

Instruction manual

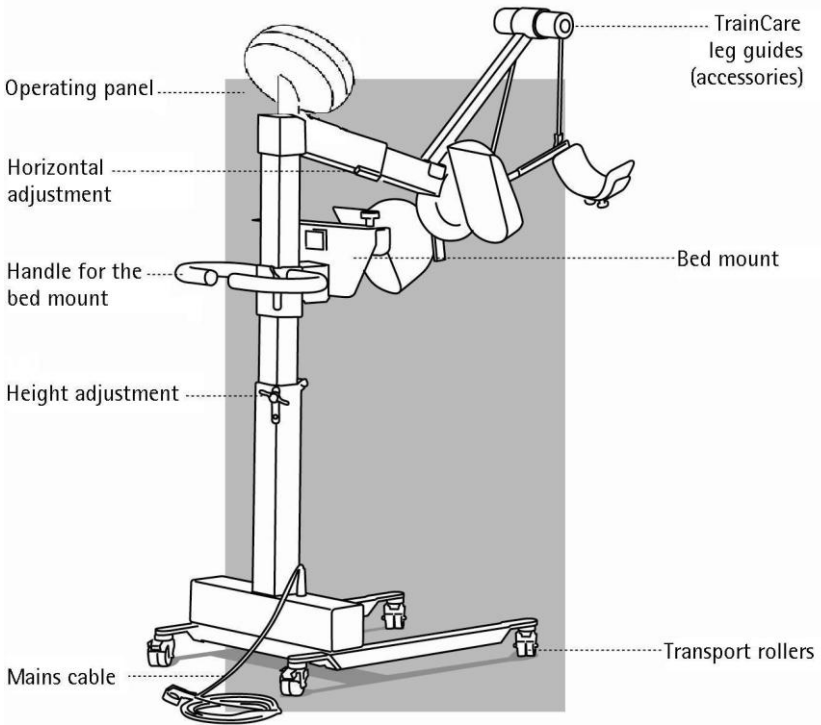
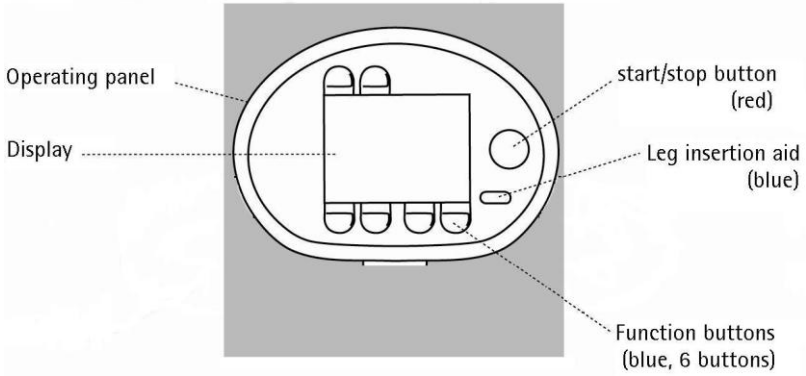
MOTOmed letto2



- 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.
- D 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.
- F Avant de commencer votre entraînement MOTOMed, veuillez lire le mode d'emploi. Si ce mode d'emploi ne correspond pas à votre langue, n'hésitez pas à nous demander une autre traduction.
- E Utilize 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.
- P Use o MOTOMed somente, depois que você leu a instrução se operando. Se você compreender a versão disponível da língua, peça por favor uma oviéntação em sua língua nacional.
- I 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 Gebruikt alleen maar MOTOMed, nadat u de gebruiksaanwijzing hebt gelezen. Als u deze taalkundige versie niet moet omvatten, een gids in uw nationale taal zal willen vragen
- S 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.
- HU Csak akkor használja a MOTOMed készüléket, miután elolvasta a használati utasítást. Hogyha nem érti az előterjesztett nyelvet, kérjük, igényeljen egy utasítást az Ön anyanyelvén.
- RUS Используйте MOTOMед только после того, как прочитаете инструкцию по эксплуатации. Если Вам не понятен язык, на котором написана иструкция, запросите, пожалуйста, одну на родном языке.

Please open





gentle, attractive and intelligent ...

Congratulations! You have made an excellent choice by purchasing your MOTOmed letto2. This MovementTherapySystem provides outstanding performance. Supported by the latest computer technology it is an innovative quality product "made in Germany" by RECK.

This user manual will help you to get to know the MOTOmed letto2. It will guide you through the functions of the MOTOmed letto2 and will give you some tips and suggestions on how to use the new movement therapy device so as to gain optimal benefit from the training. Before using the device, please follow the safety precautions listed in chapter 12.

If you have further questions or comments, please don't hesitate to call your MOTOmed representative or the RECK customer service team. We are pleased to assist you.

Enjoy training with the MOTOmed letto2!

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Application

The MOTOmed letto2 is suitable only for the active and passive movement of a person's lower extremities while being in a lying position. During the training the MOTOmed letto2 can be operated with a remote control or with an operating panel.

Normal use

During the training the user is laying in bed in front of the MOTOmed letto2. Make sure the MOTOmed letto2 is fixed correctly to the bed and that the users' legs are fixed safely to the foot shells.

