


Instruction manual

MOTMed viva 2



englisch

- 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 orientação 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 ządadacie Państwo instrukcji w języku przez Państwa znanym.
- RUS **Используйте MOTOMед только после того, как прочитаете инструкцию по эксплуатации. Если Вам не понятен язык, на котором написана инструкция, запросите, пожалуйста, одну на родном языке.**

Please open 

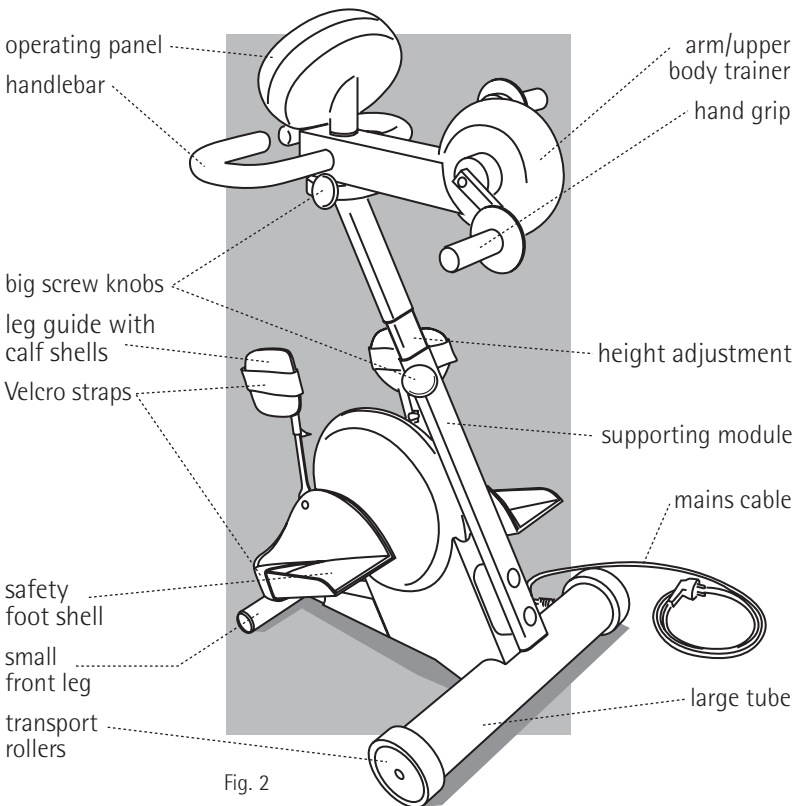
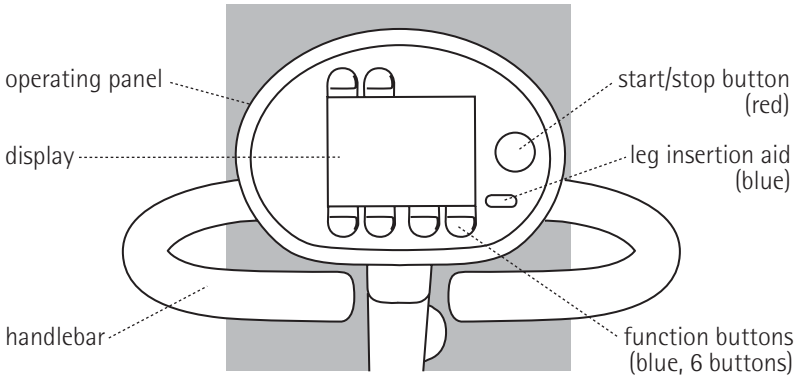


Fig. 2

gentle, attractive and intelligent...

Congratulations! You have made an excellent choice by purchasing your MOTomed viva2. This MovementTherapySystem provides out-standing performance. Supported by the latest computer technology it is an innovative quality product "made in Germany" by RECK.

The MOTomed viva2 is a motor assisted MovementTherapySystem that thinks with you. Enjoy the benefits every day.

This instruction manual will help you to get to know the MOTomed viva2. It will guide you through the functions and give some suggestions and tips on how to use your new movement therapy system so as to gain optimal benefit from the training. Before starting the training, please follow the *safety precautions* listed in chapter 12.

see page 77

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.

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Enjoy the training with your MOTomed viva2!

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Application

The MOTomed viva2 is suitable only for the active and passive movement of a person's lower and upper extremities. During the training the MOTomed viva2 can be operated with an operating panel.

Normal Use

During the training the user is seated in front of the device in a safe and sturdy wheelchair or in a stable chair (without castors) with a sufficiently high back. Make sure to sit up straight and that the wheelchair (or chair) is secured sufficiently in order to prevent tipping over.

Some specific power wheelchairs, standing chairs and sport wheelchairs with a large front or which don't have stowable or removable foot rests are not suitable.

On special occasions the MOTomed viva2 can also be used being in a lying position.

You are only allowed to use the MOTomed viva2 following the instructions and safety precautions in this manual and if no therapist or doctor states any contraindication. Adjustments and changes can only be carried out with the pedals not moving – except for the operation via the operating panel.

Restriction of Liability

The manufacturer doesn't assume liability for consequences of

- abuse and misuse
- neglect of this instruction manual
- wanton damage and reckless usage
- over intensive training
- use with an unsuitable wheelchair or chair
- 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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Training Hints

Before using the MOTMed viva2 please consult your doctor and therapist in order to adjust your training program and the duration of your training sessions to your individual state of health.

Regular training with the MOTMed viva2 is important in order to achieve therapy benefits. At the beginning, you should not train for more than 10 to 15 minutes continuously. It is better to train two to three times per day for approximately 5 to 10 minutes each period. Please start at a slow speed and with a small pedal radius. After about one week you should slowly increase the duration of your training, the speed and - if necessary - the pedal radius, according to your individual response to the MOTMed viva2 training.

How Do I Train Appropriately?

Do you have any questions about the training with the MOTMed viva2? Any problem that occurred? Please call your MOTMed representative or the RECK company, phone +49 (0) 73 74-18 85. We are pleased to assist you.

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Instructions in Case of Spasms

If you are affected by spasticity, slow and regular movement with the MOTomed viva2 is important. Just like in physiotherapy, it is recommended to train legs or arms in a way that no spasm will occur.

Particularly in the beginning it is recommended to train at a slow speed. You will notice that through this way of training, you will experience less tension.

see page 37 The *MovementProtector* with *SpasmControl* should always be switched on (ex work setting) in case a spasm might occur or in the case of sensitive tendons, joints or ligaments. If a spasm or a resistance occurs, the motor stops automatically by the *MovementProtector*. After a few moments the pedals start rotating slowly again in the opposite direction.

The *SpasmControl* changes the direction of pedal rotation according to the therapeutic principle looking for the direction in which the spasm can be eased (antagonistic inhibition). Therefore, muscles can relax and tensions are being relieved. This process will be repeated until the spasm is released.

During the training the integrated *MovementProtector* adapts automatically to the condition of your muscles (muscle tone). Therefore, the *MovementProtector* is always optimally sensitive.

see page 52 In order to improve the support of the legs, *leg guides with calf shells (item no. 502)* are an essential accessory in the case of spasticity. They provide secure and firm support.

see page 58 In case of strong spasticity it is recommended to use a *wheelchair stabilizer (item no. 8)* or a *chair fixation with stabilizer (item no. 511)*.
see page 59

For special cases (e.g. osteoporosis, very strong spasticity) the maximum motor power can be adjusted during passive training by pressing the buttons "extras" and then "motor power".
see page 40

Low motor power: e.g. for osteoporosis
High motor power: e.g. for strong spasticity

Please consult your doctor and therapist before adjusting the motor power.

In General

Pay attention to your seating position and posture when training – especially when using the arm/upper body trainer. The wheelchair or chair should be straight and in line with the MOTomed viva2. You should be sitting upright, back straight, resting on the back support of the chair or wheelchair.

The degree of movement of the knee joint and hip joint depends on the distance between the MOTomed viva2 and the chair or wheelchair. Position your chair from the MOTomed viva2 according to the flexibility of your joints. Avoid at all times overstretching or locking of the knee joints and start off sitting reasonably near the MOTomed viva2.

When using the arm/upper body trainer make sure that the elbow joints are never fully stretched during the training. Adjust the position of the arm/upper body trainer to your height.

see page 52
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If you lack support due to the effects of paralysis it is absolutely *essential that leg guides (item no. 502) and forearm shells (item no. 556)* are used. Always make sure that arms and legs are properly secured in the forearm shells or foot shells.

- 16 **Set Up**
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Set Up

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Unpack your MOTomed viva2 and put it in an upright position. In case the packaging or the MOTomed viva2 got damaged through transportation, please contact your MOTomed representative. Unpack the operating panel, as far as it is not mounted yet, and place it onto the fixture, so that the plug interlocks. Fix the display module with the two enclosed screws.

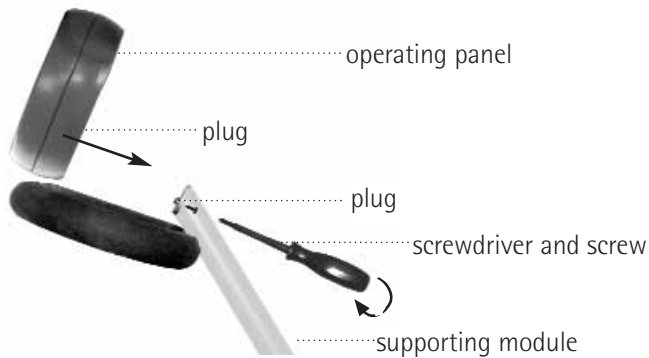


Fig. 3

see page 54

If an *arm/upper body trainer (item no. 250 or 218)* is fitted, you should extend the front leg by approx. 15 cm/6 inches. However, please keep a minimum insertion of the front leg of 10 cm/4 inches for optimal stability of the MOTomed. In order to adjust the front leg of the device you have to tilt the MOTomed backwards carefully, open the two Allen screws at the bottom of the MOTomed viva2 and pull out the front leg of the device. After adjustment, please tighten the Allen screws. You can find an Allen key at the bottom of the device.

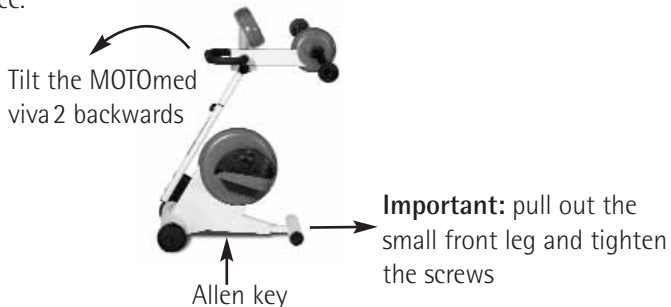


Fig. 4

Stand-by Mode

Please plug the mains cable into the MOTomed viva2 and the mains plug into a wall socket.

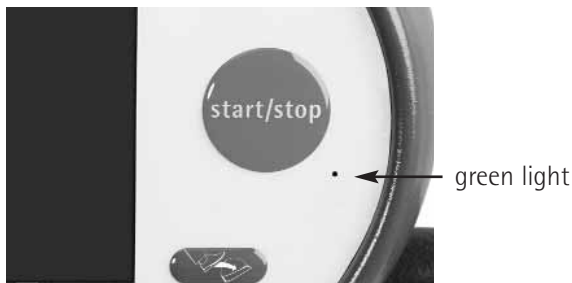


Fig. 5

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 viva2 is now in stand-by mode. Only when the "start/stop" button is pressed the MOTomed will go into operation.

The MOTomed viva2 is made for continuous stand-by mode. For repair, cleaning or transportation of the MOTomed, the mains plug has to be unplugged.

In order to save energy, the MOTomed viva2 switches into stand-by mode a few minutes after the training. The energy usage in stand-by mode is less than a television in stand-by mode. If the device is used for training 1 hour daily and 23 hours in stand-by mode it will be approximately 10 EUR in annual power costs (based on energy costs in Germany).

Moving/Transporting

The MOTOmed viva2 is equipped with two large transport rollers so that it can be easily moved within a building.

To move the MOTOmed, please hold the handlebar or the arm trainer of the MOTOmed viva2 and tilt it backwards until you can easily pull or push the MOTOmed viva2 on its large transport rollers. The mains cable has to be detached completely prior to the transport.



Fig. 6

If you have to move the MOTOmed viva2 over any small bumps, make sure that both transport rollers move simultaneously over the bump. Don't use the transport rollers to move the MOTOmed viva2 across uneven ground (e.g. cobblestones). In both cases damage to the casing of the MOTOmed viva2 and the electronics inside could result.

For longer distances on uneven ground you should use a handcart (i. e. trolley) in order to protect the transport rollers.

