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The most advanced range of electric wheels



Concentrate of technology

- ✓ integrated wheel drive
- ✓ patented technology
- √ award-winning



Modularity & simplicity

- √ the only autonomous and universal drive wheel
- ✓ multiple applications
- ✓ wide range of accessories



★★★ All-star Mobility

- ✓ improves working conditions
- ✓ modernizes industrial tools

The ez-Wheel® is a simple and efficient solution to quickly bring electric assistance to any rolling equipment or vehicles.

Applied to manual equipment, it can solve major issues for employees as well as for companies:

- reduces professional risk, especially MSD*
- helps to reduce sick leave and offers an increase in productivity of up to +50%
- doubles the load for a fifth of the effort
- generates a return on investment in less than 1 year



*Musculoskeletal disorders



ez-Wheel SAS is an innovative technology company founded in 2009. Based in Angoulême - in South-West France, the company develops a range of industrial electric traction solutions dedicated to handling equipment and green mobility.

A R&D-driven strategy

The company dedicates most of its resources to Research and Development into innovating methods. The ez-Wheel team's industrial experience ensures good assessment and management of the risk related to the delivery of innovative products to market. The product's embedded features correspond to those usually required by professionals in the field and the production process uses controlled and standardized methods.

Eco-design

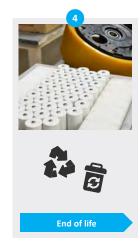
Our products have been developed following a life-cycle in which **production**, **use** and **end-of-life** conditions are taken into consideration from the **design phase**.

A lot of effort is made regarding the choice of components and the integration of mechatronics, with the intention of delivering to market reliable, powerful, sustainable and eco-friendly products, to satisfy your mobility issues.









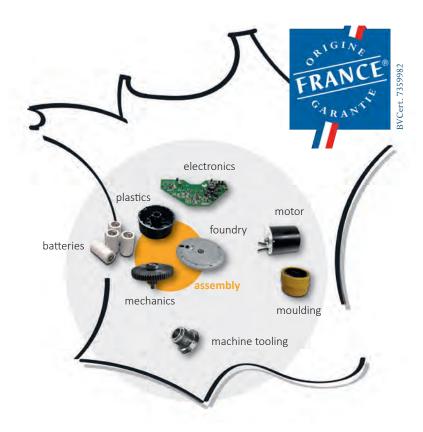


Strong industrial partners

The production process is ensured by industrial partners selected on quality, competitiveness and local criteria, monitored by our quality/manufacturing departments and outside organizations.

Since 2012, ez-Wheel has been authorised to use the "ORIGINE FRANCE GARANTIE" quality label on its products.

Delivered by approved organisations (PRO France and Bureau Veritas) this certification is obtained by meeting precise tender specifications that validate the manufacturing origin of products in the French national territory.



Implementation promoting the mechatronics innovation

Founded and located in Charente, a strategic location for electric motors and batteries in the Nouvelle-Aquitaine region, ez-Wheel benefits from geographical and economic advantages provided by a number of industrial players and SMEs implanted locally. The innovative technology of ez-Wheel is the result of recognized expertise and local know-how going back over 50 years.











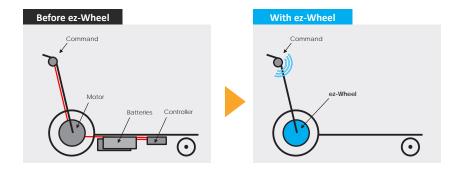
5

The first electric wheel integrating motor and batteries

ez-Wheel proposes the first electric wheel featuring embedded motor, batteries and electronics, bringing electrical assistance to rolling equipment. Thanks to optimal integration of the motor, batteries, and electronics inside the hub, the wheel can be fixed quickly and easily — a safe, clean and quiet solution.

Quick fitting

ez-Wheel® wireless technology removes all the peripherals, wire sets and connectors from the chassis, making the integration of our solutions a fast and easy task compared to other alternatives.



Designed to last

ez-Wheel® products are ready to operate in outdoor or indoor conditions, over an extended temperature range.

All the components including the battery are designed to withstand up to 7 years of operation without any maintenance required, confirmed by real returns on experience.

IP43 IP66

Protection Index

-20°C

Functional temperatures range

3Y. 7Y.

Maintenance period in years



The solution fully integrates into a wheel all the functions of a conventional power train:

- √ high-end electric motor
- √ high energy and super long-life batteries
- ✓ power controller featuring state of the art motor control
- √ battery management
- √ wireless interface







Cover

All components of the autonomous wheel are contained in a robust and totally waterproof cover. The wheel is able to operate in the toughest environments.

Motor

The high torque and ultra-compact drive is ensured by a high-tech permanent magnet motor, and a mechanical reducer fully integrated into the wheel's architecture.



Battery

The energy embedded in the wheel is stored in a cutting-edge Ni-MH battery. Built to last, rock-solid and reliable, this technology is also one of the safest available on the market.

Electronics

The brain of the wheel is powered by two micro-controllers and two real-time operating systems. It enables wireless communication, battery management and full customization of the wheel's features.

HMI

The user interface is extremely simple. It includes the wheel's recharge connector, a diagnostic button, and lights indicating the wheel, battery level and wireless communication status.



Product features guide Follow the guide!

Our products offer is developed for specific environments and needs. The following pictograms will help you quickly define the product's main characteristics.

Help guide Aid to comprehension





Solid objects greater than 1 mm Sprays of water at any angle up to 60°

Wireless communication





Limited ingress of dust Splash-proof from all directions

Serial Link communication





Dust-proof Water jets

Enables regenerative charging from wheel rotation





Dust-proof Powerful Water jets

Maintenance free Lifespan 3 to 7 years





Dust-proof High pressure and high temperature

Designed to run quietly





Hygienic design

Up to 1 ton moved





Non-slip tyre

Heavy load moved





Shockproof

Audible warning





High-pressure jet-cleaning

Internal or External battery





Stainless-steel

Business Sectors

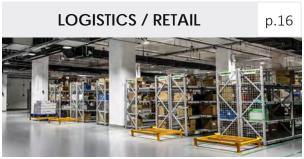
Endless possibilities

Power any rolling equipment dedicated to load handling or people transportation, quickly and easily.















Adding an electrical motorization on manual handling equipment allows improving production cycle while preserving the health of operators. Motorize any rolling equipment in industry such as heavy load carriers, industrial hand trucks or special machinery.

