

E-BIKE SYSTEM SOLUTIONS

Product Portfolio



E-MOBILITY



DRIVE
SYSTEMS



ENERGY STORAGE
SYSTEMS



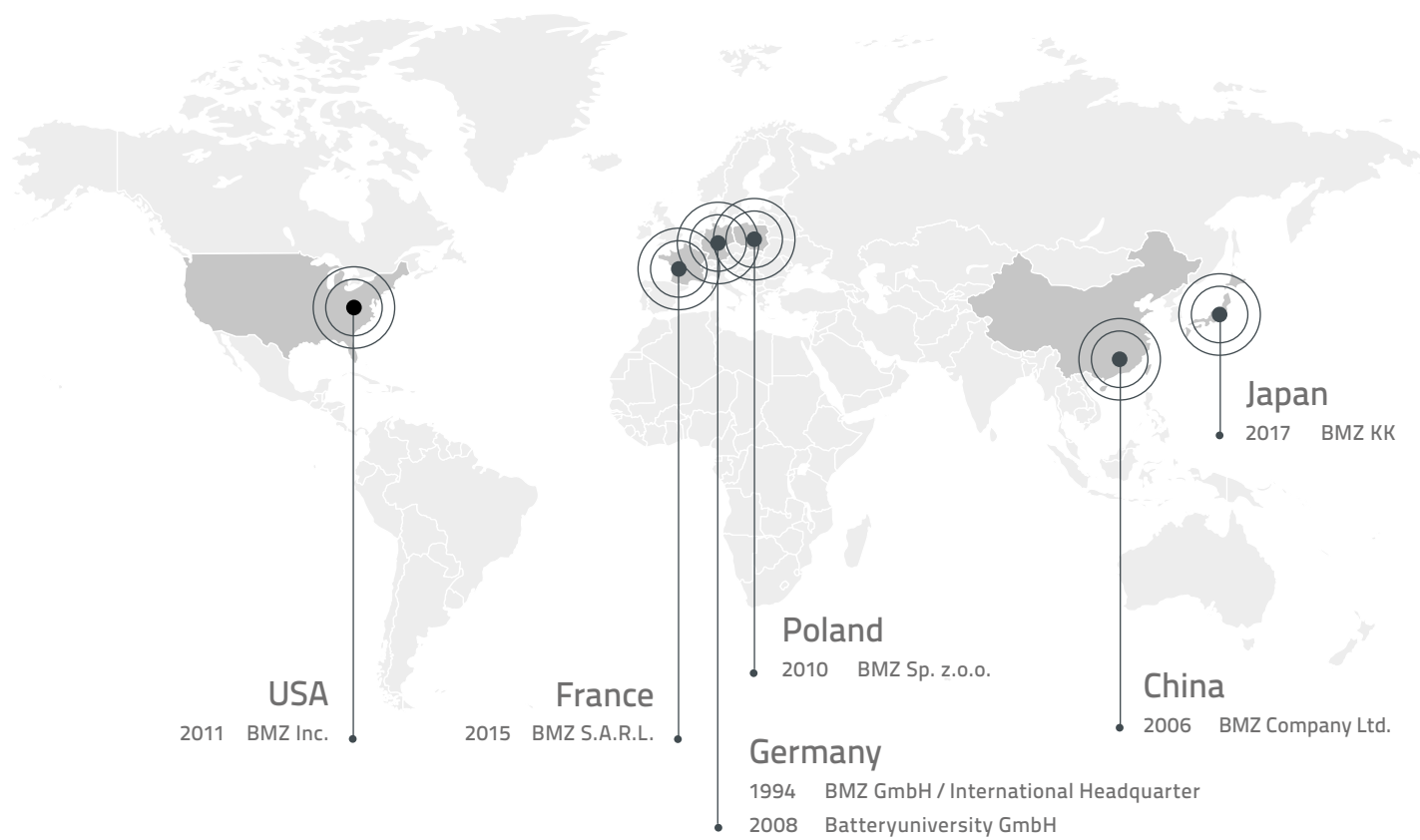
POWER- AND
GARDENTOOLS



INDUSTRIAL



MEDICAL



ABOUT BMZ Group

BMZ Group is a global player and the European leading manufacturer of lithium-ion battery system solutions. BMZ develops and produces high-tech battery systems for electric vehicles, commercial vehicles, energy storage systems, e-bikes, medical and industrial applications as well as power and garden tools, which are installed worldwide in the most diverse products of well-known brands. In addition to OEM

