

# Invacare® SB® 755



## en Bed Service Manual



DEALER: Keep this manual.  
The procedures in this manual MUST be performed by a qualified technician.



**Yes, you can.®**

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# 1 General

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## 1.1 Introduction

This document contains important information about assembly, adjustment and advanced maintenance of the product. To ensure safety when handling the product, read this document and the user manual carefully and follow the safety instructions.

Find the user manual on Invacare's website or contact your Invacare representative. See addresses at the end of this document.

Invacare reserves the right to alter product specifications without further notice.

Before reading this document, make sure you have the latest version. You find the latest version as a PDF on the Invacare website.

For pre-sale and user information, see the user manual.

For more information about the product, for example product safety notices and product recalls, contact your Invacare representative. See addresses at the end of this document.

## 1.2 Symbols in this document

Symbols and signal words are used in this document and apply to hazards or unsafe practices which could result in personal injury or property damage. See the information below for definitions of the signal words.



### WARNING

Indicates a hazardous situation that could result in serious injury or death if it is not avoided.



### CAUTION

Indicates a hazardous situation that could result in minor or slight injury if it is not avoided.



### IMPORTANT

Indicates a hazardous situation that could result in damage to property if it is not avoided.



### Tips and Recommendations

Gives useful tips, recommendations and information for efficient, trouble-free use.

## 2 Safety

### 2.1 General warning



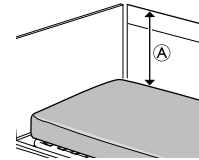
**WARNING!**  
**Risk of injury**

There is a risk of entrapment of fingers in the bed moving parts.  
– Pay attention to your fingers.



**IMPORTANT!**

- Make sure that there is nothing under, over, or near the bed that can limit the movement of the bed or the mattress support, such as furniture, window frames and storage boxes.
- Do not roll over the mains cable.
- Do not bring mains cable into moving parts.
- Disconnect the plug from the mains before moving the bed.
- Make sure that no cables (mains or from other equipment) are jammed or damaged, when the bed is used.
- The bed must not be placed close to a direct heat source (dire place, radiator etc) and not in direct sunlight.

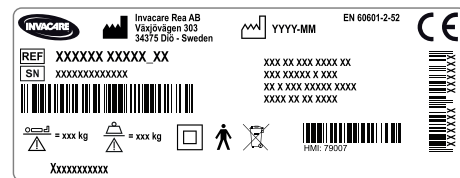


**WARNING!**  
**Risk of falling**

The user can fall over the edge and get seriously injured, if the vertical distance A between the top of the mattress and the edge of the side rail/bed end, is too short. See image above.  
– Always keep a minimum distance A of 22 cm.  
– Follow the maximum mattress height in combination with the side rail as stated in the mattress table in chapter 6 *Technical Data*, page 23.

### 2.3 Labels and symbols on the product

#### 2.3.1 Product label



### 2.2 Mattresses



**WARNING!**  
**Safety aspects regarding combination of side rails and mattresses:**

To get the highest possible safety level, when using side rails on the bed, the minimum and maximum measures for mattresses, must be respected.  
– For correct mattress measures see mattress table in chapter 6 *Technical Data*, page 23.



**WARNING!**  
**Risk of entrapment and/or suffocation**

- The user could get trapped and/or suffocate, if the horizontal space, between the mattress side and the inside of the side rail, is too big. Follow the minimum width (and length) of mattresses in combination with a side rail, as stated in the mattress table in chapter 6 *Technical Data*, page 23 .
- Be aware that using very thick or soft mattresses (low density), or a combination of these, increases the risk.

The product label is placed on the frame of the bed and contains the main product information, including technical data.

#### Symbols








	Serial Number
	Reference Number
	Manufacturer Address
	Manufacturing Date
	Max. User Weight
	Max. Safe Working Load
	CLASS II equipment
	Type B Applied Part
	WEEE conform
	This product complies with Directive 93/42/EEC concerning medical devices. The launch date of this product is stated in the CE declaration of conformity.




Abbreviations for technical data:

- Iin = Incoming Current
- Uin = Incoming Voltage
- Int. = Intermittence
- AC = Alternating Current
- Max = maximum
- min = minutes

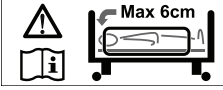
For more information about technical data, refer to 6 *Technical Data*, page 23.

**2.3.2 Other Symbols**

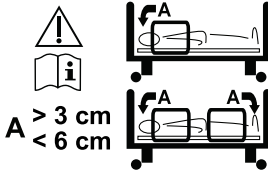

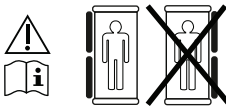
	Refer to User Manual
	Definition of min. weight, min. height and min. body mass index of an adult user  Refer to user documentation for the correct mattress measures.
	Indicates, that the bed can be used with automatic washing systems.  (Present on washable version only)
	Marks out the location of connection for means of potential equalization.  (Not present on all versions of this product)
	Total weight of the product with the maximum safe working load applied
	Temperature limit
	Humidity limitation

	Atmospheric pressure limitation
	Transport and storage conditions
	Operation conditions

**Label on 3/4 length side rails**

	Indicates the maximum space between side rail and the head end of the bed.
--	--

**Labels on Torill side rails**

	Indicates the allowed mounting positions and spaces between the side rails and the bed ends.  Top: if only one side rail is mounted on the side of the bed.  Bottom: if two side rails are mounted on the same side of the bed.
	Indicates the left version of the Torill long side rail, only to be mounted on the left side of the bed.  <i>Torill long version only</i>
	Indicates the right version of the Torill long side rail, only to be mounted on the right side of the bed.  <i>Torill long version only</i>

## 3 Assembly

### 3.1 General safety information



**WARNING!**

**Risk of injury or damage to property**

- If the bed shows any sign of damages, do not use the bed.
- After each assembly, check that all fittings are properly tightened and that all parts have the correct function.
- The electrical equipment of the bed must not be dismantled or combined with other electrical equipment.



**CAUTION!**

**Risk of injury**

- There is a risk of entrapment or squeezing, while assembling or disassembling of the bed.
- The assembly of the bed and mounting of accessories must be done by qualified personnel.



**IMPORTANT!**

**Bed accessories**

Assembly of accessories might not be described in this service manual. Refer to the manual, delivered with the accessory.

- Use only original accessories and spare parts.
- Spare parts and additional user manuals can be ordered from Invacare. See addresses at the end of this manual.



**IMPORTANT!**

**Receiving the bed**

- When you receive the bed, check the packaging. If the packaging shows any signs of damage upon delivery, contact the shipping company.

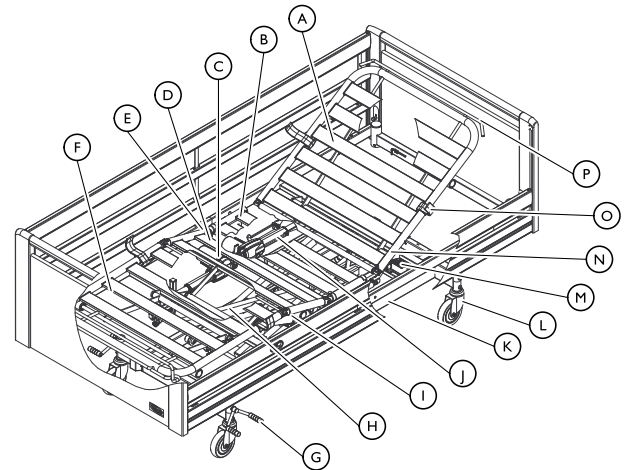
**Risk of condensation**

- The bed should not be used until it has reached a temperature of 10-40° C.



