

VERMEIREN

Maintenance manual
Beds





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1 Maintenance

Lifetime of the bed is strongly influenced by its use, storage, regular maintenance, servicing and cleaning. Do not use the bed when something is damaged, therefore read the maintenance instructions carefully. Do not perform repairs on your own.

No persons may be on the bed when performing any maintenance activities.

The manufacturer is not liable for damage caused by lacking or improper service checks.

1.1 Regular Maintenance

The maintenance activities to ensure a good condition for your Vermeiren bed are described below:

- Before every use
 - Check the castors for visible damage and/or soiling. Remove any dirt as it could impair the motion of the castors. When a castor is damaged, please go see an authorized workshop for repair.
 - Check the brakes and replace if necessary.
 - See that all the screws, locking pins are tightened properly.
 - Check the bed (cleanliness, cracks, damage on structural parts ...) and make it clean. If necessary change the coating.
 - Check the functioning of the mechanically adjustable elements for wear and tear (side railings, lifting pole + triangle, foot-end, head-end).
 - Check the condition of the wooden parts.

Only for electrical bed:

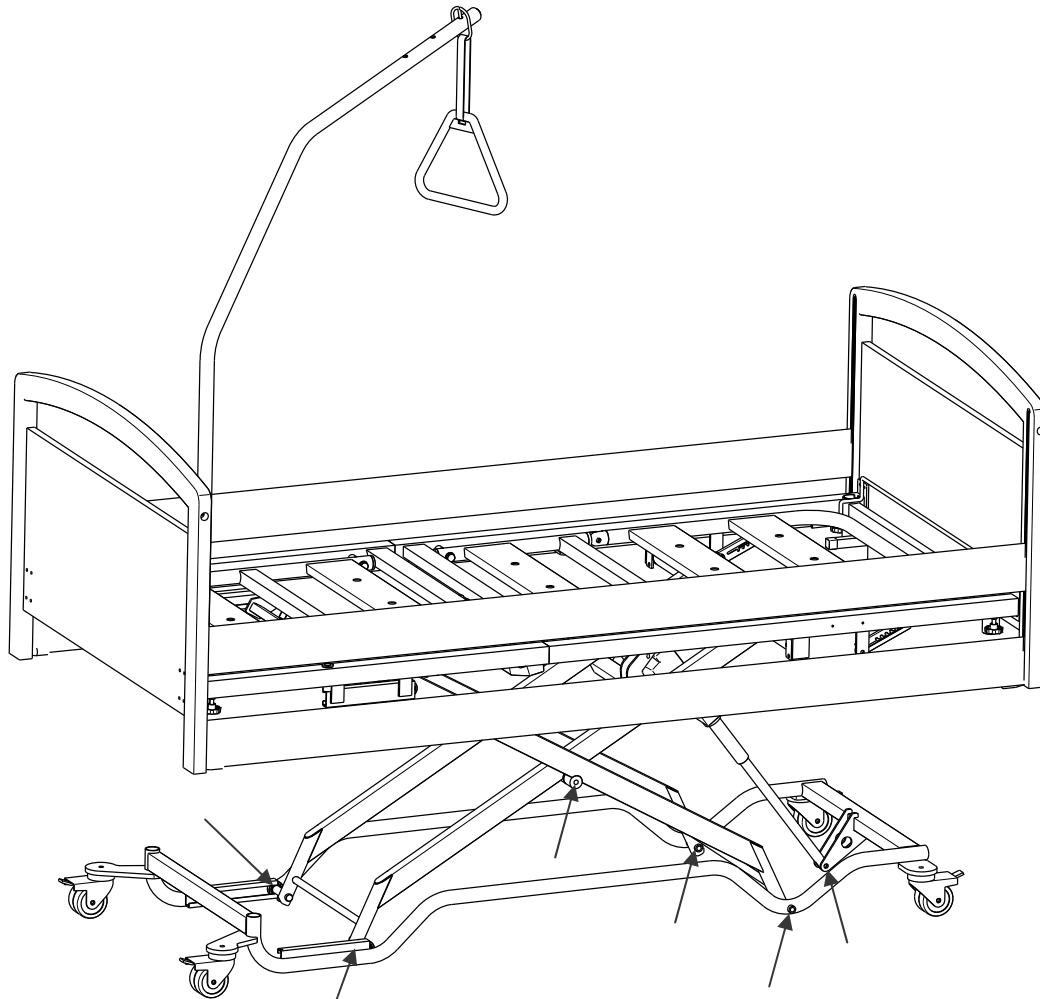
- Check the cables for visible signs of damage and whether all plugs are properly inserted as indicated in the instruction manual. In the case of damage immediately unplug the power cable out the wall socket. Plugs must only be pulled out by grasping the plug itself; never pull on the cable. Contact your authorized workshop for repairs.
- Check that the handset function properly. If a function is faulty, kindly disconnect the power cable and contact your specialist dealer immediately.

