

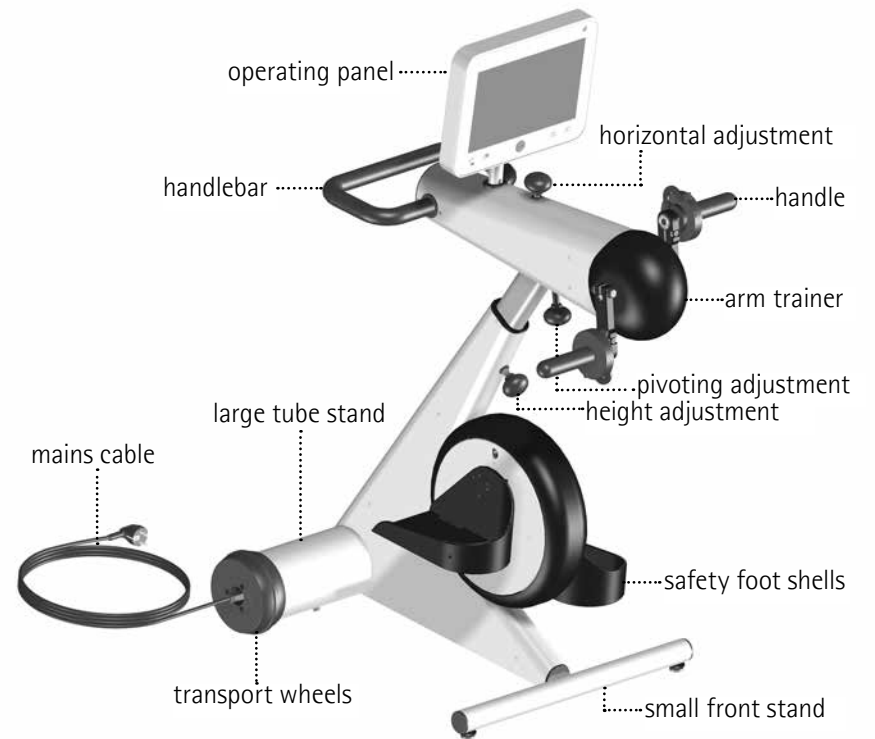
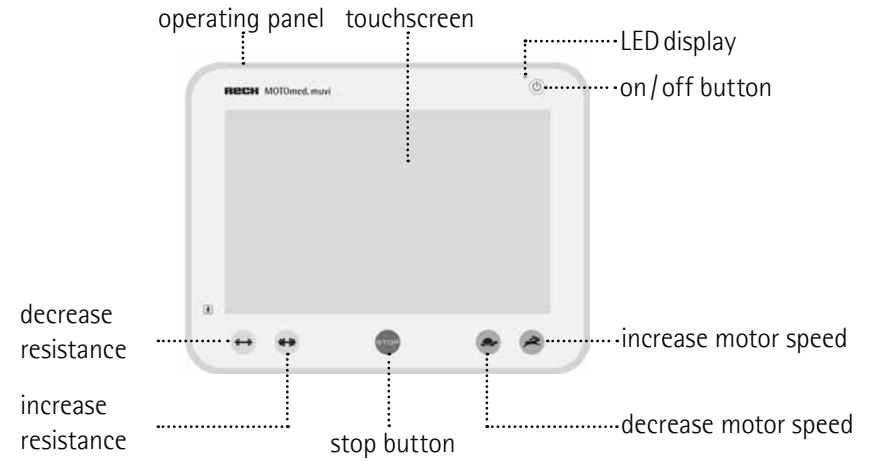
MOTOmed®
move differently

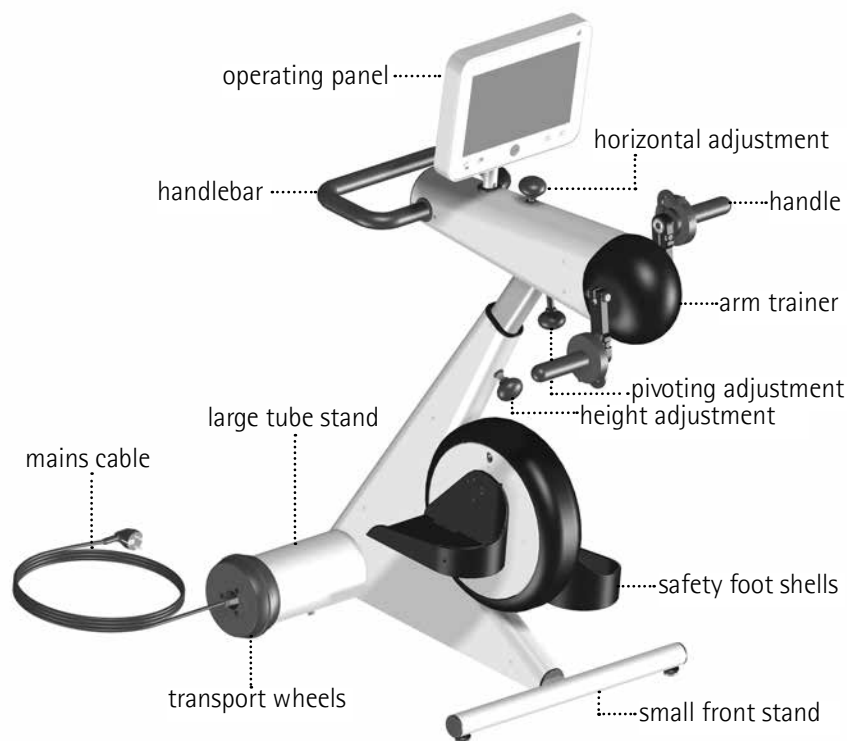
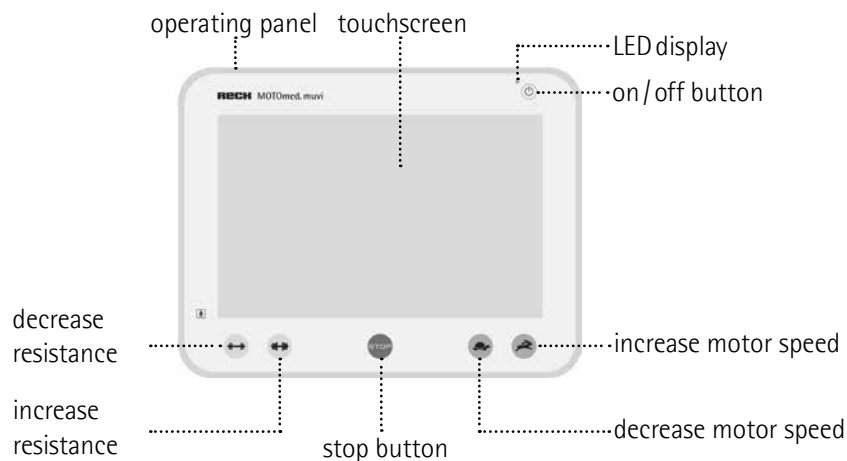
Instruction Manual

MOTOmed® muvi



RECK
Medical Devices





- GB Please use the MOTOMed only after you have read the instruction manual. If you should not understand the language of the present version, please request the instruction manual in your national language.
- DE Benutzen Sie das MOTOMed erst, nachdem Sie die Gebrauchsanweisung gelesen haben. Sollten Sie die vorliegende Sprachversion nicht verstehen, fordern Sie bitte eine Anleitung in Ihrer Landessprache an.
- FR Avant de commencer votre entraînement MOTOMed, veuillez lire les instructions d'utilisation. Si ce mode d'emploi ne correspond pas à votre langue, n'hésitez pas à nous demander une autre traduction.
- ES Utilice el MOTOMed sólo después de haber leído las instrucciones de uso. Si no entiende el idioma de la presente versión, por favor exija un manual en su lengua nacional.
- PT Use o MOTOMed somente, depois de ter lido as instruções de operação. Em caso que você não compreenda a língua desta instrução, peça por favor uma orientação em sua língua nacional.
- IT Per un ottimo funzionamento del MOTOMed leggere le istruzioni per l'uso. Se riscontrate qualche difficoltà riguardo la vostra lingua madre consultate il vostro servizio assistenza.
- NL Neem uw MOTOMed pas in gebruik nadat u de gebruiksaanwijzing hebt gelezen. Indien de gebruiksaanwijzing niet overeenstemt met uw moedertaal, aarzel dan niet ons te contacteren en een andere taalversie aan te vragen.
- SV Använd MOTOMeden endast, efter du har läst fungerande anvisningen. Om dig bör inte förstå den tillgängliga språkversionen, förfrågan var god a vägledning i ditt nationella språk.
- DK MOTOMed må først anvendes, når brugsanvisningen er gennemlæst. Forstår du ikke vedlagte brugsanvisning, rekvirer en dansk vejledning hos ProTerapi.
- PL Przed skorzystaniem z urządzenia MOTOMed prosimy zapoznać się z instrukcją obsługi. Jeśli instrukcja obsługi jest napisana w języku obcym ządajcie Państwo instrukcji w języku przez Państwa znanym.
- RU **Используйте MOTOMед только после того, как прочитаете инструкцию по эксплуатации. Если Вам не понятен язык, на котором написана инструкция, запросите, пожалуйста, на родном языке.**

gentle, strong and sophisticated ...

