

B400



Packmaß /
Folding size



Bedienpult /
Control Panel



Detail Felge /
Detail Rim

Otto Bock®

QUALITY FOR LIFE



CE

DE Gebrauchsanweisung

EN Instructions for Use

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1 General Information

INFORMATION

The present Instructions for Use can be viewed at www.ottobock.com and downloaded from there. It is possible to increase the display size of the PDF document stored there.

For other questions concerning the Instructions for Use please contact the specialist who delivered the product to you.

1.1 Foreword

These instructions for use provide the user as well as his or her attendants with all the required knowledge on the design, function, operation and maintenance of the B400 power wheelchair from Otto Bock Mobility Solutions GmbH. The instructions contain all the information that is needed to use the power wheelchair safely, to determine the possible causes of a malfunction and to help eliminate it.

Knowledge of these instructions for use is absolutely necessary for ensuring that the power wheelchair is used safely. Therefore, the user and his or her attendants must read the instructions for use thoroughly, especially the section on

“Safety”, before using the power wheelchair. This will ensure the complete utilisation of all the features of the power wheelchair.

1.2 Intended Use

The B400 power wheelchair is designed for individual mobility indoors and outdoors. It is intended solely for people who are unable to walk or who have a walking impediment. The power wheelchair may only be combined with the options mentioned in these instructions for use and vice versa. Otto Bock assumes no liability for combinations with medical products and/or accessories from other manufacturers outside of the modular system.

Any other use is considered improper use. The manufacturer is not liable for any personal injury or damage to property resulting from improper use; in such cases, the user has sole liability.

The B400 may only be used by persons trained to use it. Training users and attendants to use the power wheelchair are required for protecting persons from danger and for ensuring that the B400 is operated safely and correctly.

The operational safety of the B400 can only be ensured if it is used properly in accordance with the information contained in these instructions for use. The user is ultimately responsible for accident-free operation.

1.3 Field of Application

The versatility of this power wheelchair and its modular design make it suitable for patients who have walking impediments or walking disabilities due to:

- Palsies/paralyses
- Loss of limbs (lower limb amputation)
- Defective or deformed limbs
- Joint contractures or defects
- Other diseases

The B400 was specially designed for users who are able to move independently in such a power wheelchair.

Fitting considerations:

- Body size and body weight
(max. load capacity 140 kg / 309 lbs)
- Physical and psychological limitations
- Age of the patient
- Home conditions
- Environment

1.4 Service

INFORMATION

Service and repairs on the power wheelchair must only be carried out by specialist dealers with personnel authorised and trained by Otto Bock. Should any problems arise, please contact your power wheelchair supplier.

Should you have any questions or a problem that cannot be resolved despite using the instructions for use, please contact Otto Bock Customer Service (see inside cover for address).

Otto Bock endeavours to support customers in all respects in order to keep them satisfied with their product for a long time.

2 Safety

2.1 Explanation of Symbols

WARNING

Warnings regarding possible risks of severe accident or injury.

CAUTION

Warnings regarding possible risks of accident or injury.

NOTICE

Warnings regarding possible technical damage.

INFORMATION

Information regarding operation. Information for service personnel.

2.2 Standards and Directives

All information on safety contained in these instructions for use refers to the currently valid national laws and regulations of the European Union. In other countries, compliance with the applicable laws and national regulations is required.

In addition to the safety instructions contained in these instructions for use, the user is required to observe and comply with the BGV (Employer's Liability Insurance Association regulations), UVV (accident prevention regulations), and environmental protection regulations. All information contained in these instructions for use must be complied with at all times without restrictions.

The B400 power wheelchair has been constructed in accordance with the currently valid technical rules and is safe to operate. The safety of the B400 power wheelchair has been confirmed by CE certification and the declaration of conformity.

2.3 General Safety Instructions

WARNING

Danger of suffocation. Keep the packing material away from children.

CAUTION

Risk of accident and injury in case of failure to follow the safety instructions. All safety instructions contained in these instructions for use and in all other applicable documents must be observed and complied with. The instructions for use must be available to the user at all times.

CAUTION

Risk of accident and injury due to improper use. The B400 may only be used properly. The B400 may only be used by persons trained to use it.

⚠ CAUTION

Risk of burns when near to fire. The back upholstery and seat cushion of the power wheelchair are not highly flammable, but can however catch fire. Therefore utmost caution near any sources of open flame or sparks, especially lit cigarettes, is required.

⚠ CAUTION

Risk of hypothermia or burns on wheelchair parts. Parts can become extremely hot or cold due to extreme temperatures.

Do not expose the product to any extreme temperatures (e.g. direct sunlight, sauna, extreme cold) in order to prevent injuries by coming into contact with the parts.

INFORMATION

Only use original manufacturer's options. The optional components may be mounted only as described here. Failure to comply will void the warranty.

2.4 Safety Requirements for Transportation, Storage and Assembly

Transportation and Storage

⚠ WARNING

Risk of accident and injury due to improper use for transportation in wheelchair accessible vehicles.

The power wheelchair may only be used for transportation in a wheelchair accessible vehicle if the safety components (such as lap belt) which are offered by Otto Bock and suitable restraint systems are used.

Only one person may be transported in the B400 at any one time. For optimum protection of the occupants in case of an accident, use the seats and corresponding restraint systems installed in a wheelchair accessible vehicle while it is in operation.

For more information on the use of the B400 as a seat in a wheelchair accessible vehicle, please refer to our brochure "Using your Wheelchair / Mobility Base with Seating Shell or Buggy for Transportation in Wheelchair Accessible Vehicles", order number 646D158.

⚠ WARNING

Risk of accident and injury due to incorrect transportation in aeroplanes. Within aeroplanes, power wheelchairs have to be transported in compliance with IATA regulations (International Air Transport Association). To this end, the fuse must always be removed and the battery connectors must be insulated so that they are short-circuit-proof prior to check-in of the power wheelchair as luggage.

Please note; batteries that are not leak proof or that might not be transported in an upright position must be removed and wrapped to ensure they are leak proof and short-circuit-proof.

For more information please visit the www.iata.org website. Otto Bock recommends directly contacting the airline before every flight to obtain information regarding special transport regulations.

NOTICE

Risk of damage as a result of improper transportation. For transportation of the power wheelchair, only use hoisting devices with a sufficient capacity. The B400 must be secured in accordance with the regulations for the transportation device used. Only attach the tensioning straps

to the corresponding attachment eyes. During transport on lifting platforms or in lifts, the wheelchair controls must be switched off. Lock the brake. Ensure that the power wheelchair is centred on the lifting platform.

None of the power wheelchair's components, such as its anti-tippers or other components, may be in the danger area.

INFORMATION

Battery damage due to total discharge. Remove the fuse for shipping or when the power wheelchair is not being used for an extended period of time.

INFORMATION

The tyres of the power wheelchair contain chemical substances that can react to other chemical substances (such as cleaning agents, acids).

Black tyres contain soot particles that can cause discoloration and black marks. For this reason, place a suitable mat underneath the wheelchair, if it is not going to be used over an extended period of time.

Assembly

CAUTION

Risk of injury due to unsecured screw connections.

After loosening screw connections with thread lock, replace these screw connections with new ones or secure them with medium-strength thread lock substance (e.g. EuroLock A24.20).

After the power wheelchair has been set and adjusted, the attachment screws and/or nuts must be firmly retightened. During tightening observe torques when specified.

CAUTION

Risk of tipping as a result of incorrectly mounted anti-tipper.

To ensure safe driving operation, the anti-tipper must have been mounted correctly and must be in proper condition.

INFORMATION

Prior to using the power wheelchair, all the necessary mechanical adaptations (e. g. mounting special controls) and software settings (e. g. programming the control) must be made to comply with the individual requirements and abilities of the user. The settings may only be made by trained specialists who have been authorised by Otto Bock.

2.5 Safety Requirements for Operation

WARNING

Risk of accident and injury as a result of incorrect safety functions. The user is obliged to make sure that the power wheelchair and its safety functions are in safe and proper condition every time before using it.

The power wheelchair may only be operated if all safety functions, e.g. the automatic brakes, are functional. Brake failure can result in serious accidents with fatal injuries.

WARNING

Risk of accidents and injury due to incorrect configuration settings. Modified parameter settings in the configuration can lead to changes in driving characteristics. In particular, changes to the speed, acceleration, braking or joystick settings can lead to unexpected and therefore uncontrollable operating performance with a risk of accidents.

Always test the driving characteristics of the power wheelchair after configuration / programming is complete. Programming must only be completed by authorised personnel. Neither Otto Bock nor the control unit manufacturer are liable for damages caused by programming that

was not properly / professionally adapted to the abilities of the wheelchair user.

⚠ WARNING

Risk of accident and injury if brake function is unavailable or unlocked. Take into account the missing brake function during unlocked brake especially when driving on slopes or inclines.