products, BMZ also manufactures complete batteries with its own brand. The Group is headquartered in Germany and has further production facilities in China, Poland and the USA as well as offices in Japan and France. In addition, there are research & development facilities worldwide. BMZ has about 25 years of experience and implements around 250 new projects every year.

Business Facts:

-  **3,000** Employees worldwide
-  **250** Projects a year
-  **Worldwide** development centers

Innovative and manufacturer-independent production capacities

76,000 m² in Poland	50,000 m² in China
75,000 m² in Germany	10,000 m² in USA



BMZ DRIVE SYSTEMS

BMZ Group as an independent system supplier.

BMZ Drive Systems offers the right solution for almost all customer requirements – based on its own modular system or an individual solution.

Lithium-ion batteries are the power source of every e-bike drive. The smaller, lighter and more powerful, the better. The BMZ Group is one of the global players in battery sys-

tems and, with BMZ Drive Systems, presents comprehensive e-bike solutions. BMZ offers manufacturer-independent components so that the OEMS can configure the e-bike according to their requirements.

BMZ Drive Systems is constantly expanding and always offers the most up-to-date and marketable solutions. Rounding off the portfolio through comprehensive service offers. New from 2018 are also platform batteries for the Shimano system as well as SACHS.



STRONG SYSTEM

BMZ offers everything from the pure battery solution to the complete package with motor, display, charger and the corresponding service.

The heart of every e-bike is the lithium-ion battery. It provides the energy for the engine. The display informs about load, state of charge and other parameters. The battery gets fresh power through the charger, which must be matched to the respective battery.

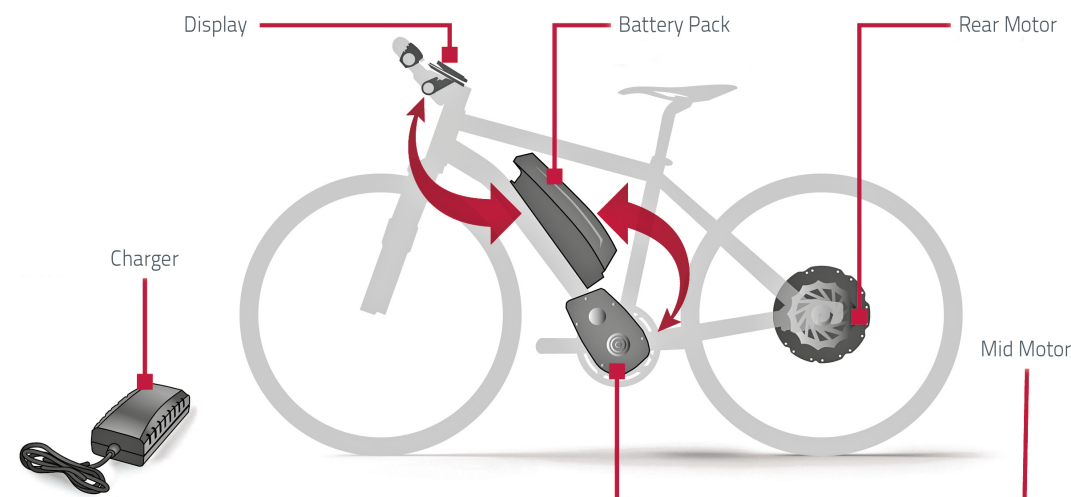
With a coordinated software solution, BMZ always provides a solid basis for communication between the components. From the display to the charging control.