Congratulations! You have made an excellent choice by purchasing your MOTOmed. This movement therapy device provides out-standing performance. An innovative quality product »made in Germany« by RECK supported by the latest computer technology.

The MOTOmed is an intelligent, motor-assisted movement therapy device. Enjoy the benefits every day.

This instruction manual will help you to get to know the MOTOmed. It guides you through the functions and gives suggestions and hints on how to use your new movement therapy system to gain optimal benefit from the training. Before starting the training, please
page 9 follow the *safety precautions* listed in chapter 2.

If you have further questions or comments, please do not hesitate to
page 61 call your MOTOmed representative or the RECK customer service team. We are happy to assist you.

Enjoy the training with your MOTOmed.

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Information about this instruction manual

Carefully read this instruction manual before first use and pay attention to the listed instructions. Keep the instruction manual for future reference.

This instruction manual contains safety instructions that help you to recognize and avoid danger. The following symbol and three signal words mark potential danger.

DANGER Indicates immediate danger with high risk, which may result in death or serious injury if not avoided.



WARNING Indicates possible danger with medium risk, which may result in death or (serious) injury if not avoided.



CAUTION Indicates possible danger with low risk, which may result in minor or moderate injury or material damage if not avoided. This warning may also be used for material damage.



Following symbols indicate there are additional or further information available.



Additional information on the operation of the MOTomed as well as on the accessories and the MOTomed software.

page 77 Reference to further information or figures at other positions (like this example to page 77).

Application

The MOTOMed is suitable only for active, motor-assisted and passive movement of lower and upper extremities while seated. During the training the MOTOMed can be operated via operating panel. The MOTOMed is mobile and therefore can be used at various locations.

Conventional use

During the training the user is seated in front of the device in a safe wheelchair or in a stable chair (without wheels), with a sufficiently high back support. The user must sit upright and the chair or wheelchair must not tilt backwards.

The MOTOMed must be placed on a firm, non-slippery surface.

In general

MOTOMed use is only permitted in accordance to measures and safety precautions indicated in this instruction manual, with the consent of a physician / therapist, and with no contraindications found.

Settings and changes besides the regular operation with the operating panel may only be done if the arm and leg trainer pedals are not moving and the arms and legs, respectively, are not fixed to the MOTOMed.

Disclaimer of liability

The manufacturer does not assume liability for consequences of:

- improper and inappropriate use
- neglect of instruction manual
- willful damage and reckless use
- over intensive training
- use of unsuitable wheelchairs, chairs, or bed units

- use without prior consultation of a responsible physician and therapist
- attachment of unauthorized accessories
- repair or other interference by any person not authorized by the manufacturer

Residual risk:

The principle of the MOTOmed movement therapy device is based on the function of electric motors that drive leg and arm trainer pedals with defined forces. The electrical and functional safety is guaranteed by the manufacturer by means of comprehensive measures, therefore the residual risk is minimal if all safety measures are followed. However, it must be considered that in case of careless use, ignoring the safety measures or general misuse the rotating pedals can cause injuries. If a user is not able to follow the safety measures or cannot recognize and prevent hazardous situations, we strongly recommend to allow use only under supervision.



When using the MOTOmed please follow the prevailing safety precautions in chapter 2.

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Safety Precautions

General instructions

The MOTOMed training has to be adapted to the individual health condition of the patient. Training suggestions by the manufacturer or its distributors are given without guarantee and are non-binding. No exact instructions can be given for the use of the MOTOMed in different health situations. This applies as well to details of the training functions as their settings have to be adjusted to age, height, individual situations, post-surgical health conditions and the general fitness of the user.

The first time use of the MOTOMed must always be supervised by a qualified person giving instructions. Before starting with your training, please consult your doctor and therapist to specify training mode, extent, intensity and time of training. Please pay attention to the preset adjustments of the selected MOTOMed training program when powering on the device.

Make sure the user understands function and operation of the MOTOMed and is able to reach the operating panel to operate and switch off the MOTOMed during the training (especially for arm/upper body training with forearm shells). Otherwise supervision is required during the training or for assisted leg or arm insertion, respectively. Generally, supervision during the training is recommended at all times.

During the training, unauthorized persons (visitors, assistants, etc.) must not make any changes to the wheelchair, chair, or the MOTOMed device. In case the health condition of the user does not allow a passive speed of 20 rpm, please make sure to reduce the passive speed after starting the MOTOMed.

Generally, the handles or foot shells and the calf shells of the leg guides may get in contact with intact skin.

Please wear socks or/and shoes as well as long trousers when using the fixing straps (Velcros). This avoids direct skin contact with the foot shells or fixing tapes and therefore prevents from pressure marks, skin irritations or abrasions.

Depending on the medical condition, the leg position and the setting of the leg guides, training is not recommended in the occurrence of skin irritation, pressure marks or other injuries. However, training may resume with a doctor's or therapist's consent, and by meeting the necessary safety precautions (insertion of buffer material etc.).

You must consult your doctor or therapist, or assume the responsibility if you train on your own and have open wounds or are at risk to get pressure sores (e. g. due to sensitive skin tissue), particularly at those body parts touching the therapy trainer. The device manufacturer is not liable for injuries caused by ignoring this instruction.

There is an increased health risk if operating the device under the influence of alcohol, medication, or drugs. We advise against such use. If experiencing any pain, nausea, circulatory weakness, the training should be discontinued right away and a doctor should be consulted. The manufacturer and its distributors do not assume responsibility for improper or over intensive use.

Only put your feet into the foot shells while seated (or laying down). Never step in with full force while standing upright. Do not put more than 25 kg / 55 lbs (at a 7 cm / 2.8 in. pedal radius) of weight onto either pedal.

One-sided training, either with only one leg/arm or with big differences in weight of the limbs should be done only under supervision of a person in charge. Conduct one-sided training only at a high resistance setting or by using an original MOTOMed counterweight accessory.

Arm/upper body training

For training with the arm/upper body trainer only, take out the feet from the foot shells and put them on the floor or onto the foot rests of the wheelchair.

For leg and arm/upper body training at the same time, the arm trainer height must be extended to make sure the handle in its lowest position does not collide with the knee in its highest position.

Safety precautions in terms of upper extremity ergometry:

Especially with young children the bone stability is pretty low which easily can lead to fractures or so called bead fractures (incomplete fractures). In order to reduce the risk of such injuries, make sure the hand joints are properly supported during upper extremity ergometry. Make sure always to use the hand, hand joint and arm accessories recommended by your facility.

Also make sure the child always is sitting upright viewing the movement trainer and avoid rotating movements of the forearm and hand joints.

If you have any doubts regarding the proper power connection of the MOTOMed or any other inquiries, please get in contact with our MOTOMed service team.

Safety and technical instructions

The MOTOmed is suitable for special therapeutic use. Thus, it is not suitable for high-performance sports or making diagnoses. In this case we recommend approved and calibrated medical ergometers or treadmills.

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Being an electronic medical device the MOTOmed complies with special EMC safety standards in regard of electromagnetic compatibility. During installation and operation the EMC instructions have to be followed.

Children must not use the MOTOmed without supervision.

Keep animals away from the MOTOmed to prevent injuries to the animal.

Not applicable are some specific power wheelchairs, standing chairs and sport wheelchairs with a large stem or with foot rests that cannot be folded or removed.

