even close to the dozer blade.

COMPACT SIZE

Front turning radius with swing: **1280 mm**.
Machine width in narrow configuration: **980 mm**.

Technical features	17VXE
Operating weight w/RS canopy	1710 kg
Bucket width/capacity	400 mm / 0.044 m^3
Undercarriage width	980 / 1300 mm
Rear turning radius	680 mm
Maximum digging depth / long arm	2100 / 2350 mm

VARIABLE GAUGE UNDERCARRIAGE



COMFORT AND SAFETY

The position is comfortable thanks to the adjustable spring seat, horizontal adjustment, tilting backrest and ergonomic layout of the controls.
It is equipped as standard with servo-assisted joysticks that ensure the utmost precision.
Two safety levers control access to the driving seat and, if lifted, inhibit all the machine working and travelling controls.
The instrumentation console is rational and user-friendly.
Behind the seat there is a document holder.

VARIABLE GAUGE UNDERCARRIAGE

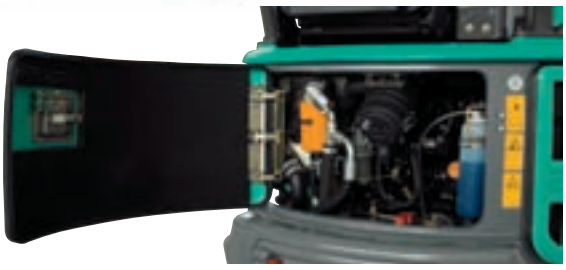
Thanks to the extensible frame (980 - 1300 mm) the 17VXE ensures considerable safety and operational stability during side excavation and lifting operations in confined spaces or on particularly uneven or steep ground. Sites with reduced manoeuvring spaces are no longer a problem.

OPERATING FLEXIBILITY

When the machine is working with the carriage closed, the two extensible sections of the blade are easily stored behind the blade itself. A lever via a function selector controls the movement of the blade or the expansion of the carriage.

HYDRAULIC CIRCUIT

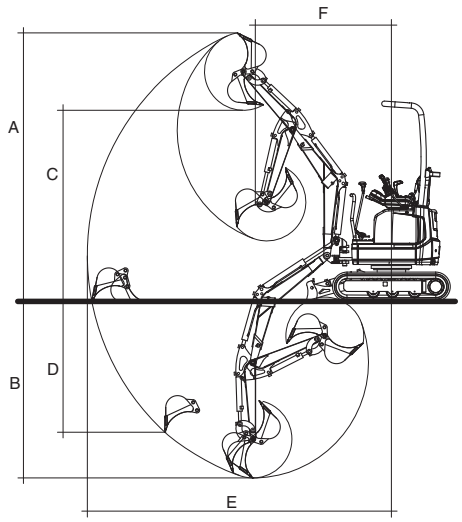
It uses two variable displacement pumps and two gear pumps, ensuring constant balancing between operational speed and working forces. Precise and simultaneous manoeuvres are assured with no loss of power or drop in engine speed.
The 17VXE succeeds in moving forward while performing working operations without losing any linearity in the trajectory.



WORK OUTFIT
The auxiliary hydraulic circuit for using various hydraulic attachments is installed as standard up to the 2nd boom. The system uses a valve to return the oil directly to the hydraulic reservoir.
A pedal locking device enables using manually controlled hydraulic equipment.
As an optional there is a version with a long boom to increase the depth of excavation (max 2310 mm). The second speed push-button control is provided.

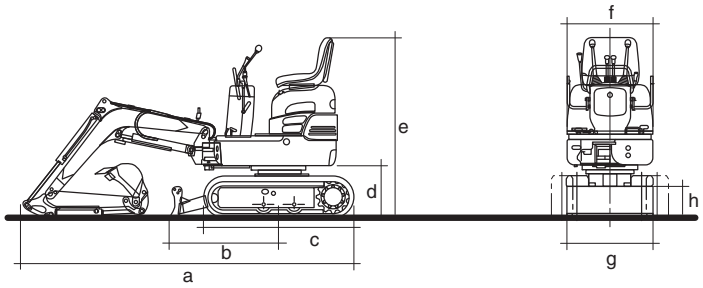
RELIABILITY OVER TIME
The hydraulic pipes of the undercarriage are covered by sheaths for protection against scratching.
The cylinder feed pipes are all internal to minimize every kind of damage.
The lifting cylinder is also fitted with a safety plate.

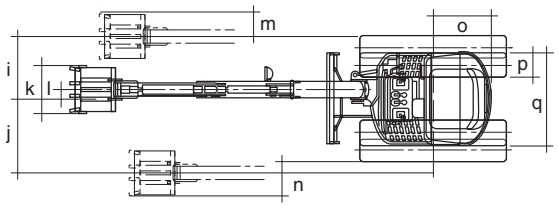
ACCESS AND EASY MAINTENANCE
The side opening engine bonnet provides easier access and visibility of most of the engine and allows easy accessibility to the various components for operations of daily inspection (oil-filters-belts) and maintenance.
The battery requires reduced maintenance.
Refuelling with diesel is done via handy and easy access with a lockable cap.
Checking the operating pressures is facilitated by quick couplers on the pumps.



