

VERMEIREN

Regina

INSTRUCTION MANUAL





Instructions to the specialist dealer

This instruction manual is part and parcel of the product and must accompany every product sold.

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Contents

Preface	2
1 Product description	3
1.1 Intended Use.....	3
1.2 Technical specifications	4
1.3 Drawing.....	5
1.4 Location identification plate.....	5
1.5 Explanation of symbols	6
1.6 Accessories.....	6
1.7 For your safety	6
2 Use	7
2.1 Remarks on electromagnetic compatibility (EMC)	7
2.2 Carrying the shell chair	8
2.3 Recommendations to use the shell chair Regina.....	8
2.4 Inclination of shell chair.....	10
2.5 Operating manual control.....	10
2.6 Cable connections	11
2.7 Running wheels / Parking brakes	11
2.8 Mounting or removing of tray	12
2.9 Mounting or removing of headrest.....	12
2.10 Use of safety harness.....	12
2.11 Taking curbs by using ramps.....	13
2.12 Transport in the car.....	13
3 Installation and adjustment	14
3.1 Tools	14
3.2 Manner of delivery	14
3.3 Adjusting the seat height	14
3.4 Mounting the fifth wheel.....	15
4 Maintenance	15



Preface

First of all we want to thank you for putting your trust in us by selecting one of our products.

Vermeiren products are the result of many years of research and experience. During the development, special attention was given to the ease of use and the serviceability of the product.

The lifetime for the product is strongly influenced by the care and maintenance of the product.

This manual will help you get acquainted with the operation of your product.

Following the user instructions and the maintenance instructions are an essential part of the warranty.

This manual reflects the latest product developments. Vermeiren has the right to introduce changes without the obligation to adapt or replace previously delivered models.

For any further questions, please consult your specialist dealer.

1 Product description

1.1 *Intended Use*

The Regina shell chair is developed entirely for your comfort.

The shell chair is designed for sitting of 1 person.

The shell chair has been designed exclusively for people with limited mobility and weak muscles so be careful with the use of the shell chair.

The shell chair is suited for indoor use.

You will need a helper for indoor transporting of the Regina, and the chair might also need its own storage place.

The different types of accessories, and the construction allow full use by persons disabled by:

- paralysis
- weak/malformed limbs
- injuries of the joints
- heart insufficiencies and poor blood circulation
- balance disturbances
- cachexia (decrease in muscle)
- and also for aged persons.

The indication to use this product must take into account the following elements:

- body size and weight (**max. load 120 kg**)
- physical and psychological condition
- home environment

The shell chair should only be used on surfaces where all four wheels are touching the ground and where there is sufficient contact to propel the wheels equally.

The shell chair should not be used as a ladder, nor is it a transport for heavy or hot objects.

When used on mats, carpeted floors or loose floor coverings, the floor covering can get damaged.

It is necessary to choose the best fitted model for the size/build of the patient.

Use only Vermeiren approved accessories.

The manufacturer is not liable for damage caused by the lack of or improper service or as a result of not following instructions from this manual.

Compliance with the user and maintenance instructions are an essential part of the guarantee conditions.

1.2 Technical specifications

Technical terms below are valid for the product in standard settings and with the upholstery. If other accessories are used, the tabulated values will change.

Make	Vermeiren		
Address	Vermeirenplein 1/15, B-2920 Kalmthout		
Type	Shell chair		
Model	Regina		
Maximum occupant mass	120 kg		
Description	Min.		Max.
Overall length	665 mm		
Effective seat width	380 mm	440 mm	480 mm
Overall width (with table)	925 mm		
Overall width (without table)	700 mm		
Overall height	1330 mm		1355 mm
Total mass	Approx. 35 kg		
Mass of heaviest part	Not applicable		
Maximum load of tray	0,5 kg		
Static stability downhill	6% (in standard configuration)		
Static stability uphill	6% (in standard configuration)		
Obstacle climbing	Not applicable		
Seat plane angle	-3°		+28°
Effective seat depth	500 mm		
Seat surface height at front edge (without seat cushions)	395 mm		420 mm
Thickness seat cushions	60 mm	80 mm	100 mm
Backrest angle	-3°		+28°
Backrest height	855 mm		
Distance between legrest and seat	Not applicable		
Angle between seat and legrest	1,3°		70°
Armrests height	250 mm		
Color of upholstery	Braun/ chocolate		Black / black
Operator control	IP20, Uin: 24V ---		
Actuator	Max. Load: Push 4000N / Pull 3000N Duty cycle: 2min ON / 18min OFF or 10%, max. 5 switching cycles per minute		
Power supply / Transformator	Input: 100-240 V~, 50/60 Hz, max. 1,5A, Output: 24V --- Protection class: IP20 Insulation class: II Duty cycle: 2min ON / 18min OFF		
Storage and use temperature	+ 5 °C		+ 40 °C
Storage temperature (electronics)	-20°C		+50°C
Use temperature (electronics)	+10°C		+40°C
Storage and use humidity	30%		70%
We reserve the right to introduce technical changes. Measurement tolerance ± 15 mm / 1,5 kg / °			