Please train only after you have switched on the MOTOmed.
Do not use the MOTOmed from a standing position.

Do not change the position and location of the MOTOmed during the training or while legs or arms are still inserted or fixed.

CAUTION Risk of injury by a tilting device



The handlebar is only for holding onto the MOTOmed with the hands during operation.

Never place full weight on one side of the MOTOmed. Avoid putting pressure on the handlebar or the arm trainer with the whole body weight or partially (e.g. by leaning on or pushing up at the handlebar).

CAUTION Risk of injury by rotating pedal cranks and by moving parts of the device



Do not make any mechanical changes to the MOTOfed (pedal radius, height adjustment of handlebar or arm/upper body trainer, etc.) while the pedals/ foot shells are moving.

Always make sure to pay attention to the rotating pedals when operating the buttons of the operating panel.

Never try to grab hold of any moving parts!



Changing the pedal radius may also change the balance of forces.



If the red stop button ④ and the on/off button ① fail to stop the MOTOfed, immediately adjust the speed to 1 rpm and finish your training right away, or unplug the mains from the outlet. You can train again as soon as the malfunction is eliminated.



Portable and mobile HF communication devices, like mobile phones or amateur radio stations can influence the functionality of the MOTOfed. Such devices carry the symbol illustrated on the left side and can thus be recognized.

CAUTION Risk of overheating the casing components



Permanent direct solar radiation may cause overheating of the casing components, therefore position the MOTOfed suitably.



Due to the thermal output, the surface temperature of the operating panel may be up to 13°C/55°F higher than the surrounding temperature. Even at the maximum surrounding temperature (40°C/104°F) and without direct radiation this may cause the buttons to heat up to a temperature of 53°C/127°F. User who are at risk for injuries at this temperature should protect themselves accordingly.

CAUTION



Risk of damaging motor and electronics

Do not actively push against the preset passive rotation movement.

WARNING



Risk of injury by electric shock

Never use the MOTOMed if the side casing is demounted. Do not open the casing and do never insert metal objects into the MOTOMed.

The MOTOMed must only be opened by qualified and trained persons. Before opening the MOTOMed, the device must always be unplugged from the mains socket!

Never use the MOTOMed in wet or humid environment.

The MOTOMed must not come into contact with water or steam.

If an object or liquid gets into the MOTOMed you have to have it checked by qualified personnel before you can continue to use it.

Always make sure to keep oil away of the drive mechanisms.

Repairs may be carried out only by or under direction and supervision of qualified personnel whose training, knowledge and experience enable them to evaluate the repair and to recognize the potential effects and hazards that might result out of the repair.

Making changes to the MOTOMed without manufacturer consent is not permitted.

Only original parts can be attached or exchanged.

In commercial facilities, the safety requirements of the Association of Commercial Trade for electrical installations and equipment must be observed.

Security related controls according to the Medical Device Operator Ordinance (German MPBetreibV) have to be carried out at least every second year. Please pay attention to follow the most recent version of the regulation DIN EN 62353.

Do not leave the packaging material laying around. Plastic foils/bags, foam parts etc. can be hazardous toys for children.

In the event that you pass this MOTomed on to another person, please also enclose this instruction manual.

Guidance for visual inspection of the MOTOMed before the start of training

Your MOTOMed is a high-quality medical device and thus has been developed by specific, high safety and quality standards, in accordance to guidelines governing the production of medical devices. In compliance to legal regulations the manufacturer of a medical product is expected to provide the user with multiple safety instructions that can be found on the following pages.

Please note, the number of instructions do not suggest that the user of the MOTOMed is at a higher risk, compared to the other daily electronic devices. More so the most instructions are a result of compliance to the particularly strict medical product regulations, to ensure user safety. In the interest of our clients we gladly and consciously comply to these regulations.

Even if some instructions seem self-explanatory, we still would like to ask you to carefully read the following instructional pages, in order to maintain a long-lasting and high standard MOTOMed device.

Please do the visual inspection **before** the training to ensure orderly condition of the device. The following inspections are completed within a few moments.

Test step	Necessary measures in case of fault detection during visual inspection	Explanation
1. Inspection of power supply and mains cable		
Is the feeder (mains cable) free from damage, e.g. abrasions, pressure points, porous and cracked spots?	In case of apparent damage, the feeder needs to be replaced. Repairing the damaged feeder is not permitted. Therefore, you are advised to replace it with an original, tested, and authorized part of the RECK Company. Therefore, please contact your RECK service partner.	A damaged mains cable may raise the risk of electric shock, either through direct exposure to the damaged spot, or by connection to the MOTOMed casing. Therefore damaged mains cables must not be used at any time!
Is the feeder positioned so that: a) it is not in contact to the device? b) it cannot be squeezed or rolled over with other objects/ devices? c) it cannot be tangled in the cranks? d) it cannot be mechanically damaged in any other way? e) no person can stumble over it?	Never use a mains cable with open wires or damaged isolations! The mains cable needs to be positioned so that no person can stumble over it, and any mechanical damage can be prevented.	A damaged mains cable may raise the risk of electric shock, either through direct exposure to the damaged spot, or by connection to the MOTOMed casing.
2. Inspection of device condition		
Are the used accessories free from visible damage?	Check if faulty parts can be reconditioned or if they need to be replaced.	If parts of the device are damaged, safe functionality cannot be guaranteed. Are there any visible defects at the remote control (cracks, holes in the cover), if yes, the remote control must be replaced.
Is the coating of the handles free of damage?	Handlebar replacement by manufacturer service.	The plastic coating of the handlebar offer additional protection to the user against electrical tension.
Is the device free from dirt?	Remove dirt prior to operation of device and according to cleaning instructions.	Cleaning reduces the risk of transmitting diseases.

Test step	Necessary measures in case of fault detection during visual inspection	Explanation
Are the accessories fitted and suitable for the user?	For example if the optionally available forearm shells are too small or too large, please exchange them by suitable ones. Accessories should be selected and used so that for example nothing is irritating the skin.	Improperly chosen accessories can result in an increased risk of injury and a failure to perform the intended purpose. Please do this assessment prior to starting the training. If the user is unable to independently do the assessment, the caregiver in charge must do the evaluation instead.
If training from a wheelchair: Before the training, check if the brakes of the wheelchair are fixed.	Pull the brakes and check if the wheel chair is in a steady position.	The wheelchair must not move out of position during training.
If using a power wheelchair for the training: Is the wheelchair powered off and are the brakes locked?	Power off the wheelchair and pull the brakes. Afterwards check if the wheelchair is in a steady position.	The wheelchair must not move out of position during training.
Is the arm/upper body trainer swiveled backwards and secured so that the handlebar can be used to hold on to during leg training?	Swivel the arm/upper body trainer backward before starting the leg trainer.	The handlebar offers better hold and legroom during the course of leg training.
Is suitable clothing used for the training?	Wide pants, long towels, and scarves that could get tangled in the pedal crank must not be worn (especially during arm training). Do not wear shoes with shoelaces. Long hair is to be pulled up properly or is to be covered prior to doing arm/upper body training.	Inappropriate clothing can tangle around the foot shells /pedal cranks and thus result in injuries. Should garments or hair get caught in between the pedal cranks, push the stop button or the on/off button immediately in order to stop the crank movement and to release the captured parts without any further damages.