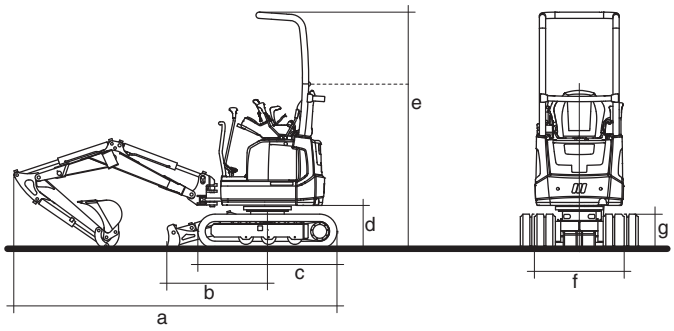
Working range	9VXE /9VXE*	12VXE	17VXE / 17VXE*
A Maximum dumping height	2755 / 2950 mm	3052 mm	3610 / 3810 mm
B Maximum digging depth	1570 / 1770 mm	2010 mm	2100 / 2350 mm
C Maximum digging height	1970 / 2150 mm	2173 mm	2560 / 2760 mm
D Maximum vertical digging depth	1175 / 1400 mm	1487 mm	1770 / 2010 mm
E Maximum digging radius	2980 / 3190 mm	3456 mm	3760 / 3990 mm
F Minimum front turning radius	1220 / 1320 mm	1530 mm	1490 / 1580 mm
at right boom swing	950 / 1030 mm	1290 mm	1280 / 1340 mm

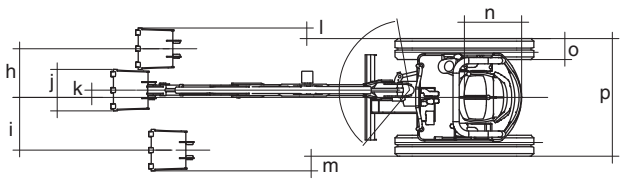
* with long arm



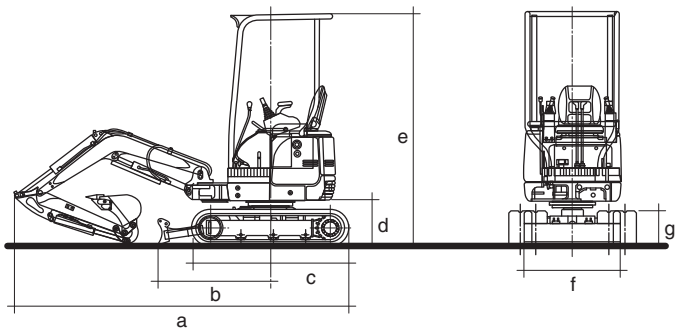


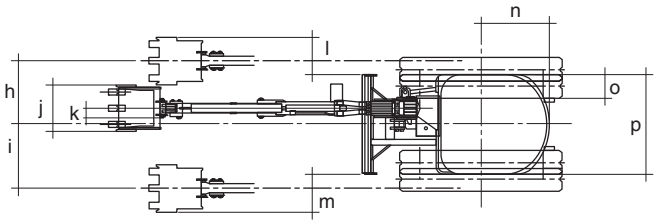
Dimensions (mm)	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
9VXE	2700	890	1220	405	1405	720	700 (950)	240	470	570	370	70	180	280	485	180	700 (950)





Dimensions (mm)	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
12VXE	3110	970	1339	417	2277 (1700)	870 (1130)	395	469	508	400	70	102	141	552	230	870





Dimensions (mm)	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
17VXE	3380	1155	1570	460	2330	980 (1300)	395	615	610	400	150	335	330	680	230	980 (1300)

Photographs appearing in the catalogue were taken for publication and may differ in some cases from actual objects. Specifications are subject to change without notice due to technical improvements or modifications.

General Specifications	**9VXE**	**12VXE**	**17VXE**
STD. Bucket capacity (ISO)	0,022 m^3	0,025 m^3	0,037 m^3
STD. Bucket width	370 mm	400 mm	400 mm
Machine weight R.S. / S.S.* Canopy	890 kg (no canopy)	1180 kg	1615 / 1675 kg
Operating weight R.S. / S.S.* Canopy	965 kg (no canopy)	1260 kg	1710 / 1770 kg
Transport dimensions	720 x 2700 x 1405 mm	3100 x 870 x 2280 mm	3380 x 980 x 2330 mm
Gradeability	30°	30°	30°
Ground pressure R.S. / S.S.* Canopy	26,2 kPa	26,5 / 28,5 kPa	26,5 / 28,5 kPa
Minimum ground clearance	160 mm	175 mm	175 mm

*R.S. / S.S. Rubber Shoe / Steel Shoe

Motor

The 2-cylinder Yanmar 2TNV70 Diesel engine is water cooled. (9VXE). The 3-cylinder Yanmar 3TNE68 Diesel engine is water cooled. (12VXE-17VXE)

Model	Yanmar 2TNV70	Yanmar TNM68	Yanmar 3TNV70
N° cylinders / displacement	2 / 570 cc	3 / 784 cc	3 / 845 cc
Bore x stroke	70 x 74 mm	68 x 72 mm	70 x 74 mm
Max output	13,4 HP a 3600 rpm	18,5 HP a 3600 rpm	19,4 HP a 3600 rpm
Rated output (ISO 1585)	10 HP a 2400 rpm (7,3 kW / 2400 min^{-1})	12,9 HP a 2200 rpm (9,5 kW / 2200 min^{-1})	14,2 HP a 2300 rpm (10,5 kW / 2300 min^{-1})
Fuel consumption	286 g/kW-h	272 g/kW-h	272 g/kW-h
Engine oil pan capacity	1,8 lt (Max level)	3 lt (Max level)	

Electrical System

Voltage	12 V	12 V	12 V
Battery	12 V - 34 Ah	12 V - 45 Ah	12 V - 45 Ah
Alternator	12 V - 20 A	12 V - 20 A	12 V - 20 A
Starter motor	12 V - 1,0 kW	12 V - 0,9 kW	12 V - 0,9 kW

Hydraulic system

The Power Shift hydraulic circuit control system, with two variable displacement pumps and one gear pump, delivers maximum power, extremely easy handling and precise movements (9VXE).

The particularly sophisticated hydraulic system integrated with variable displacement pumps and servo-assisted controls ensure extraordinary manoeuvrability and precision of the movements even when travelling, always maintaining forward movement in a straight line (12VXE-17VXE)

Maximum flow	11,1 lt/min x 2	13,2 lt/min x 2	17,2 lt/min x 2 + 12 lt/min
Max Pressure / Setting	16,2 Mpa (165 kgf/cm^2)	20,6 Mpa (210 kgf/cm^2)	20,6 Mpa (210 kgf/cm^2)
Control	comandi DCS (Direct Control System)	hydraulic remote control	hydraulic remote control

Double action hydraulic circuit for accessories

Maximum flow	22,2 lt/min	26 lt/min	29,2 lt/min
Set pressure	16,2 Mpa (165 kgf/cm^2)	20,6 Mpa (210 kgf/cm^2)	20,6 Mpa (210 kgf/cm^2)

End-of-stroke cushioning

Boom cylinder	rod fully extended	rod fully extended	rod fully extended

Slewing system

Die Schwenkbewegung des Oberwagens wird von einem hydraulischen Motor über einen Drehkranz mit Innenverzahnung und Fernschmierung gewährleistet.

