

products range



1.2 | 1.7 Ton.



Models inside

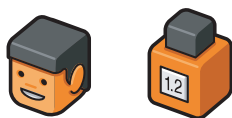
12VXE | 17VXE



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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 97/68/EU and EPA Tier 4.



SAFETY

The TOPS-FOPS 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.

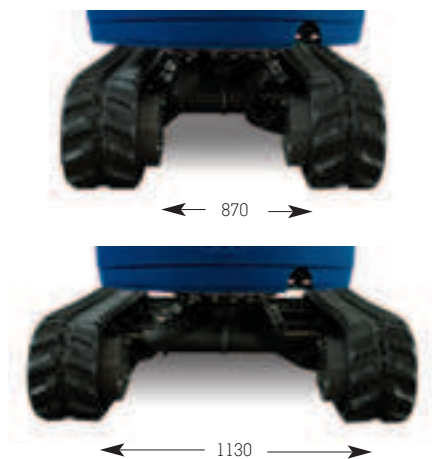


EASY ACCESS AND MAINTENANCE

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-WIDTH CARRIAGE

The 12VXE's variable width 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.



EXTENSIBLE CARRIAGE AND BLADE

When the machine is working with the carriage closed, the two outwards 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.

Technical features

Operating weight CG rollbar
Bucket width/capacity
Width with carriage closed/extended
Rear turning radius
Maximum depth of excavation

12VXE

1260 kg
400 mm / 0.025 m³
870 / 1130 mm
550 mm
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.



DIGGING PERFORMANCE WORTHY OF LARGER MACHINES

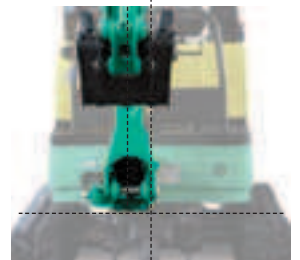
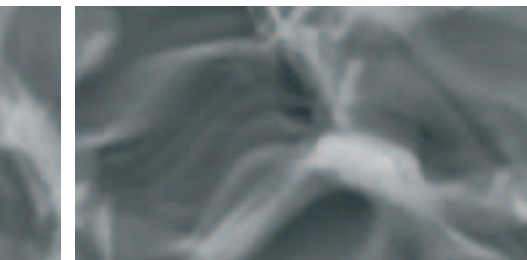
The positioning of the 1st excavator arm cylinder (above the arm to protect against damage), together with the design of the pin and the reduced clearance of the bucket articulation, increase digging performance to 2010 mm, a very high performance category for such a compact model.

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.



Weight 1180 kg
ideal for transport
on trucks in the
3.5 ton category



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

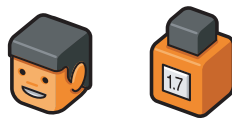
The auxiliary hydraulic circuit for hydraulic attachments such as a hydraulic breaker, shears, hydraulic grippers and drills is supplied as standard as far as the 2nd arm. A deviator valve selects single - or double - action operation.

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 it limits polluting emissions according to the antipollution requirements of the 97/68/EU regulations.



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.**

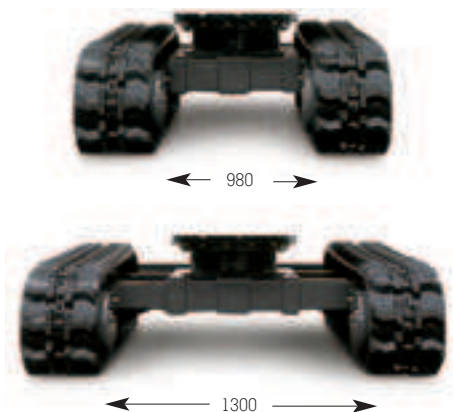
Technical features

17VXE

Operating weight CG canopy
Bucket width/capacity
Width with carriage closed/extended
Rear turning radius
Maximum digging depth

1710 kg
400 mm / 0.044 m³
980 / 1300 mm
680 mm
2100 mm

VARIABLE GAUGE UNDERCARRIAGE



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.



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.



OPERATING FLEXIBILITY

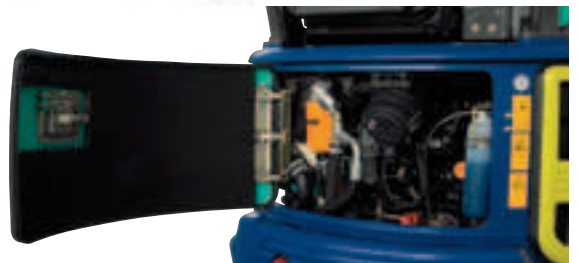
When the machine is working with the carriage closed, the two extensible sections of the blade are easily stored behind the blade itself. A lever via a function selector controls the movement of the blade or the expansion of the carriage.