System CONNECTIVITY

ARCHITECTURE

The BMZ Drive Systems architecture is based on the open BMZ Communication Protocol (BCP). This architecture creates the ability to easily and reliably connect all components of

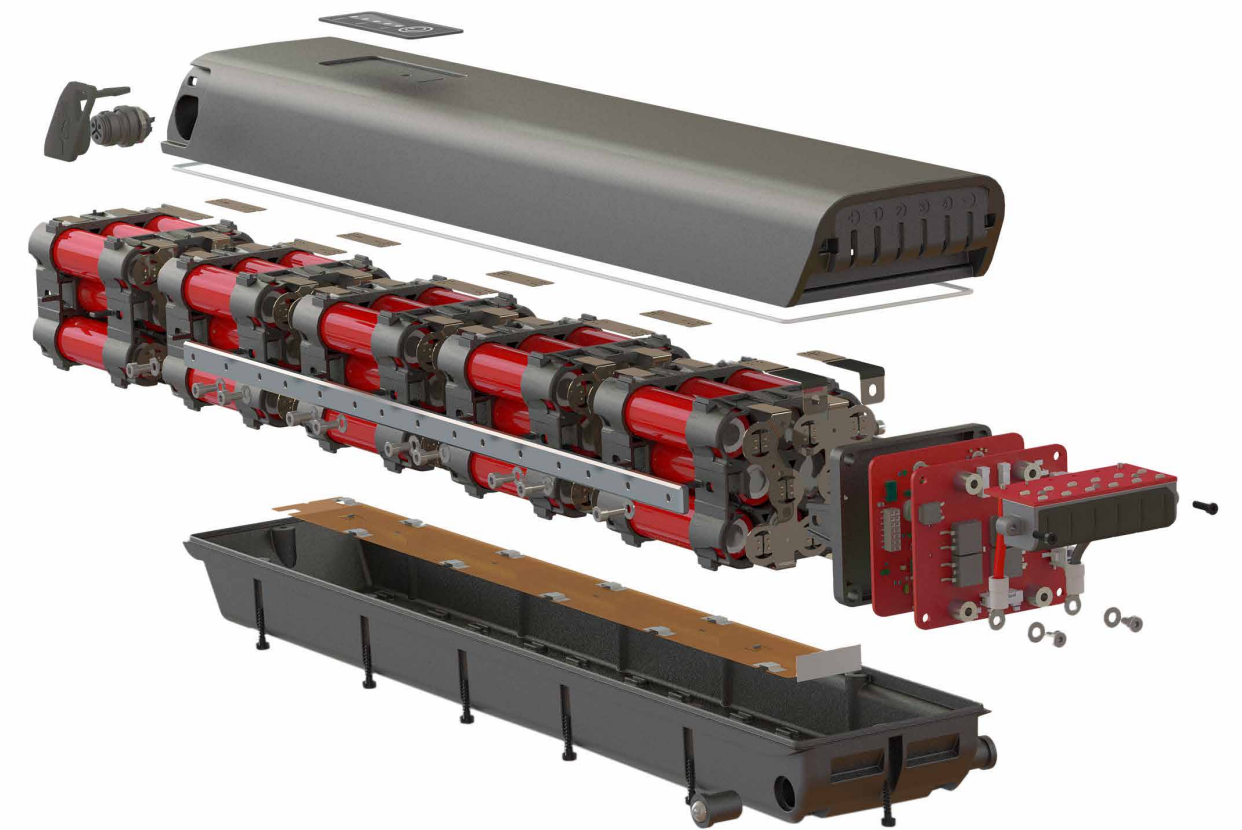
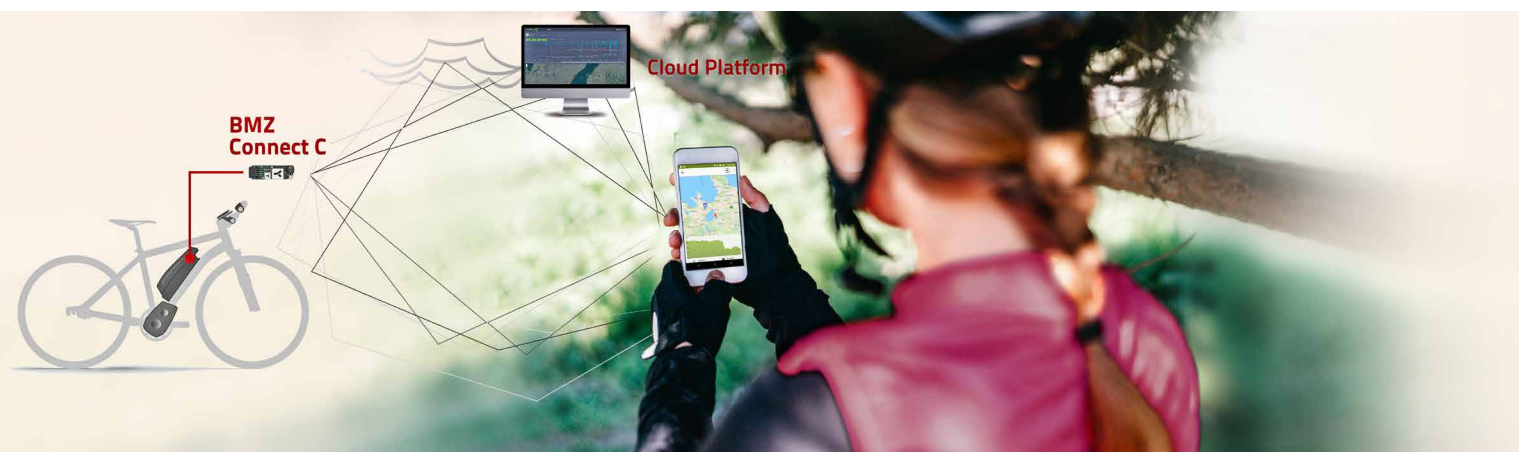
an e-bike and thus forms the basis for an open system. This gives the OEM an independent configurable environment.



