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Service Center (Germany)
Monday through Thursday from
8.00 - 18.00 h
Friday from
8.00 - 16.00 h

can be contacted at
Phone (0800) 9096-250
(toll-free, in Germany)



1. Introduction

1.1 Important safety information – please be sure to observe

The e-motion is an add-on drive for wheelchairs. For safety reasons it may only be operated by persons who

- have received instructions on its handling,
- can move and coordinate both hands or arms without major restrictions,
- are physically and mentally able to safely operate the device in all operating situations.

For new units, orientation regarding the device operation is included in the scope of delivery and is provided by arranging an appointment with your specialist dealer. This service is free of charge.

Please contact your specialist dealer also if you are not yet sure about handling the e-motion.

In case of possible technical malfunctions, you may contact your specialist dealer or the Alber Service Center (Phone 0800 9096-250).

When operating the e-motion, you should exactly follow the data specified by the manufacturer of your wheelchair (for example, the maximum slopes, the tire pressure in the wheels, etc.) as well as its general operating instructions. Specifications on limit values must never be exceeded.

The e-motion should first be switched of on safe terrain when starting to use mobile phones or similar devices. Travel near strong electrical interference fields should also be avoided.

The operation of the e-motion may possibly cause disturbances in other facilities, for example, anti-theft barriers in department stores.



Be absolutely sure not to start up the e-motion prior to the device orientation by an authorized specialist dealer!

1.2 Intended use of the e-motion

Wheelchairs with added e-motion wheels are exclusively intended for the transport of persons with walking impairments. No other parts may be added on except the accessories approved by Alber for operation.

The e-motion must be handled under the following prerequisites:

- Observing the specifications, instructions and recommendations of this instruction manual
- The device is handled exclusively by an instruction person
- Neither the user nor third parties have made technical modifications to the device

A person having received orientation is someone who has been instructed on the assigned duties and possible hazards resulting from improper action and who has been introduced into the handling of the e-motion. This is normally the drive of the wheelchair to which the e-motion wheels have been installed.

Instruction is provided by authorized specialist dealership or Ulrich Alber GmbH.

Handling of the e-motion by persons not having received instruction or unsuitable users is explicitly prohibited.

The intended use also includes compliance with this instruction manual's stipulated specifications on performing safety checks as well as observation and compliance with the safety and hazard information on driving operation.

The e-motion may not be used for purpose contradicting the intended use. This applies especially to any type of load transport such as moving general objects of daily use or additional persons.

Escalators and motorized walkways may not be entered with the e-motion.

It is also not permitted to combine the e-motion with accessories not approved by Alber.

Any use contrary to the directions and recommendations of this operating manual or exceeding the technical performance limits defined in these instructions is considered by Alber as misuse of the device.

Alber refuses any liability for resulting damage occurrences.

1.3 Permissible operating conditions/places of use

Observe the instructions on permissible operating conditions in the user manual of your wheelchair to which the e-motion is attached. Any limitations on permissible operating conditions (e.g. maximum climbing capacity, maximum permissible obstacle height, maximum user weight, etc.) must also be observed when operating the e-motion!

The e-motion may be operated only at temperatures between -25°C and $+50^{\circ}\text{C}$.

Avoid travel on non-solid surfaces (e.g. on loose gravel, sand, mud, snow, ice or through deep puddles).

Observe the safety and hazard notes in Chapter 11.

1.4 Standard scope of delivery

- two e-motion wheels
- two battery packs
- two protective covers for the wheel contacts
- two protective covers for the battery contacts
- one mains charger inc. operating instructions
- These operating instructions

The wheelchair must have special brackets for attaching the e-motion. If this is not the case, please contact your specialist dealer directly or one of the Alber factory representatives.

1.5 Optional accessories

- Rechargeable battery pack / spare battery
- Anti-tippers for the wheelchair
- Remote control
- Bracket for remote control
- Spoke cover

We recommend using only original Alber accessories.

The e-motion is designed to yield superb performance when using with original Alber accessories. Alber is not liable for damages on the product or accidents (e.g. fires, etc.) caused by a malfunction of non-original accessories or spare parts (e.g. leakage or explosion of a battery pack). The warranty does not cover any repair required due to a malfunction of non-original accessories. However, you may commission repairs on a chargeable basis.

USA / Canada

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1.6 Specifications

Range:	25 km per ISO 7176 - 4
Max. speed:	6 km/h
Drive power:	2 x 60 W
Motor voltage:	24 V
Operating temperature:	-25 °C - +50 °C

Battery pack

Battery type:	Lithium-Ions
Nominal operating voltage:	25.2 V
Charge temperature:	0 °C - 40 °C

Weight of the individual parts

Wheel:	9.2 kg
Battery pack:	1.3 kg
Battery charger:	0.8 kg
Overall weight:	21.0 kg
Range:	25 km per ISO 7176 - 4

(*) The range varies depending on the terrain traversed and the prevailing driving conditions. The stated range can be achieved if driving conditions are optimal (even terrain, freshly charged batteries, ambient temperature of 20 °C, even travel, etc.).



The e-motion complies with the EC directive for medical products 93/42/EEC.

We reserve the right to make alterations to the technology and design as part of ongoing further developments.

Battery charger

Please refer to the technical notes and instructions in the manual accompanying the charger.

1.7 The most important elements at a glance

(Please unfold the general drawing contained in the envelope)

Wheel

LED display	1
Rubber cover of the charger socket	2
Charger socket	3
Lock of the stub axle	4
On/Off button	5
Handle area	6
Fins (rear of wheel)	7
Stub shaft	8
Push rim	9
Battery contacts (inside of wheel hub)	10

Protective cover for battery contacts

Cover	18
Locking pin of the cover	19

Remote control (optional)

Info button	20
Display	21
Button 2	22
Button 1	23
Button 0	24
Reset button	25

Battery pack

Battery pack locking pin	11
Battery pack	12
Protective cover for battery contacts	13
Burls of plastic cover	14

Battery charger

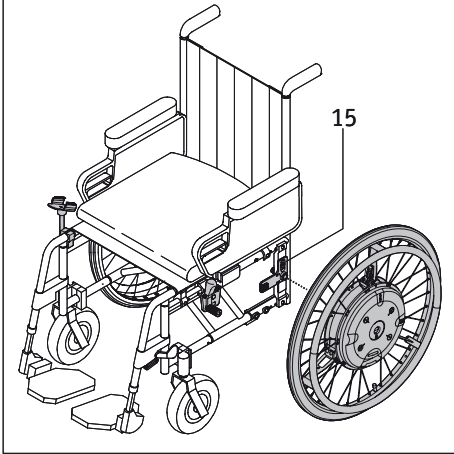
Housing	26
Charger plug	27

Wheelchair (not included in scope of delivery)