The assembly descriptions apply to all versions of the bed, if nothing else is stated. All references to left and right are based on a person lying on his back in the bed, with his head towards the head end.

### 3.1.1 Main parts of bed



Parts of standard bed:

- |                                |                                |
|--------------------------------|--------------------------------|
| Ⓐ Backrest                     | Ⓜ Control Unit                 |
| Ⓑ Seat section                 | Ⓝ Mattress support, upper half |
| Ⓒ Leg section motor            | Ⓞ Mattress retainer            |
| Ⓓ Thigh section                | Ⓟ Mattress support extension   |
| Ⓔ Thigh section motor          |                                |
| Ⓕ Leg section                  |                                |
| Ⓖ Brake pedal - central        |                                |
| Ⓗ Shear arms                   |                                |
| Ⓛ Mattress support, lower half |                                |
| Ⓜ Backrest motor               |                                |
| Ⓝ Base Frame                   |                                |
| Ⓞ Brake - castor with brake    |                                |

### 3.1.2 Accessories / Components

For accessories, please see more information in the instructions delivered with the accessory.



**Important**

- Use only original accessories and spare parts. Spare parts lists and extra user manuals can be ordered from *Invacare*.

The tools necessary for mounting/dismounting the accessories of the bed are:

- Allen key
- adjustable spanner

### 3.2 Bed ends



**CAUTION!**

**Risk of squeezing**

- If the bed end is not correctly locked it can fall down and cause injury to user.
- Make sure the locking pins are engaged.



**Risks when using bed end with removable plate.**

- If the user is restless, confused or has spasms; Victoria Bed ends (with removable plates) must NOT be used.



**Make sure that the side rails are combined with the right type of bed ends.**

- Line or Britt V side rails shall be used with Susanne, Sophie, Anita or Victoria bed ends.
- The steel side rails are optional and designed to be used with Emma, Olivia or Piggy bed ends.

**Locking pin**



### Mounting the bed ends

1. Lift the bed end and place on the bed end attachments.
2. Push down to click into place.
3. The locking pin must then be rotated and locked into position.

### Dismounting the bed ends

1. Pull the locking pin out, and turn halfway to lock the pin.
2. Repeat on the other side.
3. Pull the bed end up and out.

### 3.2.1 Bed end with U-profiles



For the Piggy Bed end the bed end attachments with U-profile are required.

1. Replace the standard bed end attachments with the U-profile attachments (if not already assembled).
2. Press the bed end into the U-profile attachments.

## 3.3 Side Rails

### 3.3.1 Installing side rails



**WARNING!**

**Risk of personal damage**

There is a risk of entrapment or squeezing, while assembling or disassembling the side rail.

- Pay attention to your fingers.
- Follow instructions carefully.
- After each assembly, check that all fittings are properly tightened and that the side rail has the correct function.

### Removable 3/4 length side rails



**WARNING!**

**Risk of entrapment**

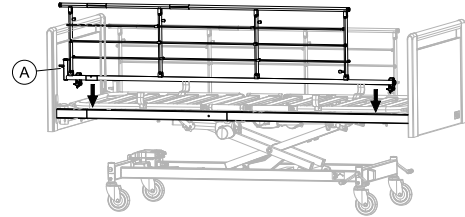
There's a risk of entrapment or suffocation between mattress support, side rail and bed end.

- When using removable side rails, always make sure that the distance between the bed end and the side rail's handle upper edge is less than 6 cm in the head end and more than 32 cm in the foot end of the bed.

### 3.3.2 Scala 2 side rail

#### Mounting side rail

1.

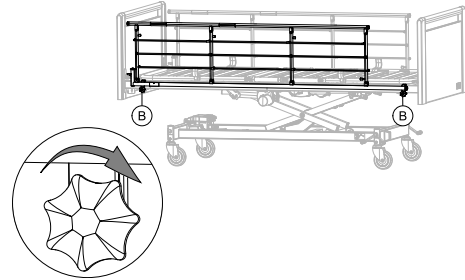


Place the side rail over the top frame with the release system **A** at the head end of the bed.



The fork links on the side rail must be mounted according to the instruction on the side rail.

2.



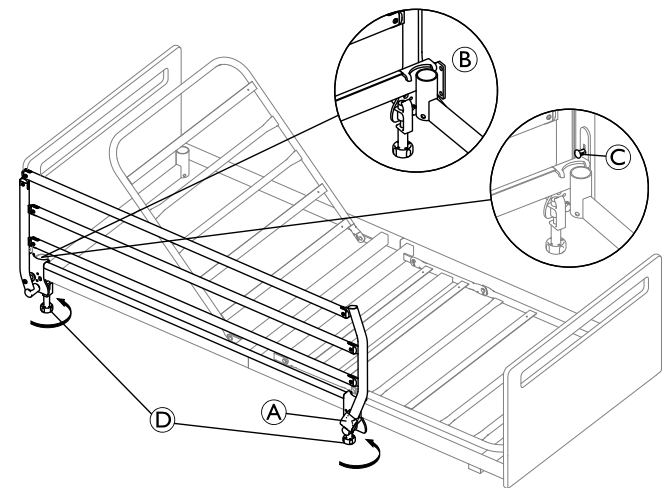
Tighten the finger screws **B** to attach the side rail on the top frame. Make sure it is steady and fastened.

#### Dismounting side rail

1. Loosen the two finger screws **B** and remove the side rail.

### 3.3.3 Verso II side rail

#### Mounting



The mounting of the side rail must be done with the side rail in locked position.

1. Place both brackets of the side rail on the frame of the bed, with the locking button **A** facing towards the foot end of the bed.
2. Ensure that the bracket near the head end of the bed is placed encompassing the lifting pole support as shown in detail **B**.



3. For beds equipped with bed ends with Sanne style fitting, it is beforehand necessary to temporarily disengage the locking pin © from the head bed end to place the bracket.
  - a. Pull the locking pin © and rotate 1/4 turn to lock it in the disengaged position.
  - b. Position the bracket under the locking pin as described in step 2.
  - c. Rotate the locking pin and allow it to engage with the bed end.
4. After the brackets are positioned correctly on the frame of the bed, fix the side rail by firmly tightening the finger screws ④.

**Dismounting**

1. Untighten the finger screws and lift the side rail of the bed frame.

**3.3.4 Britt V and Line side rail**

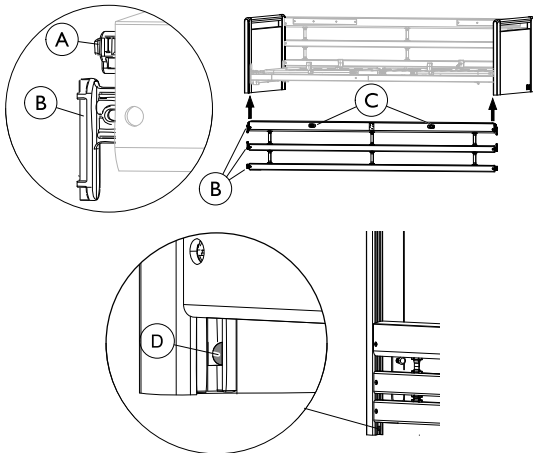


**WARNING!**

**Risk of entrapment / suffocation**

The user can get trapped or fall out of the bed if the side rail is not correctly mounted or damaged.