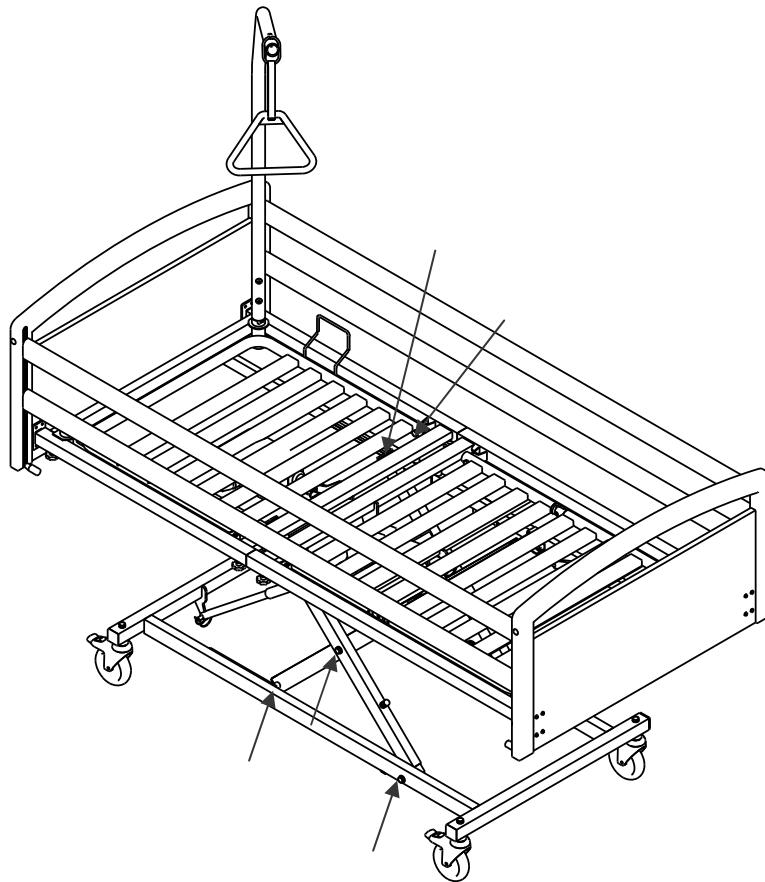
Only for mechanical bed:

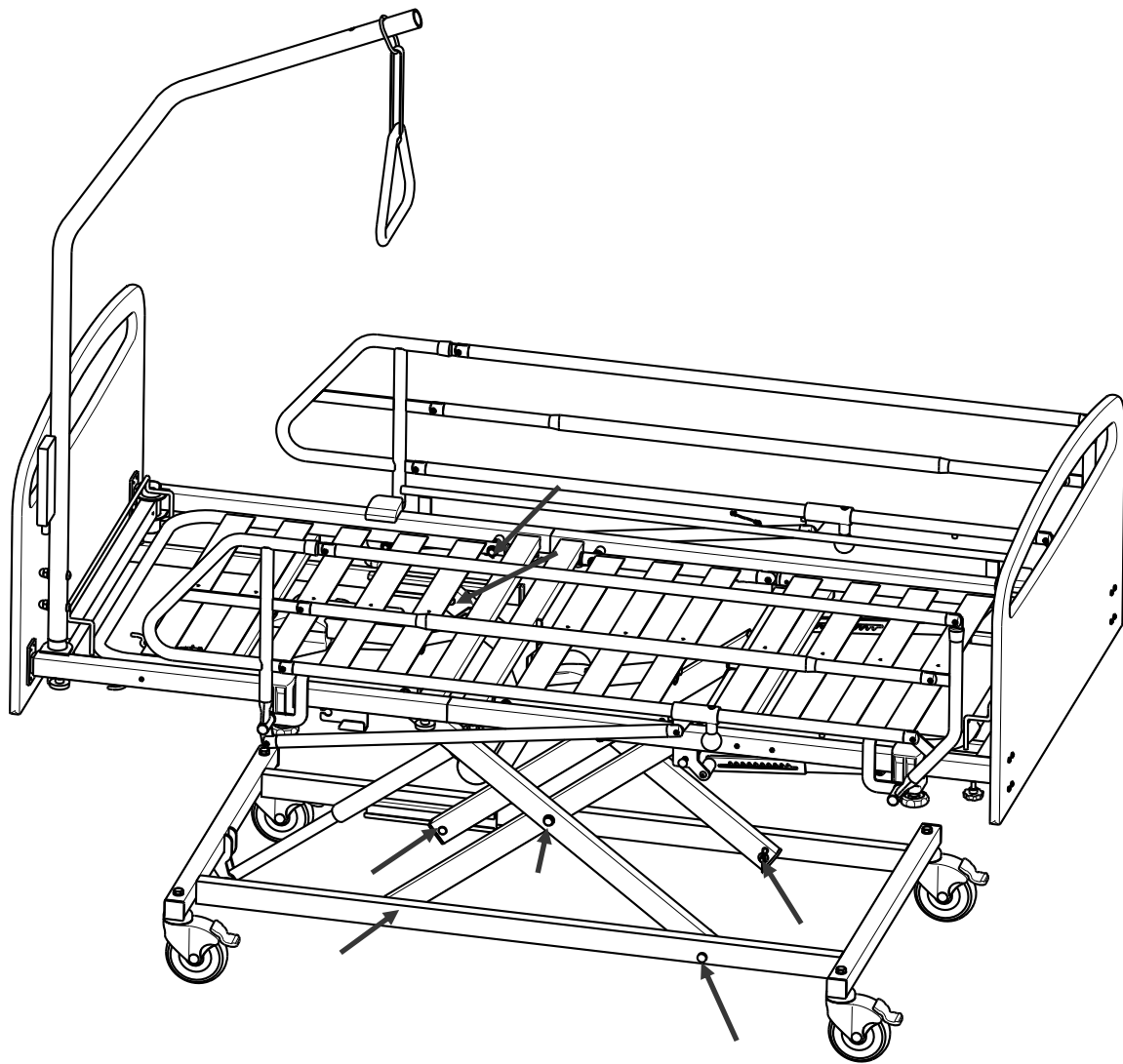
- Check functioning of the gas pressure spring (synchronized, deformation, oiled).
- Check functioning for the mechanical tooth adjustment mechanism (deformation, wear).
- Every 8 weeks: inspection and possibly lubricating or adjusting from (depending on how often the bed is used)
 - Operation and condition of the wooden side railings (headrest and foot-end)
 - Operation and condition of the metal side railings (if present)
 - Placement of the slats in the slatted frame (if available)
 - The condition of the wooden parts
 - Lifting pole (fit / deformation)
 - All screw, bolt and nut fasteners
 - Lubricating from moving parts

Figures below indicate the greasing points for the different Vermeiren beds:

Alois, Alzeis, Lo-Lo (wooden side rails)