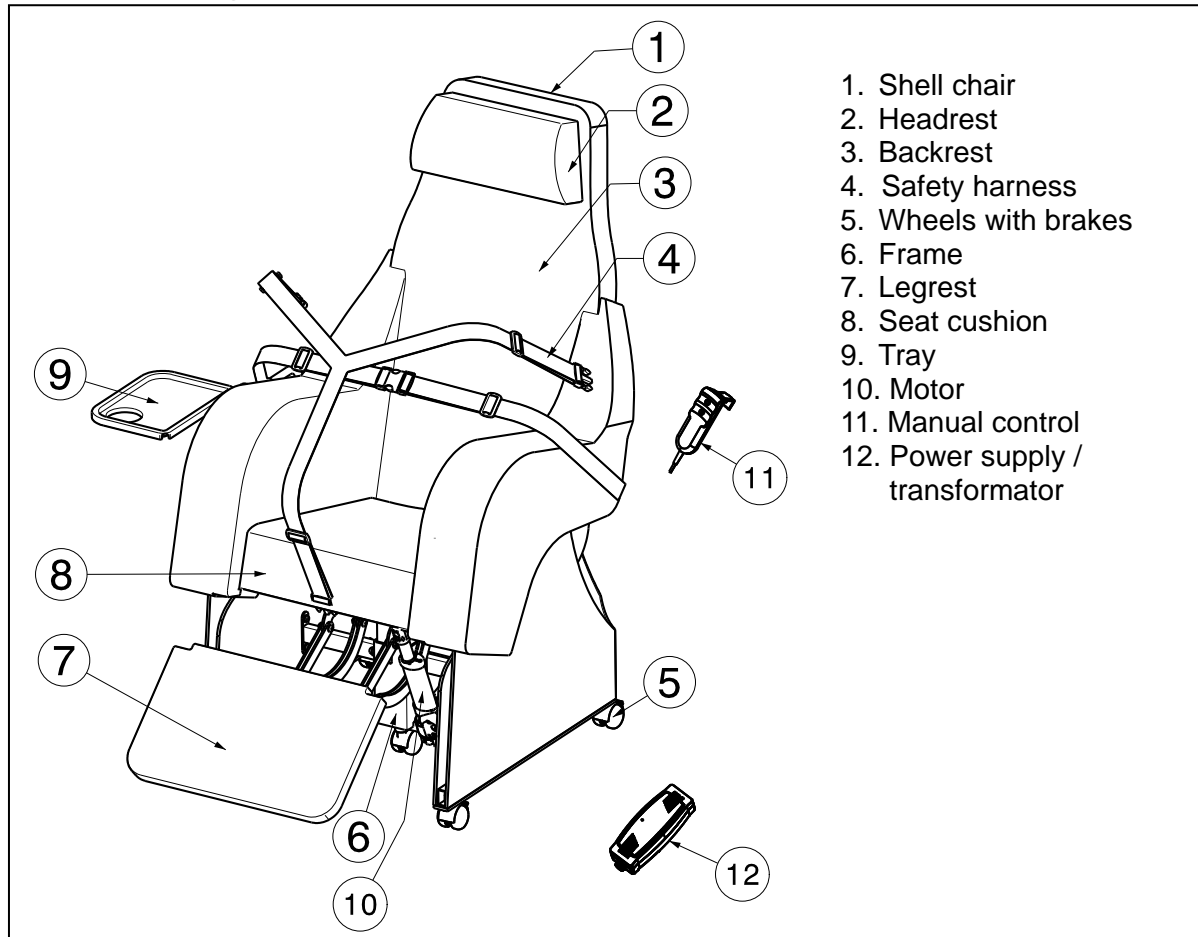
Table 1: Technical specifications

The shell chair complies to the requirements set up in:

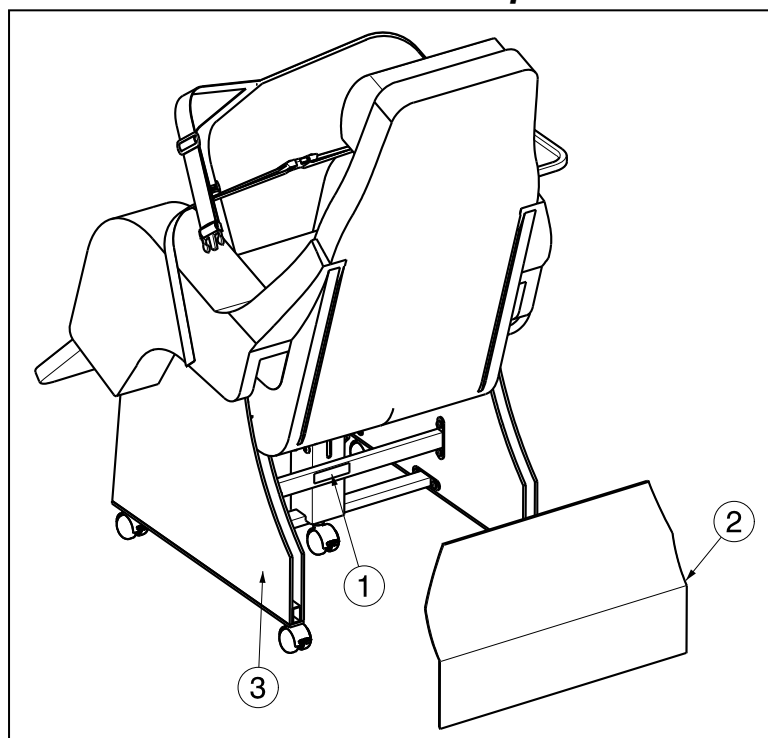
ISO 7176-8: Requirements and test methods for static, impact and fatigue strengths.