- Make sure that all gliding shoes are correctly guided into the bed end guideways.
- Make sure that all side rail bars are above the locking pin and properly locked.
- Make sure that the straps between the bars are not damaged or loose.



**Mounting**

1. Lift the upper bar in one end of the side rail. The release buttons © must face up/outwards.
2. Press in the locking pin ① in the end of the side rail.
3. Guide the three gliding shoes ② (in the end of the side rail bars) up into the bed end guideways, until they have all passed the locking pin ④.
4. Repeat steps 2 and 3 to mount the other side of the side rail.

**Dismounting**

1. Lower the side rail.
2. Lift the lower bar, in one end, to make the locking pin ④ visible and press it in with a screwdriver.
3. Lower all three bars, until they are out of the guideways.
4. Repeat steps 2 to 3 to dismount the other end of the side rail.

**3.3.5 Installing the Torill side rail**



**WARNING!**

**Risk of entrapment / suffocation**

There's a risk of entrapment or suffocation between side rail and bed end.

- Never install the short and the long version of the side rail on the same bed.
- Always make sure that the left and right version of the long side rail are mounted on the correct side of the bed.

**One side rail per side of bed**

- Always make sure that the side rail is mounted close to the head end of the bed and the distance between the bed end and the side rails top bar is more than 3 cm and less than 6 cm.

**Two side rails per side of bed**

- Always make sure that one side rail is mounted close to the head end and the other close to the foot end of the bed.
- Always make sure that the distance between the bed ends and the side rails top bar is more than 3 cm and less than 6 cm.
- For long side rails, additionally make sure that the middle gap between the two side rails top bars is less than 6 cm.

**Mounting**

Depending on the individual need of the end-user only one or two side rails of the same length can be mounted on each side of the bed.

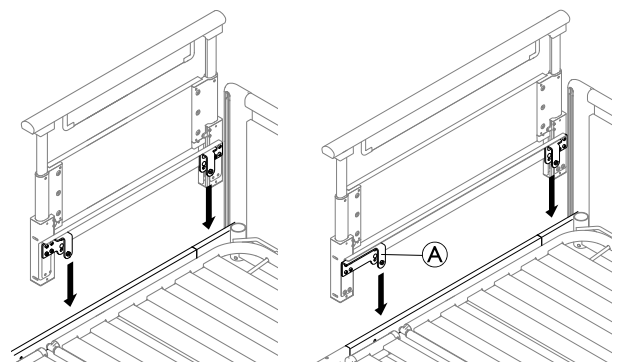


The installation of the long and the short version of the Torill side rail is similar.

1. Raise the side rail to its high position and remove the two bolts and washers on the brackets.
- 2.

Torill short

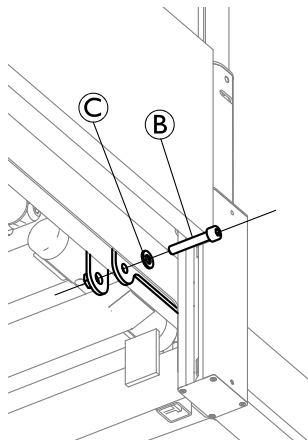
Torill long



Place both brackets of the side rail on the side tube of the mattress support and for Torill long make sure the longer bracket ① is facing towards the foot end of the bed.

3. Position the side rail with a distance of 3–6 cm between the top bar and the bed end.

4.



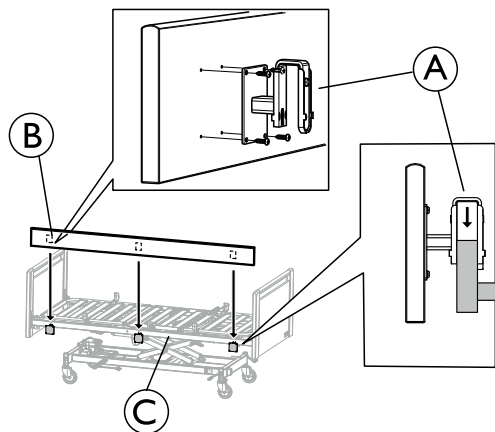
Insert the bolt **B** with washer **C** underneath the mattress support frame and firmly tighten with a 6 mm Allen key on both brackets of the side rail.

5. Repeat the procedure at the head end on the other side of the bed or at the foot end on the same side of the bed, depending on the side rail version used, desired configuration and availability of additional side rails.

#### Dismount

1. Untighten the bolts and remove on both side rail brackets.
2. Lift the side rail of the mattress support side tube.

### 3.4 Wooden side panel



1. Use the four screws and fasten each attachment **A** in the pre-drilled holes on the panels backside **B** (rounded corners up).
2. Hang the attachments **A** on the bed frame **C** and press it down firmly. Make sure it is pressed all the way down.

### 3.5 Mattress support



#### CAUTION! Handling of heavy parts

The lower part and upper part of the mattress support can exceed the weight of 25 kg, depending on configuration and bed size. See weights table in chapter technical data.

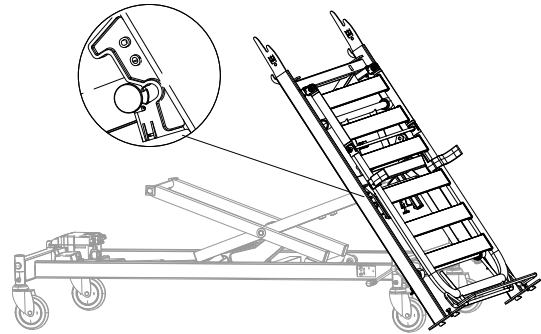
- To reduce the weight below 25 kg per part, dismount the motor from the upper part and one or both motors from the lower part of the mattress support.

#### 3.5.1 Markings on washable bed

- i** The upper half of the mattress support (head section) is marked by a red dot and the lower half of the mattress support (foot section) is marked by a green dot.

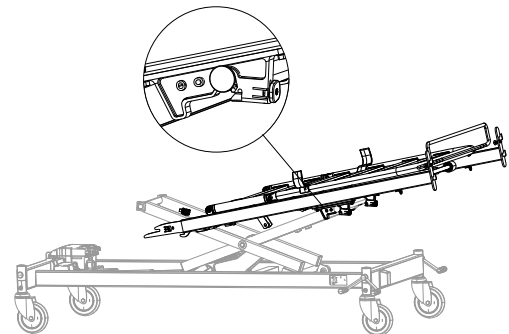
#### 3.5.2 Assembly of mattress support

1. Lock the brakes.
2. Connect the plug to the mains socket.
- 3.



- a. Take the hand control.
- b. Tilt the lower part of the bed in over the shear arms (while it is leaning on the bed end attachments).
- c. Hold it and use the hand control to lower the bed until the snap locks are fitted on the shear arms pivots.

4.