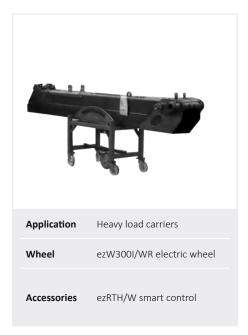


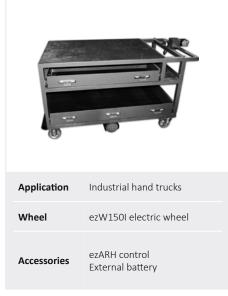






Endless possibilities:







They trust us:







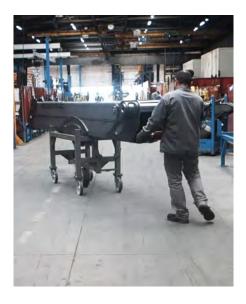


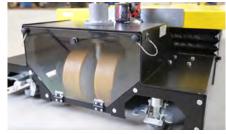


Suitable for the Industrial sector

Up to 2 tons moved without effort!

ez-Wheel® self-propelled electric wheels are ideal for handling equipment and moving heavy loads.







■ Up to 2 tons

Wheels can be paired to double the moved-load capacity. This platform has been fitted with 2 ezW300I/WR wheels and the load being moved is 2 tons.

◄ Continuous conveying

The transfer carriage or carousel can easily be powered to ensure repetitive motions. This example is fitted with 2 external batteries to allow for continuous use.

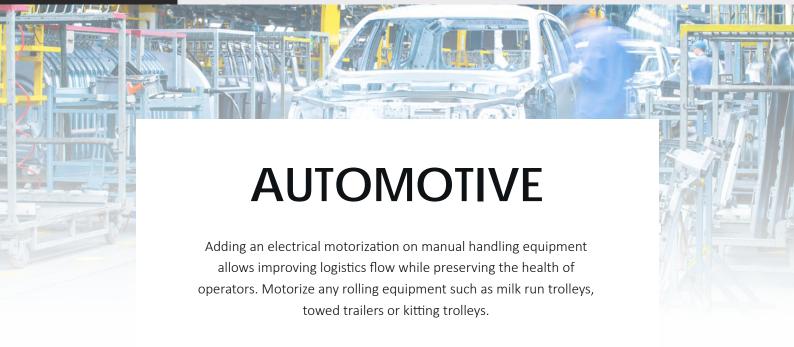
▲ Wireless control

The ezW300I/WR wheel is made for heavy load/large dimensions travel assistance. Its Wireless control offers great freedom of the manual control.



■ Special machinery

Most industrial special machinery can be fitted with ez-Wheel® electric wheels and accessories.



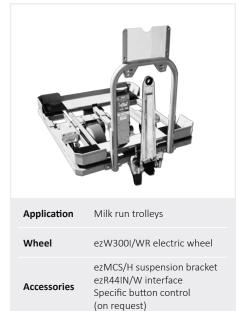


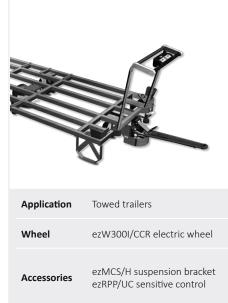


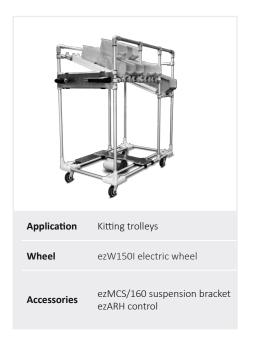




Endless possibilities:







They trust us:











Suitable for Automotive Industry

Ensuring continuous service

ez-Wheel® regenerative charging during towing feature is the perfect fit for towed material running 24/7.







■ Regen charge while towing ezW300I/WR and ezW300I/CCR electric wheels equipped with the « Regen » option can recharge themselves whilst being towed between the warehouse and the

◄ Moving platform

production line.

Operators movements may be also assisted by electric wheel ez-Wheel®. This motorized platform is footcontrolled, allowing you to follow the overhead line movement.

▲ Sensitive control

The ezRPP/UC push-pull sensitive control resulting from collaboration with a well-known automotive group, is perfect for manoeuvring on the shop floor.





◄ Charging at workstation

ezW300I/CCR and ezW150I ez-Wheel® electric wheels, can be recharged on each back-to-workstation through recharge contacts. The built-in batteries are designed to go through many micro-charging cycles without any premature ageing risks.

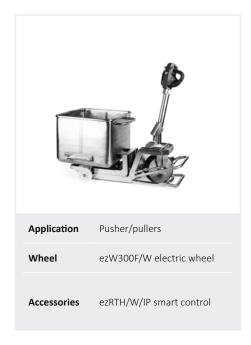


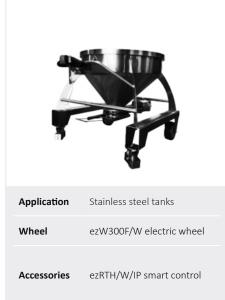


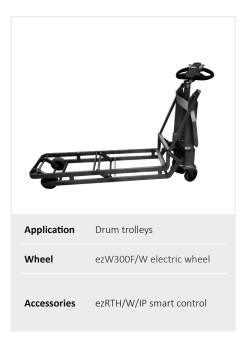




Endless possibilities:







They trust us:











Suitable for Food processing

Reinforced for serious tasks

ez-Wheel® sealed and waterproof products can operate in severe environments over a wide temperature range.







◄ Precise manoeuvre

The accurate motorization control allows precise positioning of machines.

Here, a wine tank motorized by 2 ezW300F/W. Thanks to ez-Wheel® devices, the operator can easily position the tank above the fill access cover.

◀ High pressure jet cleaning

The highest protection index **IP69K** and the stainless-steel cover of the ezW300F/W wheel allows high pressure jet cleaning, the robustness of the assembly being reinforced by the absence of connectors and fragile units.

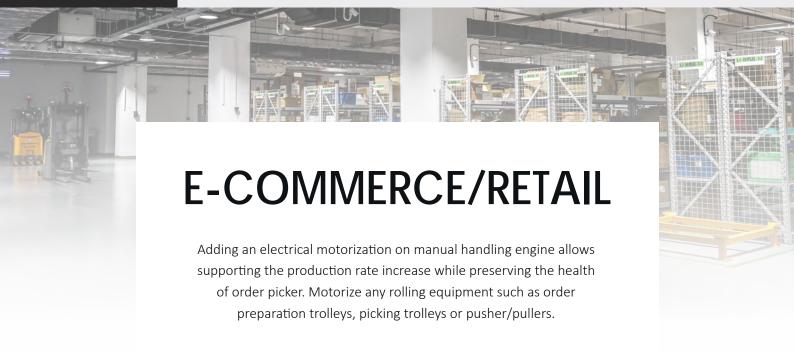
▲ Wireless

ezW300F/W wheel controlled by the ezRTH/W/IP tiller head offers a wireless solution without connector, perfect for demanding and wet environments.