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

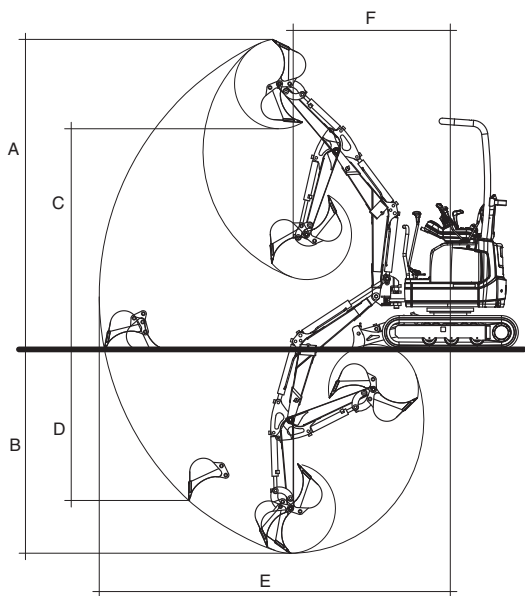
The auxiliary hydraulic circuit for using various hydraulic attachments is installed as standard up to the 2nd boom. The system uses a valve to return the oil directly to the hydraulic reservoir. A pedal locking device enables using manually controlled hydraulic equipment. As an optional there is a version 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.

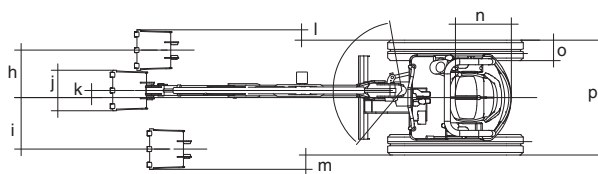
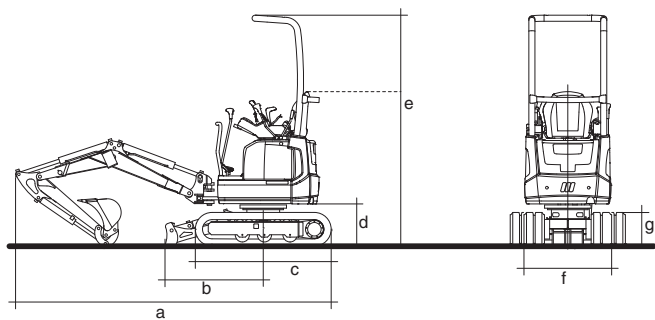
ACCESS AND EASY MAINTENANCE

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.



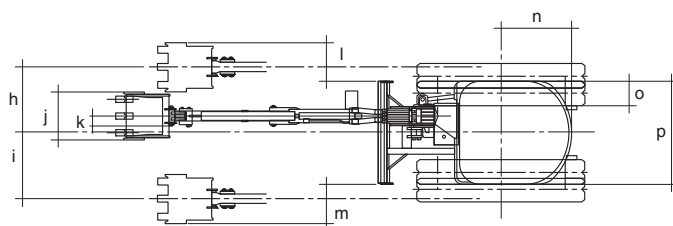
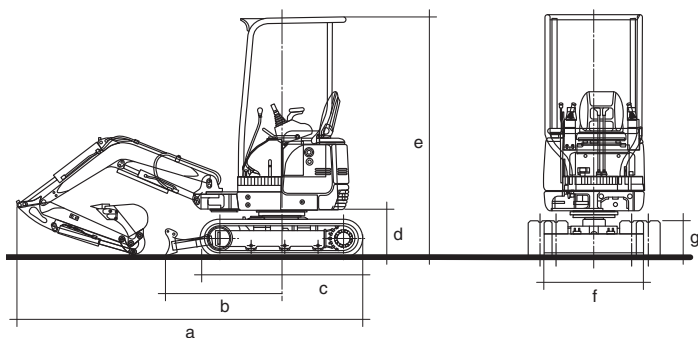
Working range

	12VXE	17VXE
A Maximum dumping height	3052 mm	3810 mm
B Maximum digging depth	2010 mm	2350 mm
C Maximum digging height	2173 mm	2760 mm
D Maximum vertical digging depth	1487 mm	2010 mm
E Maximum digging radius	3456 mm	3990 mm
F Minimum front turning radius at right boom swing	1530 mm	1580 mm
	1290 mm	1340 mm



Dimensions (mm)

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
12VXE	3110	970	1339	417	2277 (1525)	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

STD. Bucket capacity (ISO)	0.025 m³	0.044 m³
STD. Bucket width	400 mm	400 mm
Machine weight R.S. / S.S.* Canopy	1180 kg	1615 / 1675 kg
Operating weight R.S. / S.S.* Canopy	1260 kg	1710 / 1770 kg
Transport dimensions	3100 x 870 x 2280 mm	3380 x 980 x 2330 mm
Gradeability	30°	30°
Ground pressure R.S. / S.S.* Canopy	26.5 / 28.5 kPa	26.5 / 28.5 kPa
Minimum ground clearance	175 mm	175 mm
*R.S. / S.S. Rubber Shoe / Steel Shoe		

Engine

The 3-cylinder Yanmar 3TNE68 Diesel engine is water cooled.