You are only allowed to use the MOTOmed letto2 following the instructions and safety precautions in this manual and if no therapist and doctor states any contraindication. Adjustments and changes can only be carried out with the pedals not moving and with the legs not being inserted – except for the operation via the operating panel.

Restrictions of liability

The manufacturer and his distributors don't assume liability for consequences of

- abuse and misuse
- neglect of this instruction manual
- wanton damage and reckless usage
- over-intensive training
- use with unsuitable beds or couches
- use without prior consultation of the responsible doctor and therapist
- attachment of unapproved accessories
- repair or other interference by any person non-approved by the manufacturer

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Set up

Unpack your MOTomed letto2 and put it in an upright position. In case the packaging or the MOTomed letto2 got damaged through transportation, please contact your MOTomed representative.

Moving/transportation

The MOTomed letto2 is equipped with two large transport rollers so that it can be easily moved within a building.

To move the MOTomed, please release the breaks and push the MOTomed on the handlebar.

Pay attention not to overrun the mains cable.

Stand-by mode

Please plug the the mains plug of the MOTomed letto2 into a wall socket.



The green light next to the "start/stop" button on the display module is now blinking for 6 seconds. Then blinking changes to a continuous light, the MOTomed letto2 is now in stand-by mode. Only when the "start/stop" button is pressed the MOTomed letto2 will go into operation.

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In general

All functions can be adjusted via the operating panel. Any changes you make to the settings will appear on the display. Pressing any button will also be confirmed with a beep sound.

Please note the values shown on the display can vary slightly from the real values. They are not suitable for a diagnostic evaluation, but do give a good indication of performance and progress.

At low temperatures (below 0 °C/32 °F) the display can be affected, this will not however lead to any long-term damage.

Fixing the MOTomed to the bed



The MOTomed letto2 is attached to the footboard or footend of the bed. Proceed as follows:

1.



Open both screw knobs at the bed mount and open the clamp.

2.



Open the wing screw of the height adjustment to raise the MOTomed letto2 up to the required height.

3.



Open the wing screw at the handlebar section, slide it up as high as possible holding with one hand the handlebar in position. Fasten the wing screw with the other hand.

4.



Bring the MOTomed letto2 to a position in front of the bedfoot that allows the bed mount to clasp the bed when the MOTomed is lowered by the height adjustment. Fasten the wing screw of the height adjustment and apply the brakes of the castors.



5.



Clamp the bed mount to the footend of the bed and fasten the two screw knobs firmly.

6.

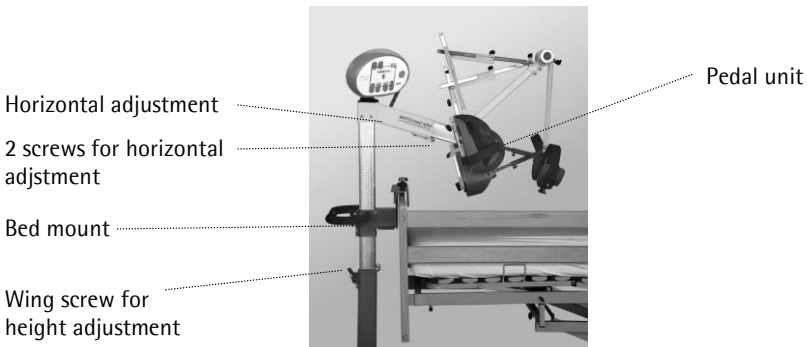


Set the height of the device so that the safety footshells won't touch the bed during operation but still move close to the bed. Please open the wing screws of the height adjustment and the bed mount again and press the MOTomed letto2 down or up until the required height is reached. Then fasten the wing screws again.

You can adjust the pedal unit of the MOTomed letto2 towards the patient by opening the screws of the horizontal adjustment and moving the pedals towards or away from the patient. Don't forget to tighten the screws again afterwards.

Attention: Regularly check the functioning of the pull-out prevention string securing the pedal unit from dropping out. Make sure when using the MOTomed letto2 that the patient is not at risk of getting injured. During adjustments the body of the patient should be out of the danger zone.

Before operation please make sure once more that the safety foot shells don't touch the bed and bedfoot.

