en

Micro-electro-mobile

Model 1.064

Operating manual

CE

MEYRA®

We move people.

Contents

MEANING OF THE APPLIED MARKERS

Safety instructions with a coloured background are mandatory and need to be observed under any circumstance!

☞ This symbol indicates tips and recommendations

[ ] Reference to a picture number

( ) Reference to a function element within a picture.

INTRODUCTION

Read and observe this manual before first operation. Children and juveniles should read this documentation together with their parents respectively a supervisor or accompanying person before first use.

This operating manual is to help you get accustomed to the handling of the Micro-electro-mobile as well as to prevent accidents.

☞ Please note that the illustrated equipment variants can deviate from your model.

We have therefore also listed chapters with options that might not be applicable for your vehicle.

Users with visual impairments can find the PDF-files together with further information on our website:

< *www.meyra.com* >.

☞ Contact your specialist dealer when required.

Information about product safety, possible recalls and general handling instructions of our products can be found in the < *Information center* > on our website:
< *www.meyra.com* >.

Our implemented assembly groups and components fulfil the demands of the norms of correspondence acc. to EN 1021 -2 for durability against inflaming. Therefore this Micro-electro-mobile meets the requirements of EN 12184 with all connected relevant international norms when implementing lithium-ion batteries.

LIST OF MODELS

This operating manual applies to the following models:

Model 1.064

INDICATIONS

In case of allergic reactions, redness of skin and/or pressure sores while using the Micro-electro-mobile, contact a doctor immediately.

If the following indications occur we recommend the application of this mobility product:

☞ Walking disability resp. extremely limited walking ability as part of the basic need to move around in your own home.

☞ A bit of remaining walking abilities is required for the use of such vehicles.

ACCEPTANCE

All products are checked for faults in the factory and packed in special boxes.

☞ However, we request that you check the vehicle for possible transport damage immediately on receipt – preferably in the presence of the carrier.

☞ The packaging of the Micro-electro-mobile should be stored for a further transport that might become necessary.

SPECIFICATIONS

The Micro-electro-mobile is an environment-friendly electric vehicle. The Micro-electro-mobile was developed to extend the mobility of persons with health-related or age-related restrictions.

The Micro-electro-mobile fulfils the demands of handicapped people according to EN 614-1.

The model has been assigned the 'Use Class A' as per the EN12184 standard. The Micro-electro-mobile solely serves to transport one person sitting in the seat and not as a hauling aid, transporter or similar.

USE

The Micro-electro-mobile is driven through the joystick integrated in the operating module.

Refrain from jerky starts with your Micro-electro-mobile. – Danger of tipping over or tilting!

Do not use the Micro-electro-mobile without a mounted seat!

Avoid driving on inclinations or slopes with insufficient surface condition.

The Micro-electro-mobile is applicable on level, firm surfaces and can be used as follows:

– For indoor use (such as apartment, day care etc.) including short term operation on close, level and firm outside perimeters.
– Never expose the Micro-electro-mobile to extreme temperatures and damaging environmental conditions, such as sunlight, extreme cold or salty water.

You must not let yourself be carried in your wheelchair through the lifting of the Micro-electro-mobile. Parts that are not securely fixed, e.g. seat, revetment parts, can become loose and thus cause an accident.

☞ The Micro-electro-mobile is an electronic vehicle and not a carrying device.

Only apply the Micro-electro-mobile within the scope of the specifications and limitation described in chapter *Technical data* on page 42.

ADJUSTMENT

Always have adaptation and adjustment work carried out by a specialist dealer.

The Micro-electro-mobile offers manifold adjustment possibilities to individual vital statistics. The Micro-electro-mobile should be adapted to your needs by a specialist dealer before the first use. The adaptation will take into account the driving experience, the physical limits of the user and the main place of use of the Micro-electro-mobile.

☞ We recommend a regular control if the Micro-electro-mobile adjustment in order to ensure a long-term optimal provision even with changing illness/handicap patterns of the user. Especially for children and juveniles an adjustment every 6 months is recommendable.

REINSTALLMENT

The Micro-electro-mobile is suited for reinstallment. Before each reinstallment the Micro-electro-mobile is to undergo a complete inspection.

☞ Hygienical measures required for reinstallment are to be carried out according to a validated hygienic plan and must include disinfection.

LIFE SPAN

We expect an average life span of about 5 years for this product, as far as the product is applied for its designated purpose and all maintenance and service guidelines. The life span of your product depends upon the frequency of use, the application environment and care. The implementation of spare parts can prolong the life span of the product. As a rule spare parts are available up to 5 years after production is discontinued.

☞ The indicated lifespan does not constitute additional guarantee.

STATUTORY REGULATIONS

☞ The product is not permitted for use in public traffic.

HIGH-FREQUENCY RADIATION

Our electric vehicles are conform with the corresponding requirements of the EG-directive 93/42 EWG for medical devices. Nevertheless Interferences from high frequency rays of other electric devices cannot generally be ruled out.
Despite tested protective measures on the electrical equipment of the vehicle, disturbances in the operation cannot be ruled out when driving through extreme electric Interferences. These are manifested in strange driving behaviour. If the electric vehicle reacts uncontrollably in such a case or if other electric devices (such as for example highly sensitive, electromagnetic devices such as antitheft units in shopping centres) are influenced by the vehicle, stop immediately and switch the electric vehicle off. Never drive the electric vehicle in the proximity of electronic medical equipment with a high danger potential and/or life-supporting function or in the proximity of diagnostic equipment.

OVERVIEW

Model: 1.064

The overview shows the most important components and operating devices of the Micro-electro-mobile.

Pos. Description

(1) Back support
(2) Operating module
(3) Clamping screw for operating module
(4) Lever for seat locking device
(5) Support castor
(6) Selection lever drive-/push mode
(7) Main fuse
(8) Locking device of the arm support
(9) Arm support
(10) Seat
(11) Type plate
(12) Footplate
(13) Steering wheel
(14) Battery case
(15) Driving wheel
(16) Locking device of seat height
(17) Compartment

Operating module

The overview shows the operating controls of the operating module.