Bracket with wheel receiver	15
Parking brake of wheelchair	16
Bracket for remote control (optional)	17

Anti-tippers (optional)

Quickpin	28
Receiver fork of bracket	29
Holding rod	30
Clamping piece	31



2. Start-up

The e-motion wheels and, if applicable, the accessories you ordered are mounted to your wheelchair by Alber or your specialist dealer and delivered to you ready for operation. Both sides of your wheelchair are therefore equipped with new brackets [15] with wheel receivers into which the two e-motion wheels are inserted (see Chapter 2.1). The manual wheelchair wheels which you have previously used are also returned to you for possible future use. When the e-motion is delivered to you, your specialist dealer will instruct you about the operation of the system and the accessories you may have ordered. He will also hand the operating instructions to you which contain important information on driving, in addition to the technical information.



The brackets [15] may only be mounted to the wheelchair by Alber or a specialist dealers authorized by Alber.



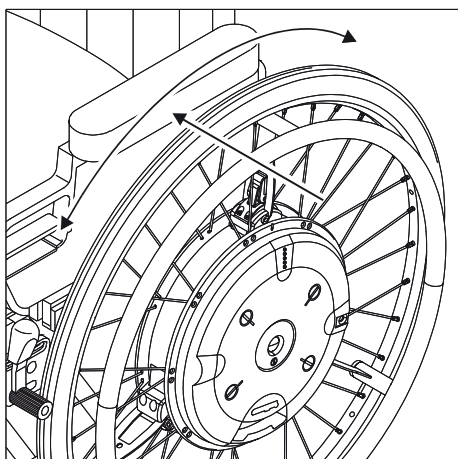
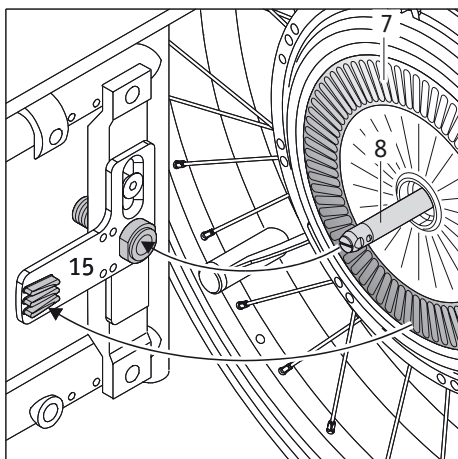
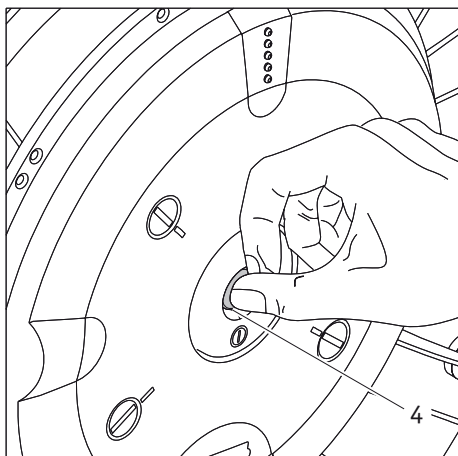
Check at regular intervals to make sure that the brackets [15] are still screwed securely to the wheelchair. If these screw connections have become loose or have even unscrewed, please have them retightened by an authorized specialist dealership.



Alber manufactures brackets in different designs, for example, as a complete single part or made up of separate parts. For this reason, graphic representations in this operating manual may differ from the bracket mounted to your wheelchair.



Drive characteristics and power assistance can be programmed into the device's electronics system (see Chapter 6). Standard parameters are set at the factory and they can be adjusted to your preferences. Please contact your authorized specialist dealer in this regard.



2.1 Mounting the wheels

Different driving parameters can be assigned to each e-motion wheel. It is therefore absolutely necessary to always mount the two e-motion wheels according to their identification on the left and right side of your wheelchair, respectively!

Technically, the stub axles [8] of the e-motion wheels are similar to the stub axles of your previously used manual wheelchair wheels. In so far, you may mount the e-motion wheels to your wheelchair as you are used to.

- Unless already done, place the battery pack [12] into the wheel hub and lock it with the same (see Chapter 4.6).
- Push on the locking mechanism [4] located in the center of the wheel hub and at the same time push the stub axle [8] of the e-motion wheel into the wheel receivers [15] on the wheelchair.
- You may possibly need to turn the e-motion wheel a few millimetres around its axis to allow the fins [7] located at the rear of the wheel to engage with the torque receiver.
- Check if the e-motion wheel can be pulled out of the wheel receiver [15] without pushing the lock [4]. If this is the case, the e-motion wheel is not seated correctly in the wheel receiver [15] and must be reintroduced into the wheel receiver [15] as described above.
- Attach the second e-motion wheel on the other side of the wheelchair.

These few steps complete the mounting of the e-motion wheels on your wheelchair.



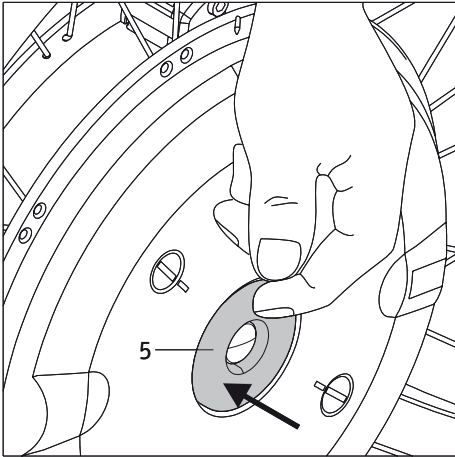
Driving is only permitted with e-motion wheels that are correctly engaged in the wheel receiver [15].



Check the functionality of your wheelchair brakes [16] before each drive. They must be adjusted correctly to the e-motion wheels and able to prevent the unintentional rolling away of the wheelchair at any time.