◄ Production machinery

Even the most complex production machineries can be motorized by ez-wheel® electric wheels, thanks to its small dimensions and its standard form factor.







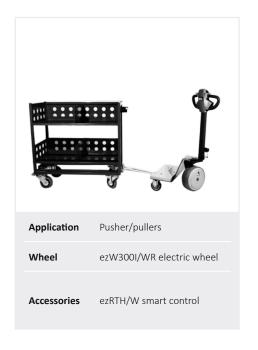




Endless possibilities:







They trust us:











Suitable for e-Commerce & Retail

Flexible, time-saving solutions

ez-Wheel® solutions are ideal for picking trolleys and platform trucks designed for hundreds of starts and stops per working shift.







◄ Multiple starts and stops

The ez-Wheel® electric wheels are specifically developed to ensure thousands of successive picking trolley starts and stops, and offer acceleration and deceleration assistance, with automatic motor brake and free-wheel control.

◀ Low height

The ezW160M+ electric wheel compactness with its castor standards dimensions facilitates mechanical integration, either as original equipment or retrofitted from existing trolleys.

▲ Full integration

The ezW160M+ wheels are easily integrated to control picking systems with other electronic components, such as these trucks fitted with Put-to-Light. The wheel is able to power the other components thanks to its on-board energy.



■ Productivity gain

Motorization increases the carrying capacity and reduces the number of trips.

Here, a trolley's puller powered by the ezW300I/WR electric wheel moving a train of 4 preparation trolleys at the same time.





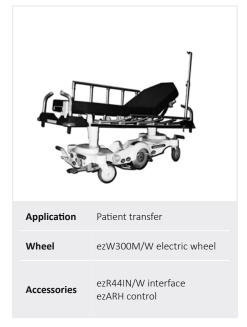


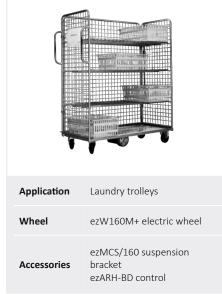


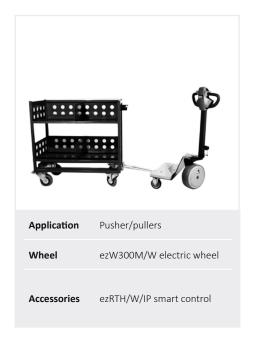




Endless possibilities:







They trust us:











Medical / Pharmaceutical

Suitable for Medical & Pharma

Clean, reliable and helpful

Medical

ez-Wheel® self-propelled electric wheels are ideal to preserve the health of healthcare workers.







■ Ability to climb slopes

The motorization offers a significant crossing torque, which allows a single person to climb slopes and access ramps without wasting time and effort.

◄ Multi-purpose

Most trolleys in hospitals can be motorized by ez-Wheel® electric wheels, either by direct motorizing, or by combining them with a motorized puller.

▲ Discreet & efficient

The ezW300M/W or ezW160M+ wheels are discreetly integrated to premium medical equipment, and their silent operation is highly appreciated by users.

Pharmaceutical

ez-Wheel® pharma range is also made for clean-rooms / white rooms with the highest hygienic requirements.



■ White and clean rooms

Thanks to its hygienic design and its special stainless-steel envelope, the ezW300M/W wheel can be used in a white and clean room.



PUBLIC SPACES

Adding an electrical motorization on rolling equipment or vehicles facilitates and optimizes every trip while preserving environment. Motorize any rolling equipment used in public spaces such as street trolleys, land drones, stage machinery.

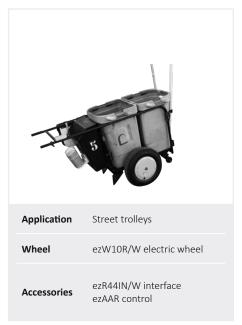


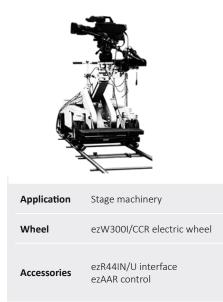


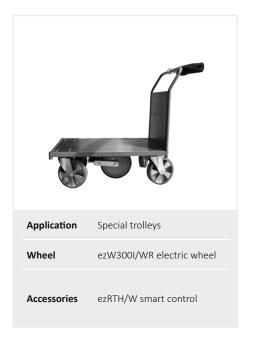




Endless possibilities:







They trust us:







2

Suitable for Public spaces

Even for the craziest ideas

ez-Wheel® products can be used outside on bitumen or turf, as well as uneven terrain. The ez-Wheel® range offers a solution for every mobility need.







◄ Manoeuvrability

These two ezW10R/W wheels driven by two ezAAR joysticks allow all complex manoeuvres and are hidden under the full costume.

◄ Ability to react

ez-Wheel® devices can motorize the most bulky equipment quickly and easily, so just a single person is required for this kind of manoeuvre.

▲ It's show-time!

The ezW300I/WR wheels can be used on spectacular parade floats, both indoors and outdoors.



◄ Multi-environments

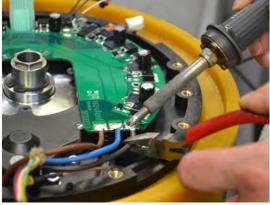
The ezW300I/WR or ezW10R/W wheels can be used on maintenance and delivery equipment or even agricultural machinery.

ELECTRIC WHEELS











ez-Wheel®

Electric wheel range



Series 300

electric wheel Series 3001

Developed for industrial use



p.24

electric wheel Series 300M

Developed for the medical environment



p.26

electric wheel Series 300F

Developed for the food processing industry



p.28

Series 150/160

electric wheel Series 1501

Developed for industrial use



p.30

electric wheel Series 160M

Developed for the medical environment



p.32

Series 10"

electric wheel Series 10"

Developed for the outdoors



p.34

electric wheel Series 3001

Developed for industrial use



All the components necessary for traction are built into the wheel: an electric gear motor, high energy and long-life batteries, a power controller ensuring optimum motor control, battery management and a control interface.









- Ø 300 mm
- 1000 kg moved
- IP54
- PU 80 sh.A flat profile



Ref. ezW300I/WR



Uses

- industrial handling tools
- towed rolling equipment
- trolley
- pusher/puller

Technical features

Diameter	300 mm
Speed range	0 to 9 km/h
Peak pushing effort	35 daN Moves 1000 kg
Nominal performance	12 daN at 6 km/h
Maximum rolling speed	12 km/h
Battery capacity	240 Wh
Wheel weight	17 kg
Function •	Regen

Ref. ezW300I/CCR

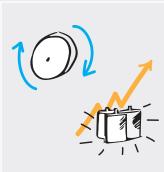


Uses

- industrial handling tools
- towed rolling equipment
- trolley

Technical features

Diameter	300 mm
Speed range	0 to 9 km/h
Peak pushing effort	35 daN Moves 1000 kg
Nominal performance	12 daN at 6 km/h
Maximum rolling speed	12 km/h
Battery capacity	240 Wh
Wheel weight	18 kg
Function •	Regen



Regen feature

Enables the built-in battery to be recharged using the kinetic energy produced by the rotation of the wheel.

