

 **Evocare**<sup>®</sup>

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**VENDLET**<sup>®</sup>



# VENDLET V4

the electrically operated turning aid

**CE**

 Ver. 3.05

**READ THIS  
MANUAL  
BEFORE USE**





The instructions in this manual must be followed. H.C. Equipment cannot be held responsible if VENDLET is used, modified or assembled in any other way than described in this manual.

Do not operate VENDLET without first reading and understanding this manual. It is imperative that all users are familiar with the warnings, safety precautions and instructions in this manual before attempting to use VENDLET.

This manual must be present beside VENDLET at all times.

Users must ALWAYS direct their full attention on the patient when using VENDLET.

ALWAYS remember to turn off the power to VENDLET by pressing the stop button after use.

VENDLET V4 has a capacity of max. 200 kg.

Prior to mounting VENDLET it is important to establish whether the product is suitable for the patient.

VENDLET is not to be operated by the patient.

VENDLET is not to be used for children under the age of 12.

Mounting, repair and maintenance of VENDLET must always be performed by a qualified technician. Periodic safety checks must be carried out every time VENDLET is mounted and at least once annually. Patient leakage current must be measured annually.

Remember to check the height adjustment of the fittings when the mattress is changed.

In case of malfunction VENDLET must not be used. Defective parts must be replaced immediately by a qualified technician and/or returned for repair.

# EU DECLARATION OF CONFORMITY

*It is hereby declared that*

*Product: VENDLET V4*


*Manufactured by: H.C. Equipment ApS  
Kaolinvej 5  
DK-9220 Aalborg Ø*

*Tel. (+45) 96 31 00 50*

*Designation: Electronic device for handling/turning patients  
in bed*

*complies with the European Medical Device Directive (93/42/EEC).*

*Aalborg, 17 November 2006  
H.C. Equipment ApS*



*Heine Buus Pedersen  
Manufacturer*

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## APPLICATIONS FOR VENDLET

VENDLET makes everyday care of patients in bed safer and more effective by relieving carers of manual lifting and strain when repositioning patients in bed. The touch of a button is all it takes. The patient is handled with ease and dignity. The carer remains in control throughout the procedure making the patient feel safe and secure. This in turn promotes job satisfaction for the carer and well-being for the patient.

When working with the patient, the carer may optimize the working posture by lowering the bars, drawing the patient close to the edge and adjusting the height of the bed.

Prior to mounting VENDLET it is important to establish whether the product is suitable for the patient. Precautions must be taken e.g. if the patient is restless in bed.

VENDLET must be mounted by a qualified technician. VENDLET is only intended for use on single beds with a steel frame e.g. nursing beds and hospital beds. When mounted VENDLET functions as an integral part of the bed.

VENDLET V4 has a weight capacity of max. 200 kg and is not to be used for children under the age of 12. Due to the risk of the hand control or cable getting caught, the patient is not to operate VENDLET on his own.



# UNPACKING, INSPECTION AND STORAGE

VENDLET V4 is supplied in 2 cartons.

VENDLET is partially assembled on delivery, ready for mounting on the bed. Remove any loose packing from the cartons. Check cartons and components for visual damages. If damage is evident, contact our distributor.

If VENDLET is not to be mounted immediately, retain the cartons and packaging for storage until mounting is to be performed. Store VENDLET in a dry area cf. ENVIRONMENTAL CONDITIONS.

## Parts list for VENDLET V4

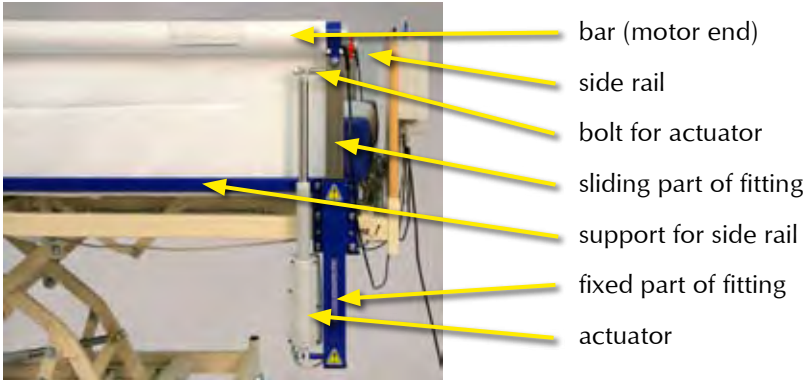
- 2 pcs. bars with motor
- 2 sets fittings (fixed and sliding part of fittings) with actuator
- 8 pcs. lock brackets
- 16 pcs. bolts for bottom fittings, button head 10 mm x 50 mm
- 8 pcs. bolts, button head 8 mm x 35 mm
- 8 pcs. nylock nuts 8 mm
- 1 pcs. Allen key 6 mm
- 1 pcs. Allen key 5 mm
- 4 pcs. plastic side rails
- 2 pcs. supports for side rails
- 1 pcs. transformer
- 1 pcs. control unit VENDLET V4
- 1 pcs. hand control VENDLET V4
- 1 pcs. slide sheet
- 1 pcs. turning sheet (cotton)
- 1 pcs. manual VENDLET V4
- 1 pcs. laminated guide VENDLET V4 to hang by the bed

# MOUNTING

## Preparations

Start by taking down the safety bed rails. These are not used with VENDLET.