BMZ E-BIKE APP „CONNECT C“

The networking solution BMZ Connect C connects the smartphone with the e-bike. The smartphone and the apps available with it open up completely new possibilities for the

user. The smartphone serves as an on-board computer and provides information about the components. At the same time, the driver can comfortably make vehicle settings.



Batterien INNOVATION LEADER

BMZ CELLS

In the BMZ E.Volution Center, the optimal cell technology is developed and implemented by our specialists. BMZ works together with leading cell manufacturers and impresses with experience and reliability of availability. For example, in addition to the 18650 cell format, BMZ is also producing a cell in the brand-new 21700 21 mm diameter, 70 mm high format, which at 60% more capacity can

simultaneously deliver a significantly higher discharge current. This improves the life span up to 12 years and increases the energy yield by 50%. The cell is exposed by the higher energy content less charging cycles and is characterized by a lower heat development. Advantages of using the new cell technology in the BMZ Drive Systems: Minimal charging time and maximum range.

LITHIUM-ION TECHNOLOGY

The advantages of BMZ's lithium-ion battery technology are its fast charging capability and long service life. The module production takes place fully automatically by laser welding robots and battery research is running at full speed. BMZ has 25 years of expertise and is a pioneer and innovator in this field.

The highly qualified engineers, designers and technicians of the BMZ Group implement individual customer requirements and are strong partners in the entire development and production process - from drawing preparation to prototyping and the execution of the necessary CE / UN / UL tests to series production.

BMZ E-Bike

BATTERIEN

INTEGRATED BATTERIES



V10 INTUBE	40 Li-Ion Cells 21700	36.0 V
Capacity	20 Ah, optional 15 Ah	
Charging contact	Hirschmann plug 8-pole	
Discharge contact	Hirschmann plug 8-pole	
Connector Box	No	
Lockable	Yes	
Support rail	Integrated	
Weight	Approx. 3,950 g (incl. Cover)	
Colour	Black anodised	



V9	40 Li-Ion Cells	36.0 V
Capacity	13.8 Ah	
Charging contact	Different Options	
Discharge contact	Cable set integrated	
Connector Box	No	
Lockable	Yes	
Support rail	No (frame)	
Weight	Approx. 3,900 g	
Colour	Black	



V8	50 52 Li-Ion Cells	36.0 V 48.0 V
Capacity	17.5 Ah 13.8 Ah	
Charging contact	Hirschmann plug 6-pole	
Discharge contact	Blade contact	
Connector Box	No	
Lockable	Yes	
Support rail	Integrated	
Weight	Approx. 3,900 g	
Colour	Black	