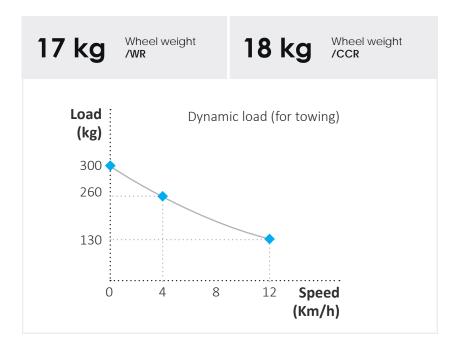
The wheel can be charged while rotating at a speed between 3 and 12 km/h, for instance during the towing phase of a trolley.

In this phase, the wheel switches into the charging mode automatically as soon as rotation is detected. The wheel then presents a resisting (braking) torque and the braking energy recovered by the motor is injected back into the battery.

Regenerative charging is an exclusive function developed by ez-Wheel.

Weight

The robust assembly can withstand knocks and severe vibration and enables the wheel to carry some load.



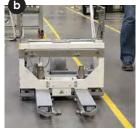
Conditions of use

The wheel can be used inside or outside, over a wide range of temperatures. The components – including the battery – do not need any inspection or maintenance over the product's whole lifespan.

-20°C Functional temperatures range 7Y. Maintenance period in years

Applications examples







- a. Heavy duty platform
- b. Special machinery
- c. Heavy load carrier

Components specifications

Motor	
Technology	BLDC PM
Gearbox	1-stage helical
Indicative lifespan	5000 h / 15000 km 1500 000 starts/stops
Nominal Speed	110 rpm (6,2 km/h)
Nominal power	200 W (S1)
Peak Torque	52 Nm

Battery	
Electro-chemistry	Ni-MH long life
Energy	240 Wh 24 VDC - 10 Ah
Indicative lifespan	5-8 years
Recharge mode	- Charger - Towing /WR /CCR - External power
Minimum charging time	2.5 hours (to 90%)

Interface	6.40
Wired	Serial
Wireless	LR WPAN 2.4 GHz IEEE 802.15.4

electric wheel Series 300M

Developed for the medical environment



All the components necessary for traction are built into the wheel: an electric gear motor, high energy and long-life batteries, a power controller ensuring optimum motor control, battery management and a control interface.









- Ø 304 mm
- 1000 kg moved
- IP65
- 70 sh.A Polyurethane bomb profile



Ref. ezW300M/W



Uses

- medical devices
- pusher/puller

Technical features

Diameter	304 mm
Speed range	0 to 9 km/h
Peak pushing effort	35 daN Moves 1000 kg
Nominal performance	12 daN at 6 km/h
Maximum rolling speed	12 km/h
Battery capacity	240 Wh
Wheel weight	17 kg
Option	-

Ref. ezW300M/W



Uses

- medical devices
- clean room material
- pusher/puller

Technical features

Diameter	304 mm
Speed range	0 to 9 km/h
Peak pushing effort	35 daN Moves 1000 kg
Nominal performance	12 daN at 6 km/h
Maximum rolling speed	12 km/h
Battery capacity	240 Wh
Wheel weight	17 kg
Feature ©	Stainless-Steel recharge per contact



FEATURE

Recharge per contact

Enables the built-in battery to be recharged by direct contact on wheel sides.

Only available on:

✓ stainless steel wheels

Weight

The robust assembly can withstand knocks and severe vibration and enables the wheel to carry some load.

17 kg

Wheel weight

300 kg Vertical load

Conditions of use

The wheel can be used inside or outside, over a wide range of temperatures. The components – including the battery – do not need any inspection or maintenance over the product's whole lifespan.

-20°C +60°C

Functional temperatures range 5Y.

Maintenance period in years

Applications examples







- a. Emergency stretcher
- b. Stainless steel tank
- c. Pusher/puller

Components specifications

Motor	
Technology	BLDC PM
Gearbox	1-stage helical
Indicative lifespan	5000 h / 15000 km 1500 000 starts/stops
Nominal Speed	110 rpm (6,2 km/h)
Nominal power	200 W (S1)
Peak Torque	52 Nm

Battery



Interface

	_
Wired	no
Wireless	LR WPAN 2.4 GHz IEEE 802.15.4

3 Wheels

electric wheel Series 300F

Developed for the food processing industry



All the components necessary for traction are built into the wheel: an electric gear motor, high energy and long-life batteries, a power controller ensuring optimum motor control, battery management and a control interface.













- Ø 304 mm
- 1000 kg moved
- IP69K
- 50 sh.A Polyurethane enhanced grip



Ref. ezW300F/W



Uses

- rolling equipment for harsh environment
- pusher/puller
- food processing material

Technical features

Diameter	304 mm
Speed range	0 to 9 km/h
Peak pushing effort	35 daN Moves 1000 kg
Nominal performance	12 daN at 6 km/h
Maximum rolling speed	12 km/h
Battery capacity	240 Wh
Wheel weight	17 kg
Feature ©	Stainless Steel recharge per contact



Recharge per contact

Enables the built-in battery to be recharged by direct contact on wheel sides.

Weight

The robust assembly can withstand knocks and severe vibration and enables the wheel to carry some load.

17 kg

Wheel weight

300 kg Vertical load

Conditions of use

The wheel can be used inside or outside, over a wide range of temperatures. The components – including the battery – do not need any inspection or maintenance over the product's whole lifespan.

-20°C +60°C

Functional temperatures range 5Y.

Maintenance period in years

Applications examples



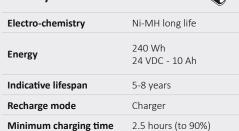




- a. Mobile tank
- b. Pusher/puller
- c. Drum trolley

Components specifications

Motor	
Technology	BLDC PM
Gearbox	1-stage helical
Indicative lifespan	5000 h / 15000 km 1500 000 starts/stops
Nominal Speed	110 rpm (6,2 km/h)
Nominal power	200 W (S1)
Peak Torque	52 Nm



Interface

Wired	no
Wireless	LR WPAN 2.4 GHz IEEE 802.15.4

3 Wheels

electric wheel Series 150I

Developed for industrial use



All the components necessary for traction are built into the housing: an electric gear motor, high energy and long-life batteries, a power controller ensuring optimum motor control, battery management and a control interface.



