



## HUMAN ENGINE, HUMAN MACHINE

"For the past 60 years, innovation, accuracy and the search for performance have been the leading keywords of our company's vision. At Mecalac, we imagine the machines designed for the construction sites of the 21st century. Since every job has its own characteristics and restrictions, since each country has its own culture, we build machines that respond perfectly to today's challenges. Our machines are created by men, for men! We are proud to be human innovators who improve and push back the limits of our clients' objectives."

Henri Marchetta, Chairman and CEO of Groupe Mecalac



# THE BESTOF 2 WORLDS

LOWERING THE CENTER OF GRAVITY, SIMPLY REVOLUTIONARY!

The fusion of the advantages of wheeled and crawler excavators brought about a unique Mecalac solution, conjugating mobility, versatility, stability, accessibility, driving user friendliness, lifting power and profitability. This is MWR series.







#### MECALAC INNOVATES AND OFFERS YOU TO WATCH MWR VIDEOS.

It's easy, all you need to do is scan the QR codes present on the pages of the brochure with your smartphone in order to access the video content.

If you don't have a scanning app, you can download a QR code scanner from the App Store or Google Play.





7-9-11/2416/201

## 7.9.111117 FROM GENESIS TO SOLUTION

#### DESIGN : A STRONG AND STRATEGIC COMPONENT OF THE MECALAC IDENTITY

"Our strength? Offering each client the most efficient solution. A deep analysis of users' work process allows us to provide the right industrial and versatile answer to their requests. This approach allows to offer better fitted machines based on the real needs of the jobsite. At Mecalac, design has always been part of our creation process. It is a strong and strategic component of our brand identity and products and is not limited to mere aesthetics.

Our design is functional and secure. It blends ergonomics with smooth flowing lines"

Patrick Brehmer, Head of Marketing, Product Management & Design

### AN EXCLUSIVE CONCEPT, A UNIQUE SOLUTION

By lowering the center of gravity of the new MWR relative to its competitors, Mecalac revolutionizes by 100 % the world of wheeled excavators.

Consequences on all "levels": from stability to accessibility, by way of security and 'all terrain' mobility, the machine gains in balance and in force without dropping any of its initial qualities.

More than a machine, the MWR is the achievement of a new concept and the result of a combined expertise of Mecalac for both wheeled and crawler excavators.

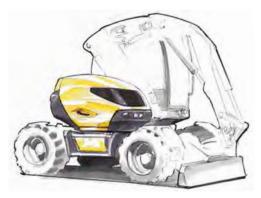
Its design has been developed to answer very demanding and complex specifications which Mecalac managed to implement in one single and unique machine.

The result : a machine with XS proportions and with XL lifting power, versatile and ultra-stable.

Moreover, the 9MWR benefits from the latest interior and exterior patented Mecalac technologies (articulated boom with offset, cylinder coupling, Connect quick coupler, central command selector, 'speed control' function).

#### **AWARD 2016**

Mecalac wins the Prize for Design of the 2016 Innovation AWARDs at the world exhibition BAUMA for the new concept of excavators on tyres: MWR.











	WHEELED EXCAVATORS	CRAWLER EXCAVATORS	MWR
Mobility	•		•
Versatility	•		•
Autonomy	•		•
Driving user-friendliness		•	•
Ability for all types of terrain		•	•
Security		•	•
Accessibility		•	•
Stability		•	•



Optimize security for the operator as for the workers' team of both urban and suburban construction sites:

• maintenance feet on the ground

- oscillation locking by the brake pedal and the joystick
- reduced access height
- excellent compactness
- optional integrated and automated cameras
- excellent visibility









## DRIVING USER-FRIENDLINESS

#### PARKING, WORK OR ROAD MODE, IN ONE SINGLE SWITCH.

Thanks to the unique central selector, the driver can switch into road or parking mode in a single movement, thus sparing 7 to 10 manipulations. With this unique global exclusivity, everything can be done instantly by selecting the desired configuration. With this unique, worldwide exclusive, everything can be done instantly by selecting the desired configuration. This guarantees faultless and ultrasafe driving on construction sites, leaving the driver free to calmly focus on the tasks at hand and take full control of the machine.

