











# RAIL INDUSTRIES

# MECALAC RAIL, SOLUTIONS PROVIDER

Innovation moves mountains; it makes the world turn. We will never stop coming up with new features, striving to improve our current technology and adapting to changing realities and constraints faced; we will excel. Innovation lies at the very core of what our company stands for.

Mecalac collaborates with railways experts for more than twenty years. We design new standards for rail-road excavators to help make sure that working on rails becomes easier and safier than ever.



#### MECALAC MRAIL-SERIES

# PURPOSE-BUILT MACHINES FOR THE RAIL INDUSTRIES

#### SAFE

ATMECALAC, SAFETYIS NOTJUSTAWORD. WE ENDEAVOUR TO HELPMAKE SURE OPERATORS ARE SAFE IN AND AROUND OUR EXCAVATORS; GROUND-LEVEL MAINTENANCE INCLUDING DIESEL REFUELING, UNIQUE EASE OF EGRESS/INGRESS, UNMATCHED ALL-AROUND DIRECTVISIBILITY, WORK AREAS LIMITERS, AND MUCH MORE...

#### **PERFORMING**

Mecalac rail-road excavators are the ideal solutions for users in need for a compact machine with high performance. Every part of the machine is specifically designed to boost the weight to performance ratio. Don't look further, we're known for that

#### BALANCED

Superior balance is the basis of the numerous benefits of the Mecalac MRail-Series. The patented design of our booms gives the machine an outstanding weight distribution and force. Add the aligned position of the upper-frame on the undercarriage and you achieve best-inclass stability, which translates into optimized lifting performances with no compromise on compactness.

#### **MOBILE**

Time is money – Mecalac products make their way quickly from one site to the next. The different types of transmissions and steering modes make them ideally equipped for a wide range of applications and environments.

#### VERSATILE

It is necessary to be able to carry out productively a wide range of tasks in rail-road applications - 365 days a year, nights and days and in all weather conditions. A single Mecalac fulfils these demands and is perfectly tailored to this requirement.

#### COMPACT

True compactness is not just a matter of rear radius. Not obstructing the adjacent track and working in areas where very little space is available: at the rear, at the front and in height: this is true compactness. Our machines are all designed around this concept in order to guarantee optimum maneuvrability.









# **SPECIAL STRENGTHS**

#### PERFORMING COMPACTNESS

The 106MRail is the smallest end of our MRail product line. In this size and with such a ease of use, it's the perfect utility machine to support larger equipment.

#### **APPLICATIONS**

The standard offset boom along with the overall compactness of this model make it a very handy tool for all light applications in urbain environments (subways, tramways, ...) and for working in tunnels or tight areas. The 106MRail is an easy goer; easy to enrail, easy to operate, and easy to move with less impact on the ballast.

KEY RAIL FEATURES			
Regulation compatibility	NF 58003		
Rail transmission	Hydrostatic drive		
Track width, standard	1435 mm (4'8.5")		
Track width, adjustable	950 mm - 1600 mm (3'1.4" - 5'3")		
Pneumatic braking system for towing	-		
Height and swing limiters	0		
Load limiter (RCI / RCL**)	-		
Operating weight	10T		
o = Optional			

#### EASE OF SERVICE

- Ground level maintenance
- Fuel refueling from the ground
- Side by side radiator, easy access
- Toolbox with tools and grease gun
- MyMecalac Connected Services (telematics)
- Optional diesel refueling pump

- All-round direct visibility
- Low height of the hoods
- Optional rear and side cameras

BEST-IN-CLASS VISIBILITY

#### GINE POWER 55KW / 75HP

- DEUTZ TCD 2.9 engine
- Meets EU Stage V / U.S Tier 4 Final emission standards

#### MAX TAIL SWING RADIUS

- 1347 mm (4'5") with extra counterweight

#### YDROSTATIC TRANSMISSION

- Independent control of the hi-rails for comfortable re-or de-railing
- Speed on rails: 23 kph (14.3 mph)

#### ROVEN ROBBUST STRUCTURES

- 2 monobloc lorries powered by cylinders with check valves
- Optional back-up system in case of rail emergencies
- Optional adjustable width to track gauge

#### RAIL BRAKING PERFORMANCE

- Multi-disks parking brakes, oil-immersed







HECALAC

# • Large cab with legroom • START / STOP button Intuitive and ergonomic controls Joystick steering and speed limiter • 1 switch excavator / loader mode MECALAC BOOMS AND STICKS Optional rail pneumatic horn • Large working envelope, far AND close • Optimized for compactness AND force Wide offset, left and right Optional height and swing limiters • Load Sensing, Flow sharing High-flow auxiliary hydraulic circuit • 4 anti-drop safety check valves • Work tools control system, with flows adjustable from the cab NNECT HYDRAULIC QUICK COUPLER • INTEGRATED: light, safe, reversible • Standard with all the lines and circuits CAB FRONT SWING RADIUS • 1280 mm (4'2") LARGE RAIL WHEELS (UIC\* profile) • Self-propelled wheels by 4 motors • 500 mm (16.69 in) steel wheels Optional insulated wheels • 630 mm (24.80 in) steel wheels Hydrostatic transmission, SensoDrive • Dedicated pump to the transmission • 450 mm (18") rubber tracks • Speed on tracks: 10 kph (6.2 mph) \* International Union of Railways

\*\* Rated Capacity Indicator (RCI) Rated Capacity Limiter (RCL)





# SPECIAL STRENGTHS

#### **COMPACT PERFORMER**

Like the 106MRail, the 136MRail is a very handy tool for all light to medium applications in urban networks and for working in tight areas. Plus it boosts your overall productivity, also in national networks, with the upmost safety devices to meet the most stringent regulation standards.

#### **APPLICATIONS**

The outstanding lifting and towing capacities along with the ability to work as a loader, spreading large buckets of ballast for instance, will boost your overall productivity. Now you can work faster, for all types of service works and maintenance on rails.

EN15746 and NF 58003
Hydrostatic drive
1435 mm (4'8.5")
950 mm - 1600 mm (3'1.4" - 5'25")
0
0
0
13T

o = Optional







# SPECIAL STRENGTHS

# YOUR DEDICATED SOLUTION FOR URBAN RAIL NETWORKS, SUBWAYS OR PRIVATE TRACKS

Sometimes you need a big machine to do the job, with all the key requirements for rail applications, but not necessarily all the costly features linked to rail regulations. The 156MRail is the easiest and cheapest solution to operate on rails.

#### **APPLICATIONS**

If you are working on subways or private tracks, then the 156MRail may be the most profitable solution for you. The exceptional compactness of this model and the flexible Mecalac boom kinematics will give you the agility to work in tunnels and a great direct visibility. The friction-drive transmission adds more traction in slopes for a better price.

KEY RAIL FEATURES	
Regulation compatibility	-
Rail transmission	Friction drive
Track width, standard	1435 mm (4'8.5")
Track width, adjustable	-
Pneumatic braking system for towing	-
Height and swing limiters	-
Load limiter (RCI / RCL**)	-
Operating weight	15T

#### MECALAC BOOMS AND STICKS

- Large working envelope, far AND close
- Optimized for compactness AND force
- Mecalac Rail dedicated boom, designed for working below catenaries and all the way in below the boom
- Optional Rated Capacity Indicator (RCI system\*\*
- Optional height and swing limiters

#### EST-IN-CLASS VISIBILITY

- All-round direct visibility
- Large glass area at the rear and sides
- Low height of the hoods
- Rear and side cameras
- 9x LED lights packag
- Optional Rail front/rear stop lights, aut switch

#### **EASE OF SERVICE**

- Ground level maintenance
- Fuel refueling from the ground
- Side by side radiator, easy access
- Toolboxes with tools and grease gun
- MyMecalac Connected Services (telematics)
- Optional diesel refueling pump

#### CONNECT HYDRAULIC QUICK COUPLER

- INTEGRATED: light, safe, reversible
- Standard with all the lines and circuits

#### CAB FRONT SWING RADIUS

• 1700 mm (5'7")

#### DIRECT ACCESS INTO THE CAB

- Slidding door
- Cab entry in-lined with the steps
- Independent door for the passenger.

#### **HINDERCARRIAGE**

- Hydrostatic transmission, SensoDrive
- 4-wheel drive and 4-steering wheels
- Oscillating front axle
- Diesel tank in the undercarriage
- Speed on tires: 35 kph (21.7 mph)
- Speed on tires: 30 kph (18.6 mph)

#### LARGE RAIL WHEELS (UIC\* profile)

- 500 mm (16.69 in) steel wheels
- 630 mm (24.80 in) steel wheel
- Self-propelled by 2 motor
- Optional insulated whee







MECNIAC



# • Large cab with refrigirated lunchbox HYDRAULIC PRECISION (156MRail) Load Sensing, Flow sharing • START / STOP button • High-flow auxiliary hydraulic circuit Emergency stop button • 4 anti-drop safety check valves • Intuitive and ergonomic controls • Work tools control system, with flows Operator IDs adjustable from the cab Autoshift to rail mode Optional rail pneumatic horn MAX TAIL SWING RADIUS **ECALA** check valves emergencies (travel mode) **BRAKING SYSTEMS**

\* International Union of Railways \*\* Rated Capacity Indicator (RCI) Rated Capacity Limiter (RCL)

#### **ENGINE POWER 100KW / 136HP**

- DEUTZ TCD 3.6 engine (with ECO Mode)
- Meets EU Stage V / U.S Tier 4 Final emission

- 1545 mm (5'1") with heavy counterweight

# FRICTION-DRIVE TRANSMISSION (156MRAIL)

- Increases traction Reduces cost
- Speed on rails: 30 kph (18.5 mph)

#### **HYDROSTATIC TRANSMISSION**

#### PROVEN ROBBUST STRUCTURES

- Lorries for a standard gauge of 1435 mm (4.70')
- 2 monobloc lorries powered by cylinders with
- Toolbox in the rear lorry
- Optional back-up system in case of rail

- Automatic parking brakes (travel mode)
- Multi-disks service brakes, oil-immersed



# **SPECIAL STRENGTHS**

## THE STRONGEST MACHINE FOR THE TOUGHEST JOBS. WITH ZERO **COMPROMISE ON MANEUVERABILITY**

Strong machines to complete all the hard tasks in a minimum of time but also with a maximum of constraints around. If you don't want to jeopardize your maneuvrability and agility against force, then the 216MRail is made for you. The 216MRail excavator is here to offer you a new alternative: that of agile strength, to give you the freedom of movement you are longing for.