Pos. Description

(1) Operating module

(2) Battery charging socket

(3) Joystick

(4) Reducing the adjusted speed preselection

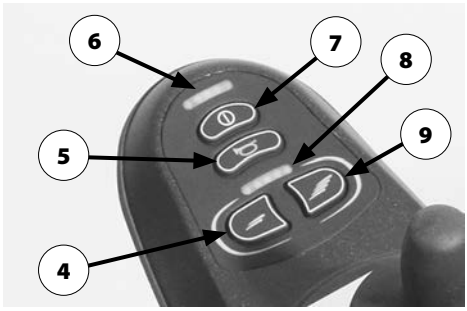
(5) Horn

(6) Control display of the battery capacity and fault indicator

(7) Switching the operating module on/off

(8) Control display of the adjusted preselected speed

(9) Increasing the preselected speed



TIPS FOR ACCIDENT PREVENTION

Only transfer into or out of the seat when the Micro-electro-mobile is switched off and the selection lever drive-/push mode is in drive mode!

An unintentional movement of the joysticks (driving and steering lever) can otherwise lead to an uncontrolled start of the Micro-electro-mobile! – Danger of accident!

First driving practice

- ☞ A low speed is to be selected on the control panel for first driving practice. Get accustomed in steps to the driving behaviour of the Micro-electro-mobile.
- ☞ Carry out a short braking and steering test at a very low speed immediately after the start of motion.

Safety information

- ☞ Curves and slopes are to be carried out at adapted speed. – Danger of overturning.
- ☞ There is a danger of tilting when driving backwards on ramps!
- ☞ The support castors can touch the ground while driving down, e.g. in front of the edge of an obstacle which can cause the drive wheels to lift off the ground. – The Micro-electro-mobile is no longer *manoeuvrable*!
- ☞ Do not switch off the operating module while driving. The Micro-electro-mobile will then switch off and stop immediately.
- ☞ The driving behaviour can change by adding or removing accessories/components.
- ☞ Do not expose the Micro-electro-mobile to extreme weather.
- ☞ Temperature influence through lamps, sun and other sources of heat can damage the upholstery and revetment or heat it up so much, that it can cause burns when they come in contact with bare skin.
  - ☞ Protect bare as well as heat sensitive skin accordingly.
- ☞ Mobile phones and other radio communication devices should, for safety reasons, only be used when the Micro-electro-mobile is switched off.

HANDLING OF THE MICRO-ELECTRO-MOBILE

Securing the Micro-electro-mobile

The Micro-electro-mobile is to be secured as follows to prevent it from rolling off unintentionally:

1. Slide the selection lever for drive-/push mode toward the back into drive mode.

2. Switch off the operating module.

Functional checks

The functions and safety of the Micro-electro-mobile must be checked before the start of each journey.

Driving

You define the speed and direction yourself with the joystick movements (driving and steering lever) while driving as well as the preadjusted maximum final speed of your Micro-electro-mobile.

BRAKES

Brake the Micro-electro-mobile down carefully and in time. This is especially the case when driving in front of people and while driving downhill!

Service brake

The motors work electrically as operating brake and carefully brake the Micro-electro-mobile down without jerks to stillstand.

Braking down the Micro-electro-mobile

For allotted braking of the Micro-electro-mobile slowly guide the joystick (steering and driving lever) back to the centre position (zero-setting).

☞ The Micro-electro-mobile stops in shortest distance after releasing the joysticks.

Braking distance

In delivery condition the braking distance is according to the maximum values of EN 12184:

– 1.0 m with 6 km/h.

The braking distance may get longer depending on the road conditions or the condition of the tyres.

Parking brake

The parking brakes are only effective when the selection lever drive-/push mode is set to drive mode. They disengage automatically when the wheelchair starts off.
The parking brakes are manually disengaged by switching the selection lever drive-/push mode to push mode.

Locking the brakes

It should not be possible to push the Micro-electro-mobile forward when the brakes are engaged.

Do not switch to push mode while driving on slopes.

To engage the brakes slide the selection lever drive-/push mode as far as possible towards the back into drive mode [1].

☞ Activation of the selection lever is intended for an accompanying person.

1

Releasing the brakes

To loosen the brakes slide the selection lever drive-/push mode as far as possible towards the front into push mode [2].

☞ Activation of the selection lever is intended for an accompanying person.

2

DRIVE-/PUSH MODE

Only switch the Micro-electro-mobile to push mode when it is standing still for positioning or in case of emergencies, but not on slopes/hills.

After push mode do not forget to switch the drive back to drive mode. Danger of uncontrolled Micro-electro-mobile movement if you do not do this!

1

Selecting the push mode

1. Switch off the operating module because the pushing will otherwise be made difficult by the electric system.
   ☞ Therefore observe chapter *Operating module-functions* on page 15.
2. Disengage the brakes [1].
   ☞ Therefore observe chapter *Releasing the brakes* on page 13.
   ☞ The Micro-electro-mobile can now be pushed.

2

Selecting the motor mode

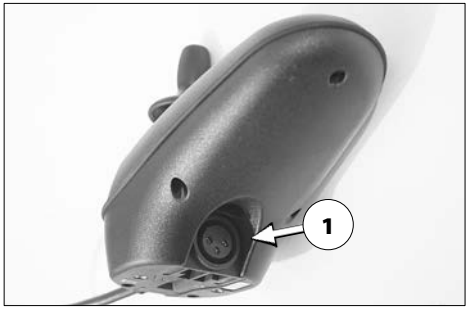
1. Activate the brakes [2].
   ☞ Therefore observe chapter *Locking the brakes* on page 13.
2. Switch the operating module on.
   ☞ Therefore observe chapter *Operating module-functions* on page 15.
   ☞ The Micro-electro-mobile is now ready for use again.

OPERATING MODULE-FUNCTIONS

Battery charging socket

Do not insert other objects into the battery charging socket. – Danger of short circuit!

To charge the batteries first switch off the operating module. Then insert the plug of the battery charger into the charging socket (1) on the front of the operating module.

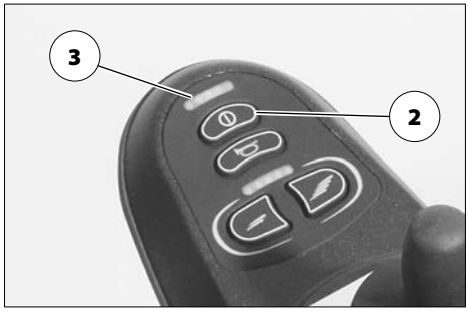


Switching the operating module on

Do not move the joystick during the system test.