+

## CONNECT "ATTACHED" TO VERSATILITY

IN ORDER TO MAKE ITS MACHINES EVER SAFER AND MORE VERSATILE, MECALAC INTRODUCES CONNECT, ITS PATENTED QUICK COUPLER, NOTABLE FOR ITS LIGHTNESS, INTEGRATION, USER-FRIENDLINESS, REVERSABILITY AND ITS PERFECT SAFETY. Controlled from the cab, there is zero risk of it detaching from the tool either while it is being connected or while in operation. It is equipped with a detection system that alerts the driver if the tool is improperly secured (with visual and audible signals). Not only that, but it is also reversible and has an automatic clearance compensation function, making the CONNECT quick coupler the ultimate connection between tool and machine!







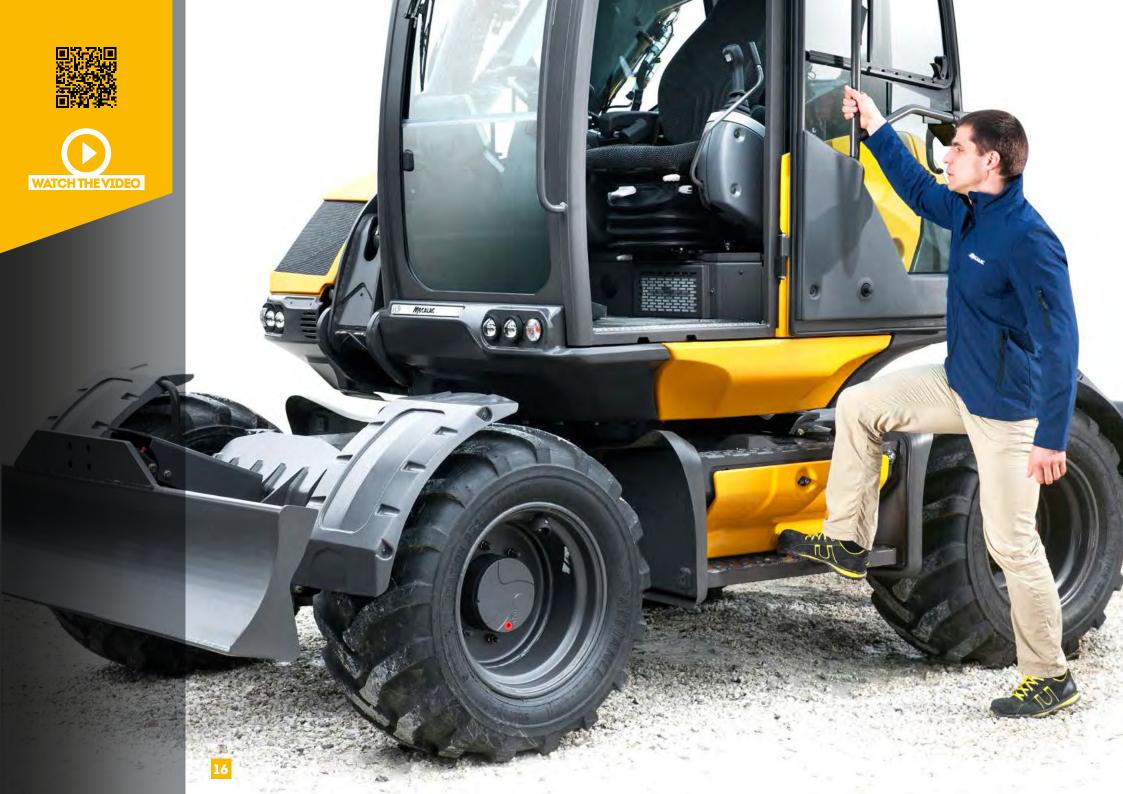
+

## THE QUEST FOR SIMPLICITY: DRIVING OUR RESEARCH

THE MWR REPRESENTS A NEW WAY TO INTERACT WITH CONSTRUCTION VEHICLES, THANKS TO ITS COMPLETELY REDESIGNED INTERNAL AND EXTERNAL ERGONOMICS AND UNIQUE INTERFACE BETWEEN HUMAN-MACHINE THAT COMBINES ACCESSIBILITY AND SAFETY.