Check the max. weight capacity of the bed. The weight of the patient including VENDLET and all other equipment in the bed is not to exceed this limit.



Mounting of VENDLET MUST always be performed by a qualified technician.

VENDLET is only intended for use on single beds with a steel frame. The length of the bed must be min. 200 cm. VENDLET is adjustable to the width of the bed. In some cases it may be necessary to order a turning sheet of extra width.

VENDLET V4 has a weight capacity of max. 200 kg and is not to be used for children under the age of 12. Due to the risk of the hand control or cable getting caught, the patient is not to operate VENDLET on his own.

It is important to establish whether VENDLET is suitable for the patient. Precautions must be taken e.g. if the patient is very restless in bed.

# MOUNTING

In accordance with DS/EN 1970:2002 (requirements and test methods for adjustable beds for disabled persons) the distance from the upper side of the mattress to the upper edge of the bar with motor must measure at least 22 cm.

In order to observe this standard, the fittings must be mounted in the highest position.



**Standard**



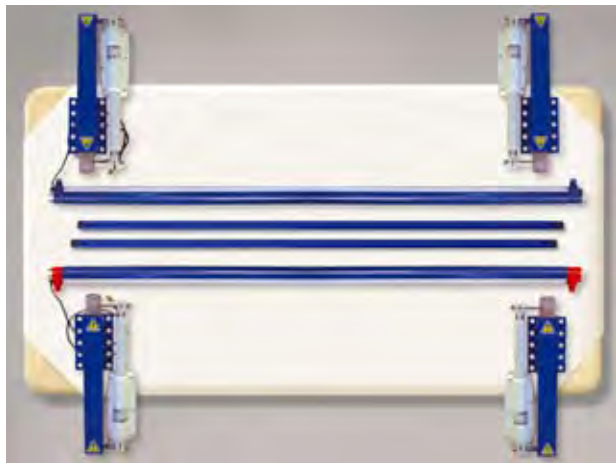
**With extension**

If the mattress is too thick or a pressure relief mattress is used, it may be necessary to add an extension (separate order).

# MOUNTING

## Fittings with actuator

VENDLET V4 requires the use of 4 pcs. fittings with actuator.



This photo illustrates the placement of the fittings. Note! All actuators are placed towards the middle of the bed.

All fittings must be mounted at the same height.



1. Insert the upper bolts in the fixed part of the fittings and thread them loosely into the lock brackets, making sure to observe the guidelines regarding the correct positioning of the fittings on page 9.
2. Place the fittings on the bed frame as shown on page 11.
3. Insert the lower bolts in the fittings and thread them into the lock brackets.
4. Mount the fittings 6 cm from the headboard.
5. Tighten the bolts using the Allen key.

Note! Fittings and lock brackets must lie flat against the bed frame.

# MOUNTING

## Bars



Note! Make sure that the bar with the red ends is mounted on the patient's right hand side.

1. Place the end of the bar with the motor in the fittings closest to the headboard. Fasten each end of the bar with an 8 mm bolt/nut on the sliding part of the fitting. Adjust the fittings sideways on the bed frame until the holes fit.
2. Mount the bar at the opposite side of the bed in the same manner.
3. Make sure that the fittings are mounted at a right angle to the bed frame to allow free movement and easy slide function for the actuators.
4. Tighten all 16 pcs. 10 mm bolts to the same torque tension, until all 4 fittings are flat against the bed frame.

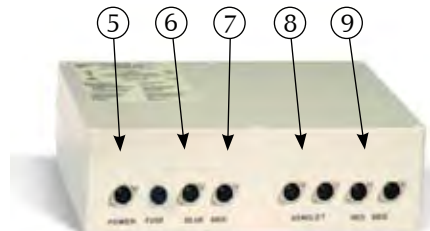
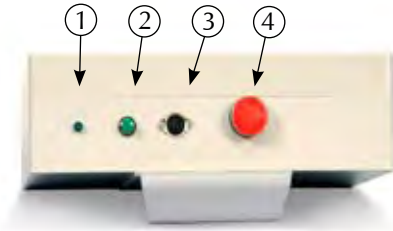
## Supports for side rails

Mount the 2 oval supports for side rails on the fittings for the actuators in the upper hole as shown. Use 4 pcs. 8 mm bolts and 4 pcs. 8 mm nylock nuts.