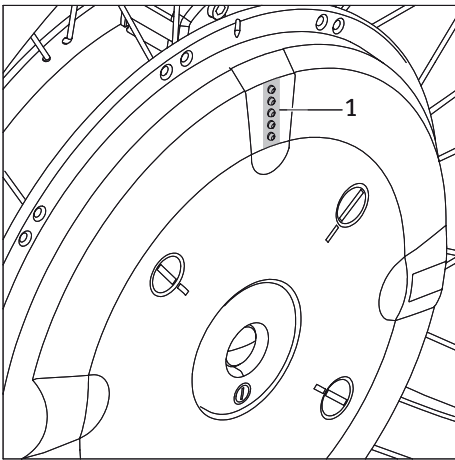
Therefore always mount the e-motion wheels according to their identification on the left and right side of your wheelchair, respectively.



2.2 Switching on the wheels on the wheel hub

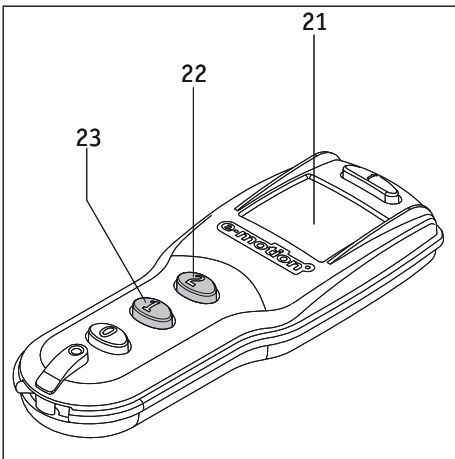
You can now switch on the system if the two e-motion wheels were correctly mounted to your wheelchair as described in Chapter 2.1.

- Push the On/Off buttons [5], located in the wheel hub, for approximately one second.
- **e-motion with remote control (optional):**
Depending on the power stage used last (refer to chapter 6), an acoustic signal sounds (one signal tone for power stage 1, two signal tones for power stage 2).
- **e-motion with remote control (optional):**
A signal tone sounds.
- All five LEDs [1] of the display light up briefly and then change to the display status for the charge status of the battery pack (see Chapter 5.1).
- The wheel is operational after approx. 2 - 3 seconds and you can start driving. Please note the instructions in Chapters 3 and 11.



Note

If the switched on wheels are not used, they switch off automatically after a predefined period (refer to the information in Chapter 7).



2.3 Switching on the wheels with the remote control (optional)

Instead of activating the wheels via the On/Off switch [5] in the wheel hub, they can also be switched on via the optionally available remote control.

- When pushing button 1 [23], both wheels are switched on in power stage 1 and one signal tone each sounds on the wheels.
- When pushing button 2 [22], both wheels are switched on in power stage 2 and two signal tones each sounds on the wheels.
-

After the wheels have been switched on, the charge status of the two battery packs and the selected power stage are indicated on the display [21].

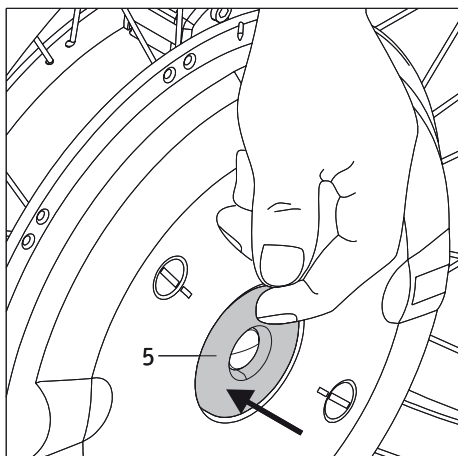
Please refer to Chapter 9 for a detailed description of this and other functions, displays and possible error messages.



A fault is present if no or more than 2 signal tones sound when switching on the wheels. Refer to Chapters 5.3 or 9.4.



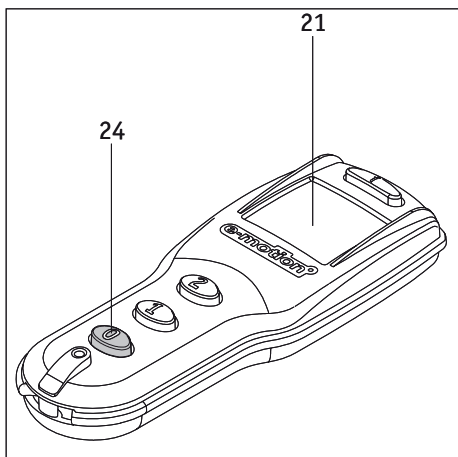
For e-motion systems without remote control we recommend switching on the wheels one after the other and not at the same time. Activating the wheels at the same time may cause you not to hear possible warning signals (see Chapter 5.3) or allocating them to the wrong wheel.



2.4 Switching off the wheels on the wheel hub

After you are done driving, you should always switch off the two e-motion wheels and pull the parking brakes on the wheelchair. This does not save the energy of the two battery packs but also prevents a possibly inadvertent rolling away of your wheelchair.

- Push the On/Off buttons [5], located in the wheel hub, for approximately one second.
- To confirm the switch-off, an acoustic signal (1 beep) sounds on each wheel.
- The LED [1] on the wheels goes off.
- Secure your wheelchair against unintentional rolled away by pulling the parking brakes of the wheelchair.



2.5 Switching off the wheels with the remote control (optional)

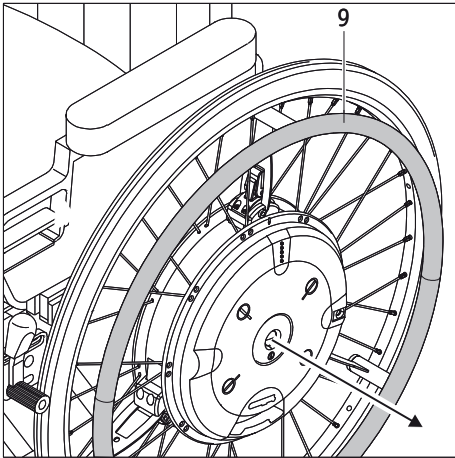
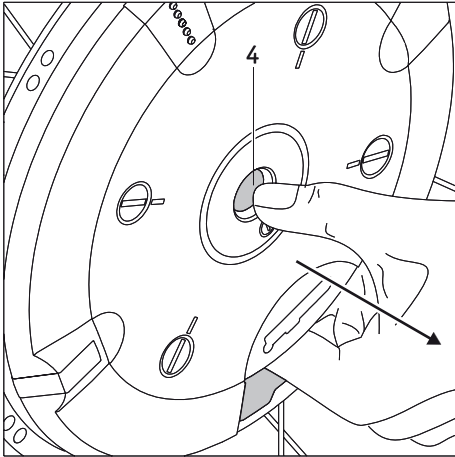
Please proceed as follows if you are switching off the wheels with the optional remote control:

- Push the "0" [24] button; both wheels are switched off at the same time.
- To confirm the switch-off, an acoustic signal (1 beep) sounds on each wheel.
- The LED [1] on the wheels goes off.
- The display (21) goes off after approx. 5 seconds.
- Secure your wheelchair against unintentional rolled away by pulling the parking brakes of the wheelchair.