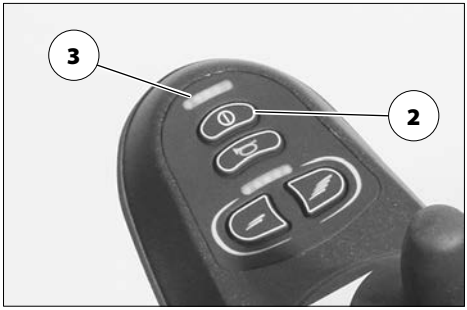
Press the ON/OFF key to switch on the operating module (2). The electronic system now performs a system test.

☞ The electronic system is ready when the battery gauge (3) is permanently lit.



Battery voltage

The battery indicator displays the battery voltage after the system test performed by the electronic system after the operating module has been switched on (3).
Less LED segments of the battery gauge are lit as the battery voltage reduces.



Battery gauge

The battery gauge (3) displays the existing battery voltage as follows:

The colours mean:

Green	Batteries charged
	☞ The charging status corresponds to the number of green lit LEDs.
Yellow	Recharging recommended.
Red	Recharge batteries immediately.

☞ An accurate battery indication is only given during travel on a level surface.

☞ Uphill/downhill travel falsifies the indication.

Evaluation

The exactness of the battery gauge depends for example on the temperature, age and strain on the battery is therefore subject to certain restrictions.

The kilometric performance (range) of the Micro-electro-mobile should be tested at least once.

Pre-selectable maximum speed

Danger of accident due to unsuitable setting of the preselected speed!

After switching on the operating module, the maximum speed setting will be the same as that selected before switching off.

Preselect the maximum speed

By pressing the keys (1) and (2) the pre-selectable final speed can be decreased or increased.

The display (3) shows the selected speed step.

Select a low maximum speed for driving situations in which you do not feel confident/ safe (e.g. driving in confined spaces, or similar).

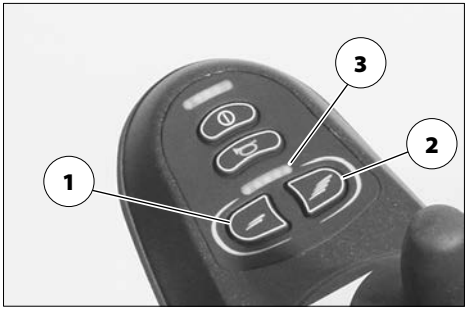
- ☞ The final speed is to be preselected in dependence on the personal impression of the respective driving situation!
- ☞ When driving on ramps, hills or slopes the speed is to be adjusted to the inclination appropriately. Never exceed the permitted max speed. – Danger of accident!

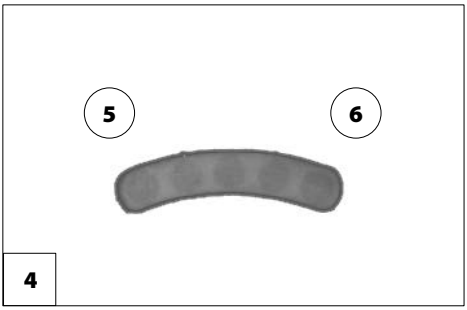
Diving speed stages

The maximum speed can be preselected in 5 driving speed stages [4].

In speed step 5 (6) the max. final speed of the Micro-electro-mobile is 6 km/h.

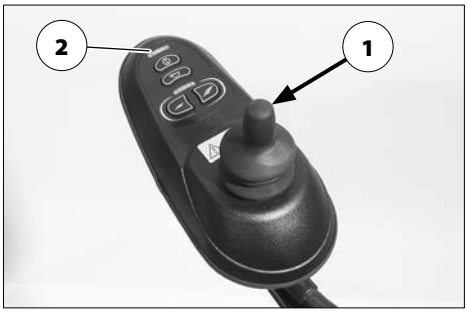
In speed step 1 (5) the max. final speed lies 20 % of the max. possible speed.





Joystick

Only move the joystick when the battery indicator (2) shows a constant light.



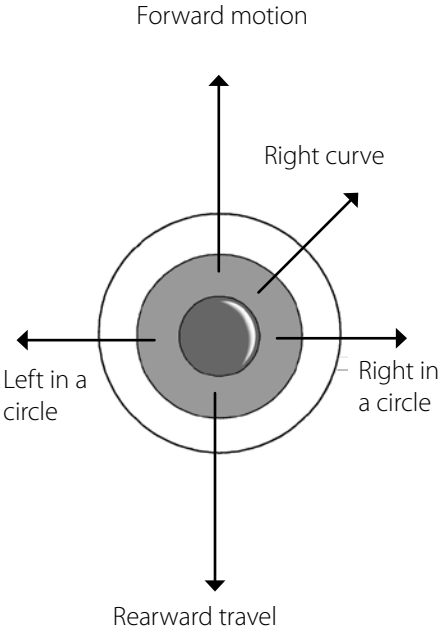
Drive and steering movement

The Micro-electro-mobile is accelerated and braked with the joystick (1). Move the joystick slowly in the desired driving direction.

The further you move the joystick away from the centre position, the faster the Micro-electro-mobile will travel (up to the preselected maximum speed).

A simultaneous lateral deflection of the joystick causes a curve travel. The Micro-electro-mobile will turn almost on the spot if the joystick is only deflected sideways.

☞ The speed is reduced automatically during reverse or curve driving.



Braking down the Micro-electro-mobile

The Micro-electro-mobile stops when you let go of the joystick.
For allotted braking slowly guide the joystick back to the centre position (zero-setting).

Keys and symbols

	**ON / OFF**	Switches the operating module on or off when pressing the key
	☞ The electronic will conduct a system test when switched on. ☞ Do not motion the joystick during this time.	
	**Horn**	A signal sounds for as long as the key is pressed.
	**Max. speed preselection < *Plus* >.**	Increases the max. speed preselection in steps (20 %) when pressing the key. ☞ For safety reasons we recommend to only press the < Plus-key > when the Micro-electro-mobile is standing still.
	☞ Level 1 (20 %) to max. level 5 (100 %).	
	**Max. speed preselection < *Minus* >.**	Reduces the max. speed preselection in steps (20 %) when pressing the key. ☞ For safety reasons we recommend to only press the < Minus-key > when the Micro-electro-mobile is standing still.
	☞ Level 5 (100 %) to min. level 1 (20 %).	
	**Display of the battery charging condition**	With decreasing battery charging condition less segments light up in the battery gauge.
	☞ Blinking light segments indicate a fault. Therefore observe chapter *Error diagnostics* on page 36.	
	**Display of the final speed**	The number of lit diodes (LED) shows the preselected maximum final speed resp. the selected driving profile. Each LED corresponds to a 20 % level.
	☞ The indicator gauge is lit when the lights are activated.	