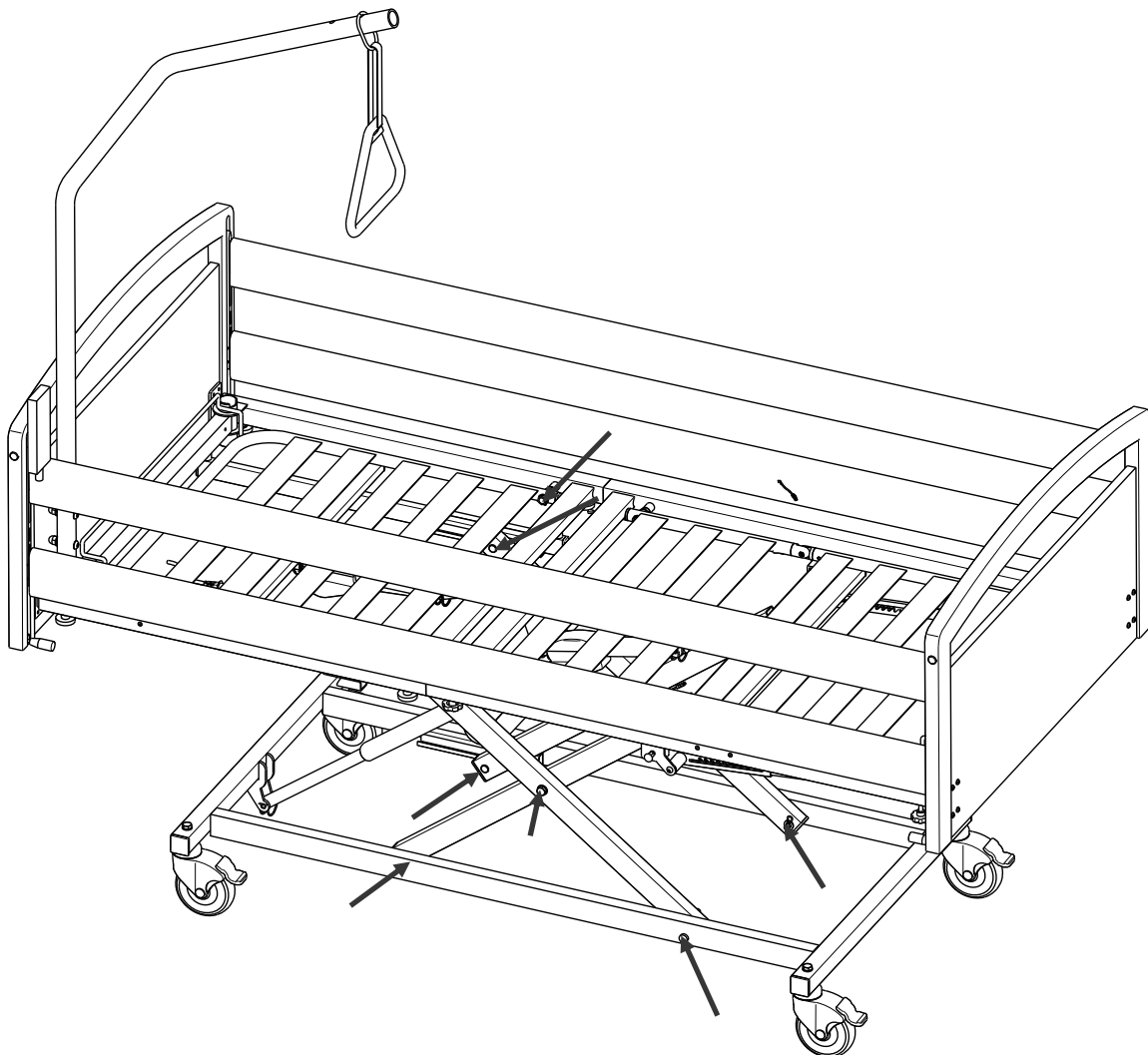


Interval

Pratic (metal side rails)

Pratic (wooden side rails)

Same for the Pratic HC bed.



For your convenience, on the back of this manual is a maintenance plan.

Repairing and assembling of spare parts for your bed may only be performed by the specialist dealer.

Only authorized Vermeiren spare parts may be installed.

1.2 Shipping and storage

The shipping and storage of the bed shall be according following instructions:

- Store in a dry place (between +5 °C and +40 °C).
- The relative humidity of the air should be between 30% and 70%.
- Provide sufficient covering or packaging to protect the bed from rust and foreign bodies. (e.g. salt water, sea air, sand, dust).
- Pull the power cable out the wall socket.
- Carefully roll up the power cable with no kinks and place it in the receptacle provided.
- Store all removed parts together in one place (or mark them if necessary) to avoid mixing up with other products when re-assembling (e.g. side rails).
- Components must be stored without being subjected to strains (Do not put too heavy parts on the bed, not clamping between something, ...). Grasp the bed by solid frame parts only.

- Check internal cables for squashing and the prevention of kinks.
- When dismantling properly tighten all screws and bolts.
- Make sure all components required for assembling the nursing bed are in place.
- After being re-assembled and passed on to somebody else, all inspections must be performed as described in the "Inspection" chapter.

1.3 Care

The cleaning of your bed is possible with household products. Check before cleaning the bed the power cable is disconnected from the power supply.

Your bed requires regular care if you want it to remain visually attractive so it should be regularly cleaned.

1.3.1 Metal frames, wooden parts

See instructions below for the cleaning of the metal frames and the wooden parts:

- Clean the metal frames and the wooden parts with a cloth moistened in warm water. Take care that you do not soak the metal frames and the wooden parts.
- Use a mild commercial detergent for removing stubborn dirt.
- Stains can be removed by using a sponge or a soft brush.
- Do not use strong cleaning liquids like solvents, nor use hard brushes.
- Never clean with steam and/or pressure washers.

Damage caused by the use of improper cleaning agents is not the responsibility of Vermeiren.

1.3.2 Plastic parts

Clean plastic parts of your bed with commercial plastic cleaners. Only use a soft brush or soft sponge. Take note of special product information.