⚠ WARNING

Risk of injury if the power wheelchair tips over during driving. The B400 has been approved for driving on inclines and slopes of no more than 12 %. Navigating inclines above this percentage value is not permitted. The critical obstacle height of the B400 is 5 cm. It is not permitted to cross obstacles higher than 5 cm. Operating the power wheelchair on stairs is not permitted.

⚠ WARNING

Risk of accident if the power wheelchair tips over during driving. Reduce the driving speed when driving downhill (e.g. set it to speed level 1). When driving on inclines or slopes, it is not permissible to negotiate obstacles. Avoid getting into and out of the power wheelchair on inclines

and slopes.

Before driving up slopes or over obstacles, a tilted seat must be lowered to its basic position and the back must be in the upright position. It is advisable to slightly tilt the seat to the rear when driving downhill.

Driving over obstacles such as steps or curbs is only allowed at reduced speed (max. 3 km/h). Always approach obstacles at a right angle and cross over them without stopping.

⚠ WARNING

Risk of tipping over when driving on inadequate surface. Using the power wheelchair on very slippery ground (such as icy surfaces) or on very coarse-grained surfaces (gravel or pebbles) is not permitted.

⚠ WARNING

Risk of tipping when using lifting platforms. During transport on lifting platforms or in lifts, the wheelchair controls must be switched off. Lock the brake.

⚠ WARNING

Risk of tipping due to centre of gravity shifting. Getting to know how the power wheelchair reacts when the centre

of gravity shifts, for example, on slopes or inclines or when clearing obstacles like steps and curbs should be done only with assistance from another person before using the wheelchair for the first time.

⚠ WARNING

Risk of accident and injury as a result of lifting the wheelchair incorrectly. Attendants must lift the wheelchair only by parts that are firmly attached and not by the footrests or armrests.

⚠ CAUTION

Risk of accident when driving without experience. Driving without experience can lead to falls and other dangerous situations. Familiarize yourself with the new wheelchair by practising on even, straightforward terrain first.

⚠ CAUTION

Risk of accident due to uncontrolled driving behaviour. Uncontrolled movements can occur during the operation of the power wheelchair as a result of malfunction. In this case, please contact your authorised dealer immediately. If any faults, defects or other dangers that can lead to personal injury are detected, the power wheelchair must

be put out of operation immediately.

⚠ CAUTION

Risk of accident and injury as a result of incorrect getting into and out of the power wheelchair. Switch off the wheelchair control before getting into and out of the power wheelchair. The footrests and armrests are not capable of bearing full body weight, and therefore must not be used for getting into or out of the wheelchair.

⚠ CAUTION

Risk of accident and injury if the wheelchair starts rolling. Releasing the brake may result in uncontrolled rolling of the power wheelchair. Make sure that the brake is engaged after parking the power wheelchair.

⚠ CAUTION

Risk of accident due to improper clothing. Otto Bock advises users to wear light-coloured clothing or clothing with reflectors during hours of darkness.

⚠ CAUTION

Risk of accident as a result of bad tyres. Check visually before every use that the tread depth is sufficient and that

the tyres are inflated to the correct tyre pressure. Whenever possible, avoid parking the wheelchair outdoors and on direct sunlight (UV light) as it causes the tyres to age prematurely. As a result, the tread surface hardens and corner pieces break out of the tread. Otto Bock recommends to replace the tyres every 2 years regardless of wear and tear.

When the wheelchair is not used for extended periods of time, or if the tyres are heated strongly (e. g. near radiators or by sunlight shining through a window), permanent deformation of the tyres will result. Therefore always make sure that the wheelchair has sufficient distance from sources of heat, move your wheelchair from time to time, or jack up the wheelchair when storing it.

NOTICE

Risk of tyre damage. Too high an air pressure in your tyres may result in tyre defect. Please observe the data in Section "Technical Data". The maximum air pressure must not be exceeded.

NOTICE

Damage due to exposure to extreme temperatures. The B400 may be used within a temperature range of

-25 °C to +50 °C. It must not be operated outside this temperature range.

NOTICE

Damage caused by overload. The maximum load for the B400 is 140 kg / 309 lbs. This load must not be exceeded.

NOTICE

Electric interference due to electromagnetic fields. The power wheelchair has been tested according to EMC regulations. Take care of the following particularities during the operation:

The driving characteristics of the power wheelchair can be affected by electromagnetic fields (mobile phones or other radiating devices). Please switch off all mobile devices when driving.

The power wheelchair can generate electromagnetic fields that can cause interference with other devices. Therefore, switch off the controls whenever you do not need them.

INFORMATION

When the wheelchair is used on the street, its user is required to obey the public traffic regulations.

INFORMATION

If the driving mode is changed while driving, the power wheelchair will accelerate or decelerate.

INFORMATION

The controls of the power wheelchair are protected according to protective system IP 54 and can thus be used in bad weather (e. g. rain). The controls are approved for indoor and outdoor operation and meet the requirements regarding environment and splashed water.

INFORMATION

After each emergency stop, the controls of the power wheelchair must be turned on again. In the event of communication problems in the bus system of the controls, the system triggers an emergency stop and thus prevents any uncontrolled functions. If the driving function is still not available after switching the controls on again, unlock the brakes to activate the push mode. In this case, contact a specialist dealer as soon as possible.

INFORMATION

If the controls do not emit an error signal as soon as the brake lever is activated, this indicates a malfunction. The

settings must be checked by a specialist dealer.

INFORMATION

Manoeuvring is only allowed at reduced speeds.

2.6 Safety Requirements for Care, Maintenance and Disposal

⚠ CAUTION

Risk of accident and injury as a result of incorrect maintenance, repair or adjustment. Only trained staff who have been authorised by Otto Bock may do maintenance work on the power wheelchair. This also applies to all repairs and settings on the brake. Incorrect settings can lead to brake failure.

⚠ WARNING

Risk of injury due to explosive gases. Explosive gases can develop while the batteries are charging. For this reason, the following safety precautions are to be taken when charging the battery:
Switch the control off.

Ensure sufficient ventilation when charging the batteries in closed rooms. Smoking and open flames are not permitted. Sparks must be avoided.

The air vents in the trim must not be covered.

⚠ CAUTION

Risk of injury due to uncontrolled movements. The fuse must always be removed for any maintenance work where the battery cover is open.

NOTICE

Unauthorized battery replacement. The battery may only be replaced by a specialist dealer. The characteristic curve of the battery charger set at the factory corresponds to the battery provided and must not be changed. Setting the characteristic curve incorrectly can result in permanent damage to the battery.

NOTICE

Damage of electronics as a result of penetrating water. Never use a water jet or high-pressure cleaning apparatus for cleaning the power wheelchair. Avoid direct contact of water with electronics, motors, and batteries under all circumstances.

INFORMATION

The power wheelchair must be inspected for functional reliability and driving safety at least once a year by an authorised specialist.

INFORMATION

Defective batteries must be disposed of properly in accordance with country-specific regulations.

2.7 Requirements for the User

CAUTION

Risk of accident and injury as a result of improper use.

The power wheelchair may only be used by informed users. For this purpose, the user and maybe any attendant must receive instructions on how to use the power wheelchair from trained specialists who have been authorised by Otto Bock.

The operator must have read and understood all the information in the instructions for use. The wheelchair may not be operated in cases of exhaustion or under the influence of alcohol or medications.

The operator must not have any mental limitations which can temporarily or permanently restrict attentiveness and judgment.

2.8 Safety Functions

INFORMATION

In dangerous situations, the B400 can be turned off at any time using the on/off button. When the button is pressed, the power wheelchair brakes immediately and the electric functions will be stopped.

If any malfunctions occur such as an insufficient supply of energy to the brake, the software will recognize them and trigger the emergency stop brake or reduce the speed of the power wheelchair. At the same time, a warning signal will be emitted.

