

mini  
excavators



High performance



Models inside

**15VXT | 16VXT | 17VXT | 19VXT**



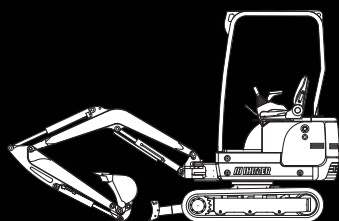
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## 15VXT | 16VXT | 17VXT | 19VXT



### **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.

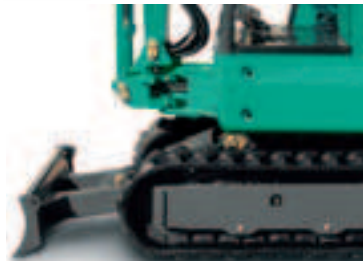


#### **EXCELLENT DIGGING PERFORMANCE**

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 97/68/EU standards.



#### **POWER SHIFT, ANTIDrift AND TRACTION LOCK SYSTEM**

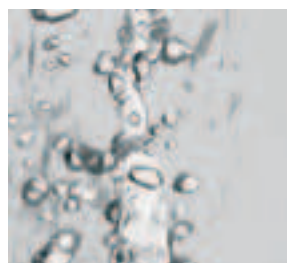
The innovative and sophisticated distributor is designed to guarantee optimum balance of operations, by means of the "Power Shift" system-sum of capacities. The 16VXT, 17VXT and 19VXT models are equipped with an "Antidrift System" (on boom cylinder) and "Traction lock".



#### **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 m³	400 mm / 0.040 m³	400 mm / 0.040 m³	400 mm / 0.040 m³
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 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.

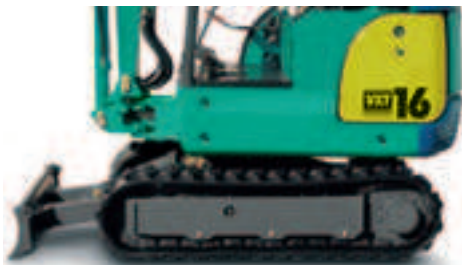
#### CANOPY AND CAB

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.



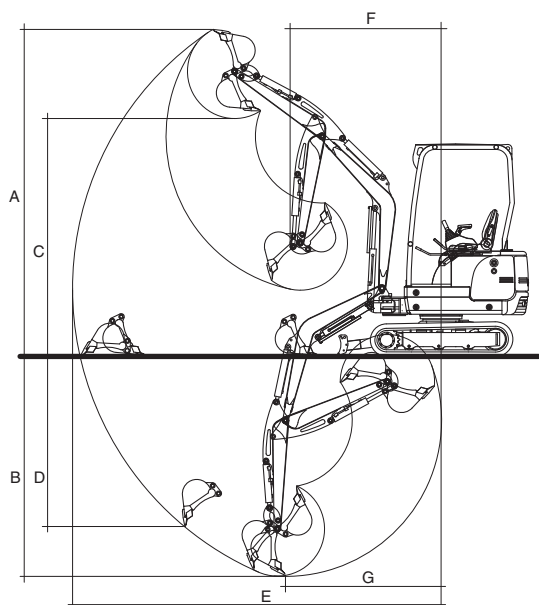
#### **MINI 17VXT**

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**

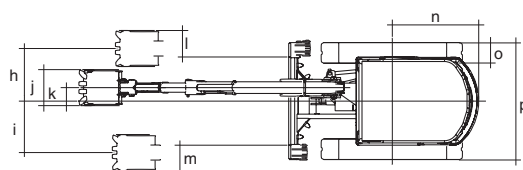
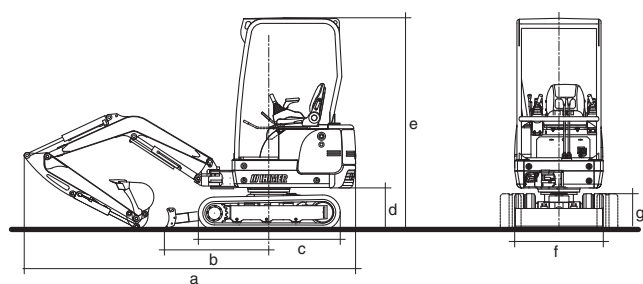
Ideal for operating in rough and narrow places, thanks to the expandable undercarriage (from 980 to 1300 mm) operated by an electric control located on the blade control lever, it offers high operating stability and versatility. With an operating weight of 1745 kg, double travelling speed (2.1-4.1 km/h)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



#### Working range

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

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



Dimensions (mm)	$\alpha$	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.

# 15VXT 16VXT 17VXT 19VXT

## General Specifications

STD. Bucket capacity (ISO)	0.044 m <sup>3</sup>	0.044 m <sup>3</sup>	0.044 m <sup>3</sup>	0.044 m <sup>3</sup>
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 <sup>-1</sup>	14.3 kW / 3600 min <sup>-1</sup>	14.3 kW / 3600 min <sup>-1</sup>	14.3 kW / 3600 min <sup>-1</sup>
Rated output (ISO 1585)	14 HP at 2300 rpm (10.5 kW / 2300 min <sup>-1</sup> )	14 HP at 2300 rpm (10.5 kW / 2300 min <sup>-1</sup> )	14 HP at 2300 rpm (10.5 kW / 2300 min <sup>-1</sup> )	14 HP at 2300 rpm (10.5 kW / 2300 min <sup>-1</sup> )
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 <sup>2</sup> )	20.6 MPa (210 kgf / cm <sup>2</sup> )	20.6 MPa (210 kgf / cm <sup>2</sup> )	20.6 MPa (210 kgf / cm <sup>2</sup> )
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
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## 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 <sup>-1</sup>	9.4 min <sup>-1</sup>	9.4 min <sup>-1</sup>	9.4 min <sup>-1</sup>
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 (1α / 2α)	2.0 km/h	2.1 / 4.1 km/h	2.1 / 4.1 km/h	2.1 / 4.1 km/h
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## Capacity

