

14 MXT



Mecalac

A genuine excavator... but also a loader

The 14 MXT is the result of a perfectly mastered concept, the intelligence of which has won over more than 4500 users on sites all over the world. Thanks to its exclusive quick-hitch link system, a Mecalac is a genuine excavator but also a loader. It also performs handling and tool-holder functions. It is a "main contractor" machine, operational from A to Z on tough sites.

Power... but also compactness

Powered by a 109 hp intercooler turbo Cummins 4-cylinder engine, driven by 4 drive wheels of the same size, the Mecalac 14 MXT can be used with perfect ease on large sites. Its power and compactness confirm its vocation as "main contractor" on all sites, even the narrowest ones.

Profitability... but also comfort

Versatility, strength and simplicity are the keys to profitability. On the Mecalac 14 MXT the operating mode, chosen by the operator, adapts instantly to his work habits and enables the machine to be mastered very quickly. The cab, a model of functionality and ergonomic design, offers ideal working conditions for optimum efficiency in complete safety.



Compactness

Full rotation in 3.2 metres. The Mecalac 14 MXT is 100% operational in the narrow configuration (roads with traffic, urban areas, tunnels, galleries, etc.).

EXCAVATOR



FOR ALL REQUIREMENTS

The design

The Mecalac 14 MXT meets visibility requirements, both at the front and at the rear. It conveys power, strength and flexibility. It reflects indisputably remarkable performances.



LOADER



The quickhitch system

Without leaving the cab, you can change tools in a few seconds thanks to an automatic mechanical locking system.

7.30 am : EXCAVATOR



"7.30 am. We started digging the trench. The site was narrow and limited by overhead cables. The Mecalac 14 MXT dug at the front and loaded the lorry directly at the rear. No problem digging offset alongside the wall, to the right or to the left. Operation in "excavator" mode was particularly easy, without having to use the pedals."

8.15 am : TOOL HOLDER

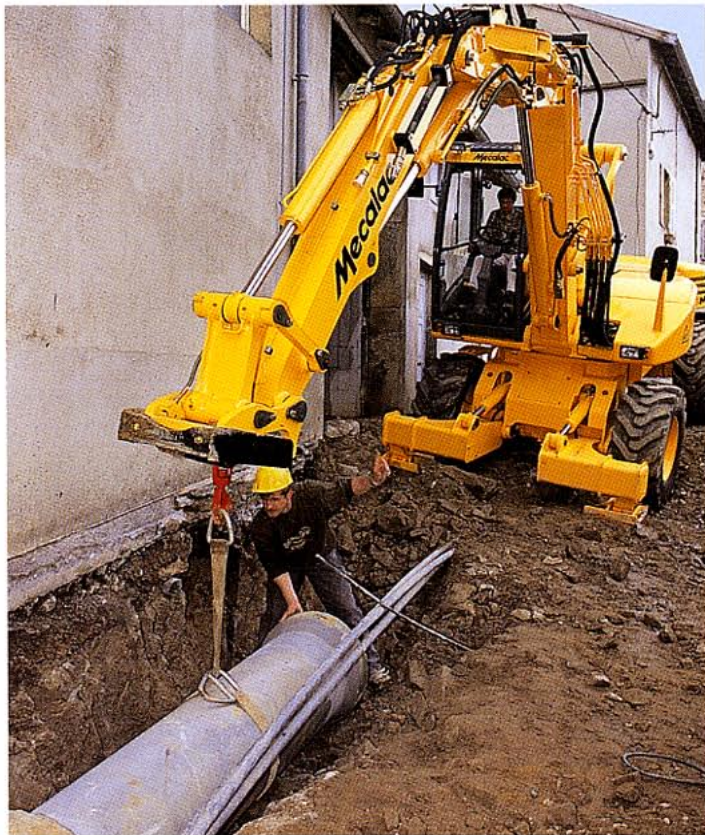


"8.15 am. The Mecalac transformed itself into a tool holder. In a twinkling, thanks to the automatic quickhitch system, the bucket was disconnected and the breaker fitted. The progressiveness and precision of the movements made it possible to use the breaker alongside existing services. The machine's power easily broke down granite."