Swing speed	8,7 min^{-1}	8,5 min^{-1}	9,4 min^{-1}
Turntable braking	automatic multi-disc brake	automatic multi-disc brake	automatic multi-disc brake
Absorption of hydraulic shocks	shock less valve	shock less valve	shock less valve

Bucket performance

Max. bucket digging force (ISO 6015)	10,6 kN (1090 kgf)	11,86 kN (1210 kgf)	15,7 kN (1600 kgf)
Max. arm digging force (ISO 6015)	6,2 kN (630 kgf)	7,84 kN (800 kgf)	9,35 kN (950 kgf)

Undercarriage

The extensible lower frame is composed of a welded and machined central body that supports. The two sliding track frames. The bearings of the rollers and of the tightener wheels are permanently lubricated (9VXE-12VXE-17VXE)

Undercarriage length R.S. / S.S.	1220 mm	1339 mm (nur Gummiketten)	1570 / 1550 mm
Variable gauge	700 / 950 mm	870 / 1130 mm	980 / 1300 mm
Crawler shoe width	180 mm	200 mm	230 mm
Lower / upper rollers for side	2	3	3
Track tension	tension spring and grease cylinder	tension spring and grease cylinder	tension spring and grease cylinder
Dozer blade size (Width x Height)	700 / 950 mm x 240 mm	870 / 1130 x 230 mm	980 / 1300 mm x 235 mm
Lift above ground	220 mm	230 mm	230 mm
Drop below ground	150 mm	210 mm	340 mm

Travel system

Each track is operated by a gearmotor composed of a two-speed axial piston engine and an epicyclic reduction gear.

Travel speed (1a / 2a)	1,7 / 3,5 km/h	2,3 / 4,0 km/h	2,1 / 4,0 km/h

Capacity

Fuel tank	8,5 lt	12,5 lt	20 lt
Hydraulic tank	8,2 lt	17 lt	19 lt
Engine oil	14 lt	26 lt	23 lt
Engine coolant	2,2 lt	3,6 lt	3,6 lt

Boom swing system

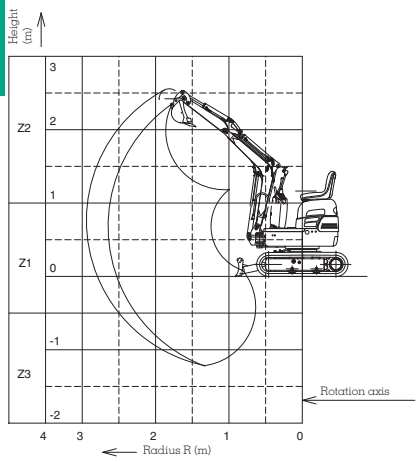
Right swing angle	90°	80°	80°
Left swing angle	50°	50°	55°

Other data

Noise level LwA (2000/14/EC)	91 dBA	93 dBA	92 dBA

Lifting capacity

9VXE

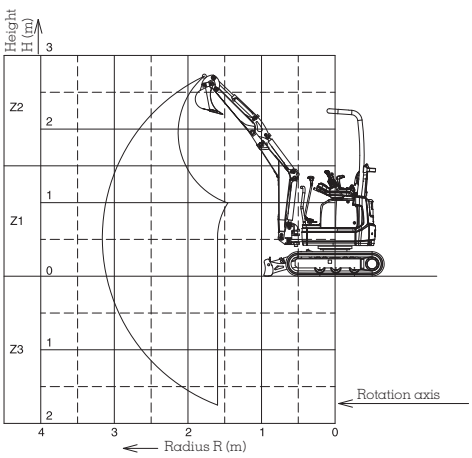


Front lifting	R 2,5	R 2,0	R 1,5	R 1,0
H Z2	100	200	-	-
H Z1	200	200	300	-
H Z3	-	200	200	300

Side lifting (Ce)	R 2,5	R 2,0	R 1,5	R 1,0
H Z2	100	100	-	-
H Z1	100	100	200	-
H Z3	-	100	200	300

Side lifting (Cc)	R 2,5	R 2,0	R 1,5	R 1,0
H Z2	-	100	-	-
H Z1	-	-	100	-
H Z3	-	-	100	200

12VXE

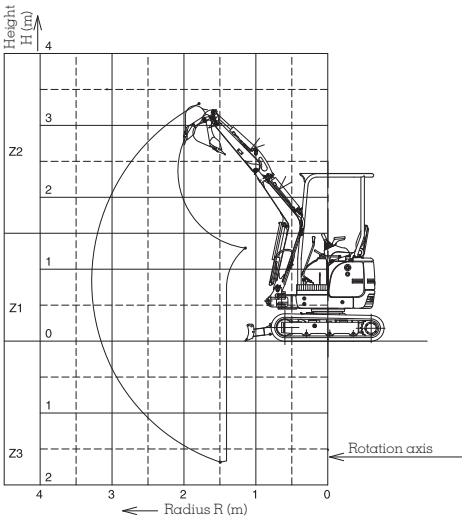


Front lifting	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	-	250	200	-
H Z1	250	350	350	400
H Z3	-	350	400	500

Side lifting (Ce)	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	-	150	200	-
H Z1	100	150	200	300
H Z3	-	150	200	300

Side lifting (Cc)	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	-	100	100	-
H Z1	90	100	150	200
H Z3	-	100	150	200

17VXE

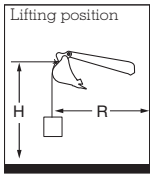


Front lifting	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	300	300	300	400
H Z1	300	400	500	700
H Z3	-	400	400	300

Side lifting (Ce)	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	100	200	300	200
H Z1	100	200	200	300
H Z3	-	200	200	300

Side lifting (Cc)	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	100	100	100	200
H Z1	100	100	100	200
H Z3	-	100	100	200

(Ce) Crawler width expansion **(Cc)** Crawler width contraction



Rated load don't exceed 87% of hydraulic capacity or 75% of stability.

