



*EMDX*



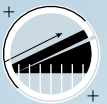
*ES1000*



*E12*



**AUTONOMY**



**PERFORMANCE**



**360° COMPACTNESS**



***EMDX***



***E12***



# Switch to **ZERO EMISSION**

## **MECALAC BELIEVES THAT INNOVATION MEANS SPEEDING UP THE MOVE TOWARDS JOBSITES THAT ARE LESS HARMFUL TO PEOPLE AND THE ENVIRONMENT**

For a very long time now, Mecalac has been giving thought to the environment, and we view sustainable development as an investment and a key issue for the future. The group's R&D policy is focused on designing products that have the smallest possible environmental impact, both on jobsites and on local residents.

### **MECALAC E-SERIES: 100%-ELECTRIC MACHINES FOR URBAN JOBSITES**

Mecalac is offering the first 100%-electric machines, which meet the three key requirements for the urban jobsites of today and tomorrow: autonomy, performance and 360° compactness. It is a technological response inspired by people, field and constraints that are constantly evolving. With the E-Series, Mecalac is entering a new chapter of its history by granting our concepts one of its most beautiful letter patent of nobility: "e" for electric, "e" for ecosystem, "e" for zero emission and "e" for emblematic. The E-Series are the logical conclusion of an approach that has been making construction sites the best they can be since 1974, with ever-more versatile products that reduce the number of machines on site, making their operation as time-efficient as possible and profitable to run.



**e51000**



*e12*

# INNOVATION TODAY

Any electric machine must take up three major challenges: autonomy, performance and compactness. The Mecalac e12 is the first 100% electric 10-12t excavator with no compromise on these three requirements. The key to the autonomy and performance of this machine lies in its very architecture. Installing the power source away from the turret allows for a record capacity of 150 kW.h and translates into an unrivalled autonomy of 8 hours.





bauma



# E12

## **AUTONOMY PERFORMANCE COMPACTNESS**

### **THE 3 MAJOR STRENGTHS OF THE E12**

The electric version of the 12MTX fits perfectly within Mecalac's philosophy of moving towards urban construction sites that are ever-more compact, efficient and environmentally friendly. The architecture of the diesel 12MTX makes it the natural forerunner of the electric version, so the location for the engine now houses a Lithium-ion battery technology, ideal for on-board solutions.

This technology combines weight/power/quality ratios that are far superior to conventional batteries with an optimized service life and total safety.



**DIGGING**



+



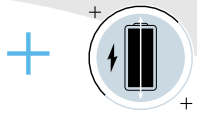
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**LOADING**

**HANDLING**

**HANDLING TOOL CARRIER**



## CUSTOMER BENEFITS

# Switch to **AUTONOMY**

### BATTERIES ARCHITECTURE



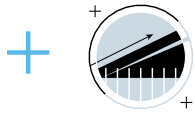
## LESS MEANS MORE

It takes only 8 hours to charge the e12. Without compromising on power, it does the job all day long without having to recharge its batteries, for 8 hours of autonomy. The Mecalac e12 means less vibration, less noise, less maintenance (no more filters, no more oil...), less risk of on-site accidents, less spent on maintenance and absolutely no CO<sub>2</sub> or particulate emission at the point of use.

### 150 KW.H LITHIUM-ION BATTERY



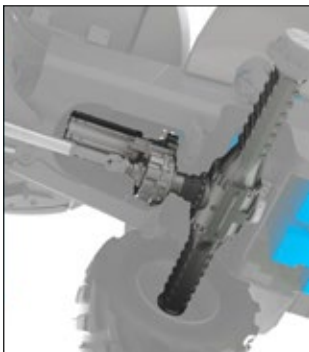
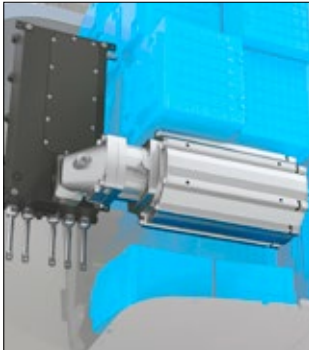




## CUSTOMER BENEFITS

# Switch to PERFORMANCE

### MOTORS ARCHITECTURE



## A NEW DIRECTION FOR URBAN JOBSITES

With a structure designed for urban environments from the outset and two independent electric motors, one powering the front linkage and work tools and one for the transmission, the Mecalac e12 is destined for urban machine fleets. In addition to its performance and autonomy, its 100% electric transmission offers unrivalled traction force as soon as it starts and energy regeneration when braking. The incredible power density of the electric motors makes it possible to preserve extreme compactness and they do not require any maintenance.





## CUSTOMER BENEFITS

# Switch to 360° COMPACTNESS

### FREEDOM OF MOVEMENT

With a full 360° swing diameter of only 2710 mm (8'11"), a 2.25 m (7'4") turning radius at wheels and an outstanding boom tilt angle (140°), the e12 only needs one road lane in urban areas to carry out its work. Traffic can continue with only a minimum of interruptions while the operator is able to work closer to the various obstacles he may come across. Efficient, the e12 offers compactness, while capitalizing on all its functionalities and capacities with a minimal impact on city environments.

Unlike conventional wheeled excavator, the e12 works all day, racking up more time in action than it does idling every day. Its articulated chassis allows it to move easily on any job site, and its agility also contributes to its overall performance.





# e12

At a time when a fixed date has already been announced for banning diesels in major conurbations, and with increasingly dense urban development and the cramped spaces going hand in hand with that, the new Mecalac e12's perfect blend of architecture and technology is paving the way for safer, cleaner and more efficient urban building sites.

## TECHNICAL DATA

100% electric	•
Capacity	150 kW.h
2x lithium-ion batteries	Nickel-Manganese-Cobalt (NMC)
Autonomy*	8 hours
Full charge duration**	8 hours
2 electric motors	1 for the transmission and 1 for the implements
0 CO <sub>2</sub> and particulate emission	(at point of use)

\*Depending on application types.

\*\* Indicative, on 22kW, subject to environmental conditions.





**eS1000**

# UPMOST EFFICIENCY

The Mecalac Swing loader – with high efficiency and speed of action – provides top performance on all construction sites. Its ability to simultaneously drive, maneuver and pivot is key to the high productivity. The new eS1000 takes the Swing concept to a new level with its 100% electric power and transmission. Switch to autonomy, stability and space management.





PS1000





# eS10000

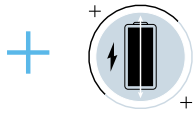
## **AUTONOMY, STABILITY, SPACE MANAGEMENT**

### **OPTIMAL IN EVERY WAY**

Mecalac swing loaders are compact, versatile, comfortable, safe, and extremely powerful. Their increased profitability and their innovative swing system have been the key for long-term market leadership in the swing loader class, which they continue to expand in terms of autonomy, stability, mobility and space management.

They are now electrically powered: the new eS1000 Swing loader allows the operator to take full advantage of the unique features of this machine with no emission at the point of use and limited noise pollution.





## CUSTOMER BENEFITS

# Switch to AUTONOMY

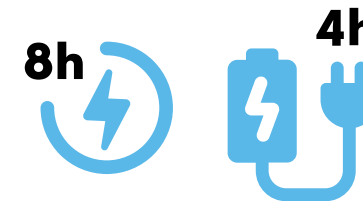
## LESS MOVES AND MORE AUTONOMY

The Swing Loader architecture results in an economy of movement. This translates into reduced cycle times, noise and visual nuisance, maintenance and risks of accidents, as well as a lower impact on the environment.

While diesel versions of the Swing Loader limit fuel consumption through this economy of motion, the electric eS1000 version also consumes only the right amount of energy for the jobsite operation and optimizes battery use for an unprecedented 8-hour autonomy.



## 75 KW.H LITHIUM-ION BATTERY

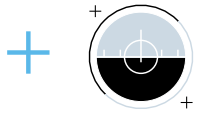


### TECHNICAL DATA

100% electric	•
Capacity	75 kW.h
1x lithium-ion battery	Nickel-Manganese-Cobalt (NMC)
Autonomy*	8 hours
Full charge duration**	4 hours
3 electric motors	1 for the transmission, 1 for the implements and 1 for the swing system
0 CO <sub>2</sub> and particulate emission	(at point of use)

\*Depending on application types

\*\* Indicative, on 22kW, subject to environmental conditions



## CUSTOMER BENEFITS

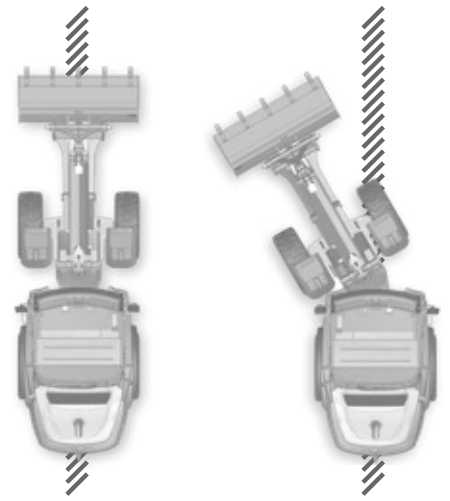
# Switch to STABILITY

### PROVEN STABILITY

Whatever is lifted by the bucket at the front, once the rear axle is locked, can be turned through 180° without any loss of steadiness. Thanks to this incredible stability in all positions and on all terrains, the Swing loader is able to drastically transform the logistics of construction sites.

Whatever the circumstances, it never loses its balance whether moving on site, between sites or during the various work stages, maintaining its mobility while reliably and securely overcoming any obstacles with ease.

### ARTICULATED LOADER

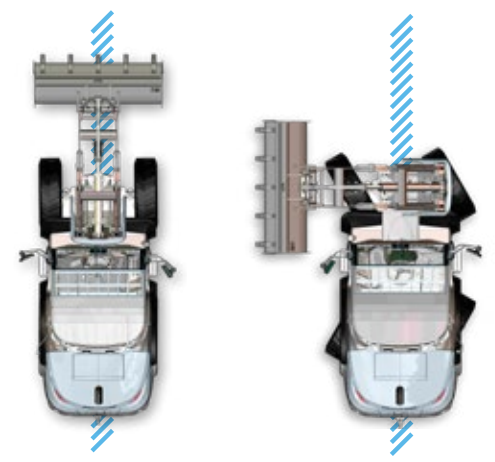


**100% STABILITY**

**75% STABILITY**

*Vs*

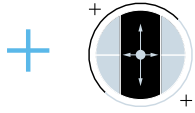
### SWING LOADER



**100% STABILITY**

**100% STABILITY**





## CUSTOMER BENEFITS

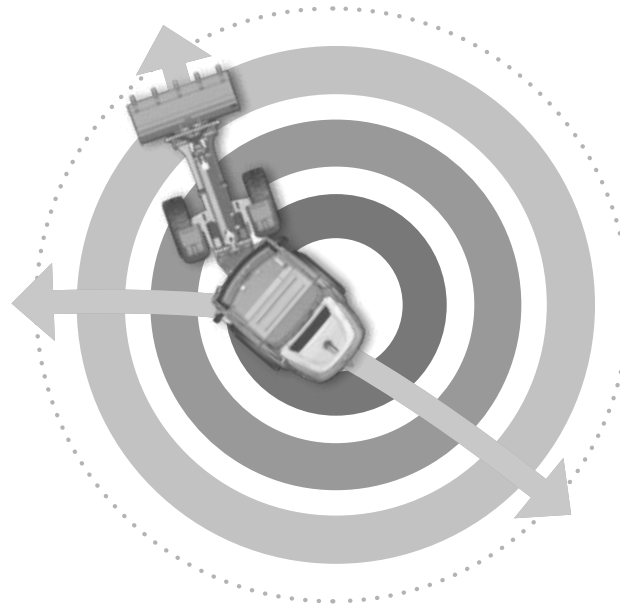
# Switch to SPACE MANAGEMENT

## MECALAC SWING, IMMEDIATE EFFICIENCY

Urban construction sites and places with limited space and time to work are the natural environment for compact wheel loaders. The small turning radius of our swing loaders ensures a very high degree of manoeuvrability. In addition, efficiency is determined by loading and unloading cycles. A large proportion of the conventional loaders' cycle times consists of time-consuming maneuvers.