Please refer to Chapter 9 for a detailed description of this and other functions, displays and possible error messages.



The e-motion wheels are not equipped with built-in brakes. It is therefore absolutely necessary to adjust the brakes installed on your wheelchair to the e-motion wheels to be able to protect the wheelchair from at any time from unintentionally rolling away. Please contact your specialist dealer in this regard.



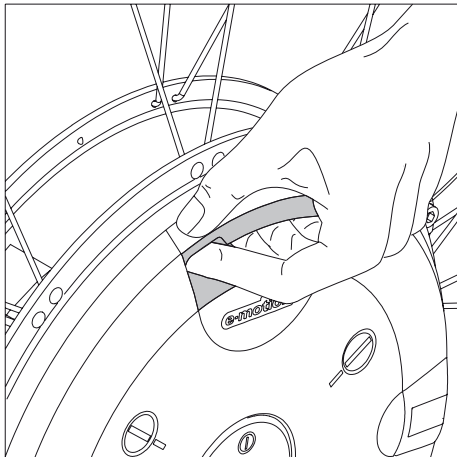
2.6 Removing the wheels

The e-motion wheels will usually remain on your wheelchair. If they need to be removed (for example to facilitate transport), then please proceed as follows:

- Switch off the e-motion wheels if not yet done (see Chapter 2.4).
- **When using Alber anti-tippers:**
Lift your wheelchair as described in Chapter 10.2 and operated the anti-tippers.
 - Reach with the fingers into the opening between wheel hub and battery pack as shown in the graphic.
 - Push on the locking mechanism [4] located in the center of the wheel hub and pull the e-motion wheel with care off the wheelchair.
 - Once both wheels have been removed, you can return the anti-tippers to the original position as described in Chapter 10.2.
- **Without Alber anti-tippers:**
Lift the wheelchair by its push handles.
 - Reach with the fingers into the opening between wheel hub and battery pack as shown in the graphic illustration.
 - Push on the locking mechanism [4] located in the center of the wheel hub and pull the e-motion wheel with care off the wheelchair.



When removing an e-motion wheel, never pull on its push rims [9]. This could damage the sensors attached to them.



2.7 Transport and storage of the wheels

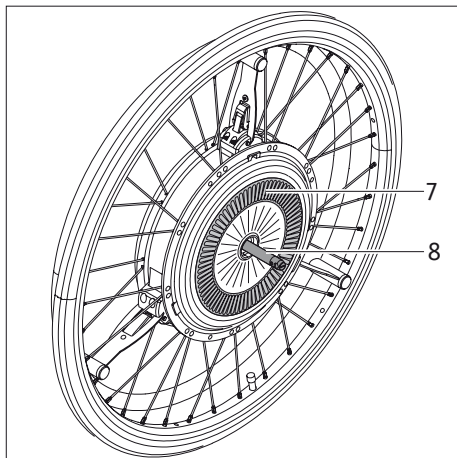
Never lift or hold the e-motion wheels by the push rims [9] when transporting the wheels. This could damage the sensors attached to them.

Instead, reach into the opening between the battery pack and wheel hub as shown in the graphic illustration or carry the e-motion wheel by its rim. There is no risk of damaging the wheel at these points.

Pay special attention to the fins [7] and the stub axle [8] on the rear of the wheel when putting or placing down the wheel. Both parts may not be damaged.

The specifications of the respective wheelchair manufacturer regarding the securing of the complete wheelchair and/or its individual parts apply for transport.

We recommend removing the e-motion wheels from the wheelchair and transporting them individually.

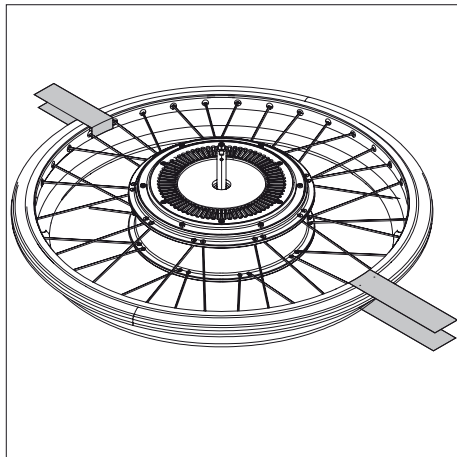


During transport, the wheels must be secured against flying about in all cases, so that they cannot lead to danger for the occupants during a braking maneuver. To secure the wheels, we suggest (we do not assume any liability for this recommendation) fastening them in the vehicle with sufficiently strong fabric straps as shown in the graphic illustration.

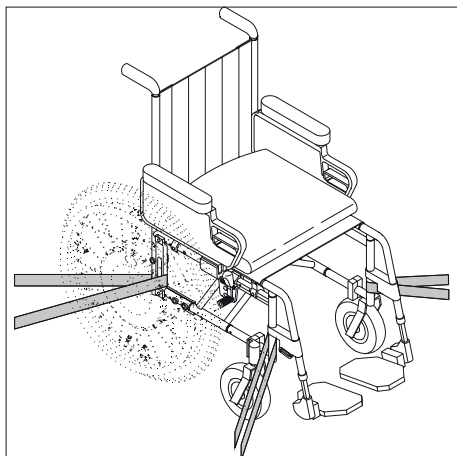
If there are national regulations regarding the securing of wheelchairs and wheels in your country, these have priority and must be observed.

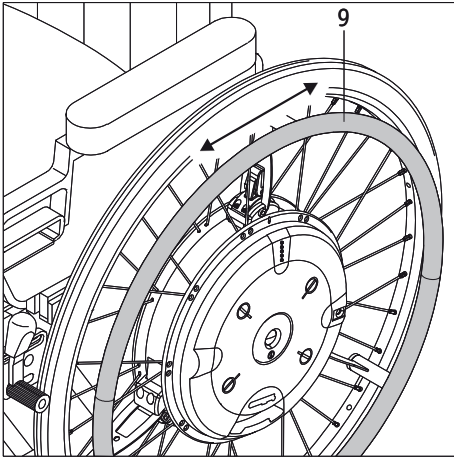
In regard to dangerous traffic situations or, more precisely, in regard to an accident, sitting in the wheelchair during transport is strictly forbidden.