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Introduction

The following pages show how to operate the MOTomed viva2. First, short instructions will be given for the basic functions of the "leg training" and the "arm/upper body training". Chapter "settings" offers a detailed explanation of the operation, step-by- step.

What is ServoCycling?

see page 29 *ServoCycling* is a special function of the MOTomed viva2 for users with very little residual muscle strength. The MOTomed *ServoCycling* function has an effect similar to a servo-assisted steering system, which could enable you to steer a truck by using one finger. Even with minimal muscle strength, MOTomed *ServoCycling* allows for complete and even pedal movements. Active cycling increases strength, coordination and motor activity.

The MOTomed viva2 recognizes your active impulse and the MOTomed *ServoCycling* enforces it throughout one complete cycle. The MOTomed viva2 accelerates noticeably, so you see and feel the effects of your own activity immediately. As soon as you stop giving active impulses the speed decreases gently. This increases the benefit of your therapy. *ServoCycling* is a great experience!

SymmetryTraining

see page 31 During active cycling with your own muscle strength, the *SymmetryTraining* function shows how much each leg "is working" at that moment. Due to this display you can practice to train and put strain on both legs equally and apply your strength more deliberately. The displayed values are not suitable for diagnostic purposes as the MOTomed viva2 is not a medical measuring equipment. Due to spasticity and contractures, the displayed values are distorted. We recommend relaxing the muscles by training passively before starting active cycling with one's own strength.

Short instructions leg training

- 1. Set up:** Place the MOTomed viva2 on a non slip surface with the large tube ⑪ against a wall if possible. Sit in a wheelchair or in a stable chair in front of the MOTomed viva2 within a reasonable distance to the trainer – the legs must be able to turn freely but the knee joints must not be stretched out completely at any time while training. **Important:** Make sure the wheelchair or chair is secure to avoid moving or slipping.

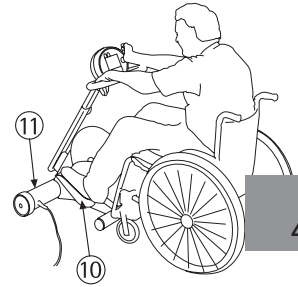


Fig. 7

- 2. Insertion and securing aid (if needed):** Press the long blue button " " ⑦. The buttons "pedals forward" ⑤ and "pedals backward" ⑥ allow you now to move the foot shells ⑩ to the lower position to help you inserting your legs one after the other comfortably.

Hint: If your legs are not equally flexible, we recommend inserting the stiffer one first. Then fix your feet and legs with the Velcro straps or the *self-operating foot holders (item no. 506) in the foot shells.*

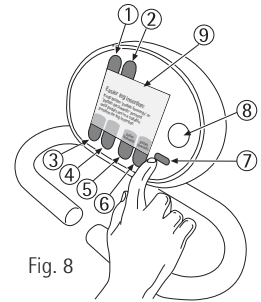


Fig. 8

see page 53

- 3. Start the training:** Press the red "start/stop" button ⑧. The foot shells automatically start moving slowly and the display ⑨ turns on. Have your legs moved "passively" for a short warm-up of a few minutes.
- 4. Change speed/direction:** With the "speed" buttons you can increase or decrease the number of rounds of the foot shells per minute. Upon pressing the button "slow" (turtle) ⑤ you reduce speed, pressing the button "fast" (rabbit) ⑥ you increase it. The button "direction" ④ allows you to switch the direction of rotation from forward to backward and vice versa. The buttons ③ to ⑥ have several functions depending on whether you are training with the assistance of the motor or cycling actively, i.e. you pedal yourself.

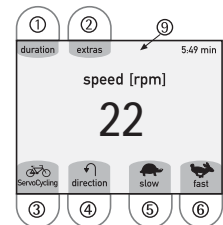


Fig. 9

5. **Cycling "actively" without motor:** After you've relaxed your muscles enough you can start to cycle actively with your own strength. Press the button "ServoCycling" ③ (see figure 9). Pedal yourself and the MOTOMed makes out your own activity. The display ⑨ gives you feedback showing a bicycle icon and the remark "you are cycling yourself". With the buttons "light" (small weight) ⑤ and "heavy" (large weight) ⑥ you can change gears according to your muscle strength (from gear 0 to 20). Please choose the appropriate gear that allows you to cycle without intense strain. It is recommended to cycle in the low gears for some time.



Fig.10

6. **Pause:** In case you get tired we advice you to relax your legs. The MOTOMed viva 2 will recognize this and take over automatically, moving your legs passively again. After a while you can try cycling yourself again (but only if you feel able to) – the MOTOMed will recognize this input and switch automatically to active mode again. The bicycle icon appears on the display ⑨ together with the feedback: "you are cycling yourself" (see figure 10).

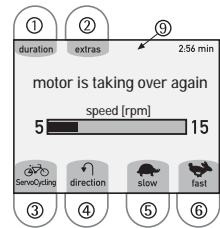


Fig.11

7. **SymmetryTraining:** The SymmetryTraining function applies only while cycling actively when the bicycle icon appears. SymmetryTraining is supposed to help you training towards an even force output of each leg by indicating the activity of both legs in a graph. Whenever the display shows 50% on both bars, both legs are equally active, one bar showing more than 50% however indicates that the corresponding leg is pedaling with more strength. Try always to train both your legs equally. You can freeze the SymmetryTraining bar graphs on the display by pressing the button "hold display" ③. The button "change display" ③ turns back to other screenshots.

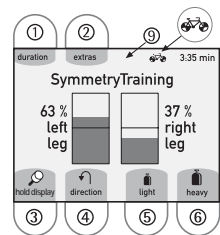


Fig.12

8. **End of training/analysis:** Before you finish your training you are advised to have your legs moved passively again for a few minutes in order to loosen up your muscles. In order to stop the training press the red "start/stop" button ⑧ twice (see figure 8). By pressing the red start/stop button only once you activate the pause function. Press then the button "analysis" ③ before the display ⑨ switches off. The analysis will show you e.g. how long you have been training with the assistance of the motor (passively) and with your own strength (actively).

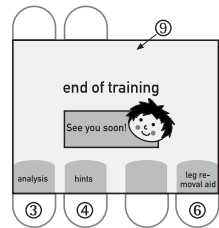


Fig.13

9. **Removing the legs:** To remove your legs after training press the button "removal aid" ⑥. Last, press again the red "start/stop" button ⑧ (see para. 2) to switch off the MOTOmed. Otherwise the MOTOmed viva2 will automatically switch into stand-by after a while.

Short instructions arm/upper body training

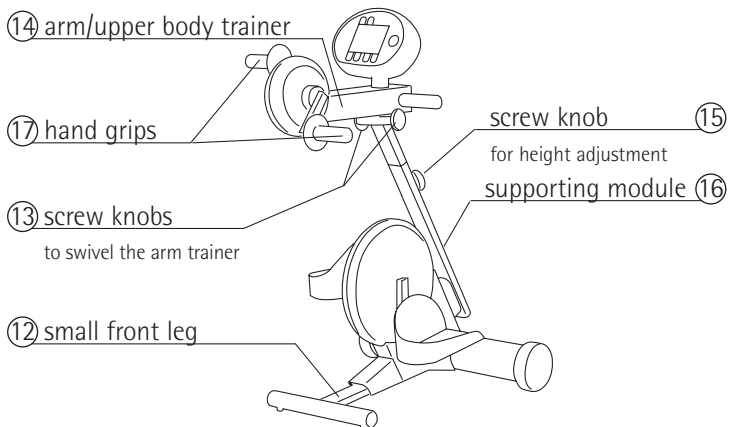


Fig.14

1. Whenever you attach an *arm/upper body trainer* ⑭ (*item no. 250 or 218*) to your MOTomed viva2 you have to extend the front leg ⑫ by approx. 15 cm/6 inches. However, please keep a minimum insertion of the front leg of 10 cm/4 inches for optimal stability of the MOTomed.
2. Open the two screw knobs ⑬ located underneath the *arm/upper body trainer* ⑭ and swivel the *arm/upper body trainer* ⑭ clockwise by 180 degrees. After that, tighten the screw knobs ⑬ again.

3. Open the screw knob ⑮ at the supporting module ⑯ and adjust it to the desired training height (after consultation of the doctor and therapist).

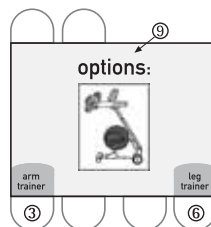



Fig.15

4. **Start of training:** Press the red "start/stop" button ⑧ (see figure 8) and then the button "arm trainer" ③. The hand grips ⑰ begin to move slowly. Let the motor move your arms passively in a short "warm-up" phase first.
5. If the hands are fixed (e.g. in the *forearm shells*) training may only be done under supervision.
6. Further instructions for arm training are very similar to the leg training (see pages 21 – 23, para. 4 to 8).

Please note that the *SymmetryTraining* for the arm trainer is not included in the standard version but can be ordered additionally (*item no. 201*).

Settings

Leg insertion aid (insertion and securing of legs)

Before you start the training, you have to place your feet into the foot shells and fix them with the Velcro straps. The leg insertion aid of the MOTomed viva2 offers the possibility to bring the foot shells into a suitable position to help you inserting your legs more comfortably. Please press the blue button  (leg insertion aid).

4

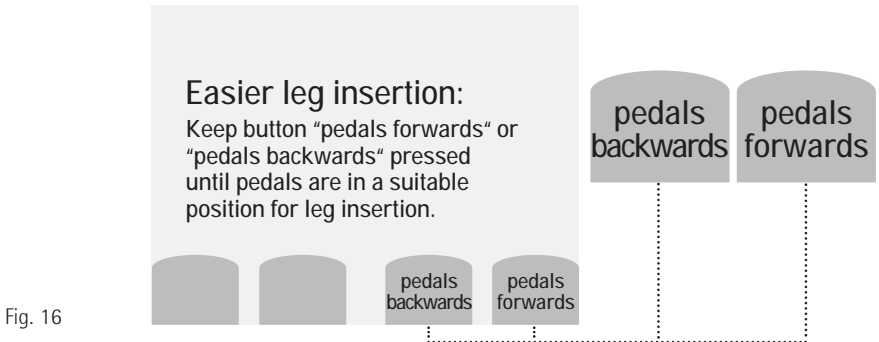


Fig. 16

see page 53

Press button "pedals forwards" or "pedals backwards" until the first foot shell is at the desired position. As soon as you stop pressing the button the pedals stop moving. Now you can insert and fix your first leg with the Velcro straps or *self-operating foot holders (item no. 506)* in the foot shell. After that you repeat this procedure with your other leg. The training starts as soon as you press "start/stop". **Important:** Only start your training when both legs are inserted and fixed.

Suggestion: If your legs are not equally flexible, step in first with the leg that is less flexible than the other.

For some types of wheelchairs it may be necessary to remove the foot plate or to swivel it aside in order to allow sufficient access to the MOTomed viva2.

However, if you decide not to train, the MOTomed viva2 goes into stand-by mode after a few minutes.

Start of training

Press button "start/stop". The MOTOmed viva2 starts with a short and gentle warm-up phase.

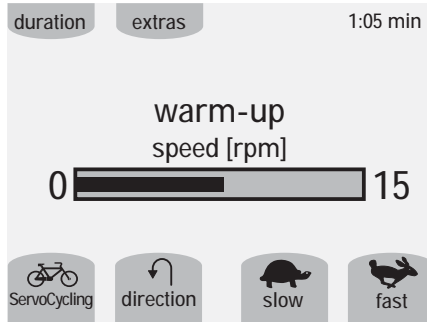


Fig. 17

The speed of the leg trainer automatically increases up to 20 rpm, arm/upper body trainer warms up to 5 rpm. Without pressing any further buttons the motor of the MOTOmed viva2 will gently move your legs in a safe way.

Arm/upper body trainer

see page 54

If there is an *arm/upper body trainer (item no. 250)*, you will be asked to choose between arm or leg training before starting the training (page 24, figure 15). If you choose arm/upper body training, you will have about 10 seconds to place your hands onto the handles, and then the training will start. In case you want to start your training immediately, press the button "start now."

Apart from that the functions and settings of the arm trainer are similar to the leg trainer, (excluding the *SymmetryTraining (item no. 201)*, which has to be ordered specifically with the arm trainer).

Adjustment of speed

With the buttons "slow" (turtle) and "fast" (rabbit) you can easily adjust the speed according to your needs. You can choose any speed between 0 and 60 (rpm).