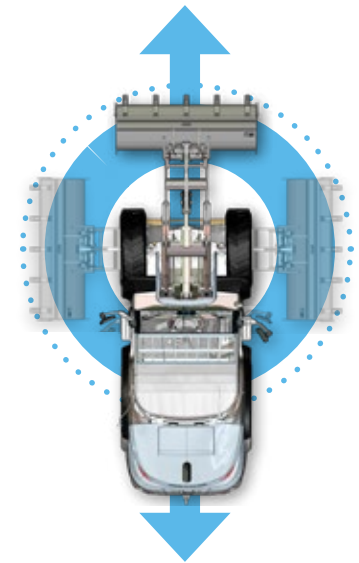
The innovative Mecalac Swing Loader concept is born from the wish to focus on operation efficiency to reduce these non added-value maneuvers by swinging the boom, instead of moving the machine itself.

ARTICULATED LOADER



vs

SWING LOADER





***eMDX***

# EMISSION-FREE LOGISTICS

Robust, reliable and essential on many urban worksites, Mecalac dumpers are the result of decades of expertise in the design and manufacture of public works machinery. Complementing the digging and loading capabilities of the e12 excavator and the eS1000 wheel loader, the new Mecalac eMDX site dumper paves the way for clean and silent transport of materials on construction sites. Not only can you still transport large quantities of materials with Mecalac site dumpers, but now you can also do it with less vibrations, less noise, less maintenance and absolutely no CO<sub>2</sub> and particulate emission at point of use.



MDX

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Mecalac

EMDX Mecalac



# eMDX

## AUTONOMY, PERFORMANCE, SAFETY

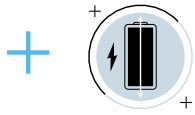
### FIRST 100% ELECTRIC 6-TON SITE DUMPER

Site dumpers are complementary machines that can quickly change the dynamic of a jobsite. Compact and maneuverable, capable of operating in all ground conditions, they provide an efficient solution for moving materials on the jobsite.

The new Mecalac eMDX keeps the fundamentals and heritage of the Mecalac 6MDX site dumpers in terms of productivity, safety and reliability, while incorporating Mecalac's technologies and expertise in zero emission solutions.







## CUSTOMER BENEFITS

# Switch to AUTONOMY

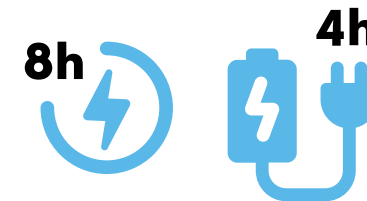
## SEAMLESS SWITCH TO ELECTRIC

Requirements of urban worksites as well as the habits of operators have been taken into account to develop the Mecalac eMDX site dumper so that the machine autonomy and productivity are not impacted.

With a record battery capacity of 75 kW.h, the eMDX can operate intensively for a minimum of 8 hours non stop. Only 4 hours are required to charge the battery. The eMDX unrivalled 8-hour autonomy can be achieved thanks to the battery's power and heat management technologies. In your jobsite, this autonomy can translate into dozens of additional hours as site dumpers are mainly used on a periodic basis with frequent machine stops.



## 75 KW.H LITHIUM-ION BATTERY

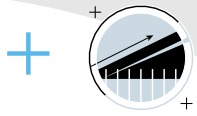


### TECHNICAL DATA

100% electric	•
Capacity	75 kW.h
1x lithium-ion battery	Nickel-Manganese-Cobalt (NMC)
Autonomy*	8 hours (non-stop)
Full charge duration**	4 hours
2 electric motors	1 for the transmission and 1 for the skip and hydraulics
0 CO <sub>2</sub> and particulate emission	(at point of use)

\*Depending on application types

\*\* Indicative, on 22kW, subject to environmental conditions



## CUSTOMER BENEFITS

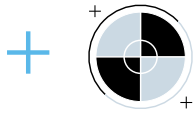
# Switch to **PERFORMANCE**

Unlike “mini” electric site dumpers available on the market, Mecalac has focused its R&D investment to offer an emission-free solution for transporting materials on a scale never before achieved. The result is the Mecalac eMDX, the first 6-ton electric site dumper with uncompromising levels of autonomy, performance and safety.

The automatic transmission ensures that all the power of the electric motor is transmitted to the permanent four-wheel drive, for unrivalled power and efficiency on all terrains.



**LARGEST 100%  
ELECTRIC  
SITE DUMPER**



## CUSTOMER BENEFITS

# Switch to SAFETY

## THE SAFEST CABBED DUMPER GOT EVEN SAFER

In addition to the ROPS/FOPS certification, the cab of the eMDX has been tested by Mecalac to withstand impacts while loading the dumper skip. A series of front and side impact tests have been performed using different excavator swing speeds to simulate real impacts that could occur. The eMDX cab has proven to be highly resistant to potential impacts, reinforcing our leadership position in terms of safety.

Mecalac's design features ensure enhanced safety with easier machine access, excellent all-around visibility, and a higher level of operator protection. Adding to this, an advanced object detection radar identifies potential hazards in front of the machine, maximizing safety standards.



## MDX-SERIES CAB: DESIGNED & TESTED TO WITHSTAND IMPACT





## MECALAC POWER PACK

# ZERO EMISSION

To complete our range of electric products and allow you to charge your machines wherever you are, Mecalac proposes an its on-site charging solution, the power pack.

## PLUG. CHARGE. WORK.

Thanks to its storage capacity, this power pack allows you to charge your electric machine on your jobsite, even when it is not hooked up to the grid. This battery-powered charger replaces traditional generators by providing you with greener electric power wherever you need it.

To avoid a significant investment, this power pack is available for rental periods from 3 days to several weeks. Depending on your energy needs, two mobile chargers can be combined, giving you up to 600 kWh of available energy. In addition, an electrical cabinet with various sockets is available for charging other devices.



The delivery and start-up of the power pack is included in the rental price and is carried out by our partner *GCK Energy*, specialized in green energy supply.

**Please contact your dealer for more information.**

#### TECHNICAL DATA

Power	200 kVA
Available energy	300 kW.h
Batteries	Lithium-Ion Intelligent Battery System (IBS)
Impact resistance	Up to 8G
Operation mode	On & Off Grid
Certifications	CE / CSC / ADR
Operating range	From -20°C to +45°C (-4°F - 113°F)
Dimension	ISO 10 Feet





## SERVICES

# PERFORMANCE, PROFITABILITY, LONGEVITY

DISCOVER OUR SERVICES

## MECALAC PREMIUM LUBRICANTS

Premium lubricants to get the best out of your machines:

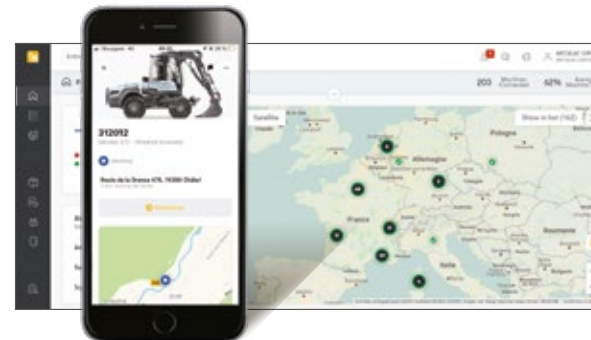
- Extended machine life
- Extended warranty and extended oil change intervals
- All-weather efficiency



## MY MECALAC CONNECTED SERVICES

To optimise the use of its machines, MECALAC offers a range of telematics services:

- Remote fleet management
- Access to all machine usage data of the machines
- Limited machine downtime thanks to preventive maintenance





## MECALAC GENUINE PARTS

Only genuine MECALAC parts ensure optimum service life and maximum performance:

- Certified genuine parts
- Maintenance kits
- Extended warranty



## MECALAC TRAINING

Make full use of the full potential of your Mecalac machines:

- Efficient use
- Individual coaching
- Intensive practice



## MECALAC FINANCIAL SOLUTIONS

A complete range of financial products and associated services to meet your specific needs:

- Machine purchase
- Machine rental
- Competitive rates



## WARRANTY EXTENSIONS

Our solutions are well-adapted to your needs to maximise the life of your machines:

- Customised contracts
- Peace of mind
- Controlled expenses

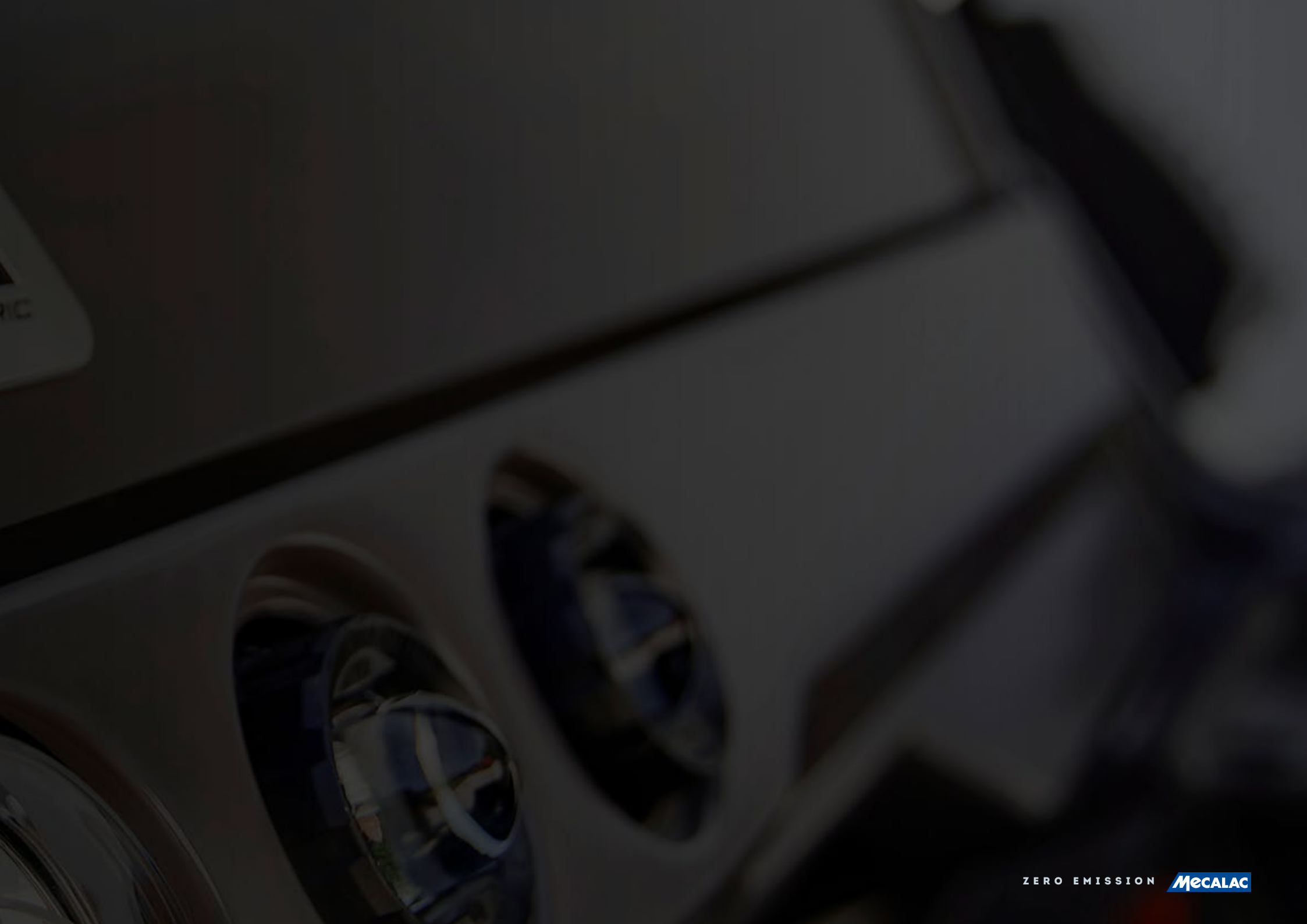


The list of services offered may vary depending on your country. Consult your local Mecalac dealer for details.