Test step	Necessary measures in case of fault detection during visual inspection	Explanation
<p>Is the device positioned and set up so that the intended movements can be executed without hitting other objects/casing parts? For leg training or simultaneous leg and arm/upper body training: is it assured that the legs do not collide with the handlebar or the arm/upper body trainer?</p>	<p>Make sure to have enough legroom when adjusting the height of the arm trainer: During the training, legs must not collide with the handlebar or the arm/upper body trainer. Make sure to maintain a minimal insertion of 10 cm / 4 in. when adjusting the height of the handlebar or the arm/upper body trainer.</p>	<p>To prevent injuries, the MOTOMed needs to be positioned and set up so that the user does not collide with any surrounding objects.</p>
<p>Is the small front stand pulled out sufficiently?</p>	<p>Pull out the small front stand sufficiently. Pay attention to keep a minimal insertion of 10 cm / 4 in.</p>	<p>Pulling out the small front stand prevents tilting forward of the device.</p>
<p>Are all the adjustable components (motor console, arm/upper body trainer, foot stand, handlebar,...) fastened properly with a clamp screw or an Allen key and are screws tightened?</p>	<p>Ensure strong hold by retightening the clamping screws and the Allen screws.</p>	<p>Loose screw connections can cause detachment of parts during the course of training. Should any of the components become loose the training must be stopped immediately by pushing the stop button. Subsequently, the loose part is to be secured into proper position.</p>
3. Review of optimal training conditions		
<p>Is the MOTOMed positioned on even floor and is it not shaking or tilting over?</p>	<p>In order to prevent shaking or tilting over select a suitable training spot. Possibly, adjust the rubber stoppers on the front stand.</p>	<p>The device must not shake or tilt over since this may increase the risk of injury to the user / patient.</p>
<p>Is the floor providing enough grip so that no shifting occurs?</p>	<p>By choosing a slip proof floor you can ensure a safe seating and device position. For the small front stand, suction caps are available as accessory order. An anti-slip mat that goes below the MOTOMed is available as accessory.</p>	<p>The MOTOMed might slip on straight floors (tiles, laminate, parquet floors etc).</p>

Test step	Necessary measures in case of fault detection during visual inspection	Explanation
Is the chair or wheelchair positioned so that the device does not tilt over or move?	<p>If your wheelchair tends to tilt or shift due to spasticity, or during active training, the use of a wheelchair stabilizer is recommended.</p> <p>Only stable and firm chairs may be used, if possible with an arm rest. The use of chairs with wheels while operating the MOTOMed is not permitted.</p>	<p>In case of strong spasticity in the lower extremities the drive force of the pedals may cause shifting or tilting of the seat. This is to be prevented with appropriate measures in order to prevent injuries.</p> <p>Chairs with wheels can shift during the training.</p>
Are the foot shells/pedal cranks moving freely? Has the danger been excluded of capturing and tangling objects during successive training sessions?	<p>Please remove all objects from the crank area, particularly those that may get tangled in the cranks during the pedal movement.</p> <p>Pay particular attention that no hair, scarfs, or jewelry pieces get caught in the pedal cranks.</p>	<p>Please pay attention that nothing gets caught into the motor-driven rotating components. Herewith, same precautionary measures apply as with e.g. kitchen devices or drilling machines.</p>
Is the disk/pedal radius the same on both sides?	<p>Please adjust equal pedal radius on both sides in case it is set differently. The adjustment procedures for the crank length are described on page 36 .</p>	<p>Uneven pedal crank lengths will cause an uneven cycle motion due to the different force effects. Please adjust equal crank length on both sides.</p>
For leg arm/upper body training, are the legs/arms of the user fixed securely in the foot shells/forearm shells ?	<p>Fix the the legs/arms as indicated in chapter "prearrangements" (page 32).</p>	<p>During the course of training, legs and arms should not move unwontedly out of the foot shells or the forearm shells.</p>

Test step	Necessary measures in case of fault detection during visual inspection	Explanation
<p>Are no other electrical devices, that are not registered as medical products, in the patient's reach?</p>	<p>Please remove all other electronic devices, not authorized as medical products, from user's (patient's) reach.</p>	<p>Should the patient come in contact with other mains-supplied devices during the course of training, the user protection from an electric shock is no longer guaranteed by the high standard isolation of the MOTOMed device but is determined by the standard of the other device that is in contact with the user. In order to effectively provide the full medical product safety standard of the MOTOMed, all other mains-powered devices, that are not registered medical devices, are to be removed from the user's reach.</p>

24 **Setup**

27 **Stand-by mode**

28 **Transport**

Setup

Included in delivery:

- MOTOfed muvi
- Operating panel, packed separately, with supplied Allen key AF 4
- flat wrench AF 15, supplied
- instruction manual MOTOfed muvi
- operation video on USB flash drive

Position the device securely| extend the small front stand

For optimal stability extend the small front stand.

CAUTION



Risk of injury and material damage

Be careful while lifting and letting down the MOTOfed for extending the small front stand. Do not drop!

Lift the MOTOfed at the small front stand ① and carefully tilt it backwards. Put down the MOTOfed onto the handlebar ②. Protect it with a cushion.

Open the two Allen screws ③ with the supplied Allen key ④. Put the Allen key ④ into the Allen screw ③ and turn the Allen key ④ counter-clockwise. Do not loosen the Allen screws ③ completely, they are not secured.

Extend the small front stand ① about approximately 15 cm / 6 in. . Ensure a minimum insertion of 10 cm / 4 in. .

Fix the small front stand ① in its position. Put the Allen key ④ into the Allen screw ③ and turn the Allen key ④ clockwise. Tighten the Allen screws ③ until you feel a resistance and put the MOTomed back up.

The MOTomed only stands safe and steady if the small front stand ① is fixed properly!

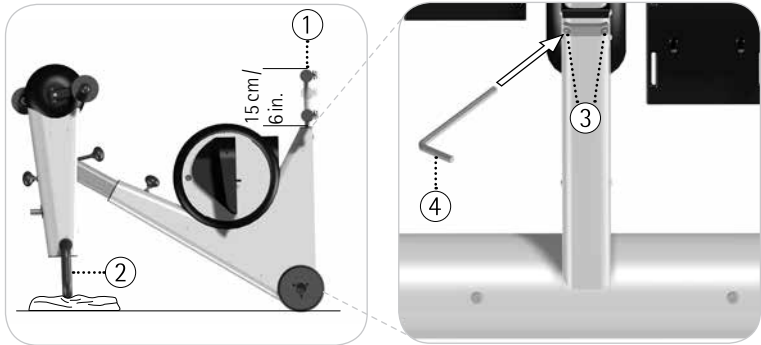


fig. 4.1, 4.2

Attaching the operating panel

Unpack the operating panel ①. Slide the operating panel ① onto the support ②. Make sure the opening ③ is exactly above the cable outlet ④. Do not squeeze or bend the cables!

Fix the operating panel. Put the supplied Allen key ⑥ into the pre-installed Allen screw ⑤.

Turn the Allen key ⑥ clockwise and tighten the screw ⑤ until you feel a resistance.

Plug in both motor control cable connectors ⑦ at the bottom side of the operating panel ⑧. The connectors must lock in place.

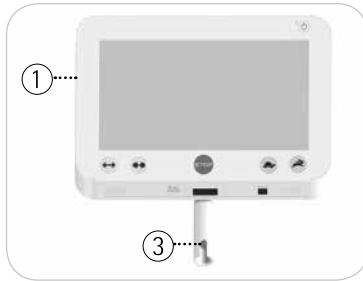


fig. 4.3, 4.4

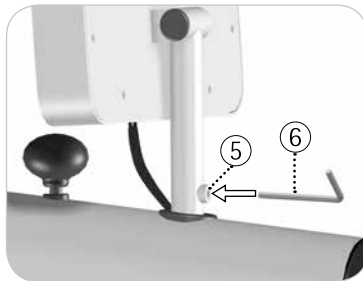
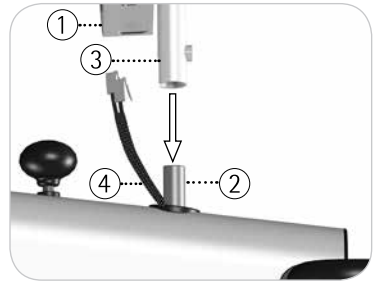
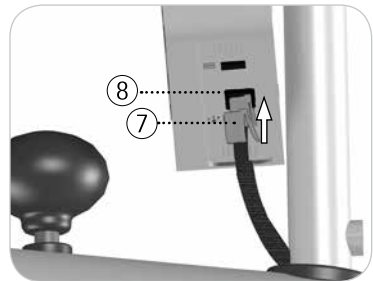


fig. 4.5, 4.6



Stand-by

At first connect the mains cable ① with the inlet plug ② at the center of the left wheel. Make sure the cable is connected properly. Then plug in the mains plug ③ of the mains cable ① into the power socket of your room.

The power socket must be accessible for a safe and fast unplugging of the MOTOMed.