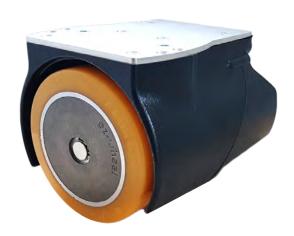








- ø 150 mm
- 1000 kg moved
- IP43
- 92 sh.A Blickle® Extrathane flat profile



Ref. ezW150I



Uses

- industrial trolleys
- rolling equipment for factories
- mobile workstations and tools

Technical features

Diameter	150 mm
Speed range	0 to 5 km/h
Peak pushing effort	35 daN Moves 1000 kg
Nominal performance	15 daN at 4 km/h
Maximum rolling speed	8 km/h
Battery capacity	0 - 70 - 140 Wh
Wheel weight	10 kg
Options ©	Parking brake /B Additional battery



Parking brake

Electro-mechanical parking brake. Ref. /B

Only available on:
✓ ezW150I



OPTION &

Additional battery

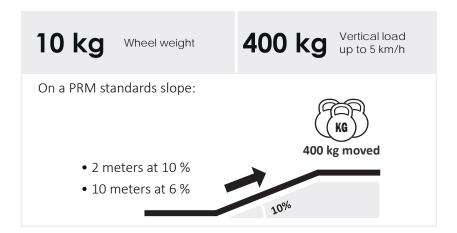
Internal batteries.
Ref. ezB24V3AH/160

Delivered separately, to be installed in:

- ✓ ezW150I
- √ ezW160M+

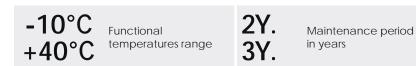
Weight

Thanks to the reinforced cast iron housing and wheel hub, the Series 150 wheel can withstand knocks and severe vibration and enables the wheel to carry some load.



Conditions of use

The wheel can be used inside or outside, over a wide range of temperatures. The components – including the battery – do not need any inspection or maintenance over the product's whole lifespan.



Applications examples







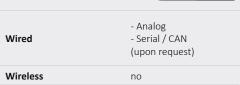
- a. Conveyor transfer car
- b. Tool trolley
- c. Scissor lift trolley

Components specifications

Motor	
Technology	BLDC PM
Gearbox	2-stage helical
Indicative lifespan	3000 h / 10000 km 1000 000 starts/stops
Nominal Speed	166 rpm (4,7 km/h)
Nominal power	170 W (S3, 15% duty cycle, 5 min max)
Peak Torque	27 Nm

	•
Electro-chemistry	Ni-MH long life
Energy	70 Wh (1 battery) 24 VDC - 3 Ah 140 Wh (2 batteries) 24 VDC - 6 Ah
Indicative lifespan	2-3 years
Recharge mode	- Charger - External power
Minimum charging time	1.5 hours (to 90%)

Interface



electric wheel Series 160M

Developed for the medical environment



All the components necessary for traction are built into the wheel: an electric gear motor, high energy and long-life batteries, a power controller ensuring optimum motor control, battery management and a control interface.









- Ø 158 mm
- 750 kg moved
- IP66
- 70 sh.A Polyurethane flat profile



Ref. ezW160M+



Uses

- catering trolleys
- transfer chairs and beds
- rolling equipment for hospitals

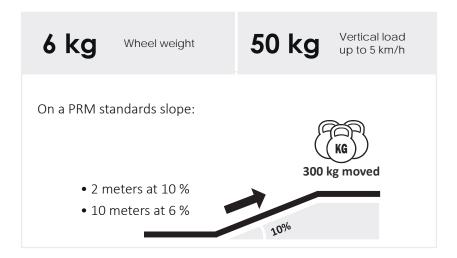
Technical features

Diameter	158 mm
Speed range	0 to 5 km/h
Peak pushing effort	27 daN Moves 750 kg
Nominal performance	9 daN at 5 km/h
Maximum rolling speed	8 km/h
Battery capacity	0 - 70 - 140 Wh
Wheel weight	6 kg
Options ©	Additional battery



Weight

The robust assembly can withstand knocks and severe vibration. The wheel is designed to be installed as a fifth wheel with a suspension.



Conditions of use

The wheel can be used inside or outside, over a wide range of temperatures. The components – including the battery – do not need any inspection or maintenance over the product's whole lifespan.

-10°C

Functional temperatures range

Maintenance period in years

Applications examples





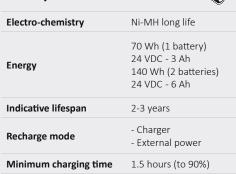


- a. Transfer chair
- b. Hot & cold food cart
- c. Catering trolley

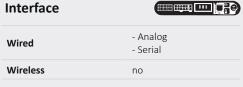
Components specifications

Motor	
Technology	BLDC PM
Gearbox	2-stage helical
Indicative lifespan	2000 h / 5000 km 600 000 starts/stops
Nominal Speed	167 rpm (5 km/h)
Nominal power	130 W (S1)
Peak Torque	22 Nm

Battery



Interface



electric wheel Series 10"

Developed for the outdoors



All the components necessary for traction are built into the wheel: an electric gear motor, high energy and long-life batteries, a power controller ensuring optimum motor control, battery management and a control interface.







- Ø 400 mm
- 150 kg moved
- IP54
- 10x4 road tyre



Ref. ezW10R/W



Uses

- delivery carts
- land drone

Technical features

Diameter	400 mm
Speed range	0 to 15 km/h
Peak pushing effort	-
Nominal performance	250 W (S1 at 10m/h)
Maximum rolling speed	18 km/h
Battery capacity	240 Wh
Wheel weight	14,5 kg
Option	-

34

Weight

The robust assembly can withstand knocks and severe vibration and enables the wheel to carry some load.

14,5 kg Wheel weight

150 kg

Recommended maximum load per wheel on a 10% slope

Conditions of use

The wheel can be used inside or outside, over a wide range of temperatures. The components – including the battery – do not need any inspection or maintenance over the product's whole lifespan.

-20°C +60°C

Functional temperatures range

5Y.

Maintenance period in years

Applications examples







- a. Street trolley
- b. Agricultural drone
- c. Motorized parade/float character

Components specifications

Motor	
Technology	BLDC PM
Gearbox	1-stage helical
Indicative lifespan	5000 h / 15000 km 1500 000 starts/stops
Nominal Speed	240 rpm (18 km/h)
Nominal power	250 W (S1 at 10 Km/h)
Peak Torque	55 Nm

Battery	
Electro-chemistry	Ni-MH long life
Energy	240 Wh 24 VDC - 10 Ah
Indicative lifespan	> 5 years
Recharge mode	Charger
Minimum charging time	3 hours (to 90%)

Interface	(D. p.p.)
Wired	-
Wireless	Wireless (LR WPAN) 2.4 GHz Based on IEEE 802.15.4

ez-Config® software

Configure your wheel

ez-Config® is the core of the ez-Wheel® solutions.