Examples of plastic parts is the handset, etc.

1.3.3 Coating

The high quality of the surface layer guarantees optimal protection against corrosion. If the outer coating is damaged by scratching or in some other way, get your specialist dealer to repair the affected surface.

When cleaning, only use warm water and normal household detergents and soft brushes and cloths. Ensure that no moisture gets into the components (tubes, electronics, ...).

Initially the chrome parts only require rubbing with a dry cloth. Dull places or stubborn dirt can best be removed by using a suitable commercial chrome polish.

Dulling can be avoided by lightly greasing steel parts with Vaseline.

1.3.4 Electronics

⚠ WARNING: Check the plug connectors for corrosion or damage before every ride, since it could affect the efficiency of the electronics.

Wipe the handset, motors with a cloth moistened by a few drops of a commercial domestic cleaner. Do not use any abrasives or sharp-edged polishing equipment like a metal scrubber or brush, since these can scratch the surface of the handset.

1.4 Inspection

For your safety and to ensure that your nursing bed remains functional even after prolonged use, it should be serviced regularly by an authorized specialist dealer whose work should be documented in the service plan. The dealer will enter maintenance work in the service plan. In general we recommend having annual servicing and servicing before each new usage. The following inspections need to be documented:

- Visually check the frame parts for plastic deformation, cracks and impaired functioning. (slatted frame, undercarriage, head-end, feet-end, lifting pole, attachment lifting pole, wheels).
- Visually check all plastic parts for cracks and brittle spots.
- Check the solidity and seating of all screws, nut connections.
- Visually check all housings for damage, screws must be securely fixed, seals and gaskets should not exhibit visible damage.
- Visually check for damage to the paintwork (danger of corrosion).
- Check the plug connectors for corrosion or damage, since it could affect the efficiency of the electronics.
- Check the operation of the braking wheels (free running, safety, locking, etc.).
- Verify the amount of grease on the metal joints of movable parts.
- Measure the resistance of the protective earth (Ohm) according to VDE EN62353.
- Measure the residual diversion current (A) according to VDE EN62353.
- Measure the insulation resistance (M Ω) according to VDE EN62353.
- Check the functioning of the side railings (locking, distances according to ISO 60601-2-52: 2009, also when loaded, deformation and wear through loading).
- Check the condition of the mattress (not when use of the bed is resumed).
- Completeness of the delivery condition, instruction manual available?

Only for electrical bed:

- Condition of the power cable (especially: squashing, abrasion, cuts, visible insulation or inner conductors, visible metallic veins, kinks, bulges, color changes of the outer covering, brittle places).
- Check the internal cabling of the power cable (especially: crushing, abrasion, cuts, visible insulation of the inner conductor, visible metallic veins, kinks, lumpiness, color changes of the outer sleeve, brittle spots).
- Visual inspection of the power cable (EPR or similar).
- Humidity protection of the electric system, at least IPX4 (see Type label).
- Check the device for suspending the power cable during transportation.
- The power cable and other electric cables to be securely placed to avoid shearing, crushing and other mechanical stresses and strains.
- Check the operation of the drives (over the full adjustment range of the motors → noises, speed, free running, etc., final switching (e.g. current limiting, main switch), if necessary: Measure the performance, first with no load, and then with the nominal load ("SWL") to investigate the wear and tear of the motors by comparing the values of the electric current with the values when the bed was delivered. Do not open the motors otherwise the warranty will lapse immediately.

Only for mechanical bed:

- Check functioning of the gas pressure spring (synchronized, deformation, oiled).
- Check functioning for the mechanical tooth adjustment mechanism (deformation, wear).



Electrical measurements may only be carried out by personnel trained on the nursing bed and instructed by an electrician about the instruments and procedures to be used. Only an electrician can approve the nursing bed for use after making the measurements and performing maintenance.

Servicing must be confirmed in the service plan when at least the above-mentioned aspects have been checked. Should your specialist dealer not perform the services you request, then contact the manufacturer. We shall gladly refer you to authorized specialist dealers in your area.

The manufacturer is not liable for damage caused by the lack of or improper servicing.

