



SERVICE TOOL IMPULSE DCW

OPERATING INSTRUCTION

Addresses, Identification and Remarks

Impressum	BMZ Batterien-Montage-Zentrum GmbH Am Sportplatz 30 63791 Karlstein Germany E-Mail: kontakt@bmz-group.com
Product identification	Art. No.: 26305 Type: Service Tool Impulse DCW Country of Origin: PRC Marks: CE
Customer service	BMZ Service Center Am Sportplatz 15-17 63791 Karlstein am Main Germany Hotline e-bike dealers: +49 180 – 5269002* Hotline Derby dealers: +49 180 – 5269001* Fax: +49 180 – 5269003 *14 eurocent/min from German landlines; max. 42 eurocent/min from German mobile networks
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Table of Contents

1	Safety	5
1.1	Important Information about this Manual	5
1.1.1	Purpose	5
1.1.2	Safekeeping	5
1.2	Explanation of Safety Signs	5
1.3	Scope of Application	5
1.3.1	Intended Use	5
1.3.2	Technical Limitations	6
1.4	Safety Notes	6
2	Description	7
2.1	Important Information on the Product	7
2.1.1	Overall view	7
2.1.2	Conformity	8
2.1.3	Labelling	9
2.2	Technical Data	9
2.2.1	Power Supply and Connections	9
2.2.2	Dimensions and Weight	9
2.2.3	Environmental Conditions	9
2.3	Equipment	9
2.3.1	Scope of Delivery	9
3	Installation	10
3.1	Copy installation files to PC	10
3.2	Install drivers	10
3.3	Install the Derby Cycle Service Tool	11
3.4	Connect the Communication Box	12
4	Operation	13
4.1	Start Program	13
4.2	Read battery information	13
4.3	Update the Battery's Firmware	14
4.4	Determine the Full Charge Capacity	16
4.5	Troubleshooting	17

5	Disposal	18
6	Other Tables	19
6.1	Glossary	19
6.2	Tables	19
6.3	Figures	19

1 Safety

1.1 Important Information about this Manual

1.1.1 Purpose

This manual provides information on a safe and faultless usage of the Service Tool.

- ▷ Please read this manual carefully before you use the Service Tool.


1.1.2 Safekeeping

This instruction is part of the Service Tool Impulse DCW. For a save usage it must be accessible to all users.

- ▷ Keep the instruction near the device.
- ▷ Tell all users where they find the instruction.
- ▷ Hand the instruction to the new owner of the device.

1.2 Explanation of Safety Signs

Table 1:
Explanation of safety signs

Sign	Explanation
	Refer to instruction manual.

1.3 Scope of Application

- Firmware update
- Update of full-charge-capacity for a more accurate display of the capacity
- Reading further information on the battery

Any other application is not allowed.

1.3.1 Intended Use

Use the Service Tool with the following batteries only:

- | | |
|--|--|
| <ul style="list-style-type: none"> ■ Art. Nr. 14574-[...] ■ Art. Nr. 16565-[...] ■ Art. Nr. 19180-[...] ■ Art. Nr. 19292-[...] ■ Art. Nr. 19329-[...] ■ Art. Nr. 19385-[...] ■ Art. Nr. 19396-[...] ■ Art. Nr. 19913-[...] ■ Art. Nr. 21481-[...] | <ul style="list-style-type: none"> ■ Art. Nr. 23662-[...] ■ Art. Nr. 24499-[...] ■ Art. Nr. 24639-[...] ■ Art. Nr. 24640-[...] ■ Art. Nr. 25946-[...] ■ Art. Nr. 29591-[...] ■ Art. Nr. 30695-[...] ■ Art. Nr. 31281-[...] |
|--|--|

Only use the Service Tool in faultless condition and in accordance to the operating instruction:

- The USB cable is intact.
- The communication box is intact.
- The battery is intact.

1.3.2 Technical Limitations

The Service Tool is not designed to charge or repair batteries.