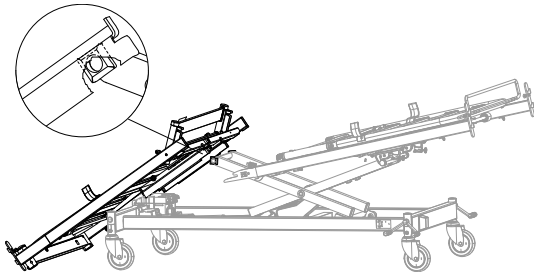


Push the section slightly towards the middle until the snap locks are activated with a clicking sound. Let it lean as shown in the image.

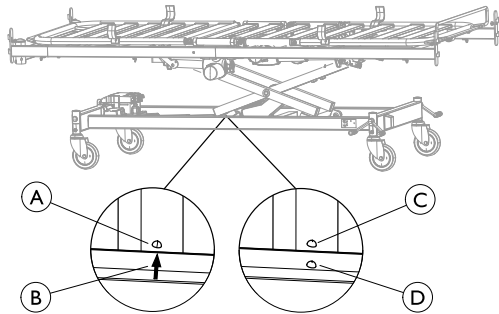
- i** Make sure the snap locks are properly engaged before proceeding. If not, turn the red buttons anti-clockwise to lock.

5. Move over to the upper part of the mattress support.

6.



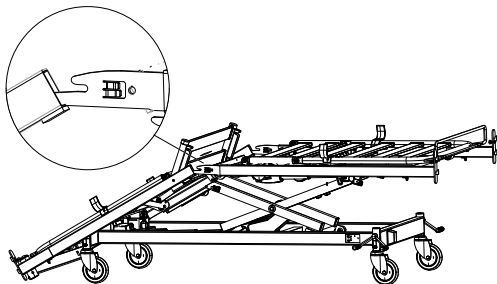
- Take the hand control.
- From the upright position (resting on the bed end attachments); tip the section in over the control box.
- Use the hand control to raise the bed until the square plastic guides on the shear arms connect with the guideways on the mattress support frame.



Bed width 85, 90 and 105 cm  
The arrow **B** on the base frame and the welding point **A** on the shear arms crossbar, must be in line.

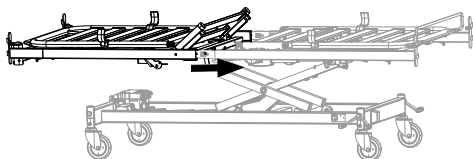
Bed width 120  
**B** The welding point on the base frame and the welding point **C** on the shear arms crossbar, must be in line.

7.



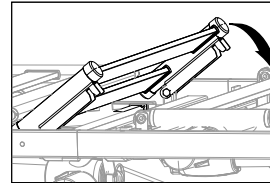
- Lift up the lower section of the mattress support up to a horizontal position and hold it there.
- Lift the upper part of the mattress support slightly and fit the inserts in the openings of the side tubes.
- Let the inserts rest in the openings.

- Move over to the bed head end.
- 

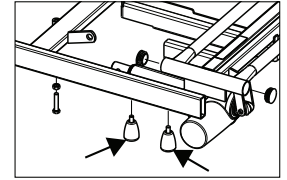


Lift the upper half of the mattress support and push it completely in over the inserts.

10. Lock the mattress support in the middle:



**Bed width 85 and 90:**  
Push down the seat section.



**Bed width 105 and 120:**  
Tighten the finger-screws, under the side tubes on each side of the mattress support.

- Connect all plugs from the section motors in the control box.
- Attach the locking cam over the plugs.



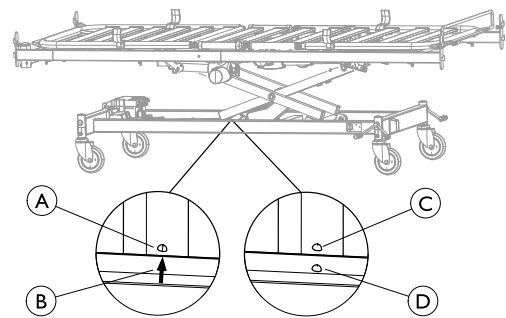
**IMPORTANT!**

- After assembly of the mattress support, check:
- that all plugs (motors and hand controls) are correctly connected to the control unit according to the printed symbols.
  - that both sections of the mattress support are completely pushed together and the seat section completely down (locked).
  - that bed ends are correctly attached and that the mattress support is attached to the shear arms (snap lock engaged).

**3.5.3 Disassembly of mattress support**



- Before Disassembly of the bed;
- Ensure that the castors in the head end of the bed are pointing towards the center of the bed.
  - Use the hand control to adjust it to the correct ergonomic height:

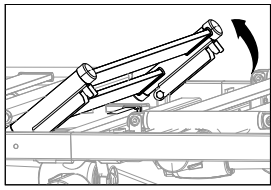


Bed width 85, 90 and 105 cm  
The arrow **B** on the base frame and the welding point **A** on the shear arms crossbar, must be in line.

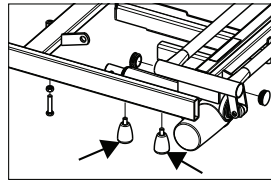
Bed width 120  
**B** The welding point on the base frame and the welding point **C** on the shear arms crossbar, must be in line.

- Lock the brakes.
- Dismount the accessories (bed ends, side rails, lifting pole etc). Leave the bed end attachments in place.
- Disconnect the main power by unplugging it from the main power socket. On the washable bed (IPx6w) also remove the power plug from the control box.

4. Remove the locking cam from the control unit and disconnect all plugs except the hi/lo and the hand control.
5. Loosen the wires and make sure no wires are squeezed between moving parts.
6. Release the mattress support in the middle:

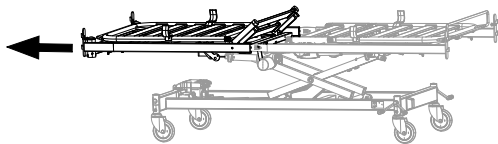


**Bed width 85 and 90:**  
Pull the seat section up.



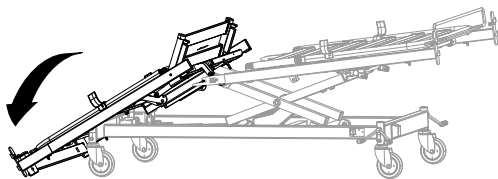
**Bed width 105 and 120:** Remove the finger-screws, under the side tubes on each side of the mattress support.

7.



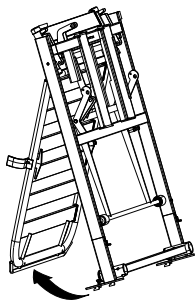
Stand at the end of the upper half of the mattress support, hold the sides on the frame and pull it straight out until it comes to a stop.

8.



Tip it gently onto the floor while holding in the lower half of the mattress support (to avoid scratching the frame) and let it rest on the bed end attachments.

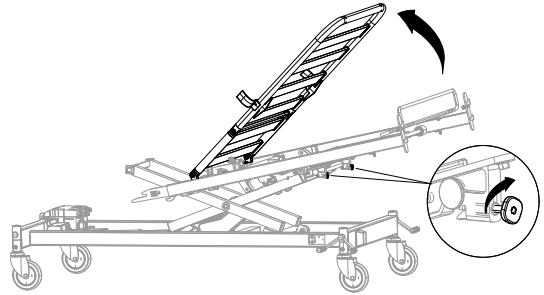
9.