2.9 Warning Symbols and Type Plates

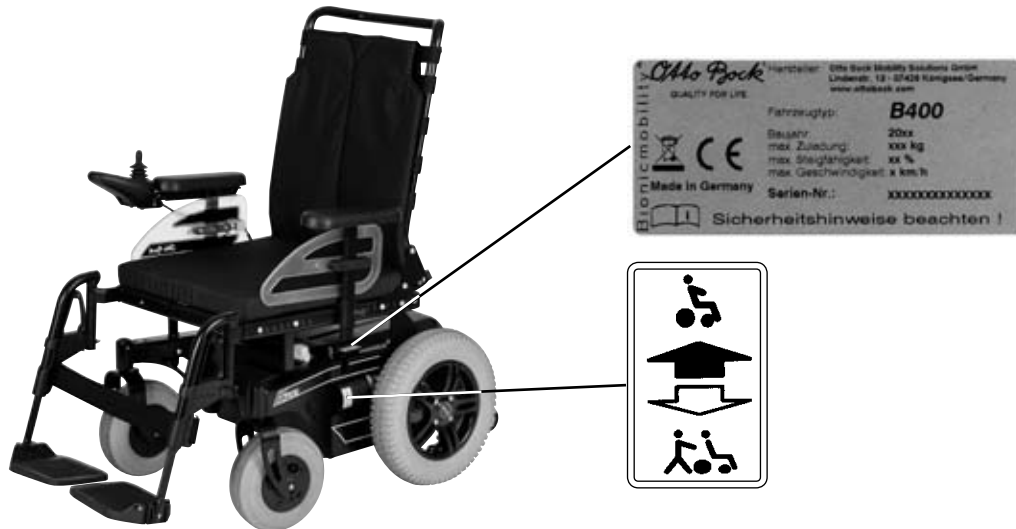


Fig. 1 Signage on the B400

Label/Type Plate	Explanation
<p>The image shows a grey label for an Otto Bock B400 wheelchair. The label includes the following information:</p> <ul style="list-style-type: none"> Logo: Otto Bock, Bionic mobility, QUALITY FOR LIFE Manufacturer: Hersteller: Otto Bock Mobility Solutions GmbH, Lindenstr. 13 - 07426 Königsee/Germany, www.ottoBock.com Vehicle Type: Fahrzeugtyp: B400 Year: Baujahr: 20xx Load Capacity: max. Zuladung: xxx kg Climbing Ability: max. Steigfähigkeit: xx % Speed: max. Geschwindigkeit: x km/h Serial Number: Serien-Nr.: H-xxxxxxxxxxxxxx CE Marking: G Country of Origin: Made in Germany Safety Note: Sicherheitshinweise beachten! <p>Letters A through K are placed on the label with lines pointing to specific fields: A (B400), B (20xx), C (xxx kg), D (xx %), E (x km/h), F (recycling symbol), G (CE marking), H (Serial number), I (bracketed area), J (Manufacturer), and K (Made in Germany).</p>	<ul style="list-style-type: none"> A Type designation B Year of Manufacture C Maximum load capacity (see Section „Technical Data“) D Maximum climbing ability (see Section „Technical Data“) E Maximum speed (see Section „Technical Data“) F Symbol for separate collection of electric and electronic devices. Components of the power wheelchair and the batteries must not be disposed of like regular domestic waste. G CE marking – product safety in conformity with EC Directives H Serial number I Read the Instructions for Use prior to using the product. Observe the safety instructions in the Instructions for Use. J Manufacturer / address K Country of manufacture

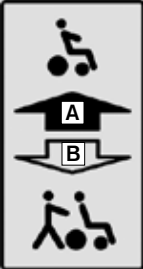

Label/Type Plate	Explanation
	<p>A Electric driving operation: lock motor brake B Manual pushing mode: unlock motor brake</p>
	<p>Risk of pinching. Do not reach into the danger area.</p>

Table 1 Signage on the B400

3 Product Description

The B400 power wheelchair is suitable for indoor and outdoor use. It is compactly designed and easy to manoeuvre for use indoors. Two 12 V batteries power its high-performance drive system, which makes it possible, along with drive wheels, to comfortably overcome obstacles (category B of EN 12184) and to ensure safe operation.

The VR2 control unit is used to control the power wheelchair. The control unit comprises a control panel for entering the driving commands and for displaying the current state of the functions as well as a controller that uses the input data to control the drive motors. Data transmission is realised via a bus system.

Since the VR2 can be programmed, it is possible to adapt the control unit to the personal requirements of the user; e. g. the speed, acceleration and deceleration values can all be adapted.

The special features of the B400 include:

- Easy servicing due to good and clear accessibility of all component groups.
- Customization through options (seating system, control unit, accessories)

4 Delivery and Preparation for Use

4.1 Delivery

INFORMATION

The options included in the delivery depend on the product configuration that has been selected for the power wheelchair.

Delivery includes:

- Adapted power wheelchair with main components (see fig. 2)
- Battery Charger
- Instructions for Use
- Options (see section 7)

Upon delivery by the specialist dealer the power wheelchair is ready for use. All the settings correspond to the indications on the order form or are adjusted directly on site by the specialist dealer. The power wheelchair is adapted to the personal requirements of the individual.

The functions of the individual components can be tested by following the instructions in section 6. Possible malfunctions are described in section 8.



Fig. 2 Main components

- | | |
|-----------------------------|--------------------------|
| 1 Backrest | 5 Brake release |
| 2 Joystick and control unit | 6 Footrest |
| 3 Armrest (side panel) | 7 Motor with drive wheel |
| 4 Seat cushion | |

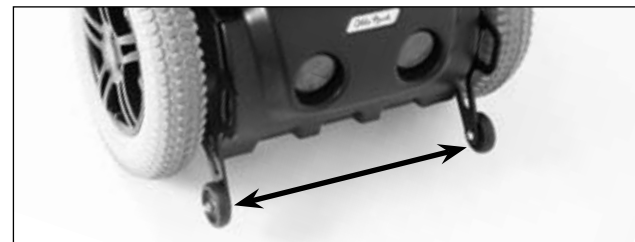


Fig. 3 Anti-tipper B400

4.2 Initial Operation

⚠ WARNING

Danger of suffocation. The packing material must be kept away from children.

Prior to putting the power wheelchair into operation, the completeness (see fig. 2) and function of all its components must be checked. Before the power wheelchair can be switched on, the 80 A fuse must be inserted into the fuse holder in the front section of the battery case (see fig. 4).

To do so, remove the fuse from the protective cover on the control panel, open the cap of the safety holder and insert the fuse.

Make sure that the fuse is pressed into the centre of the spring contacts and that it is not at an angle. Close the cap until you feel it snap back into place.

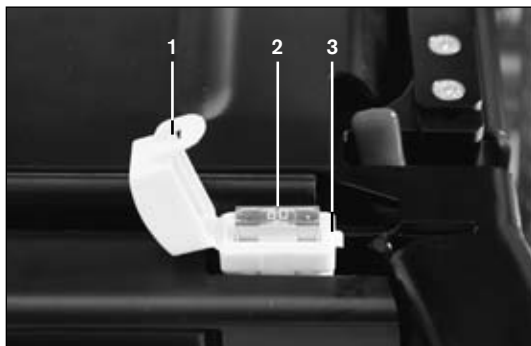


Fig. 4 Fuse holder

- 1 Cap, open
- 2 Fuse, inserted
- 3 Fuse holder

5 Transportation and Storage

⚠ WARNING

Risk of accident and injury due to improper use for transportation in wheelchair accessible vehicles.

The power wheelchair may only be used for transportation in a wheelchair accessible vehicle if the safety components (such as lap belt) which are offered by Otto Bock and suitable restraint systems are used.

Only one person may be transported in the B400 at any one time. For optimum protection of the occupants in case of an accident, use the seats and corresponding restraint systems installed in a wheelchair accessible vehicle while it is in operation.

For more information on the use of the B400 as a seat in a wheelchair accessible vehicle, please refer to our brochure "Using your Wheelchair / Mobility Base with Seating Shell or Buggy for Transportation in Wheelchair Accessible Vehicles", order number 646D158.

⚠ CAUTION

Risk of injury as a result of not engaging the locks sufficiently. Secure the power wheelchair during transport in

another vehicle by sufficiently tightening the tensioning straps.

The frame of the power wheelchair has 4 fixing eyelets for the attachment of the tensioning straps.

Before transporting the power wheelchair, switch off the controls and lock the brake.

You can reduce the size (fig. 5) of the power wheelchair for transport by folding down the backrest and removing the side panels and footrests (see section 6.1).



Fig. 5 Folding size

Tyres contain chemical substances that can react to other chemical substances (such as cleaning agents, acids, etc.).

Black tyres also contain soot particles.

The power wheelchair must be stored in a dry place.

For transport and storage, an ambient temperature range from -40 °C to +65 °C (-40 °F to +149 °F) (must be observed).

INFORMATION If your power wheelchair is not moved for several days, permanent colour changes might result on the ground where the wheelchair comes into contact with it. For this reason, place a suitable mat underneath the wheelchair, if it is not going to be used over an extended period of time.

INFORMATION Black tyres can leave black traces on the ground under some circumstances. For this reason, we recommend choosing grey tyres when using the power wheelchair mainly indoors.

INFORMATION Direct sunlight/UV light causes the tyres to age prematurely. As a result, the tread surface hardens and corner pieces break out of the tread.

INFORMATION Whenever possible, avoid parking the wheelchair outdoors. Regardless of wear and tear, the tyres should be replaced every 2 years.

INFORMATION Remove the fuse for shipping or when the power wheelchair is not being used for an extended period of time.

6 Operation

6.1 Adjustment Possibilities

CAUTION

Risk of injury due to unsecured screw connections. After loosening screw connections with thread lock, replace these screw connections with new ones or secure them with medium-strength thread lock substance (e.g. EuroLock A24.20).