#### **APPLICATIONS**

The 216MRail is compatible with the EU EN15746 legislation, the most stringent legislation. The hydrostatic transmission will bring you appreciable smoothness. Most of all, its rail-dedicated boom will give you back the freedom to move, even under heights constraints.

KEY RAIL FEATURES	
Regulation compatibility	EN15746 and NF 58003
Rail transmission	Hydrostatic drive
Track width, standard	1435 mm (4'8.5")
Track width, adjustable	1000 mm - 1435 mm (3'1.4" - 4.70')
Pneumatic braking system for towing	0
Height and swing limiters	0
Load limiter (RCI / RCL**)	0
Operating weight	20T

o = Optional



# THEBESTOF ALLWORLDS

YOU'VE GOT THE CHOICE!
TRACKS OR WHEELS
HYDROSTATIC OR FRICTION-DRIVE
ALL SIZES **ALL POSSIBLE SOLUTIONS** 





#### **OPERATING WEIGHTS**

With 75kg operator, full fuel tank, rubber tracks, rail powertrain, heavy counterweight 427 kg (941 lbs), and Mecalac boom. With digging bucket 900mm (2'11"), 200 kg (441 lbs)

9475 kg (20,889 lbs)

ENGINE	
Turbocharged engine with intercooler, chilled air inlet, water-cooled, electronic control and "Common Rail" injection system. Emission technologies include an EGR valve, a Diesel Oxidation Catalyst (DOC), and for Europe a standard Diesel Particulate Filter (DPF).	Meets EU Stage V and U.S. EPA* Tier 4 Final standards
Engine model	DEUTZ TCD 2.9 L4
Cylinders	4, in-line
Ratings	2300 rpm
Horsepower (DIN 70020)	55.4 kW (75 HP / 74.3 imperial HP)
Maximum torque	300 N.m (221 lbf-ft) at 1600 rpm
Displacement	2900 cm³ (177 in³)

<sup>\*</sup> EPA: Environmental Protection Agency - Depending on your local legislation

ELECTRICAL CIRCUIT	
Batteries	12 V (50 AH)
Voltage	12 V
Alternator	14 V (95 A)
Starter	12 V (2.7 kW)

	\ /
BOOMS AND STICK	
Mecalac variable kinematics consisting of 4 parts: boom, intermediate boom, offset and dipperstick	•
Right and left offset by hydraulic cylinder.  System enabling all penetration force to be kept regardles of the angular position of the offset	•
Left offset Right offset	1551 mm (61 in) 1899 mm (75 in)
Stick length	1800 mm (5'10.8")
Boom with shock absorbers and 4 safety check valves	•

SWING MECHANISM	
Maximum swing speed	10 rpm
Maximum swing torque	16.9 kNm (12,400 lbf-ft)

UNDERCARRIAGE		
Central X-frame chassis, triangular beams	•	
Rubber tracks	450 mm (18 in)	
Track tension: sprung shock absorber with grease stress chamber	•	

TRANSMISSION - TRACKS	
Closed-circuit hydrostatic, SENSO DRIVE	•
1 dual variable displacement pump 2x45 cm³ (2x 2.7 in³)	2x 100 l/min (2x 26.4 gpm**) 330 bar (4,800 psi)
2x2 speed gear motors, with automatic brakes	•
Maximum speed - on tracks	0-10 kph (0 - 6.2 mph)
Traction capacity	54 kN (12,139.7 lbf)
** US gallon	

TRANSMISSION - RAILS		
4 independant hydraulic engines, with park brake at loss of pressure •		
Hydrostatic transmission, closed circuit	•	
2 independant front and rear bogies controlled builth safety check-valves	y 2 cylinders	•
Maximum speed - on rails		0-23 kph (0 - 14.3 mph)
4 Rail Wheels: Wheels diameter: Wheels diameter:	Standard gauge Adjustable gauge	UIC profile 500 mm (19.69 in) 630 mm (24.80 in)
Track gauge:	Standard Adjustable	1435 mm (4'8.5") 950-1600 mm (3'1.4"-5'3")
Oscillation		-
Maximum slope (without trailer)		60‰
Maximum cant		180 mm (7.87 in)
Braking distance to stop (dry rails, 0° slope)		< 20m ( < 65'7")
Minimum track turning radius		80 m (262'5")
Traction capacity at the tow bar*** Traction capacity, maximum weight of trailers (wi system)	thout braking	1400 kg (3,086 lbs) 8 t (17,637 lbs)

	HYDRAULIC SYSTEM	
	BOOM, STICK AND ROTATION CIRCUIT	
	Maximum variable displacement pump	63 cm³ (3.8 in³)
ACTIVE CONTROL power control. "Load Sensing - Flow sharing" type LUDV main valve.  Proportionality of functions maintained regardless of the pressure level in individual elements		
	Maximum Flow Rate	120 l/min (31.7 gpm**)
	Maximum working pressure	280 bar (4,060 psi)

\*\*\* Traction capability depends on the railway regulations of your country.

<sup>\*\*</sup> US gallon

REFILL CAPACITIES	
Fuel tank	73 L (19.2 gal**)
Hydraulic tank	56 L (14.8 gal**)
Engine Coolant	20 L (5.3 gal**)
** US gallon	

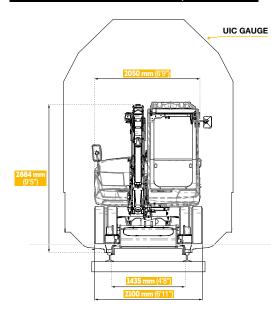
Standard and optional equipment may vary depending on your region. Consult your Mecalac dealer for details.

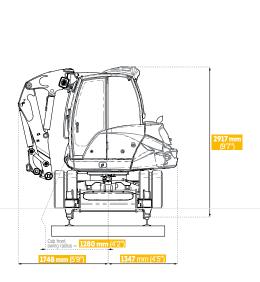


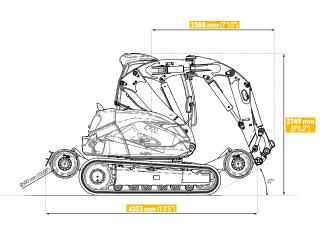
#### WORK POSITION - OVER THE FRONT, ALIGNED

#### WORK POSITION - OVER THE SIDE, 90°

#### TRAVEL POSITION

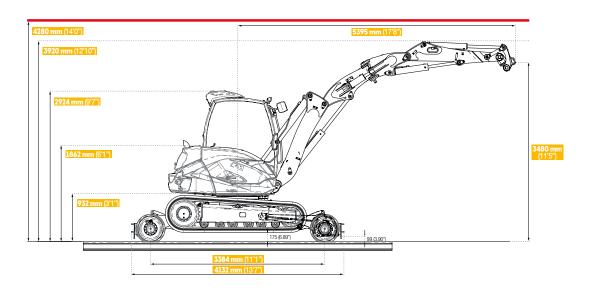






Add the track rail clearance when on rails for all heights.

#### **WORK POSITION - BELOW CATENARIES**



SHIPPING DIMENSIONS	mm (ft-in)
Shipping height	2850 (9'4")
Shipping length	4440 (14'7")



#### **OPERATING WEIGHTS**

With 75kg operator, full fuel tank, rubber tracks, rail powertrain, heavy counterweight 590 kg (1,300 lbs), and Mecalac boom. With digging bucket 900mm (2'11"), 330 kg (728 lbs)

12830 kg (28,285 lbs)

Turbocharged engine with intercooler, chilled air inlet, water-cooled,
electronic control and "Common Rail" injection system. Emission
technologies include an EGR valve, a Diesel Oxidation Catalyst
(DOC), and for Europe a standard Diesel Particulate Filter (DPF)

Meets EU Stage V and U.S. EPA Tier 4 Final standards\*

Engine model Cylinders

DEUTZ TCD 3.6 L4 4. in-line

Ratings

2200 rpm

55.4 kW

Horsepower (DIN 70020)

(75 HP / 74.3 imperial HP) 405 N.m (287 lbf-ft)

Maximum torque

at 1300 rpm

Displacement

3600 cm<sup>3</sup> (220 in<sup>3</sup>)

\* EPA: Environmental Protection Agency - Depending on your local legislation

ELECTRIC	CAL C	RCUIT

12 V (50 AH)

Batteries Voltage

12 V

Alternator Starter

14 V (95 A) 12 V (2.7 kW)

**BOOMS AND STICK** 

Mecalac variable kinematics consisting of 4 parts:

boom, intermediate boom, offset and dipperstick

Right and left offset by hydraulic cylinder.

System enabling all penetration force to be kept regardles of

the angular position of the offset

1775 mm (70 in) 2034 mm (80 in)

Left offset Right offset Stick length

2025 mm (6'7.7")

Boom with shock absorbers and 4 safety check valves

#### SWING MECHANISM

Maximum swing speed Maximum swing torque

10 rpm 25 kNm (18,440 lbf-ft)

#### UNDERCARRIAGE

Central X-frame chassis, triangular beams

450 mm (18 in) Rubber tracks

Track tension: sprung shock absorber with grease stress chamber

**TRANSMISSION - TRACKS** Closed-circuit hydrostatic, SENSO DRIVE 2x 100 l/min (2x 26.4 gpm\*\*) 1 dual variable displacement pump 2x45 cm<sup>3</sup> (2x 2,7 in<sup>3</sup>) 330 bar (4,800 psi) 2x2 speed gear motors, with automatic brakes

Traction capacity

0-9 kph (0 - 5.6 mph) 68 kN (15,300 lbf)

\*\* US gallon

TRANSMISSION - RAILS
4 independant hydraulic engines, with park brake at loss of pressure
Hydrostatic transmission, closed circuit
2 independent front and rear bogies controlled by 2 cylinders

with safety check-valves Maximum speed - on rails

Maximum speed - on tracks

TRANSMICCION DAILO

0-20 kph (0 - 12.4 mph)

4 Rail Wheels: Wheels diameter:

UIC profile For all track gauges

630 mm (24.80 in)

300 bar (4,350 psi)

Track gauge:

Standard 1435 mm (4'8.5") 950-1600 mm (3'1.4"-5'3")

Adjustable ±7° Oscillation Maximum slope (without trailer) 60‰ Maximum cant 180 mm (7 in)

Braking distance to stop (dry rails, 0° slope) < 20m ( < 65'7") Minimum track turning radius 80 m (262'5") Traction capacity, at the tow bar\*\*\* 1500 kg (3,307 lbs)

Traction capacity, maximum trailer (with air braking system) 14 t (30,864 lbs)

\*\*\* Traction capability depends on the railway regulations of your country.