Buckets (applicable to machine)	Bucket capacity ISO (m^3)	Dimensions (mm) outside teeth (A)	No. of teeth	Weight (kg)	Standard arm applications
9VXE	0,016	220	2	16	general digging std
	0,021	320	3	22	general digging std
	0,023	370	3	24	general digging std
	0,060	600	-	40	ditch clearing
12VXE	0,014	250	2	21	digging opt
	0,017	300	3	23	digging opt
	0,021	350	3	26	digging opt
	0,025	400	3	29	digging std
	0,032	500	4	34	loading opt
	0,034	600	-	37	ditch clearing opt
17VXE	0,020	250	2	26	digging opt
	0,025	300	3	30	digging opt
	0,031	350	3	32	digging opt
	0,037	400	3	37	digging std
	0,049	500	4	42	loading opt
	0,050	800	-	46	ditch clearing opt

Using buckets larger than the standard, where possible, must be done with great caution to avoid tipping the machine over and damaging structures.

STANDARD EQUIPMENT

Support frame

Rubber tracks width 180 mm (9VXE), 200 mm (12VXE), 230 mm (17VXE)
Backfill blade with extensions
Attachment points for lifting, anchoring and towing
Remote lubrication of the fifth wheel and swing cylinder foot
Variable undecarriage

Engine

Two-phase dry air filter
Electric pre-heating device
Decanter, transparent precleaner and transparent diesel fuel filter
Drainage cap underneath the diesel tank
Plastic diesel tank
Continuous engine speed control
Conforms to the gas emissions regulation 2004/26/EC

Electrical system

Battery 12V
Fuse box

Driving seat

Adjustable seat with vinyl cover (9VXE)
Cushioned bucket seat with adjustable longitudinal, vinyl covering (12VXE)
Multiple adjustment sprung seat, vinyl covering (17VXE)
Non-skid floor
Non-slip floor and handle facilitating access to the driving seat (12VXE - 17VXE)
Wrist support (12VXE - 17VXE)
Seat belt (12VXE with reel), (17VXE)
High speed button on blade lever (12VXE - 17VXE)
Travel control pedals (12VXE - 17VXE)

Equipment and monitoring devices

Digital (12VXE) / analogue (17VXE) water temperature gauge
Digital (12VXE) / analogue (17VXE) fuel level gauge
Time meter
Warning light for the following functions: preheating, engine oil pressure (9VXE-12VXE-17VXE), water temperature (9VXE-12VXE-17VXE), battery charge (9VXE-12VXE-17VXE), fuel level (12VXE-17VXE), air filter blocking (12VXE), light warning (12VXE).

Canopy version

FOPS protection against falling objects (17VXE)
TOPS protection against tipping (12VXE)
TOPS and ROPS protection against tipping and rolling (17VXE)

Hydraulics

Slew brake motor with shock valves
DCS Direct Control System controls (9VXE)
Mechanical control for variable gauge (9VXE)
Travel control with two independent levers (9VXE)
2nd swing speed control with left front pedal (9VXE)
ISO assisted hydraulic controls (12VXE - 17VXE)
Double-action hydraulic control valve. Variable displacement pump (12VXE - 17VXE)
Accessory circuit hoses (double action + return) (12VXE)
Accessory circuit hoses (double action + return) up to 2nd arm (17VXE)
Hydraulic arm swing control with Joystick (12VXE)
Assisted hydraulic arm swing control with auxiliary right pedal (9VXE) (17VXE)
Track adjustment hydraulic control (12VXE - 17VXE)

Lighting

Work lamp fitted on the arm

Digging and moving equipmen

Enbloc arm length 1350 mm (9VXE),1480 mm (12VXE), 1650 mm (17VXE)
Rocker arm, length 700 mm (9VXE), 870 mm (12VXE), 950 mm (17VXE)
Hydraulic arm swing through 130° (12VXE), 135° (17VXE), 140° (9VXE)
Limit shock absorber on arm cylinder
Remote lubrication of the fifth wheel and swing cylinder foot
Shock valve on arm cylinder (12VXE - 17VXE)

Hydraulic circuits for accessories

Hydraulic circuit for hammer with direct return to the tank
Double-effect hydraulic circuit for accessories
Hydraulic control pedal for hammer (12VXE)
Foldaway control pedal for single and double action

Safety operation

Operating and travel controls lock out when the LH console is raised to enable the operator to exit (12VXE - 17 VXE)
Single key for ignition, diesel tank cap and compartment locks
Provided tool kit
Manual lock for the operating and travel controls (9VXE)
Diesel tank cap with lock and mesh filter
Arm cylinder anti-drift system (17VXE)
Sound alert

Conformity

Machines comply with directive n. 2006/42 EEC and subsequent emendations
Noise emissions comply with directive n. 2000/14 EEC and subsequent emendations
Machines comply with EN 474-1, EN 474-5
ROPS protection conforms to EN 13510 (17VXE)
TOPS protection conforms to EN 13531 (12VXE - 17VXE)
FOPS protection conforms to ISO 10262 standard (17VXE)
Electromagnetic compatibility (CEM) conforms to directive n. 2004/108 EEC and subsequent emendations

OPTIONALS

Digging and moving equipment

Long arm (+200 mm) (9VXE), (+250 mm) (17VXE)
Rapid attachment of mechanical accessories
Buckets, various sizes

Support frame

Steel tracks, width 230 mm (17VXE)

Lighting (17VXE)