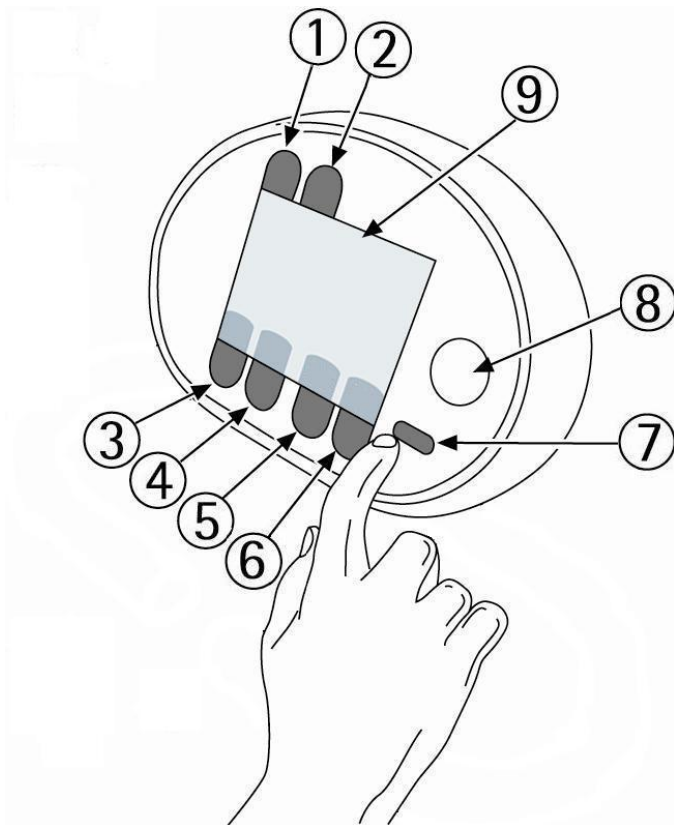


Insertion and securing of legs


Make sure the patients' feet are positioned correctly in the foot shells. This means that the heels fit snugly against the back edging of the foot shells. Furthermore, the soles of the feet are completely touching the base of the foot shells. Put the Velcro straps around the ankle joints and toes and secure them to the outside of the foot shell.

Please ensure that the length of the leg guides and the radial adjustment calf shells are ideally adjusted to the legs of the patient.

Operation of MOT0med letto2



Leg insertion and removal aid

Press the small blue button "  „ ⑦. Now you can move the foot shells with the button "pedals forwards" ⑥ or "pedals backwards" ⑤ so that you can easily insert the legs of the patient one after the other.

Hint: If the legs of the patient are not equally flexible, step in first with the leg that is less flexible than the other. Now fix the feet and legs with Velcro straps or with the self operating foot holders (item no. 506) to the foot shells.

To remove the legs of the patient after training please press the button "leg removal aid" ⑥. Press the button "pedals forwards" or "pedals backwards" until the foot shell has reached the appropriate position. Now you can remove the first leg. Just proceed in the same way to remove the other leg as well.

Last, press again the red "start/stop"-button ⑧ to switch off the MOTOmed.

Start of training

Press button "start/stop" ⑧. Automatically the foot shells start moving slowly and the display ⑨ turns on. The MOTOmed letto2 starts with a short and gentle warm-up phase.

Adjustment of speed

With the "speed"-button the revolutions of the foot shell per minute can be changed. Upon pressing the button "turtle" ⑤ the speed is reduced, upon pressing the button "rabbit" ⑥ the speed is increased.

Upon pressing the button „direction" the rotation of the foot shells can be adjusted from forwards to backwards and vice versa.

During active training the buttons ③ to ⑥ have different functions as in passive mode.

Hold/change display

In the mode "ServoCycling" you have the possibility to stop the display rotation. Upon pressing the button "hold display" ③ you can hold the information currently shown on the display. A small pin on the top of the display indicates that you are holding the display. If you wish to reactivate the change of information, just press the button "change display" ③.

Active cycling (with one's own strength, without motor)

If the patient is relaxed enough he may cycle with his own strength after the warm-up phase. Please press the button "ServoCycling" ③. As soon as the bicycle icon appears on the display ⑨ the patient is cycling actively. This happens as well if he just starts cycling with his own strength so that the display gives the following feedback: "You are cycling yourself". Upon pressing the buttons "light" (small weight) ⑤ and "heavy" (big weight) ⑥ you can shift to a lower or higher gear. The MOTomed letto2 provides 20 gears.

When the patient would like to get moved by the MOTomed letto2 again, just tell him to stop cycling. The motor automatically takes over and moves his legs gently.

SymmetryTraining

SymmetryTraining is a function which can only be used while actively cycling with own strength, indicated by the bicycle icon.

SymmetryTraining divides the entire individual performance into right and left leg activity, i. e. it shows the activity of the left and right leg separately. This function is supposed to help the user to train towards an even force output of each leg. You can hold the display upon pressing the button "hold display" ③. Upon pressing the then appearing button "change display" ③ the displays rotate again.

You can choose between two displays as SymmetryTraining feedback options. The pre-set bar graph shows the activity of both legs in two bars with the respective percentage (e.g. left leg 63 %, right leg 37 %). Whenever the display of the SymmetryTraining shows 50 % on both bars, the activity of the left and right leg is equal.

To change the SymmetryTraining display press the button "extras" ② three times and finally the button "symmetry display".

Break

If you want to interrupt the MOTomed Training press the red „start/stop“-button ⑧. If you want to continue the training press the button "continue" ⑥.

End of training

At the end of the training you should have the patient moved passively for some minutes to relax his muscles and if necessary spasms. The training can be finished at any time by pressing the button "start/stop" ⑧. Press the button „analysis" ③ before the curtain on the display ⑨ is closed. It will be analysed, for example, how long the patient had been in passive and active mode.

Training suggestions/hints

At the end of any training there are further MOTomed letto2 training suggestions available. Just press the button "hints" ④ to read them through. Remark: The training suggestions are general advice. A doctor or therapist has to decide if they apply to special conditions of the patient as well.

MovementProtector and SpasmControl

During the training, the MOTOMed MovementProtector constantly monitors the muscle condition of the user. Due to this, the MovementProtector (the motor power) automatically adapts to the muscle condition and is therefore optimally sensitive at any time.