*e12 · e51000 · eMDX*

# TECHNICAL DATA



RC



**e12**

# YOUR E12 & AVAILABLE OPTIONS

The e12 comes standard equipped with a number of features, while at the same time remaining attentive to the specifications required by various different types of customers: landscape and earthwork contractors, public works professionals, municipal authorities, etc. So, from the color scheme to the choice of tires, not to mention to the various attachments, buckets, and hydraulic tools which can be used, there are many different ways to tailor your e12 to your brand and business.

## STANDARD E12 EQUIPMENT

### UNDERCARRIAGE

Articulated with 4-wheel drive, each being of equal size and equipped with ALLIANCE 18-19.5 16PR tires, oscillating rear axle with cab-controlled lock, limited slip differential on both axles

Integrated oil-bath multi-disc brakes on both axles

Independent electric motor transmission

Gearbox, automatic and/or manual

Speed change, 0 to 25 kph (0 to 15.5 mph) with exclusive Speed Control system to define the maximum speed

Outriggers separately proportionally and electrically controlled

### POWER SUPPLY

Lithium-ion Nickel-Manganese-Cobalt (NMC) batteries, 150 kW.h. Charging by three-phase socket on the AC power grid, built-in AC>DC converter. Zero emissions of gaseous pollutants during use. Charger socket type 5 (industrial, 5 pins)

### KINEMATICS

Variable adjustment boom with 4 parts; boom cylinder assembly on parallelogram; hydraulic left/right offset; stick

CONNECT hydraulic quick coupler, a Mecalac exclusive (patented)

4 non-return safety valves

### LUBRICATION

Centralised, manual single point for the whole of the parallelogram boom

### 4 OPERATING MODES

4 operating modes: Park, Excavator, Loader and Road

Controls assisted by ergonomic, electrically operated proportional joysticks

Advanced customization of various modes and controls

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



# STANDARD



## THE CAB - COMFORT AND SAFETY

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Cab access via an extendable step, a Mecalac exclusive

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A 7" VGA color screen for control over safety components and machine functions

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Cab with wide view and premium comfort and ROPS/FOPS standard-compliant with:

- A sliding swing door, a Mecalac exclusive
- A removable front windshield, partially or fully, an exclusive Mecalac feature
- A sliding glass door
- A roof hatch

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Steering column with three adjustment controls: 2 for tilt, one for steering wheel height

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Storage space with separate container

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ISO 10263-compliant heating with 6 separate vents

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Heating and air conditioning

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Pneumatic, heated seat that can be adjusted to the driver's body shape

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Radio-ready installation and 12V power supply

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2 LED working lights at the front – 1 LED working light at the rear

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Rear and side cameras

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Cabin sun visor

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Telematic, MyMecalac Connected Services

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## NEW QUICK COUPLER: CONNECT

The new Mecalac quick coupler is compliant with the latest regulations of the EN-471-1 and introduces a new standard, anticipating an even greater safety.



### PRODUCTIVITY

Reversibility as standard, adapted to all attachments and to the four functions of our machines

Simple pick-up of attachments, optimum visibility, in both directions

Maintenance-free, no need for additional lubrication, reduced risks of failure

The advantage of a compact and light coupler is used to enhance the bucket volume: +10%

### SAFETY

Impossible for a bucket to drop, once lifted off the ground no matter if locked or not, regardless of the direction of the tool, a "hook" system prevents the bucket from falling. Integrated safety valve in the cylinder.

Continuous detection of the cylinder position, "real time" measurement of the locking of the tool, associated with an acoustic warning signal in the cab

Automatic hydraulic compensation of play by an over-dimensioned length of the cylinder rod

Simple user interface, avoiding any risk of mis-operation

### RELIABILITY

Use of 500 hb steel for the eyehooks, the steel used for the buckets is of the worldwide highest durability

100% Mecalac: the machine, quick-coupler and attachments: designed to work together.

CONNECT is dedicated to Mecalac

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

## OPTIONS TO TAILOR YOUR E12 TO YOUR NEEDS

### CUSTOMER COLORS

If you'd like to have your Mecalac e12 painted in your company's colors? Personalize your Mecalac with your own RAL codes.

Colors samples



### TIRES



18-19.5 18PR 224  
Diagonal (Standard)



18R19.5 XF TL  
Radial



18-19.5 16PR MPT-06  
TBL

### QUICK COUPLERS

CONNECT quick coupler fitted with a hook

Direct coupling system, for mounting attachments on the stick with pins

# OPTIONS

## THE CAB - COMFORT AND SAFETY

Additional counterweight

Double pedals (inching/brake)

Rotating beacon, LED

2x LED boom light

Radio 2 speakers, USB, Bluetooth

Anti-theft device - electronic immobilizer with 6 keys

Lifting-type approval for handling activities - France only

Back-up alarm, traditional or white noise

Start-up digicode (available with telematics)

## POWER SOURCE

External charging container

Charger socket Type 2 (according to IEC 62196)

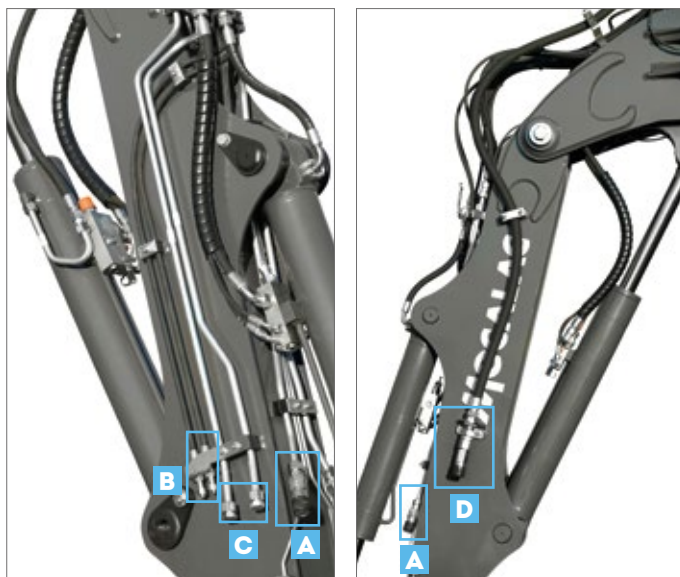
## AUXILIARY LINES

**A** Auxiliary Line 1 (standard, proportional)

**B** Auxiliary Line 2: Diverted offset cylinder for rotating function of a clamshell

**C** Auxiliary Line 3: Diverted bucket cylinder for opening / closing function of a clamshell

**D** Hammer return line



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

## LUBRICATION

Centralized, manual, single point lubrication for the boom and stick

Centralized automatic lubrication for the boom and stick

Biodegradable hydraulic oil

## REAR SAFETY BAR



## PALLET FORK OR OTHER 3RD POINT TOOLS ADAPTATION PREDISPOSITION FOR OUTRIGGERS



## EXTERNAL CONTROL FOR THE STEPS

## WORK TOOLS AVAILABLE WITH CONNECT QUICK COUPLER

Non-exhaustive list

### DIGGING BUCKETS

TYPE	WIDTH mm (ft in)	number of teeth	VOLUME l (yd³)	WEIGHT kg (lb)
DIGGING BUCKET with teeth	350 (1'2")	3	150 (0.20)	204 (449)
	450 (1'6")	3	190 (0.25)	222 (481)
	600 (2')	3	275 (0.36)	255 (562)
	750 (2'5.5")	4	360 (0.47)	292 (643)
	900 (2'11")	5	450 (0.59)	328 (723)
DIGGING BUCKET with no teeth	1200 (3'11")	5	630 (0.82)	393 (866)
	350 (1'2")	-	150 (0.20)	188 (414)
	450 (1'6")	-	190 (0.25)	207 (456)
	600 (2')	-	275 (0.36)	239 (526)
	750 (2'5.5")	-	360 (0.47)	272 (599)
	900 (2'11")	-	450 (0.59)	304 (670)
	1200 (3'11")	-	630 (0.82)	368 (811)

### LOADER BUCKETS

TYPE	WIDTH mm (ft in)	number of teeth	VOLUME l (yd³)	WEIGHT kg (lb)
LOADER BUCKET with teeth	2250 (7'5")	7	750 (1.00)	412 (908)
TOOTH PROTECTION	2250 (7'5")	-	-	19 (41)
LOADER BUCKET with no teeth	2250 (7'5")	-	750 (1.00)	390 (859)
BLADE GUARD	2250 (7'5")	-	-	10 (22)

### 4 X 1 BUCKET

TYPE	WIDTH mm (ft in)	number of teeth	VOLUME l (yd³)	WEIGHT kg (lb)
4X1 BUCKET with teeth	2200 (7'3")	7	540 (0.71)	640 (1410)
TOOTH PROTECTION		-	-	11 (24)
4X1 BUCKET with no teeth	2200 (7'3")	-	540 (0.71)	617 (1360)
BLADE GUARD		-	-	7 (16)
BOLTED COUNTERBLADE FOR 4X1 BUCKET with no teeth 7 boreholes - center-to-center borehole distance 330 mm	2200 (7'3")	-	-	62 (136)
4X1 BUCKET CONNECTION SET, 2 FLEXIBLE JOINTS	-	-	-	5 (11)

### NARROW BUCKET

TYPE	WIDTH mm (ft in)	number of teeth	VOLUME l (yd³)	WEIGHT kg (lb)
NARROW BUCKET	300 (1')	3	80 (0.10)	219 (482)



**e12**

# MECALAC ATTACHMENTS



## PALLET FORK

TYPE	Specifications	WEIGHT kg (lb)
PALLET FORK	to be used with 4 safety valves	351 (773)
PALLET FORK USING OUTRIGGERS adaptation predisposition with 3 <sup>rd</sup> point for other hydraulic tools	to be used with 4 safety valves	406 (895)