IN ACTION

8.50 am : HANDLING



"8.50 am. Gentle positioning and fitting of a pipe. The machine was perfectly stable. Total visibility towards the front. I followed the site technician's instructions to the millimetre. The work went quickly and well. Tomorrow, demolition and recycling site: I will handle far heavier loads with my Mecalac."

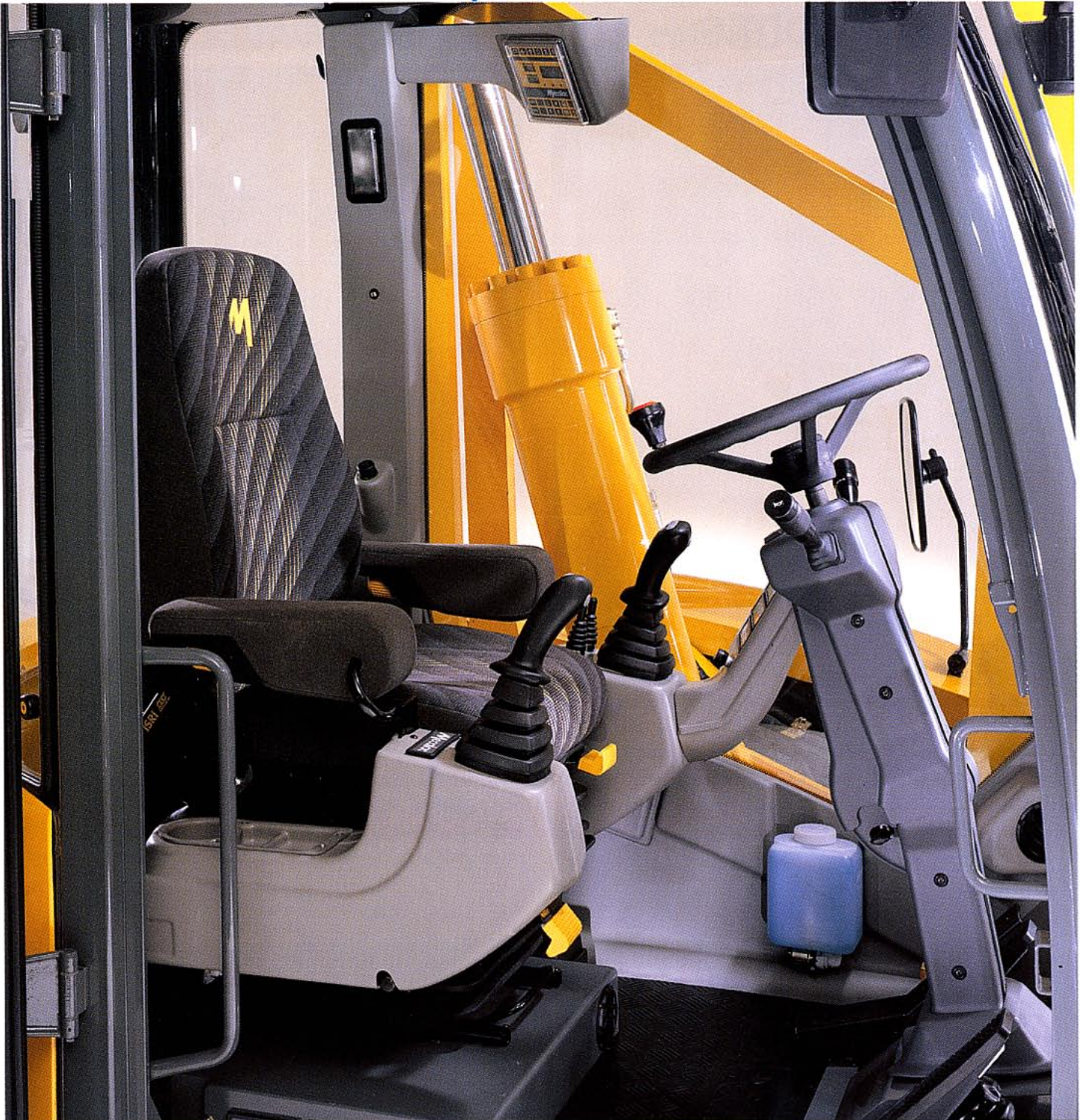
9.25 am : LOADER



"9.25 am. Backfilling of the trench. Clunk Click, the bucket was in place and I switched to "loader" mode. With my left hand on the steering wheel and my right hand on the manipulator where all the controls are grouped together, I appreciated the flexibility of the machine which makes it possible to work with an offset and to pivot 360° despite the narrowness of the street."