Thanks to their open connectivity, wheels and hand controls are programmable and can be perfectly adapted to any situation.







Environment

Evaluate and understand the working place characteristics





Connection

Open ez-Config® and connect ez-Wheel® devices via a USB port





Configuration

Configure wheels and accessories Save parameters



English interface



Windows compatibility 7 and above



Offline support

Available versions:

Ref. ez-Config/300 Configuration software suitable for:

V Series 300
V Series 10"
V Smart controls

Ref. ez-Config/150-160 Configuration software suitable for:

V Series 160
V Series 150



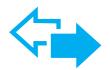
Features specifications:

This set of intuitive features have been developed and adapted thanks to years of return on experience and meet every user's demands.



Speed definition

Define the speed of the wheel.
Forward and Backward speed can
be differentiated.



Direction change

Adjust the behaviour of the wheel during a change in the set direction.
2 modes are available:
«Deceleration» and «Inversion».



Max speed mode

Set up the behaviour of the wheel when the rolling speed exceeds the maximum speed value entered in ez-Config®.



Acceleration time

Set up the acceleration time according to your needs. e.g. slow for patient moving, fast for picking trolley.



Deceleration mode

Choose the deceleration behaviour when releasing the hand control. e.g. motor brake resistance, free wheel to continue rolling.



Start time limiter

Limit the motor drive time for each start. When the hand control is released the wheel goes back to the selected deceleration mode.



Auto stand-by

Enter a value in seconds corresponding to the waiting time between the absence of activity on the hand control and switching back to stand-by.

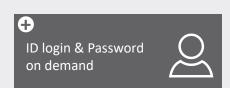


Inputs Outputs

Configure external interfaces for the displays, buttons, external supply...









ez-Wheel® devices

High level of compatibility

ez-Wheel® products have been developed to be integrated into many applications in various environments. Hundreds of accessories combinations are possible thanks to the high level of compatibility!

> Wheels and accessories are designed to ensure a plug-and-play compatibility. ez-Wheel's catalogue features a full range of wireless controls and predefined cables, ready to use.







	1 W2201 AVI	Waga (esp	ezW300M/W	9		S	O
Controls compatibil	ezW300I/WR ity	ezW300I/CCR	ezw300M/W	ezW300F/W	ezW150I	ezW160M	ezW10R/W
ezRTH/W	(Wireless	Wireless	Wireless	Wreless	No	No	Wreless
ezRPP/UC	(Wireless	Serial ezUCxM	No	No	No	No	No
ezR44IN/W	Wirekess	Wireless	Wheeless	Wireless	No	No	Wireless
ezR44IN/U	No	with ezACxM-UC/Box and ezUCxM	No	No	No	No	No
Wired control ezAxxx	+ ezACxM-UC/Box	+ ezACxM-UC/Box	+ ezACxM-UC/Box	+ ezACxM-UC/Box	with ezACxM-BD/160	with ezACxM-BD/160	+ ezACxM-UC/Box
ezARH-BD	No	No	No	No	with ezACxM-BD/160	with ezACxM-BD/160	No
Switches compatibility							
Switches ezSxxx	+ ezACxM-UCB/ Box	+ ezACxM-UCB/ Box	+ ezACxM-UCB/ Box	+ ezACxM-UCB/ Box	with ezACxM-BD/160	with ezACxM-BD/160	+ ezACxM-UCB/ Box
ezSPBC-BD	No	No	No	No	with ezACxM-BD/160	with ezACxM-BD/160	No
Emergency button ezSExxx	No	No	No	No	Cable included	Cable included	No
Internal and Externa	Internal and External batteries						
ezB24V3AH/160	No	No	No	No	Cable included	Cable included	No
External battery	No	with Mascot1A8/BAT	No	No	with ezBCEXT/160 or ezBCEXMxM/160	with ezBCEXT/160 or ezBCEXMxM/160	No

Wireless tiller head control

Bi-directional and ergonomic

Ensures a proper handling of equipment thanks to ergonomic shapes and well organised commands. The integrated wireless interface allows a simple and quick integration on rolling equipment.

Other functions:

The interface remotely displays the battery level of the wheel and the system status. It is powered by its own internal battery.

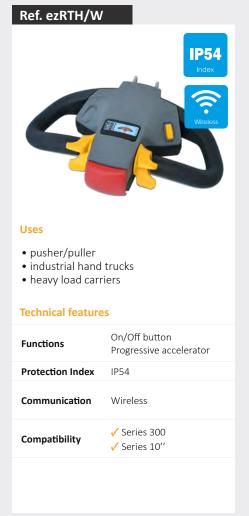
Ergo

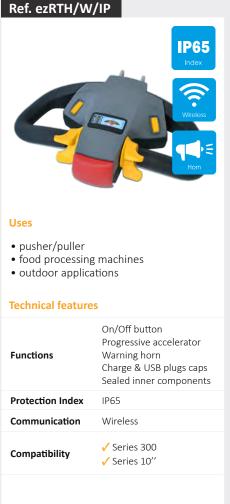
Ergonomic control

IP54 IP65

Protection Index

Which tiller head for which use?











Stainless-Steel stopper under ezRTH/W/IP tiller head. To protect the charge connector against washing water jets.



ezRTH/W: an award-winning tiller head housing, combining ergonomics and robustness, fitted with the best control features from ez-Wheel.



Push pull sensitive control

Bi-directional and sensitive sensor

Ensures a natural handling of equipment thanks to sensitive sensors, ergonomic shapes and intuitive use.

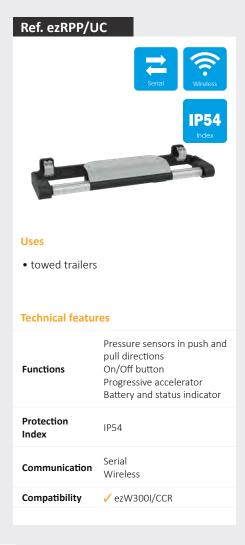
Other functions:

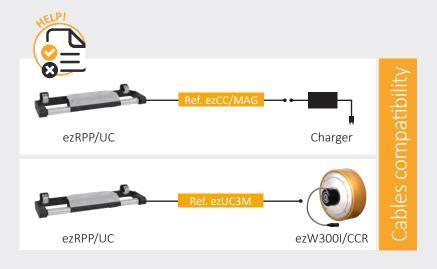
The interface remotely displays the battery level of the wheel and the system status. Its magnetic connector ensures a quick charger connection when coming back to the parking station.





Push Pull Sensitive control:











ezRPP: an intuitive control bringing best practices in lean manufacturing, co-designed with automotive players, for automotive players.