V7	40 Li-Ion Cells	36.0 V
Capacity	13.8 Ah	
Charging contact	Binder plug	
Discharge contact	Blade contact	
Connector Box	No	
Lockable	Yes	
Support rail	Integrated	
Weight	Approx. 2,940 g	
Colour	Black	

CARRIER BATTERIES



CARRIER BATTERY V2	50 Li-Ion Cells	36.0 V
Capacity	17.25 Ah	
Charging contact	Rosenberger magnetic plug	
Discharge contact	Rosenberger magnetic plug	
Connector Box	Yes	
Lockable	Yes	
Support rail	Insertion carrier battery	
Weight	Approx. 3,120 g (battery only)	
Colour	Black	



CARRIER BATTERY V6	40 Li-Ion Cells	36.0 V
Capacity	13.8 Ah	
Charging contact	Rosenberger magnetic plug	
Discharge contact	Rosenberger magnetic plug	
Connector Box	Yes	
Lockable	Yes	
Support rail	Insertion carrier battery	
Weight	Approx. 2,865 g (battery only)	
Colour	Silver - Black	



CARRIER BATTERY VOLATUS 330 Wh	18650 Cells	36 V
Capacity	9 Ah	
Charging contact	DC 5.5/2.5	
Discharge contact	SSP-055 (6Pin)	
Connector Box	Yes	
Lockable	Yes	
Support rail	Insertion carrier battery	
Weight	Approx. 3,000 g	
Colour	Black	



CARRIER BATTERY VOLATUS 440 Wh	18650 Cells	36 V
Capacity	12 Ah	
Charging contact	DC 5.5/2.5	
Discharge contact	SSP-055 (6Pin)	
Connector Box	Yes	
Lockable	Yes	
Support rail	Insertion carrier battery	
Weight	Approx. 3,450 g	
Colour	Black	



CARRIER BATTERY VOLATUS 480 Wh	18650 Cells	36 V
Capacity	13.2 Ah	
Charging contact	DC 5.5/2.5	
Discharge contact	SSP-055 (6Pin)	
Connector Box	Yes	
Lockable	Yes	
Support rail	Insertion carrier battery	
Weight	Approx. 3,600 g	
Colour	Black	



DOWNTUBE BATTERIES



DOWNTUBE BATTERY V3	40 Li-Ion Cells	36.0 V
Capacity	11.4 Ah	
Charging contact	Rosenberger magnetic plug	
Discharge contact	Rosenberger magnetic plug	
Connector Box	No	
Lockable	Yes	
Support rail	Yes	
Weight	Approx. 3,240 g	
Colour	Grey Black	

DOWNTUBE BATTERY V5	40 Li-Ion Cells	36.0 V
Capacity	13.8 Ah	
Charging contact	Rosenberger magnetic plug, opt. Binder plug	
Discharge contact	Blade contact (5-pole)	
Connector Box	Yes	
Lockable	Yes	
Support rail	Yes	
Weight	Approx. 2,245 g	
Colour	Black - Anthracite Black	

CARGO BATTERIES



CARGO BATTERY	36.0 V 48.0 V
Capacity	17.25 Ah 24.15 Ah
Charging contact	BMZ Cargo plug
Discharge contact	BMZ Cargo plug
Connector Box	No
Lockable	No
Support rail	Yes
Weight	Approx. 4,500 g
Colour	Black

CARGO BATTERY preCURSOR	36.0 V
Capacity	19.2 Ah
Charging contact	Rosenberger magnetic plug
Discharge contact	Rosenberger magnetic plug
Connector Box	No
Lockable	Individual
Support rail	Individual
Weight	Approx. 3,300 g
Colour	Black



BMZ E-Bike

CHARGERS



Plattform BASIC	10S/13S Li-Ion Cells	36.0 V/46.8 V
Input voltage	230 V 50 Hz	
Charge end voltage	42.0 V 54.6 V +/- 1%	
Charging current	3.0 A 2.0 A	
Charging display	1 x LED green, 1 x LED red	
Secondary connection	Diverse	
Dimensions	174 x 80 x 51 mm	
Weight	Approx. 550 g	