Each and every driver action is simplified, affording greater protection of everybody on the worksite. When it comes to innovation, "less is more" is definitely one of the keys to Mecalac's success.







+

## CLIMB UP AND DOWN EASILY

THANKS TO THE LOWERED CENTRE OF GRAVITY OF THE MACHINE, THE CABIN IS PERFECTLY ACCESSIBLE TO THE DRIVER, WITHOUT MAKING TOO MUCH EFFORT OR TAKING ANY RISKS. The cab is 20% lower compared to rival products on the market so now entering and exiting the vehicle requires much less effort, and is further eased by the addition of a step that has been perfectly incorporated into the machine's design. One small step for man; one giant leap for worksite safety.







+

## FILL UP YOUR TANK EFFORTLESSLY

THE TANK IS EXTREMELY ACCESSIBLE AS IT IS LOCATED ON THE UNDERCARRIAGE AT A REACHABLE HEIGHT. Besides helping lower the centre of gravity, the lower-down position of the tank and its increased capacity also mean that the driver or fleet manager no longer has to carry out any operations at height, nor is there anything in the way when driving the vehicle. With the majority of other excavators still mounting the fuel tank in the upper carriage, filling up an MWR is as simple as it is safe. Because daily upkeep should always be risk-free.



# OPTIMAL PERFORMANCE

MWR machines are equipped with numerous technical characteristics for optimal construction site management on all types of terrain.

- naturally balanced
- all terrain capacity
- manoeuverability
- agility
- compactness
- lifting power



PERFORMANCE

### NATURALLY BALANCED

THE NEW MWRS BENEFIT FROM 360°ISO STABILITY: THIS MEANS THE MACHINE'S STABILITY REMAINS THE SAME REGARDLESS OF THE ROTATION ANGLE OF THE UPPER CARRIAGE.

Lift, place, move, unload... all without moving. The new MWRs transform worksite logistics thanks to their incredible stability in any position and on any terrain. Whatever the conditions, they stay balanced both when travelling in transfer operations between sites as well as during work phases. This gives them 360° lifting performance - an extraordinary feat.





## **GROUND CLEARANCE**

THE LOWERED CENTER OF GRAVITY HAS ABSOLUTELY NO INCIDENCE ON THE GROUND CLEARANCE HEIGHT, WHICH IS AN EXCLUSIVE "MADE IN MECALAC" PARADOX.

In order to guarantee the machine's mobility in spite of ground's unevenness, the machine keeps enough height to avoid rubbing and risks of tearing out the undercarriage.



#### PERFORMANCE

## MANOEUVERABILITY & COMPACTNESS

The new MWRs can be equipped with 4 steering wheels thus allowing you to do a U-turn practically on the spot and effectively overcome all obstacles. The aim: ensuring a maximum mobility in narrow spaces.

2,5 TIMES MORE COMPACT THANA CLASSIC EXCAVATOR



#### AGILITY

Efficiency of movement

When the leeway is limited, the MWRs are a powerful ally. Their perfectly integrated and light offset and their 3-part arm allow them to work outside the pattern of the machine.

#### MOBILITY

Best manoeuvrability

The 3 direction modes enable the  $\ensuremath{\mathsf{MWR}}$  to get out of any situation.

#### **COMPACTNESS AT WORK**

in the service of security

With their XS dimensions, their 360° rotation and their exceptional angular displacement of the boom, the MWRs only require one way in an urban area to carry out their missions, thus preserving the security of pedestrians and of car drivers.



#### MAXIMUM COMPACTNESS

for minimum bulk

This useful compactness frees 100% performances and 100% functions, therefore reducing the impact of urban construction sites on the environment.

Contraction and and











#### AN UNRIVALLED COMPACTNESS/LIFTING CAPACITY RATIO:

The unique architecture of the new MWRs makes these powerful and precise handling machines capable of lifting up to 3 tonnes to 3 meters and 360°!