1.4 Safety Notes

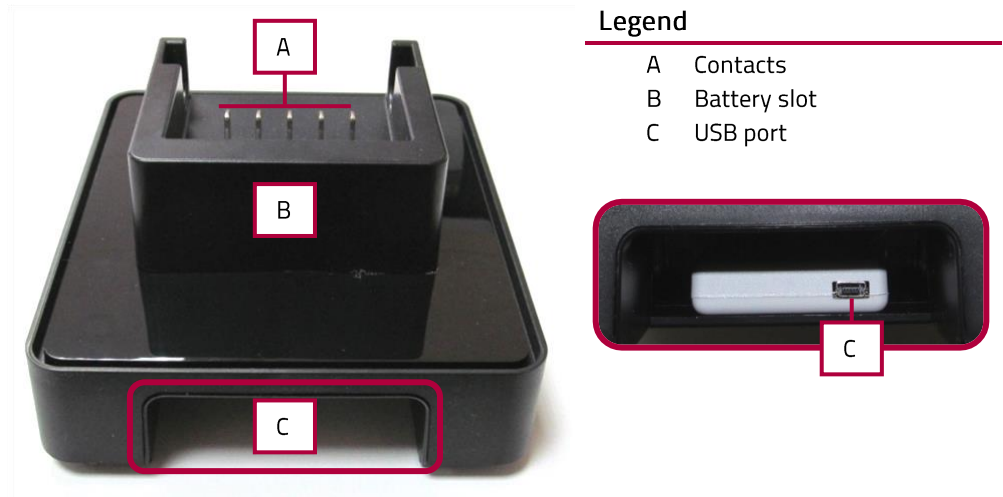
- ▷ Always respect the operating instruction of the battery.
- ▷ Do not charge the battery when it is connected to the Service Tool. This may damage the communication box.
- ▷ Do not modify the communication box.
- ▷ Do not open the communication box.
- ▷ Do not reach into the communication box.
- ▷ Do not put any objects into the communication box.
- ▷ Do not bridge the contacts with metal objects.
- ▷ Protect the communication box from fluids.

2 Description

2.1 Important Information on the Product

2.1.1 Overall view


Figure 1
Overall view
communication box



2.1.2 Conformity

Figure 2
Conformity Declaration

BMZ BATTERIEN-MONTAGE-ZENTRUM GMBH
 Am Sportplatz 28-30 · D-63791 Karlstein am Main
 Tel: +49 (0)6188 9956-0 · Fax: +49 (0)6188-9956-900
 E-Mail: mail@bmz-gmbh.de · Internet: www.bmz-gmbh.de



EG-Konformitätserklärung

Firma: Batterien-Montage-Zentrum GmbH

Anschrift: Am Sportplatz 28-30
63791 Karlstein

Produkt: Impulse Flash Tool

Bezeichnung: Service Tool

Artikel-Nr. BMZ: Art-Nr. 26305

Für das bezeichnete Produkt wird bestätigt, dass es den wesentlichen Anforderungen der folgenden Europäischen Richtlinien und Normen entspricht.

Die Übereinstimmung des Produktes mit den Richtlinien wird nachgewiesen durch die vollständige Einhaltung der angeführten harmonisierten und nicht harmonisierten Normen:


2011/65/EU RoHS-Richtlinie
 Richtlinie des Europäischen Parlaments und des Rates vom 8. Juni 2011 zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten

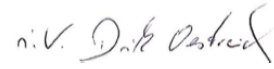
2006/95/EG Niederspannungsrichtlinie
 Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen

2004/108/EG EMV-Richtlinie
 Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit und zur Aufhebung der Richtlinie 89/336/EWG

2002/96/EG WEEE-Richtlinie
 Richtlinie des Europäischen Parlaments und des Rates zur Entsorgung von Elektro- und Elektronik-Altgeräten

Karlstein am Main, 06.07.2015


 Sven Bauer, Geschäftsführer


 i.V. Dirk Oestreich, Leiter Entwicklung

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, sichert jedoch keine Eigenschaften im Sinne des Produkthaftungsgesetzes zu.

Geschäftsführer	Sven Bauer	Ust.-ID-Nr.: DE 811770243		
HRB-Nr. 5890 Aschaffenburg	St. Nr.: 122/50444	IBAN: DE35795400490105770200	BLZ 79540049	Kto. 1057702
Commerzbank	BIC: COBADE33	IBAN: DE11795500000240004263	BLZ 79550000	Kto. 240004263
Sparkasse Aschaffenburg	BIC: BYLADE33	IBAN: DE85508700050010501500	BLZ 50870005	Kto. 010501500
Deutsche Bank	BIC: DEUTDE33			