## MECALAC MR60 TILTROTATOR\*

TYPE	Specifications	PIN to PIN HEIGHT mm (ft in)	ROTATION TORQUE Nm (lbf.ft)	WEIGHT kg (lb) 1xCONNECT
MR60 TILTROTATOR no grab	Twin CONNECT configuration, 2x 40° 2 low-flow auxiliary functions	686 (2'3")	8200 (6,050)	574 (1,270)
MR60 TILTROTATOR with grab module	Twin CONNECT configuration, 2x 40° 1 low-flow auxiliary function	686 (2'3")	8200 (6,050)	683 (1,510)

## MECALAC TILTROTATOR DEDICATED GRADING BUCKET

TYPE	Specifications	WIDTH mm (ft in)	VOLUME l (yd³)	WEIGHT kg (lb)
GRADING BUCKET for TILTROTATOR MR60	Dedicated bucket for finishing works	1500 (4'11")	570 (0.75)	455 (1005)
BOLTED COUNTER-BLADE for GRADING BUCKET	borehole center-to-center distance 152.4 mm (6 in)	1500 (4'11")	-	43 (95)

## TILT DITCH CLEANING BUCKET

TYPE	Specifications	WIDTH mm (ft in)	VOLUME l (yd³)	WEIGHT kg (lb)
TILT DITCH CLEANING BUCKET	2x Linear cylinders, 2x 45°	1800 (5'11")	516 (0.67)	725 (1,598)
BOLTED COUNTER BLADE	borehole center-to-center distance 152.4 mm (6 in)	1800 (5'11")	-	51 (112)

## DITCHING BUCKET

TYPE	Specifications	WIDTH mm (ft in)	VOLUME l (yd³)	WEIGHT kg (lb)
DITCHING BUCKET		1800 (5'11")	400 (0.52)	350 (771)
BOLTED COUNTER BLADE for DITCHING BUCKETS	borehole center-to-center distance 152.4 (6")	1800 (5'11")	-	47 (103)

## DIGGING BUCKET WITH GRAPPLE

TYPE	Specifications	WIDTH mm (ft in)	VOLUME l (yd³)	WEIGHT kg (lb)
GRAPPLE BUCKET	2 hydraulic thumbs	900 (2'11")	450 (0.59)	492 (1085)

## TRAPEZOIDAL BUCKET

TYPE	WIDTH (base) mm (ft in)	WIDTH (grande base) mm (ft in)	VOLUME l (yd³)	WEIGHT kg (lb)
TRAPEZOIDAL BUCKET with manual mechanical rotation (0-33°)	300 (0'12")	1002 (3'3")	440 (0.57)	455 (1003)

## HANDLING PLATE WITH HOOK

TYPE	Specifications	WEIGHT kg (lb)
HANDLING PLATE with hook	to be used with 3 safety valves	64 (141)

## HANDLING JIB

TYPE	Specifications	WEIGHT kg (lb)
HANDLING JIB	length 4100 mm (13'5"), lifting capacity 500 Kg (1102 lb) to be used with 4 safety valves	140 (308)

## CLAMSHELL BUCKET SUPPORT

TYPE	Specifications	WEIGHT kg (lb)
SUPPORT PIECE FOR CLAMSHELL BUCKET		67 (148)

## RIPPER TOOTH

TYPE	Specifications	WEIGHT kg (lb)
RIPPER TOOTH		192 (423)

## SKID STEER ADAPTER

TYPE	Specifications	WEIGHT kg (lb)
ISO 24410 mounting hitch for Universal Skid steer attachments		127 (280)

## HAMMER PLATE

TYPE	Specifications	WEIGHT kg (lb)
HAMMER PLATE no boreholes	-	104.5 (230)
HAMMER PLATE with boreholes	contact your dealer	105.5 (233)

\* Available soon



# TECHNICAL DATA

WEIGHT	DATA
In running order, without bucket, with 75 kg (165 lb) operator and with standard single tires	11300 kg (24,900 lbs)

POWER SUPPLY	
SUPPLY NETWORK REQUIREMENTS	
Power grid	AC
Recommended power supply	EEC 32A three-phase 22 kW
On-board charger for direct connection to the AC grid	AC>DC converter
Charger socket (Type 5P - Industrial)	•
Indicative full charge duration on 22 kW (subject to environmental conditions)	8 hours

HIGH VOLTAGE BATTERIES, MAINTENANCE-FREE	
Type	Lithium-ion NMC 1260 kg (2,778 lbs)
Storage capacity	150 kWh
Voltage - maximum	700 V
Temperature control (hot/cold)	Deionized water
Battery isolation in the event of cable disconnection	•
In-cab circuit breaker with ignition key & start/stop button	•
Electrical accreditation for operator	None

POWER - PERFORMANCE DATA	
Indicative runtime (depending on application type)	8 hours
Operating temperature range	-20°C / +40°C (-4°F / +104°F)
Protection index (resistance to water and dust)	IP 6K9K

AUXILIARY ELECTRICAL CIRCUIT - LOW VOLTAGE	
Auxiliary batteries (for low-voltage systems, cab lighting, ventilation, etc.)	2 x 107 Ah
Voltage	12V & 24V (2x 12V)
Battery disconnect switch	•

UNDERCARRIAGE	
Articulated type	•
Inside turning radius	2.63 m (103.5 in)
Outside turning radius	4.91 m (193.3 in)
Front chassis fitted with 2 independent front outriggers	•

TRANSMISSION	
Brushless synchronous electric motor	700V
Torque - maximum	352 Nm (260 ft.lbf)
Maximum power	94kW
Rated power	64kW
Cooling of high-voltage variators and motors	Deionized water
Speed - maximum	25 kph (15.5 mph)
Gearbox, 2 mechanical gears, with automatic gearshift	•
Traction force - maximum	5500 daN (12,360 lbf)
Gradeability	29° / 54%
Steering column hydraulically assisted	•
Electronically controlled travel direction (FNR) located under the right joystick	•
"Inching" control to gradually reduce speed control before braking	•

AXLES AND WHEELS	DATA
4-wheel drive	•
Front rigid drive axle	•
Oscillating rear axle to +/- 10° and oscillation lock by hydraulic cylinders	•
Limited slip differential (45°) on both axles	•

BRAKES	
Hydraulically controlled brake pedal	•
Double circuit central braking unit	•
Oil-immersed multi-disk brakes on each axle	•
"Inching" brake acting on all 4 wheels	•

UPPERCARRIAGE	
Full 360° rotation	•
Internal ring gear drive	•
Rotation via hydraulic motor (with automatic disc braking)	•
SHOCKLESS type dampened crossover valve for upper carriage rotation movement and soft stop	•
Swing speed	9 rpm
Swing torque	2210 daN.m (16,300 ft lbf)
Hydraulic motor	750 cm³ (45.8 in³)
Max. pressure	230 bar (3,336 psi)

CAB	
Superior comfort panoramic cab	FOPS/ROPS homologated
Cab mounted on 4 rubber silent blocks	•
Front windshield partially or fully retractable	under the cab roof
Sliding door	•
Opening door window	•
Seat can be set and adjusted to the operator height and weight, with seatbelt	height and longitudinal adjustment
Pneumatic (air-suspension) and heated seat	•
Independent adjustment of the joystick consoles	•
Electric heating system, compliant with EN 60204	•
Air conditioning	•
Controls assisted by Rexroth ergonomic, electrically operated proportional joysticks	•
Electronic dashboard containing all safety and monitoring information, visual indicators and alarms	•
High-voltage battery charge level (bar graph) display on the dashboard	•
Dashboard contains a color screen which automatically adapts contrast and light levels to current conditions	•
Front working light, LED	•
Refrigerated storage compartment (lunch box)	•
Rear and side camera (on the turret)	•

# TECHNICAL DATA

## HYDRAULICS (IMPLEMENTS AND SWING CIRCUITS) DATA

Hydraulic oil tank capacity	41 l (10.8 US gal)
Hydraulic circuit capacity	92 l (24.3 US gal)
Fixed displacement pump - maximum	max. 48 cm <sup>3</sup> (2.9 in <sup>3</sup> )
Hydraulic pump power	40 kW
Maximum flow rate	144 l/min (38 gpm)
Maximum working pressure	310 bar (4,500 psi)
Proportional Load Sensing with individual balance for each component: boom, adjustable boom, dipperstick, bucket and auxiliary circuit	•
Proportionality of functions achieved at all times, regardless of the pressure level of each component: "flow sharing"	•
Cooling (hydraulic circuit)	Ventilated fan
Anti-cavitation overpressure relief valve on each component: boom, adjustable boom, dipperstick and bucket	•
Anti-drop safety check valve on each component: boom, adjustable boom, dipperstick and bucket	•
Proportional electrical control of functions via joysticks or pedals	•
Available hydraulic force	Equivalent to the 12MTX

## BOOM AND STICK

Brushless synchronous electric motor	700 V
Maximum torque	171 Nm (126 ft.lbf)
Maximum power	64 kW
Rated power	40 kW
Mecalac variable kinematics consisting of 4 parts: boom, adjustable boom, offset and dipperstick	•
Right and left offset by hydraulic cylinder	•
System allowing all penetration forces to be kept, regardless of the angular position of the offset	•
Left offset	1829 mm (6'0")
Right offset	1859 mm (6'1")
Boom cylinder with end-of-travel shock absorber	•
Stick length	2210 mm (7'3")

<b>CONNECT</b> coupling system	
- Take up with automatic mechanical locking	•
- Detection of incorrect locking	
- Hydraulically controlled unlocking	

## EMISSIONS

Zero emission of gaseous pollutants at point of use	•
Noise emission:	
- Interior sound level: L <sub>pA</sub> (according to ISO 6396)	67 dB
- External sound level: L <sub>WA</sub> (according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 + A1:2009)	90 dB

## OPERATING MODES

### EXCAVATOR MODE: enables the machine to be operated like an excavator:

- Upperframe rotation and dipperstick control with the left joystick
- Bucket and intermediate boom or boom control with the right joystick
- Travel control with the pedal and travel direction (FNR) control under the right joystick
- Deactivation of the travel alarm
- Deactivation of the overload alarm
- Activation of Speed Control
- Locking of the oscillating axle when the brake pedal is fully pressed
- Screen display in excavator mode

### LOADER MODE: enables the machine to be operated like a loader:

- Lifting (adjustable boom) and bucket control with the right joystick
- Screen display in loader mode

### ROAD MODE

- Turns on road headlights
- Turns on the rotating beacon
- Locks hydraulic and electric controls (boom/stick, swing, outriggers)
- Unlocks the oscillating axle (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
- Speed display in kph (mph)
- Activation of Speed Control
- Screen display in road mode