EN 1021-1, EN1021-2: Resistance to ignition of upholstered parts

1.3 Drawing













1.4 Location identification plate



The location of the identification plate ① is on the metal frame (backside shell chair). Remove first the rear cover ②, with the velcro straps, from the side plates ③.

1.5 Explanation of symbols














-  Maximum mass
-  Indoor use only
-  CE conformity
-  Not intended to be used as a seat in a Motor vehicle
-  Protection class II
-  Type designation
-  Use the electronics in dry rooms only
-  Separate recovery and recycling of electric and electronic devices
-  Do not open the electric, electronic devices, because these can damage the seal and the electric or electronic devices.
-  Short-circuit-proof safety transformer

1.6 Accessories

No accessories are available for the Regina shell chair.

1.7 For your safety

Take note of the following safety hints:

-  Follow the instructions for using your shell chair.
-  To prevent injury of the hands and damage to the shell chair, make sure that no objects and or body parts are caught between the adjustment systems (seat height, inclination of shell chair, ...).
-  Regularly check that the wheel immobilizers function correctly.
-  The parking brakes should be applied before getting into and out the shell chair.
-  If you want to pick up something (lying in front of, on the side, or to the rear of the shell chair), you should not lean too far out to avoid tipping over.
-  When moving through doors, arches, etc. ensure that there is enough room at the sides so there is no damage to the shell chair.
-  When inclining the shell chair make sure there is sufficient room around and above it. Otherwise the adjustment movements could lead damage or injury.
-  Only use your shell chair according to regulations. For example, avoid uncontrolled rolling against obstacles (steps, curbs, doorframes, etc) or dropping down from ledges. The manufacturer cannot assume liability for damage caused by overloading, collision or other improper use.
-  Never cross steps, ledges or other obstacles with a patient seated on the chair. If alternatives like ramps or lifts are available, use them.
-  When transporting the shell chair, never pick it up by grasping movable parts (e.g. legrest) or when the shell chair is inclined.
-  Leave the shell chair in the not inclined position when not using the shell chair.
-  Do not sit on the legrest or armrests.
-  Do not lean on the leg or backrest - risk of tipping over the shell chair.

- ⚠ Be careful when using possible causes of fire such as cigarettes since they may set the seat and back covers alight.
- ⚠ Never exceed the **maximum load (120 kg)**.
- ⚠ Use the shell chair on level surfaces, with all 4 casters contacting the ground.
- ⚠ Use only Vermeiren approved accessories, spare parts or electronic components.
- ⚠ Use the safety belt and the safety harness as much as possible and definitely for persons that make extreme movements.
- ⚠ Do not use the shell chair in: environment where combustible or explosive gases or vapors may be present, close to open fires or other heat sources (such as furnaces, ovens or direct sunlight), in a humid environment or outdoors. (for the electronic parts).
- ⚠ Do not use the power supply as a toy or to play games.
- ⚠ Use only power sockets conforming to VDE (220 V / 230 V, 50 Hz) for plugging in.
- ⚠ Plugs must only be pulled out by grasping the plug itself; never pull on the cable.
- ⚠ Do not open the electric, electronic devices.
- ⚠ Make sure that all power cables are laid without kinks, shearing or other mechanical damages and that they not are strangled in the wheels and no mechanical strain should be placed on the cables.
- ⚠ All cables should be laid that nobody can fall over the cables.

2 Use

This chapter describes the everyday use. **These instructions are for the user and the specialist dealer.**

The product is delivered fully assembled by your specialist dealer. The instructions intended for the specialist dealer on how to set up the shell chair are given in § 3.

2.1 Remarks on electromagnetic compatibility (EMC)

Your shell chair has been tested according EN 61000-3-2 and EN 61000-3-3 for EMC-compliance. We wish to point out that sources of electromagnetic waves are liable to create interferences. The electronics of the shell chair itself could affect other electric appliances too.