The ez-Box® interface

Control one or two wheels

Wireless Communication /W

The wireless interface allows a simple and quick integration on rolling equipment.

Serial Link Communication /U

The serial link is used in ez-Wheel solutions for insuring a wired communication recommended for noisy environments or wireless restricted areas.



Displays the battery level of the wheel and the system status



Panel or tube mount

ez-Box® interface:

Ref. ezR44IN/W







Which box for which use?

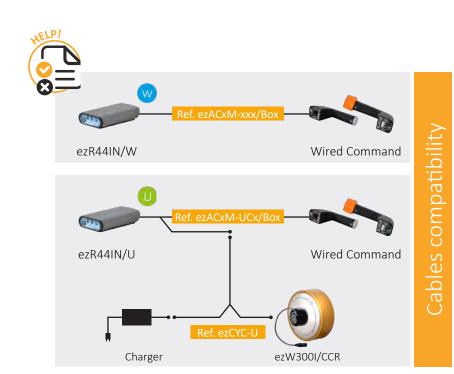
- √ √ Highly recommended
 - ✓ Compatible
 - **X** Not recommended

W	U
Wireless (LR WPAN) 2.4 GHz Based on IEEE 802.15.4	Serial link

Environment informations	Wireless communication	Serial link communication
White RF noise environment	X	√ √
Wireless restricted areas	X	$\checkmark\checkmark$
Agro/pharma environment (300M/300F)	/ /	x
Humid environment	√ √	X
Two wheels system	√√	✓







ez-wheel.com

45

Wired hand controls

Wired and Bi-directional



Ref. ezAARmini

Mini joystick

This finger operated mini joystick can control the speed in both directions (forward and backward). It can be mounted at the end of a tube, or on a panel.

Suitable for:	Cable required	
✓ ez-Box®	Ref. ezACxM/Box	
✓ Series 150/160	Ref. ezACxM-BD/160	



Ref. ezAAR

Joystick

The joystick can control the speed in both directions (forward and backward). It can be mounted on a panel and is suitable for tough environments.

Suitable for:	Cable required
✓ ez-Box®	Ref. ezACxM/Box
✓ Series 150/160	Ref. ezACxM-BD/160



Ref. ezARH

Rotating handle

The ezARH controls the speed in both directions (fwd and bck) with the thumb. The handle features an ergonomic and very rugged design.

Suitable for:	Cable required
✓ ez-Box®	Ref. ezACxM/Box
✓ Series 150/160	Ref. ezACxM-BD/160



Ref. ezARH-BD

Rotating handle with button and display

The ezARH-BD controls the speed in both directions (fwd and bck) with the thumb. The handle features an ergonomic and very rugged design. The second handle is equipped with a battery display and a start button.

Suitable for:	Cable required
✓ Series 150/160	Ref. ezACxM-BD/160



Ref. ezAFB

Forward & Backward control

This simple button control is suitable for a basic forward and backward operation (non-progressive).

Suitable for:	Cable required	
✓ ez-Box®	Ref. ezACxM/Box	
✓ Series 150/160	Ref. ezACxM-BD/160	

Tiller head

The ezATH command is a tiller head type control. It ensures a proper handling of equipment thanks to ergonomic shapes and well organized commands. It can control the speed in both directions (forward and backward). For safety, the control includes a belly button.

Suitable for:	Cable required	
✓ ez-Box®	Ref. ezACxM/Box	
✓ Series 150/160	Ref. ezACxM-BD/160	



Ref. ezATH



Wired switches

Standard switches



Ref. ezSONF-B

Switch On/Off Button

The ezSONF-B is a bistable toggle switch, to start and stop the system.

Suitable for:	Cable required
✓ ez-Box®	Ref. ezACxM-UCB/Box
✓ Series 150/160	Ref. ezACxM-BD/160



Switch Key Button

The ezSKEY-B is a bistable key switch, to secure the start of the system.

Suitable for:	Cable required
✓ ez-Box®	Ref. ezACxM-UCB/Box
✓ Series 150/160	Ref. ezACxM-BD/160

Ref. ezSKEY-B



Switch Push Button Colour

The ezSPBC-BD is an impulse push button featuring a status or battery level LED display.

Suitable for:	Cable required
✓ Series 150/160	Ref. ezACxM-BD/160

Ref. ezSPBC-BD



Ref. ezSEMRxM/160

Switch Emergency

The ezSEMRxM/160 is an emergency push button, to disconnect the motor power on Series 150/160 wheels.

Suitable for:	Cable required
✓ Series 150/160	Included



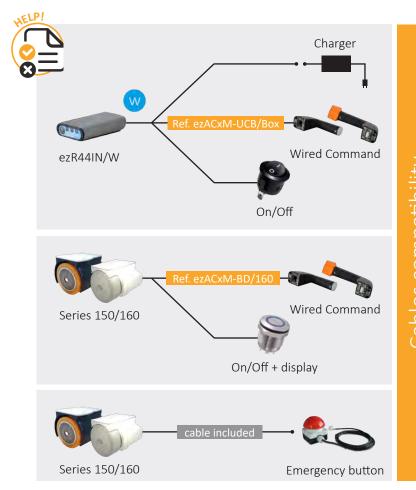
Ref. ezSERBxM/160

Switch Emergency Reverse Button

The ezSERBxM/160 is an emergency reverse button, to secure an operator trapped between the tiller head and an obstacle.

Suitable for:	Cable required
✓ Series 150/160	Included





6 Accessories

Internal battery

For Series 150 & 160



Ref. ezB24V3AH/160

Internal batteries

Ni-MH 24 VDC - 3 Ah - Extra energy for continuous use

Suitable for:	Cable required
✓ Series 150/160	No

External batteries

For continuous use



Ref. ezB24V6AH/L

External battery with handle

Ni-MH 24 VDC - 6 Ah - Long life

Suitable for:	Cable required
✓ ezW300I/CCR	Ref. Mascot1A8/BAT
✓ Series 150/160	Ref. ezBCEXMxM/160



Ref. ezB24V9AH

External battery with handle

Ni-MH 24 VDC - 9 Ah

Suitable for:	Cable required
✓ ezW300I/CCR	Ref. Mascot1A8/BAT
✓ Series 150/160	Ref. ezBCEXMxM/160



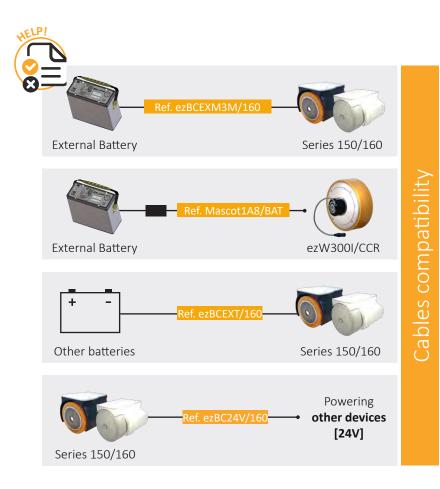
Ref. ezB24V15AH

External battery with handle

Ni-MH 24 VDC - 15 Ah

Suitable for:	Cable required
✓ ezW300I/CCR	Ref. Mascot1A8/BAT
✓ Series 150/160	Ref. ezBCEXMxM/160





Suspension bracket

Mechanical accessories for Series 150/160



Ref. ezMCS/160

Heavy Duty suspension bracket

The suspension bracket ezMCS/160 features a suspension for height compensation. The ground contact is optimal and the charge on the wheel stays stable, ensuring a good grip for the torque transmission.