**360°** 



Equipped with a loader bucket or with pallet forks, the new MWRs allow for an unusual range of amplitude whether this is positive for

loading a truck or negative for offloading pallets.

**AMPLITUDE** 

+

PERFORMANCE

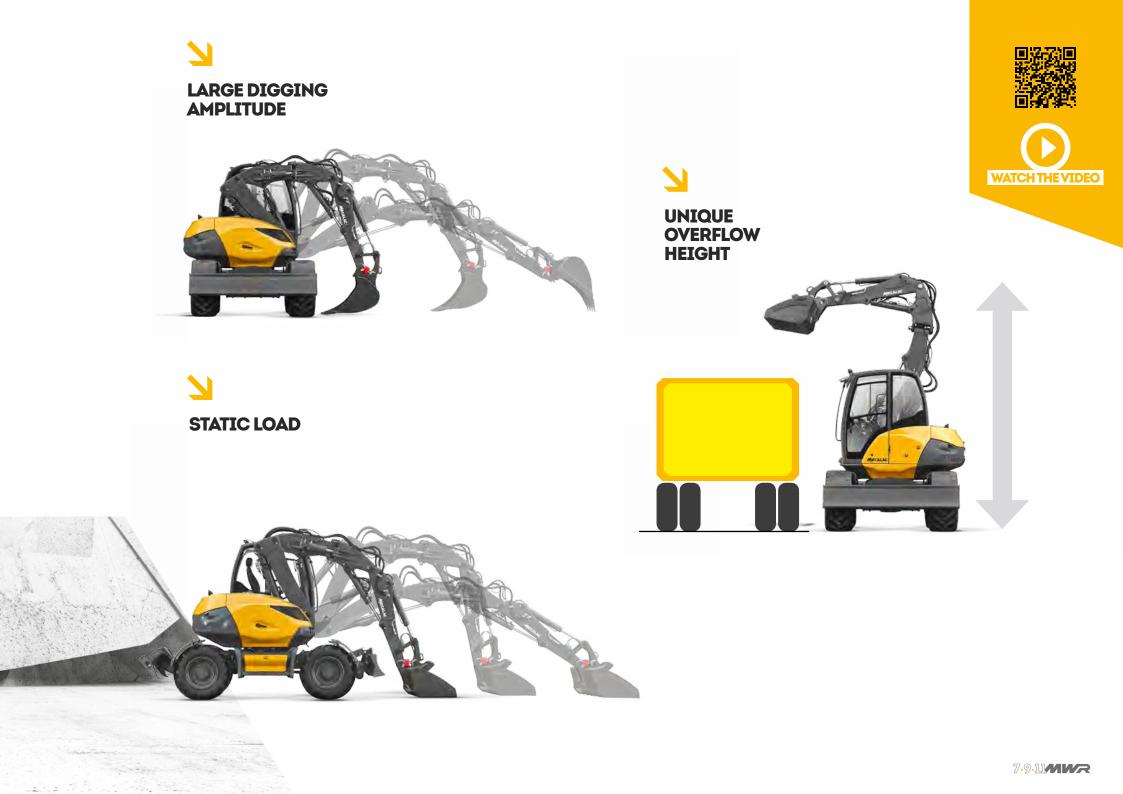
## FROM VERSATILITY TO AUTONOMY

EXPERTISE IS BORN OF EXPERIENCE. OURS IS BASED ON THE STRONG CONCEPT THAT PROFITABILITY CANNOT BE CONSIDERED WITHOUT SIMPLICITY OF USE, COUPLED WITH VERSATILITY IN FUNCTIONS. WHEN A SINGLE OPERATOR AND A SINGLE MACHINE CAN TOGETHER COVER A WIDE RANGE OF TASKS ON A SINGLE SITE WITHOUT COMPLICATED MANOEUVRES. HOURS NO LONGER HAVE THE SAME VALUE.

MECALAC

No matter the job, the country or the corporate culture, we offer the best visibility, manoeuvrability and freedom on each constuction site for optimal autonomy.