After the power wheelchair has been set and adjusted, the attachment screws and/or nuts must be firmly retightened. During tightening observe torques when specified.

Various adjustments can be made to the power wheelchair.

The seat height, seat width and seat angle have been set in accordance with the indications on the customer order form and may only be changed by the specialist dealer.

The following items can be adapted by the user:

- Back angle
- Armrest height
- Armrest position
- Lower leg length

If need be, the footrests and side panels can be removed.

6.1.1 Backrest

The backrest can be set to four different angles by pulling the release strap at the base of the backrest (fig. 6).

Once the backrest is in the desired position, release the strap to engage the locks.



Fig. 6 Release strap for the backrest

6.1.2 Side Panel with Armrest

The side panels can be removed by loosening the thumb screws and lifting the side panels. If the control panel is attached to the armrest, the side panel must be removed together with the control panel and carefully deposited on the ground or on the wheelchair seat.

The thumb screws are located at the lower end of the armrest holders (see arrow, fig. 7).



Fig. 7 Removing the side panel

After remounting the side panel, do not forget to firmly retighten the thumb screw.

The height of the armrest can be changed by loosening and shifting the screw (see fig. 8).

Firmly re-tighten the screws after making adjustments.

INFORMATION The side panels must be inserted into the armrest holder up to the height of the lowest receiver tube's bore hole at least.



Fig. 8 Adjusting the height of the armrest

6.1.3 Control Panel

NOTICE

Cable damage. Positioning the cable incorrectly can lead to pinching and thus damage to the cable. The cable must not be attached too tightly or too loosely. Avoid bending or squeezing the cable.

INFORMATION

Later changing of the control panel's mounting position from the left to the right side or vice versa may only be carried out by specialist dealers.

Adapting the Control Panel to Arm Length

To adapt the control panel to the arm length of the user, you must loosen the three screws on the underside of the armrest using a 3 mm Allen wrench (see fig. 9). You can now slide the control panel backwards and forwards.

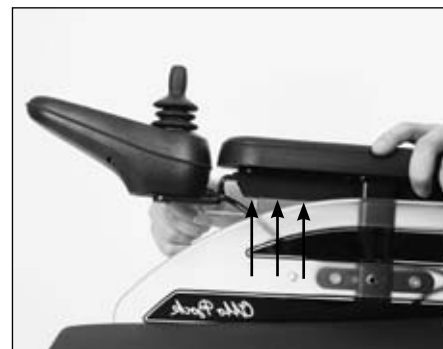


Fig. 9 Adapting the control panel

Firmly re-tighten the screws after making adjustments.

INFORMATION If the control panel rail is too long, the protruding part can simply be cut off with a saw.

6.1.4 Footrest

⚠ CAUTION

Risk of getting pinched. Make sure your fingers are not in the danger area when flipping the footplates up or down. Complete removal of the footrest is permitted only for transportation of the wheelchair.

Dismantling

1. Remove the calf band.
2. Flip the footplate up, release the footrest lock (see fig. 10) and swing the footrest either to the inside or outside.
3. Pull the footrest up to remove it.

Reassembly

1. Reinsert the footrest from above by placing it in the holding device and swinging it forward until the footrest lock engages.
2. Reattach the calf band to the holding device.



Fig. 10 Footrest lock

Adjusting the Lower Leg Length (see fig. 11)

1. Loosen the screws on the footrest bar.
2. Move the footplate up or down to adapt the height to the individual lower leg length and seat cushion thickness.
3. Retighten the screws.

INFORMATION The footrest bar must not be pulled out of the holding device by more than 160 mm.



Fig. 11 Adjusting the lower leg length

6.2 Getting Into and Out of the Power Wheelchair

⚠ CAUTION

Risk of injury if the power wheelchair starts rolling. When getting into or out of the power wheelchair, the wheelchair controls must always be switched off. This will automatically engage the motor brake.

⚠ CAUTION

Risk of breakage due to overloading. The user must not

apply his or her entire body weight to the footrests and armrests for support when getting into or out of the wheelchair.

The modular design of the power wheelchair and the ease with which you can remove the side panels and footrests make it easy to get into and out of the wheelchair from the side or from the front.

Getting into and out of the wheelchair can be done by the user individually in a way that suits him or her best.

6.2.1 From the Side

Getting into the wheelchair from the side requires the user to remove the right or left side panel depending on the side where the user will get into the wheelchair. Bring the power wheelchair as close as possible to the place where its user is sitting.

If the control panel is on the side the user wants to use to get into/out of the wheelchair, then undo the hook and loop closures that fix the cable for the control panel. Then carefully lay down the side panel with the control panel on the ground. Remove the side panel as described in section 6.1.2. If necessary, remove the footrest, see section 6.1.4.

The user can then slide onto the wheelchair's seat from the side. Use of a transfer board will make this even easier.

6.2.2 From the Front

Flipping up the two footplates makes it possible for the user to get into and out of the wheelchair from the front (fig. 12). The space for getting into/out of the wheelchair can be increased by swinging the footrests to the side (fig. 13).

The assistance of an attendant or a transfer lifter make it easy for the user to get into or out of the power wheelchair. Use of a rotation plate is also possible.



Fig. 12 Footplates flipped up



Fig. 13 Footrests swung to the side

6.3 Control Unit

NOTICE

Risk of impairing the driving performance of the power wheelchair. The driving characteristics of the power wheelchair can be affected by electromagnetic fields (mobile phones or other radiating devices). For this reason, all mobile devices are to be switched off when driving.

NOTICE

Damage of other devices. The power wheelchair can generate electromagnetic fields that can cause interference with other devices. Therefore, switch off the controls whenever you do not need them.

6.3.1 Control Panel

The control panel is used to control the power wheelchair.

The control panel consists of a keypad, LED display and joystick. The charging/programming receptacle is on the underside. The control panel is used to switch the power wheelchair on and off, to enter driving commands and to display the current state of certain functions and components.

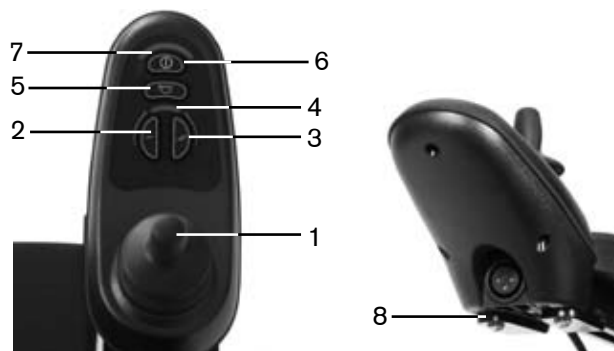


Fig. 14 Control panel

- | | |
|-----------------------------|-----------------------------------|
| 1 Joystick | 5 Horn |
| 2 Speed button slow | 6 On/Off key |
| 3 Speed button fast | 7 Battery Capacity LED indicator |
| 4 Speed Level LED indicator | 8 Charging receptacle (underside) |

On/Off Key

The on/off key is used for switching the power wheelchair on, for activating the drive-away lock and for switching the power wheelchair off.

Speed buttons

Pressing the speed buttons shortly increases or reduces the speed level. After reaching the maximum speed level, the acoustic signal is changed.

Joystick

The joystick controls the direction and speed of travel.

Horn

The horn will sound as long as the horn key is being pressed.

Battery Capacity LED indicator

The LEDs show the battery capacity (see section 6.3.4)

Speed Level LED indicator

The LEDs show the currently selected speed level.

6.3.2 Switching On and Off

WARNING

Danger to life if the brake fails to function. The brake release lever must be locked when using the power wheelchair. The automatic brakes must be operational and functional.

CAUTION

Risk of accident as a result of a wrong tyre pressure. The power wheelchair must be visually checked every time before it is used to make sure that the tread depth is sufficient and that the tyres are inflated to the correct tyre pressure. Incorrect tyre pressure reduces the tyres' service life and makes the wheelchair's driving behaviour worse.

The control panel of the power wheelchair is turned on or off by pressing the On/Off key (see fig. 14, item6). If the control panel is not used for an extended period of time, the wheelchair turns off automatically. It is also possible to switch off the power wheelchair with the on/off key during driving. In this case, the wheelchair brakes immediately until it stops.

INFORMATION Every time you switch on the control unit, it will return to the previously selected speed level.

6.3.3 Driving Function

⚠ CAUTION

Risk of injury if the power wheelchair gets out of control. Switch off the controls on the power wheelchair whenever you do not need them. This will prevent you from unintentionally activating the joystick.

⚠ CAUTION

Risk of injury if the power wheelchair tips over during driving. Observe the following safety instructions when driving the power wheelchair:

- Do not drive on inclines and slopes of more than 12 %.
- When driving downhill, reduce speed in accordance with the degree of the incline.
- Do not cross obstacles with differences in height of more than 5 cm.
- Do not cross steps or curbs without braking first.

