

Mecalac

MULTIFUNCTIONS WHEELED MACHINE **12MSX**



> Experience of your worksite

EFFICIENT AND QUIET FOR WORKING IN TOWNS

A particularly quiet 3.3 l turbo engine

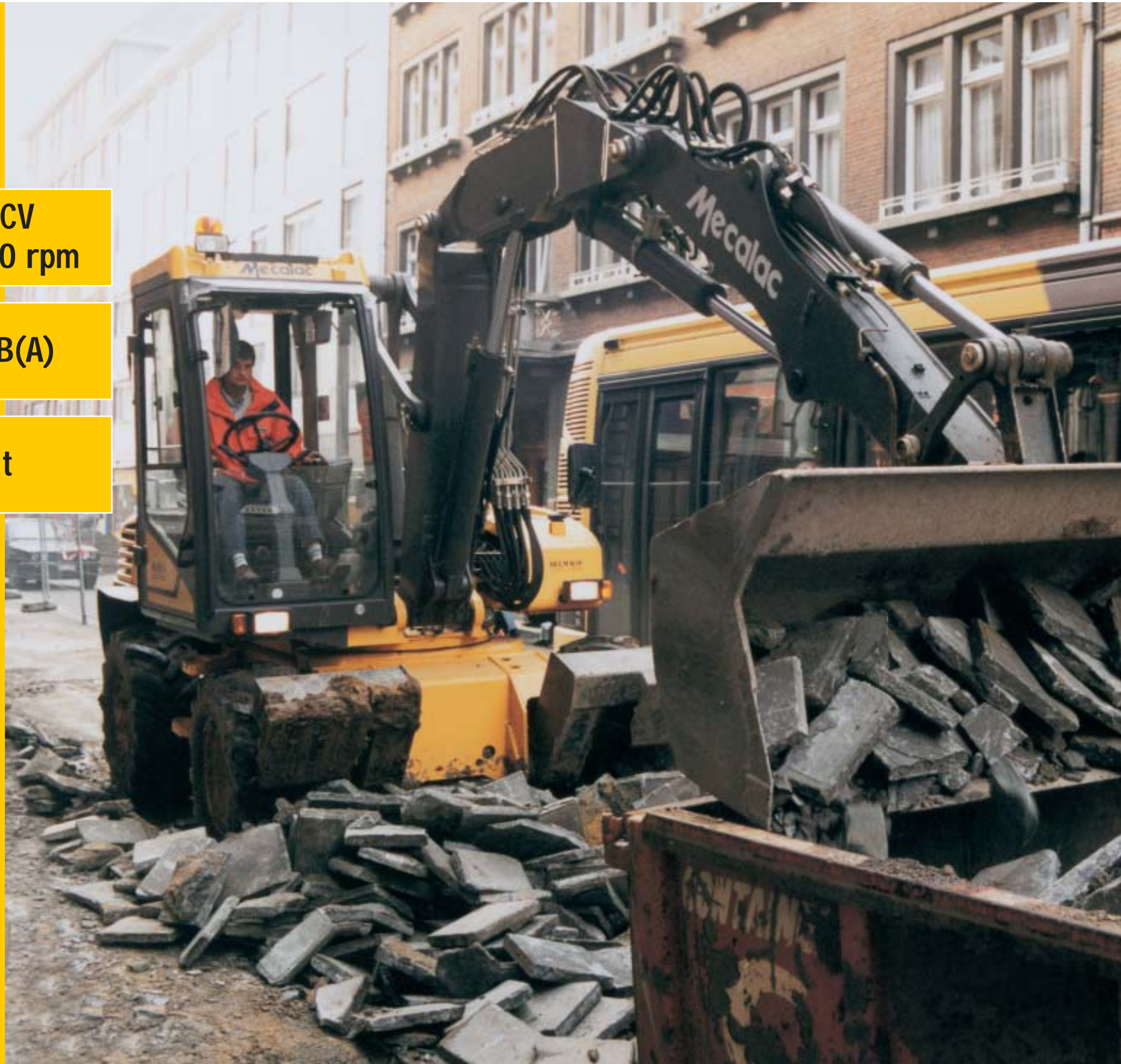
82 CV
at 2200 rpm

99 dB(A)

9 t

Complete equipment as standard

Accessory compatibility with the previous models.



MULTIPURPOSE EXCAVATORS

13t wheels	714MW
13t crawlers	714MC

MULTIFUNCTIONS MACHINES

7t	10MSX
9t	12MSX
9t	12MXT
13t	14MBX

MECALAC, THE CONCEPT FOR YOUR URBAN SITES

With over 25 years of practical experience at your side, Mecalac offer original and innovative solutions:

- boom ram mounted on parallelogram
- turret with total rotation, independent of the engine
- standard operating modes: to standard ISO 10968.