The national legal regulations apply in all cases.



Ulrich Alber GmbH and its representatives reject any liability for accidents of any type and their consequences, which come about as a result of the non-observance of these notes.





3. General safety instructions for driving with the e-motion

The operation of the e-motion wheels is analogous to the manual wheels you have used so far. This means that you can move your wheelchair with the push rims [9] as used to, however, the power assistance of the e-motion must be taken into account (see also Chapter 6).

It is therefore recommended to first conduct some training on driving after receiving the e-motion. This will help you to thoroughly familiarize yourself with the drive and its features.

- Make sure that the parking brakes [16] of your wheelchair were adjusted to the e-motion wheels thereby preventing unintentional rolling away. If this has not been done, contact the speciality dealership authorized by Alber and have the brakes readjusted.

e-motion with remote control (optional):

- First select power stage 1 for the initial driving attempts. Switch only to power stage 2 after you have familiarized yourself with the power assistance of the drive.

e-motion without remote control:

- Start your first driving attempts with special care and begin your training on level surfaces.
- Carry out your driving training in areas without obstacles.
- Before driving the e-motion on slopes or hills, you should be able to safely master handling the device on flat terrain.
- Always adjust your speed to the circumstances to be able, e.g. to safely circumvent obstacles that may suddenly occur or to stop your wheelchair.
- Always drive up slopes with full battery packs.
Although the wheels continue to run when the battery packs are empty, the power assistance for the rolling motion and especially the braking maneuver is no longer available!
- Special care must be exercised when driving down slopes of any kind.
When descending them with fully charged battery packs and at high speed, this can lead to a forced shut-down of the e-motion due to overvoltage. Although the wheels continue to run, the power assistance for the braking process is no longer available!
For this reason, drive down slopes in such cases at a low speed. This is generally always advisable to be able to circumvent suddenly occurring obstacles or to bring the wheelchair to a stop.
- Observe the information, safety and hazard notes of your wheelchair manufacturer. They apply also for driving with the e-motion.



Caution when driving on downhill slopes with fully charged battery packs!

The system may shut down automatically at fully charged battery packs and at high speed. Reduce your speed for this reason.



Overcome obstacles (e.g. curbs) only while driving backward, if possible. The maximum permitted height of the obstacle is thereby 50 mm.

Attention! When driving over obstacles in reverse, the full functionality of the Alber anti-tippers is not guaranteed! Therefore, drive slowly and carefully in reverse until the wheels of your e-motion touch the obstacle. Then, carefully drive over the obstacle. We recommend the assistance of an accompanying person.



Observe the safety and hazard notes in Chapter 11!

4. Battery pack

4.1 Safety instructions on charging the battery pack

The battery packs [12] always remain in the wheel hubs of the e-motion wheels and should be removed only in case of air transport or for service situations. The charge process takes only place directly on the wheels which do not have to be removed from the wheelchair for this purpose. Principally, both battery packs should always be recharged at the same time; the charger is therefore equipped with two charger cables.

Read and follow all instructions and warning information included with the charger before starting with the charging process and pay attention to the following warning notes.

Wheelchair

Switch off both wheels before beginning with the charge process and secure the wheelchair with its mechanical brakes against rolling away unintentionally.

Battery charger

- Only use the supplied Alber charger to charge the e-motion battery pack. This switches off automatically as soon as the battery pack is charged up. For this reason, overloading is not possible.
- Do not charge any other battery packs with the charger except those delivered.
- When the e-motion wheels are not used for some time (more than 1 day), the charger must first be disconnected from the line supply socket and then from the battery pack.
- Never use a charger not supplied by Alber.
- Never subject the charger to humidity (water, rain water, snow) during the charge process.
- Caution with condensation. If the charging device is brought from a cold room into a warm room, condensation can form. Wait using the charger in this case until the condensate has evaporated. This may take several hours.
- Never carry out the charging process in rooms where humidity may settle on the charger.
- Never carry the charger on the power cable or the charger cables.
- Never pull on the power cable to remove the charger from the socket.
- Route the power cable and the attached two charger cables to prevent persons from stepping on them or tripping over them and to keep them from being exposed to damaging impacts or stresses.
- Do not operate the charger if the power cable, one or both charger cables or the plugs attached to them are damaged. Damaged parts must be replaced without delay by the specialist dealership authorized by Alber.
- Never use or dismantle the charger if it has incurred a hard blow, was dropped or damaged otherwise. Bring the damaged charger for repair to a specialist dealer authorized by Alber.
- The charger may not be used by small children.
- The charger may only be operated at 100 V - 240 V AC.
- Do not disassemble or modify the charger.
- Do not cover the charger during the charging process and do not place any objects on top of the device.
- Place the charger securely in a vertical position on a level surface.
- Do not expose the cable and the plug to any pressure. Excessive stretching or bending the cable, pinching the cable between a wall and a window frame or placing heavy objects on the cable or the plug may cause electrical shock or fire.
- Never shorten the two poles with metallic objects.
- Do not expose the cable and the plug to any pressure. Pinching the cable between a wall and a window frame or placing heavy objects on the cable or the plug may cause electrical shock or fire.
- Make sure that the plug is firmly plugged into the socket.
- Do not touch the plug with wet hands.
- Do not use the plug of the charger and/or the plug of the power cable if they are wet or soiled. Clean them with a dry cloth before plugging them into the socket.
- The charger may not be used any more when damaged.
- After the charge procedure is completed, first pull the plug of the charger from the socket and then the charger plug from the e-motion wheels.
- Do not plug the charger plug into the charge socket while the battery has been removed.