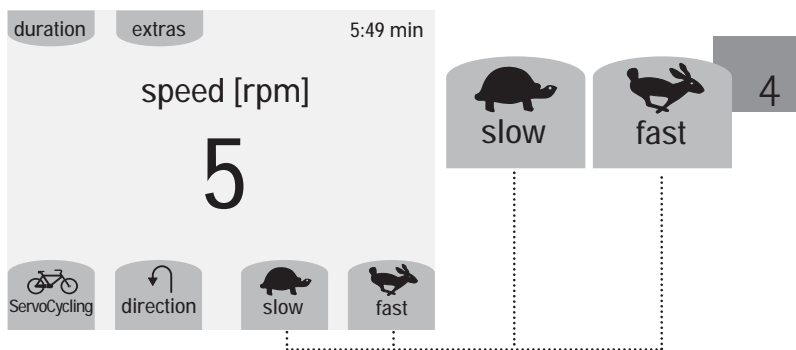


Fig. 18

Change of direction

Upon pressing the button "direction" the MOTomed viva2 slowly reduces the speed until it stops, changes the direction of movement and finally accelerates back up to the previous speed.

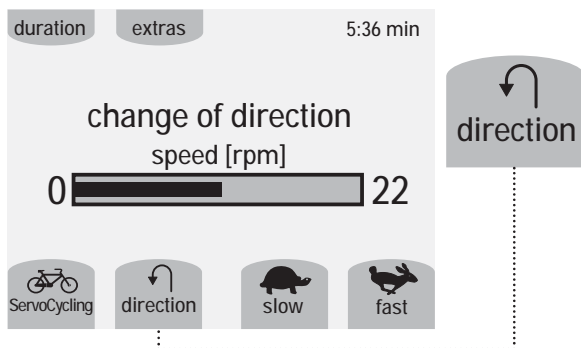


Fig. 19

Automatic direction change

With the *back + forth program* you can set a period of time after which the MOTomed viva2 will change the direction automatically. For this press at first the button "extras" (1.), then the button "extras" (2.), once again the button "extras" (3.) and finally the button "back + forth program" (4.).

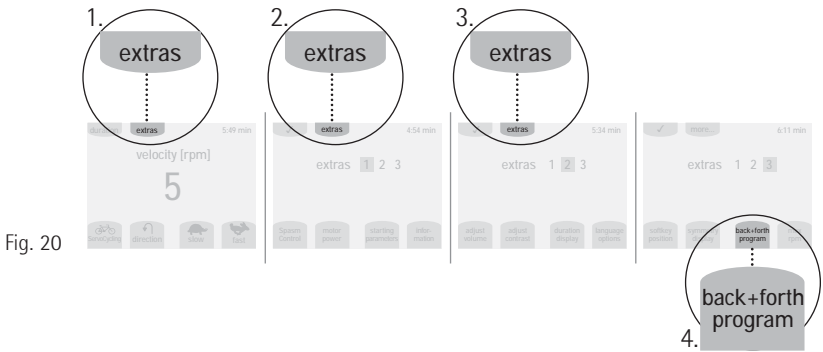


Fig. 20

Upon pressing the buttons "-" and "+" (5.) you can set the time period for the change of direction from 2 to 30 minutes.

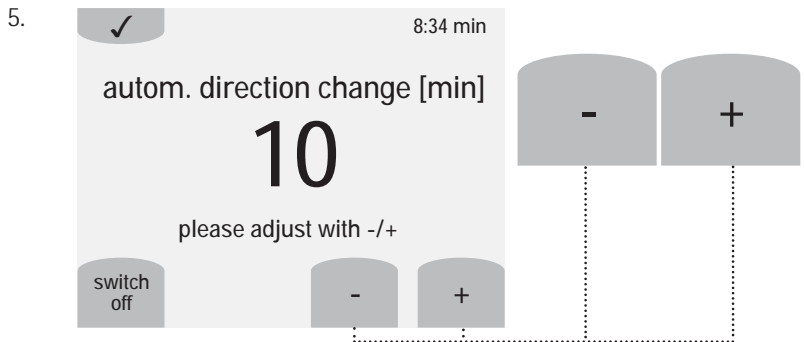


Fig. 21

If you want to go back to the standard operation please press the button "switch off". Accept your adjustment by pressing the button "✓".

Active cycling (with your own strength)

Whenever you start cycling actively with your own strength, the display gives the following feedback:

"you are cycling yourself gear 5". Upon pressing the buttons "light" and "heavy" you can shift to a lower or higher gear. When you would like to have your muscles moved by the MOTomed viva2 again, just stop cycling. The motor automatically takes over and moves your legs or arms gently.

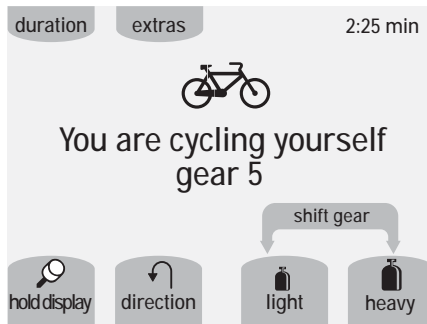


Fig. 22

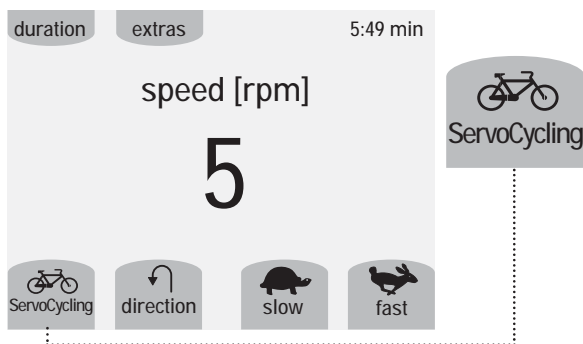
The MOTomed viva2 is however not designed for continual active training at high resistance. It is not suitable for physically well trained people as a sports trainer. The manufacturer does not grant warranty for damages occurred due to intensive active cycling in high gears (high resistance levels).

ServoCycling

The button ServoCycling allows you to switch to *active assisted cycling*.

This is particularly important if you don't have enough strength to immediately cycle yourself in the pre-adjusted gear 5 or if your previously set gear is too high. Press the button "ServoCycling." Now you may cycle yourself in the pre-set gear and try to accelerate the MOTomed viva2. As soon as a bicycle icon appears on the display you are cycling with your own strength!

Fig. 23

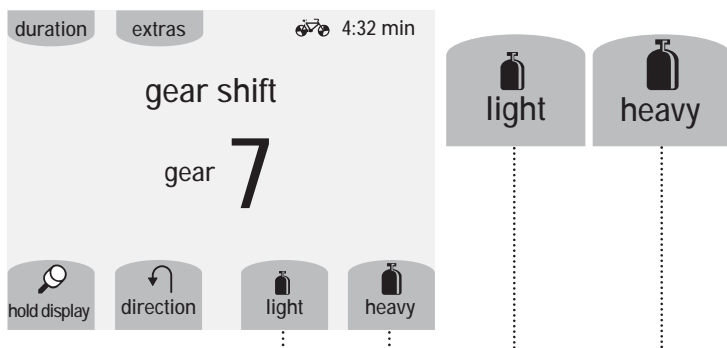


During *active cycling*, the operating sound might increase due to increasing speed or higher gears.

How to shift gears when you cycle yourself

Just like using a bicycle you can shift gears by pressing the buttons "light" (small weight) or heavy (large weight). Gears range from 0 – 20. That way you can adjust the training parameters according to your needs.

Fig. 24



Training suggestion: Always cycle in a gear which allows you to train without exhaustion. Whenever your muscles fatigue, relax and let the motor take over again. Do not overexercise!

SymmetryTraining

SymmetryTraining is only available during active training. The right and left leg activity, is displayed in bars and percentage. This function helps to train your legs evenly.

You can choose between two displays as *SymmetryTraining* feedback options. The pre-set bar graph shows the activity of your 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.

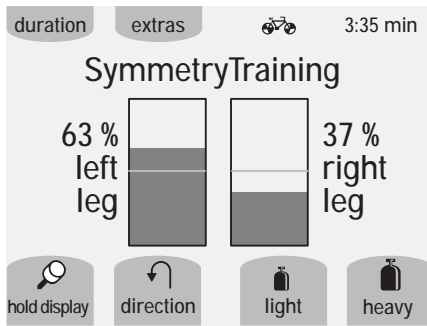


Fig. 25

The one bar graph works with a ball which moves to the right or left following the more active leg. Whenever the activity of both legs is equally the ball will be in the center of the bar.

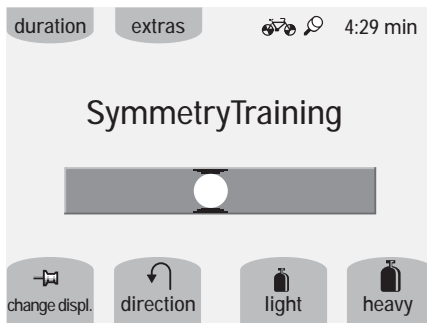


Fig. 26

The displayed values are not suitable for diagnostic purposes. Due to spasticity and contractures, the displayed values are distorted. Distortion also occurs if the user is not pushing the pedals with both legs equally but pulling with one leg while pushing with the other.

Suggestion: We recommend to loosen up the muscles by passive training before starting active cycling.

How to get into SymmetryTraining?

As described above you have to start cycling yourself or to start ServoCycling. You can do this by simply starting to cycle with your own strength or by pressing the button "ServoCycling".

see page 29

As soon as you cycle yourself, the MOTomed viva2 will detect your impulse and respond with the bicycle icon on the display. Then, various information appear on the display successively:

SymmetryTraining, duration of training, distance covered, speed,...

As soon as "SymmetryTraining" appears on the display, press the button "hold display" and you freeze the display in order to do *SymmetryTraining*.

A small pin will appear on the top of the display indicating that the display is frozen.

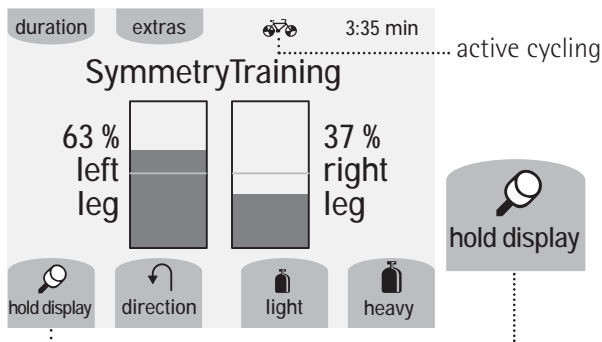
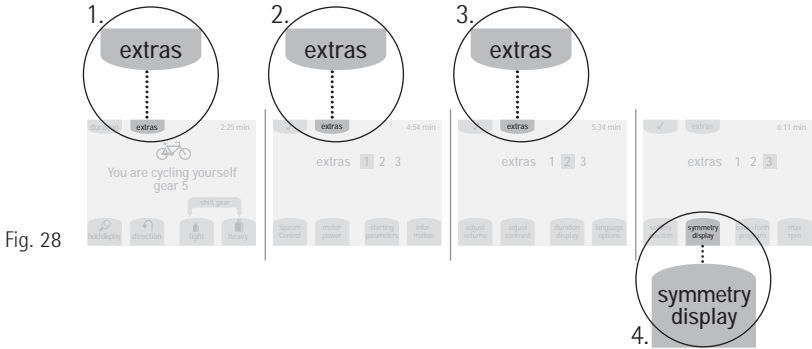


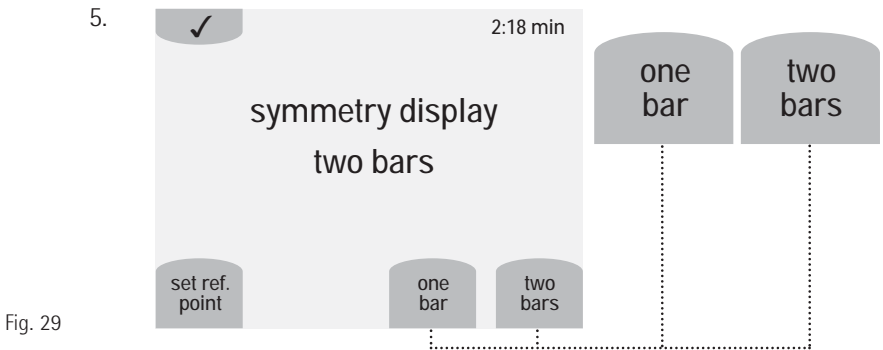
Fig. 27

Change of SymmetryTraining display

To change the *SymmetryTraining* display press the following buttons: Button "extras" (1.), button "extras" (2.), again button "extras" (3.) and finally the button "symmetry display" (4.).



Now you may choose between the one bar graph and two bar graph (5.).



By pressing the button "✓" you can close the program and save this setting.

Continuously changing display

A small pin on the top of the display indicates that you are holding the display is frozen. If you wish to go back to the continuously changing display, just press the button "change display". Now various information will appear on the display successively.