2 additional lights
Revolving lamp

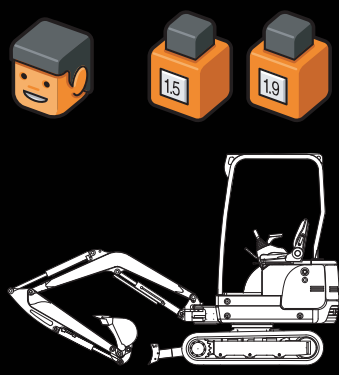
Comfort and safety

Rear counterweight (100 kg)

Conformity

FOPS protection conforms to EN 3449 (12VXE)


VXT 17
IHIMER



15VXT | 16VXT | 17VXT | 19VXT

High performance, operator safety and comfort

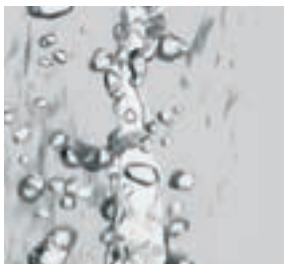
The 15VXT, 16VXT, 17VXT and 19VXT mini excavator models are the top in their category for performance, technological innovation, operating comfort, advanced design, functionality and compact size.
The short-radius frame with a 960 mm turning radius offers high operating stability. The three models are ideal in small restructuring work, excavations and drainage system maintenance, and when working in narrow spaces.

EXCELLENT DIGGING PERFORMANCE
The solid structure of the undercarriage and the boom geometries guarantee reliability, durability and adaptability in any operating area, with excellent digging performance.

YANMAR 3TNV70 14 HP ENGINE
The 854 cc 3-cylinder Diesel engine features low emissions and significantly quieter operation. The limited engine capacity together with an advanced hydraulic system guarantee considerable fuel economy (reduced to just 272 g/kW-h), quieter operation and limited pollutant emissions according to the antipollution requirements of EPA Tier 4.

POWER SHIFT, ANTIDRIFT AND TRACTION LOCK SYSTEM
The innovative and sophisticated distributor is designed to guarantee optimum balance of operations, by means of the "Power Shift" system-sum of capacities.
The 16VXT, 17VXT and 19VXT models are equipped with an "Antidrift System" (on boom cylinder) and "Traction lock".

SHORT RADIUS
The use of a short-radius frame with turning radius of 960 mm offers compactness and operating stability. Reliability and durability are guaranteed by the solid structure of the undercarriage and the rotating upper frame.



HYDRAULIC CIRCUIT
The hydraulic system uses two variable-displacement pumps and a gear pump. Engine power is exploited with maximum efficiency, ensuring high speed and precision in simultaneous forward movement and work operations.

ACCESSIBILITY AND EASY MAINTENANCE
The side-opening bonnet facilitates engine accessibility and visibility for any type of control and maintenance operations. The battery requires little maintenance. Refuelling is facilitated by a large filler with cap and key. The bonnets and doors, all in pressed steel sheet, are designed to allow quick and easy maintenance operations.

BATTERY-DISCONNECTING SWITCH
VXT series mini excavators are equipped with a battery-disconnecting switch, that protects the battery when the machine is not used for long periods.

DIGGING AREA
The 15VXT, 16VXT, 17VXT and 19VXT models offer optimum 360° visibility, both for the version with canopy and that with cab, thanks to ample windows. Two adjustable front work lights, protected to prevent accidental breakage, allow the operator to make use of optimum lighting of the work area. Boom geometries offer excellent digging performance down to a depth of 2460 mm.

Specifications	15VXT	16VXT	17VXT	19VXT
Operating weight R.S. canopy	1525 kg	1625 kg	1730 kg	1745 kg
Bucket capacity	400 mm / 0.040 m^3	400 mm / 0.040 m^3	400 mm / 0.040 m^3	400 mm / 0.040 m^3
Width with undercarriage closed/widened	980 mm	980 mm	980 mm	980 / 1310 mm
Rear turning radius	960 mm	960 mm	1030 mm	960 mm
Max. digging depth / long arm	2010 mm	2100	2360 mm	2460 mm

HIGH COMFORT FOR THE OPERATOR
The work station is comfortable thanks to the adjustable sprung seat, ergonomic controls and servo-assisted joy-sticks that ensure maximum precision.
The machines can be be fitted with cabs with radio, openable front window, windscreen wiper, heater and rear glove box that ensure a high quality standard. If the driving position is abandoned, a system inhibits all operation functions concerning the first arm, forearm, bucket, upper frame rotation and travel.

AUXILIARY SYSTEM
The VXT series is equipped with an auxiliary hydraulic circuit for the use of accessories, with prearrangement of the system up to the boom in the 15VXT and up to the arm in the 16VXT, 17VXT and 19VXT. A special switch enables selection of single or double-acting function.

SAFETY
Boom movements are attenuated by the hydraulic circuit "Shock less valve". In the lifting phase the stopping shock at the end of boom travel is limited by the cylinder's cushioning system.

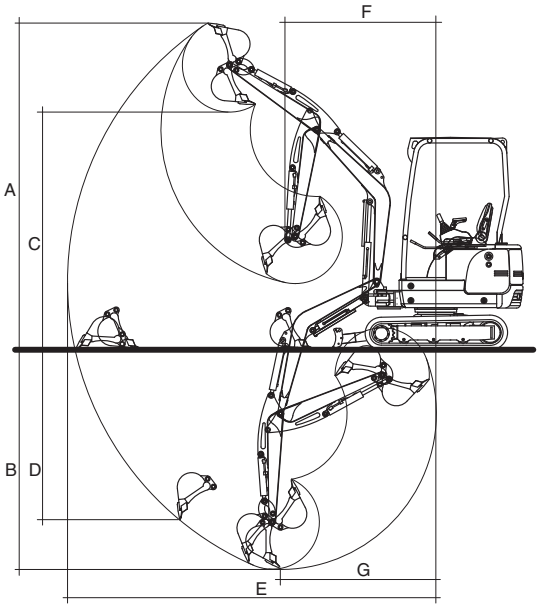
CANOPY AND CAB
Featuring an innovative and refined design, the cabs of VXT series mini-excavators ensure maximum protection for the operator.
Both the cab and the canopy (with 4 uprights) comply with international standards: TOPS (side tipping protection), ROPS (rollover protection) and FOPS (protection against objects falling from above). The harmonious shapes of the cabs and the ample windows are designed to offer comfort and optimum operating visibility.