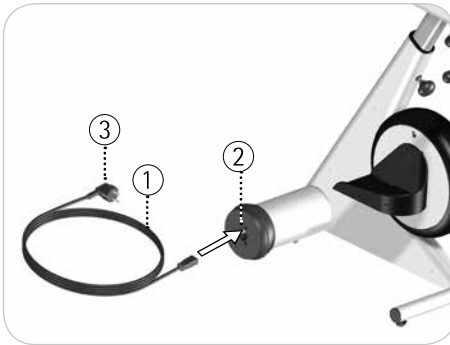


fig. 4.7

Now the MOTOMed is in stand-by mode.

page 28 You can tell by the green LED ① on the operating panel. Push the on/off button ② to switch on the MOTOMed. The main screen appears. Push the on/off button ② again to switch off the monitor. Now the MOTOMed is in sleep mode. Push and hold the on/off button ② for 3 seconds and the MOTOMed goes into stand-by mode.

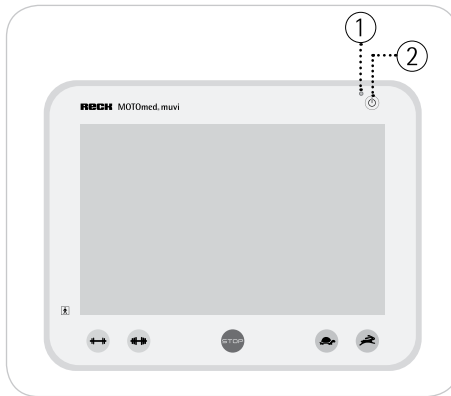


fig. 4.8

15 minutes after the training or after the last operation, the screen saver appears to save energy. 30 minutes later the screen turns off automatically, after 15 more minutes the MOTOMed goes into stand-by mode.

The MOTOMed is made for continuous stand-by mode. For repair, cleaning or transportation of the MOTOMed, the mains plug has to be unplugged.

Transport

The MOTOMed is equipped with two large wheels for easy moving within a building. In order to protect sensible surfaces from damage the transport wheels are covered with a rubber band.

page 29 Before transport, remove the mains cable completely.
To move the MOTOMed, please hold the handlebar ① and carefully tilt it backwards until you can easily pull or push the MOTOMed on its large wheels ②.

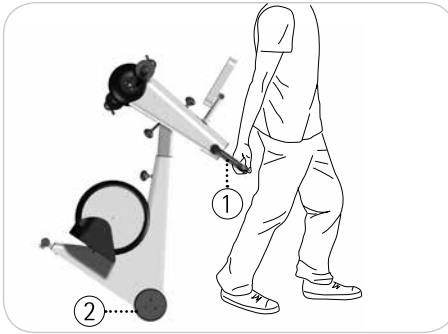


fig. 4.9

If you have to move the MOTomed over any small bumps, make sure that both wheels ② move simultaneously (parallel) over the bump.

CAUTION**Risk of material damage by jerky movements**

Do not transport the MOTomed on uneven grounds (e.g. cobblestone). The MOTomed electronics and casing may get damaged.

For longer distances and uneven grounds you should use a suitable transport equipment (e.g. trolley or pushcart) in order to protect the MOTomed

32 **Introduction**

32 **Preparation**

32 **Operating panel**

33 **Training operation**

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Introduction

Details about how to use the MOTomed are explained in the following pages.

Preparation

Position the MOTomed, preferably with the large tube stand facing a wall. Sit in a wheelchair or in a stable chair in front of the MOTomed within a suitable distance to the device - the legs need to move freely but the knee joints must not be stretched out completely at any time while training.

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WARNING



Risk of injury!

Make sure the wheelchair or chair is secured to avoid moving or slipping.

If necessary, use the Velcro straps to fix your feet to the foot shells and your calves to the calf shells (if available).

Operating panel

The MOTomed operating panel ① provides real buttons for the most important functions, 'motor speed' ② / ③, 'resistance' ④ / ⑤ and 'stop' ⑥.

All other functions and the operation of the menu is controlled via touchscreen ⑦, which reacts on finger pressure.

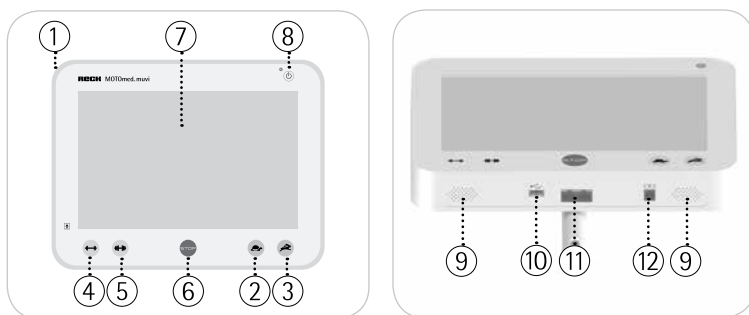


fig. 5.1, 5.2

The loud speakers ⑨, a USB port ⑩, the motor control cable connector ⑪ and a serial interface ⑫ are located at the bottom of the casing.

The USB port ⑩ may be connected to a USB flash drive. It is used to save training data and to update the software.



Please refer to the supplied operation video for detailed information about function and settings of the operating panel.

Training operation

page 32 Push the on/off button ⑧ to switch on your MOTOmed.
The main screen appears.

Free training



fig. 5.3

Insertion aid

Push **Insertion aid** of the main screen.

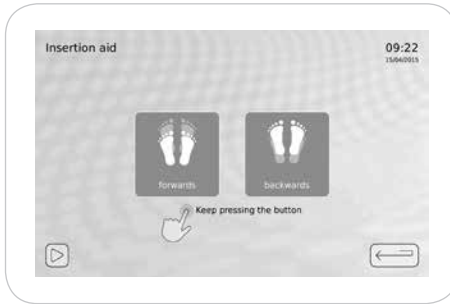


fig. 5.4

In the 'Insertion aid screen', push **forwards** or **backwards** until the foot shells are in the desired position. You can now easily and comfortably insert your feet, one after the other, each in the lowest pedal position.

Go to the main screen and select the leg or arm trainer in order to start the training.

Now the foot shells and/or the handles start moving slowly at the preset passive speed.

Active/passive training

After the warm-up phase, you can either continue with the motor driven (passive) training or you just start pedaling actively at any time (active training).


Motor speed

page 32 During the training you can change the passive speed from 1–60 rpm by pressing the buttons ②/③.

Resistance

During the training you can change the passive speed from 0–20
page 32 by pressing the buttons ④/⑤.

You can pause your training at any time by pushing the red
page 32 stop button ⑥.

Push  to go to the main screen.

Push  to go back.

Leg trainer

Seating position

The distance between seat and MOTOMed should be chosen in a way that ensures the legs are slightly bent at any time of the pedal revolution. Sit in a wheelchair or in a stable chair in front of the MOTOMed within a suitable distance to the device - the legs need to move freely but the knee joints must not be stretched out completely at any time while training.

You can hold onto the handlebar ① during the leg training.

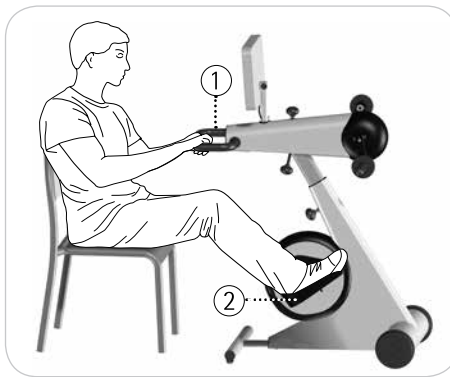


fig. 5.5

Pedal radius

Your MOTomed provides a 2 stage pedal radius adjustment:

stage 1: 7 cm / 2.8 in. (standard)

stage 2: 12.5 cm / 5 in.

WARNING



Risk of injury!

The MOTomed must be switched off and the feet must not be inserted when changing the pedal radius.

CAUTION



Risk of damaging the MOTomed!

Avoid scratches and damage when using tools. Do not drop the foot shells.