As soon as the weakest spasm occurs, the MovementProtector stops the pedals automatically. The SpasmControl eases the spasm through a gentle back and forth movement of the legs. This is similar to what a therapist does.

Suggestion: SpasmControl and thus also the MovementProtector are activated by the manufacturer. In some cases, however, it is necessary to switch them off. Please consult a doctor and therapist before doing so or call your MOTOMed representative or the RECK company.

Duration of training

It is possible to pre-set the duration of the training period, similar to setting a timer. When the set training time is over, the MOTOMed letto2 stops automatically. The duration of training can be changed at all times.

Upon pressing the button "duration" Ⓞ the duration of training can be adjusted.

Continuous operation is pre-set by the manufacturer.

Change of motor power

The motor power should be reduced if the patient is at risk of easily injuring his bones, tendons, joints and ligaments due to high motor power applied by the MOTOMed letto2 (i.e. individuals suffering from strong osteoporosis, muscle shortening etc.).

If the patient's legs are very stiff, they prevent the motor from performing a complete and round pedal movement. You should increase the motor power to avoid the SpasmControl changing the direction several times in a row. Upon pressing the button "extras" ② and the button "motor power" the motor power can be adjusted according to individual needs.

Starting parameters

If you want to save the parameters (SpasmControl, speed, duration, gear, rotation forward/backward, motor power) of the MOTOMed letto2 you set individually during training proceed as follows:

Primarily set the values that you would like to save.

Press the button "extras" ②, followed by the button "starting parameters" and "individual parameters".

By confirming the set parameters with button "yes" they are saved as the patient's own starting parameters for the next training sessions.

If you wish to start the next training with the standard parameters set by the manufacturer, press button "extras" ②, followed by button "starting parameters" and "standard parameters". By confirming with the "yes" button the manufacturer's pre-set parameters are saved as starting parameters..

Adjust the contrast of the display

By this function you can adapt the contrast of the display to the lighting conditions.

Press the button "extras" ② two times, followed by the button "adjust contrast". Now you can adjust the contrast by pressing the buttons "+" or "-". Your adjustment will be saved.

Adjust the volume

By this function you can adjust the acoustic feedback during pressing buttons, i.e. when choosing a gear.

Press the button "extras" ② two times, followed by the button "adjust volume". Now you can adjust the volume by pressing the buttons "+" or "-".

Change of duration of displayed information

Displayed information during the MOTMed training changes at certain intervals (the manufacturer's setting is 15 seconds). You can change these intervals, i.e. you can make the displayed information change faster or slower.

Please press button the "extras" ② two times, followed by the button "duration display". Now you can adjust the duration of displayed information by pressing the buttons "+" or "-".

Button lock on the operating panel

While training please press quickly 3 times the "leg insertion aid" ⑦ beneath the red "start/stop" button. An activated button lock is indicated by a key icon on the top of the display.

In order to switch off the button lock press the "leg insertion aid" ⑦ again three times.

Maximum speed

The maximum speed function allows you to limit the speed that should not be exceeded during active training.

To set the maximum speed press the "extras" Ⓜ button three times, followed by the "max rpm" button.

Now you can set the maximum speed with the buttons "-" and "+".

Language option

The language option function allows the selection between a wide range of available languages. All functions and visual feedback will be displayed in the selected language. Press the button "extras" Ⓜ two times, followed by the button "language options".

Now you can select and save the desired language.

28 TrainCare leg guides with knee protection

38 Further accessories

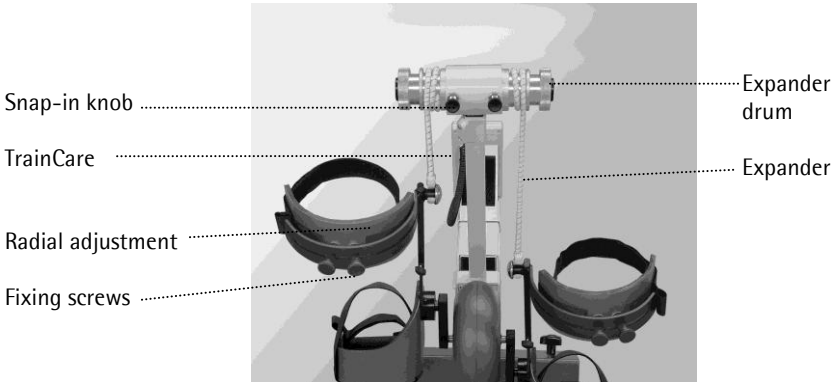
38 Ankel joint adjustment with SlidingScales

38 Pedal radium quick adjustment

Leg guides with knee protection TrainCare

For paralysed or unconscious patients it is absolutely vital that you use the TrainCare leg guides.

The TrainCare leg guides support the lower legs and prevent them from unintentional movement to the side, as they also prevent the knee joints from overstretching and blocking.



The support level of the TrainCare leg guides can be adjusted on each leg guide separately and thus may differ from one side to the other.

This is necessary as the patient may require fine-tuned support according to his lying position or different weight of the legs. To increase the support, please wind up the expander by turning the expander drum until the expander is strong enough to prevent an overstretching of the knees.

Pulling the snap-in knob decreases the tension of the expander. Please take care to hold firmly the respective expander drum and pull the snap-in knob only slowly. Otherwise with taut expanders the leg guides and the inserted legs are at risk to drop down abruptly.