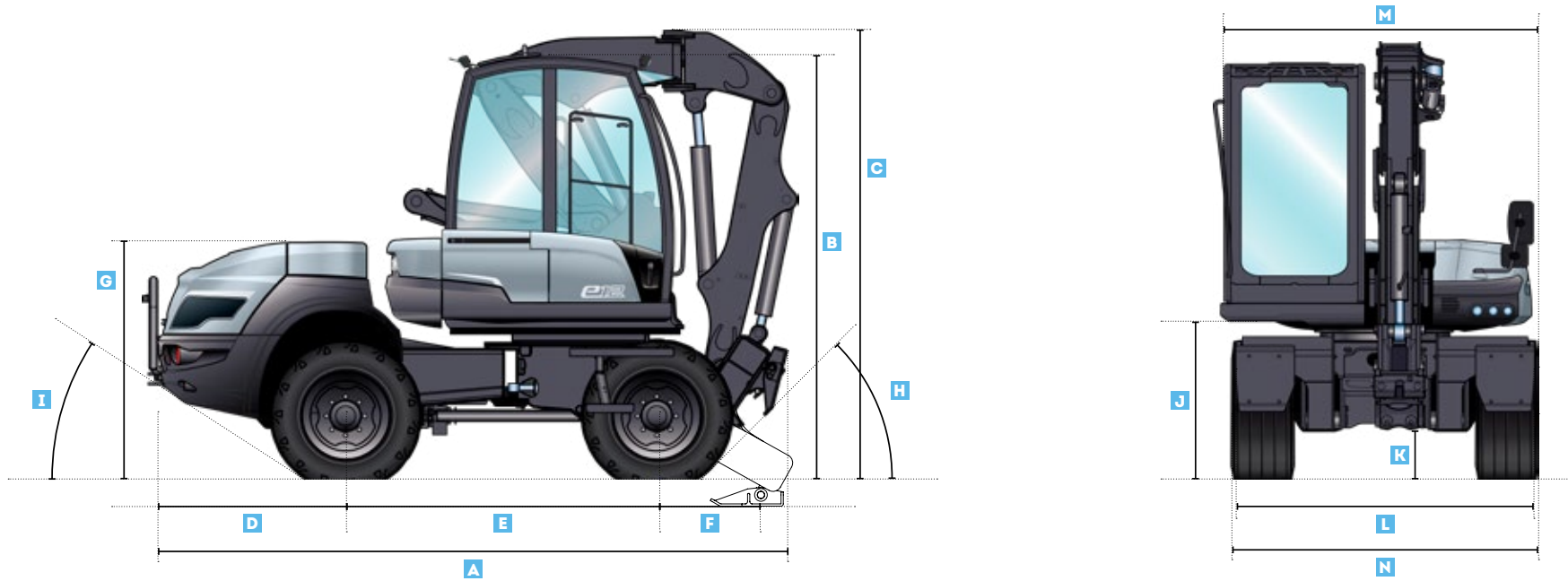
### PARKING MODE

- Engages the parking brake
- Turns the transmission into Neutral
- Deactivates the accelerator pedal
- Locks hydraulic and electric controls
- Screen display in economy mode
- Locking of the oscillating axle
- Turns on road headlights and rotating beacon

### METRIC MEASUREMENTS ARE THE CRITICAL VALUES

- 1 Litre = 0.26417 US Liquid Gallons
- 1 Litre = 0.21997 Imperial Liquid Gallons

**e12**  
**DIMENSIONS**

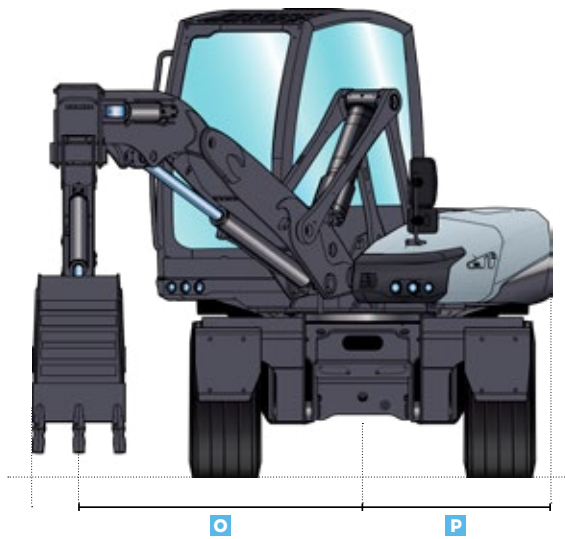


MACHINE DIMENSIONS	DATA
<b>A</b> Overall length	4619 mm (15')
<b>B</b> Cab height	3064 mm (10')
<b>C</b> Height with boom retracted	3464 m (11'4")
<b>D</b> Rear overhang	1407 mm (4'6")
<b>E</b> Wheelbase	2225 mm (7'3")
<b>F</b> Front overhang	933 mm (3')
<b>G</b> Hood height	1744 mm (5'7")
<b>H</b> Approach angle	53°

MACHINE DIMENSIONS	DATA
<b>I</b> Departure angle	30°
<b>J</b> Height under uppercarriage	1165 mm (3'8")
<b>K</b> Ground clearance	354 mm (1'2")
<b>L</b> External width of the outriggers	2187 mm (7'2")
<b>M</b> Width in road position	2383 mm (7'8")
<b>N</b> Width at wheels, standard single tires 405/70-20	2247 mm (7'4")
Width at wheels, other tires	Identical

**e12**

## DIMENSIONS

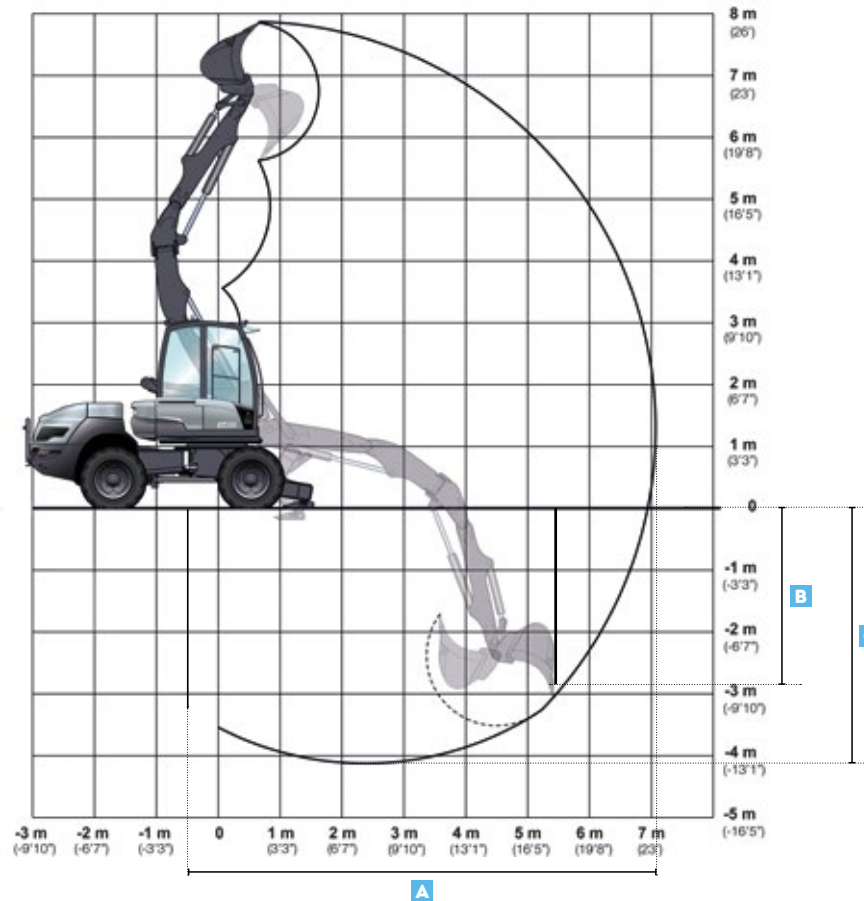


MACHINE DIMENSIONS		DATA
<b>O</b>	Boom offset to the right, maximal	1859 mm (6'1")
	Boom offset to the left, maximal	1829 mm (6'0")
<b>P</b>	Outside dimension with max. offset	1239 mm (4')
<b>Q</b>	Rear tail swing radius	1385 mm (4'5")
<b>R</b>	Front swing radius	1325 mm (4'3")
<b>S</b>	360° swing diameter	2710 mm (8'9")



E12

# BOOM PERFORMANCE AND LIFTING CAPACITY



## LIFTING CAPACITIES WITH LOADING HOOK - STABILIZERS ON GROUND

All the weights are given in kg (lb) with CONNECT.

PERFORMANCE	DATA
Break-out force	6150 daN (13,820 lbf)
Penetration/Tear-out force	3400 daN (7,640 lbf)
Lifting force with loading hook, maximum	4000 kg (8,820 lb) (valeur max.)
<b>A</b> Maximum reach	7125 mm (23'4")
<b>B</b> Vertical digging depth	2240 mm (7'3")
<b>C</b> Maximum digging depth	4100 mm (13'4")

	FRONT		SIDE		FRONT		SIDE	
	2M (7 ft)	3M (10 ft)	4.5M (15 ft)	6M (20 ft)	FRONT	SIDE	FRONT	SIDE
<b>4.5M (15 ft)</b>	3280* (7,230*)	3280* (7,230*)	3190* (7,030*)	3190* (7,030*)	2460* (5,420*)	1530 (3,370)	-	-
<b>3M (10 ft)</b>	4000* (8,820*)	4000* (8,820*)	3480* (7,670*)	3480* (7,670*)	2910* (6,415*)	1490 (3,285)	-	-
<b>1.5M (5 ft)</b>	4000* (8,820*)	4000* (8,820*)	3480* (7,670*)	2740* (6,040*)	3100* (6,835*)	1310 (2,890)	1720* (3,790*)	740 (1,630)
<b>0M</b>	4000* (8,820*)	4000* (8,820*)	3480* (7,670*)	1960 (4,320*)	3080* (6,790*)	1240 (2,735)	-	-
<b>-1.5M (-5 ft)</b>	4000* (8,820*)	4000* (8,820*)	3170* (6,990*)	1860 (4,100*)	2580* (5,690*)	1090 (2,400)	-	-
<b>-3M (-10 ft)</b>	4000* (8,820*)	4000* (8,820*)	3270* (7,210*)	2080 (4,590*)	-	-	-	-

## WORKING CONDITIONS

- On wheels with stabilizers on ground
- On horizontal, compact ground
- Boom and stick used without offset
- Front and rear frame aligned
- Without tools (bucket, shovel...)
- With handling plate and loading hook of 4t (8,818 lbs)