Pause

To pause the training please press the red "start/stop" button. Press the button "continue" in order to continue with your training.

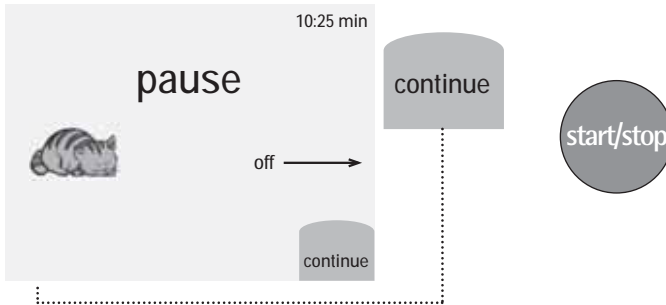


Fig. 30

End of training

see page 36

The training can be finished at any time by pressing the button "start/stop" twice. The MOTomed viva2 gently stops. Being in the pause function pushing once is sufficient. You can use the *leg removal aid* to remove your legs from the MOTomed viva2. Also, you have the option to get interesting training suggestions or a short training analysis.

Training analysis



Fig. 31

see page 75

After you have finished the training by the "start/stop" button you can query your training results by pressing the button "analysis". Now all training results will appear successively. In order to keep a record of all training results, you can query a log of your training. For further analysis and documentation you can use our new *Training Analysis Program sam1 (item no. 230)*. We are pleased to assist you!

Upon pressing the arrow buttons you may switch between the different results:

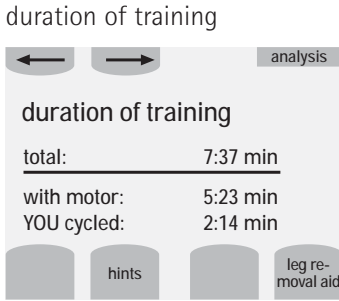


Fig. 32

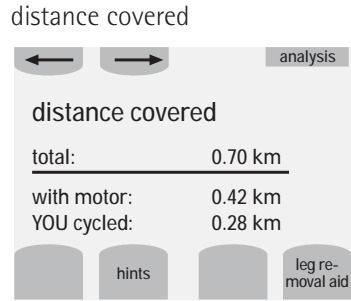


Fig. 33

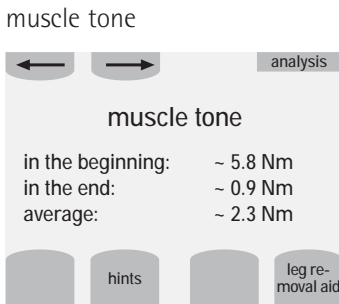


Fig. 34

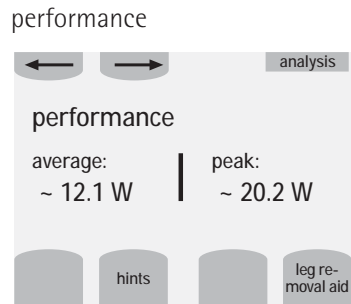


Fig. 35

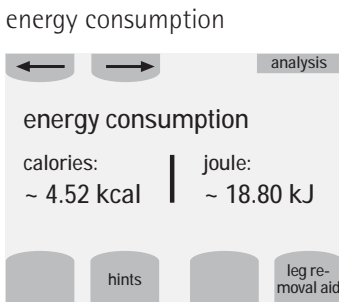


Fig. 36

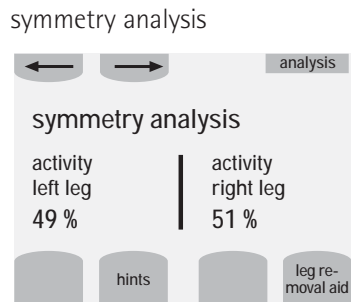


Fig. 37

Please note the values shown on the display can vary slightly from the real values. They are not suitable for a diagnostic evaluation.

While the MOTomed viva2 operates in stand-by mode and its display is dark you still can query the training results of your last training. You just have to press any of the 6 blue buttons around the display in order to see the analysis of the last training.

Training suggestions

At the end of any training there are further MOTomed viva2 training suggestions available. Just press the button "hints" to read them through.

Remark: The training suggestions are general advices. Please consult your doctor and therapist to assure they meet your individual needs.

Leg removal aid

At the end of the training you can remove your legs with assistance of the leg removal aid. Press the button "leg removal aid" (1).

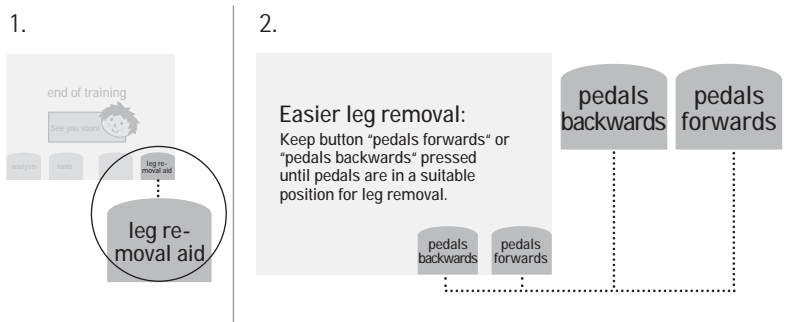


Fig. 38

While you keep the button "pedals forwards" or "pedals backwards" (2.) pressed, the foot shells can be moved slowly to an appropriate position. Then you can unfasten the Velcro straps and remove your first leg from the foot shell. Just proceed in the same way to remove the other leg as well.

MovementProtector and SpasmControl

During the training, the MOTomed *MovementProtector* constantly monitors your muscle condition. Due to this, the *MovementProtector* (the motor power) automatically adapts to your muscle condition and is therefore optimally sensitive at any time. This means additional safety, especially if your muscle stiffness changes through the course of the training with the MOTomed viva 2.

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 your doctor or therapist before doing so or call your MOTomed representative or the RECK company.

What to do if a spasm occurs?

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 your therapist does.

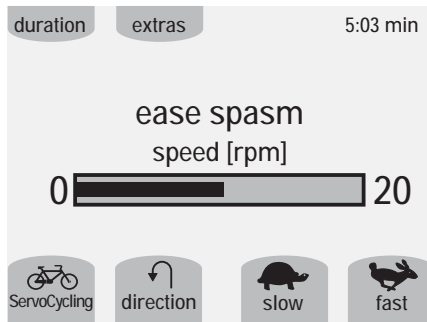


Fig. 39

Switch on/off SpasmControl with MovementProtector

(Hint: *SpasmControl* with integrated *MovementProtector* is activated by the manufacturer). Press button "extras" (1.) followed by the button "SpasmControl" (2.)

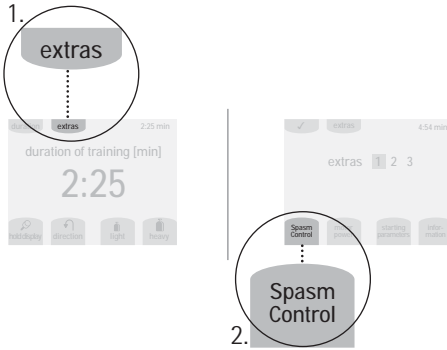


Fig. 40

To turn the *SpasmControl* on or off, press either the "switch on" button (3.) or the "switch off" button.

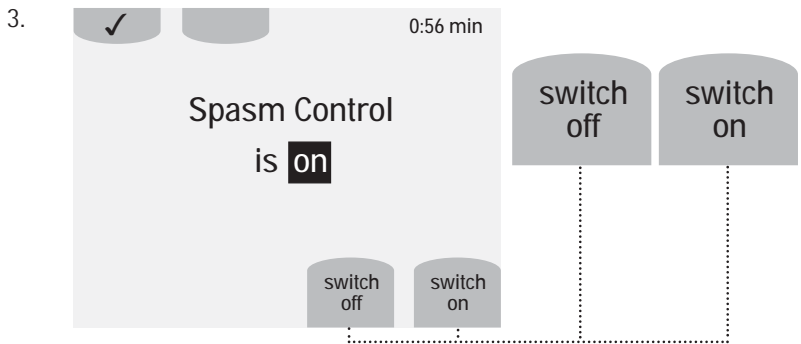


Fig. 41

Confirm your selection and exit this screen with button "✓".

Duration of training

It is possible to pre-set the duration of your training period, similar to setting a timer. When the set training time is over, the MOTomed viva2 stops automatically. The duration of training can be changed at all times.

To set the duration of training

(Hint: Continuous operation is pre-set by the manufacturer)
 Press button "duration" (1).



Fig. 42

Now you can set the duration of your training period by pressing the buttons "+" and "-" with a maximum of 120 min.

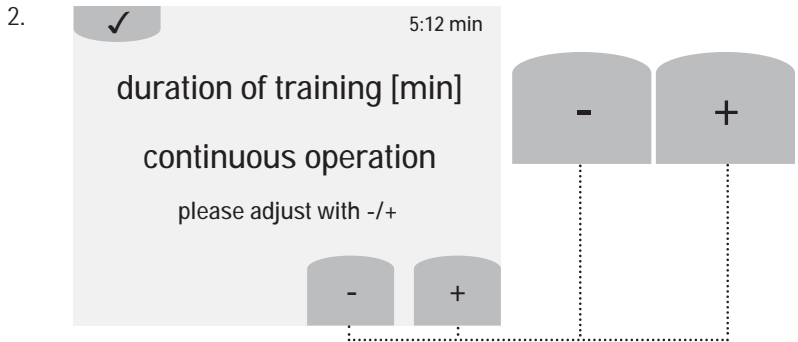


Fig. 43

Confirm your adjustment and exit this screen with button "✓".
 At the end of the pre-adjusted duration the MOTomed viva2 stops automatically and the training is finished.

To change the training time again, press "duration" (1.) button.



Fig. 44

To cancel a set training period, press the button "continuous operation" and accept with button "✓".

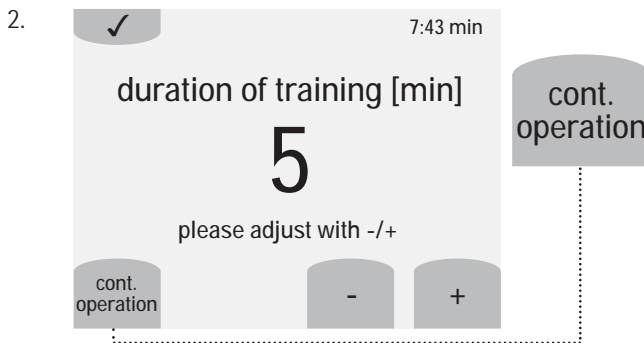


Fig. 45

Change of motor power

It is possible to adjust the maximum motor power. This is hardly ever necessary and should only be done in exceptional cases after consultation with your doctor and therapist.

When should the motor power be reduced?

The motor power should be reduced if you are at risk of easily injuring your bones, tendons, joints and ligaments due to high motor power applied by the MOTomed viva 2 (i.e. individuals suffering from strong osteoporosis, muscle shortening etc.).

see page 13

When should the motor power be increased?

If your legs or arms 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. If your legs relax again during the course of the training the *MovementProtector* (the motor power) automatically adapts to the necessary motor power and is therefore always optimally sensitive.

see page 13

How to increase or decrease the motor power

Press the button "extras" (1.) and the button "motor power" (2.).

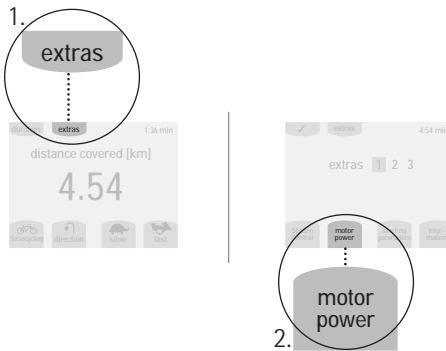


Fig. 46

Now you can limit the maximum speed (app. 2 to 15.8 Nm) with the buttons "-" and "+" (3.).

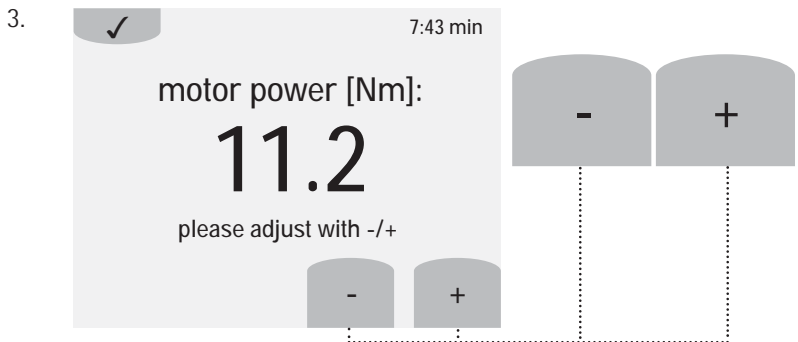


Fig. 47

Confirm and exit with button "✓".