To reduce the effect of electromagnetic sources of interference, please read the following warnings:

- ⚠ **WARNING: The shell chair might disturb the operation of devices in its environment that emit electromagnetic field.**
- ⚠ **WARNING: The driving performance of the shell chair can be influenced by electromagnetic fields (e.g. electricity generators or high power sources).**
- ⚠ **WARNING: Avoid using any portable TV or radio in the immediate environment of your shell chair for as long as it is turned on.**
- ⚠ **WARNING: Avoid using any transmitter-receiver in the immediate environment of your shell chair for as long as it is turned on.**
- ⚠ **WARNING: If involuntary movements or braking occur, turn off the shell chair as soon as it is safe to do so.**

Interfering electromagnetic fields may have a negative effect on the shell chair's electronic systems. These can include:

- Uncontrollable behavior by the shell chair
- Unintentional movements

In the presence of very strong or enduring interfering fields, the electronic systems could even break down entirely or suffer permanent damage.

Possible sources of radiation include:

- Portable receiver and transmitter installations (receiver and transmitter with fixed antenna)
 - Transmitting and receiving sets
 - Portable TV, radio systems
 - Other personal transmitting devices

- Mobile medium-range transmitting and receiving devices
 - Fixed transmitting and receiving sets
 - Fixed mobile transmitting and receiving devices
 - Fixed radio, TV systems

- Other home devices
 - CD player
 - Notebook
 - Microwave oven
 - Cassette recorder
 - etc.

Devices like electric shavers and hair dryers will have no influence provided that they function perfectly and their cabling be in an excellent condition. Please conform to the operating instructions accompanying such electric instruments to ensure trouble free operating of your shell chair.

2.2 Carrying the shell chair

The best way to carry the shell chair is to make use of the wheels and roll the shell chair.

If this is not possible, firmly grasp the frame with two persons on the fixed side parts. Do not use the wheels, legrest to grasp the shell chair.

2.3 Recommendations to use the shell chair Regina

2.3.1 Transfer in and out the chair

- ⚠ WARNING: Risk of injury – Adjust the safety harness that no strangulation of the patient can appear and the patient can sit comfortable in the chair.**
- ⚠ WARNING: Risk of injury – Adjust the safety harness as close as possible to the body of the patient so the patient cannot slide out the safety harness.**
- ⚠ WARNING: Risk of tipping over – Be sure that the shell chair do not tip over backwards when the shell chair is placed in his most backwards position.**
- ⚠ CAUTION: In case you cannot perform the transfer in a safe manner, ask someone to assist you.**

The transfer from the patient in the shell chair shall be according the instructions below:

1. Check brakes from the shell chair are engaged.
2. Place the shell chair in his most position to the front (minimum inclination: -3°) with the manual control.
3. Disengage the brakes.
4. Position the shell chair as close as possible to the chair, couch or bed from you wish to transfer. Check that the cables cannot strangled between the wheels. (It is not necessary to pull the power cable out the wall socket because it is not permitted to transport the shell chair over long distances when the patient is sitting in the shell chair).
5. Check brakes from the shell chair are engaged and that the safety belt is good fixated to the shell chair.
6. Transfer to the chair.
7. Mount the safety harness.

8. Check that the safety harness is placed correct (as close as possible to the body of the patient). If needed adjust the safety harness.
9. Place the chair in his most backwards position (maximum inclination: +28°).

The transfer from the patient out the shell chair shall be according the instructions below:

1. Check that the brakes from the shell chair are engaged.
2. Place the shell chair in his most position to the front (minimum inclination: -3°) with the manual control.
3. Disengage the brakes.
4. Position the shell chair as close as possible to the chair, couch or bed to you wish to transfer. Check that the cables cannot strangled between the wheels. (It is not necessary to pull the power cable out the wall socket because it is not permitted to transport the shell chair over long distances when the patient is sitting in the shell chair.)
5. Unfasten the safety harness.
6. Transfer out the chair.

2.3.2 Correct position in the chair

Some recommendations for a comfortable use of the chair:

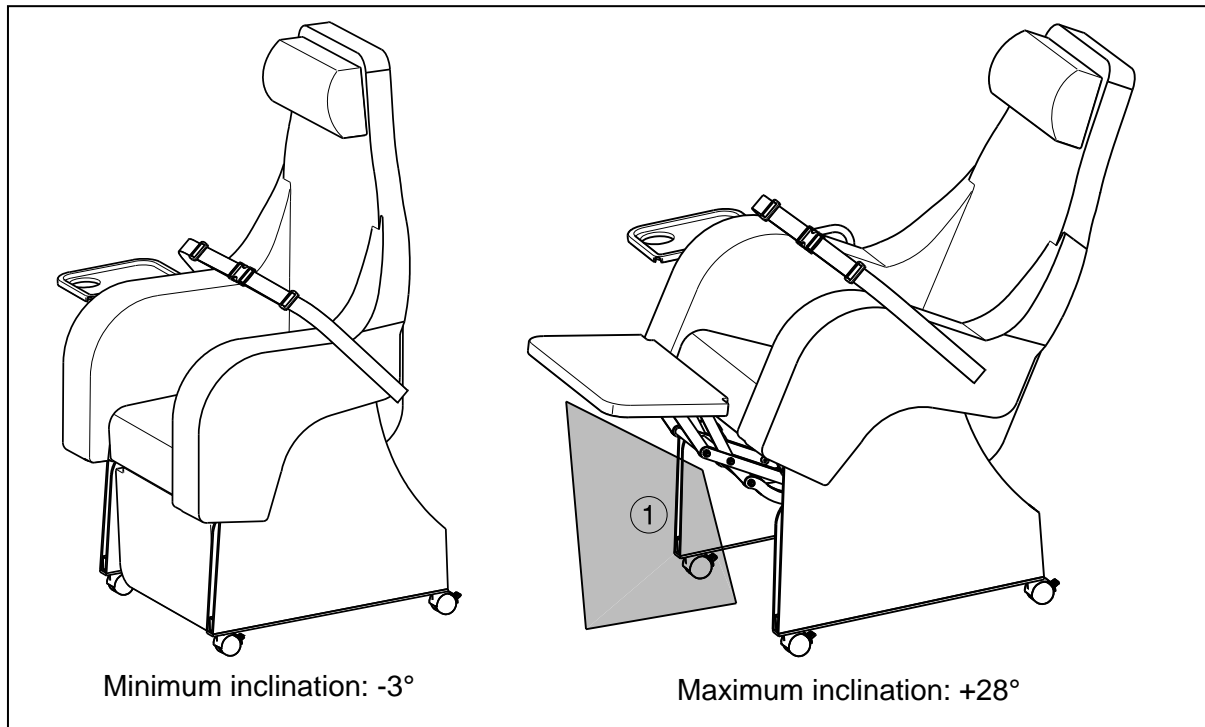
- Position your backside as close as possible to the backrest.
- Make sure your upper legs are horizontal – If needed adjust the seat height.

2.3.3 Moving / transporting the chair

- ⚠ **WARNING: Risk of clamping – Be careful passing through restricted passages (e.g. doors).**
 - ⚠ **WARNING: Risk of burns – Be careful when using in hot or cold environments for a sufficient amount of time and when touching - Surfaces can assume the environment temperatures.**
 - ⚠ **WARNING: Risk of injury – There should be no people or objects under the shell chair during transportation.**
 - ⚠ **WARNING: Risk of injury – Check that the connecting cables not come in contact with the floor or can strangle between the wheels during transport.**
1. Check brakes from the shell chair are engaged.
 2. Transfer the patient out the chair.
 3. Pull the power cable out the wall socket, if you need to move the shell chair to a place that the power cable is not long enough.
 4. Disengage the brakes.
 5. Transport the chair to the desired place on an horizontal underground. Check that the cables cannot strangled between the wheels.
 6. Engage the brakes.
 7. Transfer the patient in the chair.
 8. Mount the power cable in the nearest wall socket and put the cables in a position that nobody can fall over the cables.

2.4 Inclination of shell chair

- ⚠ **WARNING:** Risk of tipping over – Be sure that the shell chair do not tip over backwards when the shell chair is placed in his most backwards position.
- ⚠ **WARNING:** Risk of injury – Check the brakes are engaged before changing the inclination of the shell chair.
- ⚠ **WARNING:** Risk of injury – Do not place your fingers, clothes, buckles, cables or other objects between the entrapment zone.



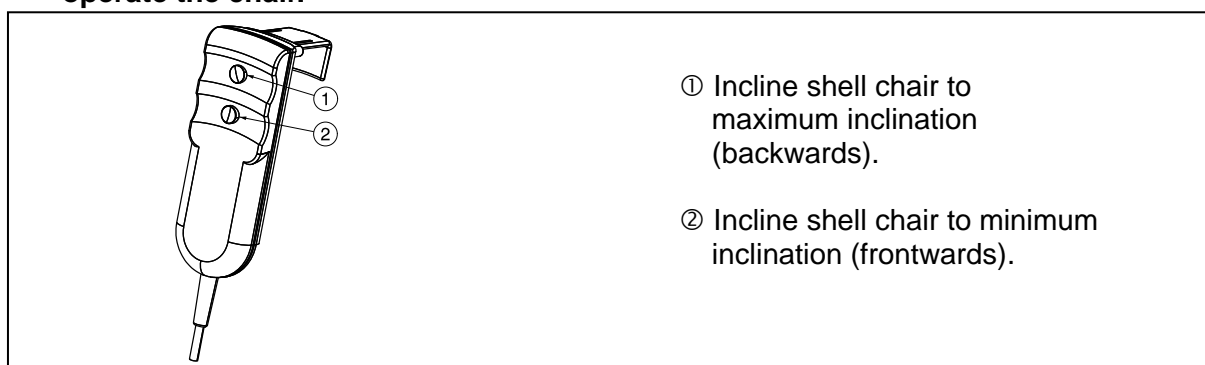
Inclination of the shell chair:

1. Engage the brakes.
2. Plug the power supply in the power socket. Wait at least 15 seconds before using the manual control.
3. The inclination of the shell chair can be adjusted from +28° to -3° with the manual control. (When inclining the shell chair see that there is enough space between the shell chair and the wall).
4. The legrest shall also inclined.

Entrapment zone is indicated with ① in the figure above.