SELECTING THE OPERATION

In order to obtain operational readiness of the Micro-electro-mobile the following directions are to be carried out in the indicated order.

1. Charge the drive batteries via the operating module before the first journey [1].

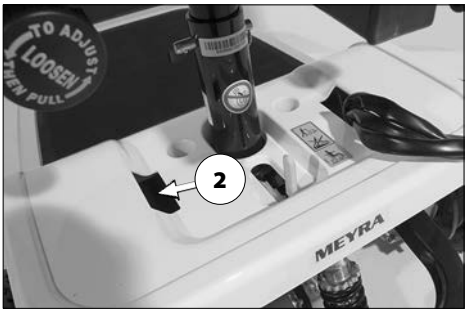
☞ Therefore observe chapter *Recharging batteries* on page 22.

2. Check whether the mains fuse is seated tightly in the fuse holder (2).

   ☞ Therefore observe chapter *Fuses* on page 34.

3. Switch the drive motors to the drive mode [3]. – For this engage the brakes.

   ☞ Observe chapter *Locking the brakes* on page 13.



4. Check the position of the operating module.

   ☞ The operating module should be positioned in such a way that you can comfortably and safely steer the Micro-electro-mobile.

Adjusting the distance to the padded arm support:

After the adjustment retighten the clamping screw. – Therefore observe chapter *Positioning the operating module* on page 24.

The distance of the operating module to the padded arm supports can be adjusted after loosening the clamping screw (4).

☞ Therefore observe chapter *Adjusting the distance to the padded arm support* on page 24.

5. Switch the operating module on.

   Press the ON/OFF-key (5) on the control panel of the operating module.

   ☞ Therefore observe chapter *Switching the operating module on* on page 15.

PRE-OPERATION CHECKS

Before starting to drive, the following should be checked:

1. The battery charging condition

2. the setting of the preselected final speed.

   ☞ Therefore observe chapter *Pre-selectable maximum speed* on page 17.

Battery charging condition

After activation the battery gauge (1) shows the battery charging condition.

☞ The displayed value depends on the surrounding temperature, the age of the battery as well as their type of strain and is therefore to be observed with limitations.

☞ If the red light segment of the battery gauge is blinking, the batteries should be charged immediately.

☞ Therefore observe chapter *Fault correction* on page 35.

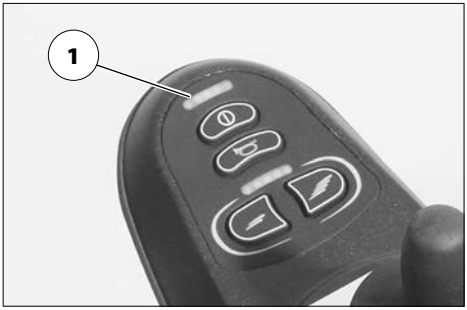
☞ View chapter *Battery voltage* on page 16.

Recharging batteries

Solely use the supplied charger that corresponds to the provided type of batteries!

The batteries should be charged right after the daily use of the Micro-electro-mobile so that the complete driving performance is available the next day.

Every battery is subject to a regular "self-discharge". The batteries should be recharged once a month when the Micro-electro-mobile is not used for a long period of time.



The Micro-electro-mobile will then always be ready for use.

☞ Charge preferably during the night. A complete charge of the batteries requires about 8 hours.

Batteries should only be charged with a battery charger that is suitable for the type and rating of this battery. The guarantee is only preserved to its full extent when the supplied and recommended battery charger is used.

☞ Avoid spark build up through electrical static (for example caused by synthetic floor covers).

☞ Observe the operating manual of the charger.

Battery charging procedure

Do not insert any objects other than the battery charger plug into the battery charging socket. – Danger of short circuit!

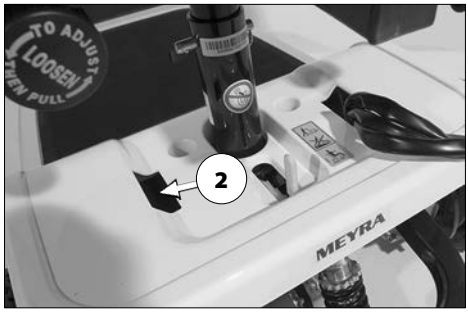
☞ For the battery charging procedure also observe the operating manual of the battery charger.

1. Secure the Micro-electro-mobile.
   ☞ Therefore observe chapter *Securing the Micro-electro-mobile* on page 12.
2. Insert the charger plug into the battery charging socket (1) of the operating module.
3. Switch the battery charger on, resp. insert the main plug of the battery charger into the corresponding power socket.

   – The battery charging procedure is initiated.

☞ The charging process only runs with an inserted battery fuse (2).
   ☞ Therefore observe chapter *Fuses* on page 34.

4. After a completed charging procedure disconnect the battery charger from the socket and remove the battery charging plug from the battery charging socket.



POSITIONING THE OPERATING MODULE

Switch off the operating module before adjusting/removing it.

Press the ON/OFF-key (1) on the control panel of the operating module.

☞ Therefore observe chapter *Switching the operating module on* on page 15.

Function description

The position of the operating module can be adjusted to suit the individual size of the user. The operating module can also be removed for transportation or storage and can be laid on the seat or stored separately [2].

Adjusting the distance to the padded arm support

Slacken the clamping screw distance adjustment (3). Afterwards slide the operating module into the desired position. In doing so carefully guide the cable and retighten the clamping screw (2) securely.

Removing the operating module

To remove the operating module, slacken the clamping screw (3).

- ☞ Remove the cables from the cable brackets.

Afterwards pull out the operating module toward the front out of the arm support tube [4].

Inserting the operating module

For drive mode insert the operating module from the front into the arm support tube (3) and adjust the distance to the padded arm support.

- ☞ Therefore observe chapter *Adjusting the distance to the padded arm support* on page 24.
- ☞ Fasten the cables in the cable brackets.

SEAT

The seat [1] with padded arm supports is removable as well as height adjustable.

Turning the seat

The seat can be turned for an easier transfer to or from the seat [2].

To release the seat lock, press the lever at side (4) forward or depending on model toward the top.

☞ After each 45° step the seat locking device engages automatically.

Removing the seat

Before removing the seat, the operating module needs to be taken off.

To remove the seat [3] press the seat locking lever at side (4) forward or depending on model toward the top.

☞ Do not use the arm supports to lift or carry the scooter.