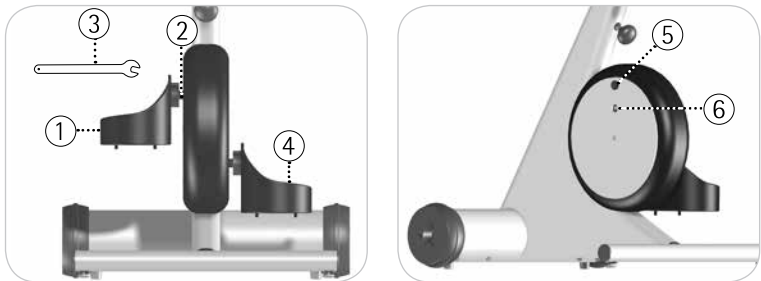


fig. 5.6, 5.7

In order to change the pedal radius of the left side hold the right safety foot shell firmly (4) and use the supplied flat wrench AF15 (3) to open the bearing screw (2) of the left safety foot shell (1).

Remove the left safety foot shell (1) completely. Support the left safety foot shell (1) so it does not drop.

Use a suitable tool to remove the covering cap (5) of the second hole.

Use this hole (2) to fix the bearing screw of the left safety foot shell (1) with the supplied flat wrench AF15 (3). Hold the right safety foot shell (4) and tighten the bearing screw (2) until you feel a resistance.

Push the covering cap ⑤ onto the first hole.
Repeat the same procedure with the right safety foot shell ④.

Hint:

Please make sure the same pedal radius is adjusted on both sides in order to guarantee a smooth pedal movement.
Make sure the bearing screws ② are tightened properly on both sides.

Arm/upper body trainer

Your MOTomed is equipped with an arm trainer as standard. Therefore you can do arm/upper body training additionally to the leg training. You can do the arm/upper body training separately or with the leg training simultaneously.

Arm/upper body trainer positioning

For arm/upper body training only, take out the feet from the foot shells ①.

Open the screw knob ② below the arm/upper body trainer ③. Swivel the arm/upper body trainer ③ 180° clockwise. Then tighten the screw knob ② again until you feel a resistance.

Swivel the operating panel ④ 180° clockwise.

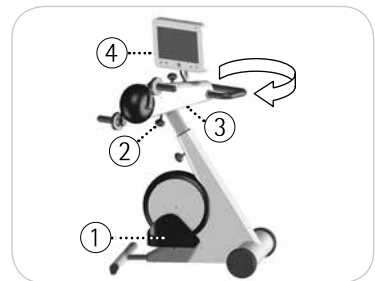
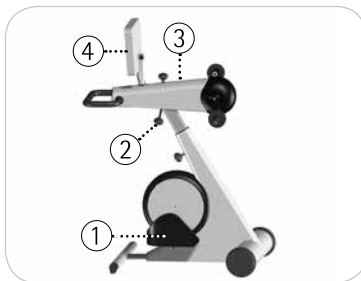


fig. 5.8, 5.9

Horizontal adjustment

Use the same distance from seat to MOTMed as for leg training. Arms should never be fully stretched but always slightly bent. Use the horizontal adjustment to regulate the distance between the arm/upper body trainer ① and yourself. Open the screw knob ② at the top of the arm/upper body trainer ① and push or pull it into the required position. Then tighten the screw knob ② again until you feel a resistance.

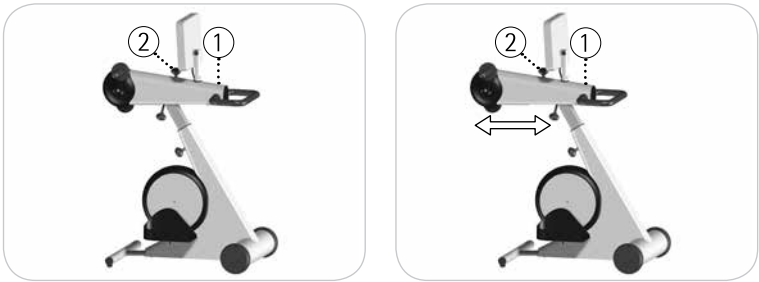


fig.. 5.10, 5.11

Vertical adjustment

The arm/upper body trainer ① has to be set on chest level or slightly below. Open the screw knob ② at the supporting module and adjust the arm/upper body trainer ① to the suitable height. Then tighten the screw knob ② again until you feel a resistance.



fig. 5.12, 5.13



fig. 5.14

- 42 **Safety foot shells**
- 42 **Leg guides with calf shells**
- 44 **Self-operating foot holders**
- 45 **Synchronized arm/upper body trainer with quick switch to the standard option**
- 45 **Tetra handles with quick release system**
- 46 **Hand fixation with wrist cuff**
- 46 **Hook grip**
- 47 **Forearm shells with arm cuffs and quick release system**

Safety foot shells

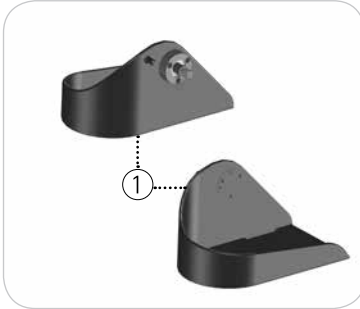


fig. 6.1

The safety foot shells ① are covered with soft PVC which is easy to disinfect. They have a large safety side panel for a high foot and ankle protection. The safety foot shells ① are equipped as standard with Velcro straps at the ankle level for a safe and easy fixation of the feet.

Optionally, there are safety foot shells with special fixing tapes available which are easy to disinfect.

page 44 The safety foot shells can be equipped with the accessory *»self-operating foot holders«* if a stronger fixation of the feet is required.

Leg guides with calf shells

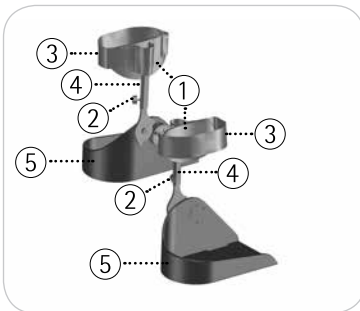


fig. 6.2

The shape of the leg guides ④ with calf shells ① enable an easy fixation. Due to their flexible shape the calf shells ① can be adjusted to the lower leg.

The calf shells ① need to rest against the calves for an optimal guidance and hold of the legs.

Loosen the wing screws ② and adjust the height of the leg guides ④. Then tighten the wing screws ② again.

CAUTION



Please ensure a minimum insertion of the leg guides ③ of 3 cm / 1.2 in. .

At first fasten your feet to the safety foot shells ⑤ then fasten your calves to the calf shells ①.

If the wing screws become loose, noise will occur. Please tighten the wing screws ②.

Optionally, there are leg guides with calf shells with special fixing tapes available which are easy to disinfect.

Leg guides with plastic calf shells long



fig. 6.3

There are leg guides with plastic calf shells available ① that provide an extra large supporting piece.

Self-operating foot holders

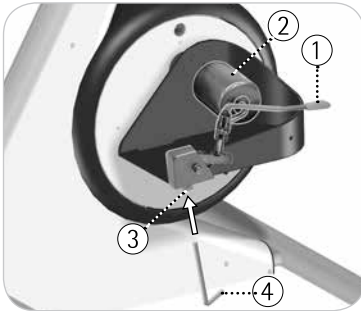


fig. 6.4

The self-operating foot holders help you to fix and loosen your feet easily and independently.

Open the foot holders and insert your feet. Use the lever (1) to guide the foot holder up and to the side for positioning the foam roll (2). Close the lever completely (1) (you will feel the resistance of the safety lock).

Adjusting the spring pressure of the foam roll

The contact pressure of the foam roll can be adjusted by tightening (clockwise) or loosening (counter-clockwise) the setscrew (3) at the bottom side of the foot holder. Use the supplied Allen key (4) for this adjustment.

Loosening the set screw (3) will loosen the contact pressure of the foam roll.

CAUTION



Do not unscrew the set screw (3) for more than 10 mm/0.4 in.!

Synchronized arm/upper body trainer with quick switch to the standard option

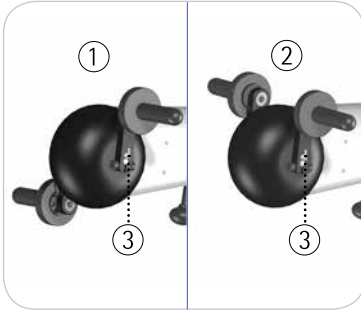


fig. 6.5

The synchronized setting ② for the arm/upper body trainer allows for a parallel movement of the arms, similar to a handbike.

You can change to the standard option ① by quick switch ③, no tools required.