The power wheelchair has been approved for driving on inclines and slopes of no more than 12 %. You are not allowed to drive on inclines or slopes steeper than this.

To ensure safe downhill driving, the driving speed must be reduced in accordance with the degree of incline (e.g. set it to speed level 1).

The critical obstacle height of the power wheelchair is 5 cm. It is not permitted to cross obstacles higher than 5 cm. Obstacles such as steps or curbs must be crossed at reduced speeds.

If there are obstacles in the travel path, it is important to drive around them with a large margin of safety. On uneven ground, the driving behaviour of the wheelchair may get out of control. Therefore the speed must always be adapted to the ground conditions.

The joystick (see fig. 14, item1) is used for driving. The further the joystick is moved away from the mid-position, the faster the power wheelchair will drive in this direction.

The maximum speed with full deflection of the joystick depends on the selected speed level. Releasing the joystick automatically activates the brake function, which brings the wheelchair to a halt. When standing still, the mechanical brakes are automatically active so the power wheelchair cannot move.

The power wheelchair has five speed levels. The speed buttons (see fig. 14, Items 2/3) are used to increase or decrease the speed level. The current speed level is indicated by lighting the "Speed Level" LED. The signal tone will change when the highest/lowest speed level was achieved.

Adapting the Driving Characteristics

⚠ WARNING

Risk of accidents and injury due to incorrect configuration settings. Modified parameter settings in the configuration can lead to changes in driving characteristics. In particular, changes to the speed, acceleration, braking or joystick settings can lead to unexpected and therefore uncontrollable operating performance with a risk of accidents.

Always test the driving characteristics of the power wheelchair after configuration / programming is complete.

Programming must only be completed by authorised personnel. Neither Otto Bock nor the control unit manufacturer are liable for damages caused by programming that was not properly / professionally adapted to the abilities of the wheelchair user.

A hand programming device, which is to be connected to the control panel, can only be used by specialist dealer to adapt the speed, acceleration and deceleration values to the individual wishes of the user.

6.3.4 Battery Capacity LED Indicator

INFORMATION

Immediately after switching the power wheelchair on, the battery indicator shows the battery capacity saved before the wheelchair was switched off the last time. The exact battery status is displayed after driving a short distance.

The battery indicator on the LED display consists of 10 segments and shows the remaining battery capacity (see Table 2).

A charge of 100% corresponds to 10 full segments in LED display. If one segment disappears, this means that the battery's capacity has decreased by approximately 10%. At a total range of approximately 35 km over even terrain, each segment corresponds to a range of approximately 3.5 km when the speed is kept constant.

If the last three segments flash, the battery must be charged immediately.

The charging process is indicated by LED running light. When the battery is charging, the driving function is blocked.

Indication	Information
	Batteries are charged
	Recharge battery, if possible
	Low battery, recharge urgently
 Running light	Battery is charging
 Flashing light	Battery: undervoltage
 Flashing light	Battery: overvoltage

Table 2 Battery indicator on the control panel

6.3.5 Drive Lock

The control unit of the B400 power wheelchair features an electronic drive-away lock. This function is activated/deactivated via control panel.

Activating the drive-away lock:

1. With the control unit switched on, press and hold the On/Off switch.
2. Once you hear a signal sound (approx. 1 sec.), release the On/Off switch.
3. Move the joystick to the front until a signal sound is heard.
4. Now move the joystick to the rear until a further signal sound is heard.
5. A long beep confirms that the driving function has been locked. The control unit then turns off.

The activation of the drive-away lock is indicated by a running light bar on the LED indicator “Speed Levels” after switching the control unit on (see Table 3).

Indication	Information
Running light LEDs Speed Level LED indicator	Drive-away Lock

Table 3 Drive-away lock indicator on the control panel

Deactivating the drive-away lock:

1. After switching on, the battery capacity indicator is off and the LED indicator "Speed Levels" is in running light mode.
2. Move the joystick to the front until a signal sound is heard.
3. Now move the joystick to the rear until a further signal sound is heard.
4. A long signal sounds to confirm that the driving function has been unlocked and the LED indicator "Battery Capacity" is on.

Now the drive-away lock is deactivated and the wheelchair can be driven.

INFORMATION If the joystick is not moved correctly, the drive-away lock remains activated. For a new deactivation of the drive-away lock, the you must switch off the control unit. Afterwards you can switch on the power wheelchair again and deactivate the drive-away lock.

6.4 Releasing and Locking the Brake

⚠ WARNING

Danger to life due to brake failure. Incorrect brake setting can lead to brake failure and therefore to serious bodily injuries or death. Repairs and adjustments to the brake may only be carried out by authorised service staff.

⚠ WARNING

Risk of accident and injury if brake function is unavailable.

When the brake is unlocked (push mode), no brake function is available.

- When moving on inclined paths, the person pushing the power wheelchair must provide the appropriate brake force.
- The brake function may only be released in the presence of an attendant.
- Should the user be unable to release the brake himself, the brake can be released by the attendant.

NOTICE

Damage due to parking without locked brake. Releasing the brake may result in uncontrolled rolling of the

power wheelchair. Therefore, make sure that the brake is engaged after parking the power wheelchair.

If the control unit fails or there is not enough battery power, it is possible to push the power wheelchair by disengaging the brake by means of the mechanical release mechanism. The brake release mechanism is located on the left-hand and right-hand sides on the motors.

Unlocking the Brake

For activation of the push mode, pull out both red brake release levers located under the seat on the left-hand and right-hand sides (fig. 15). In this position, the control unit will recognise that the brake has been released and automatically deactivate the driving function. The unlocked brake will be indicated by the flashing “Battery Capacity” LED.

INFORMATION Once the brake unlocking lever has been released, all braking systems are deactivated.


Indication	Information
 Flashing light	Unlocked brake for push mode

Table 4 Brake release indicator on the control panel



Fig. 15 Brake release

Locking the Brake

To lock the brake, push the red brake release lever inwards. To reactivate the driving function, you must switch off the wheelchair controls and then switch them on again.

6.5 Batteries

INFORMATION

When checking the power wheelchair's batteries, make sure the power wheelchair is standing on level ground.

INFORMATION

Before doing any maintenance work on the batteries, please read the battery manufacturer's warnings thoroughly!

INFORMATION

The liquid level in the batteries must be checked on a monthly basis and be topped up with distilled water if required.

The standard version of the B400 power wheelchair includes two 50 Ah/12 V wet cell (low-maintenance) batteries.

The batteries are located under the seat of the power wheelchair.

To check the battery, proceed as follows:

1. The seat bottom of the wheelchair must be removed for maintenance work and for mounting/removing the batteries.
2. Remove battery cover. Once the cover has been removed, you have free access to the batteries (see fig. 17).
3. Unscrew the caps (see arrow, fig. 17) of the individual chambers by using a large screwdriver. You will be able to see the battery's liquid level on the acid level markings.
4. If the liquid is below this marking, top up with distilled water.
5. Replace the battery cover and reinsert and attach the seat bottom.

Maintenance-free lead gel batteries can be used as an alternative.

See section 6.3.4 for battery capacity display on the control panel.



Fig. 16 Remove battery cover



Fig. 17 Batteries

6.5.1 Battery Charging

⚠ WARNING

Risk of injury due to explosive gases. Explosive gases can develop while the batteries are charging. The following safety instructions must be followed under all circumstances: Ensure sufficient ventilation when charging the batteries in closed rooms. Smoking and fire are not permitted. Sparks must be avoided. Do not cover the air vents in the trim.

NOTICE

Risk of battery damage. Driving over a longer period of time with only the red LEDs lit will discharge the battery completely and damage the battery. There is a risk that the power wheelchair may stop due to zero battery capacity and bring the user into a dangerous situation.

The remaining battery capacity determines the distance range of the power wheelchair. The battery capacity is influenced by many factors. In addition to the temperature, age of the batteries, and amount of use, the charging cycle has a pronounced effect on the capacity and therefore on the range.

For an optimal charging frequency the following applies:

- The batteries can be charged at any time, regardless of the remaining charge.
- It takes about 10 hours until a discharged battery (only one, flashing segment) is completely charged. Subsequently, the power wheelchair can remain connected to the charger without causing any problems; the charger has a programmed recharge phase which ensures that maximum battery capacity is maintained.
- For daily use, it is recommended to connect the charger overnight so that the full capacity is available every day.
- If the wheelchair is not used for extended periods of time, the batteries gradually discharge. When the power wheelchair is not used for an extended period of time, the battery will become discharged over time. It is therefore necessary to charge the batteries at least once a week to maintain full battery capacity. We also recommend removing the fuse when the power wheelchair is not going to be used for an extended period of time.
- Total discharge of the batteries should be avoided.
- In order to ensure that the batteries are fully charged, the control system of the power wheelchair must be turned off during the charging process.

The following must be observed when charging the batteries:

- Only the battery charger provided by Otto Bock may be used for charging. Failure to comply will render the warranty null and void.
- The voltage settings on the battery charger must correspond to the voltage used in your country.