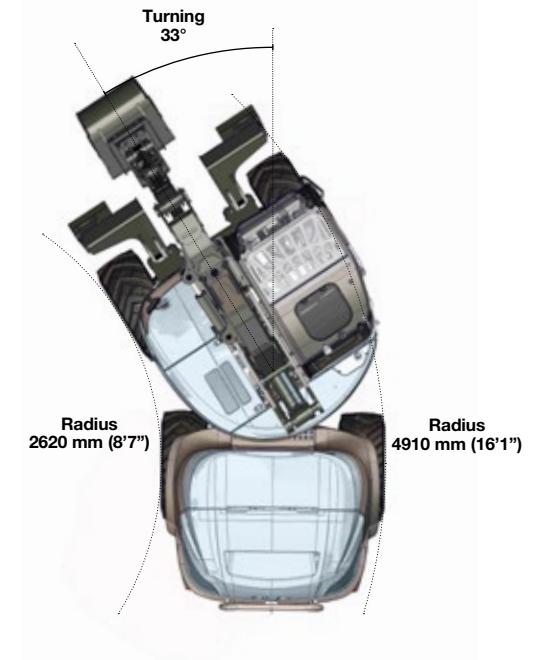
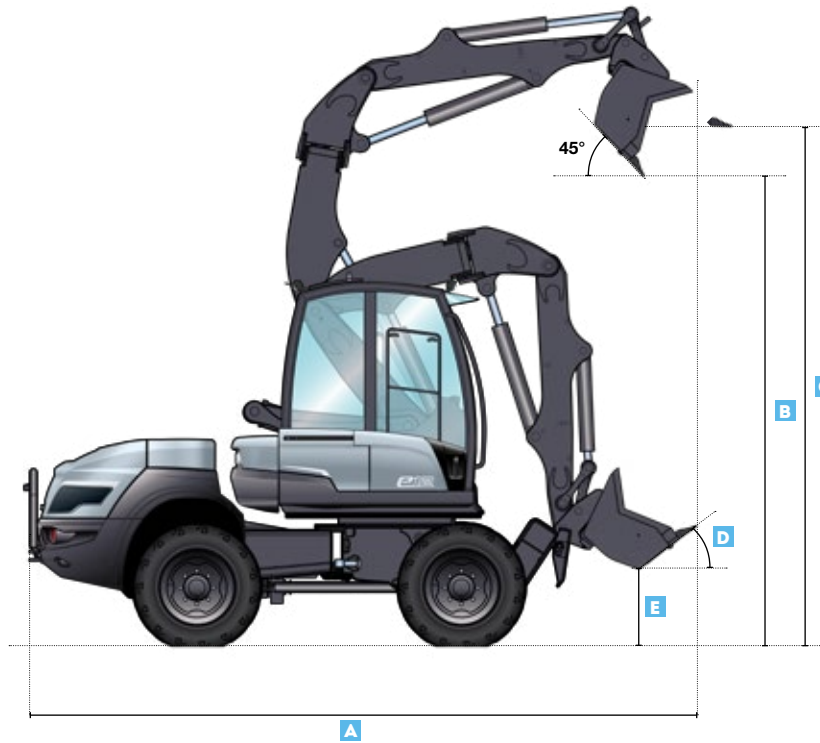
- Maximal 75% of the tipping load or 87% of the hydraulic capacity
- **Maximum values determined for optimal position of the boom and cylinders**

The lifting capabilities shown with an asterisk (\*) are limited by the hydraulic capabilities. Other values are limited by the tipping load that can be lifted or the capability of the loading hook. The weight of the chain sling, bucket and other auxiliary lifting devices must be deducted from the nominal load to determine the load which can be lifted.



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.





TECHNICAL FEATURES	DATA
Lifting power	4050 daN (9,105 lbf) - determined acc to Norm NF ISO 14397-2
Digging force	6400 daN (14,390 lbf) - determined acc to Norm NF ISO 14397-2
Traction force	5970 daN (13,420 lbf) - traction force of the machine
Tipping load with standard loader bucket* Working forward with chassis fully turned	3550 kg (7,830 lbf) - tipping load acc to ISO 14397-1
Tipping load with standard loader bucket* Working over the side with chassis fully turned	4050 kg (8,930 lbf) - tipping load acc to ISO 14397-1

\* Not with 4x1 multipurpose bucket

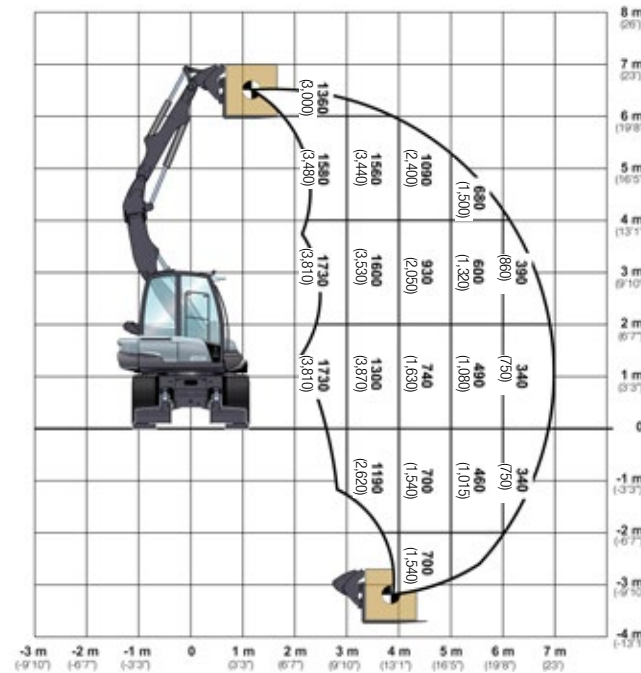
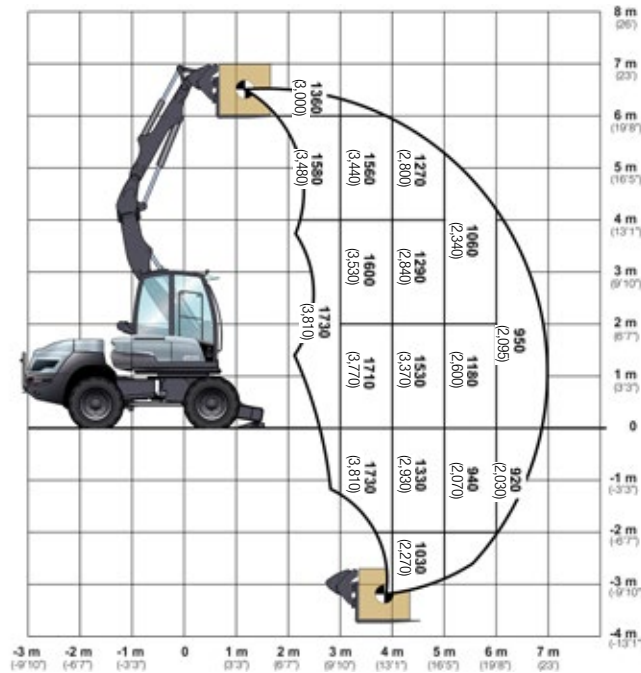
MACHINE DIMENSIONS	DATA
<b>A</b> Overall length	5617 mm (18'5")
<b>B</b> Dumping height	4077 mm (13'4")
<b>C</b> Loading height	4498 mm (14'9")
<b>D</b> Digging angle	40°
<b>E</b> Clearance under bucket	651 mm (2'2")
<b>F</b> Minimal turning radius upper structure	3600 mm (11'9")
<b>G</b> Minimum side dumping distance (bucket at 45°)	403 mm (1'4")
<b>H</b> Minimum side dumping distance (bucket at 90°)	78 mm (0'3")



# e12 PALLET FORKS

## LIFTING CAPACITIES WITH PALLET FORKS

All the weights are given in kg (lb) **with CONNECT**.



### WORKING CONDITIONS

- On wheels, with stabilizers on ground
- On horizontal, compact ground
- Boom and stick used without offset
- Front and rear frame aligned
- Equipped with loading forks

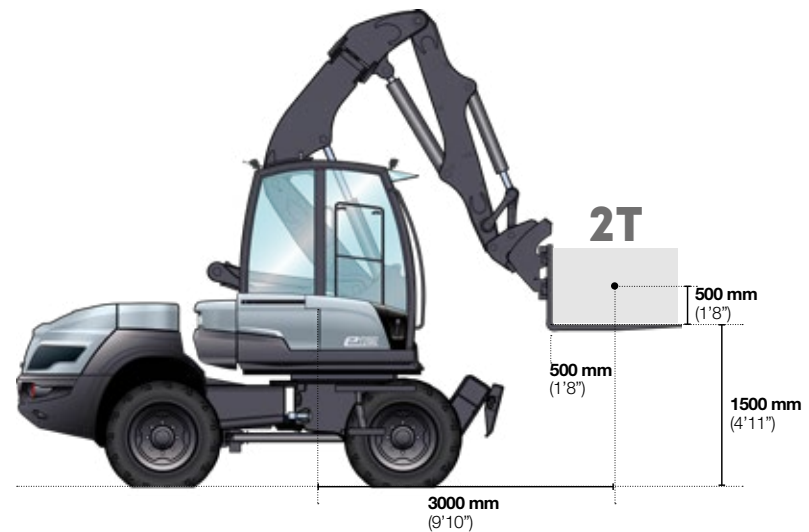
### ACCORDING TO ISO 10567

- Maximal of the tipping load or 87% of the hydraulic capacity

## LIFTING CAPACITY WITH LOADING FORKS FROM 0 to 1.50M (5 ft)

Maximum pallet forks capacity 2000 kg (4,410 lb) (value max.)

Lifting capacities with loading forks determined for the optimal position of the boom and cylinders.



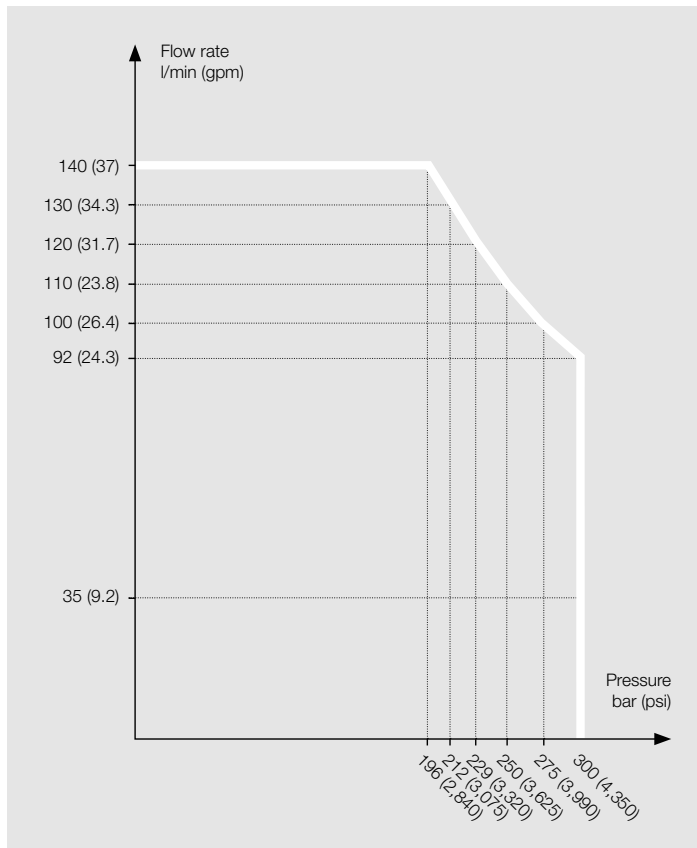


**E12**

# HYDRAULIC TOOL CARRIER

## AUXILIARY LINE 1

Electro-proportional control integrated into the right joystick



## AUXILIARY LINE 2

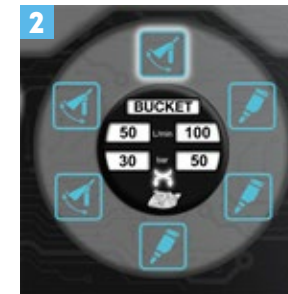
### DATA

Offset cylinder diverted (clamshell rotation)	Option
Flow rate maximum	3-35 l/min (0.8-9.2 gpm)
Pressure	310 bar (4,500 psi)
Controls	Proportional

## AUXILIARY LINE 3

### DATA

Bucket cylinder diverted (clamshell function)	Option
Flow rate maximum	120 l/min (31.7 gpm)
Pressure	310 bar (4,500 psi)



## 1 SPEED CONTROL - AVAILABLE RANGE IN KPH (MPH)

0,3 (0.2) - 0,6 (0.4) - 0,9 (0.5) - 1,2 (0.7) - 1,5 (0.9) - 2 (1.2) - 3 (1.9) - 4 (2.5) - 5 (3.1) - 7 (4.3) - 10 (6.2) - 15 (9.3) - 20 (12.4) - 25 (15.5) MAX