Protection Class

IP00

2.1.3 Labelling

Figure 3
Label



2.2 Technical Data

2.2.1 Power Supply and Connections

Power supply	5 V
Internal power consumption	<50 mA
Total power consumption	max. 500 mA
Connections	3 x I2C-Bus (TWI), incl. 5 V supply, USB
I2C bus frequency	245 Hz – 400 kHz

2.2.2 Dimensions and Weight

Dimensions (W x H x D):	130 x 75 x 150 (mm) 5,12 x 2,95 x 5,91 (in)
Weight	1200 g 2,65 lb

2.2.3 Environmental Conditions

Temperature	-5 ... +35 °C 23 ... 95 °F
Humidity	90 % at 20 °C 68 °F 50 % at 40 °C 104 °F

2.3 Equipment

2.3.1 Scope of Delivery

- Communication box
- USB cable
- USB stick (with driver and tool software)

3 Installation

3.1 Copy installation files to PC

Overview

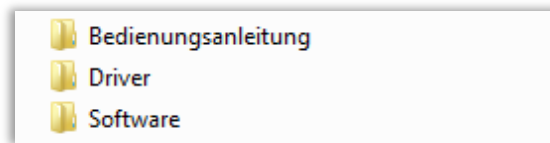
The installation must be executed from your hard drive. For this, copy the installation files to your PC.

Auxiliaries

- Supplied USB stick
- PC with Windows 7 or higher

Instruction

1. Create a new folder on your hard drive.
e. g: C:\DCW Service Tool
1. Copy all files from the supplied USB stick to the new folder.



3.2 Install drivers

Overview

Before you connect the communication box to your PC, the SiLabs VCP driver must be installed.

Prerequisites

- ✓ The installation files are copied to your hard drive. (see 3.1)
- ✓ You have administrator access rights.
- ✓ The communication box is disconnected from your PC.

Auxiliaries

- File `cp210x_Windows_Drivers.zip` in folder `Driver`

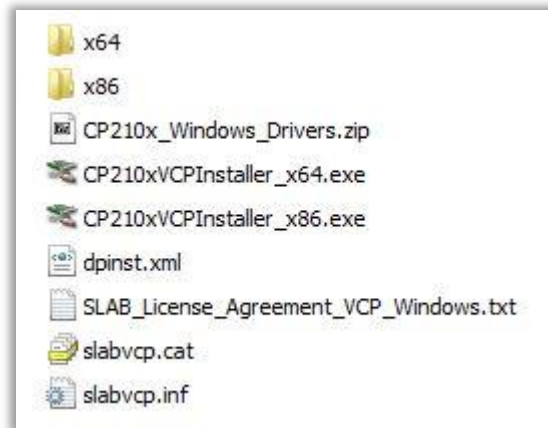
Note

For the latest drivers visit the SILICON LABS website:
www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers

Instruction

1. Open the file `Driver` on your hard drive.
2. To unpack the ZIP file, right-click the file and select `Extract All` and follow the instructions.

NOTE: 7-Zip users select 7-Zip and unpack here.



3. Depending on your system type, run the appropriate EXE file:
 - 64-bit operating system: CP210xVCPInstaller_x64.exe
 - 32-bit operating system: CP210xVCPInstaller_x86.exe

NOTE: To determine your system type press and hold the Windows key and the Pause key.

4. In the first window click Next.
5. Read and accept the license terms and click Next.
6. Click Install.
7. Click Finish.

3.3 Install the Derby Cycle Service Tool

Overview

The Derby Cycle Service Tool does not require an installation program. Simply unpack it on your hard disk and it's ready to go.

Prerequisites

- ✓ The installation files are on your hard drive (see 3.1)

Auxiliaries

- File DerbyCycleServiceTool.zip in folder Software

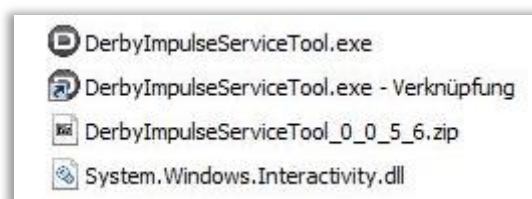
Instruction

1. Open folder Software on your hard disk.
2. Unpack the ZIP file.

Shortcut from desktop

For a quick access you can create a shortcut on your desktop:

3. Right-click the EXE file and select Create shortcut.
4. Drag and drop the shortcut to your desktop.



3.4 Connect the Communication Box

Overview

Before you connect the communication box to your PC, the SiLabs VCP driver must be installed. (see 3.1)

Prerequisites

- ✓ The SiLabs VCP driver is installed.