6.5.2 Battery Charger

WARNING

Explosion hazard as a result of sparks. Always switch off the battery charger and remove the mains plug before disconnecting the battery.

NOTICE

Unauthorized battery replacement. The battery may only be replaced by a specialist dealer. The characteristic curve of the battery charger set at the factory corresponds to the battery provided and must not be changed. Setting the characteristic curve incorrectly can result in permanent damage to the battery.

The battery charger is designed for maintenance-free and low-maintenance batteries. The charger can operate along two characteristic curves to charge the respective batteries. The power wheelchair is delivered with the appropriate characteristic curve, set in accordance with the kind of battery the wheelchair is equipped with. If the battery charger is to be used with another power wheelchair or if a new battery is installed, the characteristic curve must be checked.

NOTICE Risk of battery damage. Setting the characteristic curve incorrectly can result in permanent damage to the battery.

When handling the battery charger, the following safety instructions must be observed: Failure to observe the instructions can affect the function of the battery charger:

- Always place the rubber feet of the battery charger on a level surface.
- Protect the battery charger from direct sunlight to prevent the charger from getting any warmer than it already is.
- The location where the battery charger is installed must be dry and well ventilated. Avoid letting dust and dirt enter the battery charger.
- To clean the charger, use a dry cloth.

To charge the batteries, proceed as follows:

1. Turn off the control on the power wheelchair.
2. Connect the plug of the battery charger to the charging receptacle on the control panel of the power wheelchair (see section 6.3.1, fig. 14).
3. Connect the battery charger to a wall outlet and turn it on. The batteries will start charging automatically, and the current charge status is indicated on the LEDs of the battery charger (see Table 5).
4. When the charging process is complete, turn off the battery charger: Disconnect the battery charger from the mains supply, then from power wheelchair.
5. Turn on the controls. The wheelchair is ready for driving.

The following statuses are indicated by the battery charger:

Indication	Function
Yellow LED is lit	Battery is charging
Yellow LED is flashing	Battery is charged to 90 %
Green LED is lit	Battery is fully charged
Red LED is lit	Wrong pole connection (remove mains cord plug and connect the poles correctly)

Indication	Function
Red LED is flashing	Battery defective or missing, or charging time exceeded

Table 5 Battery charging statuses during the charging process

If none of the LEDs are lit, there is no power supply.

7 Accessories

⚠ CAUTION

Risk of injury due to unsecured screw connections. After loosening screw connections with thread lock, replace these screw connections with new ones or secure them with medium-strength thread lock substance (e.g. EuroLock A24.20). After the power wheelchair has been set and adjusted, the attachment screws and/or nuts must be firmly retightened. During tightening observe torques when specified.

INFORMATION

Only original options provided by the manufacturer may be used. The optional components may be mounted only as described here. Failure to comply will void the warranty.

INFORMATION

All available optional components are contained on the order form and in the wheelchair accessories catalogue.

The B400 power wheelchair has been designed as a modular system. Certain component groups can be exchanged and other accessory components can be added to the power wheelchair. The complete range of options is listed on the order form and in the wheelchair accessories catalogue.

7.1 Mechanical Seat Tilt

⚠ WARNING

Risk of pinching or crushing the fingers. Do not reach into the danger zone between the frame and the seat when tilting the seat. There must not be any interfering objects or obstacles in the tilting area.

⚠ WARNING

Risk of injury if the power wheelchair tips over during driving. Before driving up slopes or over obstacles, the back must be brought into the upright position.

⚠ CAUTION

Risk of injury as a result of abrupt lowering. Using the release lever when the seat is tilted can lower the seat abruptly.

INFORMATION

When getting into or out of the power wheelchair, bring the seat to a level position.

The mechanical seat tilt adjustment lets you bring the seat into a tilted position for pressure relief, for example. The standard seat can be continuously tilted backwards up to 20°.

To tilt the seat backwards (see fig. 18):

- Use the release lever on the armrest (to unblock the gas compression spring).
- Tilt the seat to the desired inclination.
- Let go of the release lever (to again block the gas compression spring).



Fig. 18 Mechanical seat tilt

7.2 Lighting

INFORMATION

The B400 is delivered from the factory with a seat tilt of 3°. The lighting is adjusted according to this seat tilt setting and allows for non-dazzling drive for the oncoming traffic. If you need another individual seat tilt setting during the drive, it is necessary to adjust the lighting so as to ensure the geometric visibility and not to dazzle the other road users.

An option for the power wheelchair is to have it equipped with a set of lights. The set of lights consists of:

- two rear lamps with integrated direction indicators
- two front lights consisting of halogen lamp and direction indicator (fig. 19)
- control panel and light module



Fig. 19 Front lights on the side panel

The front lights must be mounted on the side panel. The rear lights are attached to the wheelchair frame.

A separate control panel is included for control of lighting (see fig. 20). Press the lighting control button to switch on the control panel.

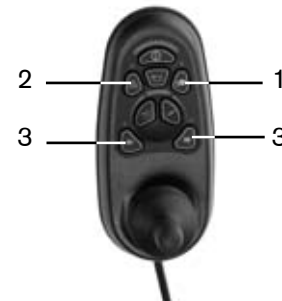


Fig. 20 Separate control panel

- 1 Lighting control button
- 2 Warning flasher
- 3 Direction indicator right/left

Lighting Control Button

The front and rear lights are activated and deactivated by pressing the light key.

Warning Flasher

Pressing the warning flasher key activates all four direction indicators.

Direction Indicators

The right or left front and rear direction indicators are activated and deactivated by pressing the “direction indicator, right” or “direction indicator, left” keys respectively.

7.2.1 Changing Defective Lights

NOTICE

Risk of damage due to moisture. When reinserting the panes, make sure they are seated correctly on the housing and ensure the screws are firmly tightened so as to avoid moisture from penetrating into the lamps.

INFORMATION

Lamp housings or lamps can be ordered from a specialist dealer.

To change the halogen lamp in the front light, proceed as follows:

- Lightly push the black engaging lever at the lower end of the lamp and fold the pane forward (see fig. 21, item 1).

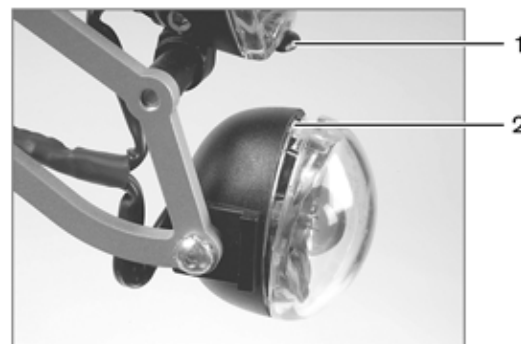


Fig. 21 Changing the front lights

- 1 Engaging lever of front light
- 2 Recess (use the screwdriver at this point)

- Remove the pane with mirror towards the front.
- Pull the bulb out of the rear of the mirror.
- Replace and reinsert the bulb.
- Insert the pane with mirror and bulb into the lamp housing.
- Make sure that the pane securely snaps in place.

To change the lamp of the front direction indicator, proceed as follows:

- Open the front direction indicator: Insert a small screwdriver into the recess of the direction indicator housing and flip down the pane of the direction indicator (see fig. 21, item 2).
- Remove the pane.
- Slightly rotate the lamp to release it from the lock on the lamp socket and pull it out (see fig. 22).



Fig. 22 Replacing the direction indicator lamp

To change the rear direction indicators and the rear light, proceed as follows (see fig. 23):

- Unscrew the pane.
- The rear lamps are attached on the right and left side on sprung-mountings. Exert slight pressure to the right and pull the lamp forward on the left side.
- To protect the front lamps against damage, they are provided with rubber bearings.

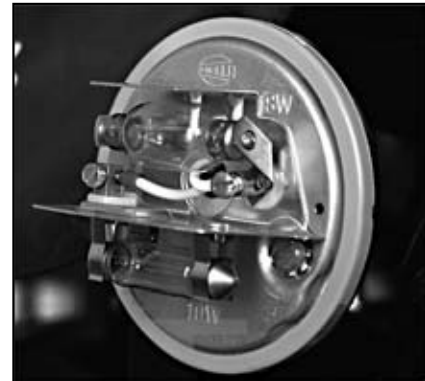


Fig. 23 Rear light without lamp cover

7.3 Front Wheel Swivel Lock

The wheelchair must be driven in totally straight line onto ramps or into lifts. The B400 power wheelchair offers the option of having the front wheels locked in the forward position, thereby preventing the wheelchair from turning.

Engaging the front wheel swivel lock:

- Slightly rotate the folding lever on the front frame to the side thus allowing it to jump out of its normal mid-position.
- A bolt is released from the frame and engages in the front caster fork as soon as the straight forward position of the wheelchair is reached (see fig. 24, left photo).