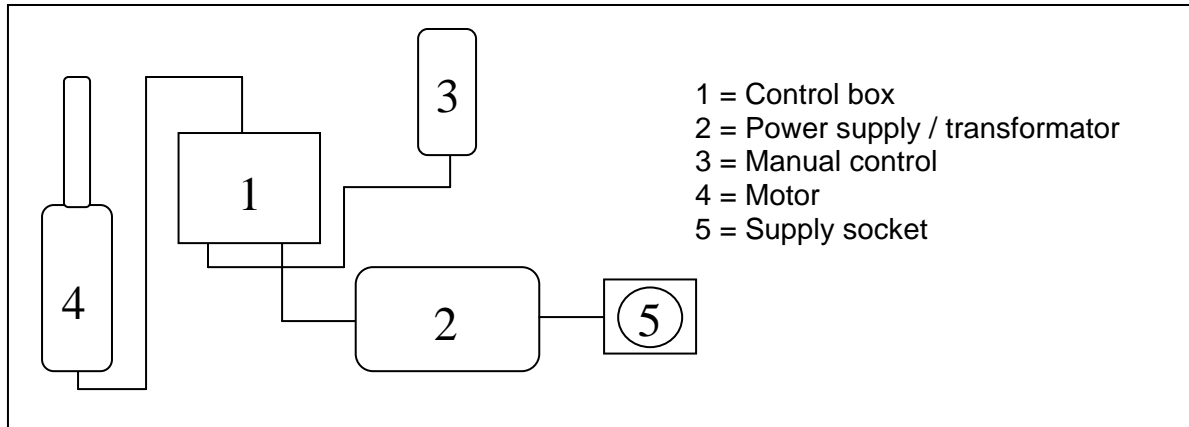
2.5 Operating manual control

- ⚠ **WARNING:** Risk of injury – The shell chair may not be operated by small children, frail or infirmed persons without supervision or nearby small children. Only authorized staff who have been trained in using the shell chair must use and operate the chair.



- ① Incline shell chair to maximum inclination (backwards).
- ② Incline shell chair to minimum inclination (frontwards).

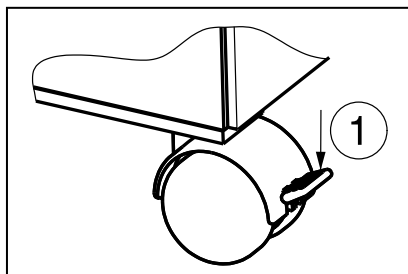
2.6 Cable connections



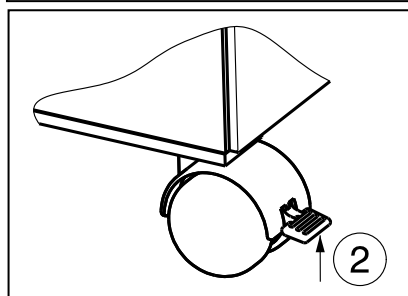
First connect all the cables to the control box ① and in the last connect the power cable to the supply socket.

2.7 Running wheels / Parking brakes

- ⚠ **WARNING:** Risk of injury – Lock all four wheels in place to put the shell chair in a parking position.
- ⚠ **WARNING:** Good operation of the brakes is influenced by wear and contamination of the wheels (water, oil, mud, ...) – Check the condition of the wheels before each use.
- ⚠ **WARNING:** The brakes are adjustable and can wear – Check the operation of the brakes before each use.
- ⚠ **CAUTION:** Risk of unintended movement – Make sure the shell chair is on a flat horizontal surface before releasing the brakes. Never release all the brakes simultaneously.



- ① **Engaging the parking brakes**
With your foot, press the black brake plate of the wheels downwards till it locks in place. The wheels cannot roll.

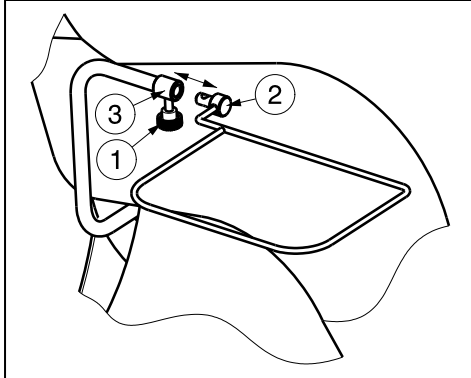


- ② **Disengaging the parking brakes**
With your foot, press the black brake plate of the wheels in the direction of the frame. The wheels have now been released and can both roll and swivel.

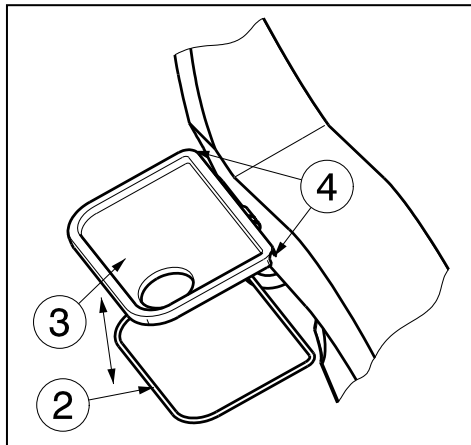
2.8 Mounting or removing of tray

⚠ WARNING: Risk of tipping over – Do not overload the tray. The maximum weight shall be 1 kg.