28





# SETUP YOUR MWR

The new MWR comes standard equipped with a number of features, while at the same time remaining attentive to the specifications required by various types of customers: landscape and earthwork contractors, public works' professionals, municipal authorities, etc. So, from the color scheme to the choice of tires, heating/AC or cameras, not to mention the various attachments, buckets and hydraulic tools which can be used, there are many different ways to tailor your new MWR to your brand and business.

30

### N

#### **CUSTOM COLORS**

You wish to get your MWR with your brand colors ? Customize your Mecalac with your own RAL color codes.

#### Color examples





#### **TIRES CHOICES**

#### 7MWR-9MWR

Simple Mitas 365/70 R18 EM Large Alliance 500/45 R20 Twin BKT 8.25 R20

#### 11MWR

Simple 18-19,5 Large Alliance 600/40 R22,5 Twin BKT 9,00 R20



#### **CAB - COMFORT AND SAFETY**

#### Air conditionning

Rotating beacon

LED rotating beacon

Travel alarm

Lynx shout type adaptative travel alarm

Overload buzzer (additional to screen indicator)

Additional front working light

Additional rear working light

Stereo USB Bluetooth radio

Heated pneumatic seat

Cabin sun visor

Rear cam (in additino to the side cam)

Switch command ISO / SAE

#### FRAME

2 steered wheels 40km/h

4 steered wheels 20km/h

4 steered wheels 40km/h

Steering direction inversion

(4 steer wheels only)

Front blade and stabiliser

Rubber protective pads under stabilisers

Chamshell bucket adaptation on lower frame

Additional counterweight

#### ENGINE

Particles filter (DPF)

Automatic temporised engine stop

Electric gas oil pump with automatic stop

Anti-theft device - electronic immobilizer with 6 keys

#### **AUXILIARY LINES**

Additional auxiliary line (if slweing power grab or other fuction)

Additional proportional auxiliairy line

Hammer return line

#### ANTIDROP SAFETY VALVES

Safety valves on boom, adjustable boom, dipperstick

Safety valves on boom, adjustable boom, dipperstick, bucket

#### QUICK COUPLING

"Connect" quick coupling with hook

#### LUBRICATION

Centralized, manual lubrication for turret and equipment (except axles between connecting rod and quick coupling system)

Centralized, automatic lubrication for turret and equipment

#### **OIL CHOICES**

Hydraulic oil Syn Panolin (HLP 46)

Hydraulic organic oil Panolin (HLP 46)

Hydraulic oil for cold weather (ISO 32)

Hydraulic oil for hot weather (ISO 68)

Hydraulic oil for very hot weather (ISO 100)





#### **DIGGING BUCKETS**

7MWR	WIDTH (mm)	number of teeth	VOLUME (I)	WEIGHT (kg)
	350	3	85	105
	450	3	115	118
DIGGING BUCKET with teeth or no teeth	600	4	160	152
	750	5	205	175
	900	5	250	195
9MWR	WIDTH (mm)	number of teeth	VOLUME (I)	WEIGHT (kg)
	350	3	105	110
	450	3	137	122
DIGGING BUCKET with teeth or no teeth	600	4	191	176
	750	5	250	197
	900	5	310	216
11MWR	WIDTH (mm)	number of teeth	VOLUME (I)	WEIGHT (kg)
	350	3	130	156
	450	3	180	173
DIGGING BUCKET with teeth or no teeth	600	3	250	230
	750	4	330	265
	900	4	405	295
	1200	5	565	366

#### NARROW BUCKET

ТҮРЕ	WIDTH (mm)	number of teeth	VOLUME (I)	WEIGHT (kg)
NARROW BUCKET	250	2	62	185
NARROW BUCKET	300	3	80	197

#### LOADER BUCKETS (SKID AND 4X1)

7MWR	WIDTH (mm)	number of teeth	<b>VOLUME (I)</b>	WEIGHT (kg)
SKID BUCKET no teeth	2200		540	378
9MWR	WIDTH (mm)	number of teeth	<b>VOLUME (I)</b>	<b>WEIGHT (kg)</b>
SKID BUCKET no teeth	2310	-	570	389
11MWR	WIDTH (mm)	number of teeth	<b>VOLUME (I)</b>	WEIGHT (kg)
SKID BUCKET no teeth	2500	-	820	475
SKID BUCKET 4x1 with or without teeth	2200	7	540	611
4X1 BUCKET CONNECTION SET, 4 FLEXIBLE JOINTS	-	-	-	5
BOLTED COUNTERBLADE FOR 4X1 BUCKET with no teeth 7 boreholes - center-to-center borehole distance 360	2300	-	-	65