Whether you are in the building or road industries, local authorities, cable or pipe layers, landscape gardeners, working in urban areas... Mecalac endeavour to meet your requirements for compactness, performance and cost-effectiveness.

PERFORMANCE

Picking up the heaviest loads up and positioning them precisely and safely are usual jobs for the Mecalac. Unloading a lorry, handling a pallet 3 metres below ground, or setting it down over a wall are also part of daily work.



Efficiency of the operating sequence, quick-release coupling, compactness and speed of cycles give the Mecalac all its flexibility.

COST-EFFECTIVENESS...

A single Mecalac on the site for digging, loading, handling and lots of other jobs ...

Tool changing is done in just a few seconds from the cab, thanks to the quick-release coupling with automatic locking.



COMPACTNESS...

The Mecalac uses only one lane, irrespective of the job to be done, and remains efficient, even in the most restricted places



TO WORK BETTER AND MORE QUICKLY...

A PANORAMIC, COMFORTABLE CAB:

The cab, in order to meet the FOPS and ROPS safety requirements, is particularly spacious. With large glazed areas, you can see all of the equipment and site environment. Separated from the engine, it has a very low sound level.

Ergonomic cab design, safety and low sound level are essential to the operator's efficiency throughout the day. Ease of operation and precision of controls make the Mecalac a machine accessible to everyone.

STANDARD OPERATION - COMPLYING WITH STANDARD ISO 10968:

In **Excavator Mode**, the Mecalac, with its 3-part equipment, behaves like a standard excavator with 2-part equipment, thanks to the patented ram coupling system.

In **Loader Mode**, the Mecalac behaves like a standard loader, the operator having his left hand on the steering wheel and his right hand on the manipulator.

In **Mecalac Modes**, the operator controls each equipment and accessory ram individually to meet particular situations.



Comfort equipment : foldaway front windscreen, high-performance ventilation, filtering sun visor, multi-adjustable seat, (pneumatic seat as an option), very efficient air conditioning*, heating and defrosting, adjustable steering column...

Cab comfort and easy operation, precision and progressiveness of the controls contribute to making the Mecalac a high-productivity machine.

Easy Drive* MAKES DRIVING EASIER

Easy Drive, the power-assisted steering system, combines coupling of the equipment rams with control of the bucket ram, thus making digging, loading, handling and banking work easier.

Digging: Easy Drive maintains the approach angle of the bucket whatever movements the equipment makes and the driver uses just 2 controls to operate the equipment as a whole, giving you a flat bottom trench in one operation, with no accidental loss of material before unloading.

Loading: Easy Drive maintains the approach angle of the bucket, allowing flat and regular clearance of materials in one operation, with no accidental loss of material before unloading.

Handling: Easy Drive maintains the inclination of the pallet whatever movements the equipment makes, even when driving on hilly ground.

Banking: Easy Drive maintains the approach angle of the bucket whatever movements the equipment makes and the driver uses just 2 controls to operate the equipment as a whole, giving you regular banking in one operation.

Immediate results: Safety, Cost-effectiveness, Cleanness and Quality.

EASY DRIVE IS A DEVELOPMENT EXCLUSIVE TO MECALAC

SOPHISTICATED FUNCTIONS:

Inching for a slow approach :

This pedal permits a slow, precise approach whilst keeping the engine at maximum speed in order to deliver the power required to the equipment.

Load Sensing for optimum pressure on the equipment

This system adapts the hydraulic pressure on the equipment to meet the effort required.

*optional

SPECIFIC ADVANTAGES...

Stable and efficient, the 12MSX is a natural choice for the road construction site and, of course, is an ideal hirer's machine.

Further the articulated undercarriage and oscillating rear axle unit is by its very essence designed for work in demanding and difficult terrain. With 4 wheel drive, it enables the 12MSX to maintain permanent contact with the ground, even if the ground is uneven.

The turbo engine's 82 hp, and the independence of the hydraulic equipment and travel circuits, give the machine the power essential to operate on the most difficult ground one can encounter on a road repair or construction site.

With the strength of its 9 tonnes, the 12MSX is stable in any situation thanks to its low centre of gravity. This is due in particular to the transverse arrangement of the engine in the rear undercarriage section.

The independent stabilizers are standard and make the machine even better balanced. These are available in a telescopic version (as an option). They provide additional stability for work or handling at 90 degrees to the side.