Now the power wheelchair can drive straight forward or backward.

Releasing the front wheel swivel lock:

- Turn the folding lever back to its mid-position where it will disengage the bolt from the front caster fork.
- The lever engages into the centre of the front frame in an unlocked position (see fig. 24, right photo).

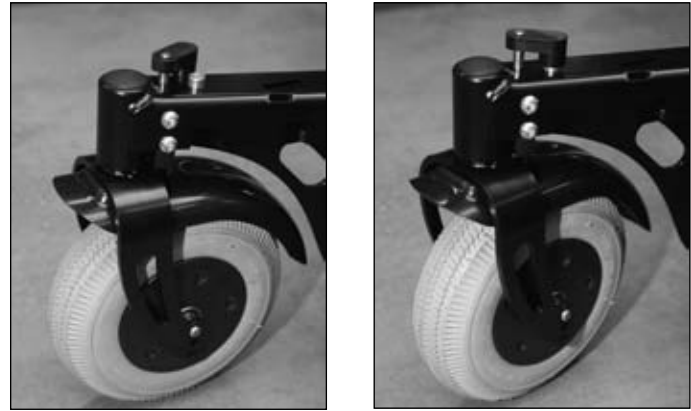


Fig. 24 Caster swivel lock engaged and released

7.4 Mechanically Elevating Footrest

The B400 power wheelchair can be equipped with mechanically elevating footrests (see fig. 25).

To elevate the footrest:

- Use the release lever on the footrest (to unblock the gas compression spring, see arrow in fig. 25).
- Move the footrest to the desired position.
- Let go of the release lever (to again block the gas compression spring).



Fig. 25 Mechanically elevating footrest

7.5 Swing-away Control Panel Holder

To allow the user to drive the power wheelchair closer to an object or under the edge of a table, the control panel can be swung to the side when using a special control panel holder (see fig. 26).

- Apply a little bit of pressure to press the control panel holder to the side and release the pivot element.
- Swing the control panel holder to the side.
- When bringing the control panel holder back to its original position, the pivot element automatically locks into place.



Fig. 26 Swing-away control panel holder

7.6 Lap Belt

⚠ WARNING

Risk of injury due to improper use of lap belt. The lap belt helps to additionally stabilise the person sitting in the power wheelchair. The lap belt must never be used as part of a restraint system for transportation of the person in wheelchair accessible vehicles.

The B400 can be equipped with a lap belt. The lap belt serves exclusively as a safety belt when driving the power wheelchair.

To apply the lap belt, insert the two buckle halves into each other until they lock in place (fig. 27). The belt buckle must snap in place audibly. Then, verify that the belt has locked by trying to pulling it apart. The lap belt should not be too tight on the body. Objects caught under the belt can cause painful pressure sores.

To open the lap belt, press the red release button.

The belt length can be adjusted on both sides. To set the length, position both buckle halves in the middle of the body.

After positioning the buckle halves at a right angle in relation to the belt, their position can be varied. Any excessive belt length will be held in place by the plastic slides.



Fig. 27 Applying the lap belt

7.7 Other Options

- Curb climbing assist: The curb climbing assist is used to clear curbs and steps that have a maximum height of 10 cm.
- Puncture-proof tyres: Solid rubber tyres
- Armrest accessories: Special adapter for the armrests of our Accessories Catalogue
- Adapter for headrest mounting kit: For attachment to the back tube

These and other optional add-on components are included in the order form and in the wheelchair accessories catalogue.

8 Failures/Troubleshooting

INFORMATION

Should you encounter problems while troubleshooting or if you do not manage to completely eliminate a problem by following the measures described here, please contact your specialist dealer.

Malfunctions are indicated by the flashing Battery Capacity LED indicator on the control panel. Table 6 describes the individual indications with the corresponding sources of the problem as well as the possible causes and measures to be taken.

If you do not manage to completely eliminate the problems with the described measures, your specialist dealer may be able to read the exact error code with the hand programming device and undertake a more systematic analysis of the system.

All problems that have ever occurred are saved in a list and can be retrieved, for example, in case of a general overhaul of the power wheelchair. The saved data can be used to determine future service and maintenance intervals, for example.

8.1 Warning

A warning indicates a status or malfunction of one or several components of the power wheelchair. The function of components that have no errors is not restricted.

8.2 Error

CAUTION

Risk of injury if the power wheelchair stops abruptly. In the event of communication problems in the bus system of the controls, the system triggers an emergency stop to prevent any uncontrolled functions. Depending on the source of the malfunction, it is possible to drive the wheelchair out of a danger zone such as road traffic after switching the controls on again. If the driving function is still not available after switching on the controls again, the brakes must be released (see section 6.4) to switch over to the pushing mode. After the power wheelchair has triggered an emergency stop, contact a specialist dealer as soon as possible!

CAUTION








Risk of accident due to uncontrolled driving behaviour. Uncontrolled movements can occur during the operation

of the power wheelchair as a result of malfunction. In this case, please contact your authorised dealer immediately.

NOTICE

Malfunction on the control unit. When the joystick is activated while the brakes are unlocked, the control system emits an error signal on the control panel. If this is not the case, there is a malfunction that must be corrected immediately by a specialist dealer.

An error affects one or several functions of the power wheelchair. The system is not fully operational until the error has been corrected.

Flashing LED	Error / Warning	Cause	Possible Corrective Action
	Battery undervoltage	Total battery discharge; batter cable damaged/ poor connection to the battery	Recharge battery; check connection to battery (if connection to battery, recharge battery)
	Poor cable connection to the left motor Defective motor	e.g. defective plug	Check connection to the left motor Check motor
	Short circuit on the battery connection to the left motor	e.g. broken cable	Check battery connection to the left motor
	Poor cable connection to the right motor Defective motor	e.g. defective plug	Check connection to the right motor Check motor
	Short circuit on the battery connection to the right motor	e.g. broken cable	Check battery connection to the right motor
	Driving function is blocked due to external influences	or battery charger is connected	Disconnect battery charger
	Joystick error	Joystick not in zero position when switching on	Switch joystick to zero position prior to switching on




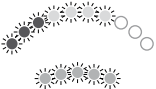
Flashing LED	Error / Warning	Cause	Possible Corrective Action
	Controller error	Controller defective	Check all connections
	Brake release	Brake release open	Check the motor brakes/ Check the connections to controller
	Battery overvoltage	Voltage too high Battery contacts loose	Continue driving slowly Check plug contacts
	Communication error between control panel (joystick) and Controller	Poor cable, loose plug connection	Check connections

Table 6 Status and error messages

9 Maintenance, Cleaning and Care

INFORMATION

A spare parts catalogue from Otto Bock is available upon request for ordering spare parts. Only spare parts supplied by Otto Bock may be used. Failure to comply will render the warranty null and void.

INFORMATION

Should you encounter problems during maintenance, contact your authorised dealer. The power wheelchair is to be checked and serviced once a year by an authorised dealer.

9.1 Maintenance Intervals

The correct function of the power wheelchair should be checked every time before using it. The items listed in table 7 must be checked by the user at the indicated intervals.

Components	Activity	Daily	Weekly	Monthly
Armrest and side panel	Fastening screws tightened Armrest and control panel secured Check armrest for damage		Prior to every use X	X
Drive wheels	Wheels must rotate freely and without axial run out Central nut on the driving shaft tightened Check if wheel mounts are seated securely Directional stability of the entire wheelchair		X	X X X
Tyres	Air pressure (printed on the sidewall of the tyre) Sufficient tread depth, at least 1 mm Check for damage			X X X
Batteries	Liquid/acid level (not with gel batteries)			X
Lighting	Visual check for damage Test to see that it functions	X	X	
Electronics	Control system free of errors If battery charger does not show any error messages on the LEDs Check plug connections		Prior to every use X	X

Components	Activity	Daily	Weekly	Monthly
Brake	Activate brake lever while control system is switched on Brake function active with engaged brake	X		X
Mechanically elevating footrest	Check ratchet mechanism for functionality and secure seating; check footplates for damage Visual check for scratches on the piston rod and oil leak			X X X
Swivelling wheels/casters	Fork seated in the receiver without play Wheels must rotate freely and without axial run out Fastening nut tightened			X X X
Padding and belts	Proper condition of padding No wear on the seat belts Check belt buckle for functionality		X	X X
Seat attachment	Check if attachment screws are seated securely			X

Table 7 Maintenance measures and intervals

9.2 Changing the Fuse

The 80 A fuse is located in a fuse holder in the front section of the battery case (see fig. 28).

Open the cap of the safety holder and exchange the fuse. Make sure that the fuse is pressed into the centre of the spring contacts and that it is not at an angle. Close the cap until you feel it snap back into place.