PERFECTLY



A very comfortable panoramic cab

Compact on the outside and spacious on the inside, the cab provides panoramic visibility thanks to its large glazed surface area; this is a basic safety factor. Particular attention has been paid to ventilation and heating: retractable windscreen, sliding right-hand side window, opening rear panel, very efficient de-misting and heating.

The ergonomic design of the operator's cab

It has been designed to suit all shapes and sizes: seat and arm rests adjustable in all directions, tilting steering column* and manipulator consoles adjustable independently of the seat. Also notable is the possibility of electric locking of the accelerator* and brake. As far as safety is concerned, apart from the essential devices, the Mecalac is equipped with an on-board monitor displaying in real time engine speed, water and oil temperatures, diesel level, oil pressure, condition of filters, etc..

*in option

MASTERED POWER



Choice of operating modes

Now Mecalac have gone further with a new feature : choice of operating modes. A simple selector switch on the dashboard enables the operator to choose the operating mode to suit the desired function.

In "excavator" mode, the Mecalac 14 MXT becomes an excavator with a two-part operating sequence. Selecting this mode automatically synchronises the equipment's movements without having to use the pedals.

In "loader" mode, the Mecalac 14 MXT is operated like a traditional loader: with your left hand on the steering wheel and your right hand on the right manipulator where the forward/reverse, low or high speed, bucket open/close and boom up/down controls are grouped together.

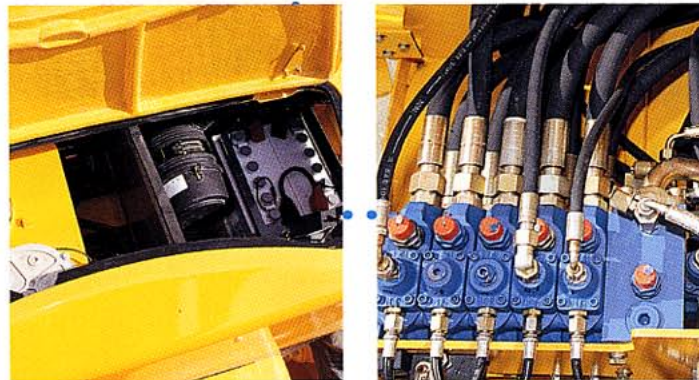
The "Mecalac" mode enables simultaneous or independent control of all the rams in order to perform all the specific tasks which only a Mecalac can successfully complete.

An on-board monitor for immediate information

Instantaneous, continuous display of engine speed, water and oil temperatures, diesel level, oil pressure and condition of filters, etc..



Thus, with these innovations, the Mecalac 14 MXT meets all the requirements of the contractor and of his operator: efficiency and profitability and simplicity.



Accessibility

Access to every vital part has been designed to simplify maintenance as much as possible: wide covers facilitating the maintenance operations essential to the safety and optimum operation of the machine.