#### HYDRAULIC SYSTEM

Maximum working pressure

#### BOOM, STICK AND ROTATION CIRCUIT Maximum variable displacement pump

75 cm<sup>3</sup> (4.6 in<sup>3</sup>)

ACTIVE CONTROL power control. "Load Sensing - Flow sharing" type LUDV main valve. Proportionality of functions maintained regardless of the pressure level in individual elements

Maximum Flow Rate 150 l/min (39.6 gpm\*\*)

\*\* US gallon

\*\* US gallon

REFILL CAPACITIES	
Fuel tank	105 L (27.7 gal**)
Hydraulic tank	77 L (20.3 gal**)
Engine Coolant	20 L (5.28 gal**)

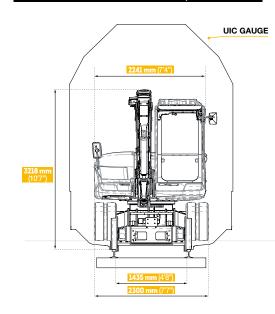
Standard and optional equipment may vary depending on your region. Consult your Mecalac dealer for details.

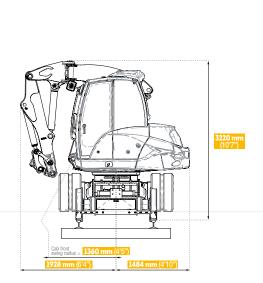


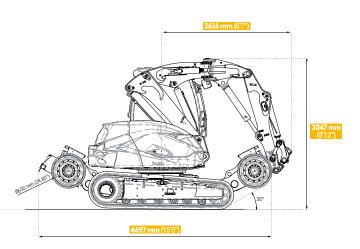
#### WORK POSITION - OVER THE FRONT, ALIGNED

#### WORK POSITION - OVER THE SIDE, 90°

#### TRAVEL POSITION

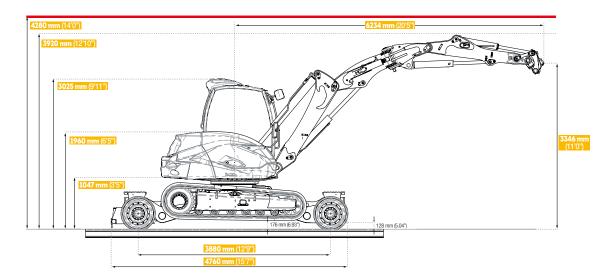






Add the track rail clearance when on rails for all heights.

#### **WORK POSITION - BELOW CATENARIES**



SHIPPING DIMENSIONS	mm (ft-in)
Shipping height	3240 (10'7")
Shipping length	4965 (16'3")



#### **OPERATING WEIGHTS**

With 75kg operator, full fuel tank, twin-tires, rail powertrain, heavy counterweight 3800 kg (8,378 lbs) and Mecalac boom. With bucket 1000 mm (3'3"), 485 kg (1,070 lbs).

16360 kg (36,067 lbs)

#### ENGINE

Turbocharged engine with intercooler, chilled air inlet, water-cooled, electronic control and "Common Rail" injection system. Emission technologies include an EGR valve, a Diesel Oxidation Catalyst (DOC), Selective Catalytic Reduction system (SCR) and for Europe a standard Diesel Particulate Filter (DPF).

Meets EU Stage V and U.S. EPA\* Tier 4 Final standards

Engine model
Cylinders
Ratinas

DEUTZ TCD 3.6 L4 4, in-line 2300 rpm

100 kW

Horsepower (DIN 70020)

(136 HP / 134 imperial HP) 500 N.m (370 lbf-ft)

Maximum torque

at 1600 rpm

Displacement

3621 cm<sup>3</sup> (221 in<sup>3</sup>)

<sup>\*</sup> EPA: Environmental Protection Agency - Depending on your local legislation

ELECTRICAL CIRCUIT	
Batteries	12 V (50 AH)
Voltage	12 V
Alternator	14 V (120 A)
Starter	12 V (3.2 kW)

#### **BOOMS AND STICK**

Mecalac variable kinematics consisting of 4 parts: boom, intermediate boom, offset and dipperstick

offset and dipperstick

Right and left offset by hydraulic cylinder. System enabling all penetration force to be

System enabling all penetration force to be kept regardles of the angular position of the offset  $\,$ 

Left offset Right offset ± 2300 mm (7'6") ± 2300 mm (7'6")

Stick length

2450 mm (8'0.4")

Boom with shock absorbers and 4 safety check valves

•

#### SWING MECHANISM

Maximum swing speed 10 rpm

Maximum swing torque 38 kNm (28,000 lbf-ft)

#### **AXLE AND WHEELS**

4-steering wheels with steering angle - with single tires	27°
Outside tires turning radius - with single tires	4440 mm (14'7")

TRANSMISSION - ROAD	
Open-circuit hydraulic, SENSO DRIVE	•
Hydraulic motor coupled to a 2-speed ZF gearbox, Powershift.	107 cm³ (6.5 in³)
Continuously variable displacement pump	160 l/min (42.3 gpm**) 350 bar (5,080 psi)
Double-circuit braking system	Multi-disk, wet
Maximum speed - on roads	0-35 kph (0 - 21 mph)

83 kN (18,660 lbf)

Traction capacity

TRANSMISSION - RAILS		
Friction-type Transmission (tires on rails), open circle	uit	•
2 independant front and rear bogies. Controlled by 2 cylinders, with safety check-valves		•
Maximum speed - on rails		0-30 kph (0 - 18.6 mph)
4 Rail Wheels: Wheels diameter:	Standard gauge	UIC profile 500 mm (19.69 in)
Track gauge:	Standard	1435 mm (4'8.5")
Oscillation		-
Maximum slope (without trailer)		60‰
Maximum cant		5° = 130 mm (5.11 in)
Braking distance to stop (dry rails, 0° slope)		< 20 m (< 65'7")
Minimum track turning radius		80 m (262'5")
Traction capacity, at the tow bar*** Traction capacity, maximum trailer (without braking	system)	4000 kg (8,818 lbs) 20 t (44,092 lbs)
*** Traction capability depends on the railway regulations of y	our country.	

#### HYDRAULIC SYSTEM

#### BOOM, STICK AND ROTATION CIRCUIT

Maximum variable displacement pump 130 cm³ (8.0 in³)

ACTIVE CONTROL power control. "Load Sensing - Flow sharing" type LUDV main valve. Proportionality of functions maintained regardless of the pressure level in individual elements

Maximum Flow Rate 270 I/min (71.3 gpm\*\*)

Maximum working pressure 350 bar (5,080 psi)

"US gallon

REFILL CAPACITIES	
Fuel tank	220 L (58.1 gal**)
Diesel Exhaust Fluid (DEF)	20 L (5.28 gal**)
Hydraulic tank	122 L (32.2 gal**)
Engine Coolant	20 L (5.28 gal**)

\*\* US gallon

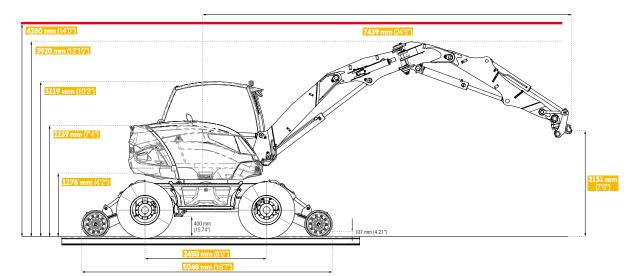
Standard and optional equipment may vary depending on your region. Consult your Mecalac dealer for details.

<sup>\*\*</sup> US gallon



# WORK POSITION - OVER THE FRONT, ALIGNED WORK POSITION - OVER THE SIDE, 90° TRAVEL POSITION **UIC GAUGE**

#### **WORK POSITION - BELOW CATENARIES**



SHIPPING DIMENSIONS	mm (ft-in)
Shipping height	3200 (10'6")
Shipping length	8200 (26'11")



#### **OPERATING WEIGHTS**

With 75kg operator, full fuel tank, twin-tires, rail powertrain, heavy counterweight 4700 kg (10,362 lbs) and Mecalac rail dedicated boom. With clamshell 1000 mm (3'4").

20367 kg (44,902 lbs)

#### **ENGINE**

Turbocharged engine with intercooler, chilled air inlet, water-cooled, electronic control and "Common Rail" injection system. Emission technologies include an EGR valve, a Diesel Oxidation Catalyst (DOC), Selective Catalytic Reduction system (SCR) and for Europe a standard Diesel Particulate Filter (DPF).

Meets EU Stage V and U.S. EPA\* Tier 4 Final standards

 Engine model
 DEUTZ TCD 3.6 L4

 Cylinders
 4, in-line

 Ratings
 2300 rpm

 Horsepower (DIN 70020)
 100 kW

136 HP / 134 imperial HP)

 
 Maximum torque
 500 N.m (370 lbf-ft) at 1600 rpm

 Displacement
 3621 cm³ (221 in³)

<sup>\*</sup> EPA: Environmental Protection Agency - Depending on your local legislation

ELECTRICAL CIRCUIT	
Batteries	12 V (50 AH)
Voltage	12 V
Alternator	14 V (120 A)
Starter	12 V (3.2 kW)

#### BOOMS AND STICK

Mecalac two-piece boom kinematics, rail dedicated for working under 4.28 m (14 ft) catenaries with freedom of movements.

Consisting of 3 parts: boom, internediate boom and dipperstick

Right and left offset

Stick length

2450 mm (8'0.4")

Boom with shock absorbers and 4 safety check valves

#### SWING MECHANISM

Maximum swing speed	10 rpm
Maximum swing torque	38 kNm (28,000 lbf-ft)

#### **AXLE AND WHEELS**

4-steering wheels with steering angle - with twin tires	17.6°
Outside tires turning radius - with twin tires	5473 mm (17.9 ft)

TRANSMISSION - ROAD	
Open-circuit hydraulic, SENSO DRIVE	•
Hydraulic motor coupled to a 2-speed ZF gearbox, Powershift.	140 cm³ (8.5 in³)
Continuously variable displacement pump	160 l/min (42.3 gpm**) 350 bar (5,080 psi)
Double-circuit braking system	Multi-disk, wet
Maximum speed - on roads	0-30 kph (0-18.5 mph)
Traction capacity	112 kN (24,692 lbf)
** US gallon	

TRANSMISSION - RAILS		
2 independant hydraulic engines, with multi-dis of pressure	sk park brake at loss	•
Hydrostatic transmission, open circuit		•
2 independant front and rear bogies, lockable. Controlled by 2 cylinders, with safety check-val	lves	•
Maximum speed - on rails		0-30 kph (0-18.5 mph)
4 Rail Wheels:		UIC profile
Wheels diameter:	For all track gauges	630 mm (24.80 in)
Track gauge:	Standard	1435 mm (4'8.5")
	Adjustable	1000-1435 mm (3'3.4"-(4'8.5")
Oscillation		±5°
Maximum slope (without trailer)		60‰
Maximum cant		180 mm (7.08 in)
Braking distance to stop (dry rails, 0° slope)		< 30 m ( < 98'5")
Minimum track turning radius		90 m (295'3")

Traction capacity, maximum trailer (with air braking system)
\*\*\*\* Traction capability depends on the railway regulations of your country.