Make sure that the distance between the movable parts of the surface of the bed and the elements of VENDLET measures at least 25 mm to avoid fingers from getting caught. If this is not possible, warning triangles must be placed visibly near these locations.

# MOUNTING

## Electrical parts



1. Timer indicator
2. Start button for timer
3. Socket for hand control
4. Stop button
5. Socket for transformer
6. Fuse holder
7. Socket blue side
8. Sockets for bars (marked VENDLET)
9. Socket red side

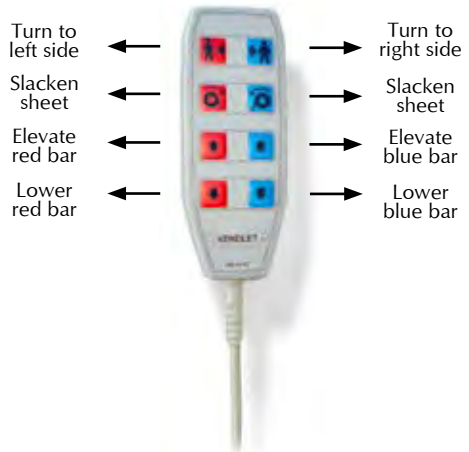
**Make sure that the cables are plugged in correctly.**

**Defective cables may cause damage to the electrical system. NEVER operate VENDLET if the cables are damaged.**

When VENDLET is mounted, the cables MUST be routed and secured properly to ensure that the cables do NOT become entangled, pinched and/or severed during operation of the bed or VENDLET. Keep all cables away from HEATED or HOT surfaces. Do not wind cables to VENDLET around metal or iron due to the risk of heating.

Cables may be damaged, if they are run over or get stuck. Therefore, make sure always to keep the cables off the floor and away from the wheels of the bed.

**Ensure that the mains supply is easily accessible, so that VENDLET can be disconnected at all times by removing the mains plug.**



# MOUNTING



1. Hang hand control, control unit and transformer on the headboard.



2. Connect the plug (8 pole) from the hand control to the top of the control unit.



3. Press the stop button to cut off the power supply. Turn to release.



4. Connect the plug (5 pole) from the transformer to the bottom of the control unit.



5. Connect the plugs (4 pole) from the bars to the bottom of the control unit marked VENDLET.



6. Connect the plug (4 pole) from the actuator (red side) to the bottom of the control unit marked RED SIDE.

# MOUNTING



7. Connect the plug (4 pole) from the actuator (blue side) to the bottom of the control unit marked BLUE SIDE.





8. All cables are mounted correctly. Fasten the cables on the back side of the bed frame using cable strips.



9. Connect the plug from the transformer to a 230 V socket. The indicator light on the transformer will turn on = ready for use.

10. Check that the stop button on the control unit is pressed down. Turn to release.
11. Press the green start button to activate the timer. The timer indicator on the control unit will light as long as the timer is activated. The timer always disconnects after 1½ minutes, even if the hand control is in use. Press the green start button to activate the timer for another 1½ minutes.
12. After use, press the stop button to cut off the power supply to VENDLET.

The control unit is equipped with an electronic brake which jams the motors when VENDLET is connected to 230 V, (i.e. the bars cannot be turned by hand). The electronic brake prevents the patient from rolling the sheet off the bars unintentionally.

The motors have reduced tractive force, when the sheet is rolled off the bar using  or . This prevents that the sheet rolls up from under the bar, cf. page 16.

# MOUNTING

## Slide sheet

The slide sheet reduces the friction against the mattress and thereby the electricity consumption when using VENDLET.

Lack of slide sheet or holes in the slide sheet may cause an overload and thereby damages to the electrical system.



Stretch the elastic in the corners of the slide sheet round the mattress.



Guide the velcro straps round the steel frame under the mattress. The straps are of ample length in case an additional mattress is used. Surplus straps can be cut off.



# MOUNTING

## Turning sheet



1. Place the turning sheet in the middle of the bed with the central red line face up.
2. Fasten the turning sheet to the velcro straps on the bars at the same distance from the ends on both sides. The sheet must always roll OVER the bars. It will reduce the tractive force if the turning sheet rolls up from under the bars. Do not pull the sheet as it will fit exactly on the bar.



3. Turn to release the stop button and press the green start button to activate the timer (the timer is now active for 1½ minutes).
4. Tighten the turning sheet firmly on the bars (using  and  on the hand control), so that it rises above the mattress.