Plattform STANDARD	10S/13S Li-Ion Cells	36.0 V/46.8 V
Input voltage	100-240 V 50-60 Hz	
Charge end voltage	42.0 V 54.6 V +/- 1%	
Charging current	4.5 A 3.5 A	
Charging display	1 x LED green, 1 x LED red	
Secondary connection	Diverse	
Dimensions	206 x 94 x 61 mm 174 x 80 x 51 mm	
Weight	Approx. 770 g Approx. 550 g	



Plattform PREMIUM	10S-14S Li-Ion Cells	36.0 V/46.8 V/50.4 V
Input voltage	100-240 V 50-60 Hz	
Charge end voltage	58.8 V max.	
Charging current	10.0 A max.	
Charging display	1 x LED green, 1 x LED red	
Secondary connection	Diverse	
Dimensions	225 x 155 x 75 mm	
Weight	Approx. 2,200 g incl. equipment	

10 To all chargers any plug version can be delivered (on request).

BMZ E-Bike

DISPLAYS



- Bluetooth integrated (Sigma App and Data export third parties like Strava, Komoot, Facebook...)
- Automatic light with brightness sensor
- 9 RGB LEDs



- 2.8" FSTN Display with dot matrix
- Navigational arrows
- Display a variety of information: Trip data, modes, speed, etc.
- Can only be used in conjunction with SIGMA EOX remote 500



- 3.5" colour display
- Display block using freely selectable PIN code
- Adjustable background colour
- Display a variety of information: Trip data, modes, speed, etc.
- Connect C ready with BMZ App



- 1.3" display
- Display block using freely selectable PIN code
- Adjustable background colour
- Display a variety of information: Trip data, modes, speed, etc.
- Connect C ready with BMZ App



- 1.77" colour display
- Automatic light with brightness sensor
- Display a variety of information: Trip data, modes, speed, etc.
- Connect C ready with BMZ App



- 1.5" colour display
- Automatic light with brightness sensor
- Display a variety of information: Trip data, modes, speed, etc.
- Bluetooth integrated

BMZ E-Bike ENGINES



BMZ RS 48 250 E25	
BMZ Article No.	34911
Rated voltage	48 V
Max. Torque	112 Nm
Duration Power	250 Watt
Peak power	700 Watt
Light output	6 V 2.0 Amp.
Crank connection	ISIS Drive®
Bottom bracket shaft length	135 mm
Backpedal function	-
Weight	3.60 kg
Protection class	IP 56



BMZ GT 36 250 E25	
BMZ Article No.	-
Rated voltage	36 V
Max. Torque	55 Nm
Duration Power	250 Watt
Peak power	350 Watt
Light output	6 V 1.5 Amp.
Crank connection	ISIS Drive®
Bottom bracket shaft length	128 mm
Backpedal function	Version möglich
Weight	2.90 kg
Protection class	IP 55



PANASONIC GX POWER PLUS	
BMZ Article No.	-
Rated voltage	36 V
Max. Torque	75 Nm
Duration Power	250 Watt
Peak power	450 Watt
Light output	13.6 V 1.5 Amp.
Crank connection	4-Kant Konus
Bottom bracket shaft length	156 mm
Backpedal function	Version möglich
Weight	3.20 kg
Protection class	IP X5



BMZ RS 48 250 E45	
BMZ Article No.	607195
Rated voltage	48 V
Max. Torque	112 Nm
Duration Power	400 Watt
Peak power	700 Watt
Light output	6 V 2.0 Amp.
Crank connection	ISIS Drive®
Bottom bracket shaft length	135 mm
Backpedal function	-
Weight	3.60 kg
Protection class	IP 56



PANASONIC GX POWER	
BMZ Article No.	-
Rated voltage	36 V
Max. Torque	60 Nm
Duration Power	250 Watt
Peak power	450 Watt
Light output	13.6 V 1.5 Amp.
Crank connection	4-Kant Konus
Bottom bracket shaft length	156 mm
Backpedal function	Version possible
Weight	3.20 kg
Protection class	IP X5