✓ Series 150/160



Ref. ezMCS/L/160

Compact suspension bracket

The compact suspension bracket ezMCS/L/160 features a suspension for height compensation without increasing footprint. This suspension is suitable for medium loads, up to 500 kg.

√ Series 150/160



Ref. ezMCS/L/160+

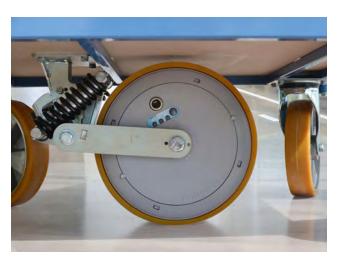
Horizontal suspension bracket with stronger spring force (+)

The suspension bracket ezMCS/L/160+ features a suspension for height compensation. This model is preferred for heavier loads, between 500 and 1000 kg.

√ Series 150/160



ezMCS/L/160+ on a Series 160 wheel



ezMCS/H on a Series 300 wheel

Suspension bracket

Mechanical accessories for Series 300



Ref. ezMCS/H

Horizontal suspension bracket

The suspension bracket ezMCS/H features a suspension for height compensation. The ground contact is optimal and the charge on the wheel stays stable, ensuring a good grip for the torque transmission.

✓ Series 300



Ref. ezMCS/H/CC

Horizontal suspension bracket

The suspension bracket ezMCS/H/CC is a specific version of the ezMCS/H for the Series 300/CC wheels.

It includes collars to attach the wheel's cable output.

√ ezW300I/CCR

Accessories

Mechanical accessories for Series 300 & 10"



Ref. ezMAR

Anti-rotate ring

The ezMAR is used to block the rotation of the wheel's axis, ensuring the transmission of the motor torque to the chassis.

- ✓ Series 300
- ✓ ezW300I/CCR
- ✓ Series 10"

6 Accessories

ez-Wheel® Chargers

Universal plug available

Universal voltage 90-264 V AC

Adapted to ez-Wheel® devices



Ref. Mascot1A8

Charger 1,8 Amp 🔘 🕖

1,8 Amps charger XLR charge plug + EU power cord

Suitable for:	Cable required
✓ Series 300 et 10''	cable included
✓ Series 150/160	Ref. ezCCxM/160



Ref. Mascot1A8/IP

Charger 1,8 Amp IP67 (9)



1,8 Amps charger IP67 XLR charge plug + EU power cord

Suitable for:	Cable required
✓ Series 300 et 10''	cable included
✓ Series 150/160	Ref. ezCCxM/160



Ref. Mascot4A

Charger 4 Amp

4 Amps charger XLR charge plug + EU power cord

Suitable for:	Cable required
✓ Series 300 et 10''	cable included
✓ Series 150/160	Ref. ezCCxM/160

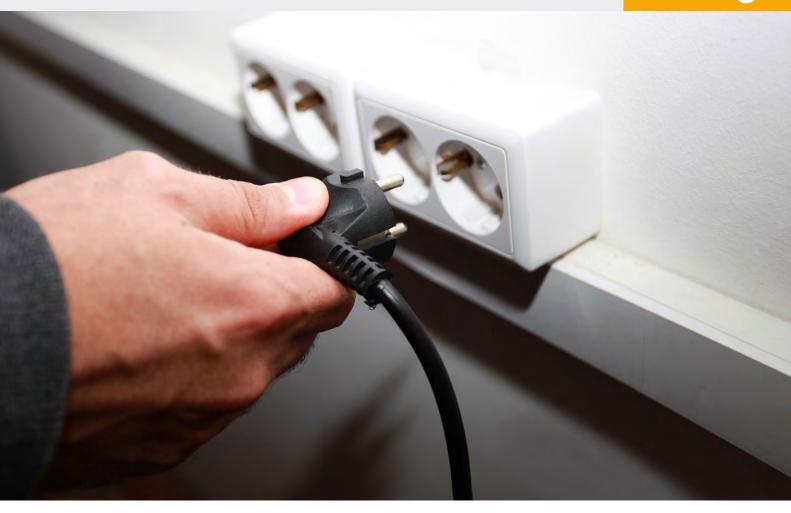


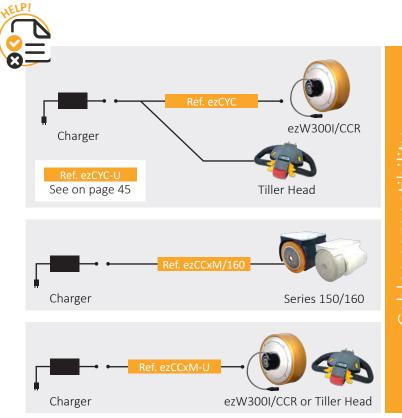
Ref. Mascot1A8/160

Embedded charger 1,8 Amp

Charger for Series 150/160 (embedded) Molex charge plug + EU power cord

Suitable for:	Cable required
✓ Series 150/160	cable included







A Worldwide Distribution network

ez-Wheel relies on a strong worldwide distribution network, highly-experienced and specialising in mobility and logistics needs.

Contact our expert partners!





A strong and specific **expertise in motorization**



Dedicated local **product assistance**



Smart tools for field support



Who are you?

An end user, an integrator, a manufacturer?



End User





Visit our website **ez-wheel.com** heading **contact**





Complete the online form



Our sales network will get back to you and connect you with **local integration partners**



Integrator





Visit our website **ez-wheel.com** heading **contact**





Complete the online form





Our sales network will provide you with all the necessary technical data to properly integrate our products

(We will be pleased to welcome you to our network of qualified integration partners!)



OEM / Manufacturer





Visit our website **ez-wheel.com** heading **contact**

(2



Complete the **online form**





Our technical experts will define with you the **best solutions to power your devices**

(Customized solutions available for high volumes)



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INDUSTRY





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PUBLIC SPACES



ez-Wheel SAS