5. Loosen the sheet again. Make sure that the sheet lies smoothly with the red line in the centre of the bed.

**VENDLET is now ready for use! ALWAYS test whether the system is functioning as intended and whether all components for VENDLET are correctly and securely in place BEFORE use.**

If necessary, please refer to TROUBLESHOOTING.

# MOUNTING



## Plastic side rails

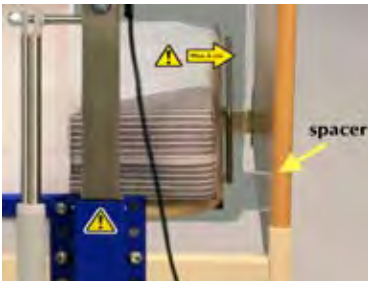
**The bars must be raised and the side rails placed securely on the bars before the patient is left in the bed.**

Use 2 side rails on each bar. If the head or foot of the bed is elevated while the patient is lying in bed, the side rails must be removed at that end.

### Attachment of side rails



1. Press  and  to slacken the sheet on both bars enough to allow for the side rails to be pressed on to the bars. The side rails are to hang securely between the mattress and the support on the inner side of the bar.
2. Adjust the height of the bed to ensure correct posture when pressing the side rails on to the bars.



3. Note! When the side rails are pressed on to the bars, the spacer at the bottom of the side rail must be in line with the head- or footboard to ensure that the patient does not get fingers etc. caught in the gap. This location is marked with a warning triangle.



4. Always attach the side rail at the foot of the bed before the one at the head of the bed so that the overlap points towards the foot end. This prevents the patient from getting caught between the side rails.

The easiest way to attach the side rails is to slant them and press the bent edges on to the bars one at a time. Start by pressing the bent edge closest to the foot- or the headboard on to the bar to make sure that the spacer is adjusted correctly.

# MOUNTING

## Taking down the side rails

1. Adjust the height of the bed to ensure correct posture when removing the side rails from the bars.
2. To remove the side rails take hold of the side and pull upwards.
3. The side rails may be damaged if they get jammed or caught. Therefore, always hang them on the supports beneath the bars when they are not in use.



**The side rails are partly responsible for ensuring that VENDLET fulfils all requirements to mechanical safety.**

If the side rails are not used, there is a risk that:

- The funnel-shaped opening between the head- and footboard and VENDLET is greater than 6 cm. This can cause suffocation should the patient become caught by the throat.
- The distance between the bed frame and the underside of the bar is greater than 12 cm. This may cause the patient to fall through this opening or to suffocate if he/shes gets caught.

If the patient always lies calmly in bed, the use of side rails may seem unnecessary. In such cases the nursing staff may choose at their own risk not to use the side rails. However, the risk must be re-evaluated regularly as the patient's condition may change rapidly.

**H.C. Equipment does not assume any responsibility if the side rails are not used.**

## OPERATION

**All users must be familiar with the instructions, warnings and safety precautions in this manual before attempting to operate VENDLET.**

### **Before operating VENDLET**

1. The bars must be raised and the surface of the bed must be flat and horizontal before operating VENDLET.
2. Adjust the height of the bed to ensure correct posture when removing the side rails.
3. Remove the side rails as instructed on page 18 and hang them on the supports for side rails underneath the bars.





3. Turn to release the stop button.
4. Press the green start button to activate the timer for 1½ minutes. If the timer disconnects while VENDLET is in use, press the green start button again to activate the timer again.
5. The bars are marked red or blue corresponding to the colours on the hand control.

# OPERATION

## After operating VENDLET




1. Raise the bars to top level.
2. Press  or  to slacken the turning sheet enough to allow for the bent edges of the side rails to be pressed on to the bars.
3. Adjust the height of the bed to ensure correct posture when pressing the side rails on to the bars.
4. Attach the side rails on the bars as instructed on page 17. Always remember to attach the side rail at the foot of the bed before the side rail at the head of the bed.
5. Press the red stop button to cut off the power supply to VENDLET.




# OPERATION

## Repositioning the patient



If the patient is facing the red bar, press  to tighten the turning sheet on the red bar and turn the patient to face the blue bar.



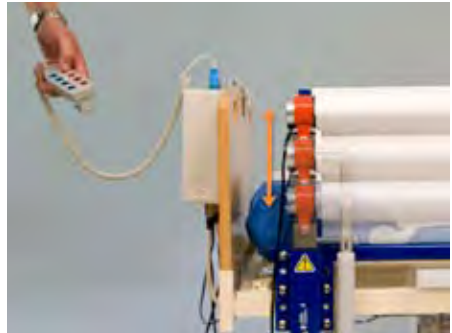
Press  to tighten the turning sheet on the blue bar and turn the patient to face the red bar. Press  or  to draw the patient to the middle of the bed.