MINI 15VXT
Compact and light, perfect for use in historic centres and very narrow spaces inaccessible to conventional excavators. With an operating weight of 1525 kg, it ensures a digging depth of 2010 mm. Despite the small size, it offers maximum safety, exceptional operating capacity and high comfort for the operator.

MINI 16VXT
With an operating weight of 1625 kg and a digging depth of 2100 mm, it is equipped with double travelling speed, offering excellent handling and maximum manoeuvrability inside the worksite.
The high-speed system (2.1-4.1 km/h) controlled by an electric dead-man's controller handle and located on the blade control lever, enables easy shifting, especially if combined with the travel control pedals.
There are big advantages in filling operations with the dozer blade.

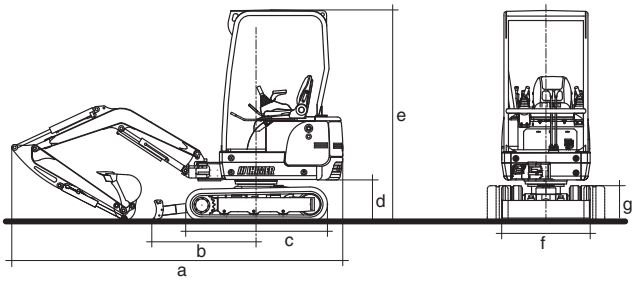
MINI 17VXT
With an operating weight of 1730 kg and thanks to the long arm of 1200 mm reaches a digging depth of 2360 mm.
The high-speed system (2.1-4.1 km/h) offers excellent handling and maximum manoeuvrability inside the worksite.
There are big advantages in filling operations with the dozer blade.

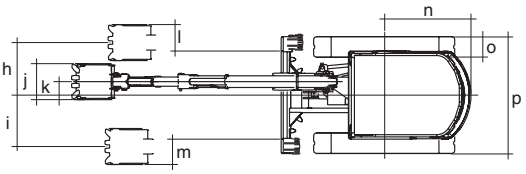
MINI 19VXT: VARIABLE GAUGE UNDERCARRIAGE
Ideal for operating in rough and narrow places, thanks to the expandable undercarriage (from 980 to 1300 mm) operated by an electric control located on the blade control lever, it offers high operating stability and versatility.
With an operating weight of 1745 kg, double travelling speed (2.1-4.1 km/h) and a digging depth of 2460 mm, the 19VXT is the top machine in its category.



Working range	15VXT	16VXT
A Maximum dumping height	3250 mm	3350 mm
B Maximum digging depth	2010 mm	2100 mm
C Maximum digging height	2270 mm	2370 mm
D Maximum vertical digging depth	1490 mm	1600 mm
E Maximum digging radius	3600 mm	3710 mm
F Minimum front turning radius	1448 mm	1530 mm
at right boom swing	1215 mm	1280 mm
G Maximum digging depth radius	1594 mm	1625 mm

	17VXT	19VXT
A Maximum dumping height	3500 mm	3640 mm
B Maximum digging depth	2360 mm	2460 mm
C Maximum digging height	2520 mm	2660 mm
D Maximum vertical digging depth	1810 mm	1980 mm
E Maximum digging radius	3940 mm	4080 mm
F Minimum front turning radius	1573 mm	1663 mm
at right boom swing	1322 mm	1400 mm
G Maximum digging depth radius	1625 mm	1714 mm



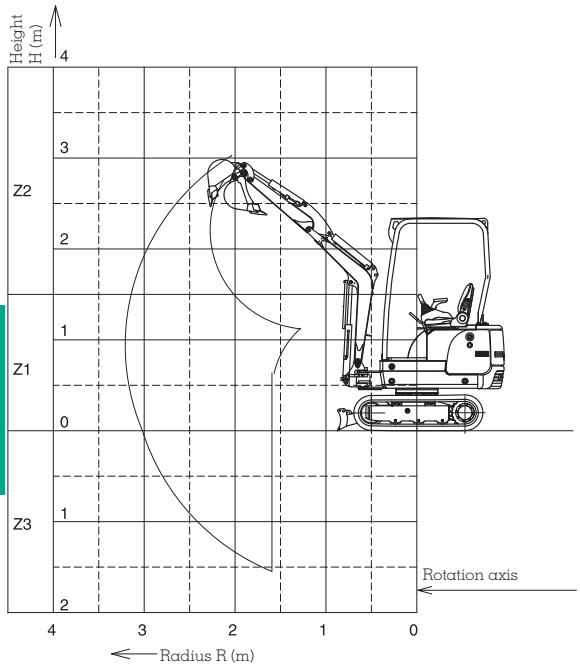


Dimensions (mm)	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
15VXT	3350	875	1425	462	2345	980	395	585	571	430	150	294	282	R 960	230	980
16VXT	3486	1154	1570	462	2345	980	395	585	571	430	150	294	282	R 960	230	980
17VXT	3486	1154	1570	462	2345	980	395	585	571	430	150	294	282	R 1030	230	980
19VXT	3665	1154	1570	459	2340	980/1300	395	585	571	430	150	294	282	R 960	230	980/1310

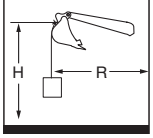
Photographs appearing in the catalogue were taken for publication and may differ in some cases from actual objects. Specifications are subject to change without notice due to technical improvements or modifications.