Auxiliaries

- USB cable

Instruction

- ▶ Connect the communication box with the USB cable directly to your PC.

(A connection via USB hub is not possible.)

⇒ *When connecting for the first time Windows installs the driver automatically. The communication box is ready to use.*

4 Operation

4.1 Start Program

Prerequisites

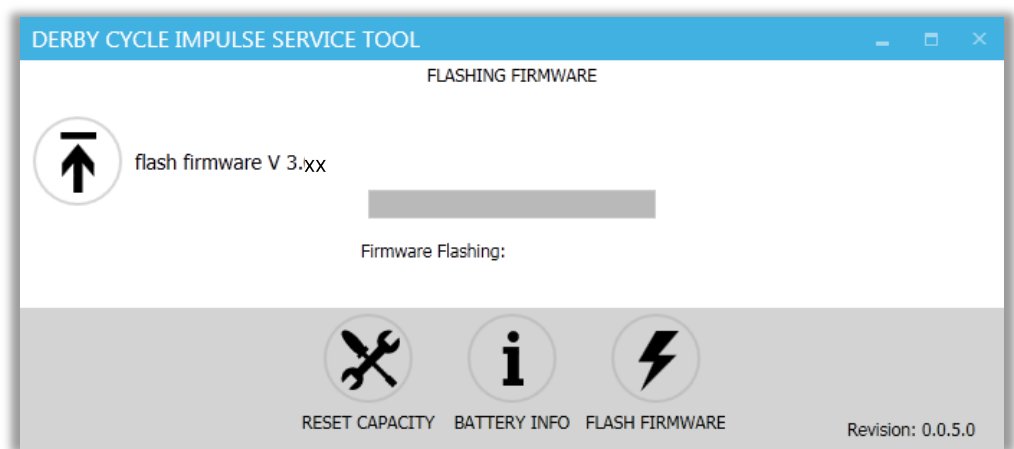
- ✓ The SiLabs VCP driver is installed.
- ✓ The Derby Impulse Service Tool is copied to your PC.
- ✓ The communication box is connected to your PC.

Instruction



1. Open installation folder. (e. g. C:\Programme\Derby Cycle)
2. Open file `DerbyImpulseServiceTool.exe`.
⇒ *The start window opens up.*

Figure 4
Start window



4.2 Read battery information

Overview

In BATTERY INFO you find the following information:

- Firmware Version
- Serial Number
- Cycles
- Design Capacity
- Item Number

NOTE

The item number of some batteries can only be read after a firmware update. (see 4.3). You also find the item number on the battery label.

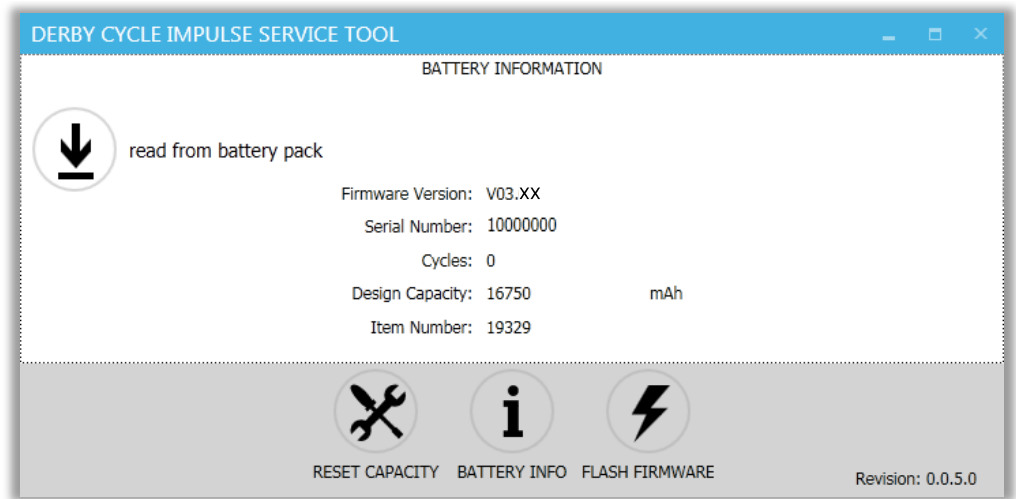
Prerequisites

- ✓ The communication box is connected to your PC.