Attention: Due to wear and tear the expanders of the TrainCare leg guides are at risk to break and may cause injuries. Therefore, please check and replace the rubber straps regularly. The manufacturer and its distributors don't assume liability for damages due to neglecting maintenance.

The radial adjustment attached to the calf shell can be set individually on the right or left side. With the radial adjustment the patient can get hold of his/her legs while training with the MOTOmed letto2 helping to avoid the patients' legs from sliding laterally.

To set the radial adjustment, please switch off the MOTOmed letto2 and pull the main plug. Open the two fixing screws on the back of the radial adjustment. Set the angle of the radial adjustment on both sides and fasten the fixing screws tight again.

Before you start the MOTOmed letto2, please check if the legs of the patient get enough hold with the settings of the leg guides. Lateral sliding of the legs should be avoided. Plug the main plug into the wall socket again.

Further accessories

Item n° 149 Ankle joint adjustment



The Ankle Joint Control enables precise, targeted movement of the ankle joint. Targeted ankle joint movement can significantly increase blood circulation throughout the body, especially in the legs.

Item n° 507 Pedal radius quick adjustment



With the pedal radius quick adjustment, you are able to adjust the range of movement/size of orbit of the foot shells. The pedal radius is adjustable to four fixed settings and can also be set between those settings if required.

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 - 48 The motor blocks
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Safety instructions for troubleshooting

Before making any physical adjustments to the MOTOmed, the device must be turned off and unplugged from the main socket. For safety reasons it is crucially important that the device is completely disconnected from the power supply.

A damaged main cable must be replaced by a qualified person (qualified distributor, technician or employee of the RECK company). Never operate the MOTOmed letto2 with a damaged main cable.

In case of a malfunction that isn't listed below or if you have any questions, please refer to your MOTOmed representative or the RECK customer service department.

Upon requirement the RECK company can provide further technical documentation in order to support qualified personnel regarding adjustments, repair and maintenance.

The MOTOmed letto2 runs unevenly and jerky, or makes noises

Please check the following points:

1. Are the wing nuts of the leg guides securely tightened?
2. Please make sure that the cotter pins on the left and right pedal crank are pointing in opposite directions on each side.
3. Is the pedal radius set to the same level on both sides?
4. Is the pedal radius set at a level too large for the level of mobility of the user?
5. Are all Allen screws of the pedal radius quick adjustment tightened sufficiently?
6. Please check the position of the MOTOmed letto2. The safety foot mustn't touch the bed.
7. For stroke patients, it is possible that the pedal movement is uneven due to the uneven sides of the body (especially when using a low gear).

The MOTOmed letto2 does not work at all or the operating panel does not react

Please check whether the cockpit is mounted correctly and whether the main cable is plugged into the main socket (electric outlet) correctly. Also check the functioning of the main socket (electric outlet) by connecting another electric device to it.

Error reports on the display - MOTOmed letto2

Overheating



The MOTOmed letto2 overload detection is responding. Please wait several minutes until the motor has cooled down and the buttons of the operating panel react again. If overheating occurs twice, please interrupt the training for approx. two hours in order to let the motor cool down completely.

The motor blocks



This error message appears as soon as the SpasmControl is activated 25 times at short intervals or if the motor was locked for a period of 3 minutes. Please pull the mains plug out of the plug socket and put it in again. Then please check if the motor power is adjusted too low or if the pedal radius is adjusted too high in relation to the patient's condition.

Neither arm-trainer nor leg-trainer is detected



This error message appears if the pedals are moved before the MOTOMed letto2 is ready for starting up (the green small lamp at the operating panel must burn permanently). Please pull the mains plug out of the plug socket, put it in again and wait until the green light at the operating panel is burning permanently.

Cleaning and Care

Before cleaning the MOTOmed letto2, the device must be unplugged from the mains (electric outlet) so that the power supply is completely disconnected.

Clean the surface of the MOTOmed letto2 only with a soft and dry cloth. It is absolutely crucial that no water enters the device.

If several users use the MOTOmed letto2, please disinfect the handlebar and the operating panel with a suitable disinfectant.

Never use caustic, corroding or solvent cleaning agents.

Clean around stickers attached to the MOTOmed letto2 so that they don't get damaged.

Technical specifications, symbols

General data for all MOTomed viva2

Measurements and weight (basic model)

Height:	107–133 cm / 42-52,5 inches
Width:	51 cm / 20 inches
Depth:	85 cm / 33,5 inches
Weight:	61 kg / 134,5 lb

Ambience conditions

Operation:	0 °C to +40 °C / 32 °F - 100 °F
Storage:	-20 °C to +60 °C / 0 °F - 172 °F
Humidity:	10 % - 80 % relative, not condensing

System of protection: IPX0

Class of medical products
according to MPG II a

Technical data for 230 V~ devices

Power requirement

Mains voltage:	230 V~
Mains appliance:	50/60 Hz

Power consumption

Non-operating:	max. 7,5 VA
Operating:	max. 185 VA
Class of protection	class I, Type B