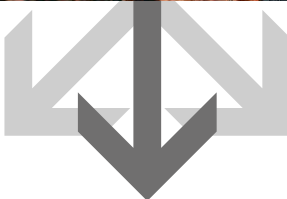


PANASONIC ULTIMATE	
BMZ Article No.	-
Rated voltage	36 V
Max. Torque	90 Nm
Duration Power	250 Watt
Peak power	600 Watt
Light output	13.6 V 1.5 Amp.
Crank connection	ISIS Drive®
Bottom bracket shaft length	132 mm
Backpedal function	-
Weight	2.95 kg
Protection class	IP X5

COMPATIBILITY with Drives

The OEM has particularly high demands on all components of the e-bike. Especially, technical products must be subjected to strict control to ensure a high lifetime. Equally relevant is the communication from charger to battery and on to the engine. BMZ batteries are specially tuned to the high-quality motors and ensure full compatibility with well-

known manufacturer brands such as Brose, Erzmo, Heinzmann, Neodrives, SACHS and Shimano, which are built with different features and performance characteristics. With BMZ batteries and components you can always drive with excellent brand quality.



Brose



Heinzmann



Neodrives



Panasonic



Sachs



Shimano



Central SERVICE

BMZ stands for maximum sustainability with distinctly innovative, particularly high-quality products and excellent after-sales service.

Our service promise:

- **Europe-wide network**
with international hotline
- **Spare part supply**
within 24 hours
- **48 hours**
mobility warranty
- **Cost-efficient and customer-oriented**
service processes
- **Dealer trainings**
and support

However, high quality alone is not enough to satisfy our customers over the complete service life of their product. Therefore, we offer competent and friendly service throughout the entire value chain.

We have only highly trained technicians and specialists, often with many years of experience in repair work at our fully equipped service center. Replacement parts are original components without exception, which are carefully verified before installation.

RECYCLING

The BMZ Group offers a unique service of collecting and recycling all lithium-ion batteries within every EU member state. The advantage for BMZ Group customers worldwide is that they will receive all the services which are relevant to their business from a single source.



SERVICE SHOP

With our B2B E-Bike Shop being part of Central Service, we offer dealers and distributors across Europe a way to speak with the BMZ Group online, request components, obtain advice, and order direct deliveries at the best possible price. The shop is available online 24/7. Since go-live in April 2019, far in excess of 1,000 bicycle dealers have registered and since then have been successfully ordering daily via the shop. Currently, numerous products from within the categories of batteries, chargers, displays, motors and accessories are available as our online inventory is being constantly expanded.

To be contacted at: **ebike.bmz-group.shop**

ADVANTAGES OF THE SHOP

- Many products available online
- Lower shipping costs
- Real time availability check
- Fast processing
- View specification
- Individual & itemized prices can be viewed
- Free dealer locator for end customers
- Registration for the offer newsletter
- Special offers available online



SERVICE TOOL

Upon registration, you will receive updates and news from our service tool directly to your screen. You will always be up-to-date and able to take that extra step further with your customers. We at BMZ know your customers' needs and we also know how to guarantee you a competitive advantage. BMZ Group is your leading partner in service, maintenance and repair.

ACCESSING PROCEDURE:

1. Start service tool
 2. Switch on system
 3. Plug in USB interface (USB2CAN / USB2UART)
 4. Establish new connection
-
- Run Diagnosis
 - Receive Updates
 - Follow Protocol



BMZ USB2CAN / USB2UART:

The BMZ USB2CAN / USB2UART PC connection device is used to check system functions and errors, for firmware updates and for functional adjustment. The USB2CAN / USB2UART is connected via a USB B port.

Any questions?

Contact us, we will be pleased to advise you.



BMZ GmbH

Zeche Gustav 1
63791 Karlstein am Main
Germany

P: +49 6188-9956-0
E: mail@bmz-group.com
www.bmz-group.com

© BMZ 02.2021

All rights reserved. Although we have taken great care in preparing this document, BMZ does not accept any responsibility for errors or omissions.
All information included here may be changed at any time without prior notification.