## 2 CUSTOMIZABLE PARAMETERS

Memory storage of flow rates with the name of the attachments

### METRIC MEASUREMENTS ARE THE CRITICAL VALUES

- 1 Litre = 0.26417 US Liquid Gallons
- 1 Litre = 0.21997 Imperial Liquid Gallons



ES1000

# TECHNICAL DATA

## GENERAL DATA

Operating weight (without attachment)	7085 kg (15,620 lb)
Electric power (gross)	94 kW
Bucket capacity	1 m <sup>3</sup> (1.3 yd <sup>3</sup> )
Zero-play, chain operated 180° swing system	•
Comfortable panoramic driver's cabin with ROPS and FOPS safety system	•
Ergonomic joystick control	•
Electrically operated proportional joystick	•
Independent electric motor transmission	•
Four-wheel steering system with automatic alignment	•
Planetary axles with 100% locking differential in both axles	•
Kinematics	Z-Kinematic
Excellent parallel lifting characteristics	•
Hydraulically controlled quick-coupler with electric safety feature	•
Wide range of attachments	•

## POWER SUPPLY

### DATA

#### SUPPLY NETWORK REQUIREMENTS

Power grid	AC
Recommended power supply	EEC 32 A three-phase 22 kW
On-board charger for direct connection to the AC grid	AC>DC converter
Charger socket (Type 5P - Industrial)	•
Indicative full charge duration on 22 kW (subject to environmental conditions)	4 hours

#### HIGH VOLTAGE BATTERIES, MAINTENANCE-FREE

Type	Lithium-ion NMC 630 kg (1,388 lbs)
Net storage capacity	75 kWh
Voltage - maximum	700 V
Temperature control (hot/cold)	Deionized water
Battery isolation in the event of cable disconnection	•
In-cab circuit breaker with ignition key & start/stop button	•
Electrical accreditation for operator	None

#### POWER - PERFORMANCE

Indicative runtime (depending on application type)	8 hours
Operating temperature range	-20°C / +40°C (-4°F / +104°F)
Protection index (resistance to water and dust)	IP 6K9K

#### TRANSMISSION

Brushless synchronous electric motor	700 V
Torque - maximum	352 Nm (260 ft.lbs)
Maximum power	60 kW
Rated power	40 kW
Cooling of high-voltage variators and motors	Deionized water
Speed - maximum	25 kph (15.5 mph)
Gearbox, 2 mechanical gears, with automatic gearshift	•
Traction force - maximum	4850 daN (10,903 lbf)
Axles: Planetary axles with four-wheel steering for maximum manoeuvrability	•

## TECHNICAL DATA

TRANSMISSION	DATA
Differential lock: 100% locking differential in both axles	•
Wheels:	14.5-20
- Tyre size	405/70 R20
- Optional	
Speeds:	
- First gear	0-12 kph (0-7.5 mph)
- Second gear	0-25 kph (0-15.5 mph)
Oscillation: max. oscillation angle	+/-10°

HYDRAULIC IMPLEMENT	DATA
Brushless synchronous electric motor	700 V
Maximum torque	132 Nm (97 ft.lbs)
Maximum power	36 kW
Rated power	24 kW

BRAKES	DATA
Working brakes:	•
1. Hydrostatic inching brake, acting on all 4 wheels	•
2. Hydraulically operated disc brake at the front axle, acting on all 4 wheels	•
Parking brake:	•
- Mechanically activated parking brake, acting on all 4 wheels, with deactivation of the drive	•
- Wet disk brake and SAHR brake for parking brake	

STEERING	DATA
Hydrostatic four-wheel steering with 3 steering modes with automatic alignment (four-wheel, front-wheel and crab steer)	•
Max. steering angle	+/-35°
Turning radius, measured over: rear	3670 mm (12'0.5")

HYDRAULIC SYSTEM	DATA
Dual-circuit system with piston pumps:	•
1. Working hydraulics circuit (lift/lower, tilt, accessories), and steering (via priority valve); three-way control valve with primary and secondary safeguards	•
Max. operating pressure at 3500 rpm	65 l/min (17.2 gpm) 225 bar (3263 psi)
2. Arm swivelling circuit control by single control valve and gear pump with primary and secondary protection	•
Max. operating pressure at 3500 rpm	20 l/min (5.3 gpm) 225 bar (3263 psi)
Float position for lifting cylinders	•
Cylinder: 2 lifting cylinders	•
1 tilting cylinder	•
2 swing cylinders	•

PERFORMANCE DATA	DATA
Bucket position:	
- Crowd angle	45°
- Dump angle top	45°
Lifting force	4000 daN (8992 lbf)
Break out force	5600 daN (12589 lbf)
Thrust force	4850 daN (10,903 lbf)
Tipping load:	
- std. bucket, max. steered, straight	4300 kg (9480 lb)
- std. bucket, max. steered, 90°-swivelled	3600 kg (7936 lb)
Tipping load and payload on forks:	
Tipping load (according to ISO 14397):	
- max. steered, frontal	4000 kg (9480 lb)
- max. steered, 90°-swivelled	3150 kg (6945 lb)
Payload (according to EN 474-3):	
- max. steered, frontal, even ground	3200 kg (7055 lb)

FILLING CAPACITIES	DATA
Hydraulic system with tank	approx. 129 l (34 US gal)

CHASSIS	DATA
Rigid, single-frame chassis with rear axle support for maximum stability, especially when working in swivelled position	•
Sealed articulated/oscillated pivot with play-free, chain operated swinging system with constant turning speed and power	•
Operator's cab with flexible four-point mountings for maximum driver comfort and minimum noise levels	•
Smooth and accurate, electrically operated, proportional joystick controls	•

EMISSIONS	DATA
Zero emission of gaseous pollutants at point of use	•
Noise emission:	
- External acoustic sound power level $L_{WA}^1$	92 dB(A)
- Interior acoustic power level $L_{pA}^2$	75 dB(A)
Vibrations:	
- Vibration total value for hands and arms <sup>3</sup>	< 1.31 m/s <sup>2</sup>
- Effective vibration level on total full body <sup>4</sup>	< 0.79 m/s <sup>2</sup>

<sup>1</sup> According to 2000/14/EG

<sup>2</sup> According to ISO 6396

<sup>3</sup> According to ISO/TR 25398

<sup>4</sup> According to ISO/TR 25398

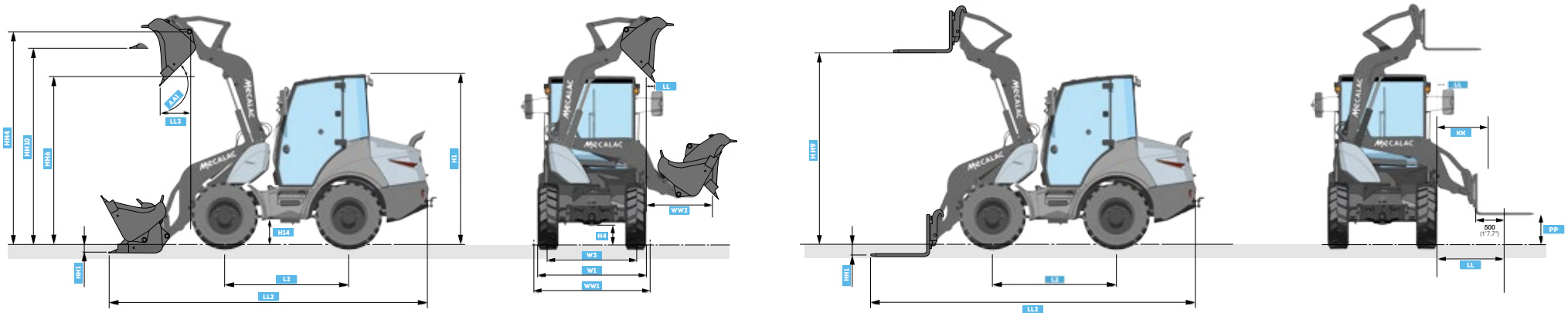
### METRIC MEASUREMENTS ARE THE CRITICAL VALUES

- 1 Litre = 0.26417 US Liquid Gallons
- 1 Litre = 0.21997 Imperial Liquid Gallons



# ES1000

## DIMENSIONS



MACHINE DIMENSIONS		DATA
	BUCKET	STD. 1.0 m <sup>3</sup> (1.3 yd <sup>3</sup> )
AA1	Tipping angle max	45°
H1	Overall height	2830 mm (9'3")
H4	Ground clearance axles gear box	345 mm (1'1.6")
H14	Ground clearance transmission shaft	440 mm (1'5.3")
HH1	Plunge depth	150 mm (0'5.9")
HH4	Bucket pivot pin at max. height	3500 mm (11'5")
HH6	Dumping height at max lifting height and 45° tipping angle	2650 mm (8'8")
HH10	Loading height at bottom of bucket	3190 mm (10'5.6")
L2	Wheelbase	2070 mm (6'9.5")
LL	Side Dumping width at max lifting height and 45° tipping angle	730 mm (2'4")
LL2	Overall length	5690 mm (18'8")
LL3	Dumping width at max lifting height and 45° tipping angle	850 mm (2'9.5")
W1	Width over tyres	std 1990 mm (6'6")
W3	Wheel track	1640 mm (5'4.6")
WW1	Width over bucket	2100 mm (6'10")
WW2	Dumping width at min lifting height	1470 mm (4'9")

MACHINE DIMENSIONS		DATA
	FORKS	
HH1	Plunge depth	220 mm (0'8.6")
HH9	Overload height at max. lifting height	3170 mm (12'5")
KK	Max load width on the side	1010 mm (3'10")
LL	Side width of load centre at min lifting height	1420 mm (5'6")
LL2	Overall length	6160 mm (24'2")
PP	Min height on the side	380 mm (0'1.5")

# STANDARD / OPTIONAL EQUIPMENT

STANDARD FEATURES	DATA
Large panoramic and comfortable ROPS and FOPS cabin with 2 lockable doors	•
Single piece floor mat for easy cleaning	•
Tinted windows	•
Parallel guided windscreen wiper	•
Rear wiper	•
Front and rear screen washing device	•
Heated rear window	•
2 large exterior mirrors (retractable)	•
Tinted roof window	•
Steering column is adjustable in height and tilt	•
Ergonomically adjustable joystick	•
Multi-position adjustable seat	•
Safety belt	•
Sun visor	•
Heating and ventilation system with fresh air filter	•
Main battery switch	•
Interior light	•
12 V socket	•
Charging socket (Type 5P - Industrial)	•
Coat hook	•
Storage areas in the cabin	•
7" VGA color screen for full control over safety components and machine functions	•
2 road lights on cabin roof	•
Single key system	•
Hydraulic quick coupler with electric safety device	•
Towing coupling device	•
Fastening and lifting points	•
Proportional 1 <sup>st</sup> auxiliary hydraulics circuit, integrated into the joystick	•
Boom suspension	•
Air-conditioning system	•
Grammer air suspended comfort seat	•
Color scheme: Electric Blue (with cab, axles and wheels in grey)	•

OPTIONAL EQUIPMENT	DATA
Wide tires	o
Interior mirror	o
Acoustic back-up alarm	o
2 <sup>nd</sup> auxiliary hydraulics circuit and lines	o
Safety valves	o
Bio-degradable oil fill for hydraulic system	o
Pressureless return line	o
Lockable differential on rear axle	o
Heated mirrors (exterior)	o
Rotating beacon	o
Central lubrication system	o
Tool kit	o
Charging socket (Type 2)	o