Technical data for 115 V~ devices

Power requirement

Mains voltage:	115 V~
Mains appliance:	50/60 Hz

Power consumption

Non-operating:	max. 7,5 VA
Operating:	max. 185 VA

Class of protection	class I, Type B
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Technical data for 100 V~ devices

Power requirement

Mains voltage:	100 V~
Mains appliance:	50/60 Hz

Power consumption

Non-operating:	max. 7,5 VA
Operating:	max. 185 VA

Class of protection	class I, Type B
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Technical data specific for devices with external power supply (30VDC)

Power requirement of external power supply

Mains voltage:	100-240 V~
Mains appliance:	47-63 Hz

Power consumption of external power supply

Non-operating:	max. 26 VA
Operating:	max. 150 VA

Power requirement of MOTOMed

Voltage:	30 V 
Current:	4A

Class of protection	class II, Type B
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According to IEC 601-1, all poles switch off of the MOTOmed viva2 is ensured by pulling the mains plug.

Signs and symbols



Applied part type B

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



Attention, consult ACCOMPANYING DOCUMENTS



Attention! Follow operating instructions



The MOTOmed letto2 meets the standards for medical devices 93/42/EWG



Construction year of the MOTOmed letto2 (e.g. 2007).



Environment-friendly waste disposal



Serial number

Warranty

The RECK company offers a warranty on material and manufacturing faults of 12 months on the MOTOmed letto2 valid as of day of delivery or invoice date.

During the 12 months warranty period the RECK Technik GmbH & Co. KG grants replacement of defective parts of the MOTOmed letto2 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 parts are not damaged due to normal wear and tear.
2. repairs have only been effected by personnel authorized by the RECK company who have special knowledge, training and the necessary means for a proper implementation.
3. only RECK parts have been fitted to and used with the MOTOmed letto2 – no modifications have been made.
4. the MOTOmed letto2 has been used in accordance with the instructions and safety precautions listed in the instruction manual and has not been used inappropriately.
5. the failure is not due to wanton destruction, abuse, neglect, improper maintenance or unapproved modifications.
6. the warranty claim has been asserted within the fixed period of time and on presentation of a receipt which certifies the purchase of the MOTOmed letto2.

Recycling

The MOTOmed letto2 is a high-quality all-metal construction: it is long lasting, environmentally compatible and recyclable. Most parts can be recycled via scrap-metal recycling. The remaining electronic parts can be disposed of via electronic industrial waste.

Service

Should you have any questions please call us and we will gladly return your call.

Please have the serial no. of your MOTomed letto2 available, which you can find on the identification plate.



SN T 16 LET2-11 - - - - **SN** T 16 LET2-11

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It is important for us to constantly improve our products. In order to do this, we need to hear about your experiences with the MOTomed. We would therefore appreciate your feedback. Please contact us on the telephone numbers above or in writing by email or fax, either to us or to your MOTomed representative.

If you have friends or family to whom you would like to recommend the MOTomed letto2, we are always happy to send information about the MOTomed MovementTherapySystems, either to you or directly to your friends – at no cost and with no obligation.

Safety precautions

The first time use of the MOTOmed letto2 must always be supervised by a qualified person giving instructions. Assessment of MOTOmed training in regard to the patient's health situation as well as the time, duration and intensity of the training periods have to be discussed with a doctor and physiotherapist before start of the training. Please pay attention to the preset adjustments of the MOTOmed letto2 when switching it on.

The MOTOmed letto2 is a movement therapy trainer only to be used when lying down on a bed. While the MOTOmed letto2 therapy trainer is in use, ensure that the health condition of the user is under supervision and that no unauthorized persons (visitors, temporary staff) are allowed to make any adjustments to the MOTOmed letto2 or the bed that the patient is lying in.

Always make sure, that the MOTOmed letto2 is properly secured to the bed and the brakes on the large castors are on.

Before starting the training make sure that the legs of the user are properly secured.

The electrical or manual height adjustment of the bed should not be adjusted, either by the patient or by the medical staff after the MOTOmed letto2 has been secured to the bed or during the training.

Only put the feet into the footshells while the patient is lying. Make sure that he/she never steps in while sitting or standing upright. Do not put more than 13 kg/28,5 lb (at a radius of 7 cm/2,7 inches) of weight onto either pedal. Never bring your hands into the pedal area nor change the pedal radius or other adjustments during operation!

Take care to position the MOTOmed letto2 in a distance from the patient that doesn't make the knees fully block when stretched out.

Fully stretched knee joints may lock the rotation of the pedals. Over-stretched knee or hip joints may also cause spasms. When the knee joint of the patient fully stretches out during training, you should move him closer to the MOTomed letto2 or move the MOTomed letto2 closer to the patient. Lay the upper body of the patient in a height ened position so that he/she cannot slide back, i.e. away from the MOTomed letto2.

For the training with paralysed or unconscious patients the accessory TrainCare (Item no. 115) is absolutely essential. This leg guide prevents the knee joints of the patient from blocking or dropping down and to the side.

Warm-up: If the health situation of a patient doesn't allow MOTomed training with the speed of 5 rpm, the parameter speed of the starting parameter has to be reduced after the start.

The use of the MOTomed letto2 has to be adapted to individual health conditions. Training suggestions by the manufacturer or its distributors are given without guarantee. No exact instructions can be given for the use of the MOTomedletto2 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.