COMPACT AND QUIET, FOR WORK IN TOWN

Compact, the 12MSX does a complete rotation in a radius of just 1.36 m, and offers operating precision and flexibility particularly appreciated in all handling operations. In this area, it offers the additional advantage of setting down a pallet 3 metres below ground level, thus becoming the ideal machine for building sites. The small handling jib, pallet lifter and handling plate are all accessories which contribute to its professionalism.

Very quiet when working, the 12MSX is appreciated by people living nearby. A soundproofing kit (optional) enables the machine to meet the criteria imposed by the "Ange Bleu" label.



RELIABILITY AND SIMPLICITY OF DAILY SERVICE CHARACTERIZE THE 12MSX

The 12MSX benefits from the experience gained on the other models in the range: the fabricated elements (undercarriage, turret and equipment) are those of the 12MXT and it has the same travel hydraulics as the 10MSX.

Equipment's hydraulic circuit particularly simple to adjust. A wide cover on the hydraulic compartment gives easy access at a convenient height to the load sensing SX14 distribution valve block.

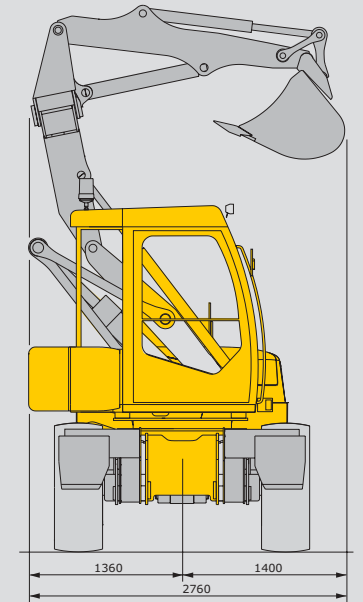
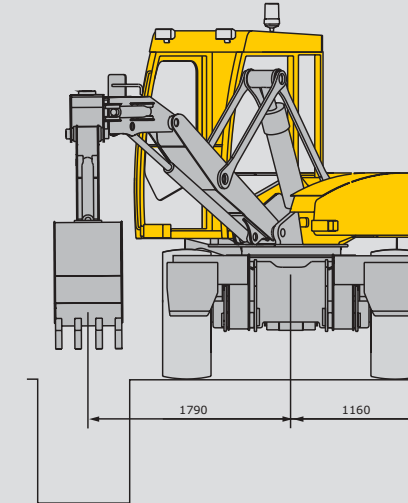
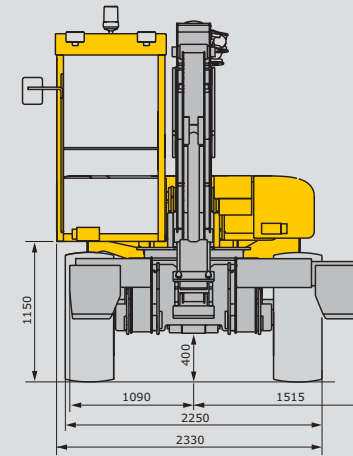
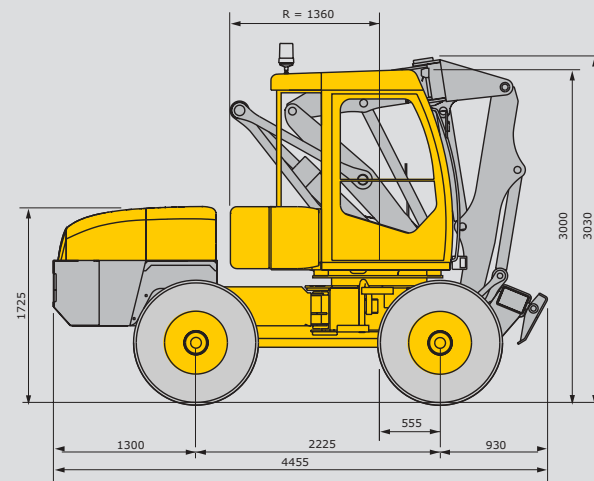
The engine is mounted transversely, with two large trap doors under the cradle. These permit easy access for maintenance operations.

The number of greasing points is particularly small, thanks to the one-shot greasing of the parallelogram and crown wheel*.

- * As an option:
- Simultaneous greasing of the parallelogram, crown wheel and equipment
 - Automatic one-shot greasing.