☞ Grab sideways under the seat surface in order to lift the seat.

Attaching the seat

After reattaching the seat the operating module must be mounted again.

In order to insert the seat [1] press the lever at the side (2) forward

☞ Grab sideways under the seat surface in order to lift the seat.

After inserting the seat, align it in driving direction and let the lever at the side (2) lock into place.

Afterwards check the locking device of the seat.

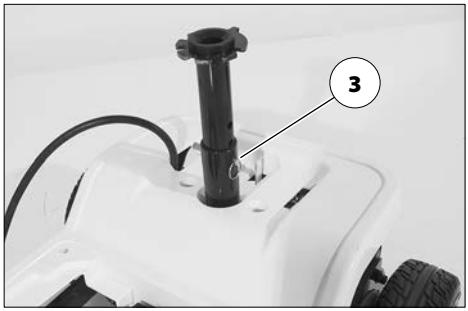
Adjustment of the seat height

In order to adjust the seat height, pull the locking pin (3) out of the seat post. After positioning the seat post, the locking pin needs to be replaced (3).

Back support

The back support can be folded down onto the seat surface (4).

To raise the back support swivel it upward toward the back [1].



Arm supports

Swivel up the arm supports

The arm supports can be swivelled up for an easier transfer to/from the seat [1].

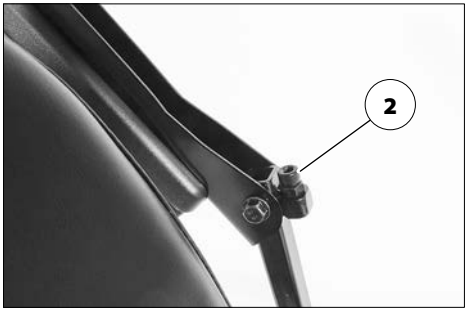
Adjusting the arm support angle

The can of the arm support is continuously adjustable by adjusting the stopper screw (2).

Remove the arm support

In order to remove the arm support [3] first turn the locking screw (4) counter-clockwise, then pull back against the force of the spring.

☞ When the locking device is released, the arm support can be removed toward the outside [3].

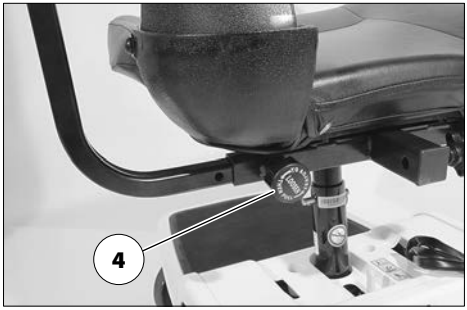


Insert and position the arm support

To insert and position the arm support, pull back the locking screw (4) against the resistance of the spring.

Then insert the arm support and slide inward into the desired position [3].

Afterwards let the locking screw (4) lock into place in the next hole and tighten clockwise.



Reducing the size of the Micro-electro-mobile

For storage or the transport, e.g. in a car, the size of the Micro-electro-mobile can be reduced as follows [1].

1. Secure the Micro-electro-mobile.

☞ For this observe chapter *Securing the Micro-electro-mobile* on page 12.

2. Remove the seat [1].

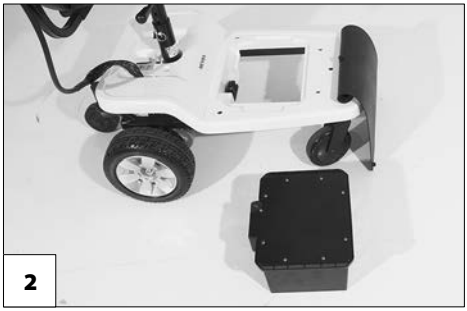
☞ Therefore observe chapter *Seat* on page 26.

3. Remove the battery pack [2].

☞ For this observe chapter *Battery pack* on page 30.

The parts detached for the transport must be carefully stowed and carefully attached again before the next journey!

1



2

BATTERY PACK

The battery pack can be removed for external charging of the batteries [1].

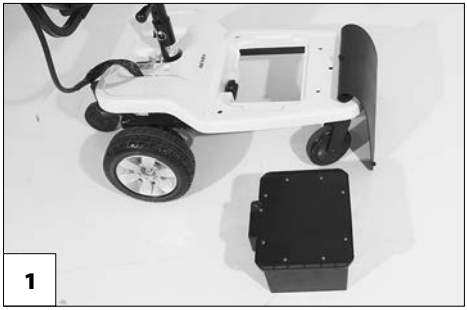
1. Secure the Micro-electro-mobile.

☞ For this observe chapter *Securing the Micro-electro-mobile* on page 12.

2. Fold the footmat forward [2].

3. Take out the battery pack [1].

☞ Therefore first press the battery pack from the bottom and then lift it out [1].



Stillstand for more than four months

In case of a stillstand of the Micro-electro-mobile, *of more than four months*, corresponding maintenance jobs need to be carried out.

1. Pull fuse in order to interrupt the power supply.

2. Connect the charger every six weeks and charge the batteries.

BASKET

With increasing weight in the basket, the backward tilting over also increases.

Do not place valuable items such as wallets openly inside the basket. - Unwanted loss of valuable items.

The basket [1] can be lifted off towards the top.

For attachment place the basket onto the two brackets.

The maximum load of the basket is 3 kg.

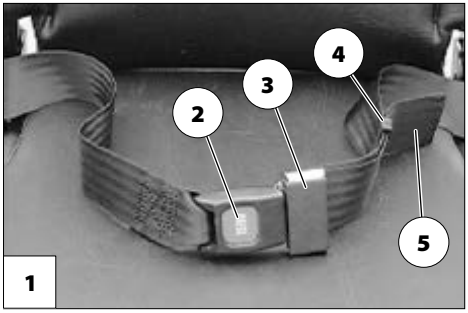
RETAINING STRAP

The retrospective assembly of a retaining strap is only to be carried out by a specialist workshop!

The retaining strap [1] serves to hold a person sitting in the Micro-electro-mobile in place.

– Additional stabilisation of the sitting position.
– Prevents the user from slipping forwards out of the seat (e.g. during abrupt braking).

The retaining strap is screwed from the bottom onto the seat.



1

Fastening the retaining strap

Make sure that no objects are trapped between belt and the body! – Thus you avoid painful pressure points.

Pull both belt halves to the front and slide the catch halves together so that they latch together [1].

☞ Afterwards conduct a pulling test.

Opening the retaining strap

To open the retaining strap press the red unlocking knob (2) inside the buckle.