Starting parameters

If you want to save the parameters (*SpasmControl*, *speed*, *duration*, *gear*, *rotation forward/backward*, *motor power*) of the MOTomed viva2 you set individually during training proceed as follows:
Primarily set the values that you would like to save.

Then press the button "extras" (1.), followed by the button "starting parameters" (2.) and "individual parameters" (3.).

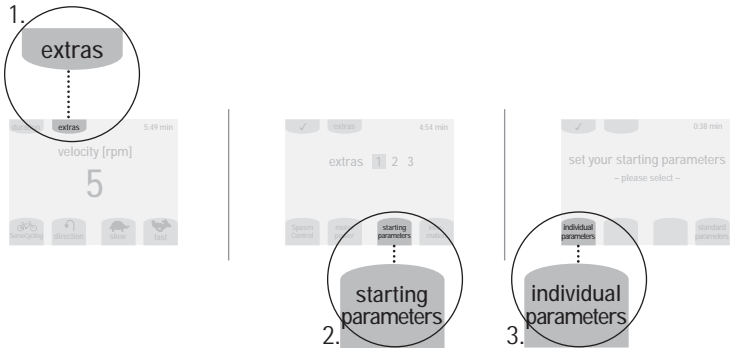


Fig. 48

The individually set parameters (*SpasmControl*, *speed*, *duration*, *gear*, *motor power*) are displayed so that you can confirm them by the n "yes" or "no" button (4.).

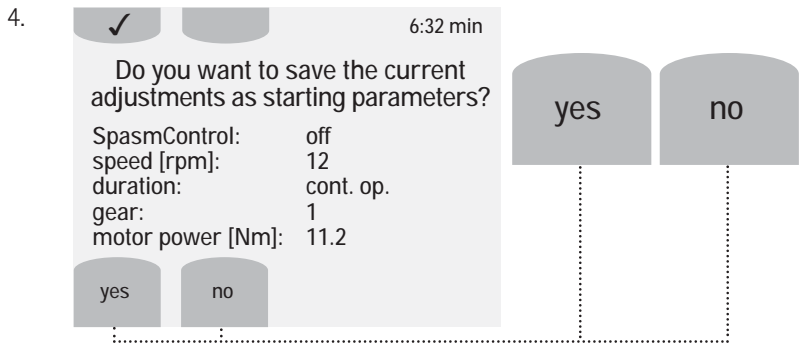


Fig. 49

Do you want to save the current adjustments as starting parameters?

By confirming the set parameters with button "yes" they're saved as your own starting parameters for the next training sessions. The MOTomed viva2 will start all following training sessions automatically with the new parameters.

If you wish to start your next training with the standard parameters set by the manufacturer, press button "extras" (1.), followed by button "starting parameters" (2.) and "standard parameters" (3.).

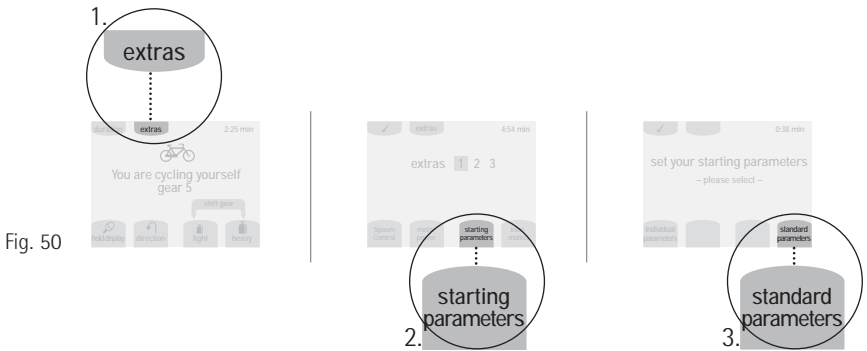


Fig. 50

By confirming with the "yes" button (4.) the manufacturer's pre-set parameters are saved as starting parameters. The MOTomed viva2 will start all following training sessions automatically with the standard parameters.

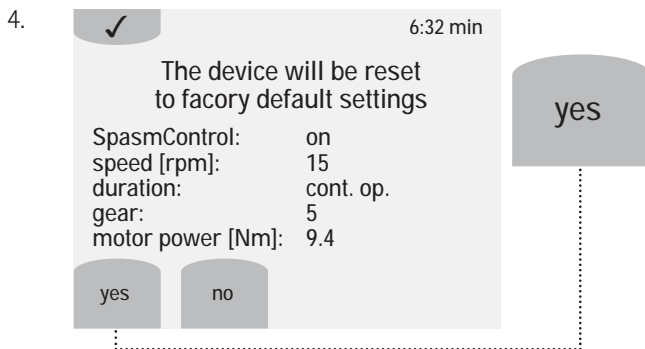


Fig. 51

Adjust the contrast of the display

Through this function you can adapt the contrast of the display to the lighting conditions. Your adjustment will be saved.

Press the button "extras" (1.), followed by the buttons "extras" (2.) and "adjust contrast" (3.).

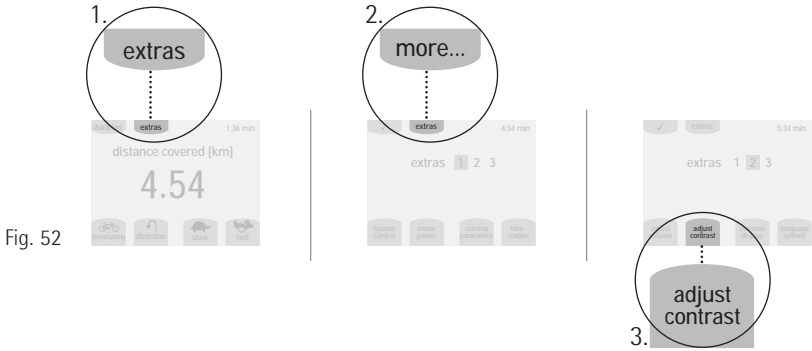


Fig. 52

Now you can adjust the contrast by pressing the buttons "-" or "+" (4.).

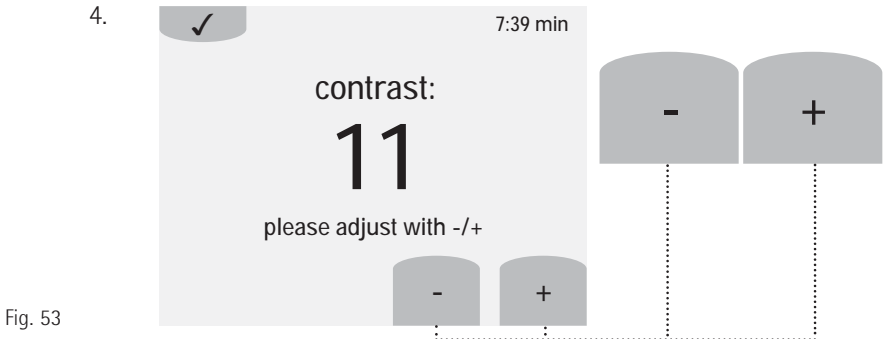


Fig. 53

Confirm your adjustment and exit this screen with button "✓".

Adjust the volume

Through this function you can adjust the acoustic feedback during pressing buttons, i.e. when choosing a gear. Press the button "extras" (1.), then the buttons "extras" (2.) and "adjust volume".

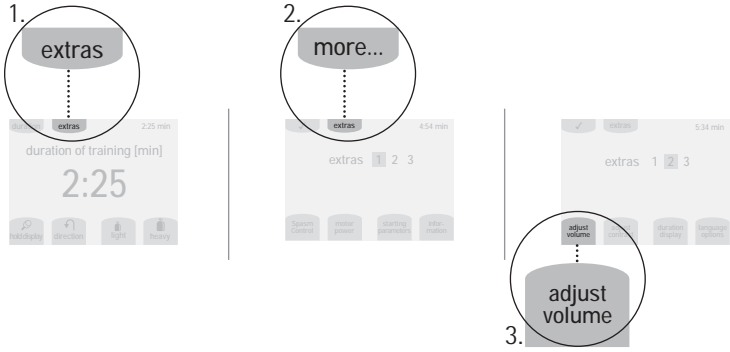


Fig. 54

Now you can adjust the volume by pressing the buttons "-" or "+" (4), "0" is without sound, "1" the minimum and "8" the maximum volume.

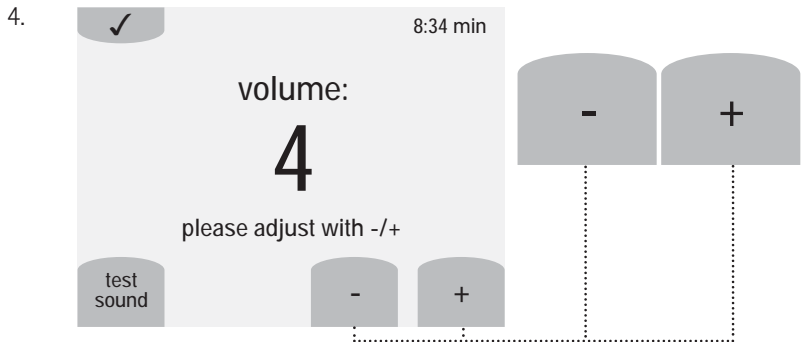


Fig. 55

With the button "test sound" you can test the set volume. With button "✓" you can save the setting.

Freeze/continue displayed information

This function is only available when you cycle actively. It interrupts the automatic change of displayed information. That means you can hold the particular information on the display you like to work with.

Press the button "hold display."

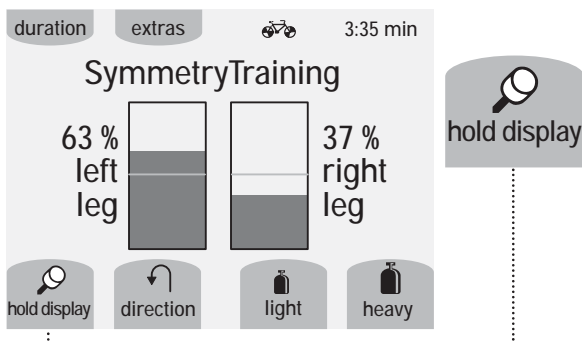


Fig. 56

A pin appears on the top of the display.

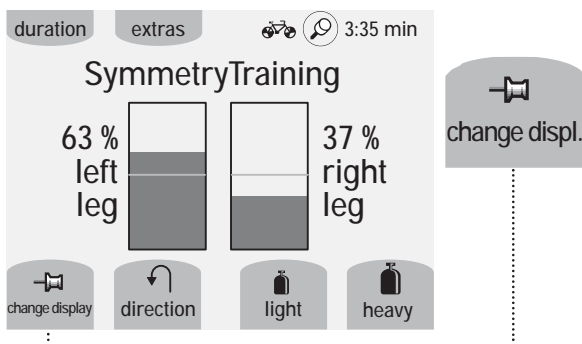


Fig. 57

As long as the diagonal pin appears, the automatic change of the display is at rest. The current display stays on until you press the button "change display" which in turn will reactivate the automatic change of the displayed information. By pressing the buttons "hold display" (diagonal pin) and "change display" (horizontal pin) successively, you can flip through the different displays.

Duration of displayed information

Displayed information during the MOTomed 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" (1.), then "extras 2.) and "duration display" (3.).

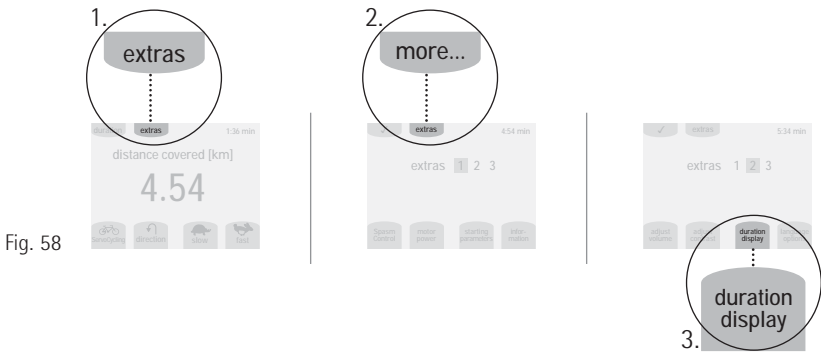


Fig. 58

Now you can use the buttons "-" and "+" (4.) to set the duration of the displayed information according to your needs. You can choose between 5 to 25 seconds. This value will be saved.