Tip the part to an upright position (on the bed end attachments) and fold out the backrest until it is in balance and let it stand aside.

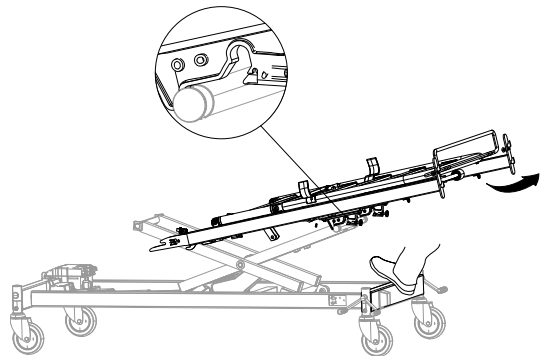
10. Plug in the main power plug in the control box and connect the main power.

11. Move over to the lower part of the mattress support.
12. Put the hand control within reach.
- 13.



Lift the thigh/leg section up to reach the snap locks. Pull out the red, square locking buttons and turn them clockwise, until they stay out. Fold back the thigh/leg section.

14.

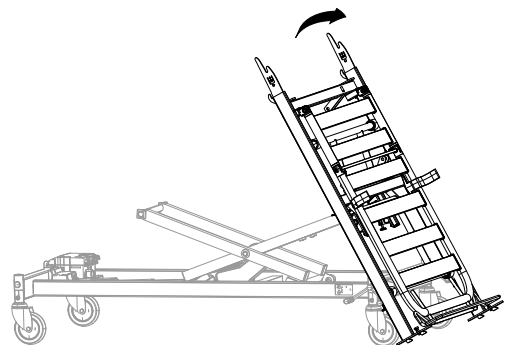


Stand in the foot end of the bed.

- a. Put your foot on the base and hold the sides of the frame
- b. Lift the section slightly up and pull it backwards until it unlocks and leans on the shear arms pivots.

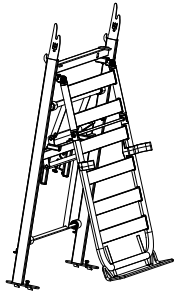
Don't pull it completely off.

15.



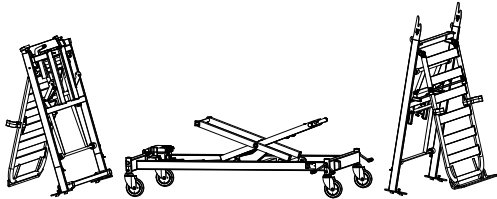
- a. Hold it steady and pull it slightly backwards to keep it out of the snap locks.
- b. Lower the bed with the hand control and tip the bed foot end down to the floor, until it rests on the bed end attachments.

16.



Tip up to an upright position (thigh section upwards). Fold out the thigh/leg section until it is in balance and let it stand aside.

17.



### 3.6 Shear arms (dismountable)



**CAUTION!**

**Risk of personal injury**

Personal injury can occur if the snap lock between the base and the shear arm is not correctly engaged.  
– Secure the snap lock.



**IMPORTANT!**

If wires get trapped between the base and the shear arm they can get damaged.  
– Make sure the wires run free from moving parts.

#### 3.6.1 Assembly of shear arms

1. Lock the brakes.
2. Take hold of the handle on the shear arms.
- 3.



Lift the shear arm into the base, resting on the floor.

4.



Carefully lower the shear arm into place holding the handle.

5. Insert it into the guideways on the base.
6. Make sure the snap lock is engaged..

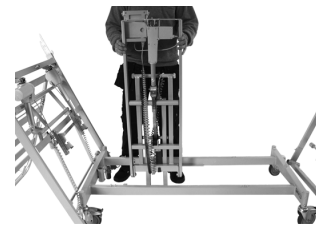
#### 3.6.2 Disassembly of shear arms

1. Lock the brakes.
2. Use the hand control to lower the shear arms completely down.
- 3.



Take hold of the small handle located next to the controls with one hand.

4. Loosen the locking pin
5. Lift the shear arm to an upright position.
- 6.



Turn the shear arm and hold it towards the body before lifting.

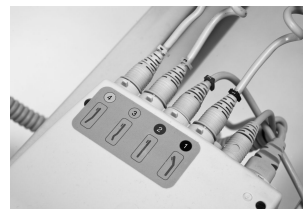
7. Lift the shear arms out of the base.

#### 3.7 Wiring



**IMPORTANT!**

– The cables must be mounted in such a way that they are not hanging on the floor and do not block the castors.



If the bed is equipped with a washable control unit, it is located on the opposite side of the actuator. To plug in the cables, the lid of the control unit needs to be opened and closed again afterwards. The routing of the cables is similar to the non-washable control unit.

- Check the wiring by operating the motors of the bed to their outer positions.
- There is no risk of squeezing the wires when correctly installed.

- It is normal for cables to stretch slightly after some usage.
- The wires are equipped with plugs at both sections and can be replaced independently (except for the height motor).

**! IMPORTANT!  
IP Protection**

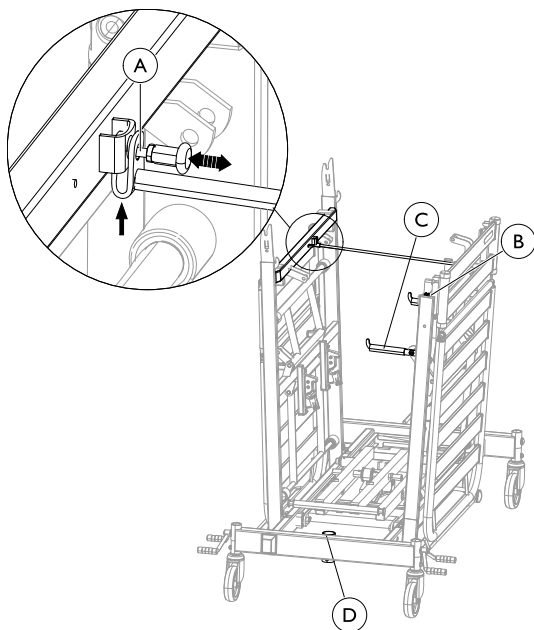
The hand control, control unit and motors are protected according to IPx4, IPx6 or IPx6w.  
– To guarantee the IP protection, a locking cam must be installed on the control unit.

### 3.8 Storage of disassembled bed on base frame



**CAUTION!**  
**Risk of personal injury or damage to property.**  
If the distance pin is not properly attached bed parts may fall off the trolley.  
– Make sure the distance pin is correctly attached between the mattress support sections before hanging anything on the hooks.

#### Mounting the parts on the base frame



1. Lock the brakes
2. Use the hand control to lower the shear arms completely down.
3. Disconnect the plug from the mains.
4. Place the power wire and the hand control securely around the shear arms.
5. Hang one mattress support section on each side, on the hooks on the base frame.
6. Lift the distance pin out of its place holder B and swing it over to the opposite side.
7. Place the motor wires around the slats on each mattress support sections.
8. Pull out the cotter pin A and push the distance pin, from underneath, into the bracket. Let go of the cotter pin and make sure that the spring is fully engaged and distance pin properly fastened.
9. Fold down both transport hooks C for the accessories.
10. Place the bed ends and side rails on the hooks.