Traction capacity, at the tow bar\*\*\*

HYDRAULIC SYSTEM	
BOOM, STICK AND ROTATION CIRCUIT	
Maximum variable displacement pump	130 cm <sup>3</sup> (8.0 in <sup>3</sup> )
ACTIVE CONTROL power control. "Load Sensing - Flow sharing" type LUDV main Proportionality of functions maintained regardless of the pressure level in individual	
Maximum Flow Rate	270 l/min (71.3 gpm**)
Maximum working pressure	350 bar (5,080 psi)
** US gallon	

2250 kg (4,960 lbs)

20 t (44,092 lbs)

REFILL CAPACITIES	
Fuel tank	280 L (73.9 gal**)
Diesel Exhaust Fluid (DEF)	20 L (5.28 gal**)
Hydraulic tank	122 L (32.2 gal**)
Engine Coolant	20 L (5.28 gal**)
** US gallon	

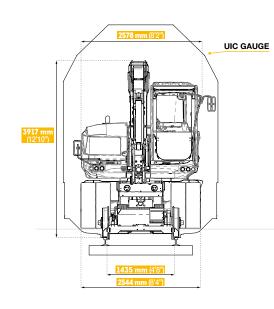
Standard and optional equipment may vary depending on your region. Consult your Mecalac dealer for details.

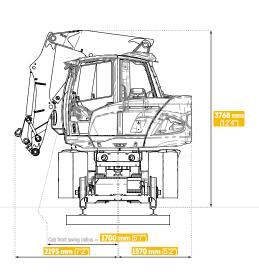


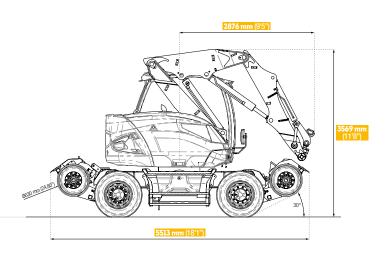
#### WORK POSITION - OVER THE FRONT, ALIGNED

#### WORK POSITION - OVER THE SIDE, 90°

#### TRAVEL POSITION

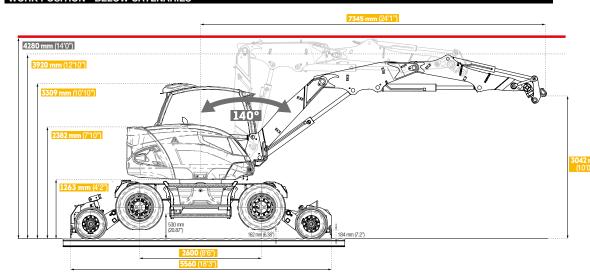






Add the tire rail clearance when on rails for all heights.

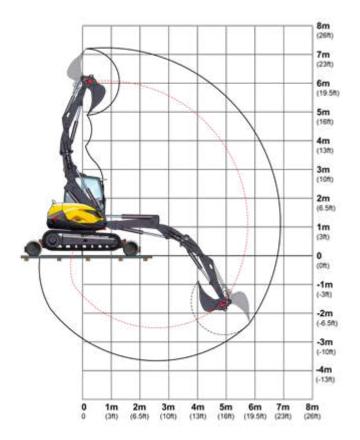
#### **WORK POSITION - BELOW CATENARIES**



SHIPPING DIMENSIONS	mm (ft-in)
Shipping height	3116 (10'3")
Shipping length	9162 (30'0")

# **MECALAC VERSATILE BOOM\***

#### **WORKING RANGES - ON RAILS**



WORKING RANGES ON RAILS	
Maximum reach	6750 mm (22'2")
Maximum digging depth	3600 mm (11'10")

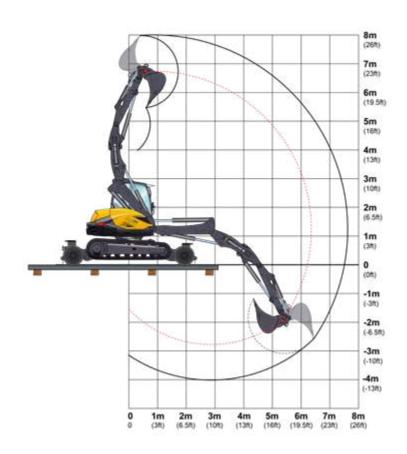
DIGGING PERFORMANCE	
Break-out force (maximum)	5100 daN (11,460 lbf)
Penetration/Tear-out force (maximum)	2700 daN (6.070 lbf)

<sup>\*</sup> With offset

# 136MRail

# **MECALAC VERSATILE BOOM\***

#### **WORKING RANGES - ON RAILS**



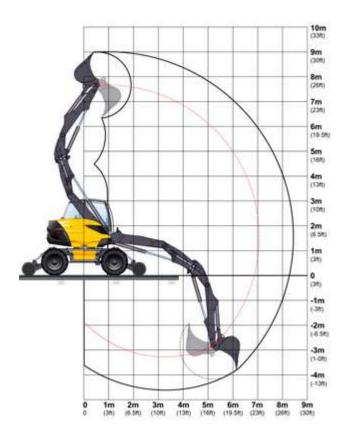
WORKING RANGES ON RAILS	
Maximum reach	7500 mm (24'7")
Maximum digging depth	3824 mm (12'6")

DIGGING PERFORMANCE	
Break-out force (maximum)	6500 daN (14,600 lbf)
Penetration/Tear-out force (maximum)	3300 daN (7,400 lbf)

<sup>\*</sup> With offset

# **MECALAC VERSATILE BOOM\***

#### **WORKING RANGES - ON RAILS**



WORKING RANGES ON RAILS	
Maximum reach	8300 mm (27'3")
Maximum digging depth	4550 mm (14'11")

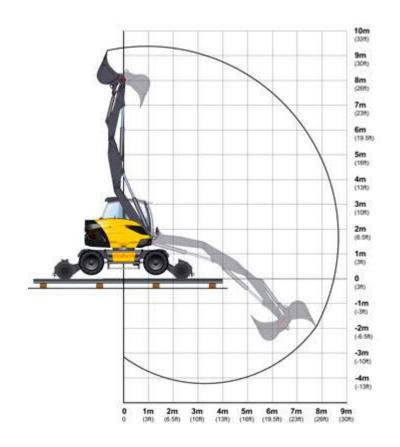
DIGGING PERFORMANCE	
Break-out force (maximum)	8170 daN (18,370 lbf)
Penetration/Tear-out force (maximum)	5500 daN (12.360 lbf)

<sup>\*</sup> With offset

# 276MRail

# **MECALAC RAIL-DEDICATED BOOM**

### **WORKING RANGES - ON RAILS**



WORKING RANGES ON RAILS	
Maximum reach	8906 mm (29'3")
Maximum digging depth	4437 mm (14'6")

DIGGING PERFORMANCE	
Break-out force (maximum)	8170 daN (18,370 lbf)
Penetration/Tear-out force (maximum)	6800 daN (15,280 lbf)



#### MECALAC VERSATILE BOOM WITH OFFSET

#### LIFTING CHARTS WITH HOOK - WITHOUT INCLINATION All the weights are given in kg (lb) with CONNECT. 3M (10 ft) 4M (131 ft) 5M (16 ft) on rails 2000 (4,409) 2000 (4,409) 2000 (4,409) **2000**° (4,409°) 1600 (3,527) 1200° (2,646°) 2000 (4.409) 2000 (4.409) 2000 (4.409) 2000\* (4.409\*) 1350 (2.976) 1200° (2.646°) on tracks 2100 (4,630) on rails 2600 (5,732) **2600** (5,732) 1950° (4,299°) 1600 (3,527) **1200°** (2,646°) 1300 (2,866) 770° (1,697°) 3M (10 ft) on tracks 2300 (5,071) 2200 (4,850) 2000 (4,409) 1950° (4,299°) 1300 (2,866) 1200° (2,646°) 800 (1,764) 770° (1,697') on rails 2800 (6,173) 2800 (6,173) **2100** (4,630) **1900**° (4,189°) 1700 (3,738) 1100° (2,425°) 1300 (2,866) 770° (1,697°) 1100 (2,425) 500° (1,102") 2300 (5,071) 2200 (4,850) **1900** (4,189) 1900° (4,189°) **1150** (2,535) 1100° (2,425") 750 (1,653) 770° (1,697°) 1100 (2,425) **500**° (1,102°) on tracks 1800 (3,968) on rails 2800 (6,173) **2100** (4,630) 1650° (3,638°) 1000° (2,205") 1300 (2,866) 700° (1,543°) 2200 (4.850) 1800 (3.968) 1650° (3.638°) 1000 (2.205) on tracks 1000° (2,205°) 700 (1.543) 700° (1,543°) on rails 2400 (5,291) 2300 (5,071) 1500° (3,307") 1500 (3,307) 950' (2,094') 1100 (2,425) 650° (1,433°) on tracks 2200 (4,850) **1700** (3,748) 1500° (3,307°) 1000 (2,205) 950\* (2,094\*) **650** (1,433) 650° (1,433°) 1400 (3,086) 2000 (4,409) **1400**° (3,086°) 900 (1,984) 900' (1,984') on rails -2M (-7 ft) 900 (1,984) 900\* (1,984\*) on tracks 2000 (4,409) **1400** (3,086) 1400° (3,086°)

#### **WORKING CONDITIONS**

#### ON TRACKS

- On crawler, lorry up
- On horizontal, compact ground

#### ON RAILS

- Machine bogies on rails
- On level tracks, CANT = 0°

#### TRACKS AND RAILS

- Boom and stick used without offset
- Without tools (bucket, shovel...)
- With CONNECT quick coupler, with loading hook of 3 t (6.613 lb) and with standard track shoes.

#### **ACCORDING TO ISO 10567**

- Maximum 75% of the tipping load or 87% of the hydraulic capacity
- Maximum values determined for optimal position of the boom and cylinders

The lifting capabilities shown with an asterix (\*) are limited by the tipping load that can be lifted. Other values are limited by the hydraulic capabilities and capacity of the hook.