If there is any risk of damaging or causing injury to tendons, joints or bones (for example, users with osteoporosis, muscle shortening) you can adjust the motor power according to individual needs after switching on the MOTomed letto2.

Always start the training with passive motion (legs are moved by the motor) to warm-up. If the patient is able to train actively, make him/her train his/her first sessions at low resistance. Avoid overexertion – it is recommended to rather cycle in low gears for longer times and more frequently.

If the following conditions apply to the patient, you must not use the MOTomed letto2 without first consulting a doctor and therapist: rupture of the crucial ligament, arthrosis of knee and hip, lately replaced hip and knee joint, stiff knee joint, advanced stage of osteoporosis, extreme deformity of limbs, extreme muscle shortening, pressure sores, risk of hip or shoulder dislocation, acute thrombosis.

Training is not recommended if there is the risk of skin abrasions, pressure marks or other injuries due to the health situation, position of feet or the adjustment of the leg guides with calf shells. You can train however, if you take the right safety measures (insert buffer material, etc.). Special elastic calf shell pads are available as accessory (item no. 521).

You must consult a doctor and therapist, or assume the responsibility if you allow the patient to train on his/her own having open wounds or being at risk to get pressure sores (e.g. due to sensitive skin or tissue) particularly at those body parts touching the therapy trainer (e.g. legs). The manufacturer does not assume liability for injuries caused by neglecting these instructions.

Under the influence of alcohol, medicine or drugs, the health risks of using the MOTomed letto2 can be increased. Such usage is advised against.

Place the MOTomed letto2 so that it cannot tilt or fall over and cause injuries to somebody. Don't put weight on only one side of the MOTomed letto2. The mains cable must not be laid under the device. Pay attention especially when transporting the MOTomed letto2.

If you are not sure about the correct connection of the MOTomed letto2 or have other questions, contact our customer service.

Training and insertion/removal of the legs should never be done without supervision of a qualified person if it cannot be made sure that the user understands the functions and purpose of the MOTomed letto2 and that he is able to switch off the device through the remote control/operating panel during the training. In general, supervision during the training is recommended.

Ensure before every training session that the screws of all adjustable parts of the device (handlebar, bed mount...) are tightened and intact. In case they get loose during the operation you have to stop the training immediately and fix the screws.

Suitable clothing must always be worn. Wide trousers, long towels and scarves that could get caught or tangled in the pedal crank must not be worn. Shoes with shoe laces must not be worn, either if experiencing any pain, nausea, circulatory weakness, the training should be stopped right away and a doctor should be consulted.

The manufacturer and its distributors do not assume responsibility for improper or over intensive use by the user.

While the pedals/foot shells are turning, neither the user nor any other person should make any mechanical alterations to the MOTomed letto2 (pedal radius, height adjustment of handlebars or arm/upper body trainer etc.). Never try to grab hold of any moving parts!

The MOTomed letto2 must not be moved while legs are inserted or secured to the device.

Please train only after you've switched on the MOTomed letto2!

Children should never use the MOTomed letto2 without supervision.

If the red "start/stop" button fails to stop the MOTomed letto2, immediately adjust the speed to 0 rpm and end the training right away. You can use the MOTomed letto2 again as soon as the malfunction is eliminated.

Being an electronic medical device the MOTomed letto2 has to comply with special safety standards in regard of electromagnetic compatibility. During installation and operation the EMC information has to be followed.

Before you plug the MOTOmed letto2 into a mains socket please check that the voltage of the device stated on the marking corresponds with the voltage of the power supply. The MOTOmed letto2 is earthed by the ground wire in the mains cable.

In order to avoid electric shock, please make sure that the electrical system in your house/ clinic and the wall socket you connect the MOTOmed letto2 to is also properly earthed. The MOTOmed letto2 must only be used if the power cable is free from grazes, bruises, porous points, kinks or buckles – wires should never be exposed. Before using the MOTOmed letto2 each time check that there is no damage to the power cable and that the power cable cannot interfere with the mechanical operation of the device.

Further place the mains cable during training in a way that no mechanical damage can occur. Make also sure that nobody will trip over the mains cable. During transport of the MOTOmed letto2 make sure not to overrun the mains cable. Only use fuses which match the specifications indicated for the MOTOmed letto2.

Prior to transporting the unit, please roll up the mains cable to prevent a pull-out of the plug connector. Please be advised to keep the mains cable from getting trapped between the patient and the bed/machine.

Multiple sockets or extension cords that you may use with the MOTOmed have to comply with the standards for medical equipment.

In order to avoid fire hazard or electrical shock the MOTOmed letto2 must never be operated if the casing has been removed. In the same way the MOTOmed letto2 must never be operated in any wet or damp environments. The MOTOmed letto2 must never be opened by any unqualified person and metal objects must never be inserted.

Portable or mobile communication devices, like mobile phones or amateur radio stations, can influence the functioning of the MOTOmed letto2. Such devices carry the symbol illustrated on the left side and can thus be recognized.

If the motor is on overload, please follow the instructions "overheating". When cycling actively in small gears, the function "ServoCycling" can be recognized easily. This means that through the support of the motor the speed of the MOTOmed letto2 can be significantly increased by applying only little muscle strength. Thus, the effect of the muscle force applied is enforced by the motor. One-sided training, either with only one leg or with big differences in weight of the limbs should be done only under supervision of a person in charge and only in a high gear. In case of an amputated leg a counter weight (item no. 535) is required.