11. Place the mattress between the sections.
12. Place the lifting pole in the tube D on the base frame.

**i** Make sure all wires and the hand control are properly secured, to avoid damage during transport.

#### Dismount the parts from the base frame

1. Lock the brakes.
2. Remove the accessories from the transport hooks C.
3. Fold up the transport hooks.
4. Pull out the cotter pin A and remove it from the bracket. Swing it over to the opposite side and press it into its place holder B.
5. Lift off the mattress support sections.

### 3.9 Mattress retainers

Mattress retainers keep the mattress in place when the user is moving in the bed or in/out of bed. They also enable the mattress to follow the movements when sections are positioned with the hand control.

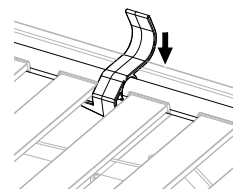


**WARNING!**  
**Risk of injury**  
if the mattress retainers are removed, the mattress can slide sideways and cause the user to fall out of the bed or get trapped in the bed.  
– Always use mattress retainers and be careful to put them back after any adjustments.  
– Always use the right size of retainers depending on the bed width.  
– Always place the retainers at the correct place according to instruction.

**i** The mattress retainers come in different sizes depending on the width of the bed.

#### Mounting mattress retainers

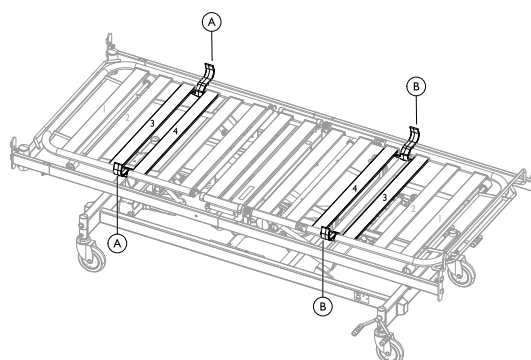
- 1.



Clip the mattress retainer down, over the mattress frame.

**i** Make sure that the end with the hook is underneath the laths.

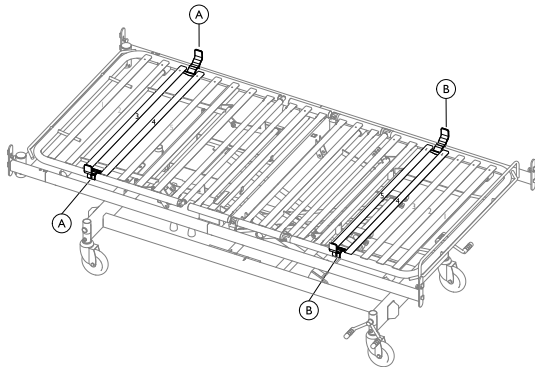
#### For bed width 85 – 90 cm



From head end of the bed - Place the mattress retainers **A** between lath 3 and 4.

From foot end of bed - Place the mattress retainers **B** between lath 3 and 4.

**For bed width 105 - 120**



From head end of the bed - Place the mattress retainers **A** between lath 3 and 4.

From foot end of bed - Place the mattress retainers **B** between lath 4 and 5.

### 3.10 Limitation cross bar



**WARNING!**

**Risk of squeezing or entrapment**

The user can get caught or squeezed when the leg section is lowered beneath the frame of the bed  
Take special care when the user is restless or confused.

- To avoid the risk of entrapment a limitation crossbar can be fitted under the leg section of the mattress support.

### Mounting the limitation crossbar under the leg section

1.



Lift the leg section of the mattress support to free the base.

2.



Fit the crossbar into place and tighten the screws.

3.



When properly installed, the leg section of the mattress support leans on the crossbar.

### 3.11 Mattress support extension

For patients, taller than two meters it is recommended to extend the bed with a mattress support extension.



**WARNING!**

**Risk of injury**

The user can fall out of bed, get trapped or suffocated.  
- Always extend the mattress when extending bed.  
- There must be a distance of more than 2,5 cm, between the bed end and the mattress bow, to avoid entrapment of fingers.



**WARNING!**

**Risk of injury**

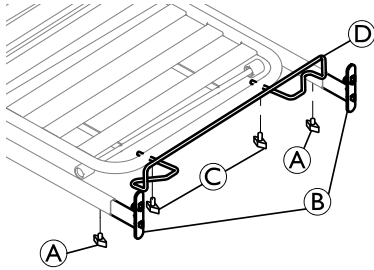
The user can get hit by the lifting pole or fall out of bed.  
- Always make sure to tighten the screws for the mattress support extension.

The bed can be extended 5 or 10 cm in both ends of the bed – to a maximum extension of 20 cm.



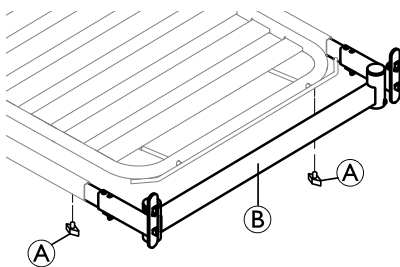
Allen key

1. Dismount the side rail(s) and lifting pole (bed head end).
2. Extend the bed in the foot end




- a. Loosen the screws (A) on the bed end attachments.
- b. Pull out the bed end attachments (B) 5 or 10 cm, and re-tighten both screws (A).
- c. Loosen the screws (C) on the mattress bow (D) and pull it out to match the extension. Make sure there is at least 2,5 cm between the mattress bow and the bed end.


3. Extend the bed in the head end



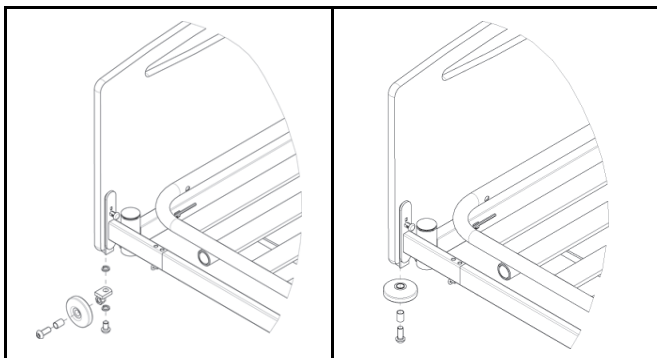
- a. Loosen the screws (A) on the side tube of the mattress support frame.
  - b. Pull out the cross tube (B) 5 or 10 cm, and re-tighten both screws (A).
4. Replace the mattress or put in a fitting mattress piece.
  5. Mount the side rail(s) and lifting pole (bed head end).

 Loose mattress pieces should always be fitted in the foot end of the bed.

### 3.12 Bumper wheels on Emma bed ends

 Bumper wheels can not be mounted onto other bed ends.

The bumper wheels can be mounted in two different ways. See illustrations.



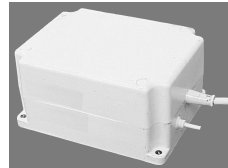
1. Mount the bushing in the bumper wheel
2. Fasten the bumper wheel with a screw into the bed end.

### 3.13 Accumulator backup

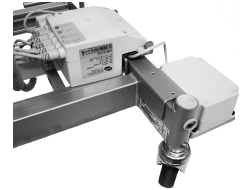
(only for non-washable version of the bed)

Beds equipped with an accumulator has an additional box (A) next to the control unit (B). The backup ensures that the bed can be adjusted during a power failure or transport.