#### PALLETFORK

ТҮРЕ	Specifications	WEIGHT (kg)
PALLET FORK	to be used with 4 safety valves	330

#### **DITCHING BUCKET**

7MWR - 9MWR	Specifications	WIDTH (mm)	VOLUME (I)	WEIGHT (kg)
DITCHING BUCKET 1 COUPLING		1500	262	250
BOLTED COUNTER BLADE	borehole center-to-center distance 160	1500	-	-
11MWR	Specifications	WIDTH (mm)	VOLUME (I)	WEIGHT (kg)
DITCHING BUCKET 1 COUPLING		1800	314	288
DITCHING BUCKET 3 COUPLINGS		1800	314	340
BOLTED COUNTER BLADE	borehole center-to-center distance 160	1800	-	47

#### **ROTATING TRAPEZOIDAL BUCKET**

11MWR	Dimensions	WEIGHT (kg)
ROTATING TRAPEZOIDAL BUCKET	300 X 900 X H 700	190
ROTATING TRAPEZOIDAL BUCKET	400 X 900 X H 1200	315

#### HANDLING PLATE AND HAMMER PLATE

TYPE	Specifications	WEIGHT (kg)
HANDLING PLATE with hook	to be used with 3 safety valves	43
HAMMER plate no boreholes	-	80
Hammer plate with boreholes	contact your dealer	80

#### **HANDLING JIB**

7MWR - 9MWR	Specifications	WEIGHT (kg)
HANDLING JIB	length 2000 mm, lifting capacity 500 Kg to be used with 4 safety valves	80,5
11MWR	Specifications	WEIGHT (kg)
HANDLING JIB	length 4100 mm, lifting capacity 500 Kg to be used with 4 safety valves	113

#### **CLAMSHELL BUCKET SUPPORT**

TYPE	Specifications	WEIGHT (kg)
SUPPORT PIECE FOR CLAMSHELL BUCKET - 7MWR, 9MWR, 11MCR	-	

#### **RIPPER TOOTH**

F

ТҮРЕ	WEIGHT (kg)
RIPPER TOOTH	170



WEIGHT	7MWR	9MWR	11MWR
In running order, without bucket, with 75 kg operator, fuel tank full without optional equipment, standard tires			
- Rear blade	6925 kg	7900 kg	10000 kg
- Front stabilisers + blade	not available	+300 kg	+450 kg
- Large tires	+60 kg	+60 kg	+160 kg
- Twin tires	+350 kg	+350 kg	+380 kg
ENGINE	7MWR	9MWR	11MWR
Turbo charged engine with intercooler, EGR valve and catalytic converter (DOC), complying with regulation	Tier 4 Final Stage IIIB	Tier 4 Final Stage IIIB	Tier 4 Final Stage IIIB
Diesel 4 in-line cylinders	DEUTZ TCD 2,9 L4	DEUTZ TCD 2,9 L4	DEUTZ TCD 3,6 L4
Horsepower (DIN 70020) Engine speed	55.4 kW (75hp) 2300 rpm	55.4 kW (75hp) 2300 rpm	55.4 kW (75hp) 2200 rpm
Maximum torque	300 Nm at 1600 rpm	300 Nm at 1600 rpm	390 Nm at 1300 rpm
Cubic capacity	2900 cm <sup>3</sup>	2900 cm <sup>3</sup>	3600 cm <sup>3</sup>
Cooling	water	water	water
Air filter, cyclonic, dry, cartridge	•	•	•
Fuel consumption (depending on operating conditions)	8 to 9 l/h	8 to 9 l/h	7 to 11 l/h
Fuel tank capacity	108	140	165 I
ELECTRICAL SYSTEM			
Voltage		12 V	
Batteries		100 Ah / 720A	
Alternator		14 V (120 A)	
Starter		12 V 2,6 kW	
UNDERCARRIAGE	7MWR	9MWR	11MWR
Rigid	•	•	•
Outside turning radius			
- 4 steered wheels (optional)	3,52 m	3.56 m	3.86 m
- 2 steered wheels	6,08 m	6.10 m	6.41 m
Stabilisers controlled independently or in pairs	not available	•	•
TRANSMISSION	7MWR	9MWR	11MWR
Closed hydrostatic center with Senso Drive automotive type automatic regulation	•	•	•
Electronically controlled traveling direction reverser located under joystick	•	•	•
Pump		125 l/min	
Hydraulic variable displacement pump and motor allow for a continuously variable transmission rate over the whole speed range of the machine	•	•	•
Continuously variable speed	i.e. 0-30 km/h	0-20 km/h (0-40 km/h in option)	0-20 km/h (0-40 km/h in option)
Max. pressure		440 bar	
Max. traction force	3760 daN	4820 daN	4820 daN
Gradeability	60%	65%	68%
Gearbox with automatic shifting	not available	Option	Option