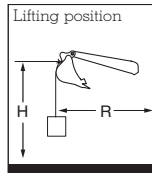
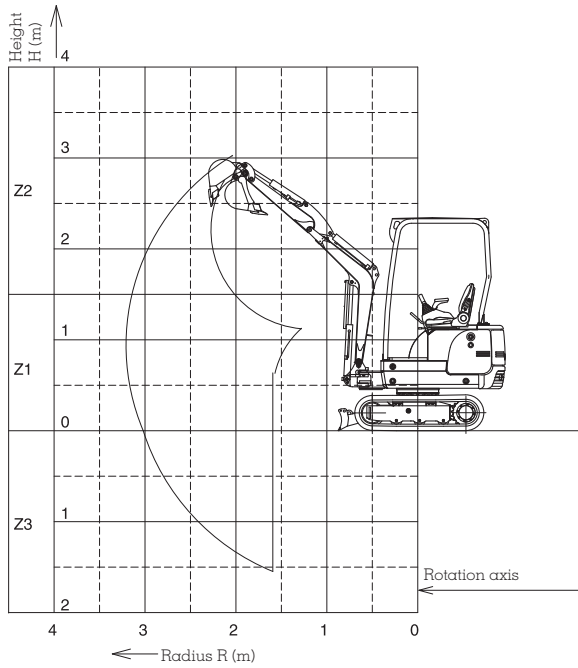
Fuel tank	20 lt	20 lt	20 lt	20 lt
Hydraulic tank	19 lt	19 lt	19 lt	19 lt
Engine oil	23 lt	23 lt	23 lt	23 lt
Engine coolant	3.6 lt	3.6 lt	3.6 lt	3.6 lt

## 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
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### 15VXT Lifting capacity

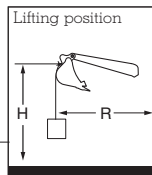
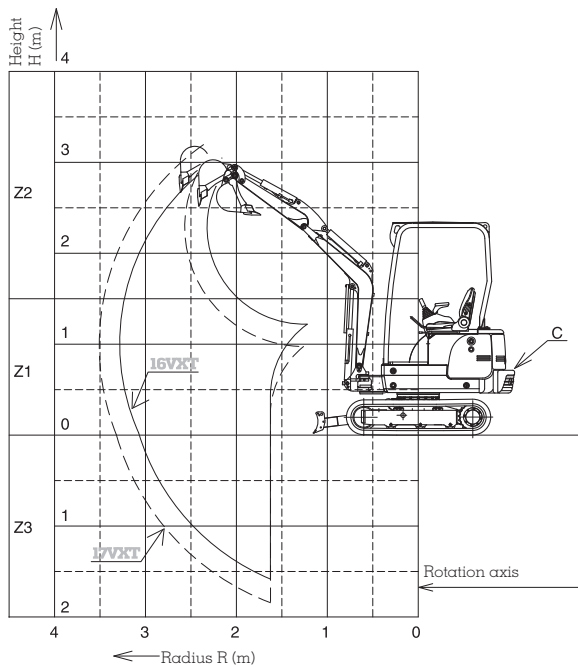
Front lifting	R 3.0	R 2.5	R 2.0	R 1.5
H Z2	300	300	300	300
H Z1	300	400	500	700
H Z3	-	400	400	600

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

### 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

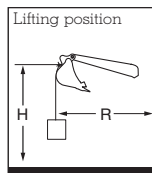
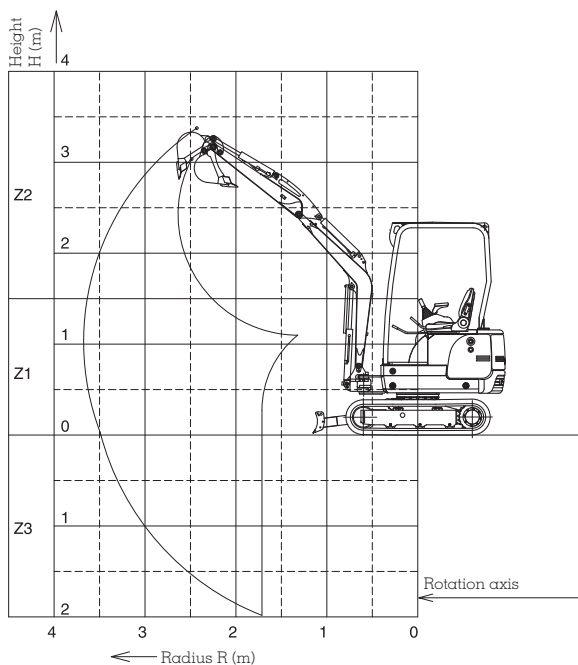
Side lifting	R 3.0	R 2.5	R 2.0	R 1.5
H Z2	100	100	200	-
H Z1	100	100	200	200
H Z3	-	100	200	200



### 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



### 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  
Antitheft device  
Cab

distributed by



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