## Washing and changing the patient



The caregiver may optimize the working posture by lowering the bars, drawing the patient close to the edge and adjusting the height of the bed.

## Raising and lowering the bars



Press   or   to raise and lower the bars.

## FREQUENTLY ASKED QUESTIONS

### **Is VENDLET suitable for all patients?**

It is important to establish whether VENDLET is suitable for the patient. As standard, VENDLET has a weight capacity of max. 200 kg and is not to be used for children under the age of 12. For safety reasons the patient is not to operate VENDLET on his own.

### **Is VENDLET applicable for incontinent patients?**

Yes. The absorbent bed-sheet must measure min. 125 cm in length so that it follows when the patient is turned. Do not let the bed-sheet wrap onto the bar - let it hang loosely over the sides of the bed. Two small bed-sheets are NOT the solution as it will make the edge twice as high, increasing the risk of bedsores.

### **Is VENDLET applicable with a pressure relief mattress?**

Yes. When the turning sheet is slackened and the slide sheet is mounted loosely, VENDLET does not interfere with the function of a pressure relief mattress.

### **Is it necessary to use the side rails, if the patient is lying completely still in bed?**

Yes. The side rails have been introduced to ensure that VENDLET fulfils all requirements to mechanical safety.

### **Is it necessary to pull out the plug to cut off the power supply to VENDLET before leaving the patient in bed?**

No. It is sufficient to press the red stop button. However, the mains supply must always be easily accessible so that VENDLET can be disconnected at all times by removing the plug.

### **How do we attach the urine bag if the patient uses a catheter?**

If convenient, the urine bag can be pinned to the turning sheet. Remember to use long tubes as the bag must be placed a bit further away than usual. However, this requires individual adjustments, and therefore you simply have to work your way to find the best solution. Ask your supplier of urine bags for longer tubes.

### **What if the turning sheet does not roll up evenly on the bars?**

The sheet does not have to lie exactly straight - an overlap of 1-2 cm at the ends does not affect the tractive power. Smooth the sheet on the bars with your hands while rolling it up as if using an old-fashioned rotary ironer, and if it crumples, then loosen the sheet and tighten it again.

# MAINTENANCE

## In general

Mounting, repair and maintenance of VENDLET must be performed by a qualified technician according to the instructions in this manual.

Beware when cleaning. The mechanical and electrical parts are not waterproof and are therefore **NOT TO BE SUBMERGED** in water or other fluids! Nor does VENDLET tolerate steam-cleaning.

The mechanical and electrical parts can be cleaned by wiping with a soft cloth. To remove stains, wipe with a soft cloth moistened with a mild detergent solution and wrung dry, then wipe with a dry soft cloth. A dry soft cloth with spirit can also be used.

Bolts must be tightened regularly and always after adjustment, repair or service. Make sure that all 8 bolts are tightened to the same torque tension. The bottom fittings must be mounted at a right angle to the bed frame to ensure free swing and lock function. The bottom fittings may be dislocated if for example the bed is bumped against a door frame.

On change of mattress, it may be necessary to adjust the height of the bottom fittings cf. page 9-10.

VENDLET has a service life of 8 years depending on maintenance, wear and tear.

## Change of fuse



*Fuses should only be changed by a qualified technician.*

If VENDLET is not working, it may be necessary to change the fuse in the control unit or in the transformer. When changing the fuses, remember to cut off the power supply and remove the plug from the 230 V outlet.

The fuse in the control unit (5 AT) is located in the fuse holder next to the plug for the transformer. Press and turn against the clock.

# MAINTENANCE



The fuse in the transformer (1.6 AT) is located beneath the lid.

When the transformer is connected to 230 V, and the fuse functions, the green indicator will light.

# MAINTENANCE

## Washing instructions

### Slide sheet



Recommended washing temperature: 40°C



Do not tumble dry.

### Turning sheet (cotton)



Recommended washing temperature: 95°C



Can be tumble dried.



Remember! A cotton sheet must be ironed or mangled!

The turning sheet is pre-treated and shrinkage during washing is therefore minimal.

**Note! The sheets have a service life of 2-6 months depending on wear and tear.**

# MAINTENANCE

## Periodic safety check

A qualified technician is to carry out this periodic safety check every time VENDLET is mounted and at least once annually. Defective parts must be replaced immediately and/or returned for repair.

### Electrical parts



#### *Measurement of patient leakage current*

In order to observe quality standards for medical devices (EN60601-1:1990) the periodic safety check of VENDLET includes an annual measurement of patient leakage current on all VENDLET systems. The description of this measurement may be downloaded from [www.vendlet.dk](http://www.vendlet.dk). This measurement requires special equipment, which we do not expect all our customers to have at their disposal. Contact your dealer for service information.