Adjustment of belt length

☞ The retaining strap should not be pulled too tight.

Push or pull the strap (5) in the respective direction in order to extend or shorten the strap.

☞ Therefore hold the lock part or buckle (3) at a right angle to the strap.

Fasten excessive strap by repositioning the plastic slider (4).

Maintenance schedule

WHEN	WHAT	REMARK
Before starting out	**General** Test for faultless operation.	Carry out test yourself or with a helper.
	Checking the magnetic brake Switch the selection lever drive- / push mode to drive mode.	Carry out test yourself or with a helper. If the Micro-electro-mobile can be pushed, have the brakes repaired immediately by the specialist workshop. – Danger of accident!
Every 2 weeks (depending on distance covered)	**Adjustment screws** Screws and nuts are to be checked for tight fit.	Carry out test yourself or with a helper. Retighten the loosened adjustment screws. Contact specialist workshop upon demand.
Every 6 -8 months (depending on distance covered)	**Wheel attachments** Wheel nuts or screws are to be checked for tight fit	Do it yourself or with the aid of a helper. Securely tighten any loosened wheel nuts or screws and retighten again after 10 operating hours or resp. 50 km. Contact specialist workshop upon demand.
Every 2 months (depending on distance covered)	**Check the wheels**	Carry out a visual check yourself or with a helper. If the tyre profile is worn down or if the wheel is damaged, consult a specialist workshop for repairs.
Every 6 months (depending on frequency of use)	**Check** – Cleanness. – General condition.	View chapter *Service* on page 38. Do it yourself or with the aid of a helper.

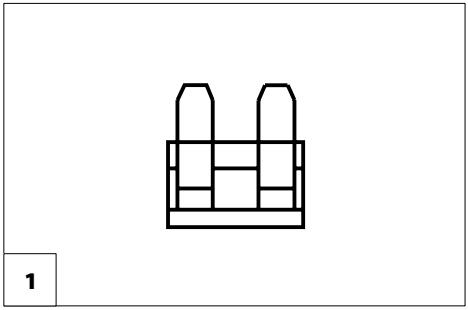
WHEN	WHAT	REMARK
Manufacturer recommendation: **Every 12 months** (depending on frequency of use)	**Maintenance jobs** – Vehicle – Battery charger	To be carried out by the specialist dealer.

Wheels

Damaged wheels are to be replaced immediately through new wheels by a specialist dealer.

☞ Always replace wheels in pairs.

Two differently worn wheels will impair the straight running course of the Micro-electro-mobile.



1

Fuses

Only replace the safety fuse with a safety fuse of the same type!

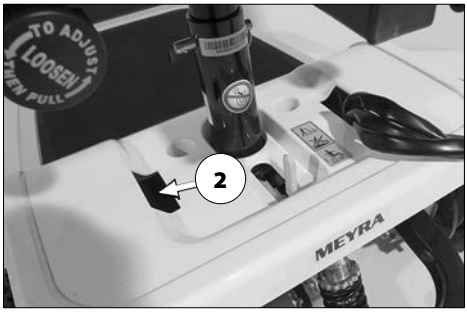
Replacing the fuses

Before replacing fuses, park the Micro-electro-mobile on a level surface and secure it from rolling away.

☞ Therefore observe chapter *Securing the Micro-electro-mobile* on page 12.

New fuses can be obtained for example at petrol stations.

☞ If the safety fuse blows again or other functional errors have the fault repaired by a specialist dealer.



Blade-type fuse

The blade fuse [1] for the battery current is inserted in the fuse holder (2) of the revetment.

☞ Observe chapter *Technical data* on page 42!

Fault correction

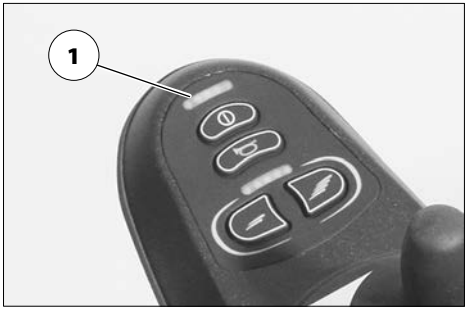
Fault	Cause	Remedy
Battery indicator on the operating module does not light up after the switch-on.	Main fuse is defective.	Replace the blade-type fuse. If necessary have it repaired by the specialist workshop
	Battery fuse defective	Have the battery fuse replaced in a specialist workshop
	Operating module defective	Have it repaired by the specialist workshop
	Plug connection of the power supply without contact.	Check the plug connections.
	Batteries deep discharged.	Have it repaired by the specialist workshop.
The battery gauge blinks after the switch-on.	The selection lever drive-/ push mode is set to push mode.	Swivel the selection lever drive- / push mode to drive mode.
	The joystick moved too early.	Switch the Micro-electro-mobile off and back on again.
	Plug connection at one of the drives without contact.	Check the plug connections.
	Malfunction in the electronics.	Have it repaired by the specialist workshop.
	Not listed faults.	View chapter *Error diagnostics* on page 36.

ERROR DIAGNOSTICS

Operating module < LED >

Error illustration through the battery gauge

In case of an **Error** the Micro-electro-mobile is switched off for safety reasons and the lighting segments of the battery gauge (1) blink. The number of blink impulses indicate the possible fault source.



☞ **Note:**
If the malfunction cannot be repaired and the Micro-electro-mobile no longer operated, contact an authorised specialist workshop.

Fault	Cause	Remedy
1 blink impulse	The battery is discharged.	Immediately charge the batteries and if necessary check the battery contacts.
2 blink impulses	The electrical connection to the left motor is open-circuit.	Check the motor connection cable, motor cable plug and motor.
3 blink impulses	The electrical connection to the left motor is defective (short-circuit).	Check the motor connection cable, motor cable plug and motor.
4 blink impulses	The electrical connection to the right motor is open-circuit.	Check the motor connection cable, motor cable plug and motor.
5 blink impulses	The electrical connection to the right motor is defective (short-circuit).	Check the motor connection cable, motor cable plug and motor.

Fault	Cause	Remedy
6 blink impulses	The drive disable function is active. The drive disable function is an electronic security function that prevents the wheelchair from being driven when a battery charger is connected.	Remove the charger from the battery charging socket.
7 blink impulses	A system or joystick error.	Do not touch the joystick during the initiation phase. – Switch the Micro-electro-mobile off and on again.
8 blink impulses	The operating module or the electronic is defective or a system error has occurred.	Check cables and connecting plugs. – Switch the Micro-electro-mobile off and on again.
9 blink impulses	Fault on the magnetic brakes of the motor.	Put the drive/push mode selection lever into the drive mode position.
10 blink impulses	The battery voltage is too high (downhill driving).	Only drive downhill very slowly and if necessary check the battery contacts.