Instruction

1. Click button BATTERY INFO.
2. Click button read from battery pack.
3. Insert battery into Batterie in die communication box.
4. Click ok.
⇒ *The battery information is displayed.*

Figure 5:
Read information



4.3 Update the Battery's Firmware

Overview

For the best functionality of the battery, make sure that it runs with the latest firmware. In FLASH FIRMWARE you can update the firmware version.

NOTE

Firmware versions older than 2.03 cannot be overwritten.

Check BATTERY INFO for the firmware version and the item number of the battery.

See section 4.2.

Do not disconnect the battery from the communication box during the update.

Prerequisites

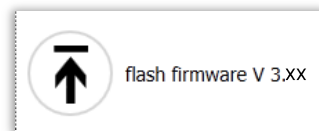
- ✓ The communication box is connected to your PC.
- ✓ Battery's firmware version: 2.03 or higher.
- ✓ Battery capacity min. 50 %

Instruction

1. In the bottom ribbon click FLASH FIRMWARE.

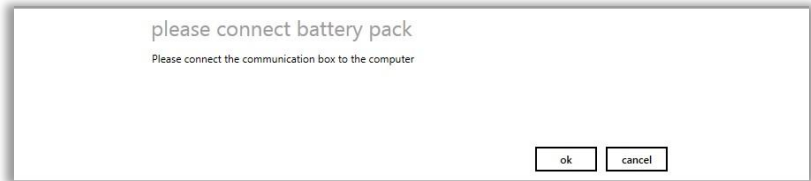


2. On the left side click flash firmware.

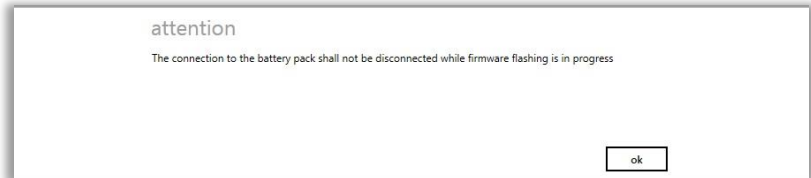


3. When the window please connect battery pack shows up, insert the battery into the communication box. Confirm by

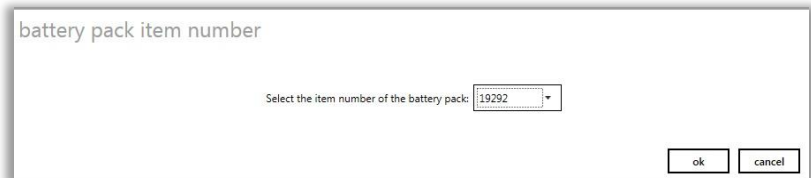
clicking ok.



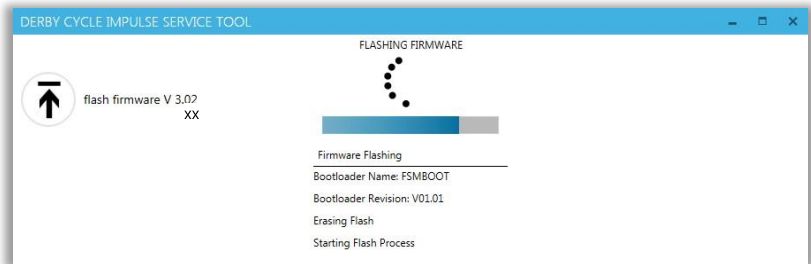
4. Confirm window attention by clicking ok.



5. In the window battery pack item number select the battery's item number (see label.) Confirm by clicking ok.



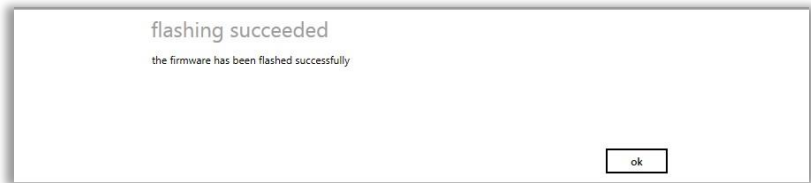
The middle LED flashes during the flash process.



- When the window **press the button** shows up, press the capacity button on the battery. Confirm by clicking **ok**.



- The window **flashing succeeded** confirms a successful update. Confirm by clicking **ok**. The battery can now be disconnected from the communication box.