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



**EMDX**

# TECHNICAL DATA

## EMDX – ELECTRIC 6-TON DUMPER SWIVEL TIP SKIP

SKIP CAPACITY	
Payload	6000 kg (13,228 lbs)
Skip type	Swivel tip skip
Skip volume - Water	1580 l (417 US gal)
Skip volume - Struck	2399 l (633.5 US gal)
Skip volume - Heaped	3085 l (815 US gal)

MACHINE WEIGHT	
Operating weight ISO6016 – 75 kg (165 lbs) operator	5325 kg (11,740 lbs)*

\* Specifications are subject to change

POWER SUPPLY	
SUPPLY NETWORK REQUIREMENTS	
Power grid	AC
Recommended power supply	EEC 32 A three-phase 22 kW
On-board charger for direct connection to the AC grid	AC>DC converter
Charger socket	Type 5P - Industrial
Indicative full charge duration on 22 kW (subject to environmental conditions)	4 hours

HIGH VOLTAGE BATTERIES, MAINTENANCE-FREE	
Type	Lithium-ion NMC 630 kg (1,388 lbs)
Storage capacity	75 kW.h
Voltage - maximum	700 V
Temperature control (hot/cold)	Deionized water
Battery isolation in the event of cable disconnection	•
In-cab circuit breaker with ignition key and start/stop button	•
Electrical accreditation for operator	None

POWER – PERFORMANCE	
Indicative runtime (battery range at maximum use and non-stop)	8 hours
Operating temperature range	-20°C / +40°C (-4°F / +104°F)
Protection index (resistance to water and dust)	IP 6K9K

TRANSMISSION	
Type	Automatic Electric motor via GearBox to front and rear axles
Brushless synchronous electric motor	700 V
Torque - maximum	352 Nm (260 ft.lbf)
Maximum power (DIN 70020)	60 kW
Rated power	40 kW
Cooling of high-voltage variators and motors	Deionized water
Maximum engine speed	5400 rpm
Traction	Permanent 4-wheel drive
Drive	2/2 Forward and Reverse (High/Low Speed)

## TECHNICAL DATA

<b>EMDX – ELECTRIC 6-TON DUMPER SWIVEL TIP SKIP</b>	
<b>DRIVE CHARACTERISTICS</b>	
Maximum turning radius	6382 mm (20'11")
Maximum speed	25 kph (15.5 mph)
Chassis	Articulated and oscillating
Steering angle	+/-30°
Oscillation angle	+/-10.5°
Gradeability (defined by maximum safe working angle)	25%
Tyre Size	405-70-20 (14PR)
<b>HYDRAULIC SYSTEM</b>	
Brushless synchronous electric motor (for skip and hydraulics)	700 V
Torque - maximum	132 Nm (97 ft.lbs)
Maximum power	19 kW
Rated power	19 kW
Cooling of high-voltage variators and motors	Deionized water
Auxiliary hydraulics pump type	Fixed displacement axial piston pumps
Auxiliary hydraulics flow rate	80 l/min (21.1 gpm)
Auxiliary hydraulics operating pressure	210 bar (3,045 psi)
Steering system	Orbitrol hydrostatic steering unit powering a central hydraulic steering cylinder
<b>TANK CAPACITIES</b>	
Hydraulic tank	41 l (10.8 US gal)
<b>BRAKING SYSTEM</b>	
Working brake	Hydraulic boosted foot Brake - Oil immersed discs on front/rear
Parking brake	Over centre parking brake-integrated in rear axle
<b>EMISSIONS</b>	
Zero emission of gaseous pollutants at point of use	•
Noise emission:	
- Interior sound level - Operators ear sound pressure $L_{pAd}$ (according to ISO 4871)	74 dB(A)
- External sound level - Machine noise power $L_{WA_d}$ (according to ISO 4871)	94 dB(A)
Noise compliance: Equipment used outdoors EU Noise Directive	2000/14/EC
Hand arm vibration (defined by EN474-1 for all operations)	1.75 m/s <sup>2</sup>
Whole body vibration (defined by ISO/TR25398 for a work cycle)	0.91 m/s <sup>2</sup>



### METRIC MEASUREMENTS ARE THE CRITICAL VALUES

- 1 Litre = 0.26417 US Liquid Gallons
- 1 Litre = 0.21997 Imperial Liquid Gallons

# EMDX

## DIMENSIONS

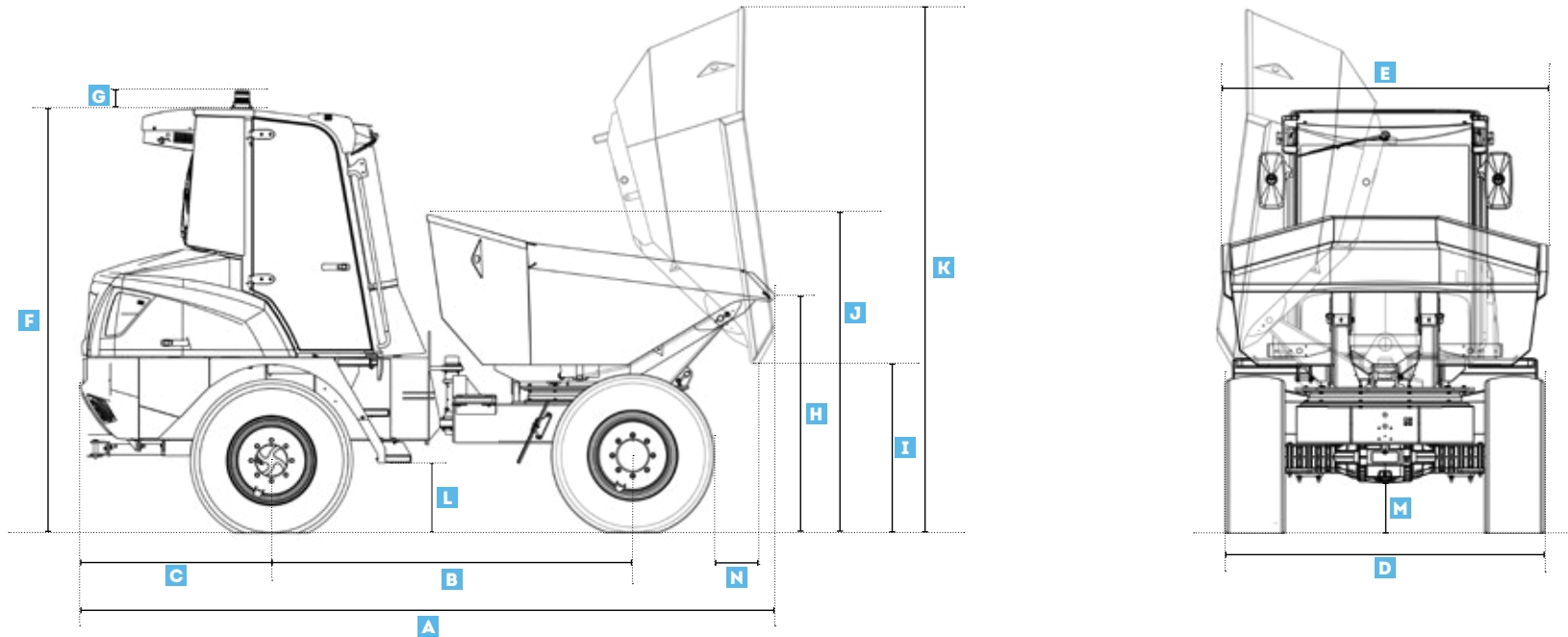


Illustration not contractual

MACHINE DIMENSIONS	DATA
<b>A</b> Overall length	4711 mm (15'5")
<b>B</b> Wheelbase	2450 mm (8')
<b>C</b> Rear overhang	1287 mm (4'3")
<b>D</b> Total width	2211 mm (7'3")
<b>E</b> Skip width	2211 mm (7'3")
<b>F</b> Overall height of cab	2875 mm (9'5")
<b>G</b> Additional height for beacon	130 mm (5")
<b>H</b> Height to lip of skip - untipped	1685 mm (5'6")

MACHINE DIMENSIONS	DATA
<b>I</b> Height to lip of skip - tipped	1126 mm (3'8")
<b>J</b> Height of skip - untipped	2167 mm (7'1")
<b>K</b> Height of skip - tipped	3545 mm (11'8")
<b>L</b> Height to first step	472 mm (1'7")
<b>M</b> Minimum ground clearance	347 mm (1'2")
<b>N</b> Discharge distance - front	354 mm (1'2")
Discharge distance - side	16 mm (0'6")





# STANDARD / OPTIONAL EQUIPEMENT

## EMDX – ELECTRIC 6-TON DUMPER SWIVEL TIP SKIP

### OPERATOR ENVIRONMENT

Cab ROPS/FOPS glazed and comfortable with access from both sides	•
Cab heating and ventilation system	•
Cab air-conditioning system	•
Multifunctional display screen integrated into the dashboard	•
Adjustable ergonomic seat	•
High visibility orange seatbelt	•

### SAFETY

High visibility safety decals steps and handrails	•
Front-view camera with screen integrated into the dashboard	•
Rear-view mirrors	•
Reverse alarm	•
Fan guard	•
Rear-view camera with screen integrated into the dashboard	•
Tilt monitoring system	•
High-visibility orange seatbelt	•
Automatic parking brake	•
Cab front screen guard	o
Hazard / Object detection system	o

### LIGHTING

LED amber flashing beacon	•
Green beacon seatbelt indicator	•
LED front and rear work lights	•
Certified road lights front and rear - including light guards	•

## EMDX – ELECTRIC 6-TON DUMPER SWIVEL TIP SKIP

### COLOUR & BRANDING

Standard machine colour - Mecalac "Electric Blue e-series" & grey	•
Mecalac standard branding	•
Custom machine colour	o

### TELEMATICS

MyMecalac Telematics - including app	•
Start-up digicode (linked to telematics)	•

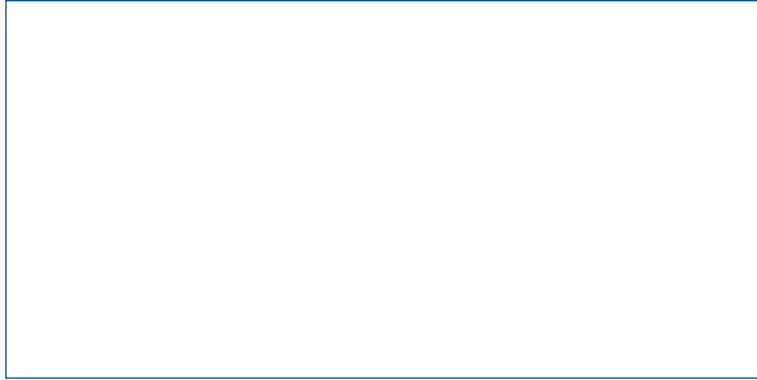
### OTHERS

Articulated and oscillating chassis	•
Traction tyres	•
Towing/recovery bracket	•
Heavy-duty articulation lock	•
Loose wheel nut indicator	•
Charging socket (Type 5P - Industrial)	•
Spare wheel	o
Biodegradable hydraulic oil	o
German / Swiss road homologation kit	o
Charging socket (Type 2)	o

Country packs available

- = Standard
- o = Optional

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



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