### 7-9-11**MMR** TECHNICALDATA

AXLES AND WHEELS				
4-wheel drive			•	
Rigid drive axle on the rear Oscillating drive axle on the front to +/- 7° ; oscillation block involves 2 hydraulic cylinders		steering	steering as an option steering	
		c s		
BRAKES				
Double circuit central braking system			•	
Oil-immersed multi-disk brakes on each axle			•	
HYDRAULIC SYSTEM	7MWR	9MWR	11MWR	
Hydraulic oil tank	56 I	61	77	
ATTACHMENT AND ROTATION CIRCUIT				
Variable displacement pump	45 cm <sup>3</sup>	63 cm <sup>3</sup>	75 cm <sup>3</sup>	
ACTIVE CONTROL power control "Load Sensing - Flow Sharing" type LUDV main control valve block, proportionality of functions maintained regardless of the pressure level in individual elements	•	•	•	
- Maximum flow rate	100 l/min	145 l/min	165 l/min	
- Maximum working pressure	280 bar	280 bar	300 bar	
TURRET	7MWR	9MWR	11MWR	
Full rotation 360°	•	•	•	
Slewing by slow hydraulic motor with automatic braking assured by discs equipped with anti-bounce pressure relief valve	•	•	•	
Driven by internal crown slewing wheel	•	•	•	
Rotation speed	10 rpm	10 rpm	10 rpm	
Rotation torque	1330 daNm	1690 daNm	2125 daNm	
САВ	7MWB	9MWR	11MWR	
Extremely comfortable panoramic cab		ROPS and FOPS		
Monocogue cab fastened to 4 spring posts	•	•	•	
Front windshield partially or fully removable		under the cab roof		
Seat can be set and adjusted to operator height and weight	•	•	•	
Water heating system compliant with ISO 10263	•	•	•	
Independent settings for control lever support consoles	•	•	•	
Controls assisted by ergonomic, proportional control levers	•	•	•	

Independent settings for control lever support consoles	•	•	•	
Controls assisted by ergonomic, proportional control levers	•	•	•	
Dial display of fuel level and coolant temperature	•	•	•	
Control panel including colour screen	•	•	•	
Proportional hydraulic control of the attachment integrated on right-hand joystick	•	•	•	
Front working light	•	•	•	

ATTACHMENT	7MWR	9MWR	11MWR
Mecalac variable range kinematics consisting of 4 parts: boom, adjustable boom, offset boom and dipperstick	•	•	•
33° right and left offset by hydraulic cylinder. System enabling all penetration force to be conserved regardless of the angular position of the offset boom	•	•	•
Left offset	1150 mm	1630 mm	1630 mm
Right offset	1830 mm	2030 mm	2030 mm
Boom cylinder with endof travel shock absorber	•	•	•
CONNECT quick coupler - Take up with automatic mechanical locking - Detection of incorrect locking	•	•	•