Model	Yanmar TNM68	Yanmar 3TNV70
N° cylinders / displacement	3 / 784 cc	3 / 845 cc
Bore x stroke	68 x 72 mm	70 x 74 mm
Max output	18.5 HP at 3600 rpm	19.4 HP at 3600 rpm
Rated output (ISO 1585)	12.9 HP at 2200 rpm (9.5 kW / 2200 min ⁻¹)	14.2 HP at 2300 rpm (10.5 kW / 2300 min ⁻¹)
Fuel consumption	272 g/kW-h	272 g/kW-h
Engine oil pan capacity		3 lt (Max level)

Electrical System

Voltage	12 V
Battery	12 V - 45 Ah
Alternator	12 V - 20 A
Starter motor	12 V - 0.9 kW

Hydraulic system

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

Maximum flow	13.2 lt/min	17.2 lt/min x 2 + 12 lt/min
Max Pressure / Setting	20.6 Mpa (210 kgf/cm²)	20.6 Mpa (210 kgf/cm²)
Control	hydraulic remote control	hydraulic remote control

Double action hydraulic circuit for accessories

Maximum flow	26 lt/min	29.2 lt/min
Set pressure		20.6 Mpa (210 kgf/cm²)

End-of-stroke cushioning

Boom cylinder	rod fully extended	rod fully extended
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Slewing system

The turret orientation is assured by a hydraulic motor that operates a fifth wheel with remote greased internal toothing.

Swing speed	8.5 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

Bucket performance

Max. bucket digging force (ISO 6015)		15.7 kN (1600 kgf)
Max. arm digging force (ISO 6015)		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.

Undercarriage length R.S. / S.S.		1570 / 1550 mm
Variable gauge	870 / 1130 mm	980 / 1300 mm
Crawler shoe width	200 mm	230 mm
Lower / upper rollers for side	3	3
Track tension	tension spring and grease cylinder	tension spring and grease cylinder
Dozer blade size (Width x Height)	870 / 1130 x 230 mm	980 / 1300 mm x 235 mm
Lift above ground		230 mm
Drop below ground		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)	2.3 / 4.0 km/h	2.1 / 4.0 km/h
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Capacity

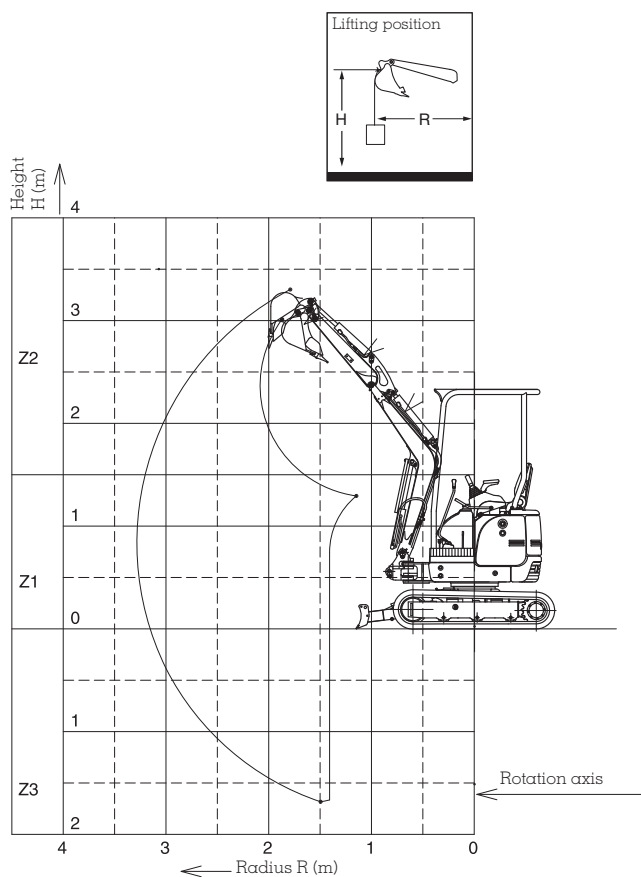
Fuel tank	12.5 lt	20 lt
Hydraulic tank	15 lt	19 lt
Engine oil		23 lt
Engine coolant		3.6 lt