# 136MRail

Working in longitudinal position

### **MECALAC VERSATILE BOOM WITH OFFSET**

Working over the side or at 360°

		<b>2M</b> (7 ft)		3M	<b>3M</b> (10 ft) <b>4.5M</b> (15 ft)			6M (	20 ft)	MAXIMUM		
			41	B		The state of		事		<b>B</b>		<b>MM</b> (ft-in)
6M (20 ft)	on rails	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>3250</b> ° (7,165°)	-	-	-	-	-	-	-
0.1.(20.1.)	on tracks	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>4000</b> (8,818)	-	-	-	-	-	-	-
I.5M (15 ft)	on rails	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>3450</b> ° (7,605°)	<b>4000</b> (8,818)	<b>1700</b> * (3,748°)	-	-	-	-	-
Com (10 II)	on tracks	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>2700</b> ° (5,952')	<b>2450</b> ° (5,401°)	-	-	-	-	-
Th4 (40 (1)	on rails	-	-	<b>4000</b> (8,818)	<b>3300</b> ° (7,275°)	<b>4000</b> (8,818)	<b>1750</b> * (3,858*)	<b>3500</b> ° (7,716°)	<b>950</b> ° (2,094°)	-	-	-
<b>3M</b> (10 ft)	on tracks	-	-	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>2750</b> ° (6,063°)	<b>2450</b> * (5,401*)	<b>1550</b> ° (3417°)	<b>1400</b> * (3,086*)	-	-	-
= => 4 (= 4×)	on rails	-	-	<b>4000</b> (8,818)	<b>3200*</b> (7,055*)	<b>4000</b> (8,818)	<b>1650</b> * (3,638*)	<b>3600</b> ° (7,937°)	900* (1,984*)	<b>3000</b> ° (6,614')	700° (1,543°)	6600 (21'8'
<b>1.5M</b> (5 ft)	on tracks	-	-	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>2650</b> ° (5,842°)	<b>2400</b> ° (5,291°)	<b>1550</b> * (3,417*)	<b>1400</b> ° (3,086°)	<b>1250</b> ° (2,756°)	<b>1100</b> ° (2,425°)	6600 (21'8'
	on rails	-	<b>4000</b> (8,818)	4000 (8,818)	<b>2850</b> ° (6,283°)	4000 (8,818)	<b>1500</b> ° (3,307°)	<b>3500</b> ° (7,716°)	<b>850</b> ° (1,874°)			-
0 M	on tracks	<b>4000</b> (8,818)	<b>4000</b> (8,818)	4000 (8,818)	<b>4000</b> (8,818)	<b>2450</b> ° (5,401°)	<b>2200</b> ° (4,850°)	<b>1450</b> ° (3,197°)	<b>1300</b> (2,866)			-
	on rails	-	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>2500</b> ° (5,511°)	4000 (8,818)	<b>1300</b> (2,866)	<b>2050</b> (4,519)	<b>800</b> ° (1,764°)	-	-	-
<b>-1.5M</b> (5 ft)	on tracks	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>3850</b> ° (8,488°)	<b>2250</b> ° (4,960°)	<b>2000</b> (4,409)	<b>1400</b> ° (3,086°)	<b>1250</b> (2,756)	_	_	_
	on rails	-	<b>4000</b> ° (8,818°)	<b>4000</b> (8,818)	<b>2300</b> ° (5,070°)		-	-	-	_	-	-
<b>3M</b> (-10 ft)	on tracks	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>4000</b> (8,818)	<b>3650</b> ° (8,047°)					_		_

#### **WORKING CONDITIONS**

#### **ON TRACKS**

- On crawler, lorry up
- On horizontal, compact ground

#### ON RAILS

- Machine bogies on rails
- On level tracks, CANT = 0°

#### TRACKS AND RAILS

- Boom and stick used without offset
- Without tools (bucket, shovel...)
- With CONNECT quick coupler, with loading hook of 3 t (6,613 lb) and with standard track shoes.

#### **ACCORDING TO ISO 10567**

- Maximum 75% of the tipping load or 87% of the hydraulic capacity
- Maximum values determined for optimal position of the boom and cylinders

The lifting capabilities shown with an asterix (\*) are limited by the tipping load that can be lifted. Other values are limited by the hydraulic capabilities and capacity of the hook.

Working in longitudinal position

Working over the side or at 360°



All elements added to the end of the dipperstick must be taken into consideration when measuring the real lifting capacities in kg (lbs), particularly their positions and weights

### MECALAC VERSATILE BOOM WITH OFFSET

		2M	2M (7 ft)		(10 ft)	4.5M	<b>4.5M</b> (15 ft)		20 ft)	MAXIMUN		MAXIMUM		
				可		The state of the s		T		The state of the s		<b>MM</b> (ft-in)		
6M (20 ft)	on rails	<b>6800</b> (14,991)	<b>6800</b> (14,991)	<b>6800</b> (14,991)	<b>4600</b> * (10,141*)	<b>5200</b> (11,464)	2350° (5,181°)	-	-	<b>4350</b> (9,590)	<b>1650</b> * (3,638*)	E400 (17'0"		
OM (20 II)	on tyres	<b>6800</b> (14,991)	<b>6800</b> (14,991)	<b>6800</b> (14,991)	<b>5950</b> ° (13,117')	<b>3650</b> * (8,047*)	<b>3000°</b> (6,614')	-	-	<b>2700</b> ° (5,952°)	<b>2150°</b> (4,740°)	<b>5400</b> (17'8")		
<b>4.5M</b> (15 ft)	on rails	-	-	<b>6650</b> (14,660)	<b>4600</b> ° (10,141')	<b>5200</b> (11,464)	2400° (5,291")	<b>4850</b> (10,692)	<b>1400</b> ° (3,086')	<b>4600</b> (10,141)	1150° (2,535')	<b>6500</b> (21'4"		
4.3M (13 II)	on tyres	-	-	<b>6650</b> (14,660)	<b>5950</b> ° (13,117')	<b>3800</b> * (8,377*)	<b>3100°</b> (6,834')	<b>2200*</b> (4,850')	<b>1800°</b> (3,968°)	<b>1900</b> * (4,189*)	<b>1550°</b> (3,417°)	0500 (214)		
3M (10 ft)	on rails	-	-	<b>8000</b> (17,640)	<b>4450</b> * (9,810')	<b>6600</b> (14,550)	<b>2400</b> ° (5,291')	<b>4950</b> (10,912)	<b>1350°</b> (2,976°)	<b>3900</b> (8,598)	<b>900</b> ° (1,984')	<b>7100</b> (23'3")		
3M (101t)	on tyres	-	-	<b>7500</b> ° (16,535°)	<b>5750</b> ° (12,676°)	<b>3800</b> * (8,377*)	<b>3050°</b> (6,724')	<b>2200</b> ° (4,850')	<b>1800</b> ° (3,968')	<b>1600</b> ° (3,527°)	<b>1250°</b> (2,756°)	7100 (200)		
1.5M (5 ft)	on rails	-	-	<b>8000</b> (17,640)	<b>4350</b> ° (9,590°)	<b>8000</b> (17,640)	<b>2300°</b> (5,071°)	<b>4900</b> (10,802)	<b>1300°</b> (2,866°)	3100 (6,834)	<b>800°</b> (1,764°)	<b>7400</b> (24'3")		
1.3M (3 II)	on tyres	-	-	7350° (16,204°)	<b>5650</b> ° (12,456')	<b>3700</b> ° (8,157°)	<b>2950</b> ° (6,504')	<b>2150</b> ° (4,740')	1700° (3,748°)	<b>1400</b> ° (3,086°)	1100° (2,425')	7400 (24.3.)		
0 M	on rails	-	<b>7350</b> (16,204)	-	<b>4000</b> * (8,818')	<b>8000</b> (17,640)	<b>2050</b> ° (4,519')	<b>3950</b> (8,708)	<b>1200°</b> (2,645')	<b>2350</b> (5,180)	<b>800°</b> (1,764°)	<b>7300</b> (23'11"		
UM	on tyres	-	<b>8000</b> (17,640)	-	<b>5300</b> ° (11,684')	<b>3400</b> ° (7,496°)	<b>2650</b> ° (5,842°)	<b>2050</b> ° (4,519°)	<b>1600°</b> (3,527')	<b>1400</b> ° (3,086°)	<b>1100°</b> (2,425°)	7300 (23 11		
<b>-1.5M</b> (-5 ft)	on rails	-	<b>6500</b> (14,330)	-	<b>3400</b> ° (7,496')	<b>4550</b> (10,031)	1800° (3,968')	<b>2650</b> (5,842)	1100° (2,425')	<b>2050</b> (4,519)	900° (1,984')	<b>6700</b> (22'0")		
-I.3M (-3 II)	on tyres	-	8000 (17,640)	-	<b>4650</b> ° (10,251')	<b>3150</b> ° (6,944°)	<b>2450</b> ° (5,401')	<b>1950</b> (4,299)	<b>1500°</b> (3,307')	<b>1600</b> ° (3,527°)	<b>1250°</b> (2,755°)	6700 (22 0 )		
-3M (-10 ft)	on rails	-	-	-	<b>3300</b> ° (7,275°)	<b>3800</b> (8,377)	<b>1750°</b> (3,858°)	-	-	3100 (6,834)	<b>1300°</b> (2,866°)	<b>5400</b> (17'8")		
-3M (=10 II)	on tyres	-	-	-	<b>4500</b> ° (9,921")	<b>3050</b> ° (6,724°)	2350° (5,181")	-	-	<b>2250</b> (4,960)	1750° (3,858°)	3400 (17 O )		

#### WORKING CONDITIONS

#### ON TIRES

- On tires, lorry up
- On horizontal, compact ground
- With axle oscillation locked and brakes

#### ON RAILS

- Machine bogies on rails
- On level tracks, CANT = 0°

#### TIRES AND RAILS

- Boom and stick used without offset
- Without tools (bucket, shovel...)
- With CONNECT quick coupler, with loading hook of 8 t (17,637 lb) and with standard tires.

#### **ACCORDING TO ISO 10567**

- Maximum 75% of the tipping load or 87% of the hydraulic capacity
- Maximum values determined for optimal position of the boom and cylinders

The lifting capabilities shown with an asterix (\*) are limited by the tipping load that can be lifted. Other values are limited by the hydraulic capabilities and capacity of the hook.