TECHNICAL SPECIFICATION



WEIGHT

- Empty in working order without bucket 8975 kg
- Empty in working order with loader bucket 9315 kg

ENGINE

- Turbocharged engine
- Type CUMMINS 4BT 3,3
- Diesel 4 cylinders in line
- Power 60 kW at 2200 rpm, 82 hp
- Max net torque 300 Nm at 1800 rpm
- Cylinder capacity 3300 cm³
- Cooling system : by water
- Air filter dry, cartridge type
- Fuel consumption (depending on conditions of use) ... 7 to 10 l/h
- External soundproofing 99 dB(A)

ELECTRICAL CIRCUIT

- Voltage 12 V
- Batteries 175 Ah
- Alternator 12 V / 60 A
- Starter 12 V / 2,7 kW

CHASSIS-SECTION

- Articulated type
- Turning circle inside 2,65 m
- outside 4,91 m
- Chassis equipped with 2 independent front stabilisers, either fixed or telescopic*.
- Blade*

Tanks

- Hydraulic oil, capacity 82 l
- Diesel fuel, capacity 120 l
- * on option



TURNTABLE

- Total 360° rotation
- Crown wheel drive with internal gear.
- Slewing by hydraulic motor with brake.
- Rotation speed 6,5 rpm
- Hydraulic motor 750 cm³ max pressure 230 bars.
- Fixed capacity gear pump :
- Max pump flow rate 32 l/min
- Patented HYDRO-SENSOR type, dampened
- Cross-over valve for movement start-up and progressive stopping of the rotation turntable.

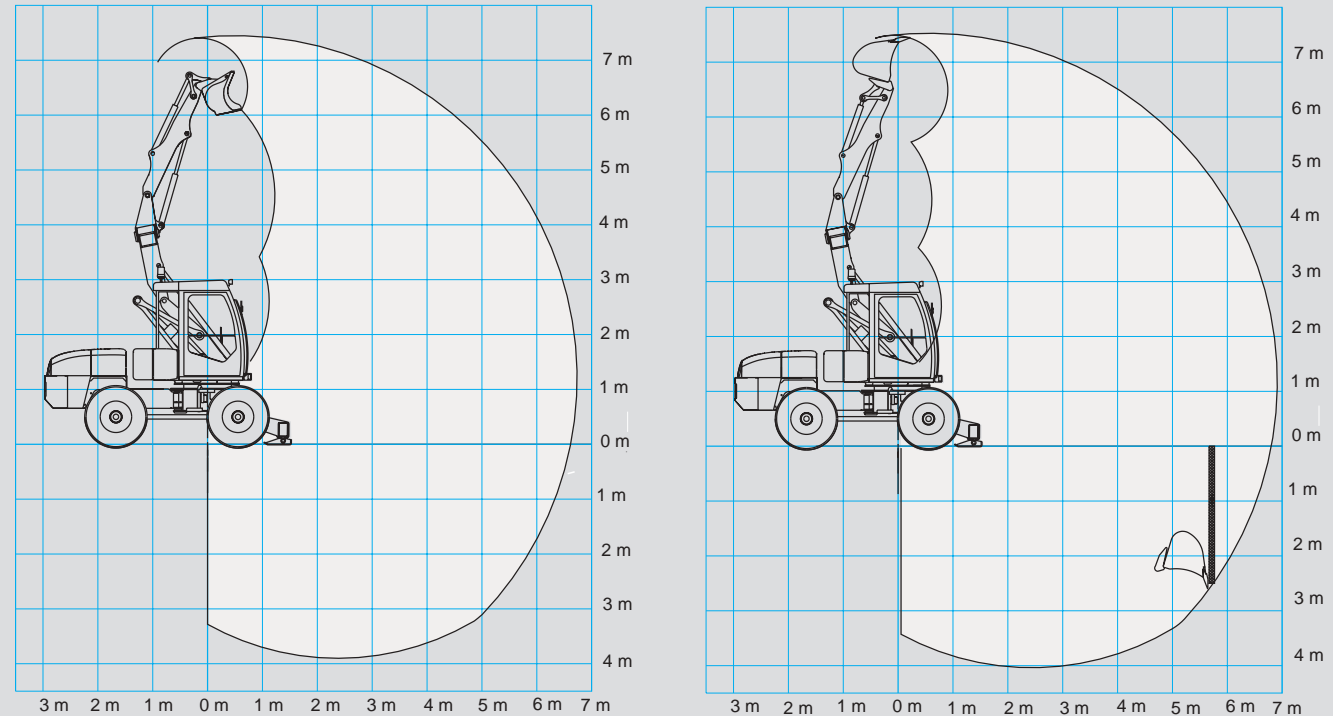
STEERING

- Hydraulic ORBITROL unit ; priority valve, actuated by load sensing signal.
- Shock protection valves 240 bars.