#### *Transformer*

- Check for visual damages to the plastic box (may cause electric shock).
- Check for defect cables (may cause electric shock).
- Check for damages to plugs (may cause electric shock).
- Check strain relief.
- Check plastic suspension for cracks.
- Check the voltage on the plug for the control unit. When the transformer is connected to 230 VAC, the voltage must measure approx. 42 VDC.

#### *Control unit*





- Check for visual damages to the box..
- Check plug and the stop button.
- Check plastic suspension for cracks.
- Check that the timer disconnects after 1½ minute.
- Check the outlet voltage to the motors, when the power is switched on. The voltage must measure approx. 24 VDC or -24 VDC when activating  or .

#### *Hand control*

- Check the hand control for visual damages.
- Check suspension. Damaged suspensions must be replaced.
- Check all functions on the hand control.
- Check cables and strain relief.
- Check for defects in the cable connection.
- Check the voltage to the plug for the hand control. Pin 8 = GND, on other pins the voltage must measure approx. 5 VDC.

# MAINTENANCE

## **Motorized bars**

- Check the motors for visual damages.
- Check that the bar can rotate by hand, when the motor is disconnected from the control unit.
- Check cables and plugs.
- Check strain reliefs.
- Check that the motors have full tractive force when activating  or  and reduced tractive force when activating  or . This is done by stopping the bars by hand.

## **Actuators**

- Check for visual damages to plastic covers.
- Check that the actuators slide freely.

## **Mechanical parts**

- Check for visual damages including crooked fittings.
- Check that all nuts and bolts are mounted and comply with the parts list and that they are fastened correctly.
- Check bars for dents and irregularities.
- Supports for side rails must be mounted and fastened correctly with bolts and nylock nuts.
- Check that all 4 side rails are present and in good condition.
- Check that the velcro is firmly stuck to the bars and in good condition.

## **Sheets**

Sheets are exposed to serious wear and tear and must therefore be checked often. Lack of slide sheet or holes in the slide sheet will increase the friction against the mattress and thereby the electricity consumption. An overload of the system may damage the control unit.

## **Functional test**

- Check that the bars may be raised and lowered freely and in parallel.
- Check that VENDLET functions as intended when the hand control is activated.

# TROUBLESHOOTING

<b>SYMPTOM</b>	<b>PROBABLE CAUSE</b>
VENDLET is not working	Is the power supply switched on?
	Is the stop button pressed down (= power supply is turned off)?
	Is the green indicator turned on (i.e. timer is active)?
	Are all cables mounted correctly in the control unit and are they plugged in correctly?
	Is the cable from the transformer connected to 230 V?
	Do the fuses in the transformer or the control unit need renewal?
	Replace the hand control. If this helps, the original hand control needs repair.
A bar is not functioning	Is the cable from the bar mounted correctly?
	Check the plug on the cable for visual defects.
	Is the cable defective or damaged?
	Replace the hand control. If this helps, the original hand control needs repair.
One of the bars turn too slowly	Check and adjust the fittings.
	Does the control unit or motor need repair?
	Try to exchange the plugs from the bars. If the opposite bar turns too slowly, the control units needs repair. If the same bar still turns too slowly, the motor in the bar must be replaced.

# TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE
A bar can only turn in one direction	The control unit needs repair.
	Replace the hand control. If this helps, the original hand control needs repair.
VENDLET is malfunctioning	The power supply may not be sufficient.
	Does the extension lead have the required conductor area (1.0 mm <sup>2</sup> )?
The hand control is not working correctly	Make sure that the cables from the bars are connected to the control unit as instructed in this manual.
	Make sure that the turning sheet rolls over the bar.
The timer is not working	Is the stop button pressed down? Turn to release.
	If the timer is not activated (or the green indicator in the control unit does not light) when the green start button is pressed, it may be necessary to change the fuse in the transformer or the control unit.
	If the timer is still not working, the control unit needs repair.
The actuators are not working	Loosen the bolts holding the fittings to the bed frame, lift the bar a couple of times to make sure that the fittings are in place. Try to activate the actuators again. Remember to tighten the bolts again.
	Dust or the like may be interfering. Try to clean the bearings and spray them with silicone.

## SAFETY PRECAUTIONS

***The instructions in this manual must be followed.***

H.C. Equipment cannot be held responsible if VENDLET is used, modified or assembled in any other way than described in this manual.

***It is imperative that all users are familiar with the instructions, warnings and safety precautions in this manual before attempting to use VENDLET.***



***Users must ALWAYS direct their full attention on the patient when using VENDLET.***

Take care that fingers and other parts of the body are not caught between the sheet and the bar.