Mounting the tray:



1. Loosen screw ①.
2. Mount the pen of the frame of tray ② to the bushing ③.
3. Retighten screw ① firmly by hand.



4. Mount the tray ③ to the frame of the tray ②.
5. Put the two holes ④ into direction of the chair.

To remove the tray you can repeat the steps in opposite direction.

2.9 Mounting or removing of headrest

Mounting the headrest:

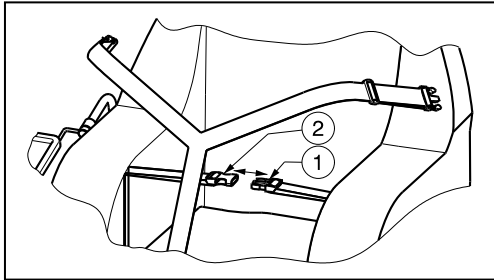
1. Take the headrest.
2. Check that the large edge is placed to the bottom.
3. Mount the headrest to the back of the shell chair by the elastic.

Remove the headrest from the back of the shell chair by the elastic.

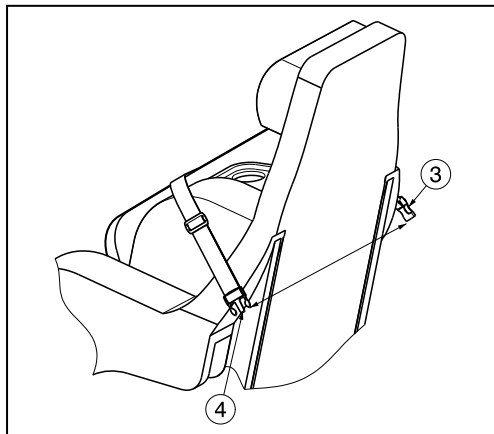
2.10 Use of safety harness

- ⚠ WARNING: Risk of injury – Adjust the safety harness that no strangulation of the patient can appear and the patient can sit comfortable in the chair.**
- ⚠ WARNING: Risk of injury – Adjust the safety harness as close as possible to the body of the patient so the patient cannot slide out the safety harness.**
- ⚠ WARNING: Risk of injury – Use the safety harness for patients that make extreme movements. These can lead to falling out the chair.**

When the patient has spasm or make restless movements the safety harness shall be used.

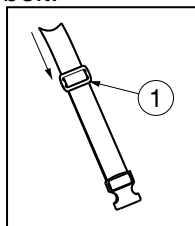


1. Mount the waist belt around the waist of the patient.
2. Click the buckle of belt ① into buckle of belt ②.
3. If needed adjust the waist belt.



1. Mount the buckle of the safety harness in the buckle on the front side of the shell chair and just below the seat cushion.
2. Mount the safety harness around the body of the patient.
3. Cross the harness around the back of the shell chair.
4. Click the buckle of belt ③ into buckle of belt ④.
5. If needed adjust the safety harness.

The adjustment of the belt shall be with the plastic adjustment system ① mounted on the belt.



1. Pull the belt through the adjustment system ①.

2.11 Taking curbs by using ramps

⚠ WARNING: Risk of tipping over – Never go up or down ramps without the aid of a helper.

If you are considering the installation of ramps to overcome obstacles, kindly note the following:

The chair is intended firstly and mostly to be used inside on level and solid surfaces. Never go up or down ramps that are rough or have bumpy edges. Limit yourself to ascents or descents with a maximum angle of 6%.

2.12 Transport in the car

⚠ DANGER: Risk of injury – The shell chair is not suited for use as a seat in a motor vehicle.

⚠ WARNING: Risk of injury – See that the chair is attached properly in the car or the truck.

Never use your shell chair as a seat in an automobile or other vehicle. The shell chair shall be marked with following symbol.



To transport the shell chair in the car use following steps:

1. Remove accessories.

2. Store accessories safely.
3. Place the chair in the luggage place.
4. If the chair and the passenger compartment is NOT separated, attach the frame of the chair securely to the vehicle. You can use the available safety belts in the vehicle.

3 Installation and adjustment

The instructions in this chapter are for the specialist dealer.

To find a service facility or specialist dealer near you, contact the nearest Vermeiren facility. A list of Vermeiren facilities can be found on the last page.

- ⚠ **WARNING: Risk of unsafe settings - Use only the settings described in this manual.**
- ⚠ **WARNING: Variation of allowed adjustments can still change the stability of your product (tilt back or sideways).**

3.1 Tools

To set up the chair the following tools are needed.

- Wrench set n°17
- Allen key set n°6

3.2 Manner of delivery

The Vermeiren product shall be delivered with:

- 1 frame with shell chair and 4 wheels
- 1 wheel not mounted on the shell chair
- 1 legrest
- Tray
- Manual control, motor, power supply and cables
- Tools
- Manual
- Accessories

Before use check if everything is included and that no products are damaged (example by transport, ...).