Requirement:	Remark:
1.) Visual check:	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.1) Power cable EPR cable or comparable quality	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.2) Condition of power cable In particular look for: Crushing, abrasion, cuts, visible insulation of the inner conductor, visible metallic veins, kinks, lumpiness, color changes of the outer sleeve, brittle spots)	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.3) Status of internal wiring In particular look for: Crushing, abrasion, cuts, visible insulation of the inner conductor, visible metallic veins, kinks, lumpiness, color changes of the outer sleeve, brittle spots)	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.4) Sufficient ease of pulling and power cable kink protection	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.5) Sufficient ease of pulling and kink protection for internal cables	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.6) The power cable and other electric leads must be wired securely so that shearing, squashing, and other forms of mechanical stress are unlikely.	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.7) Moisture protection IP66	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.8) Inspecting device for suspended power cables during transport.	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.9) Check the frame parts for plastic deformation and/or wear and tear. - undercarriage - bed lift - head-end, seat area, feet-end - lifting pole - fastening of lifting pole - rolling castors	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes
1.10) Housing Visual inspection of all housings for damage. The screws need to be tightly fastened. The seals must not have any visual damage	n.a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notes

Table (A) on Picture (B)

Symbol	Size	Requirement in mm
A	The smallest distance between the elements within the circumference of the side railings in an erect/inserted position, or the area included by the side railings and fixed parts of the bed.	$A \leq 120$
B	Thickness of the mattress in accordance with regulatory use	As indicated by manufacturer
C	Height of the top sides of the side railings over the mattress (see 'B') without compression.	$C \geq 220$
D	Distance between the headrest or foot part and the side railings.	$D \leq 60$ or $D \geq 235$
E	Distance between side railings taken apart with the lying surface in flat position.	$E \leq 60$ or $E \geq 235$
F	Smallest distance of all accessible openings between the side railing and the lying surface.	If $D \geq 235$ then $F \leq 60$ If $D \leq 60$ then $F \leq 120$
G	Overall length of the side railings or sum total of the lengths of the side railings taken apart on one side of the bed.	$G \geq 1/2$ of the length of the lying surface
H	Distance between headrest and foot-end without extension of these parts.	No requirements

Actual size: mm

Actual size: mm

Actual size: mm

Actual size: mm

Actual size: mm

Actual size: mm

Actual size: mm

Actual size: mm

NA Yes No Notes

Beds whose side railings exceed the indicated dimensions by less than 10 % must not be used with small or underweight patients, otherwise additional measures must be taken to avoid having such patients being clamped in the bed or sliding through.

n.a. Yes No Notes

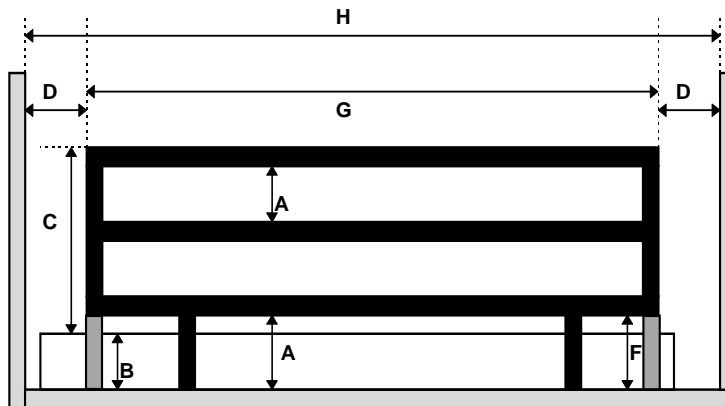
Side railings that exceed the indicated measurements by 10 % or more may not be used until the deficiencies have been removed and the rails must be exchanged or upgraded.

n.a. Yes No Notes

In addition to the following points, the full functionality (i.e. locking, fixing elements) of the side railings must be inspected. Any defects must be eliminated. Keeping the sizes for the side railing components in compliance with the following sketch.

n.a. Yes No Notes

Picture (B) on Table (A)



Remark: When the bar for the side railings are external (dark gray marking), they need to be kept at distance A to the lying surface.

2.) Measurement tests

n.a. Yes No Notes

2.1) Protective earth resistance

Actual size: Ohm

n.a. Yes No Notes

2.2) Residual diversion current

Actual size: A

n.a. Yes No Notes

2.3) Insulation resistance

Actual size: MOhm

n.a. Yes No Notes

3.) Function tests

n.a. Yes No Notes

3.1) Functional check of side railings:

- locking, e.g. play in the locking device
- distances, including under load
- deformation
- wear and tear owing to load

n.a. Yes No Notes

3.2) Functional check of brakes:

- safety
- braking
- neutral

n.a. Yes No Notes

3.3) Functional check of drives:

- move through complete adjustment scope for the motors (sounds, speed, smooth operations, etc.) - Final switch off (e.g. current limitation, main switch)

Measure performance, first with no load, and then with the nominal load ("SWL") to inspect for possible wear and tear on the motors by comparing electrical current input.