Battery pack

- Only the battery packs supplied by Alber may be used for the operation of the e-motion wheels. Other battery types may burst and cause injuries or property damages.
- Never charge the batteries in the presence or vicinity of flammable liquids or gasses.
- Keep the battery pack away from fire.
- Never subject the wheels with the battery packs in them to humidity (water, rain water, snow) during the charge process.
- In the (unlikely) event of overheating or fire of the battery pack it must not come into contact with water or any other liquids at any rate. The battery manufacturers recommend sand as the only useful means to extinguish the fire.
- Never carry out the charging process in rooms where humidity may settle on the wheels with the battery packs in them.
- Never charge the battery packs at temperatures below 0 °C or over 40 °C.
- When attempting to charge the batteries outside of this temperature range, the automatic mechanism of the e-motion wheel cuts off the charge process automatically.
- Your e-motion uses power each time it is used. You should never run the battery pack completely empty since this may damage it over time. We recommend recharging the battery pack after each use if possible.
- Only use the Alber charger supplied with the e-motion to charge the battery pack. This switches off automatically as soon as the battery pack is charged up. For this reason, overloading is not possible.
- When the e-motion wheels are not used for some time (more than 1 day), the charger must first be disconnected from the line supply socket and then from the battery pack.
- Use the battery packs only for the purposes outlined in these operating instructions.
- Do not disassemble or modify the battery pack.
- Never shorten the poles of the battery pack with metallic objects.
- Never shorten the poles with metallic objects.
- Do not submerge the battery pack in water. This could cause irreparable damages.
- Attach the protective cover for the battery contacts [13] as soon as you have removed it from the wheel.
- The service life of a battery pack also depends on its storage location. Therefore do not leave the battery pack at hot locations for long periods (regardless whether it is installed in the wheel hub or has been removed from it). Especially the trunks/boots of passenger cars parked in the sun should be used only for transport but not for general storage.

Wheel

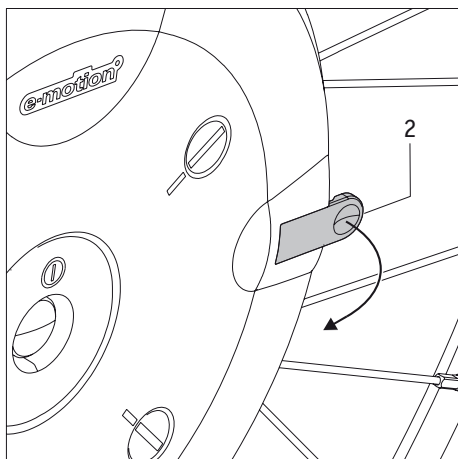
The orientation of the sensors is checked during the charge process; for this reason, neither compression nor tensile forces may be exerted on the push rim during this time. Make sure during each charge process that both push rims are free from any load or weight.

If the push rims were accidentally exposed to any forces during the charge process and the sensor orientation was therefore misadjusted, please proceed as follows:

- Make sure that the push rim is not exposed to any loads, that is, neither to tensile or compression forces.
- Carry out the charge process once more for approx. 10 minutes; this will readjust the sensors.
- Complete the charge process.

The correct charging process on the e-motion wheels is described below.

Carry out the charging process only according to these instructions!



4.2 Charging the battery pack

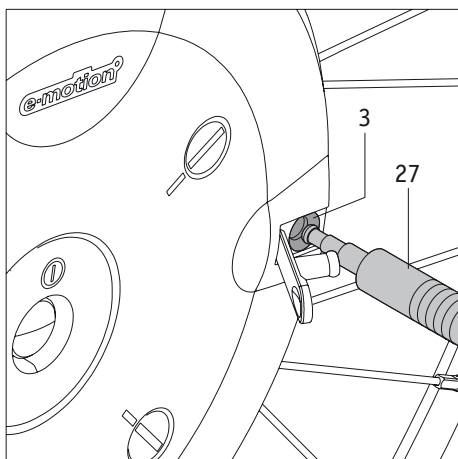
- Open the rubber cover [2] attached on the wheel hub above the charge socket [3].
- Push the charger plug [27] into the charger socket [3].
- Push the power cable of the charger only now into an outlet.
- Depending on the remaining capacity in the batteries, one or several LEDs on the wheel come on (see also Chapter 5.1).
- All five LEDs come on if the battery pack is fully charged.
- Pull the power plug of the charger from the socket.
- Pull the charger plug [27] only now from the charger socket [3].
- Close the charger socket [3] again with the rubber cover [2].



When the e-motion wheels are not used for some time (more than 1 day), the charger must first be disconnected from the line supply socket and then from the battery pack.

Always check the charge status of the battery packs each time you prepare to drive. They should be fully charged before beginning to drive.

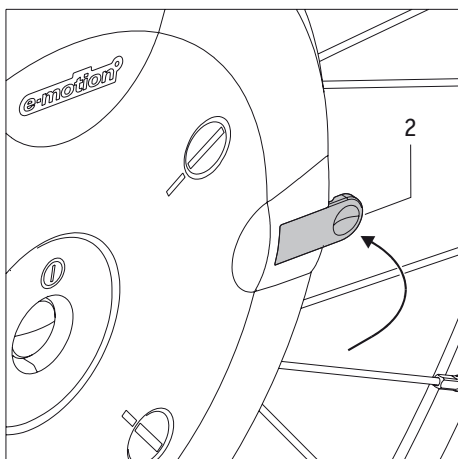
Please follow also the notes and instructions in the manual accompanying the charger.



The e-motion wheel shuts off automatically if the charger plug [27] is pulled from the charger socket [3].



If a fault occurs during the charging process, all 5 LEDs flash at the same time.

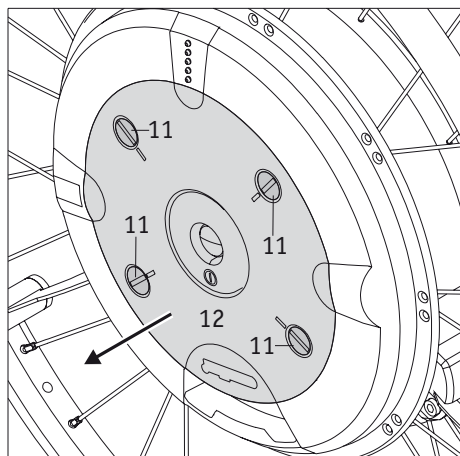


If the e-motion wheels have been left attached to the wheelchair during charging, switch off both wheels before beginning with the charge process and secure the wheelchair with its mechanical brakes against rolling away unintentionally.

If you disregard this and the wheels roll away during the charging process, an acoustic warning signal sounds (several beeps) to alert you to this critical safety condition.



Remove the rubber covers [2] only to charge the battery pack. Attach the rubber covers [2] again to the wheel hub after the charging process is completed.