The MOTOmed letto2 is suitable only for therapeutic use.

The values displayed are not suitable for diagnostic purposes.

In order to avoid overheating of the casing you must not expose the MOTOmed letto2 to long-term direct solar radiation.

- 50 Manufacturer's declaration – electromagnetic emissions
- 51 Manufacturer's declaration – electromagnetic immunity
- 53 Recommended separation distance

The manufacturer states that the mains cable of the MOTOmed letto2 complies with the requirements of the EN 60601-1-2:2001.

If the original mains cable coming with the MOTOmed letto2 is not taken into use the electromagnetic emission of the MOTOmed letto2 may increase and the immunity may decrease.

Manufacturer's declaration – electromagnetic emissions


The MOTOmed letto2 is suitable for use in the specified electromagnetic environment. The customer and/or the user of MOTOmed letto2 should assure that it is used in an electromagnetic environment as described below.

Emissions Test	Compliance	Electromagnetic Environment Guidande
RF Emissions CISPR 11	Group 1	The MOTOmed letto2 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
RF Emissions CISPR 11	Class B	The MOTOmed letto2 is suitable for use in all establishments including domestic establishments and those directly connected to the public lowvoltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations / flicker Emissions IEC 61000-3-3	Complies	

Manufacturer's declaration – electromagnetic immunity

The MOTOMed letto2 is suitable for use in the specified electromagnetic environment. The customer and/or the user of the MOTOMed letto2 should assure that it is used in an electromagnetic environment as described below.

Immunity Test	IEC 60601–Test Level	Compliance Level	Electromagnetic Environment Guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 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 transients/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial and/or hospital environment
Surge IEC 61000-4-5	± 1 kV differential mode ± 2 kV common mode	± 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 on power supply input lines IEC 61000-4-11	< 5% U_T for 0.5 cycle (> 95% dip in U_T) 40% U_T for 5 cycles (60% dip in U_T) 70% U_T for 25 cycles (30% dip in U_T) < 5% U_T for 5 sec (> 95% dip in U_T)	< 5% U_T for 0.5 cycle (> 95% dip in U_T) 40% U_T for 5 cycles (60% dip in U_T) 70% U_T for 25 cycles (30% dip in U_T) < 5% U_T for 5 sec (> 95% dip in U_T)	Mains power quality should be that of a typical commercial and/or hospital environment. If the user of the MOTOMed letto2 requires continued operation during power mains interruptions, it is recommended that the MOTOMed letto2 be powered from an uninterruptible power supply or a battery.

Immunity Test	IEC 60601 –Test Level	Compliance Level	Electromagnetic Environment Guidance
<p>Conducted RF IEC 61000-4-6</p> <p>Radiated RF IEC 61000-4-3</p>	<p>3 V_{rms} 150 kHz to 80 MHz</p> <p>3 V/m 80 MHz to 2.5 GHz</p>	<p>3 V_{rms}</p> <p>3V/m</p>	<p>Portable and mobile RF communications equipment should be used no closer to any part of the MOTomed letto2 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>80 MHz to 800 MHz</p> $d = 7.0/10\sqrt{P} = 0.70\sqrt{P}$ <p>800 MHz to 2,5 GHz</p> <p>Where P ist he maximum output power rating of the transmitter in watts (W) according to the transmtter manufacturer and d ist he recom-mended separation distance in meters (m)</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range.</p> <p>Interference may occur in the vicinity of equip-ment marked with the following symbol.</p> 
<p>NOTE 1: At 80 MHz and 800 MHz the higher frequency range is to be used</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 letto2 is used exceeds the applica-ble RF compliance level above, the MOTomed letto2 should be observed to verify normal operation. If abnormal per-formance is observed, additional measures may be necessary, such as re-orienting or relocating the MOTomed letto2.</p> <p>b) Over the frequency range 150 kHz to 80 MHz, filed strengths should be less than 3V/m.</p>			

Recommended separation distances between portable and mobile RF communications equipment and the MOTomed letto2.

The MOTomed letto2 is supposed to be operated in an electromagnetic environment where the RF interference is controlled. The customer or user of the MOTomed letto2 can help avoid electromagnetic interference by keeping the separation distances between portable and mobile RF communications equipment (transmitters) and the MOTomed letto2 – which depends on the performance of the communication device as described below.

Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.

Recommended Separation Distances between Portable and Mobile RF Communications Equipment and the MOTomed letto2			
Rated Maximum Output Power of Transmitter / Watts	Separation distance / m		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2,5 GHz
	$d = 1.17\sqrt{P}$	$d = 0.35\sqrt{P}$	$d = 0.70\sqrt{P}$
0.01	0.12	0.04	0.07
0.1	0.37	0.11	0.22
1	1.17	0.35	.070
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 can be estimated using the equation in the corresponding column, where P is the maximum output power rating of the transmitter in Watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz the higher frequency range is to be used.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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Technical modifications for the purpose of technical improvement are subject to change without notice. Reprint, even in parts, only by approval of the RECK company.

Instruction manual

MOTOmed letto2



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