Compare with the values given at the time of delivery. The manufacturer will provide you with the limits.

n.a. Yes No Notes

Other:

1.5 Troubleshooting

The following list will assist you with the troubleshooting of your bed. If you cannot find any fault please contact your specialist dealer.

Problem	Cause of problem	Solution
Power light indicator of the control box is not working.	<ul style="list-style-type: none"> Not connected to the power supply. Fuse is damaged. Control box is damaged. 	<ul style="list-style-type: none"> Connect the control box to the power supply. Send the motor or control box for repair.
Power light indicator of the control box does not lit, motor is not working, relay in control box make a clicking sound.	<ul style="list-style-type: none"> Motor plug is not connected very well in the control box. Motor is damaged. Control box is damaged. 	<ul style="list-style-type: none"> Connect the motor plug in the control box. Send the motor or control box for repair.
Power light indicator of the control box does not lit, motor is not working, relay in control box make no clicking sound.	<ul style="list-style-type: none"> Control box is damaged. Handset is damaged. 	<ul style="list-style-type: none"> Send the control box or handset for repair.
Power light indicator is lit, motor is working, but spindle is not working.	<ul style="list-style-type: none"> Worm gear is loose or worn. Supply voltage is too low. Bed is overloaded. 	<ul style="list-style-type: none"> Send the motor for repair. Supply voltage must be 220V AC. Provide less weight on the bed, and let the motors rest.
Power light indicator is lit, motor and spindle are not working.	<ul style="list-style-type: none"> Cables are not good connected. Cables are broken. Control box is damaged. Handset is damaged. Motor is damaged. 	<ul style="list-style-type: none"> Connect the cables. Change the cable. Send control box, handset or motor for repair.
Control box is working, motor works only in one direction.	<ul style="list-style-type: none"> Handset is damaged. 	<ul style="list-style-type: none"> Send handset for repair.

1.6 Disinfection

⚠ WARNING: Dangerous Products - The use of disinfectants is restricted to authorized personnel.

⚠ WARNING: Dangerous Products, risk of skin irritation - Wear suitable protective clothing. Take note of the product information of the solutions concerned.

All parts of the bed can be treated by scrubbing with a disinfectant.

All steps taken to disinfect rehabilitation equipment, their components or other accessory parts are to be recorded in a disinfection report containing a minimum of the following information (with product documentation appended):

Date of the disinfection	Reason	Specification	Substance and concentration	Signature
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Table 1: Example of a disinfection book

Abbreviations used in column 2 (reason):

V = Suspected infection IF = Infection case W = Repetition I = Inspection

For a blank sheet of a disinfection book see § 5.

The recommended disinfectants for scrubbing (based on the list provided by the Robert Koch Institute, RKI) are standing in the table below. The current state of the disinfectants included in the RKI list can be obtained from the Robert Koch Institute (RKI) (homepage: www.rki.de).