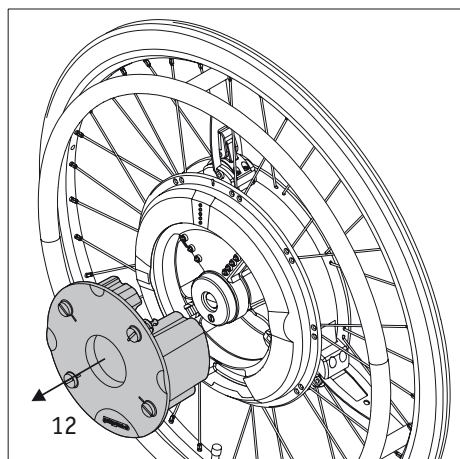
4.3 Removal and protection of the battery pack

We once more point out that the battery pack always remains in the wheel hub of the e-motion wheel and should be removed only in case of air transport or for service situations. Please proceed as follows in this case:

- Loosen the 4 locking pins [11] using a coin.
- After loosening the last locking pin, the battery pack [12] jumps slightly out of the wheel hub.
- Remove the battery pack [12] from the wheel hub.

On the bottom of the battery pack:

- Immediately after removing the battery pack, place the round side of the protective cover [13] in the center of the battery pack housing [12] as shown in the graphic illustration and firmly push it in place.
- Push the burls [14] of the protective cover into the openings on the bottom of the battery pack housing and push them in place.
- The protective cover [13] and its burls [14] must be connected firmly enough with the battery pack housing so that they cannot become detached from it on their own.

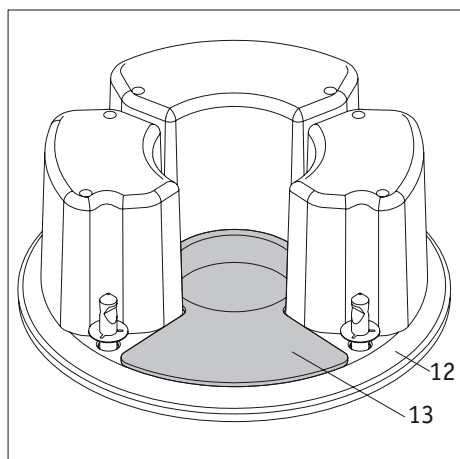
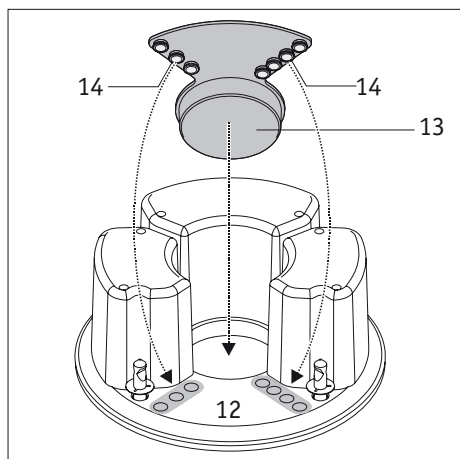


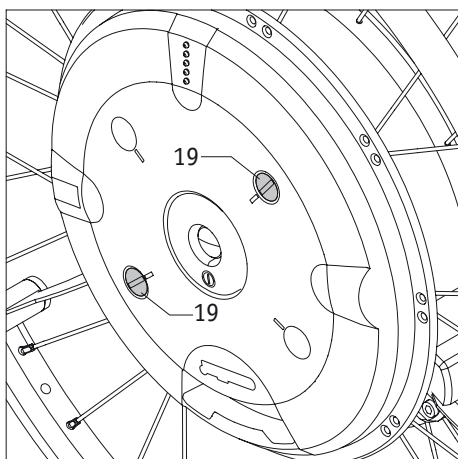
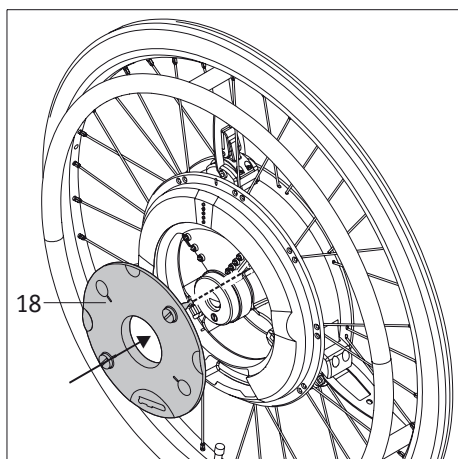
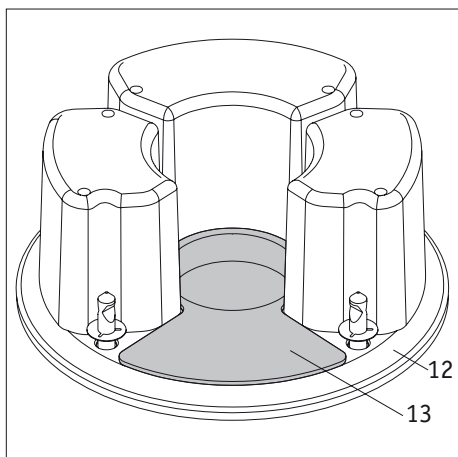
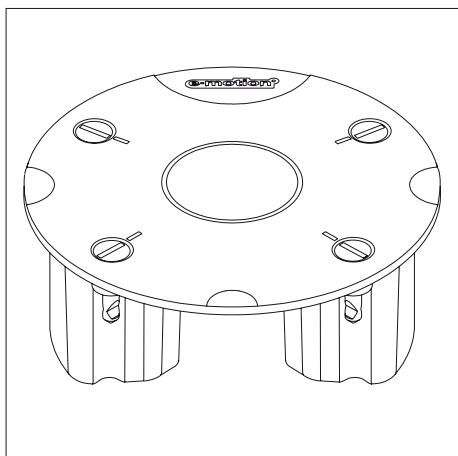
Protect the battery pack immediately after removing it from the e-motion wheel. Neither humidity nor foreign objects (e.g. metal shavings, small nails or other conducting metals) may enter the openings on the battery pack.



The battery pack must normally only be removed from an e-motion wheel in case of air transport. Status of current knowledge (as of June 2008):

The wheels are transported in the cargo compartment of the plane, the two battery packs are to be carried as hand luggage in the passenger cabin. However, make sure to contact the respective airline carrier on the applicable regulations in this matter before commencing your journey and also on the legal applicable regulations in your country of origin or your vacation destination in regard to the air transport of batteries and rechargeable lithium-ion batteries.