# 276MRail

Working in longitudinal position

# **MECALAC RAIL-DEDICATED BOOM**

Working over the side or at 360°

		n kg (lb) with COI	NNECT.									
		2M (	7 ft)	3M (	10 ft)	4.5M	(15 ft)	6M (	20 ft)		MAXIMUM	
		th						丏		The state of the s		<b>MM</b> (ft-in)
6M (20 ft)	on rails on tyres	-	-	<b>6800</b> (14,990) <b>6800</b> (14,990)	<b>5700</b> (12,566) <b>6800</b> (14,990)	<b>5200</b> (11,464) <b>5200</b> (11,464)	<b>3400</b> ° (7,496°) <b>5000</b> ° (11,023°)	<b>4300</b> (9,480) <b>3800</b> (8,377)	<b>1850</b> ° (4,078°) <b>2600</b> ° (5,732°)	<b>5060</b> (11,155) <b>3600</b> * (7,936)	<b>1750</b> ° (3,858°) <b>2300</b> ° (5,070°)	<b>6200</b> (20'4")
<b>4.5M</b> (15 ft)	on rails on tyres	-	-	<b>6650</b> (14,660) <b>6650</b> (14,660)	<b>5350</b> (11,794) <b>6650</b> (14,660)	<b>5200</b> (11,464) <b>5200</b> (11,464)	<b>3400</b> ° (7,496') <b>5000</b> ° (11,023')	<b>4875</b> (10,747) <b>4150</b> * (9,149*)	<b>1800</b> ° (3,968') <b>2600</b> ° (5,732')	<b>4270</b> (9,413) <b>2850</b> (6,283)	<b>1300</b> ° (2,866°) <b>1800</b> ° (3,968°)	<b>7200</b> (23'7")
<b>3M</b> (10 ft)	on rails on tyres	-	-	<b>8000</b> (17,640) <b>8000</b> (17,640)	<b>5850</b> (12,897) <b>6500</b> (14,330)	<b>6600</b> (14,550) <b>5250</b> (11,574)	<b>3300</b> ° (7,275') <b>5000</b> ° (11,023')	<b>4950</b> (10,913) <b>3750</b> (8,267)	<b>1900</b> ° (4,188°) <b>2650</b> ° (5,842°)	<b>3310</b> (7,297) <b>2450</b> ° (5,401)	<b>1150</b> ° (2,535°) <b>1550</b> ° (3,417°)	<b>7750</b> (25'5"
<b>1.5M</b> (5 ft)	on rails on tyres	-	-	<b>8000</b> (17,640) <b>8000</b> (17,640)	<b>5400</b> ° (11,904°) <b>7600</b> (16,755)	<b>8000</b> (17,640) <b>4925</b> (10,857)	<b>3150</b> ° (6,944°) <b>4800</b> ° (10,580°)	<b>4925</b> (10,857) <b>3425</b> (7,550)	<b>1800</b> * (3,968*) <b>2350</b> * (5,180*)	<b>2611.5</b> (5,757) <b>2400</b> * (5,291)	<b>1050</b> ° (2,314') <b>1500</b> ° (3,306')	<b>7850</b> (25'9"
0 M	on rails on tyres	-	-	<b>8000</b> (17,640) <b>8000</b> (17,640)	<b>4700</b> ° (10,361°) <b>7300</b> (16,093)	<b>8000</b> (17,640) <b>4750</b> (10,472)	<b>2900</b> ° (6,393') <b>4550</b> ° (10,031')	<b>3950</b> (8708) <b>3300</b> * (7,275°)	<b>1550</b> ° (3,417') <b>2250</b> ° (4,960')	<b>2060</b> (4,541) <b>2050</b> (4,519)	<b>1100</b> ° (2,425°) <b>1550</b> ° (3,417°)	<b>7700</b> (25'3"
<b>-1.5M</b> (5 ft)	on rails on tyres	-	-	<b>8000</b> (17,640) <b>8000</b> (17,640)	<b>4375</b> * (9,645*) <b>7075</b> (15,597)	<b>4550</b> (10,031) <b>4550</b> (10,031)	<b>2700</b> ° (5,952°) <b>4300</b> ° (9,480°)	<b>2650</b> (5,842) <b>2850</b> * (6,283*)	<b>1550</b> ° (3,417') <b>2100</b> ° (4,629')	<b>1960°</b> (4,321)° <b>1925</b> (4,243)	<b>1300</b> ° (2,866°) <b>1500</b> ° (3,306°)	<b>6900</b> (22'7"
<b>-3M</b> (-10 ft)	on rails on tyres	-	-	<b>4800</b> (10,580) <b>4800</b> (10,580)	<b>4100</b> (9,038) <b>4800</b> (10,580)	<b>3800</b> (8,377) <b>3800</b> (8,377)	<b>2600</b> ° (5,732°) <b>3800</b> (8,377)	-	-	<b>3100</b> (6,834) <b>3100</b> (6,834)	<b>2150</b> ° (4,739°) <b>2400</b> ° (5,291°)	<b>5300</b> (17'5"

Working in longitudinal position

Working over the side or at 360°

#### WORKING CONDITIONS

#### ON TIRES

- On tires, lorry up
- On horizontal, compact ground
- With axle oscillation locked and brakes

#### ON RAILS

- Machine bogies on rails
- On level tracks, CANT = 0°

#### TIRES AND RAILS

- Boom and stick used without offset
- Without tools (bucket, shovel...)
- With CONNECT quick coupler, with loading hook of 8 t (17,637 lb) and with standard tires.

#### **ACCORDING TO ISO 10567**

- Maximum 75% of the tipping load or 87% of the hydraulic capacity
- Maximum values determined for optimal position of the boom and cylinders

The lifting capabilities shown with an asterix (\*) are limited by the tipping load that can be lifted. Other values are limited by the hydraulic capabilities and capacity of the hook.

All elements added to the end of the dipperstick must be taken into consideration when measuring the real lifting capacities in kg (lbs), particularly their positions and weights



# 103.133MRail

# STANDARD / OPTIONAL EQUIPEMENT

ENGINE	106MRail	136MRail
Engine, meets U.S. EPA Tier 4 Final / EU Stage V standards, with DOC		
(Diesel Oxidation Catalyst) and DPF (Diesel Particulate Filter) for Europe,		
4 cylinders, turbocharged "common rail", intercooler, water-cooled		
Deutz engine TCD2.9	•	
Deutz engine TCD3.6		•
Automatic engine low idle when no function is used	•	•
Automatic engine idle shutdown (depending on regulations, excl. France)	0	0
Engine rpms adjustment by potentiometer	•	•
Fuel/water separator and diesel filter	•	•
Electric fuel priming pump	•	•
Engine hydraulic oil filter	•	•
Engine air filter, cyclonic	•	•
ELECTRICAL FOLUDATAT		
ELECTRICAL EQUIPMENT Alternateur (14V-95A)	•	_
, ,	•	•
Battery Optima high performance 12V (50AH)	-	•
Interior cab light	-	•
One front working light, on top of the cab	•	•
One rear working light	•	
Working lights package, 5 LED lights: 2x front, 1x rear, 2x on front linkage		0
Side camera, meets ISO 5006:2017 standards	0	•
Rear camera, meets ISO 5006:2017 standards	0	0
Horn	•	•
Back-up alarm, white noise	0	0
Electric diesel refueling pump, with automatic stop	0	0
OPERATOR STATION		
Panoramic cab, FOPS-ROPS certified with standard FOPS Level II guard	•	•
Skylight window and sunshade (for windshield and/or skylight roof window)	•	•
Windscreen, 2-piece split "60/40", entirely or partially retractable	•	•
Wiper, 3 positions (stop, intermittent, continuous)	•	•
Mirrors, left and right	•	•
Cab rain protector	0	0
LED beacon	0	0
	0	0
Anti-theft (electronic, 6 keys included)		
Anti-theft (electronic, 6 keys included)  Cab Interior  Heating system, meets ISO 10263 standard	•	•
Cab Interior Heating system, meets ISO 10263 standard	•	•
Cab Interior Heating system, meets ISO 10263 standard Air conditioning	-	•
Cab Interior Heating system, meets ISO 10263 standard	0	•
Cab Interior  Heating system, meets ISO 10263 standard  Air conditioning  Storage area for documents / phone, coat hook	0	•

OPERATOR STATION	106MRail	136MRail
Cab readiness for radio installation with speakers	•	•
MP3 Bluetooth Radio	0	0
Cab air filter	•	•
Fuse box, enclosed	•	•
Seat		
Adjustable in height and horizontally with lumbar, back and headrest adjustments	•	•
Heated pneumatic seat	0	0
Adjustable armrests	•	•
Safety seatbelt, retractable, integrated into the seat	•	•
Controls		
Start/Stop button	•	•
$2\mbox{-way}$ pedals (forward/reverse) and $2$ levers for left and right tracks control	•	•
Pedal for variable adjustment boom, cylinder selection via the right joystick $% \left( 1\right) =\left( 1\right) \left( $	•	•
Lever for front and rear lorries	•	•
User-friendly control pannel (keypad) and rotary encoder	•	•
Joysticks with hydraulic proportional control	•	•
ISO / SAE switch control pattern	0	0
Operation-assisting features		
One-Switch system for operating the machine like an excavator or a loader	•	•
Bucket controls (open/close) reversing switch	•	•
Coupling function of the intermediate boom and stick cylinders (monoboom-type operation)	•	•
Speed control	•	•
Monitor		
7" Color screen monitor, real-time machine and safety data visuals, audible alarms. Adaptation for video input.	•	•
Diesel level gauge, coolant temperature, indicators for filter replacement or default codes. Work tools control and flows setting and much more	•	•
Overload warnings and audible alarm (if RCL option not selected)	•	•
HYDRAULIC FLUIDS - OIL		
Mecalac mineral hydraulic oil (ISO 46)	•	•
Total Bio-hydraulic oil (TMP 46) or Panolin (HLP 46)	0	0
Hydraulic oil for cold weather (ISO 32)	0	0
Hydraulic oil for warm weather (ISO 68)	0	0
Hydraulic oil for extreme warm weather (ISO 100)	0	0
Country packs available  = Standard		

o = Optional

<sup>\*</sup> Please reach your local dealer sales administration contact for more information.
\*\* Excluding pins for quick couplers