Active substance	Product name	Laundry disinfection		Surface disinfection (scrubbing-/wiping disinfection)		Disinfection of excretions 1 part sputum or stools + 2 parts diluted solution or 1 part urine + 1 part diluted solution						Area of effectiveness	Manufacturer or Supplier
		Diluted solution	Time to take effect	Diluted solution	Time to take effect	Sputum		Stools		Urine			
						Diluted solution	Time to take effect	Diluted solution	Time to take effect	Diluted solution	Time to take effect		
		%	Hr.	%	Hr.	%	Hr.	%	Hr.	%	Hr.		
Phenol or phenol derivative	Amocid	1	12	5	6	5	4	5	6	5	2	A	Lysoform
	Gevisol	0,5	12	5	4	5	4	5	6	5	2	A	Schülke & Mayr
	Helipur			6	4	6	4	6	6	6	2	A	B. Braun
	m-cresylic soap solution (DAB 6)	1	12	5	4							A	
	Phenol	1	12	3	2							A	
Chlorine, organic or inorganic substances with active chlorine	Chloramin-T DAB 9	1,5	12	2,5	2	5	4					A ¹ B	
	Clorina	1,5	12	2,5	2	5	4					A ¹ B	Lysoform
	Trichlorol	2	12	3	2	6	4					A ¹ B	Lysoform
Per combinations	Apesin AP100 ²			4	4							AB	Tana PROFESSIONAL
	Dismozon pur ²			4	1							AB	Bode Chemie
	Perform ²			3	4							AB	Schülke & Mayr
	Wofesteril ²			2	4							AB	Kesla Pharma
Formaldehyde and/or other aldehydes or derivatives	Aldasan 2000			4	4							AB	Lysoform
	Antifect FD 10			3	4							AB	Schülke & Mayr
	Antiseptica surface disinfection 7			3	6							AB	Antiseptica
	Apesin AP30			5	4							A	Tana PROFESSIONAL
	Bacillocid special			6	4							AB	Bode Chemie
	Buraton 10F			3	4							AB	Schülke & Mayr
	Desomed A 2000			3	6							AB	Desomed
	Hospital disinfectant cleaner			8	6							AB	Dreiturm
	Desomed Perfekt			7	4							AB*	Desomed
	Formaldehyde-solution (DAB 10), (formaline)	1,5	12	3	4							AB	
	Incidin Perfekt	1	12	3	4							AB	Ecolab
	Incidin Plus			8	6							A	Ecolab
	Kohrsolin	2	12	3	4							AB	Bode Chemie
	Lysoform	4	12	5	6							AB	Lysoform
	Lysoformin	3	12	5	6							AB	Lysoform
	Lysoformin 2000			4	6							AB	Lysoform
	Melsept	2	12	4	6							AB	B. Braun
	Melsitt	4	12	10	4							AB	B. Braun
	Minutil	2	12	6	4							AB	Ecolab
	Multidor			3	6							AB	Ecolab
Nüscosept			5	4							AB	Dr. Nüsken Chemie	
Optisept			7	4							AB*	Dr. Schumacher	
Pursept-FD			7	4							AB*	Merz	
Ultrasol F	3	12	5	4							AB	Fresenius Kabi	
Amphoteric surfactants (amfotensiden)	Tensodur 103	2	12									A	MFH Marienfelde
Lye	Lime-milk ³							20	6			A ³ B	

1 Not effective against myco-bacteria when service disinfecting, especially in the presence of blood.
 2 Not suitable for disinfecting blood-contaminated or porous surfaces (e.g. raw wood).
 3 Useless for tuberculosis; preparation of Lime-milk: 1 part dissolved lime (calcium hydroxide) + 3 parts water.
 * Checked for effectiveness on viruses in accordance with checking methods of the RKI (Federal Health Reporting 38 (1995) 242).
 A: Suitable for killing vegetative bacterial germs including myco-bacteria as well as fungi, including fungal spores.
 B: Suitable for deactivating viruses.

Table 2: Disinfectants

Kindly consult your specialist dealer if you have queries on matters related to disinfection; he will gladly assist you.

2 Warranty

Excerpt from the "General Business Conditions":

(...)

5. The terms of the guarantee may differ from country to country. Consult your specialist dealer for the guarantee period for warranty claims.

(...)

Claims are invalid when:

- the agreed condition is only minimally deviated from
- usability is only minimally impaired
- wear and tear is normal
- faults are due to improper assembly or neglected maintenance
- faults are due to improper use
- Faults are due to improper handling by customers or their contractual partners or workshops
- for damage resulting from faulty or negligent treatment, excessive wear, inappropriate equipment, faulty installation or due to special influences not included in the contract after the transfer of goods.

(...)

The terms of the guarantee may differ from country to country. Please contact your dealer for further information.

3 Disposal



A local waste disposal company will tell you where you can take the nursing bed to be recycled free of charge. It may not be disposed of with domestic waste.

The manufacturer is responsible for taking back and recycling the bed and shall meet the requirements of European Directive 2002/96/EC on Waste Electrical and Electronic Equipment.

Packaging materials can be taken to disposal or recycling centers.



4 Maintenance plan

Date	Maintenance	Remarks	Paraph
1/1/2014	<i>Greasing and general servicing</i>	<i>non</i>	

5 Disinfection book

Date of the disinfection	Reason	Specification	Substance and concentration	Signature

Abbreviations used in column 2 (reason):

V = Suspected infection IF = Infection case W = Repetition I = Inspection



SERVICE

The bed was serviced:

Dealer's stamp:

Date:

Dealer's stamp:

Date:

Dealer's stamp:

Date:

Dealer's stamp:

Date:

Dealer's stamp:

Date:

Dealer's stamp:

Date:

Dealer's stamp:

Date:

Dealer's stamp:

Date:

Dealer's stamp:

Date:

Dealer's stamp:

Date:

- For service checklists an additional technical information, please see our specialist dealers nearest to you. More information on our website at: www.vermeiren.com.

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