Tetra handles with quick release system

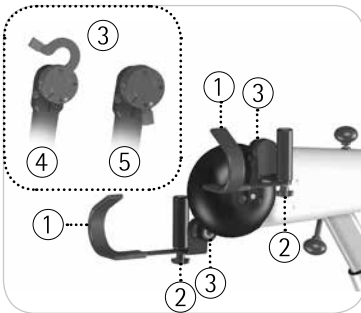


fig. 6.6

The tetra handles ① allow a simple positioning and fixation of the arms without assistance. The wrist support can be individually adjusted by the set screw ②.

The handles can easily be exchanged by quick release system ③, no tools required. Open the clip ④ and remove the handle. Attach the required handle and close the clip completely ⑤.

Hand fixation with wrist cuff

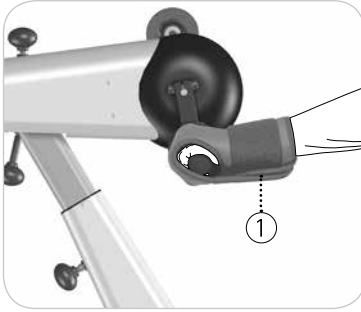


fig. 6.7

The hand fixation with wrist cuff enables quick and simple attachment of weak or paralyzed hands to the arm/upper body trainer, the handlebar, or any handle.

Hook grip

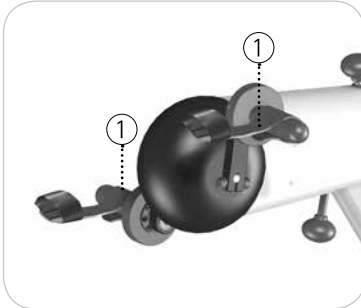


fig. 6.8

The hand fixation with hook grip ① enables quick and simple attachment of weak or paralyzed hands to the arm/upper body trainer or the handlebar.

Forearm shells with arm cuffs and quick release system

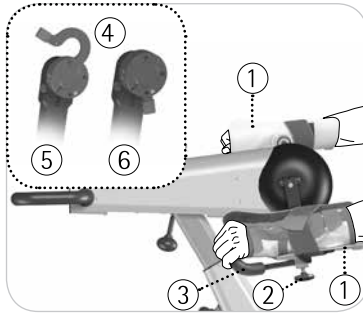


fig. 6.9

The forearm shells ① firmly fasten and guide strongly paralyzed arms. In order to allow some lateral movement for the forearms, the forearm shells ① have a pivot bearing for horizontal movement.

Open the wing screw ② at the bottom side of the forearm shell ① and adjust the length of the cross grip ③ as needed. Then tighten the wing screw ② again.

6

CAUTION



Please ensure a minimum insertion of the cross grip ③ of 2.5 cm / 1.2 in. .

The handles can easily be exchanged by quick release system ④, no tools required. Open the clip ⑤ and remove the handle. Attach the forearm shells ① and close the clip completely ⑥.

CAUTION



Make sure to fix the hands (and fingers) in a way they do not streak the pedal cranks. Training with forearm shells requires supervision at all times.

Grip range for forearm shells

The forearm shells are equipped with cross grip as standard.

There are following versions available:

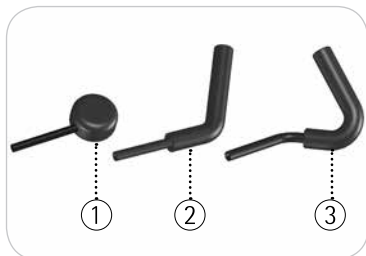


fig. 6.10

- ① ball-shaped hand rest
- ② vertical handle
- ③ cross hand grip

- 50 **Safety instructions for troubleshooting**
- 50 **The MOTomed runs unevenly**
- 51 **The MOTomed does not work at all or the operating panel does not react**

Safety instructions for troubleshooting



Only authorized qualified personnel is allowed to carry out repair works on the MOTomed.

For security reasons, please pull the mains cable from the outlet before starting the maintenance.

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In cases of unlisted malfunctions, or if you have any questions, please refer to the RECK customer service department or to an authorized MOTomed representative.

The MOTomed runs unevenly

Please check the following points:

1. Is the pedal radius set on the same level on both sides?
2. Is the pedal radius set too wide for the level of mobility of the operator? This leads to an uneven user-specific run.
3. Please check the seating position and posture of the user.
You should sit upright and in a straight alignment with the MOTomed. The distance between you and the MOTomed should be such that the legs are not stretched completely at any time.
4. With hemiplegic patients, pedal movement may be uneven due to the unevenly affected body sides (especially when using a low resistance).
5. In case of uneven run without feet inserted, authorized qualified personnel is to examine the drive belt.

The MOTOmed does not work at all or the operating panel does not react

page 27 Please check if the operating panel is mounted properly and if the motor cable is plugged in correctly. Make sure the mains cable is plugged in correctly at the outlet and at the inlet connector at the center of the wheel of the MOTOmed. Please also check the functionality of your wall socket (by plugging in another electronic device).

Cleaning, Maintenance, Recycling

Cleaning

WARNING



Risk of injury by electric voltage!

Before cleaning or disinfecting the MOTOmed, the device must be unplugged from mains (electric outlet) so that the power supply is completely disconnected.

The MOTOmed is only suitable for moist wipe disinfection with common disinfectant cloths.

CAUTION



Risk of damaging the MOTOmed!

Never use spray disinfection or disinfection showers as this could damage the sensible electronic parts as well as the unsealed flexible parts!

There is no general cleaning protocol. Cleaning must be made according to necessity and hygiene requirements.

If several persons use the MOTOmed, parts that may get in touch with sensible body areas (e.g. open wounds, risk of decubitus) must be cleaned regularly and disinfected with a common disinfectant.

Never use caustic, corroding or solvent cleansing agents or such that contain chlorine. Pay attention to not damaging the stickers on the MOTOmed.



Recommended disinfectants are for example

- Microbac forte surface disinfectant
- Sagrotan Multi - active cleanser complete

Maintenance

There is no regular maintenance service required for the MOTOMed. Security related controls according to the Medical Device Operator Ordinance (German MPBetreibV) have to be carried out at least every second year. Please pay attention to follow the most recent version of the regulation DIN EN 62353.

page 17 If the MOTOMed is used for different patients within the provision system of the health insurance, the visual inspection according to chapter 3 has to be carried out. Worn wear parts (i.e. foot shell foam, handles, expanders) should be replaced.

Recycling

The MOTOMed is a high-quality all-metal construction: it is long lasting, environmentally compatible and recyclable. Users are required to dispose of such used electrical and electronic devices in accordance to EC regulations 2002/96/EG-WEEE (Waste Electrical and Electronic Equipment).

page 61 Please contact your MOTOMed representative for any questions.

Technical Specifications, Symbols

Dimensions and weight (basic model)

MOTOmed models	Dimensions (outside dimensions in cm and in. min./max.)			Weight (in kg and lbs)
	length	width	height	
muvi with arm/upper body trainer	95 / 108 cm	60 cm	124 / 135 cm	51 kg
	37.4 / 42.5 in.	23.6 in.	48.8 / 53 in.	112.5 lbs

Power requirements (mains voltage, mains frequency)

power supply PMP120F-17 100 - 240V~ / max. 120VA
47 - 63 Hz

Input power

in stand-by < 3 W

Ambient conditions for use

temperature + 5° C bis + 40° C / 41 to 104° F
 humidity 15 % - 93 % relative humidity
 non condensing
 air pressure > 795 hPa
 operation height < 2000 m / 6,600 ft. above sea level

Ambient conditions for storage and transport

temperature + 25° C bis + 70° C / 41 to 104° F
 humidity +70° at 93 % relative humidity,
 non condensing
 air pressur not applicable

Degree of protection IP20

Classification Protection class II, Type BF

According to MPG II a

According to MDR (SOR/98-282)	II
NBOG Code	1108 active rehabilitation devices
FDA product code	BXB - exerciser powered
Maximum user weight	135 kg / 297lbs

The handles are PVC coated (depending on the model). Pulling the mains plug guarantees an all-phase power switch off.

Symbol description - in general



Protection class II device



Type BF application parts

Applied parts which are in contact with the user during standard use and which are therefore subject to special safety criteria.