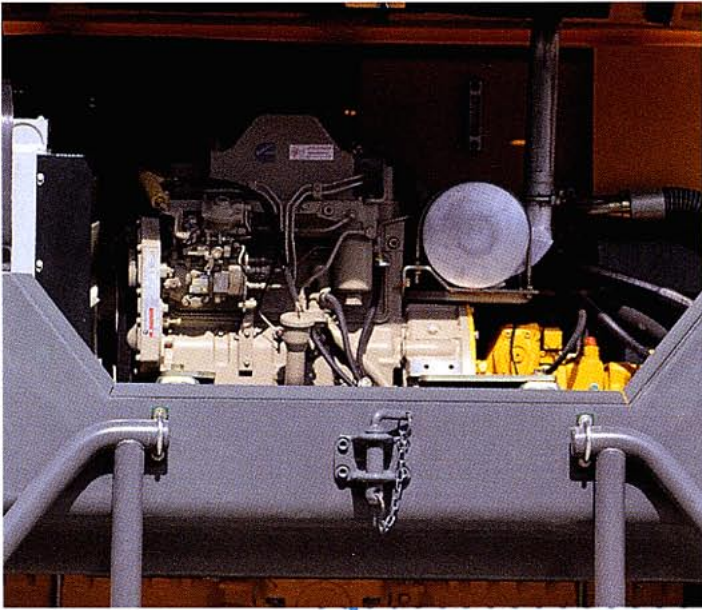


The rear cradle

Its reinforced structure provides effective protection of the engine and pumps. A retractable roll bar* protects the rear cover.

*in option

THE ADVANTAGES



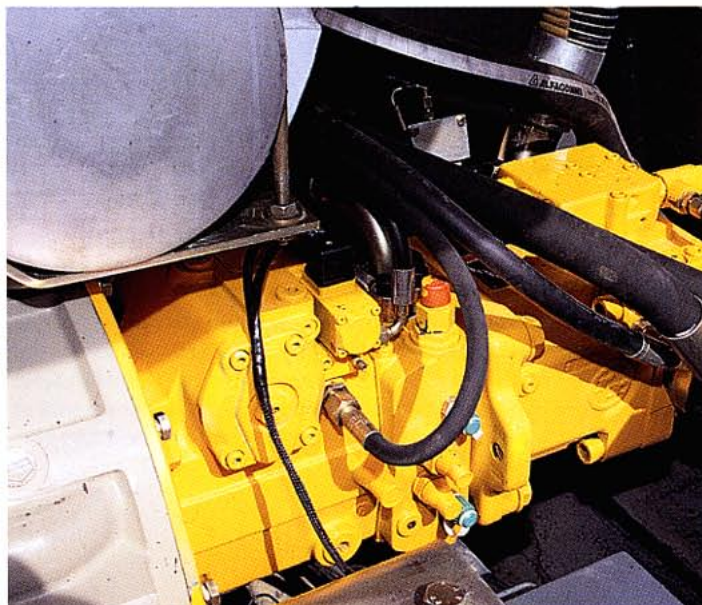
Intercooler turbo 4-cylinder Cummins engine

The Mecalac 14 MXT's engine is turbocharged as standard - 109 hp, 75 kW at 2 200 rpm - which makes it the favourite machine for large sites. The engine is transverse-mounted for better stability and easier maintenance.



Articulated chassis and oscillating rear axle

The articulated chassis permits a minimum turning circle whilst keeping the bucket or the tool in line with the machine's path. The oscillating rear axle offers exceptional on- and off-the-road qualities with a clearance of +/- 10%. The oscillation is locked in the cab, irrespective of the Mecalac's position. The two axles have oil-bath multi-disc brakes and a limited-slip differential.

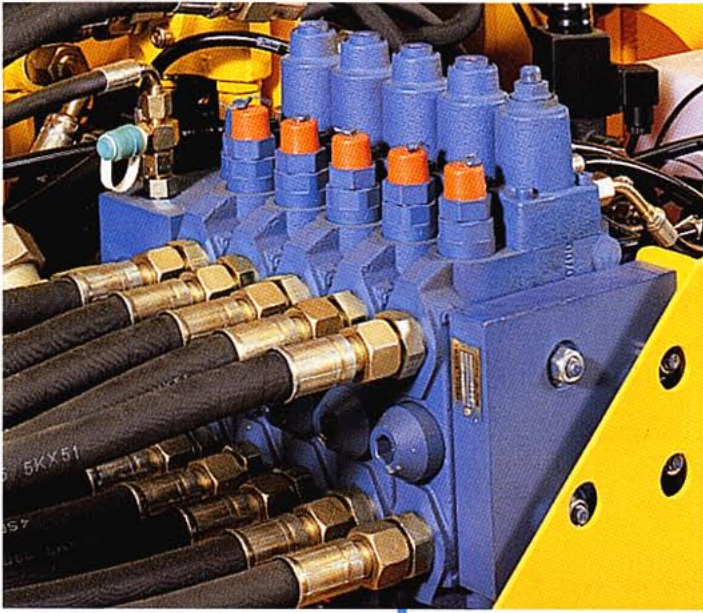


Power control, load sensing, variable displacement equipment pump

Its performances are increased while at the same time limiting the stress on the engine : fuel consumption is reduced.