# 106-136MRail

# STANDARD / OPTIONAL EQUIPEMENT

UNDERCARRIAGE - CENTRAL X FRAME	106MRail	136MRail
Closed hydrostatic transmission circuit, Senso Drive	•	•
Two-speed automatic travel motors (5 kph and 10 kph / 3 mph and 6,2 mph)	•	
Two-speed automatic travel motors (5 kph and 9 kph / 3 mph and 5,6 mph)		•
Automatic parking brakes	•	•
Idler block with tension adjustment through greasing point	•	•
Front blade, 3 positions, adapted for rail applications		
(not compatible with the French "SNCF" railways regulation)		0
UNDERCARRIAGE - RAIL		
2x monobloc lorry powered by cylinders with safety check valves, for a rail standard gauge of 1435 mm (4'8.5") $$	•	
1x monobloc lorry and 1x oscillating lorry (+/-7°) lockable via the joystick, powered by cylinders with safety check valves		•
Four steel wheels (UIC profile), 500 mm (19,68 in)	•	
Four steel wheels (UIC profile), 630 mm (24,80 in)		•
Steel wheels self-propelled by four hydraulic motors	•	•
2x multidisk parking brakes, oil-immersed	•	•
Hydrostatic transmission. Max speed on rails: 23 kph (14,3 mph)	•	
Hydrostatic transmission. Max speed on rails: 20 kph (12,4 mph)		•
Semi-Automatic hook for trailers		0
Toolbox included into the rear lorry, tow bar and hook included	•	•
TRACK GROUP		
Rubber tracks, 450 mm (18 in)	•	•
HYDRAULICS		
Systems		
Main hydr. variable piston pump (boom, stick and swing)	•	•
2x variable displacement piston pumps (transmission)	•	•
Hydr. distributor Active Control with load sensing and flow sharing	•	•
Hydr. swing motor with brake and shockless valve for $360\ensuremath{^\circ}$ upperframe swing	•	•
Lines and circuits		
Main auxiliary hydraulic line, proportional, high flow	•	•
Hydr. continuous flow (via a switch) for tools with a continuous movement	•	•
$2^{\rm nd}$ auxiliary hydraulic line, proportional (offset bypass for rotating or other function)	0	0
Hydraulics for clamshells (deviation of the bucket cylinder) - open/close	0	0
Hammer return line	0	•
Hydraulic lines and circuit for a Mecalac CONNECT or Direct quick coupler	•	•
4 Anti-drop check valves on booms, stick, bucket (with overload alarm if RCL option is not selected)	•	•

BOOMS AND STICK	106MRail	136MRail
Mecalac boom, including offset, 3-part adjustable boom kinematics	•	•
Mecalac stick, 1800 mm (5'11")	•	
Mecalac stick, 2025 mm (6'7")		•
QUICK COUPLER		
Mecalac patented CONNECT quick coupler, with hook	•	•
Mecalac direct coupling option (pin-on, with hook)	0	0
OTHER EQUIPEMENT		
Manual centralised greasing system (upperframe)	•	•
Manual centralised greasing system (upperframe and booms/stick**)	0	0
Automatic greasing system (upperframe and booms/stick**)	0	0
Additionnal heavy counterweight (+425kg / 937 lbs)	•	
Additionnal heavy counterweight (+590kg / 1,300 lbs)		•
MyMecalac Connected Services (telematics)	•	•
Start-up digicode	О	0
Grease gun	•	•
2-years warranty / 3000 hours	•	•
SPECIAL PAINT		
Special paint option 1 color (excluding cab)	0	0
Special paint option 2 colors (excluding cab)		0
RAIL REGULATIONS AND SPECIFICITIES		
France - NF58003 Homologation	0	0
EU - EN15746 homologation compatibility		0
Yellow or Blue RCI lights depending RCI option and local regulation		0
Rail white/red lights, front/rear, with auto shift		0
Rail warning horn	О	0
In-cab emergency stop button		0
Rated Capacitiy Indicator (RCI) and Rated Capacity Limiter (RCL) system with 4.3" screen		0
Height and swing limiters. Heights: 3.92 m (12'10"), 4.28 m (14'0") and adjustable	0	0
Adjustable track gauge, 950 - 1600 mm (3'1.4" - 5'3")	*	0
Other gauges on demand	*	*
Pneumatic braking system for rail car brakes (1 line), braking with lever		0
Pneumatic braking system for rail trailers (2 lines), braking with the lever		0
Emergency back-up system, for repositioning and towing the machine in case of diesel engine failure	0	0
Insulated steel wheels	0	0

<sup>• =</sup> Standard

o = Optional

<sup>\*</sup> Please reach your local dealer sales administration contact for more information. \*\* Excluding pins for quick couplers

# 156-216**MRail**

# STANDARD / OPTIONAL EQUIPEMENT

ENGINE	156MRail	216MRail
Engine, meets U.S EPA Tier 4 Final / EU Stage V standards, with DOC		
(Diesel Oxidation Catalyst) and DPF (Diesel Particulate Filter) for Europe,		
SCR (Selective Catalyst Reduction), Diesel Exhaust Fluid (DEF), 4 cylinders,		
surbocharged "common rail", intercooler, water-cooled		
Deutz engine TCD3.6, 100kW (136 hp)	•	•
Automatic engine low idle when no function is used	•	•
Automatic engine idle shutdown (depending on regulations, excl. France)	0	0
Engine rpms adjustment by potentiometer or pedal	•	•
Fuel/water separator and diesel filters	•	•
Electric fuel priming pump	•	•
Engine hydraulic oil filter	•	•
Engine air filter, cyclonic	•	•
ELECTRICAL EQUIPMENT		
Alternator, 14V / 120A	•	•
Battery Optima high performance (12V-50AH)	•	•
nterior cab light	•	•
One LED front working light, on top of the cab	•	•
Additional LED working light, front	0	
One rear LED working light	0	
Vorking lights package, 9 LED lights: 2x front, 1x rear, 4x front linkage, x counterweight, 1x on the engine hood		0
Road lights, front and rear, bottom of counterweight	•	•
Side camera, meets ISO 5006:2017 standards	•	
Rear camera, meets ISO 5006:2017 standards	•	•
Horn	•	•
Back-up alarm, white noise	-	•
	0	0
Electric diesel refueling pump, with automatic stop	0	0
PERATOR STATION Panoramic cab, FOPS-ROPS certified with standard FOPS Level II quard	•	
· · · · · · · · · · · · · · · · · · ·	•	•
Gecondary seat for a second operator, with independent door / access	•	•
n-line cab access steps for a direct entry into the cab	-	•
Sliding door for the main cab, with sliding side window	•	•
kylight window and sunshade (for windshield and/or skylight roof window)	•	•
/indscreen, 2-piece split "60/40", entirely or partially retractable	•	•
Viper, 3 positions (stop, intermittent, continuous)	•	•
Mirrors, left and right	•	•
Cab rain protector	0	0
ED beacon	0	0
Anti-theft (electronic, 6 keys included)	0	0
Cab Interior	•	
leating system, meets ISO 10263 standard	•	•
Air conditioning	•	•
Storage area for documents / phone, coat hook, bottle holder	•	•
Refrigirated lunchbox	•	

	450110 "	040145 !!
Cab Interior Storage compartment below the 2 <sup>nd</sup> operator's seat	156MRail	216MRail
• .	_	•
Steering column, 3 adjustments (2x fore/aft + 1x height) Left tilting console, with hydraulic functions lockout	•	•
12V Plug	•	•
MP3 Bluetooth Radio	•	
Cab readiness for radio installation with speakers	0	0
Cab air filter	•	•
Fuse box, enclosed	•	•
· ·		
Seat  Adjustable in height and horizontally with lumbar, back and headrest		
adjustments	•	•
Heated pneumatic seat	0	0
Adjustable armrests	•	•
Safety seatbelt, retractable, integrated into the seat	•	•
Controls		
Start/Stop button	•	•
One-way travel pedal and FNR switch (forward/Neutral/Reverse)	•	•
Two-way travel pedal (forward/reverse), no FNR switch	_	0
Switch for steering wheel direction inversion	0	0
Pedal for variable adjustment boom, cylinder selection via the right joystick	•	•
Lever for front and rear lorries	•	•
User-friendly control pannel (keypad) and rotary encoder	•	•
Joysticks with hydraulic proportional control	·	•
ISO / SAE switch control pattern	0	0
Operation-assisting features		
Eco Mode	•	•
Configured for two applications: road and rail applications. For each: One-switch system for switching between Parking, Work and Travel modes	•	•
Shift between road and rails (via the lowering/rise of the lorries, with steering wheels locked and 2-steering wheels position selected)		•
Operator ID profiles	•	•
Bucket controls (open/close) reversing switch	•	•
Coupling function of the intermediate boom and stick cylinders (monoboom-type operation)	•	•
Speed and Ride control	•	•
Monitor		
7" Color screen monitor, real-time machine and safety data visuals, audible alarms. Adaptation for video input.	•	•
Diesel level gauge, coolant temperature, indicators for filter replacement or default codes. Work tools control and flows setting and much more	•	•
Overload warnings and audible alarm (if RCL option not selected)	•	•

Country packs available
• = Standard

- o = Optional

# STANDARD / OPTIONAL EQUIPEMENT

HYDRAULIC FLUIDS - OIL	156MRail	216MRail
Mecalac mineral hydraulic oil (ISO 46)	•	•
Total Bio-hydraulic oil (TMP 46) or Panolin (HLP 46)	0	0
Hydraulic oil for cold weather (ISO 32)	0	0
Hydraulic oil for warm weather (ISO 68)	0	0
Hydraulic oil for extreme warm weather (ISO 100)	0	0
UNDERCARRIAGE		
Diesel tank in the undercarriage (220 I / 58 US gal)	•	
Diesel tank in the undercarriage (280 I / 74 US gal)		•
4-wheel drive	•	•
4-steering wheels	•	•
Oscillating front axle, lockable via the joystick	•	•
Open hydrostatic transmission circuit, Senso Drive	•	•
Two-speed automatic Powershift gearbox (0 - 30 kph / 0 - 18,6 mph)		•
Two-speed automatic Powershift gearbox (0 - 35 kph / 0 - 21,7 mph)	•	_
Automatic parking brakes integrated in the gearbox (travel mode only)	•	•
Multidisk Service brakes, oil-immersed, integrated into both axle Clamshell travel support bar	•	0
Ciarnsheil travel support bar		0
UNDERCARRIAGE - RAIL		
2x monobloc lorry powered by cylinders with safety check valves, for a rail	•	
standard gauge of 1435 mm (4'8.5")		
1x monobloc lorry and 1x oscillating lorry (+/-5°) lockable via the joystick,		•
powered by cylinders with safety check valves Four steel wheels (UIC profile), 500mm (19,68 in)	_	
Four steel wheels (UIC profile), 330mm (24,80 in)	•	•
Steel wheels mounted on 2 axles propelled by 2 hydraulic motors		•
Multidisk dry parking brake integated in each lorry		•
2 dry disks service brakes integrated in each lorry		
Hydrostatic transmission (9A). Max speed on rails: 30 kph / 18,6 mph		•
Friction-drive transmission (9C). Max speed on rails: 30 kph / 18,6 mph	•	
Semi-Automatic hook for trailers		0
Toolbox included into the rear lorry, tow bar and hook included		•
WHEELS		
Single tires XF 18R 19.5		0
Twin tires 315/70R 22.5 without spacer		0
Single tires ZXM 12.00-R20 with HD insert	•	
HYDRAULICS		
Systems		
Main hydr. variable piston pump	•	•
Hydr. distributor Active Control with load sensing and flow sharing	•	•
Hydr. swing motor with brake and shockless valve for 360° upperframe swing	•	•
Lines and circuits		
Main auxiliary hydraulic line, proportional, high flow	•	•
Hydr. continuous flow (via a switch) for tools with a continuous movement	•	•
$2^{nd}$ auxiliary hydraulic line, proportional (offset bypass for rotating or other function)	0	0