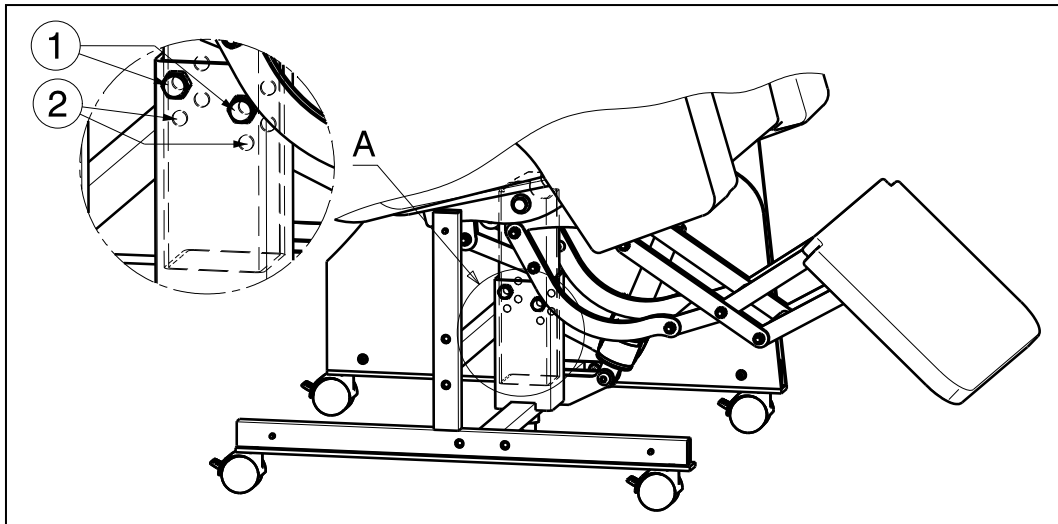
3.3 Adjusting the seat height

- ⚠ **WARNING: Risk of injury – Make sure that no objects and or body parts are caught between the adjustment systems.**
- ⚠ **WARNING: Risk of injury – Adjusting can only be done by authorized people.**
- ⚠ **WARNING: Risk of injury – Check that all screws have been properly fastened.**

You can adjust the shell chair in 2 different seat heights (step: 25 mm) by adjusting the frame and also adjust the seat height by changing the thickness of the seat cushion. The shell chair must not be removed during this process.

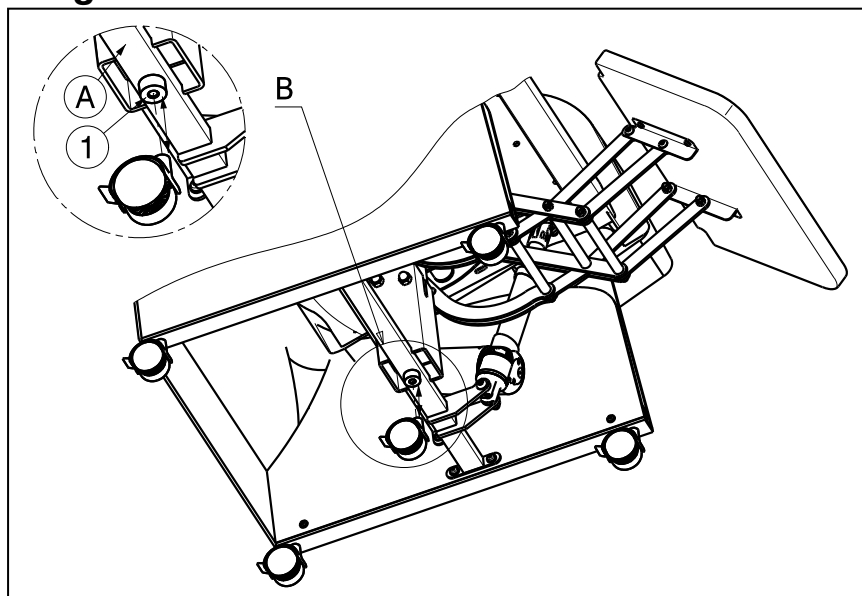
Thickness seat cushion	Seat height	Frame Position
60 mm	455 mm	Hole 1
80 mm	475 mm	Hole 1
100 mm	495 mm	Hole 1
60 mm	480 mm	Hole 2
80 mm	500 mm	Hole 2
100 mm	520 mm	Hole 2

Table 2: Seat heights



The shell chair shall be placed in the Vermeiren factory to the desired seat height, so with the purchase you must decide the correct seat height.

3.4 Mounting the fifth wheel



With your shell chair there is 1 wheel delivered that is not mounted on the shell chair. There is the possibility to mount this wheel on the shell chair.

The location for the fifth wheel is in the middle of the shell chair. Mounted on the bushing ①.

4 Maintenance

For the maintenance manual of the shell chairs refer to the Vermeiren website: www.vermeiren.be.



SERVICE

The shell chair 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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