- Hydraulically-controlled unlocking

#### **OPERATING MODES**

WORKING MODE

Enables the machine to be operated like an excavator:

- Turret rotation and dipperstick control with the left control lever
- Bucket and intermediate boom or boom control with the right control lever

Travelling control using foot pedals

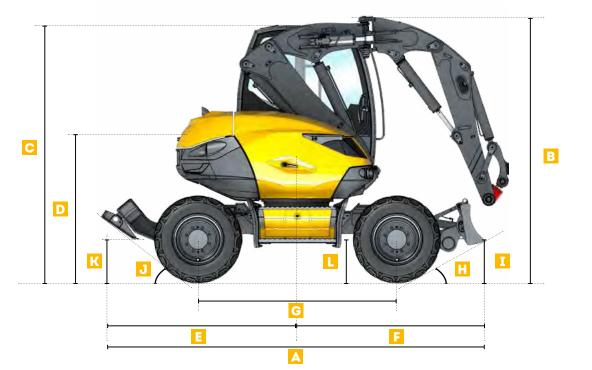
#### DRIVING MODE

- Deactivation of the manual engine speed control. The engine speed varies depending on how far the travel pedal is depressed,
- Turning on road headlights,
- Turning on rotating beacon,
- Locking of machine hydraulic functions (attachment, slewing, outriggers),
- Deactivation of oscillation lock (only if oscillation lock selector is on AUTO) and is not activated via the right joystick,
- · Deactivation of the travel alarm,
- Deactivation of the overload alarm,
- Display of speed in km/h,
- · Deactivation of idle function via keypad and joystick,
- Speed controller
- Screen display in road mode.

#### PARKING MODE

- Engage parking brake,
- Turn the transmission into Neutral,
- Deactivation of the accelerator pedal,
- Engage auto-idle function,
- Lock hydraulic and electrical controls
- Screen display in economy mode,
- · Lock oscillating axle,
- Turn on road headlights



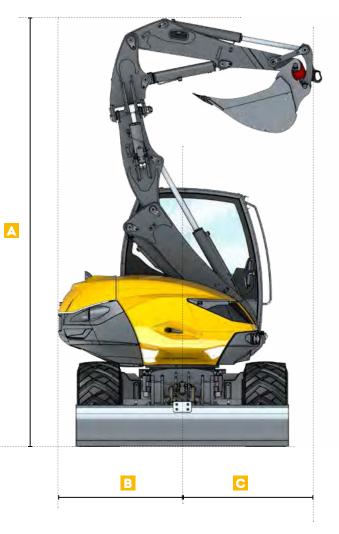


DIMENSIONS	7MWR	9MWR	11MWR
A Overall length with attachment	3730 mm	4418 mm	4836 mm
B Overall height of structures	2816 mm	2945 mm	3256 mm
C Machine height (without attachment)	2816 mm	2829 mm	2944 mm
D Cover height	1865 mm	1886 mm	2030 mm
Overhang of lower frame on stabilisers side	1550 mm	2159 mm	2275 mm
E Overhang of lower frame on blade side	2030 mm	2076 mm	2230 mm
G Wheelbase	2100 mm	2200 mm	2300 mm
H Blade crossing angle	32°	28°	32°
Height with blade raised	429 mm	429 mm	545 mm
Stabilisers crossing angle	-	39°	36°
K Height with stabilisers raised	-	430 mm	413 mm
L Ground clearence at axle	430 mm	430 mm	460 mm





7MWR	9MWR	11MWR
310 mm	310 mm	350 mm
2180 mm	2310 mm	2500 mm
	310 mm	310 mm 310 mm



MACHINE DIMENSIONS	7MWR	9MWR	11MWR
A Height in folded position	4410 mm	4630 mm	5090 mm
Tail swing radius	1296 mm	1350 mm	1445 mm
C Front radius	1438 mm	1444 mm	1881 mm

#### MECALAC FRANCE

Parc des Glaisins 2 av. du Pré de Challes 74940 Annecy-le-Vieux FRANCE Tel : +33 (0) 4 50 64 01 63 Fax : +33 (0) 4 50 64 02 79

WWW.MECALAC.COM