Lines and circuits	156MRail	216MRail
Hydraulics for clamshells (deviation of the bucket cylinder) - open/close	0	•
Hammer return line	0	•
Hydraulic lines and circuit for a Mecalac CONNECT or Direct quick coupler	•	•
4 Anti-drop check valves on booms, stick, bucket (with overload alarm if RCL option is not selected)	•	•
BOOMS AND STICK		
Mecalac rail-dedicated boom 2-part adjustable boom kinematics,		
purpose-built for working under overhead lines, without offset boom		•
Mecalac boom, including offset, 3-part adjustable boom kinematics	•	
Mecalac stick, 2450 mm (8'0.4")	•	•
QUICK COUPLER		
Mecalac patented CONNECT quick coupler, with hook	•	•
Mecalac direct coupling option (pin-on, with hook)	0	0
OTHER EQUIPEMENT		
Manual centralised greasing system (upperframe)	•	•
Manual centralised greasing system (upperframe and booms/stick**)	0	0
Automatic greasing system (upperframe and booms/stick**)	0	0
Additionnal heavy counterweight (+3800kg / 8,377 lbs)	•	
Additionnal heavy counterweight (+4700kg / 10,362 lbs)		•
MyMecalac Connected Services (telematics)	•	•
Start-up digicode	0	0
Grease gun	•	•
2-years warranty / 3000 hours	•	•
SPECIAL PAINT		
Special paint option 1 color (excluding cab)	0	0
Special paint option 2 colors (excluding cab)	0	0
RAIL REGULATIONS AND SPECIFICITIES		
France - NF58003 Homologation		0
EU - EN15746 homologation compatibility		0
Yellow or Blue RCI lights depending RCI option and local regulation		0
Rail white/red lights, front/rear, with auto shift		0
Rail warning horn	0	0
2 in-cab emergency stop buttons, one for each seat		•
Rated Capacity Indicator (RCI) and Rated Capacity Limitation (RCL) system with 4.3" screen		0
Height and swing limiters. Heights: 3.92 m (12'10"), 4.28 m (14'0") and adjustable		0
Adjustable track gauge, 1000 - 1435 mm (3'3.4" - 4'8.5")		0
Other gauges on demand	*	*
Pneumatic braking system for rail car brakes (1 line), braking with lever		0
Pneumatic braking system for rail trailers (2 lines), braking with the foot pedal		0
Emergency back-up system, for repositioning / towing the machine in case		9
of diesel engine failure	О	О
Insulated steel wheels		0
		-

#### Country packs available

<sup>\*</sup> Please reach your local dealer sales administration contact for more information. \*\* Excluding pins for quick couplers.

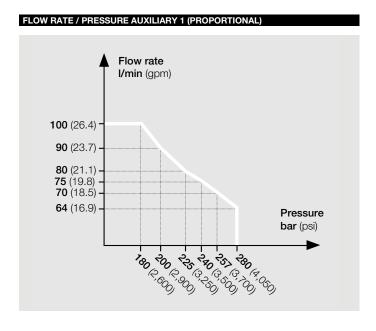


<sup>• =</sup> Standard / o = Optional

# 103-133MRail

# **HYDRAULIC ATTACHMENTS**

# 106MRail



AUXILIARY LINE 2	DATA
Offset cylinder diverted (clamshell rotation)	
Flow rate maximum	30 l/min (7.9 gpm*)
Pressure maximum	280 bar (4,050 psi)
Controls	Proportional

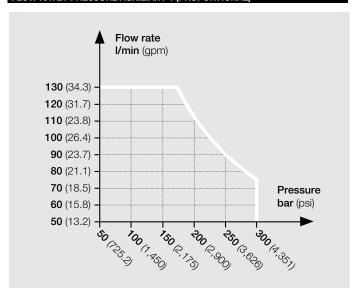
<sup>\*</sup> US gallon

AUXILIARY LINE 3	DATA
Bucket cylinder diverted (clamshell function)	
Flow rate maximum	80 l/min (21.1 gpm*)
Pressure maximum	280 bar (4,050 psi)

<sup>\*</sup> US gallon

# 136MRail

#### FLOW RATE / PRESSURE AUXILIARY 1 (PROPORTIONAL)



AUXILIARY LINE 2	DATA
Offset cylinder diverted (clamshell rotation)	
Flow rate maximum	30 l/min (7.9 gpm*)
Pressure maximum	300 bar (4,350 psi)
Controls	Proportional

<sup>\*</sup> US gallon

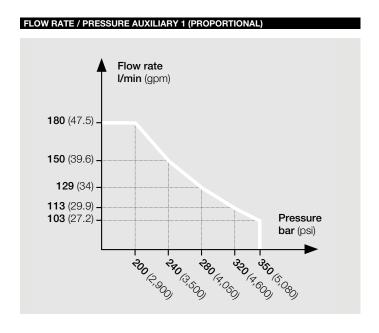
AUXILIARY LINE 3	DATA
Bucket cylinder diverted (clamshell function)	
Flow rate maximum	120 l/min (31.7 gpm*)
Pressure maximum	300 bar (4,350 psi)

<sup>\*</sup> US gallon

# 156-216MRail

# **HYDRAULIC ATTACHMENTS**

# 156MRail



AUXILIARY LINE 2	DATA
Offset cylinder diverted (clamshell rotation)	
Flow rate maximum	45 l/min (11.9 gpm*)
Pressure maximum	350 bar (5,080 psi)
Controls	Proportional

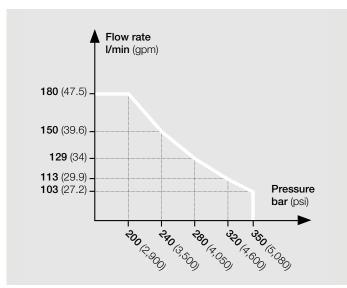
<sup>\*</sup> US gallon

AUXILIARY LINE 3	DATA
Bucket cylinder diverted (clamshell function)	
Flow rate maximum	160 l/min (42.3 gpm*)
Pressure maximum	350 bar (5,080 psi)

<sup>\*</sup> US gallon

# 216MRail

# FLOW RATE / PRESSURE AUXILIARY 1 (PROPORTIONAL)



AUXILIARY LINE 2	DATA
Offset cylinder diverted (clamshell rotation)	
Flow rate maximum	45 l/min (11.9 gpm*)
Pressure maximum	350 bar (5,080 psi)
Controls	Proportional

<sup>\*</sup> US gallon

AUXILIARY LINE 3	DATA
Bucket cylinder diverted (clamshell function)	
Flow rate maximum	160 l/min (42.3 gpm*)
Pressure maximum	350 bar (5,080 psi)

<sup>\*</sup> US gallon

# COMPARATIVE CHART CHOOSE YOUR RAIL-ROAD EXCAVATOR NOW!









103MRail	136 <b>MRail</b>	SPECIFICATIONS	156 <b>MRail</b>	216MRail
EU Stage V / U.S. EPA Tier 4 Final	EU Stage V / U.S. EPA Tier 4 Final	ENGINE	EU Stage V / U.S. EPA Tier 4 Final	EU Stage V / U.S. EPA Tier 4 Final
55.4 kW (75 hp) at 2300 rpm	55.4 kW (75 hp) at 2200 rpm	Engine Power	100 kW (136 hp) at 2300 rpm	100 kW (136 hp) at 2300 rpm
300 Nm (221 lbf) at 1600 rpm	405 Nm (287 lbf) at 1300 rpm	Maximum torque	500 Nm (370 lbf) at 1600 rpm	500 Nm (370 lbf) at 1600 rpm
		OPERATING WEIGHT		
9475 kg (20,889 lbs)	12830 kg (28,285 lbs)	With Work Tool	16360 kg (36,067 lbs)	20367 kg (44,903 lbs)
		воом		
Mecalac boom with offset	Mecalac boom with offset	Boom type	Mecalac boom with offset	Rail dedicated boom
		TRACK WIDTH	-	
950-1600 mm (3'1.4''-5'3'')	950-1600 mm (3'1.4''-5'3'')	Possible Track Widths	1435 mm (4'8.5")	1000-1435 mm (3'3.4" - 4'8.5")
		TOWING CAPABILITIES		
1400 kg (3,086 lbs)	1500 kg (3,307 lbs)	Traction capacity at the tow bar	4000 kg (8,818 lbs)	2250 kg (4,960 lbs)
8 t (17,637 lbs)	14 t (30,864 lbs)	Traction capacity - maximum Trailer	20 t (44,092 lbs)	20 t (44,092 lbs)
	0	Pneumatic Braking System		0
		SAFETY LIMITERS	_	
0	0	Height and Swing Limiters		0
	0	RCI Load Limiter		0
		TRANSMISSION		
Crawler closed circuit	Crawler closed circuit	Road Transmission	Hydrostatic	Hydrostatic
Hydrostatic	Hydrostatic	Rail Transmission	Friction, tires on rails	Hydrostatic
		SPEEDS		
10 kph (6.2 mph)	9 kph (5.6 mph)	On ground	35 kph (21 mph)	30 kph (18.5 mph)
23 kph (14.3 mph)	20 kph (12.4 mph)	On rails	30 kph (18.6 mph)	30 kph (18.5 mph)
		CABIN		
Single	Single	Single or double	Single	Double
		LIFTING CAPACITY - RAILS		
2T	4T	At 3 m (10 ft) and 0°. Height: 3 m (10 ft)	8T	8T
	950 kg (2,094 lbs)	At 6 m (19'8") and 90°. Height: 3 m (10 ft)	1350 kg (2,976 lbs)	1900 kg (4,188 lbs)
		TYPICAL APPLICATIONS		
Light applications	Light and medium applications	Type of applications	Medium to heavy applications	Heavy applications
Urban (subways, trams), tunnels	National railways, urban, tunnels	Type of networks	Urban (subways, trams), tunnels	National railways, urban, tunnels
France (NF 58003)	EU - Compatible with EN15746	Rail regulation compatibility	No specific homologation	EU - Compatible with EN15746



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