**Before leaving the patient, ALWAYS remember to:**

- a. Raise the bars.
- b. Place the side rails securely on the bars.
- c. Press the stop button to cut off the power supply to VENDLET.

***Ensure that the mains supply is easily accessible, so that VENDLET can be disconnected at all times by removing the mains plug.***

***Mounting of VENDLET must always be performed by a qualified technician.***

Before mounting VENDLET on a bed, check the max. weight capacity of the bed. The weight of the patient incl. VENDLET and all other equipment in the bed is not to exceed this limit.

***Place control unit and transformer securely on the outer side of the headboard***

If the control unit or transformer falls to the floor, this may cause malfunction or parts may be damaged. During mounting examine the electrical and mechanical parts for visual damages which may cause malfunction. Do not place the control unit or the transformer under the bed due to the risk of damage when the bed is in use.

## SAFETY PRECAUTIONS

### ***Hang the hand control on the outer side of the headboard or place it outside the bed***

If the hand control is placed in the bed, the patient may unintentionally activate the hand control. This will constitute a risk as the patient may roll onto his/her stomach and extreme situations suffocate in the pillow or duvet, or the cable may wrap around the patient's neck or body.

### ***VENDLET is not suitable for all patients***

Prior to mounting VENDLET it is important to establish whether the product is suitable for the patient. Precautions must be taken e.g. if the patient is very restless in the bed. VENDLET has a weight capacity of max. 200 kg and is not to be used for children under the age of 12.



### ***The patient is not to operate VENDLET on his own***

Due to the risk of the hand control or cable getting caught, the patient is not to operate VENDLET on his own.



### ***Make sure that the turning sheet rolls OVER the bar.***

If the turning sheet rolls up from under the bars there is a risk that fingers, hair, etc. may become caught between the sheet and the bar.

The motors have reduced tractive force when the sheet is rolled off the bars using  or . This is to avoid hazardous situations if the sheet rolls up from under the bar.

### ***Avoid damages to cables***

Cables may be damaged, if they are run over or get stuck. Therefore, make sure always to keep the cables off the floor and away from the wheels of the bed.

Defective cables may cause damages to the electrical system. NEVER operate VENDLET if the cables are damaged.

When VENDLET is mounted, the cables MUST be routed and secured properly to ensure that the cables do NOT become entangled, pinched and/or severed during operation of the bed or VENDLET. Keep all cables away from heated or hot surfaces. Do not wind cables around metal or iron due to the risk of heating.

### ***Make sure that the cables are plugged in correctly.***

## SAFETY PRECAUTIONS

### ***Beware when using an extension lead***

The lead from the transformer must be plugged directly to 230 V. Should it be necessary to use an extension lead, make sure that the conductor area equals at least 1.0 mm<sup>2</sup> corresponding to the lead from the transformer. Otherwise, the power supply to VENDLET may be too low constituting a possible hazard.

### ***Avoid damages to fittings and motors***

Damages to fittings or motors may cause damage to the electrical system.

Follow the instructions with regard to the correct mounting of fittings – also after cleaning. Make sure that the fittings are mounted at a right angle to the bed frame.

The bottom fittings may be dislocated if the bed is bumped against a door frame.

The motor may be damaged, if the bar falls to the floor or is subjected to a great force or vibrations in connection with the dismantling.



### ***Height adjustment of fittings – also in connection with change of mattress***

In accordance with DS/EN 1970:2002 (requirements and test methods for adjustable beds for disabled persons) the distance from the upper side of the mattress to the upper edge of the bar must measure at least 22 cm.



### ***The bars must be raised and the side rails placed securely on the bars before the patient is left in the bed.***

When the side rails are pressed on to the bars, the spacer at the bottom of the side rail must be in line with the head- or footboard to ensure that the patient does not get fingers etc. caught in the gap. This location is marked with a warning triangle.



### ***The side rails may be damaged if they get jammed or caught.***

Always hang the side rails on the supports for side rails underneath the bars when they are not in use. For hygienic reasons do not place side rails on the floor, etc.

# SAFETY PRECAUTIONS

***Always attach the side rail at the foot of the bed before the side rail at the head of the bed.***

If the overlap points towards the foot end, this prevents the patient from getting caught between the side rails.



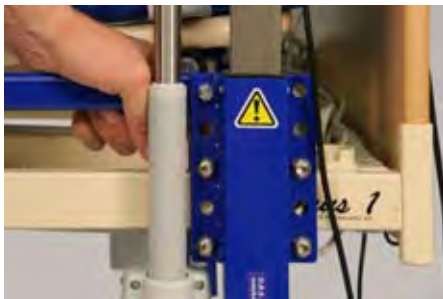
***Make sure to have free space on the floor underneath the actuators***

When the bed is lowered, beware that feet do not get stuck underneath the actuators, as they get very close to the floor. These locations are marked with yellow warning triangles. Always make sure to have free space on the floor underneath the actuators to avoid damages to the bed and VENDLET.