CAB

- Certified ROPS and FOPS
- Single shell fixed on 4 elastic blocks, windscreen can be folded up the roof of the cab, sliding door window, opening rear window.
- Servo-controls integrated in the consoles on either side of the driver's seat, and adjustable with respect of the seat.
- Suspended, shock-absorbing seat, with height and longitudinal adjustment, equipped with seat belt.
- Electronic instrument panel combining all safety and monitoring information, visual displays and acoustic alarms.
- Easy, visible access to fuses and electrical components.
- Patented driver assistance system with four possible modes :
 - **MECALAC 1+2**, for handling and precision work.
 - **EXCAVATOR**, for use as excavator, for earth-works and grading work.
 - **LOADER**, for rehandling and grading
- Adjustable steering column.
- Waterheated, ventilation with large air flow, 320 m³/h, great capacity of demisting and defrosting.
- Soundproofing in cab 71 dB(A)
- Air conditioning as an option.

TECHNICAL SPECIFICATION



TRANSMISSION

- Closed-circuit hydrostatic transmission with "automotive" type automatic control.
- Electrically-controlled travel direction reversing system on steering column ; can be actuated without stopping.
- Two speed ranges in both travel directions : "site" and "road".
- "Inching" or slow approach control allowing the machine speed to be reduced progressively until stopped with constant diesel engine revs : this function is controlled by a foot pedal which also combines as a braking function.
- Hydraulic travel motor and pump have variable capacity allowing continuous variation in transmission ratio over the entire speed range : 0 to 20 km/h



Max traction force 5100 daN
 Max pressure 480 bar
 Max pump flow rate 123 l/min
 Motor 107 cm³

Axles and wheels

- Four equal size drive wheels
- As standard equipped with Mecalac 405 / 70 - 20 tyres.
 - On option equipped with Michelin 425 / 75 - 20 XM 27 TL tyres.
 - On option equipped with Mecalac 18-19.5.
 - On option equipped with Michelin 18-19,5 XF tyres.
- Fixed rigid drive axle on front chassis-section
 - Oscillating drive axle on rear chassis section, +/- 10°
 - Oscillating locking system by 2 hydraulic cylinders.
 - On rear axle, single-ratio transfer gear box transferring movement directly to the rear axle and to the front axle via a transmission shaft. Limited-slip differential on both axles.

Brakes

- Multi-disc, oil bath main service brakes built into both axles.
- Multi-disc, oil bath parking brake built into the front axle.
- Multi-disc, oil bath emergency brake built into the front axle, actuated by pressure drop.
- Hydrostatic brake.

HYDRAULIC CIRCUIT

Equipment circuit

- Variable capacity piston pump 45 cm³
- Max pressure 280 bars
- Max pump flow rate 100 l/min

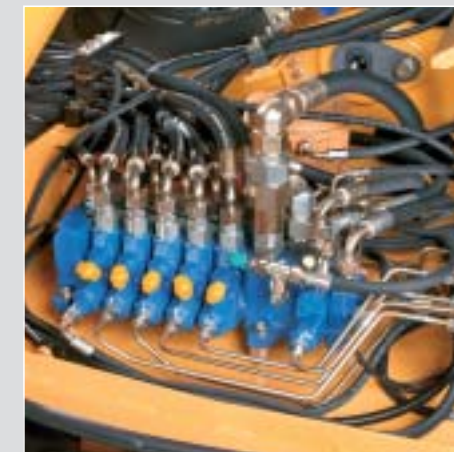
• SX14 type distribution valve block :

- proportional load sensing system with individual balance valve for each item : boom, boom extension, arm, bucket and auxiliary (optional).
- proportionality of functions always respected regardless of the pressure level of each item.
- anti-cavitation overpressure valve on each item.
- Hydraulically-assisted proportional controls of functions, by manipulators or foot-operated controls supplied at low pressure with standby accumulator.



• Auxillary functions by solenoid valves :

- independently controlled left and right hand stabilisers.
- Unlocking of the tool holder.
- safety lock to prevent consoles from being raised.





Our mission is to design, develop, manufacture and distribute quality product.

Our innovative machines perform many varied and demanding tasks within your environment. Customers are the heart of our company.

We provide them with our knowledge, experience and the team spirit that drives Mecalac.

Your dealer



Mecalac

Parc des Glaisins - 2, av. du Pré de Challes - F-74940 Annecy-le-Vieux - Tél. : +33 (0)4 50 64 01 63 - Fax : +33 (0)4 50 64 02 79 - www.mecalac.com

The Mecalac Group S.A. manages **MECALAC** and **AHLMANN** Brands.

ColorPress Communication - 12MSX-GB - 02/04
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