4.4 Storage and transport of the battery packs removed from the wheel

Never subject the battery pack to humidity (water, rain water, snow, etc.)!

Information regarding storage:

- The battery pack removed from the wheel should always be stored upright as shown in the graphic illustration and inaccessible to children.
- Charge the battery pack before long-term storage and check the charge status every 3 months.
- Store the battery pack at a cool and dry location where it is protected from damage and unauthorized access.

Information regarding transport:

- The battery pack should generally be transported in the original package (therefore keep the carton).
- The battery pack may remain in the wheel with all types of transport except air transport. This must be clarified with the respective airline when transporting the battery pack by plane (see note in Chapter 4.3).
- Contact your specialist dealer or the Alber Service Center for clarification prior to shipping or transporting a damaged battery pack.

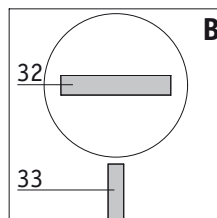
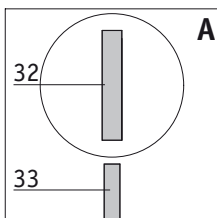


The battery pack [12] removed from the wheel may only be stored or transported with the protective cover [13] in place. Transport or storage without the protective cover in place [13] is not permitted.

4.5 Protection of the wheel with the battery pack removed

After you have removed the battery pack and secured it as described in Chapter 4.3, in the next step you must protect the wheel against dirt and damage as follows:

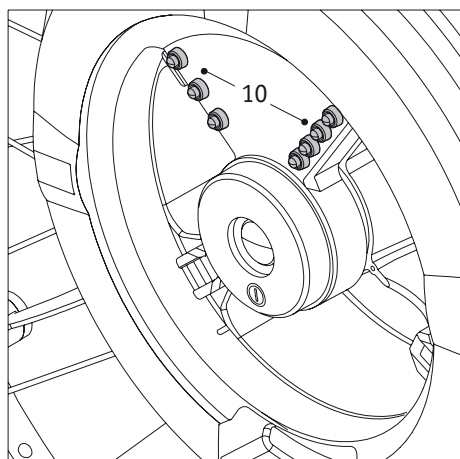
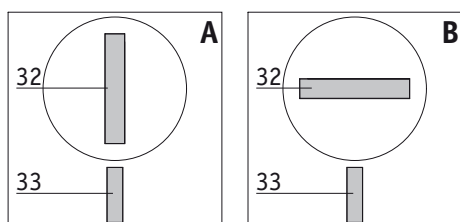
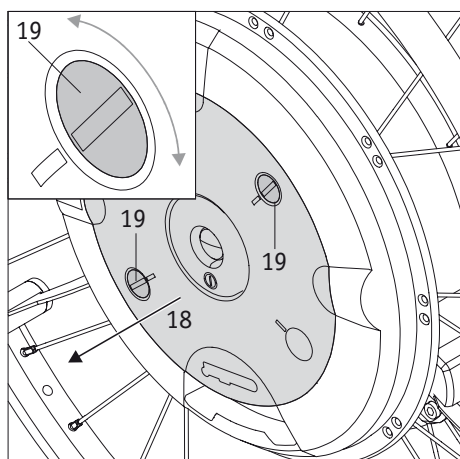
- Remove the cover [18] and push it slightly into the wheel hub in place of the battery pack as shown in the graphic illustration.
- Insert a coin into the slot [32] of one of the two locking pins [19].
- Push the locking pin [19] inside and rotate it by 90 degrees.
- Repeat the procedure with the second locking pin [19].
- The cover [18] has only been correctly inserted into the wheel hub if it does not protrude beyond it at any point.
- The cover [18] is only correctly secured in the wheel hub if its marks [33] and the slots [32] of the locking pins [19] are properly aligned (refer to the following graphic illustration).



**A=Locking pin locked
B=Locking pin released**



Protect the wheel immediately after removing the battery pack. Neither humidity nor foreign objects (e.g. metal shavings, small nails or other conducting metals) may enter the wheel hub.

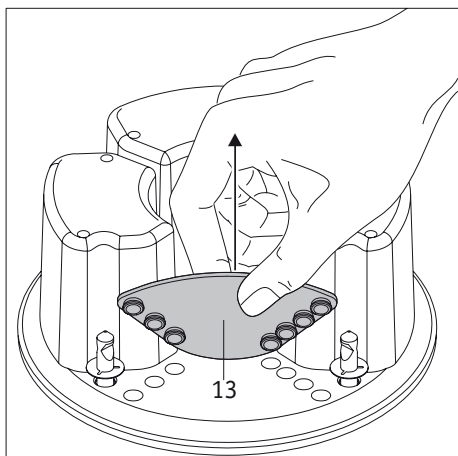


4.6 Inserting the battery pack

Carry out the following steps if you want to insert a battery pack again in the wheel hub:

Wheel

- Insert a coin into the slot [32] of one of the two locking pins [19].
- Push the locking pin [19] slightly toward the inside and turn it by approx. 90 degrees until the slot [32] and the marks [33] of the cover [18] are properly aligned (refer to the graphic illustration). This releases the locking pin and it jumps out slightly.
The graphical illustration explains:
A= locking pin locked
B= locking pin released
- Repeat the procedure with the second locking pin.
- Remove the cover [18] from the wheel hub and store it for future transports of the wheel.
- Check if moisture is present inside the wheel hub. Dry wet spots immediately with a clean, dry cloth.
- Check if dirt or foreign objects (especially metal shavings, small nails or other conducting metals) are present inside the wheel hub and remove them.
- Dry and clean especially the battery contacts [10] inside the wheel hub if necessary.



Battery pack

- Pull the protective cover [13] off the bottom of the battery pack. Keep the protective cover [13] for further transports.
- Take the battery pack [12] and push it into the wheel hub.
- Push the four locking pins [11] one after the other slightly to the inside and rotate them by 90 degrees.
- The battery pack [12] has only been correctly inserted into the wheel hub if it does not protrude beyond it at any point.
- The cover [12] is only correctly secured in the wheel hub if its marks [33] and the slots [32] of the locking pins [11] are properly aligned (refer to the graphic illustration).

The graphical illustration explains:

A= locking pin locked

B= locking pin released

Your e-motion wheel is now completely ready for the next ride.



Insert the battery pack only into the wheel hub if both are clean and dry. Both parts may never be joined in case of dirt and moisture. Observe the notes in on cleaning in Chapter 12.1.