OF GREAT POWER



New-generation directional control block

Irrespective of the movements of the rams, their supply retains its proportionality. The resulting operating comfort, precision and progressiveness improve the machine's productivity.



3-part operating sequence

The boom ram is mounted on a parallelogram. Combined with the three-part operating sequence, it gives a 1.6 m turning circle. The standard hydraulic offset of 33° to the left and to the right permits offset excavation, loading and/or levelling work.

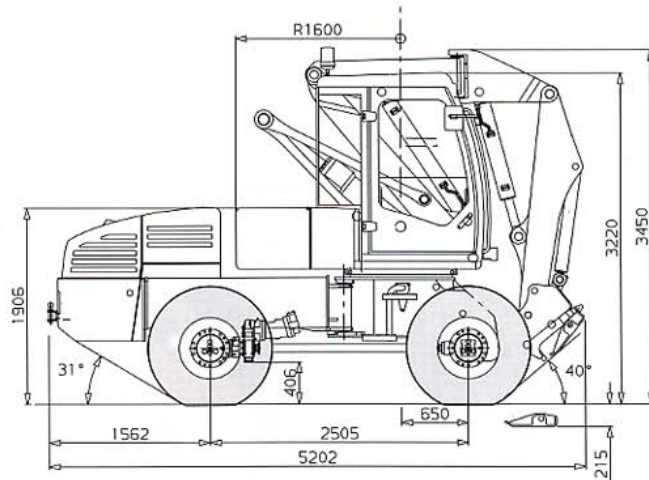


Hydraulic telescopic independent outriggers

These increase the machine's stability efficiently. Controlled separately or together from the cab, the pads can be inverted between right and left.



TECHNICAL CHARACTERISTICS



WEIGHT

- Unladen ready for work without bucket without option12800
- Unladen ready for work with bucket13320

ENGINE

- Intercooled turbocharged engine
- Type Cummins 4BTA3-9C-17
- Diesel 4 cylinders in lines
- Net power output101 HP/75 KW at 2200 rpm
- Cubic capacity3920 cm³
- Cooling: by coolant.
- Air filter dry, cartridge
- Diesel consumption (depending on operating conditions)7 to 11 l/h

CHASSIS

- Articulated type turning circleinside 3.0 moutside 5.5 m
- Front chassis equipped with 2 telescopic independent front outriggers.
- **Tanks**
- Hydraulic oil, capacity110 l
- Diesel, capacity210 l
- **Electrical circuit**
- Voltage24 V
- Batteries2 x 100 Ah/500 A
- Alternator24 V/40 A
- Starter motor24 V/2.8 kW

TRANSMISSION

- **Hydraulic transmission**
- Closed-circuit hydrostatic with "automotive" type automatic control.
- Electrically-operated direction-of-travel changeover switch on steering column without need to stop.
- Two speed ranges in both directions of travel: "site" and "road".
- Inching control making it possible, with the diesel engine at constant speed, to reduce the speed until the machine is stationary; this fonction is operated by a pedal which is also used for the braking function.

- Hydraulic travel motor and pump are variable-displacement making it possible to vary the gear ratio continuously over the entire speed range from 0 to 22 kph

Max. tractive effort7100 daN
 Max. pressure450 bars
 Max. pump displacement198 l/min (90 cm³)
 Engine160 cm³

• Axles and wheels

- 4 drive wheels of the same size.
- As standard equipped with DUNLOP 14.9 x 24 tyres.
- Optionally equipped with DUNLOP 18 x 22.5 tyres.
- 1 fixed rigid live axle on the front chassis.
- 1 oscillating axle on the rear chassis + or - 8°.
- Oscillation lock by 2 hydraulic rams.
- On rear axle, single-ratio transfer gearbox giving the power directly to the rear axle and to the front axle via a transmission shaft. Limited-slip differential on the two axles.