NOTE

After the update the battery must once be fully charged for a correct display of the capacity.

4.4 Determine the Full Charge Capacity

Overview

Over time the full charge capacity of batteries changes under certain conditions. You can determine the remaining full charge capacity so that the battery shows the correct charge level again.

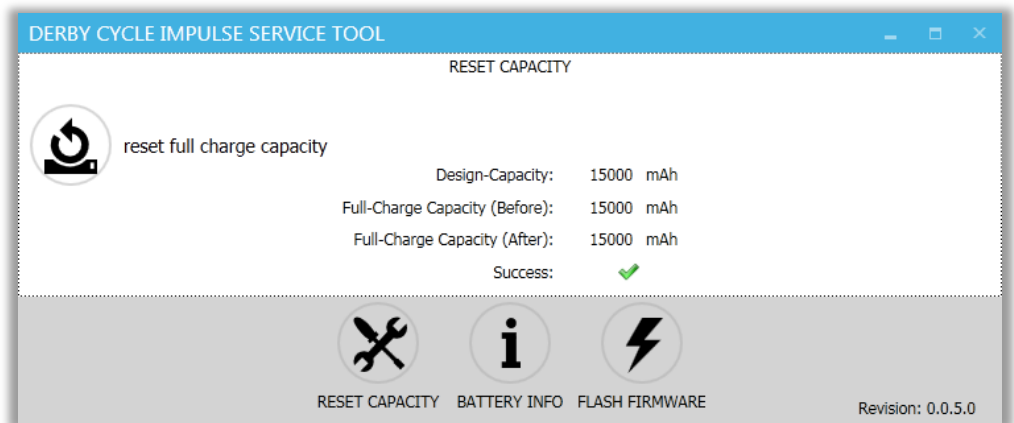
Prerequisites

- ✓ The communication box is connected to your PC.

Instruction

- Click button **RESET CAPACITY**.
- Click button **reset full charge capacity**.
- Insert battery into communication box.
- Klick **ok**.
⇒ *The old and the new full charge capacity are displayed.*

Figure 6:
Determine capacity



4.5 Troubleshooting

Error	Definition	Solution
Error while reading the data		Follow the instructions on screen.
Cannot find battery pack.	No connection to battery.	Check the connection between battery and PC. If necessary, clean contacts.
error while flashing		Check the connection between battery and PC. Wake up the battery by pressing the capacity button.

5 Disposal

The product must not be disposed of in the household waste.

- ▶ Dispose of this product at a collection point for the recycling of electrical and electronic equipment.



By contributing to the proper disposal of this product, you protect the environment and the health of your fellow human beings. Environment and health are endangered by incorrect disposal. Material recycling helps to reduce the consumption of raw materials. For more information on how to recycle this product, contact your local government, municipal waste disposal service or the store where you purchased the product.

6 Other Tables

6.1 Glossary

Term	Definition
user	Individual who uses products
communicatoin box	adapter between PC and e-bike battery

6.2 Tables

Table 1:	Explanation of safety signs	5
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6.3 Figures

Figure 1	Overall view communication box.....	7
Figure 2	Conformity Declaration	8
Figure 3	Label.....	9
Figure 4	Start window	13
Figure 5:	Read information	14
Figure 6:	Determine capacity.....	16



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BMZ GmbH

Am Sportplatz 28-30
63791 Karlstein am Main
Germany
Phone +49 61 88-9956-0
Fax +49 61 88-9956-900
mail@bmz-group.com

Service

centralservice@bmz-group.com

Web

www.bmz-group.com

BMZ Company Ltd.

2nd Building, NO.2 Jinlong Street
Baolong Industry Zone, Longgang
518116 Shenzhen
China
Phone +86 755 89775-800
Fax +86 755 89775-900
sales@bmz-ltd.cn

BMZ USA Inc.

2656 Lishelle Place
Virginia Beach, VA 23452
USA
Phone +1 757 821-8494
Fax +1 757 821-9499
info@bmz-usa.com

BMZ Poland Sp. z o.o.

Ul. Leonarda da Vinci 5
PL-44-109 Gliwice
Poland
Phone +48 32 7842-450
Fax +48 32 7842-451
biuro@bmz-gmbh.de

BMZ France S.A.R.L.

153, Boulevard Haussmann
75008 Paris
France
Phone +33 6 84 52 76 29
jean-marc.brunet@bmz-group.com