(A)



(B)



#### IMPORTANT!

##### Low accumulator capacity

- When the accumulator only has capacity left for one more lifting cycle, the control box will make an audible sound, when using the hand control.

#### Mounting the backup battery

1. Install the box, on the bed's base frame, next to the control unit (B).
2. Connect the cable to the control unit.

#### Charging the batteries



#### WARNING!

##### Risk of explosion

- Old or faulty accumulators may generate an explosive gas mixture during charging.
- The accumulator box is provided with vents to ensure adequate ventilation of the box. Do not block or cover the vents, as this may result in pressure built-up and the risk of explosion.

1. Connect the control unit to the mains.



- The control unit must be connected to the mains for 24 hours prior to first use.
- Accumulators must be charged, at least, every 6 months for maintenance purposes.

#### Preventive maintenance



Frequent, sudden discharges reduce the backup's life.

We recommend the accumulator be tested at least once a year.

Accumulators are not damaged by continuous connection to the mains.

#### Exchanging the accumulators



#### IMPORTANT!

##### Accumulator back-up

- Old accumulators must be returned to Invacare or recycled as car batteries

- Accumulators have to be exchanged after 4 years. Depending on how the back up is used the exchange may have to take place earlier.



- Accumulators must be exchanged as sets.
- Accumulators must be replaced with accumulators of the same type or mechanically and electrically compatible accumulators (12V - 1,2 Ah).
- Accumulators, in a set, must have identical production codes.



Prior to insertion make sure that the accumulator set is correctly connected according to the drawing (in the accumulator box), and that none of the connections are loose.

## 4 Servicing

### 4.1 General servicing information



#### IMPORTANT!

- The mattress support must be supported during service inspections, to prevent accidental lowering.
- Only personnel who have received the necessary instructions or training may perform service and maintenance of the bed.
- After reconditioning the bed, or if bed functions change, service must be carried out according to the check list.

A service contract can be made in the countries, where Invacare® has its own sales company. In certain countries Invacare® offers courses in service and maintenance of the bed. Spare parts lists and additional user manuals are available from Invacare®.

#### Before Use

- Ensure that all manual and electrical parts functions correctly and are in a secure state.
- Check, by raising and lowering the bed, that the shear arms run smoothly in the guideways.

#### After three months

- Ensure that all manual and electrical parts are functioning, and tighten bolts, screws, nuts, etc.

#### Every year

- We recommend a safety test comprising the motors' performance and mechanical state.

#### Every second year

- We strongly recommend a service according to the below checklist after two years of normal use and then every second year.



Motors, hand control and control units are serviced by exchanging the faulty part.

#### 4.1.1 Checklist - Maintenance

##### Checkpoints

- Circlips, cotter pins and plastic fixing ring - properly locked and intact.
- Screws - tightened.
- Weldings - intact.
- Check the guideways - no bending.
- Check the guideways reinforcement - properly fastened.
- Side rail locking and moving system - properly locking and running smoothly.
- Castor fittings - tightened.
- Castor brakes - locking properly.
- Height adjustment motor - running properly.
- Backrest motor - running properly.
- Thigh section motor - running properly.
- Leg section motor - running properly.
- Wires - correctly wired and undamaged.
- Electric plugs - undamaged.
- Cable insulation and actuator housings – no cracks or damages.

- Damaged coating - repaired.
- Line side rail straps - not frayed or cracked.
- Accessories - correctly assembled and correct function.

### 4.2 Inspection after relocation - Prepare for new user



#### IMPORTANT!

- When the bed has been relocated; before given to a new user it has to be thoroughly inspected.
- Inspection must be done by a trained professional.
  - For regular maintenance see maintenance chart.

#### 4.2.1 Checklist - After relocation

##### Checkpoints

- Check that the lifting wedge runs in the centre of the support rolls; upper and lower.
- Check that the locking between the lifting wedge and piston from the motor is secure (pipe pins correctly mounted).
- Check that the side tubes of the mattress support are fully inserted, aligned and locked.
- Check that the latches, locking the mattress support on the shear arms, are properly engaged (red button on the mattress support).
- Check the locking of the motors (pipe pins correctly mounted).
- Check the electronic wiring for the motors (wires not squeezed).
- Check that the enclosing of the motors are intact (no cracks that enables fluids to pierce).
- Check that the locking cam is properly mounted over the contacts in the control box.
- Check the sections of the mattress support by using the hand control to activate all functions of the moving parts.
- Check the function of the brakes.
- Check that the snap locks on the bed ends are properly locked (pin all the way in = locked)
- Check the locking function(s) of the side rails.
- Check that all bed slats are intact and not loose.

### 4.3 Cleaning and Disinfection

#### 4.3.1 General Safety Information



#### CAUTION!

##### Risk of contamination

- Take precautions for yourself and use appropriate protective equipment.




#### CAUTION!

##### Risk of electric shock and product damage

- Switch off the device and disconnect from mains, if applicable.
- When cleaning electronic components consider their protection class regarding water ingress.
- Make sure that no water splashes to the plug or the wall outlet.
- Do not touch the power socket with wet hands.

- !** **IMPORTANT!**  
 Wrong fluids or methods can harm or damage the product.
- All cleaning agents and disinfectants used must be effective, compatible with one another and must protect the materials they are used to clean.
  - Never use corrosive fluids (alkalines, acid etc.) or abrasive cleaning agents. We recommend an ordinary household cleaning agent such as dishwashing liquid, if not specified otherwise in the cleaning instructions.
  - Never use a solvent (cellulose thinner, acetone etc.) that changes the structure of the plastic or dissolves the attached labels.
  - Always make sure that the product is completely dried before taking into use again.

 For cleaning and disinfection in clinical or long-term care environments, institutional hygiene guidelines apply.

### 4.3.2 Cleaning Intervals

- !** **IMPORTANT!**  
 To reveal loose or worn parts, enhance smooth operation and prevent contamination:
- Clean and disinfect the product thoroughly and on a regular basis.
  - Clean and disinfect the product before and after any service procedure, according to the instructions in this chapter.
  - Clean and disinfect the product when it has been in contact with any body fluids.

### 4.3.3 Cleaning by hand

#### Electrical components

- Method: Wipe off with a wet cloth or soft brush.
- Max. temperature: 40 °C
- Solvent/chemicals: Water
- Drying: Wipe dry with a soft cloth

#### Metal components

- Method: Wipe off with a wet cloth or soft brush. Water may be pressurized, but not high pressure or steam.
- Max. temperature: 40 °C
- Solvent/chemicals: Ordinary household cleaning agents and water.
- Drying: Wipe dry with a soft cloth

#### Wood (including textile straps on side rails, if existing)

- Method: Wipe off with a wet cloth or soft brush.
- Max. temperature: 40 °C
- Solvent/chemicals: Ordinary household cleaning agents and water.
- Drying: Wipe dry with a soft cloth

#### Textiles (including upholstery and mattresses)

- See attached label on each product.

### 4.3.4 Cleaning in automatic washing systems

- !** **IMPORTANT!**  
 Only certain components of the product tolerate cleaning in automatic washing systems or with high pressure cleaning equipment.
- The washability of the components must be determined by authorized personnel.
  - If the components cannot tolerate cleaning in automatic washing systems, with high pressure cleaning equipment or if it is unclear, they must be cleaned by hand.