The following accessories (type BF) may be attached to the MOTomed and must be maintained on a regular basis:

- operating panel
- handlebar
- handles
- foot shells
- leg guides with calf shells

IP20

The MOTOmed corresponds to the degree of protection IP20:
Protected against insertion of fingers, not protected against water.



Follow the instruction manual.



The MOTOmed meets the medical device 93/42/EWG standards.



Year of manufacture of the MOTOmed (e.g. 2014)



Pay attention to proper disposal directions
WEEE-reg.-no. DE 53019630.



Serial number of the device

Expected durability

There is no general durability as this depends on operation surrounding, frequency of use and type of use.
Therefore the expected durability is considered as the time period the device should be maintaining operation after the first use.
This operating time is defined to 10 years, except other technical specifications of MOTOmed models and accessories.

Warranty

In accordance with legal regulations, the RECK Company will provide warranty coverage on metal and manufacturer malfunctions.

I. Warranty contents

During the warranty period, RECK-Technik GmbH & Co. KG, grants replacement of defective parts of the MOTOMed at no cost or repair of the device at the company premises or by an authorized MOTOMed representative/technician at no cost, provided that:

1. The claim is not about wearing parts (e.g. Velcro straps).
2. Previous maintenance (servicing, inspection, repair) was conducted only by a RECK service agent or the RECK Company in a proper manner.
3. No modifications have been made on the MOTOMed.
4. The MOTOMed has been used in accordance with the instructions and safety instructions listed in the instruction manual and has not been used inappropriately.
5. The failure is not due to wanton destruction.
6. The warranty claim is within effective time frame with proof of purchase.
7. The MOTOMed was delivered and obtained by the RECK Company or an authorized representative.

II. Warranty Limitations

Warranty claims are only valid through the representative/distributor from which the MOTOMed was purchased.

In service cases please contact your representative/distributor. If the device was purchased through a third person (e.g. private individual), this claim expires.

III. Other

By request of the RECK Company, defective components replaced due to manufacturer or material defects are to be returned to the RECK Company after the repair. Replaced parts become property of RECK-Technik GmbH & Co. KG.

In case of part delivery on warranty, an extension of warranty period does not come into effect.

Service

Should you have any questions we will be happy to assist you. Please call us - your questions and suggestions are always welcome. We will gladly return your call. Please have the serial number (SN) of your MOTOMed right at hand. You can find it on the label on the large front tube of your MOTOMed.

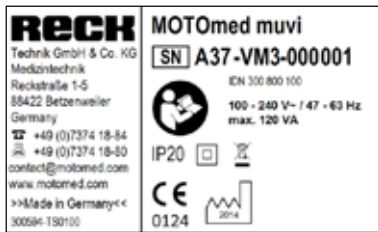


fig. 11.1

Your service contact for Germany

phone 07374 18-28
fax 07374 18-80
e-mail service@MOTOmed.de

or give us a call,
free of charge from Germany 0800 6 68 66 33

Your international service contact

phone +49 7374 18-502
phone +49 7374 18-531
fax +49 7374 18-480
e-mail: service@motomed.com

- 64 **Manufacturer's Declaration -
electromagnetic emissions**
- 65 **Manufacturer's Declaration -
electromagnetic immunity**
- 67 **Recommended separation distance**

The manufacturer states that the mains cable of the MOTOMed complies with the requirements of the EN 60601-1-2:2007-12.

Manufacturer's Declaration – electromagnetic emissions


The MOTOMed is supposed to be operated in the electromagnetic environment described below. The customer or user of the MOTOMed has to guarantee the use in the appropriate environment.

Emissions test	Compliance	Electromagnetic environment – guidelines
HF emissions according to CISRP 11	Group 1	The MOTOMed uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
HF emissions according to CISRP 11	Class B	The MOTOMed is made for the use in facilities and homes which are connected to the public mains supply which also supplies individual homes.
Harmonic emissions according to IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complied	

Manufacturer's Declaration – electromagnetic immunity

The MOTOMed is supposed to be operated in the electromagnetic environment described below. The customer or user of the MOTOMed has to guarantee the use in the appropriate environment.

Immunity tests	IEC 60601 – test level	Electromagnetic environment – guidelines
Electrostatic discharges (ESD) according to IEC 61000-4-2	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for entry and exit	Mains power quality should be that of a typical commercial and/or hospital environment.
Surge voltages (surges) according to IEC 61000-4-5	± 1 kV differential mode ± 2 kV common mode	Mains power quality should be that of a typical commercial and/or hospital environment.
Voltage dips, short interruptions and voltage variations according to IEC 61000-4-11	< 5% UT (> 95% dip in UT) for ½ period < 40% UT (> 60% dip in UT) for 5 cycles < 70% UT (> 30% dip in UT) for 25 cycles < 5% UT (> 95% dip in UT) for 5s	Mains power quality should be that of a typical commercial and/or hospital environment. If the user of the MOTOMed requires continued operation during power mains interruptions, it is recommended to power it from an uninterrupted power supply or battery.
Power frequency (50/60 Hz) IEC 61000-4-8	3 A/m	The magnetic fields at the supply frequency should be of typical business or hospital values.
Remark: UT is the mains common-mode voltage prior to the application of the test level.		

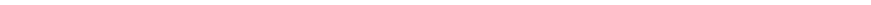
Immunity tests	IEC 60601 – test level	Compliance level	Electromagnetic environment – guidelines
<p>Conducted HF disturbance according to IEC 61000-4-6</p> <p>Radiated HF disturbance according to IEC 61000-4-3</p>	<p>$3V_{\text{eff}}$ 150 kHz to 80 MHz</p> <p>3 V/m 80 MHz to 2.5 GHz</p>	<p>$3V_{\text{eff}}$ 150 kHz to 80 MHz</p> <p>3 V/m 80 MHz to 2.5 GHz</p>	<p>Portable and mobile RF communications equipment should be used no closer to any part of the MOTOmed including cables, than the recommended separation distance calculated from the equation appropriate for the frequency of the transmitter.</p> <p>Recommended separation distance:</p> $d = 3,5/3 \sqrt{P} = 1,17 \sqrt{P}$ $d = 3,5/10 \sqrt{P} = 0,35 \sqrt{P}$ <p>for 80 MHz to 800 MHz</p> $d = 7,0/10 \sqrt{P} = 0,70 \sqrt{P}$ <p>for 800 MHz to 2.5 GHz</p> <p><i>P</i> is the maximum output power rating of the transmitter in watts (W) according to the specifications of the manufacturer and <i>d</i> is the recommended separation distance in meters (m). Field strengths for fixed RF transmitters, as determined by an electromagnetic site survey^a should be less than the compliance level in each frequency range.^b Interference may occur in the vicinity of equipment marked with the following symbol .</p>
<p>Note 1: At 80 MHz and 800 MHz the higher frequency range applies.</p> <p>Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			
<p>a) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the MOTOmed is used exceeds the applicable RF compliance level above, the MOTOmed should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the MOTOmed.</p> <p>b) Over the frequency range 150 kHz to 80 MHz field strength need to be less than 3 V/m.</p>			

Recommended separation distances between portable and mobile RF communications equipment and the MOTOMed

The MOTOMed is supposed to be operated in an electromagnetic environment where the RF interference is controlled. The customer or user of the MOTOMed can help avoid electromagnetic interference by keeping the separation distances between portable and mobile RF communications equipment (transmitters) and the MOTOMed - which depends on the performance of the communication device as described below.

Output power of transmitter W	Separation distance dependent on transmitter frequency		
	150 kHz to 80 MHz $d = 1,17 \sqrt{P}$	80 MHz to 800 MHz $d = 0,35 \sqrt{P}$	800 MHz to 2.5 GHz $d = 0,70 \sqrt{P}$
0.01	0.12	0.04	0.07
0.1	0.37	0.11	0.22
1	1.17	0.35	0.70
10	3.70	1.11	2.21
100	11.70	3.50	7.00
For transmitters rated at a maximum output power not listed above, the separation distance d in meters (m) can be estimated using the corresponding column, where P is the maximum output power rating of the transmitter in watts (W) according to the specifications of the manufacturer.			
Note 1: At 80 MHz and 800 MHz the higher frequency range applies.			
Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			





- valid as of year of construction 2014 – status March 2015

IDN 100.008.382 status 20150325 GB

We reserve the right to technical changes according to the progress.

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