SERVICE

Cleaning and maintenance

Do not clean the Micro-electro-mobile with a high-pressure cleaner! – Danger of short circuit!

Silicone free water based cleaning agents and care products should be used for the care of the vehicle.

☞ In doing so the manufacturers instructions are to be observed.

Do not use aggressive cleaning agents e.g. solvents, or hard brushes etc.

Upholstery and covers

☞ Clean the upholstery with warm water and hand washing liquid.

☞ Remove spots with a sponge or a soft brush.

– Wash off persistent dirt with commercial fine detergent.

☞ Do not soak! Do not machine wash!

Follow-up with clean water and allow to dry.

Plastic parts

The plastic panelling is attacked through non-ionic tensides as well as solvents and especially alcohol.

The plastic panels and parts are made of high-quality plastic.

Only clean the plastic parts with warm water and neutral detergent or soft soap.

When using commercial plastic cleansers the manufacturers application instructions are to be observed.

Finish

The high quality finish ensures an optimum of protection against corrosion.

Should the coating be damaged with scratches or similar, these areas can be touched up with our paint pen available at the specialist dealer.

Slight lubrication of moving parts will ensure for their long functioning.

Disinfection

If the product is used by more than one person (for example in a care centre), the use of a commercial disinfectant is mandatory.

Before disinfection the upholstery and operating module are to be cleaned.

A spray- or wiping disinfection is permitted with tested and accredited disinfectants.

☞ In doing so the manufacturers instructions are to be observed.

A list of the disinfectants and disinfection means tested and approved by the Robert Koch Institute can be found under:

< *http://www.rki.de* >.

During the use of disinfectants it can happen that surfaces might be affected in such a fashion that the long term functionality of parts can be limited.

Reinstallment

Before each reinstallment the Micro-electro-mobile is to undergo a complete inspection.

☞ The hygienic measures required for reinstallment are to be carried out in correspondence with the validated hygienic plan.

Should your specialist dealer carry out a revision/reconditioning or make fundamental changes to your vehicle, without the use of original spare parts, this under certain conditions may result in a remarketing of your Micro-electro-mobile. This will further entail that your specialist dealer might need to conduct new conformity assessments and tests.

Repairs

Trustfully contact your local specialist dealer of another specialist workshop for carrying out repairs. They are briefed in carrying out the work and have educated personnel.

Customer Service

In case you have questions or require help, please contact your local specialist dealer, who will provide counselling, customer service and repairs.

Spare parts

Safety relevant parts or assembly groups are only to be assembled in a specialist workshop. – Danger of accident!

Spare parts can only be ordered from specialist dealers. In case of repair work, only original spare parts are to be used!

☞ Spare parts from other manufacturers can cause malfunctions.

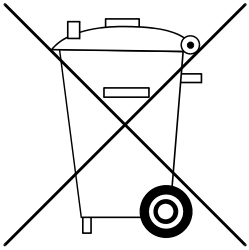
A list of spare parts with the according part numbers and drawings is kept by your specialist dealer.

In order to ensure the correct delivery of a spare part, always quote the corresponding serial number (SN) of the vehicle! You will find this on the type plate.

Whenever changes/modifications are carried out on the vehicle by the specialist dealer, the supplementary information, e.g. assembly/operating instructions must be attached to the operating manual of the vehicle, the date of the modification must be recorded and stated when ordering spare parts.

This should prevent wrong order details on future spare parts orders.

Disposal



The disposal must comply with the respective national law.

Please enquire about local disposal arrangements at your municipal authority.

Information for the specialist dealer

A maintenance and service manual is available upon demand, in which you can for example find the following information:

1. Adjustments that can be carried out with tools.
2. Step by step explanations to important repairs.
3. Information on model specific amendments.
4. A checklist for the annual inspection.

The functional tests necessary for the inspection are listed in the check list.

They are a guide for the performance of the inspection work.

☞ It does not outline the actual scope of the necessary work which can only be ascertained by an inspection of the vehicle.

After the successful completion of an annual inspection the inspection certificate should be recorded in the operating manual.

A draft for further inspection certificates can be copied from the maintenance and service manual when required. It then has to be added to the operating manual.

Programming the driving behaviour

The driving behaviour of the Micro-electro-mobile can be adjusted through the programming device.

☞ Therefore observe the respective < Maintenance and service manual >.

The driving behaviour of the Micro-electro-mobile should be adjusted to the individual requirements and the learning process of the respective user at regular intervals.

☞ The programming must be specially tailored to the user. The capacity of reaction, the constitution as well as physical and psychical abilities are to be considered. A talk with the doctor or therapist can be very helpful.

☞ Any change to the manufacturer set programming may result in an increased danger of accidents.

☞ Possible danger of tilting in curves.

TECHNICAL DATA

Maximum range

The maximum range depends to a large extent on the following factors:

- battery condition,
- weight of the driver,
- driving speed,
- driving style,
- road surface condition,
- driving conditions,
- ambient temperature.

The nominal values given by us are realistic under the following conditions:

- Ambient temperature of 27 °C.
- 100 % rated drive battery capacity as per the DIN standard.
- new condition of the drive batteries with more than 5 charging cycles.
- Nominal load of 100 kg.
- Without repeated acceleration.
- Level, firm driving surface.

The maximum range is greatly reduced by:

- frequent driving upwards on ramps,
- insufficient charging condition of the drive batteries,
- low ambient temperature,
- frequent starts and stops (e. g. in shopping malls),
- aged, sulphated drive batteries,
- frequently necessary steering manoeuvres,
- reduced driving speed (especially at walking speed).

In practical use, the maximum range under 'normal conditions' is then reduced to approx. 80 – 40 % of the nominal value.

Hill climbing ability

Gradients in excess of the permitted values (e.g. ramps) should for safety reasons only be driven when the wheelchair is empty!