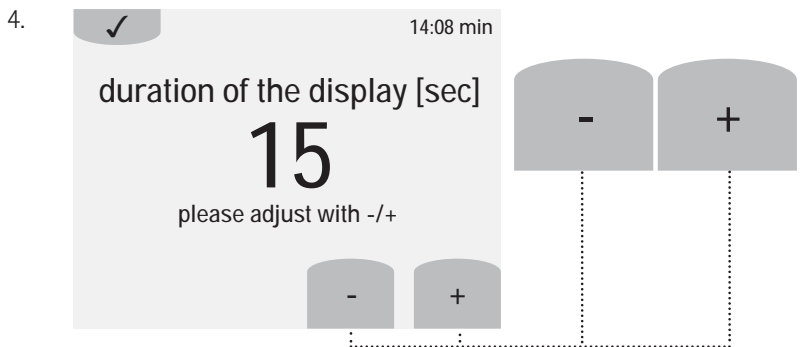



Fig. 59

Finish this operation and save this adjustment by pressing "✓."

Button lock on the operating panel

The button lock function can be activated to avoid changing set parameters during training. While training please press quickly 3 times the long blue button  (leg insertion aid) beneath the red "start/stop" button. An activated button lock is indicated by a key icon on the top of the display.

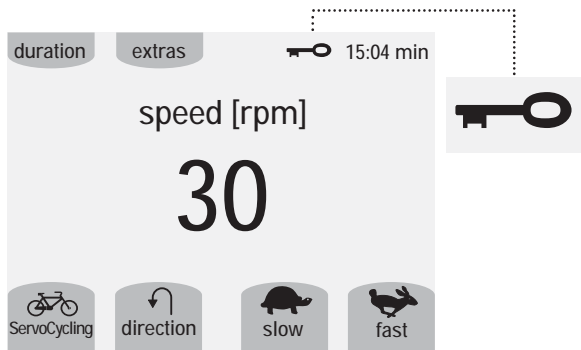



Fig. 60

In order to switch off the button lock press the button  (insertion aid) again 3 times. If you wish to train with locked parameters you always have to activate the button lock at the start of your training. You always can switch off the MOTomed viva 2 with the red button "start/stop", even if you train with locked parameters.

Maximum speed

The *maximum speed* function allows you to limit the speed that should not be exceeded during active training. This can be necessary while using an ankle joint control or doing the SymmetryTraining. The standard setting is 120 rpm.

To set the maximum speed press the "extras" (1.) button, then press "extras", press the "extras" button a third time and finally the "max rpm" (4.) button.

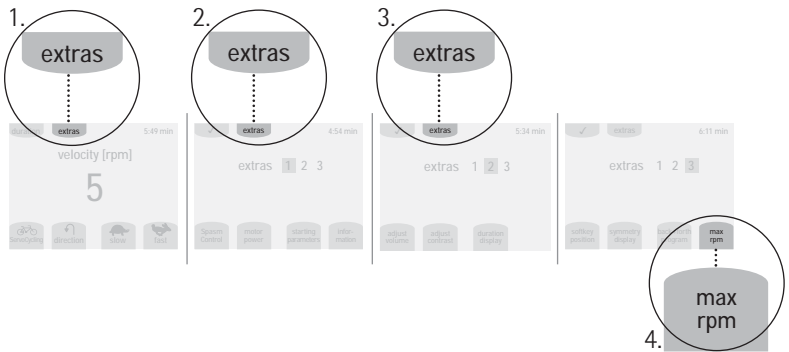


Fig. 61

Now you can set the maximum speed with the buttons "-" and "+" (5.), save this adjustment and finish the operation pressing the button "✓".

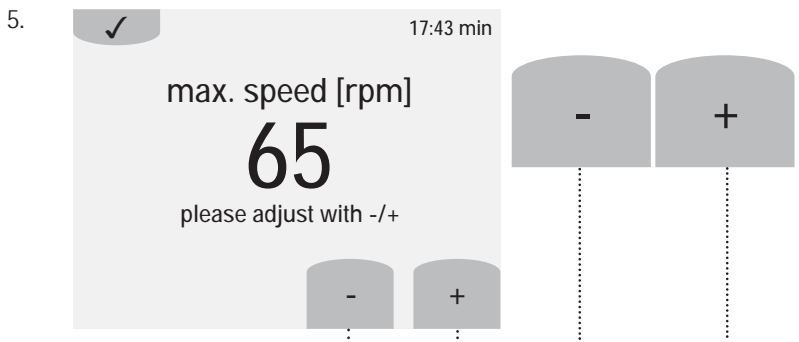


Fig. 62

Language option

The language option allows the selection between a wide range of available languages. All functions and visual feedback are displayed in the selected language.

Press the button "extras" (1.), then the button "extras..." (2.) and then the button "language options" (3.).

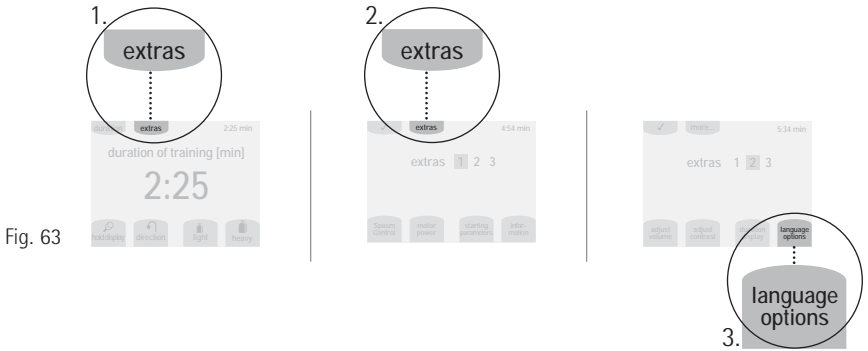


Fig. 63

Now you can select and save the desired language by pressing button "✓" (4.). Further languages can be viewed and selected via the button "more...".

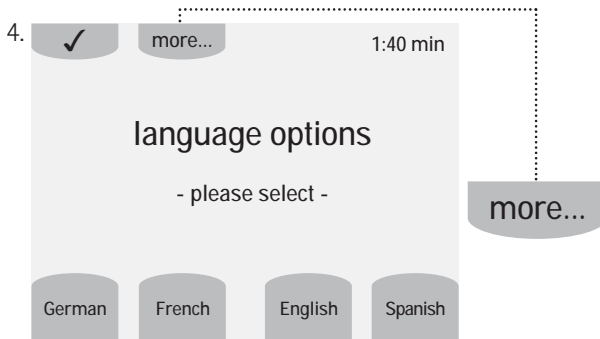


Fig. 64

- 52 Leg guides with calf shells
- 53 Self-operating foot holders
- 53 Pedal radius quick adjustment
- 54 Arm/upper body trainer active/passive
- 56 Arm/upper body trainer active
- 57 Forearm shells with arm cuffs
- 58 Hand fixation with wrist cuff
- 58 Wheelchair stabilizer
- 59 Chair fixation with stabilizer
- 60 Height adjustment
- 61 Ankle joint control with SlidingScale adjustment
- 62 Accessories, included in basic model:
 - 62 Safety foot shells
 - 63 Handlebar

Leg guides with calf shells

The leg guides (fig. 65a) at the safety foot shell are movable and spring mounted so that an ankle joint movement is possible. This is important as the calf muscle pump in the legs can increase the speed of the blood flowing back to the heart. The calf shells are formed in a way that an easier fixation to the shell is possible. Due to their flexible form they can be adjusted to the lower leg.

Don't adjust the calf shells too high; they must not touch the lower legs. The calf shells need to rest against the calves for an optimal guidance and hold of the legs (fig. 65b). Loosen the wing screw and adjust the height accordingly. Make sure that the minimum insertion depth of 3 cm/1.2 inches is maintained. As soon as you have fixed the feet into the foot shells, you need to tighten the Velcro straps around the calf.

Caution: Make sure that the Velcro Straps are securely tightened around the calves (fig. 65b).

see page 77

Pay attention to the safety precaution.

- 1.
- Velcro straps
 - calf shells
 - leg guides
 - wing screw

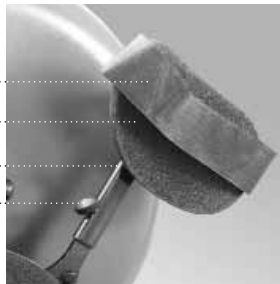


Fig. 65 a



Fig. 65 b

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

Item no. 506 **Self-operating foot holders**

If you have difficulties positioning your feet with the standard Velcro straps we recommend using the self-operating food holders. They help you to fasten and remove your feet easily and independently. This is of special advantage if the desired urge to use the toilet occurs while training with the MOTomed viva2.



Fig. 66

Open the foot holders and insert your feet. After that, lift the foot holder first up and then aside to place the rubber roll properly. Last you fix it with the operating handle (feel a clear pressure).

Item no. 507 **Pedal radius quick adjustment**

With the pedal radius quick adjustment, you are able to adjust the range of movement/pedal radius of the foot shells. The pedal radius is adjustable on both sides in four levels and can also be set between those levels if required.

Please follow these steps when changing the pedal radius:

1. First stop the pedal movement of the MOTomed viva2 by pressing the red "start/stop" button twice.
2. Remove legs from the foot shells.

3. Unplug the mains.
- 4a. By pulling up the snap knob the foot shell can be slid along the pedal crank and can be set at any one of the 4 positions/levels (primarily loosen the Allen screw). You can find an Allen key at the bottom of the device.
- 4b. Stage-less adjustment: Using the Allen screw the foot shells can be set at any position on the pedal crank.
5. Repeat this process on the pedal crank of the other side. Please make sure that you adjust the same pedal radius on both sides.
6. Plug the MOTomed in again at the mains socket.

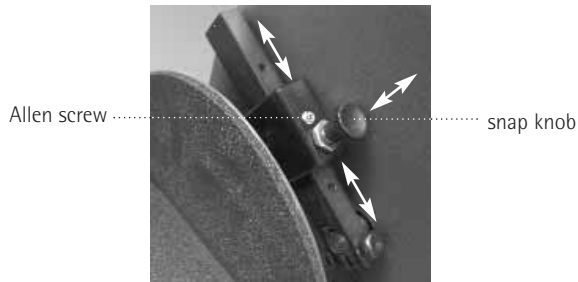


Fig. 67

Note: Loose Allen screws may cause noise. After tightening the Allen screw the noise should cease. We recommend tightening the Allen screws on a regular basis.

Item no. 250 **Arm/upper body trainer active/passive**

Before using the arm/upper body trainer it is important to pull out the front leg about 15 cm/6 inches (ensure a minimum insertion of 10 cm /4 inches). This improves the stability of the MOTomed viva2 necessary for the arm training.

Please ensure that you do not place too much weight on one side of the handle i.e. when standing up: do not prop yourself up on one side of the handle since this could cause the MOTomed viva2 to tip over.

You can do both active and passive training with the arm/upper body trainer.



Fig. 68 1 leg training 2 stop 3 swivel the arm/upper body trainer 4 start 5 arm/upper body training

The integrated handlebar of the arm trainer can be used to hold onto during leg training. To do arm training, please take the legs off the foot shells and swivel the arm/upper body trainer clockwise by 180 degrees. Please follow these steps:

- see page 24 1. Open the screw knob ⑬ on the underside of the arm/upper body trainer and turn it clockwise by 180 degrees. Tighten the screw knob.
- see page 24 2. In order to adjust a suitable height of the arm/upper body trainer, please open the screw knob ⑮ at the supporting module, adjust it to the desired height and tighten the screw knob again. Please ensure a minimum insertion of 10 cm/4 inches.

After you've removed your legs from the foot shells you can start the arm/upper body trainer by pressing the "start/stop" button and then choosing "arm training."

Important: Please make sure that your arms are not stretched completely; the elbow joint should always be slightly bend. The arm trainer has to be fixed at chest level or slightly below. For your optimal seating position please consult your therapist and doctor.

Hint: The body has the tendency to slump over, especially with elderly people. Backward arm training encourages a more upright posture. Regular backward arm training is recommended as part of your training program.

The *SymmetryTraining* for the arms (*item no. 201*) needs to be ordered additionally to the arm trainer.

Arm/upper body trainer active

Item no. 218

see page 16

Before using the arm/upper body trainer it is important to pull out the front leg about 15 cm/6 inches. Ensure a minimum insertion of 10 cm /4 inches. This improves the stability of the MOTomed viva2 necessary for the arm training.

Please ensure that you do not place too much weight on one side of the handle i.e. when standing up: do not prop yourself up on one side of the handle since this could cause the MOTomed viva2 to tip over.