Boom swing system

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

Other data

Noise level LwA (2000/14/EC)	93 dBA	92 dBA
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17VXE Lifting capacity

Front lifting	R 3.5	R 3.0	R 2.5	R 2.0
H Z2	300	300	300	400
H Z1	300	400	500	700
H Z3	-	400	400	300

Side lifting (Ce)	R 3.5	R 3.0	R 2.5	R 2.0
H Z2	100	200	300	200
H Z1	100	200	200	300
H Z3	-	200	200	300

(Ce) Crawler width expansion

Side lifting (Cc)	R 3.5	R 3.0	R 2.5	R 2.0
H Z2	100	100	100	200
H Z1	100	100	100	200
H Z3	-	100	100	200

(Cc) Crawler width contraction

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

Buckets (applicable to machine)	Bucket capacity ISO (m³)	Dimensions (mm) outside teeth (A)	No. of teeth	Weight (kg)	Standard arm application	Long arm application
12VXE - 17VXE	0,020	250	2	25	ditch digging opt	ditch digging opt
12VXE - 17VXE	0,025	300	3	29	ditch digging opt	ditch digging opt
12VXE - 17VXE	0,030	350	3	31	ditch digging opt	ditch digging opt
12VXE - 17VXE	0,040	400	4	36	general digging std	general digging std
12VXE - 17VXE	0,050	500	4	40	loading opt	loading opt
12VXE	0,060	600	4	40	ditch clearing opt	-
12VXE - 17VXE	0,075	800	-	50	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 230 mm
Backfill blade with extensions
Attachment points for lifting, anchoring and towing
Remote lubrication of the fifth wheel and swing cylinder foot
Adjustable track carriage
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 - 36 Ah
Fuse box
Driving seat
Spring seat with multiple adjustment options and vinyl cover
Non-slip floor and handle facilitating access to the driving seat
Wrist support
Seat belt
High speed button on blade lever
Travel control pedals
Equipment and monitoring devices
Analogue water temperature gauge
Analogue fuel level gauge
Time meter
Warning light for the following functions: preheating, engine oil pressure, water temperature, battery charge, fuel level, hydraulic filter blocking, air filter blocking
Canopy version
FOPS protection against falling objects
TOPS and ROPS protection against tipping and rolling
Hydraulics
Slew brake motor with shock valves
ISO assisted hydraulic controls
Double-action hydraulic control valve. Variable displacement pump
Accessory circuit hoses (double action + return) up to 2nd arm
Hydraulic arm swing control with RH pedal
Track adjustment hydraulic control
Lighting
Work lamp fitted on the arm
Digging and moving equipment
Enbloc arm, length 1650 mm
Rocker arm, length 950 mm
Hydraulic arm swing through 135°
Limit shock absorber on arm cylinder
Remote lubrication of the fifth wheel and swing cylinder foot
Shock valve on arm cylinder
Hydraulic circuits for accessories
Hydraulic circuit for hammer with direct return to the tank
Double-effect hydraulic circuit for accessories
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
Single key for ignition, diesel tank cap and compartment locks
Provided tool kit
Diesel tank cap with lock and mesh filter
Arm cylinder anti-drift system
Sound alert

Conformity
Machine complies with directive n. 98/37 EEC and subsequent emendations
Noise emissions comply with directive n. 86/662 EEC and subsequent emendations
Machine complies with EN 474-1, EN 474-5
ROPS protection conforms to EN 13510
TOPS protection conforms to EN 13531
FOPS protection conforms to ISO 10262 standard
Electromagnetic compatibility (EMC) conforms to directive n. 89/336 EEC and subsequent emendations

■ OPTIONALS

Digging and moving equipment
Long rocker arm (+ 250 mm)
Rapid attachment of mechanical accessories
Rapid attachment of hydraulic accessories
Buckets, various sizes
Support frame
Steel tracks, width 230 mm
Lighting
2 additional lights
Revolving lamp
Protection of the natural environment
Catalytic converter
Comfort and safety
Electrical hydraulic anti-theft device
Rear counterweight (100 kg)

distributed by



IHIMER Spa

Head offices and plant

Cusona 53037 San Gimignano (Siena) Italy
Phone: +39 0577 951 21 | Fax: +39 0577 982 400

Administration and Sales

53036 Poggibonsi (SI) Via Salceto, 41 - Italy
Phone: +39 0577 951 21 | Fax: +39 0577 938 076

info@ihimer.com | www.ihimer.com

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