• Brakes

- Service brake:
- hydrostatic braking
- mechanical brake: oil-bath multi-disc in the two axles.
- Parking and emergency brakes. Spring ram operating by lack of pressure on the front axle.

TURRET

- Total 360° rotation.
- Inner toothed crown wheel drive.
- Slewing by hydraulic motor with brake.
- Rotation speed8 rpm.
- Hydraulic motor1250 cm³/max. pressure 250 bars.
- Fixed-displacement gear pump :80 l/min (34 cm³).
- Cross-over valve dampened for the setting in motion and progressive stopping of the turret in rotation.
- **Steering**
- Hydraulic: ORBITROL unit; priority valve, actuated by load sensing signal.
- Anti-shock valves240 bars

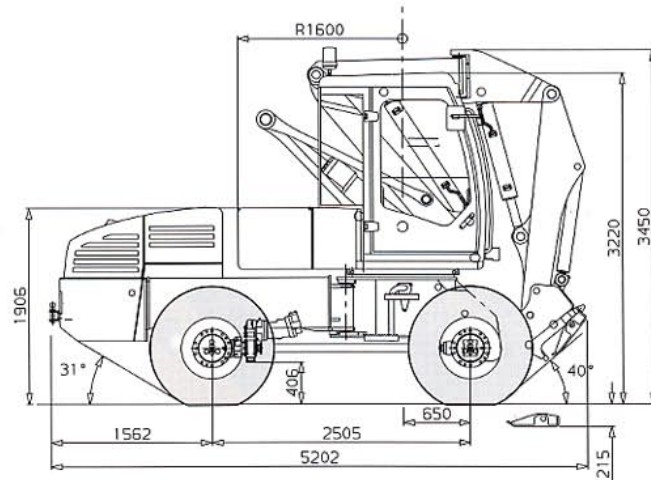
CAB

- ROPS and FOPS approved.
- Unit body fixed on 4 anti-vibration mountings, retractable windscreen under the cab roof, sliding door window, opening rear panel.
- Controls incorporated in consoles situated on either side of the seat, and adjustable in relation to the seat.
- Suspended and dampened seat, adjustable in terms of height and longitudinally with seat belt.
- Electronic control panel with all the safety and supervision information, visual indications and audible alarm.
- Heating and de-misting by an independent system with thermostatic temperature control.
- Visibility and easy access to fuses and electric components.
- Patented operator assistance system (option), giving the possibility of 3 modes:
 - MECALAC, for handling and precision work.
 - EXCAVATOR, for use as an excavator, for earthwork and levelling work.
 - LOADER, for re-handling and levelling.
- Optional tilting steering column.
- Soundproofing in accordance with existing standards.

EQUIPMENT

- Made up of 3 parts : boom, boom jib, and dipper.
- Boom controlled by a patented system of conrods and rams permitting a clearance of 142°.
- Right and left offset by hydraulic ram.
- Main bearings fitted with sealing rings and lubrication by the rings.
- Boom cylinder with end-of-travel damper.
- Tool quick hitch system.
- Connection with automatic mechanical locking.
- Hydraulically-controlled unlocking.
- **Performances of the equipment**
- Handling

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A technology to suit your needs.

Choosing Volvo Construction Equipment machines means having high quality and high productivity. It also means being assured of the reliability of machines built to take into account the needs of the operator as well as those of the environment. From each range you can choose the machine most suited to your needs, enabling you to improve the profitability of even the most difficult site in complete safety.

Compact & Service Equipment offers a complete range of compact excavators, compact loaders and excavators/loaders.

Mecalac S.A. 2, avenue du Pré de Challes P.A.E. des Glaisins - BP 230
F-74942 Annecy-le-Vieux Cedex
Tel. : +33 (0)4 50 64 01 63 - Fax : +33 (0)4 50 64 02 79

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**Volvo Construction
Equipment Group**