Values acc. to ISO 7176-15 for model 1.064

	min	max
Overall length	760 mm	760 mm
Overall width	600 mm	700 mm
Overall dimensions	170 kg	170 kg
User weight (incl. additional load)	120 kg	120 kg
Weight of the heaviest part	25 kg	25 kg
Actual seat depth	400 mm	400 mm
Actual seat width	470 mm	570 mm
Seat surface height at front edge (without cushion)	370 mm	450 mm
Seat angle	4°	4°
Back support angle	18°	18°
Back support height	370 mm	450 mm
Footplate to seat (lower shank length)	370 mm	450 mm
Static stability downhill	6°	6°
Static stability uphill	6°	6°
Static stability lateral	6°	6°
Dynamic stability uphill	3°	3°
Arm support height from seat surface	180 mm	180 mm
Back support to front edge of arm support	290 mm	290 mm
Obstacle height	15 mm	15 mm
Minimal turning radius	560 mm	560 mm
Max. forward top speed	6 km/h	6 km/h
Minimum breaking distance from top speed	1000 mm	1000 mm
Maximum range with lead batteries	– km	10 km
Maximum range with lithium batteries	– km	17 km

Further technical data for model 1.064

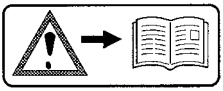
	min	max
Sound level		70 dB(A)
Protection class		IP X4
Turning area	900 mm	900 mm
Drive controller		24 V / 50 A
Engine output (6 km/h)	2x 200 W	2x 200 W
Main fuse		30 A
Additional load	– kg	3 kg
Permitted axle load front	30 kg	30 kg
Permitted axle load rear	140 kg	140 kg
Ground clearance drive		50 mm
Ground clearance battery pack		60 mm
Empty weight (with battery pack)	– kg	47 kg
Empty weight (without battery pack)	– kg	38 kg
Overall height	880 mm	960 mm

Transport dimensions		
Length	760 mm	760 mm
Width (without arm supports)	600 mm	600 mm
Height without arm supports	740 mm	740 mm

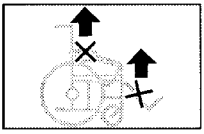
Climatic data	
Ambient temperature	-25 °C to +50 °C
Storage temperature with drive batteries	-25 °C to +50 °C
Storage temperature without drive batteries	-40 °C to +65 °C

	min	max
Steering wheel		
120 x 40 mm (5“)		puncture safe
Driving wheel		
220 x 80 mm (9“)		puncture safe
Drive batteries		
2 x 12 V 12 Ah (5 h) / 14 Ah (20 h)		maintenance free
Max. battery dimensions (LxWxH)		152 x 99 x 103 mm
Charging current, charger Type: HP0060W(B)		2 A
2 x 24 V 20.8 Ah		Lithium
Max. battery dimensions (LxWxH)		125 x 122 x 74 mm
Charging current, charger Type: HP0060W(L2)		2 A

Meaning of the labels on the Micro-electro-mobile



Attention!
Read the operating manuals and other provided documentation.

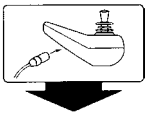


Do not lift the Micro-electro-mobile at the arm supports or leg supports.
Removable parts are not suitable for carrying.

Drive mode

Push mode

Push only on level surfaces.



Indication for charging socket

The product is **not** approved as a seat within a motor vehicle.

Indication for danger of jamming. – Do not reach in here

Meaning of the symbols on the type plate

Manufacturer

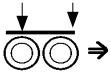
Order number

Serial number

Production date (Year – Calendar week)

Permitted user weight

max. permissible total weight



Permitted axle weights

Max. permissible rising gradient

Max. permissible falling gradient

max. ... km/h Permitted maximum speed

The product is approved as a seat within a motor vehicle

Max. permitted user weight if the product is approved as a seat within a motor vehicle

The product is **not** approved as a seat within a motor vehicle.

INSPECTION CERTIFICATE

Vehicle data:

Model:

Delivery note no.:

Serial-no.(SN):

Recommended safety inspection 1st year (at least every 12 months)

Stamp of specialist dealer:

Signature: _____

Place, date: _____

_____

Next safety inspection in 12 months

Date: _____

Recommended safety inspection 2nd year (at least every 12 months)

Stamp of specialist dealer:

Signature: _____

Place, date: _____

_____

Next safety inspection in 12 months

Date: _____

Recommended safety inspection 3rd year (at least every 12 months)

Stamp of specialist dealer:

Signature: _____

Place, date: _____

_____

Next safety inspection in 12 months

Date: _____

Recommended safety inspection 4th year (at least every 12 months)

Stamp of specialist dealer:

Signature: _____

Place, date: _____

_____

Next safety inspection in 12 months

Date: _____

Recommended safety inspection 5th year (at least every 12 months)

Stamp of specialist dealer:

Signature: _____

Place, date: _____

_____

Next safety inspection in 12 months

Date: _____

WARRANTY / GUARANTEE

We accept legal liability for this product within the scope of or general terms and conditions and warranty and in certain cases other verbal resp. agreed upon guarantees. For warranty and guarantee demands please contact your specialist dealer with following Warranty/Guarantee section and the there included information on model description, delivery note number with delivery date and serial number (SN).

The serial number (SN) can be read off of the type plate.

Precondition for the acceptance of liability in any case is the intended use of the product, the use of original spare parts by authorised dealers as well as maintenance and inspections in regular intervals.

Guaranty is not granted for surface damages, tyres of the wheels, damages due to loosened screws or nuts as well as worn out attachment holes due to frequent assembly work.

Furthermore, damage to the drive and electronics caused by improper cleaning using steam cleaning equipment or the deliberate or accidental flooding of the components are also excluded.

Interferences through radiation sources such as mobile phones with high transmission power, HiFi-equipment and other extreme interference radiators outside of norm specifications cannot be declared as warranty or guarantee claims.

Attention:

! Failure to observe the instructions in the operating manual, improperly carried out maintenance work and, especially, technical changes and additions (add-ons) carried out without our prior consent will lead to a general loss of guarantee and product liability.

☞ **Note:**
This operating manual as a part of the product is to be handed out in case of a change of owner.

We reserve the right to make technical improvements.

CE The product conforms with the EC Directive 93/42/EEC (MDD) for medical products.

Warrantee / Guarantee section

Please fill out! Copy if necessary and send the copy to the specialist dealer.

Warranty / Guarantee

Model designation:

Delivery note no.:

SN (view type plate):

Date of delivery:

Stamp of the specialist dealer:

Inspection certificate for transfer

Vehicle data:

Serial-no.(SN):

Model:

Delivery note no.:

Stamp of specialist dealer:

Signature: _____

Place, date: _____

_____

Next safety inspection in 12 months

Date: _____

NOTES

Your specialist dealer

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