General Specifications	**15VXT**	**16VXT**	**17VXT**	**19VXT**
STD. Bucket capacity (ISO)	0.044 m^3	0.044 m^3	0.044 m^3	0.044 m^3
STD. Bucket width	400 mm	400 mm	400 mm	400 mm
Machine weight R.S.* Canopy / Cabin	1450 / 1610 kg	1550 / 1710 kg	1655 / 1815 kg	1670 / 1830 kg
Operating weight R.S.* Canopy / Cabin	1525 / 1685 kg	1625 / 1785 kg	1730 / 1890 kg	1745 / 1905 kg
Transport dimensions	3350 x 980 x 2345 mm	3486 x 980 x 2345 mm	3590 x 980 x 2345 mm	3665 x 980 x 2340 mm
Gradeability	30°	30°	30°	30°
Ground pressure	0.31 kPa	0.28 kPa	0.28 kPa	0.31 kPa
Minimum ground clearance	220 mm	220 mm	220 mm	380 mm
*R.S. Rubber Shoe				
Engine				
Model	Yanmar 3TNV70	Yanmar 3TNV70	Yanmar 3TNV70	Yanmar 3TNV70
N° cylinders / displacement	3 / 854 cc direct injection	3 / 854 cc direct injection	3 / 854 cc direct injection	3 / 854 cc direct injection
Bore x stroke	70 x 74 mm	70 x 74 mm	70 x 74 mm	70 x 74 mm
Max output	14.3 kW / 3600 min^{-1}	14.3 kW / 3600 min^{-1}	14.3 kW / 3600 min^{-1}	14.3 kW / 3600 min^{-1}
Rated output (ISO 1585)	14 HP at 2300 rpm (10.5 kW / 2300 min^{-1})	14 HP at 2300 rpm (10.5 kW / 2300 min^{-1})	14 HP at 2300 rpm (10.5 kW / 2300 min^{-1})	14 HP at 2300 rpm (10.5 kW / 2300 min^{-1})
Fuel consumption	272 g / kW-h	272 g / kW-h	272 g / kW-h	272 g / kW-h
Engine oil pan capacity	3.0 lt	3.0 lt	3.0 lt	3.0 lt
Electrical System				
Voltage	12 V	12 V	12 V	12 V
Battery	12 V - 45 Ah	12 V - 45 Ah	12 V - 45 Ah	12 V - 45 Ah
Alternator	12 V - 20 A	12 V - 20 A	12 V - 20 A	12 V - 20 A
Starter motor	12 V - 0.9 kW	12 V - 0.9 kW	12 V - 0.9 kW	12 V - 0.9 kW
Hydraulic system				
The hydraulic system with variable plunger pump and POWER SHIFT control guarantees extremely easy handling and precise movements (15-16-17-19VXT). The STRAIGHT TRAVEL system enables straight translation together with boom operation (16-17-19VXT).				
Two variable displacement pumps and one gear pump serving all actuator and travel circuits.				
Max Pressure / Setting	20.6 MPa (210 kgf / cm^2)	20.6 MPa (210 kgf / cm^2)	20.6 MPa (210 kgf / cm^2)	20.6 MPa (210 kgf / cm^2)
Control	Power assisted hydraulic controls		Power assisted hydraulic controls	
Maximum flow	17.2 x 2 + 12 lt / min	17.2 x 2 + 12 lt / min	17.2 x 2 + 12 lt / min	17.2 x 2 + 12 lt / min
Double action hydraulic circuit for accessories				
Maximum flow	34.4 lt / min	29.2 lt / min	29.2 lt / min	29.2 lt / min
Set pressure	20.6 MPa	20.6 MPa	20.6 MPa	20.6 MPa
End-of-stroke cushioning				
Boom cylinder	Rod fully extended	Rod fully extended	Rod fully extended	Rod fully extended
Slewing system				
Angular position of the turntable determined by an orbital hydraulic motor coupled directly to a slewing ring gear, remote lubrication.				
Swing speed	9.4 min^{-1}	9.4 min^{-1}	9.4 min^{-1}	9.4 min^{-1}
Turntable braking	Automatic multi-disc brake		Automatic multi-disc brake	
Absorption of hydraulic shocks	Shock less valve	Shock less valve	Shock less valve	Shock less valve
Bucket performance				
Max. bucket digging force (ISO 6015)	15.7 kN (1600 kgf)	15.7 kN (1600 kgf)	15.7 kN (1600 kgf)	15.7 kN (1600 kgf)
Max. arm digging force (ISO 6015)	9.4 kN (950 kgf)	10.3 kN (1050 kgf)	10.3 kN (1050 kgf)	9.4 kN (950 kgf)
Undercarriage				
The lower frame consists of a welded and machined middle part.				
Undercarriage length	980 mm	980 mm	980 mm	980 - 1300 mm
Crawler shoe width	230 mm	230 mm	230 mm	230 mm
Lower rollers / upper for side	3	3	3	3
Track tension	By grease gun	By grease gun	By grease gun	By grease gun
Dozer blade size (Width x Height)	980 mm x 235 mm	980 mm x 235 mm	980 mm x 235 mm	980-1300 mm x 235 mm
Lift above ground	215 mm	220 mm	220 mm	220 mm
Drop below ground	195 mm	340 mm	340 mm	340 mm
Travel system				
Each track is driven by a two-speed axial piston hydraulic motor coupled to an epicyclic final drive reduction unit.				
Travel Speed (1a / 2a)	2.0 km/h	2.1 / 4.1 km/h	2.1 / 4.1 km/h	2.1 / 4.1 km/h
Capacity				
Fuel tank	20 lt	20 lt	20 lt	20 lt
Hydraulic tank	19 lt	19 lt	19 lt	19 lt
Engine oil	23 lt	23 lt	23 lt	23 lt
Engine coolant	3.6 lt	3.6 lt	3.6 lt	3.6 lt
Boom swing system				
Right swing angle	80°	80°	80°	80°
Left swing angle	55°	55°	55°	55°
Other data				
Noise level LwA (2000/14/EC)	92 dBA	92 dBA	92 dBA	92 dBA