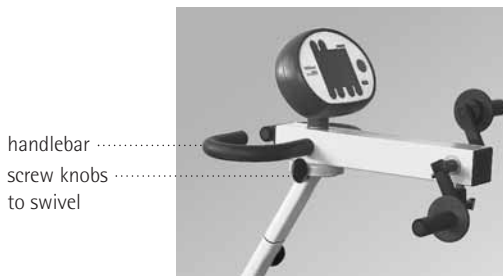


Fig. 69

The integrated handlebar of the arm trainer can be used to hold onto during leg training. To do arm training, please swivel the arm/upper body trainer clockwise by 180 degrees. Please follow these steps:

- see page 23 1. Open the screw knob ⑬ on the underside of the arm/upper body trainer and turn it clockwise by 180 degrees. Tighten the screw knob again.
- see page 23 2. In order to adjust the arm/upper body trainer to suitable height, please open the screw knob ⑮ at the supporting module, adjust it to the desired height and tighten the screw knob again. Please see the pictured explanation.

Item no. 55 **Forearm shells with arm cuffs**

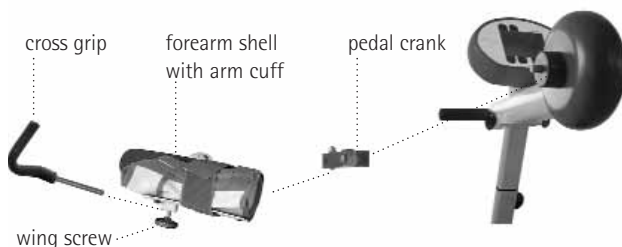


Fig. 70

see page 54, 56 The forearm shells can only be used in combination with the *arm/upper body trainer (item number 250 and 218)*. They are required if the arms need support and guidance due to paralysis. In order to allow some lateral mobility for the forearms, the shells have a pivot for horizontal movement. The position of the cross grip/hand rest of the forearm shell can be adjusted in all directions by loosening the wing screw (please ensure a minimum insertion of 2.5 cm/1 inch). Tighten the wing screw securely.

The grip range for forearm shells consists of three different models: *cross hand grips (item no.560)*, *ball-shaped hand rests (item no.558)* and *vertical grips (Item no.559)*.



Fig. 71

Item no. 560

Item no. 558

Item no. 559

For tetraplegic patients, we offer special handles (*item number 555, tetra handles*) which are similar to the handles on a handy bike. Additionally, we can provide a modification for *synchronic movement of the arms (item no. 554)*.

Caution: It is important to make sure that the hands (and fingers) are fixed in a way that they cannot touch the pedal cranks. Training with forearm shells may only be done under supervision. For retrofit of the forearm shells, please open the Allen screw at the ball bearing. You find an appropriate Allen screwdriver at the underside of the MOTomed viva2. Don't forget to tighten the Allen screw again after attaching on the forearm shells.

Item no. 562 **Hand fixation with wrist cuff**

The hand fixation with wrist cuff enables quick and simple attachment to the arm/upper body trainer for a weak or paralyzed hand. Compatible with the full range of hand grips.

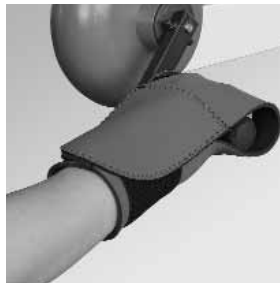


Fig. 72

Item no. 8 **Wheelchair stabilizer**

The wheelchair stabilizer protects the wheelchair from tilting or slipping away during active training or due to an occurring spasm.

When the wheelchair is in the right position, place the stabilizer behind the wheelchair and adjust the height in a way that the upper crossbar of the stabilizer fits right underneath the push handles of the wheelchair.



Fig. 73

In order to do this, you will need assistance. The wheelchair stabilizer is suitable for most conventional wheelchairs.

Item no. 511 **Chair fixation with stabilizer**

The chair fixation with stabilizer enables the user to train safely and securely from a normal chair. Especially recommended for users with strong spasticity and for those training actively.



Fig. 74

Please make sure that the chair fixation with stabilizer is secured firmly to the MOTomed viva2. Both front legs of the chair must be secured inside the chair fixation and the back legs must be positioned on the floor plate.

Height adjustment

With the height adjustment it is possible to adjust the position of the pedal pivot by 7 – 15cm/ 2.75-5.9 inches meaning the pedals rotate higher and nearer to the user. The height adjustment has been especially developed for people with short legs and for children. Other than that it can make it easier to drive up close to the MOTomed viva2 with sport wheelchairs or wheelchairs with a rigid foot board.

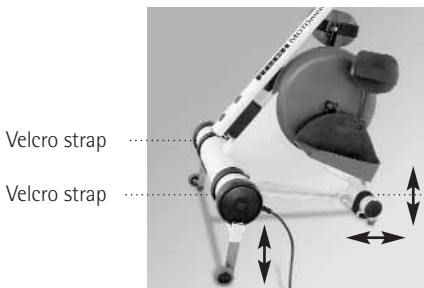


Fig. 75

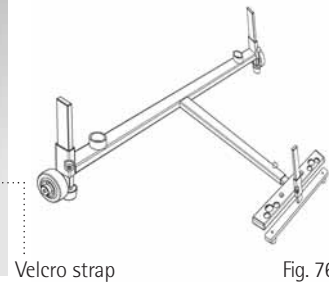


Fig. 76

Put the large tube of the MOTomed viva2 on top of the large part of the height adjustment unit, so that both rubber-knobs are inserted in the circular holders of the height adjustment.

Now open the Allen screws of the front part of the height adjustment unit with the Allen screwdriver which comes with the MOTomed viva2 and which is located underneath the device. Pull out the front support of the height adjustment unit until the rubber-knobs of the front leg of the MOTomed fit into the circular holders of the height adjustment unit. Close the screws tightly and secure the height adjustment to the MOTomed viva2 with the Velcro straps.

To raise the large tube of the MOTomed, open one of the two Allen screws of the large part of the height adjustment unit with the Allen key. Now you can adjust the height according to your needs. Tighten this Allen screw and open the other one. Now adjust the MOTomed viva2 so that it is in a straight position, then fix the Allen screw again.

To raise the small leg of the MOTomed viva2, open the Allen screw of the small part of the height adjustment unit with the Allen screwdriver.

Now you can adjust the height you need. Tighten this Allen screw. Don't forget to secure the MOTomed viva2 with the 3 Velcro straps to the height adjustment. Put them around the left and right side of the large tube and the height adjustment and one strap around the front leg of the MOTomed and the height adjustment unit.

Item no. 534 **Ankle Joint Control with SlidingScale 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. This in turn can stimulate the metabolism, avoid contractures and help to support normal walking movement.

Using the SlidingScale adjustment you can individually adjust the plantar flexion (stretching) and dorsal flexion (bending) of both ankle joints, enabling the therapy to meet your special needs.

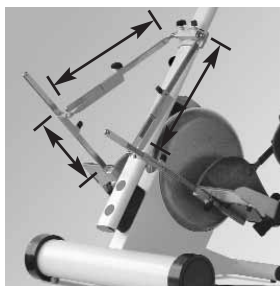


Fig. 77

Warning: The degree of ankle joint movement must be set carefully. In general, you should start the training with a limited ankle joint movement which can be increased slowly. Overexertion must be avoided. Consult a doctor and therapist for advice on appropriate usage of the ankle joint control system before starting the training.

Accessories, included in basic model:

Safety foot shells

The foot shells allow secure hold of the feet. This is particularly important for people with (complete) paralysis and for people with spasticity.

The high safety panel supports fixing the feet and protects against the rotating pedal crank at the same time. The specific padding allows for comfortable and slip-proof training.

The foot shells come as standard with Velcro straps at the ankle and toe level. If required, additional Velcro straps are also available for the lower foot.

The standard foot shell provides two pedal radius settings for adjustment of the range of movement of the ankle and knee joints. With a special spanner you are able to remove the foot shell (or pedal) from the pedal crank and screw it into the second hole on the pedal crank increasing the pedal setting. You find the required spanner along with your MOTomed viva 2.



Fig. 78

Please be aware that this is a left-hand thread! Please ensure that you have mounted both the left and the right side foot shell on the same pedal radius. Tighten the pedal bolts and check them regularly.

see page 53 If you wish to change the pedal radius frequently, we recommend our *pedal radius quick adjustment (item no. 507)*.

Important: The foot shells can be individually adjusted to your needs, e.g. with outward rotation, in height etc.

see page 75 The employees of the RECK company will be pleased to assist you.

Handlebar

The handlebar supports a secure hold during the training, particularly in case of strong spasticity, balance problems and for *active training*.

Please ensure that you do not place too much weight on one side of the handle i.e. when standing up: do not prop yourself up on one side of the handle since this could cause the MOTomed viva2 to tip over.

For hygiene reasons, the handlebar covering is washable and can also be disinfected with regular disinfectants.

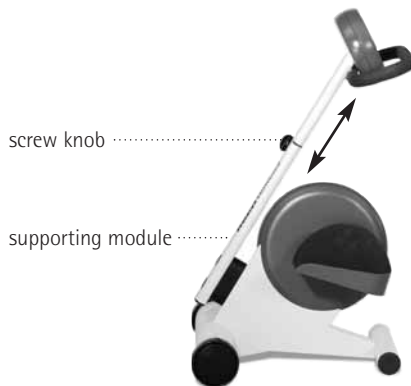


Fig. 79

The height of the handlebar can be adjusted according to your individual needs by loosening the big knob-screw located at the supporting module. Please make sure that the module is inserted 10 cm / 4 inches minimum.

After making adjustments to the MOTomed, always ensure that all screws and screw knobs are tightened again before using the trainer. Do not lean on the handle bar when it has been raised as it may be unstable and there is a risk of tipping over.

General information:

Additional accessories are described in the current product overview.
Also individual adaptations can be carried out. Please contact your
see page 75 MOTomed representative or the RECK company, see chapter "service."

- 66 **Safety Instructions for Troubleshooting**
- 66 **The MOTomed viva2 is Jerky, Runs Unevenly or Makes Noises**
- 67 **The MOTomed viva2 Does Not Work at All or the Operating Panel Does Not React**
- 67 **Error Messages**
 - 67 Overheating
 - 68 The motor locks
 - 68 Neither arm-trainer nor leg-trainer is detected

Safety Instructions for Troubleshooting

Only authorized qualified personnel is allowed to carry out repair works on the MOTOmed viva2. For safety reasons it is crucially important that the device is completely disconnected from the power supply.



In case of a malfunction that is not listed below or if you have any questions, please refer to the RECK customer service department

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

see page 75

The MOTOmed viva2 is Jerky, Runs Unevenly or Makes Noises

Please check the following points:

1. Are the wing screws of the leg guides securely tightened?
2. Is the pedal radius set to the same level on both sides?
3. Is the pedal radius set too large for the level of mobility of the user? This leads to an uneven user dependant run.
4. Are all Allen screws of the pedal radius quick adjustment tightened correctly?
5. Please check your seating position and posture in front of the MOTOmed viva2. You should sit upright and in a straight alignment with the MOTOmed viva2. The distance between you and the MOTOmed should be such that the legs are not stretched completely at any time.
6. 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 viva Does Not Work at All or the Operating Panel Does Not React

Please check whether the operating panel is mounted correctly and whether the mains cable is plugged into the wall socket and into the MOTomed viva2. Check also the function of your wall socket (by plugging in any other electric device).

Error messages

Overheating

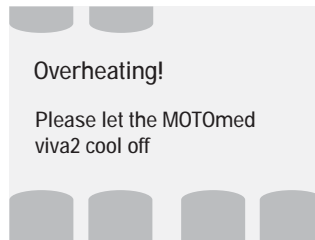


Fig. 80

The MOTomed viva2 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 your training for approx. two hours in order to let the motor cool down completely.

The motor locks

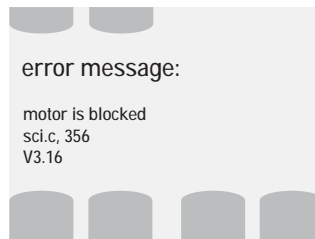


Fig. 81

This error-message appears as soon as the SpasmControl is activated

15 times at short intervals or if the motor was locked for a period of 30 seconds. Please pull the mains plug out of the plug socket and put it in again. Then please check if the motor power is set too low or the pedal radius too high in relation to your condition.

see page 40

Neither arm- nor leg-trainer is detected

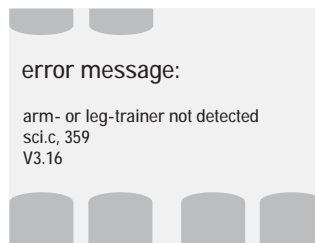


Fig. 82

This error message appears if the pedals are moved before the MOTomed viva2 is ready for starting up (the green small lamp at the operating panel must be permanently). Please pull the mains plug out of the plug socket, put it in again and wait until the green small lamp at the operating panel lights permanently.

see page 17

Cleaning and Care

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

Clean the surface of your MOTOmed viva2 only with a soft and dry cloth. It is absolutely crucial that no water enters the device.