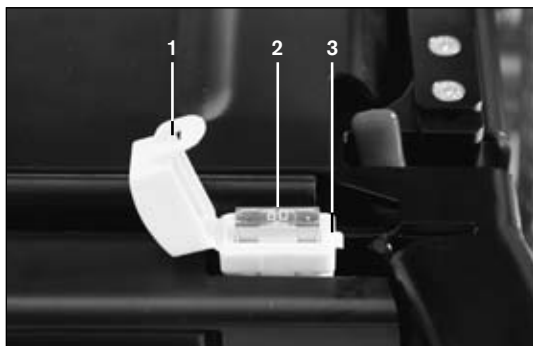


Fig. 28 Fuse holder

- 1 Cap, open
- 2 Fuse, inserted
- 3 Fuse holder

9.3 Changing Tyres

INFORMATION

Direct sunlight (UV light) causes the tyres to age prematurely. As a result, the tread surface hardens and corner pieces break out of the tread.

INFORMATION

Whenever possible, avoid parking the wheelchair outdoors. Regardless of wear and tear, the tyres should be replaced every 2 years. When the wheelchair is not used for extended periods of time, or if the tyres are heated strongly (e. g. near radiators or by sunlight shining through a window), permanent deformation of the tyres will result. Therefore always make sure that the wheelchair has sufficient distance from sources of heat, move your wheelchair from time to time, or jack up the wheelchair when storing it.

To change the tyre of a drive wheel, proceed as follows:

- Secure the wheelchair to prevent it from tilting to the side by placing a suitable base under the drive unit support.
- To dismount a drive wheel, loosen the four Allen head screws in the middle of the wheel (fig. 29) with 8 mm Allen wrench and remove the wheel.

- If the inner tube of a drive wheel needs to be replaced, loosen all Allen head screws on the inner side of the rim with 8 mm Allen wrench and pull apart the two-piece rim. The defective inner tube is now freely accessible and can be replaced.



Fig. 29 Disassembling drive wheel

To change the tyre of a front wheel, proceed as follows.

- To dismount the front wheel, loosen the screw of the axle using a 6 mm Allen wrench (see fig. 30, item 1) and pull out the axle.
- Loosen all Allen head screws (see fig. 30, item 2) with 8 mm Allen wrench and separate the two-piece rim.

The defective inner tube is now freely accessible and can be replaced.

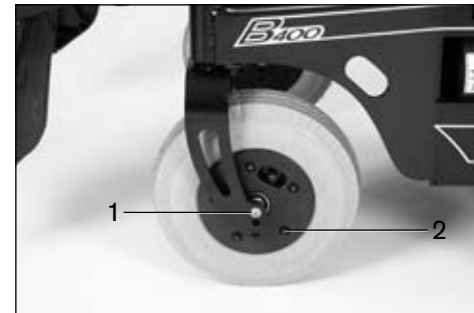


Fig. 30 Disassembling front wheel

- 1 Axle screw
- 2 Allen head screw

9.4 Cleaning and Care

NOTICE

Damage of electronics as a result of penetrating moisture. When cleaning the power wheelchair, the electronic components, the motor and the batteries must not come into contact with water to avoid malfunctions.

NOTICE

Damage to power wheelchair components. Do not use any aggressive cleansing agents, solvents, or hard brushes for cleaning the power wheelchair. Never use a water jet or high-pressure cleaning apparatus for cleaning the power wheelchair.

INFORMATION

Prior to disinfection, clean the seat and back upholstery as well as the seat cushion, the control panel and the armrest.

The power wheelchair must be cleaned regularly, depending on the amount of use and the degree of soiling.

The control panel, battery charger, armrests, and trim can be cleaned with a damp cloth and mild cleaning solution.

Use a dry brush to clean the seat and back upholstery as well as the seat cushion.

Use a damp plastic brush to clean the wheels and frame.

9.4.1 Disinfection

Wipe all parts of the wheelchair down with disinfectant.

Important information about disinfection

- Water based disinfectants should be used. Observe the usage information provided by the manufacturer.
- Prior to disinfection, clean the seat and back upholstery, seat cushion, control panel, and armrest.

10 Technical Data

Dimensions and weights	
Seat width	38 – 42 cm or 43 – 48 cm
Seat depth	38 – 46 cm or 42 – 50 cm
Seat height	40 – 50 cm
Armrest height	24 – 36 cm
Armrest length	26 cm
Lower leg length	25 – 34 cm or 35 – 44 cm or 45 – 54 cm
Back height	45 or 55 cm
Back angle	-9/1/11/21° or 0/10/20/30°
Overall width	58 cm
Total height	103 cm
Total length	108 cm
Turning radius	155 cm
Tyre size:	
Front wheel	9"
Drive wheel	14"
Air pressure	front: printed on the sidewall back: 2.5 bar

Dimensions and weights	
Weight empty	95 kg/210 lb (dependent on options)
Shipping weight* (* The specified weight varies according to the selected options and model.)	See weight empty*, of which: Side panel: < 1 kg (2.2 lbs) Footrest (standard): approx. 1 kg (2.2 lbs) Footrest, removable: 1.8 kg (4 lbs)
Max. load capacity	140 kg / 309 lbs (patient weight)
Electrical Installation	
Operating voltage	24 V
Batteries:	
Wet cell batteries	2 × 12 V, 50 Ah (5h) / 65 Ah (20h)
Gel batteries	2 × 12 V, 73 Ah (20h)
Control model:	VR2 with controller and control panel
Operating voltage	24 V DC
Max. output current per motor	60 A

Electrical Installation	
Lighting:	
Front direction indicator	H21W 12 V BAY9s
Front light	HMP 08 2,4 W; 6 V, PX13,5s
Rear direction indicator	C21W 12 V; BA15s
Rear light	C5W 6 V; BA15s
Backup	80 A
Driving Data	
Speed	6 km/h
Climbing ability	12 %
Obstacle height that can be cleared:	5 cm
Distance range	aprox. 30 km
Operating temperature	-25 °C to +50 °C
Transport and storage temperature range	-40 °C to +65 °C
Battery Charger	
Model	G25-324-6; Automatic battery charger with computer-controlled characteristic curve
Power requirements	230 V ± 15 %

Battery Charger	
Mains frequency	50/60 Hz ±4 %
Protection class	1 (protective conductor)
Charging connection	24 V DC
Nominal charging current	6 A
Residual ripple	< 1 %
Characteristic curve	IUoU, analog characteristic curve, DIN 41773
Primary fuse	T2.5G fuse link, not accessible from outside
Secondary circuit breaker	Electronic, reversible reverse battery protection, short circuit-proof, idling-proof, overheating protection
Protective system	IP 21
Ambient temperature	-10 °C to +40 °C
Display	3 LED
Weight	1.25 kg
Dimensions (W × H × D)	140 × 85 × 170 mm

Protection against corrosion	
Corrosion protection	Powder-coated frame

Table 8 Technical data

11 Disposal

INFORMATION

If a wheelchair is to be disposed of, all components and materials of the power wheelchair must be recycled or disposed of properly.

CAUTION

There is a risk of polluting the environment with battery acid. The batteries of the power wheelchair contain a toxic acid. They must not be disposed of with regular domestic waste and the battery acid must not enter the sewage water system or ground. You must observe the battery manufacturer's instructions printed on the batteries.

If the power wheelchair is no longer in use, it must be disposed of properly in accordance with national regulations.

Please return defective batteries to your dealer when buying new ones.

12 Information on Re-use

The B400 power wheelchair is suitable for re-use.

Similar to second-hand machines or cars, products that are being re-used are subject to increased strain. Features and functions must not change in a way that could endanger patients or other persons within the product's life cycle.

Based on market observations and the current state of technology, the manufacturer has calculated that the B400 power wheelchair can be used for a period of 5 years, provided that it is used properly and that the service and maintenance instructions are observed. Periods during which the wheelchair is stored at the dealer or with the cost bearer are not included in this period. It should be clearly pointed out, however, that the B400 is a reliable product far beyond this defined period of time, provided that it is cared for and maintained appropriately.

In cases of re-use, the corresponding product must first be thoroughly cleaned and disinfected.

Afterwards, the condition of the product must be examined by an authorized dealer to check for wear and tear as well as any damage.

Any worn and damaged components as well as components which do not fit or are not suitable for the new user must be replaced.

The service manual includes a service schedule for each model, detailed information, and a list of the required tools.

13 Liability

The manufacturer's warranty applies only if the product has been used under the conditions and for the purposes described. The manufacturer recommends that the product be used and maintained according to the instructions for use.

The manufacturer is not responsible for damages caused by components and spare parts not approved by the manufacturer. Repairs must be carried out exclusively by authorized dealers or by the manufacturer.

14 CE Conformity

This product meets the requirements of the 93/42/EWG guidelines for medical products. This product has been classified as a class I product according to the classification criteria outlined in appendix IX of the guidelines. The declaration of conformity was therefore created by Otto Bock with sole responsibility according to appendix VII of the guidelines.

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Otto Bock has a certified Quality Management System in accordance with ISO 13485.