VXT



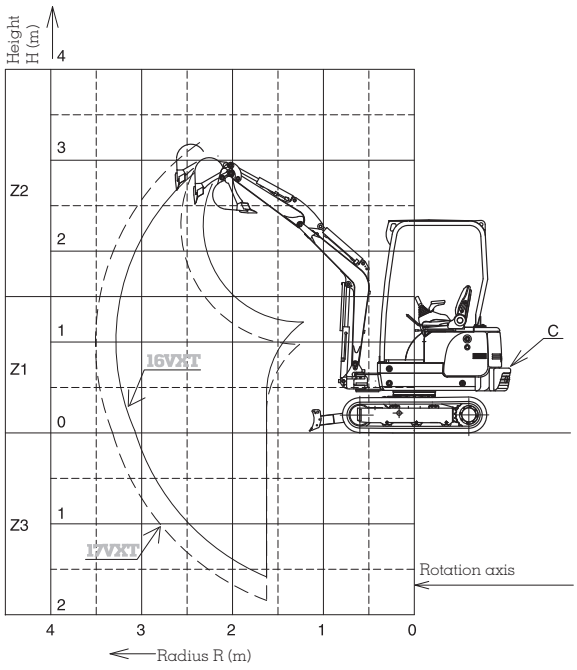
Lifting position



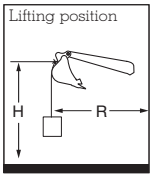
15VXT Lifting capacity

Front lifting	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	300	300	300	300
H Z1	300	400	500	700
H Z3	-	400	400	600

Side lifting	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	100	100	200	200
H Z1	100	100	200	200
H Z3	-	100	100	200



Lifting position

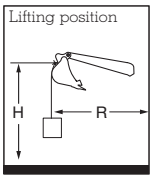


16VXT Lifting capacity

Front lifting	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	300	300	300	-
H Z1	300	400	500	500
H Z3	-	400	500	300

Side lifting	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	100	100	200	-
H Z1	100	100	200	200
H Z3	-	100	200	200

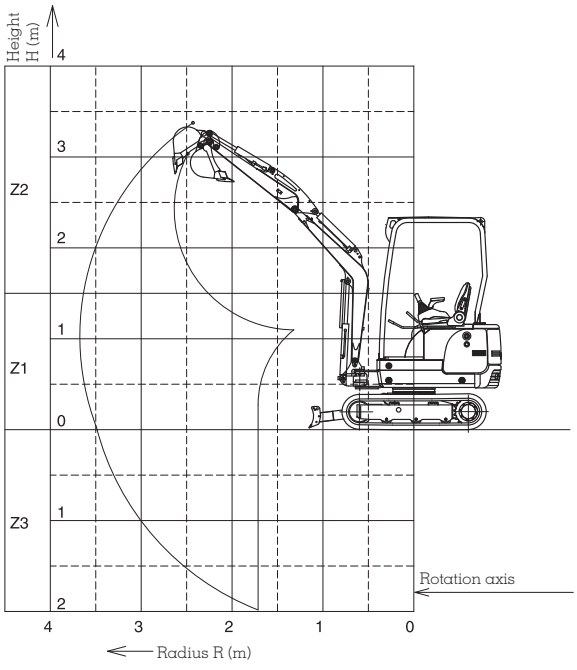
Lifting position



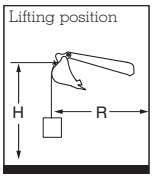
17VXT Lifting capacity

Front lifting	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	300	300	300	-
H Z1	300	400	400	600
H Z3	-	300	300	500

Side lifting	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	100	200	200	-
H Z1	100	200	200	300
H Z3	-	200	200	300



Lifting position



19VXT Lifting capacity

Front lifting	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	200	200	200	-
H Z1	300	400	400	700
H Z3	300	400	400	500

Side lifting (Cc)	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	100	100	200	-
H Z1	100	100	200	200
H Z3	100	100	200	200

(Cc) Crawler width contraction

Front lifting (Ce)	R 3,0	R 2,5	R 2,0	R 1,5
H Z2	200	200	200	-
H Z1	200	200	300	400
H Z3	200	200	300	400

(Ce) Crawler width expansion

Rated load don't exceed 87% of hydraulic capacity or 75% of stability.

STANDARD EQUIPMENT

Undercarriage

Rubber tracks, width 230 mm

Filling blade

Hooking points for anchoring and towing

Remote lubrication of slewing ring and swing cylinder foot

Engine

Double-stage dry air filter

Electric preheating device

Decanter, transparent prefilter and transparent filter for Diesel fuel

Drain plug under Diesel fuel tank

Continuous engine speed adjustment

Electrical system

Battery 12V - 45AH

Horn

Fuse box

Driving position

Multiple adjustment sprung seat, vinyl covering

Non-skid floor

Seat belt

Pedals for forward movement control

Instruments and control

Analogue water temperature control instrument

Analogue fuel level control instrument

Hour counter

Control and alarm indicator lights for the following functions:
preheating, engine oil pressure, battery charge, air filter clogging

Engine alarm device in case of overheating or low oil pressure

Canopy version

FOPS protection against falling objects

TOPS and ROPS rollover protection

Lighting

2 front work lights on canopy

Digging and handling equipment

Monobloc boom, length 1550 mm (15VXT)

Monobloc boom, length 1650 mm (16VXT)

Monobloc boom, length 1650 mm (16VXT)

Monobloc boom, length 1800 mm (19VXT)

Arm 950 mm (15VXT - 16VXT)

Arm length 1200 mm (17VXT)

Arm 1200 mm (19VXT)

135° hydraulic boom swing

Anti-Shock valve on boom cylinder

End-of-stroke cushioning on boom cylinder

Hydraulic circuits for accessories

Hydraulic circuit for hammer with direct return to tank

Hydraulic circuit for double-acting accessories

Safety

Device for locking work controls and traverse levers when the left console is raised to access the driving position

Type approval

Machine complying with Directive 98/37 EEC as amended.

Sound emission complying with Directive 2000/14 EEC as amended

Handling device complying with Standard EN 474-5

ROPS protection complying with Standard EN 13510

TOPS protection complying with Standard EN 13531

FOPS protection complying with Standard ISO 10262

Electromagnetic compatibility(CEM)complying with Directive 89/336 EEC as amended

OPTIONALS

Digging and handling equipment

Quick mechanical coupling for accessories

Rear balance weight (100 kg)

Undercarriage

Steel tracks (width 230 mm)

Lighting

Additional rear work light

Flashing beacon

Protection of natural environment

Catalytic silencer

Comfort and safety

Radio

Cab

FOPS protection for cabin

unleaded.it

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