If several users use the MOTOmed viva2, 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 viva2 so that they don't get damaged.

Technical Specifications, Symbols

Measurements and weight (basic model)

Height:	100 cm/40 inches
Width:	60 cm/23.6 inches
Depth:	56 cm/22 inches
Operating panel:	11.3 x 8.5 cm/4.5 x 3.4 inches
Weight: leg trainer	31 kg/68 lb
leg and arm trainer	38 kg/84 lb

Power requirements

Europe:	220 - 240 V ~/50 - 60 Hz, 0,56 A
USA, Canada:	110 - 120 V ~/50 - 60 Hz, 1,0 A
Japan:	100 - 110 V ~/50 - 60 Hz, 1,0 A
Other countries:	according to country specifications, consider the marking

Power consumption

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

Ambience conditions

Operation:	0° to +40°C/32 to 104°F
Storage:	-20° to +60°C/4 to 140°F
Humidity:	10 % - 80% relative, not condensing

System of protection: IPX0

Class of protection: I, Type B

**Class of medical products
according to MPG:** II a

According to IEC 601-1, all-pole switch off of the MOTOMed viva2 is ensured by pulling the mains plug.

Signs and symbols on the marking



Applied part type B

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



Pay attention to the provided information sheets



Attention! Follow the instruction manual



MEDICAL ELECTRICAL EQUIPMENT
WITH RESPECT TO ELECTRICAL SHOCK
FIRE, AND MECHANICAL HAZARDS ONLY
IN ACCORDANCE WITH UL60601-
1/CAN/CSA C22.2 No. 601.1
40FF



The MOTOMed viva2 meets the standards for medical devices 93/42/EWG



Construction year of the MOTOMed viva2 (e.g. 2006)



Environment-friendly waste disposal



Serial number

Warranty

The RECK company offers a warranty on material and manufacturing faults of 12 months on the MOTOmed viva2 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 viva2 at no cost or repair of the device at the company premises or by an authorized MOTOmed representative/technician at no cost, provided that:

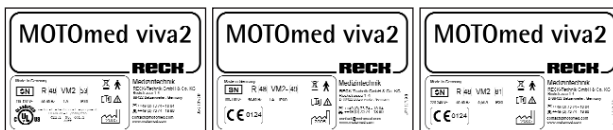
1. The parts are not damaged due to normal wear and tear.
2. Repairs have only been effected by personnel authorized by the RECK company who have special knowledge, training and the necessary means for a proper implementation.
3. Only RECK parts have been fitted to and used with the MOTOmed viva2 – no modifications have been made.
4. The MOTOmed viva2 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 viva2.

Recycling

The MOTOmed viva2 is 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 viva2 available, which you can find on the marking on the large tube.



Manufacturer:

Distributor:

RECK-Technik GmbH & Co. KG
Medizintechnik
Reckstrasse 1-4
88422 Betzenweiler,
GERMANY

Customer service (Export).

José Poyatos

Phone: +49 (0) 73 74-18 486

Phone: +49 (0) 73 74-18 481

Fax: +49 (0) 73 74-18 480

E-Mail: service@motomed.com

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 viva2, we are always happy to send information about our various MOTomed MovementTherapySystems, either to you or directly to your friends – at no cost and with no obligation.

Safety Precautions

see page 26 The first time use of the MOTOMed viva2 must always be supervised by a qualified person giving instructions. Assessment of MOTOMed training in regard to your health situation as well as the time, duration and intensity of the training periods have to be discussed with your doctor or physiotherapist before you start the training. Please pay attention to the pre-set adjustments of the MOTOMed viva2 when switching it on.

Either the patient is conscious or a therapist must be present during the training.

see page 42 Warm-up: If the health condition of a patient doesn't allow MOTOMed training with the maximum speed of 20 rpm the parameter "speed" of the starting parameters has to be reduced after the start.

The use of the MOTOMed viva2 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 MOTOMed viva2 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.

see page 41 If there is any risk of damaging or causing injury to tendons, joints of bones (for example, users with osteoporosis, muscle shortening) you can adjust the motor power according to your needs after switching on the MOTOMed viva 2.

Always start your training with passive motion (legs or arms are moved by the motor) to warm-up. If you are able to train actively, train your 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, you must not use the MOTOMed viva2 without first consulting your doctor or 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. You can train however, if you take the right safety measures (insert buffer material, etc.). Special *elastic calf shell pads (item no. 521)* and a *Velcro inlay (item no. 546)* are available as accessory item.

You must consult a 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 or tissue) particularly 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 can be increased. Such usage is advised against.

Please ensure that the MOTOMed is placed on an even, non-slip surface for best possible stability (if possible place it against a wall).

Place the MOTOMed viva2 so that it cannot tilt over and cause injuries to somebody. Don't put weight on only one side of the MOTOMed viva2. The mains cable must not be laid under the device.

see page 58 If your wheelchair tends to tilt or move due to spasms or active training, the use of a *wheelchair stabilizer (item no. 8)* is required.

see page 59 If tilting backwards or sliding of the *chair cannot be ruled out, the use of a chair fixation with stabilizer (item no. 511)* will be required.

The MOTomed viva2 might slip on straight floors (tiles, laminate, parquet floors etc.). Therefore, *anti-slip caps (item no. 591)* are available.

Please watch out, the rubber feet of the MOTomed viva2 may leave pressure marks or spots on sensitive floor coverings like carpet or synthetic floors. To prevent this, an *anti-slip mat (item No. 589)* is available.

Please make sure that you apply the brakes of your wheelchair before starting your training with the MOTomed viva2. If you are training seated in a power wheelchair it has to be switched off and its brakes must be applied as well.

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

During training with an arm/upper body trainer or with strong loads affecting the MOTomed, please ensure that the front support is pulled out for stability (however make sure to leave at least 10 cm / 4 inches in the tube) to avoid the MOTomed viva2 tipping over towards the user. While training the arms, the legs have to be removed from the foot shells.

see page 16

see page 63

While adjusting the height of the arm trainer you must not place your fingers on the inner supporting module.

see page 55

Before starting your training, make sure that the screw knob fixing the supporting module of the handlebar or arm/upper body trainer is tightened and that your legs or arms are secured properly. Ensure that 10cm / 4inches of the handlebar or arm/upper body trainer remain inserted in the supporting module. The height adjustment of the leg guides need to remain inserted 3 cm / 1.2 inches.

Before starting leg training, the arm/upper body trainer has to be swivelled back so that you can hold tight to the handlebar.

see page 75 If you have any doubts regarding the proper power connection of the MOTOMed viva2 or any other question, please get in contact with our helpdesk.

Training and insertion/removal of legs or arms should never be done without supervision of a qualified person if it cannot be assured that the user understands the functions and purpose of the MOTOMed viva2 and that he is able to switch off the device through the operating panel during the training (particularly during the arm/upper body training with forearm shells). In general, supervision during the training is recommended.

Ensure before each training session that the screws of all adjustable parts of the device (arm/upper body trainer, front leg, handlebar...) 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 your doctor should be consulted. The manufacturer and its distributors do not assume responsibility for improper or over intensive use.

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

The MOTOMed viva2 must not be moved while legs or arms are inserted or secured to the device.

Please train only after you've switched on the MOTOMed viva2!

Children should never use the MOTOMed viva2 without supervision.

If the red "start/stop" button fails to stop the MOTOMed viva2, immediately adjust the speed to 0 rpm and end your training right away. You can train again as soon as the malfunction is eliminated.

see page 85

Being an electronic medical device the MOTOMed viva2 has to comply with special safety standards in regard of electromagnetic compatibility. During installation and operation the EMC instructions have to be followed.

see page 71



Before you plug the MOTOMed viva2 into a main socket please check that the voltage of the device stated on the marking corresponds with the voltage of the power supply. The MOTOMed viva2 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 and the wall socket you connect the MOTOMed to is also properly earthed. The MOTOMed must only be used if the mains cable is free from grazes, bruises, porous points, kinks or buckles – wires should never be exposed. Before using the MOTOMed check each time that there is no damage to the mains cable and that the mains 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. Only use fuses which match the specifications indicated for the MOTOMed viva2.

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 viva2 must never be operated if the casing has been removed. In the same way the MOTOMed viva2 must never be operated in any wet or damp

environments. The MOTOMed viva2 must never be opened by any unqualified person and metal objects must never be inserted.

The MOTOMed viva2 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 viva2. Such devices carry the symbol illustrated on the left side and can thus be recognized.

see page 67

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 viva2 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/arm 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 viva2 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 viva2 to long-term direct solar radiation. Further you must not block actively against the passive motion as this could damage the motor and the electronics.

see page 75

The MOTOMed viva2 must not come into contact with water or steam. If an object or liquid gets into the MOTOMed viva2 you have to have it checked by qualified personnel before you can continue to use it.

If an object or liquid gets into the MOTOmed viva2 you have to have it checked by qualified personnel before you can continue to use it.

Keep animals away from the MOTOmed viva2.

Don't leave the packaging material lying around. Plastic foils/ -bags, Styrofoam parts etc. can be hazardous toys for children.

Security related controls according of the medicine product operator regulation (Medical Devices Act) have to be carried out at least every second year. The latest version of the regulation has to be followed.

In the event that you pass this MOTOmed viva2 on to another person, please also enclose this instruction manual.

Repairs may be affected ONLY by or under direction and supervision of individuals (qualified personnel) whose qualified 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.

Only original parts can be attached or exchanged. Always make sure to keep oil away of the drive mechanisms. Follow the norm DIN VDE 0751.

The MOTOmed viva2 must only be opened by qualified persons. Beforehand the device must always be unplugged from the mains socket.

- 86 **Manufacturer's Declaration – Electromagnetic Emissions**
- 87 **Manufacturer's Declaration – Electromagnetic Immunity**
- 89 **Recommended Separation Distances**

The manufacturer states that the mains cable of the MOTomed viva2 complies with the requirements of the EN 60601-1-2:2001. If the original mains cable coming with the MOTomed viva2 is not taken into use the electromagnetic emission of the MOTomed viva2 may increase and the immunity may decrease.

Manufacturer's Declaration – Electromagnetic Emissions


The MOTomed viva2 is supposed to be operated in the electromagnetic environment described below. The customer or user of the MOTomed viva2 has to guarantee the use in the appropriate environment.

Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The MOTomed viva2 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 viva2 is made for the use in facilities and homes which are connected to the public mains supply which also supplies individual homes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	complied	

Manufacturer's Declaration – Electromagnetic Immunity

The MOTOMed viva2 is to be operated in the electromagnetic environment described below. The customer or user of the MOTOMed viva2 has to guarantee the use in the appropriate environment.

Immunity test	IEC 60601 – test level	Electromagnetic environment – guidance
Electrostatic discharges (ESD) 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 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	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 (> 95 % dip in U_i) for 1/2 cycle 40 % U_T (60 % dip in U_i) for 5 cycles 70 % U_T (30 % dip in U_i) for 25 cycles < 5 % U_T (> 95 % dip in U_i) for 5 s	Mains power quality should be that of a typical commercial and/or hospital environment. If the user of the MOTOMed viva2 requires continued operation during power mains interruptions, it is recommended to power it from an uninterruptible power supply like a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	The magnetic fields at the supply frequency should be of typical business or hospital values.
Remark: U_i is the mains common-mode voltage prior to the application of the test level.		

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_{eff} 150 kHz to 80 MHz</p> <p>3 V/m 80 MHz to 2.5 GHz</p>	<p>3 V_{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 viva2 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> $d = 7/10\sqrt{P} = 0,35\sqrt{P}$ <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).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey^a should be less than the compliance level in each frequency range.^b</p> <p>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 viva2 is used exceeds the applicable RF compliance level above, the MOTomed viva2 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 viva2.</p>			
<p>b Over the frequency range 150 KHz to 80 MHz field strengths need to be less than [V₁] V/m.</p>			

Recommended Separation Distances between portable and mobile RF communications equipment and the MOTomed viva 2.

The MOTomed viva 2 is supposed to be operated in an electromagnetic environment where the RF interference is controlled. The customer or user of the MOTomed viva 2 can help avoid electromagnetic interference by keeping the separation distances between portable and mobile RF communications equipment (transmitters) and the MOTomed viva 2 – which depends on the performance of the communication device as described below.

Rated maximum output power of transmitter W	Separation distance in relation to the frequency of transmitter in meter		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2,5 GHz
	$d = 1,17\sqrt{P}$	$d = 0,35\sqrt{P}$	$d = 0,7\sqrt{P}$
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 equation in 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.			

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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 viva2



QUALITY
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We are authorized



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