***Beware when elevating or lowering the bars***

Fingers etc. may get caught between the upper end of the fixed part of the fitting and the bolt for actuator on the sliding part of fitting.



***Beware when activating the bed functions***

When activating the bed functions be careful that fingers do not get caught between the surface of the mattress and the VENDLET fittings.

## SAFETY PRECAUTIONS

### ***The electrical parts are not waterproof***

Beware when cleaning. The electrical parts are not to be submerged in water or other fluids! Nor does VENDLET tolerate steam-cleaning cf. "TECHNICAL DATA".

### ***Beware of electromagnetic disturbances***

VENDLET complies with the requirements of the EMC directive. If VENDLET is exposed to severe electromagnetic disturbances (e.g. cell phones), this may result in malfunction.

### ***In case of malfunction VENDLET must not be used. Defective parts must be replaced immediately by a qualified technician and/or returned for repair.***










The control unit is only to be repaired by the manufacturer. Damage to the seal on the control unit implies the annulment of warranty and liability.



#### ***Warning***

**The yellow warning triangle indicates locations where special attention is necessary.**

# SYMBOLS

	<p>The manufacturer has joined a collective scheme with regard to the collection, treatment, recovery and disposal of the medical devices cf. WEEE 2002/96/EC.</p> <p>When scrapping the products, sub-components should be recycled.</p>
	<p>Warning triangle indicates when special attention is necessary cf. IEC 417 no. 3864.</p>
	<p>CE marking: The product complies with the Medical Device Directive (93/42/EEC).</p>
	<p>According to IEC 878-02-02 the product is Type B equipment.</p>
	<p>According to IEC 417 no. 5172 the product is Class II equipment</p>
	<p>Turn to the right or left</p>
	<p>Slacken sheet from red or blue bar</p>
	<p>Elevate bar</p>
	<p>Lower bar</p>

## TECHNICAL DATA

In accordance with executive order no. 1268 of 12 December 2005 concerning medical devices from the Danish Ministry of the Interior and Health, VENDLET V4 is a class 1 product.

Power supply: Transformer

Power rating: 100 VA

### Ratings:

Mains supply 230 Volt AC/50HZ

Output voltage 27 Volt DC

Idle consumption 18mA AC

Fuse 1.6AT (5x20mm)

### Current consumption @ 200 kg load/idle

Primary 0.5A AC/25mA AC

Output 3.5A DC/55mA DC

Intermittence 5% 5 min.

Fuse 5AT (5x20mm)

Weight limitation: Capacity max. 200 kg

Ingress protection: IPX1

Expected service life: Approx. 8 years

### Weight:

Complete system Approx. 46 kg

Fittings incl. actuator 5 kg each

Bar with motor 5 kg each

Transformer 3 kg

Control unit 2 kg

Supports for side rails. 1.5 kg each

Plastic side rails 2 kg each

### Measurement

Total length 195 cm

Width Adjustable to the width of the bed. In some cases it may be necessary to order a turning sheet of extra width.

Noise level: 65 dB (A) at max. weight load of 200 kg (in relation to the patient in bed)

# TEST REPORTS

VENDLET V4 complies with the following standards:

<b>Tested by:</b>	<b>Standards:</b>
TÜV Product Service GmbH TÜV Süd Gruppe Masurenweg 1-3 D-30163 Hannover	EN 60601-1:1990 + A1:1991 + A2:1995
PHOENIX TESTLAB GmbH Königswinkel 10 D-32825 Blomberg	EN 55014-1:2000 + A1:2001 +A2:2002 EN 61000-3-2:2000 EN 61000-3-3:1995 + A2:2001
The Danish Centre for Assistive Technology Gregersensvej, port 38 DK-2630 Taastrup	EN 1970 EN 12182

To view the complete test reports please refer to [www.vendlet.dk](http://www.vendlet.dk).

# ENVIRONMENTAL CONSIDERATIONS

## **During operation**

Ambient temperature: 5°C to 40°C

Relative atmospheric humidity: 20% to 90% @ 30°C

Atmospheric pressure: 700hPa til 1060hPa

## **During storage**

Ambient temperature: 10°C to 50°C

Relative atmospheric humidity: 20% to 90% @ 30°C

Atmospheric pressure: 700hPa til 1060hPa

## **During transport**

Ambient temperature: -20°C to 50°C

Relative atmospheric humidity: 20% to 90% @ 30°C

Atmospheric pressure: 700hPa til 1060hPa



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