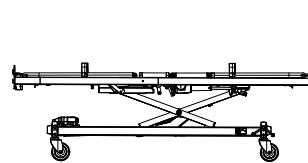
The IP classification determines the washability of a electrical component. The IP classification of each electrical component is stated on its serial label.

- **Electronics classified IPx4 and/or IPx6** may NOT be washed with high-pressure cleaning equipment or in a automatic washing system.
- **Electronics classified IPx6w** can be washed with high-pressure cleaning equipment or in a automatic washing system.

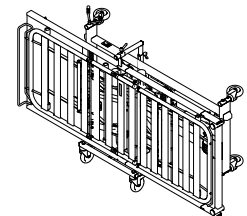
#### Preparation

Before washing with high-pressure cleaning equipment or in automatic washing systems, perform the following:

- Remove all electronics not classified as IPx6w.
- Remove power plug from mains.
- Remove all textiles (including mattress and upholstery).
- Remove all wooden parts.
- Remove aluminium side rails.
- Make sure all plugs on the bed are placed in their sockets during washing.
- Protected all disconnected (loose) plugs with plastic covers and all empty sockets e.g. with blind plugs.
- Run the motors all the way down/in to prevent them from calcium sedimentation and corrosion.
- Place the bed in one of the following ways:



Placed on its castors



Placed on the side on a trolley

#### Washing

- Max temp: 70°C
- Solvent/ chemicals: Mild cleaning solution
- Max. Duration: 2 min
- Max pressure: 8 Bar, with a nozzle distance of 30 cm from part


#### Rinsing/ flushing

- Max temp: 85°C
- Solvent/ chemicals: Neutral rinsing solution
- Max. Duration: 20 sec
- Max pressure: 8 Bar, with a nozzle distance of 30 cm from part

#### Drying

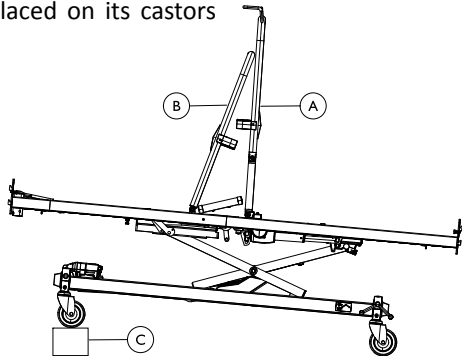
- Method: In washing system or drying cabinet
- Max temp: 50°C

- Max. Duration: 10 min

 Alternatively, let the bed dry in room temperature.

Depending on the placement of the bed, perform one of the following procedures, to allow the water to run out of the tubes:

- Bed placed on its castors



1. Place the thigh/leg section **A** and the backrest **B** in an upright position.
2. Tilt the bed by placing an object (about 10 cm) **C** under the head end castors.

- Bed placed on trolley

1. Tilt the bed/trolley to one side, by placing an object (about 10 cm) under the castors. Leave it for 5 minutes.
2. Tilt the bed/trolley, to the other side, by placing an object (about 10 cm) under the castors. Leave it for 5 minutes.

#### 4.3.5 After washing

**Necessary precautions before taking the bed into use again**

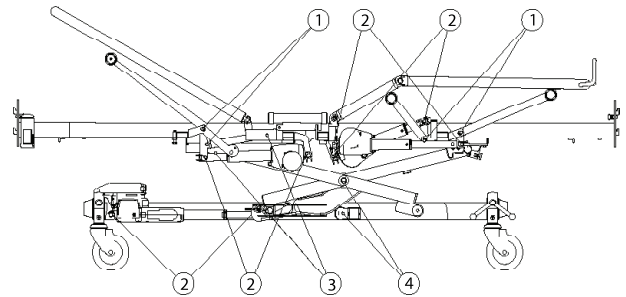
1. Inspect carefully for remaining water and wipe off with a dry cloth. Especially check the guideways.
2. Test all electric functions.
3. Lubricate the bed according to lubrication chart
4. Recondition the bed according to section *Inspection after relocation - Prepare for new user.*

#### 4.3.6 Disinfection

**!** **IMPORTANT!**  
 – Only use disinfectants and methods approved by your local infection control institution and follow your local infection control policy.  
 – Additional information on recommended disinfectants can be found on <https://vah-online.de/en/for-users>.

- Method: Wipe off with a moistened, firmly wrung cloth.
- Solvent / chemical: Ordinary household disinfectant.
- Drying: Allow the product to air-dry.


#### 4.4 Lubrication



We recommend lubricating the bed according to the following table:

	Part of bed	Lubrication method
1	Bearings for lifting- and shear arms	Oil (medically clean)
2	Motor suspension	Oil (medically clean)
3	Gliding shoes and guideways	Grease
4	Axles and rolls for shear arms (axle must be dismounted)	Grease

**!** **IMPORTANT!**  
 The gliding shoes in the Line side rails' gliding system move sluggishly if lubricated with oil.

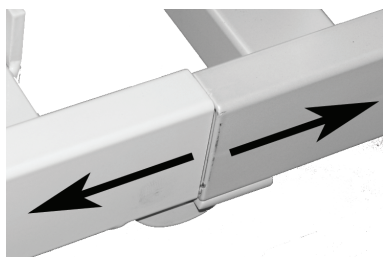
 For ordering of correct oil and grease, please contact your Invacare dealer.

#### 4.5 Adjusting misaligned platform tubes

*This instruction only applies to beds 85–90 cm wide.*

In the event that the side tubes are misaligned in the assembly, the inserts can be adjusted for better fit.

1.



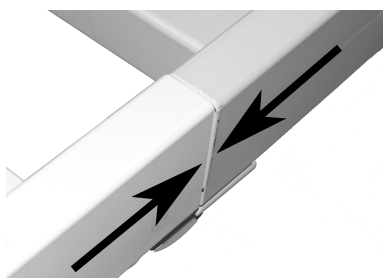
Slide the side tubes apart.

2.



Use a large screwdriver to flip the little tongue 1-2 mm.

3.



Slide the side tubes along. Verify that the side tubes are aligned


## 4.6 Disposal

Be environmentally responsible and recycle the different materials and components of this product separately through your recycling facility at its end of life.

The disposal and recycling of used products and packaging must comply with the laws and regulations for waste handling in each country. Contact your local waste management company for information.

## 5 Troubleshooting

### 5.1 Troubleshooting electrical system

Symptom	Possible cause	Remedy
Mains indicator does not light up	Mains are not connected	Connect mains
	Fuse in the control unit is blown	* Replace the control unit
	Control unit is defective	* Replace the control unit
Mains indicator lights up, but the motor is not running. The relay in the control unit makes a clicking noise.	Motor plug is not fully inserted into the control unit.	Insert the motor plug properly into the control unit
	The motor is defective.	* Replace the motor
	Motor cable is damaged.	* Replace the cable
	Control unit is defective	* Replace the control unit
Mains indicator lights up, but the motor is not running. No relay sound is heard from the control unit.	Control unit is defective	* Replace the control unit
	Hand control is defective	* Replace the hand control
Control unit is in order except for one direction on one channel.	Control unit is defective	* Replace the control unit
	Hand control is defective	* Replace the hand control
Motor is running, but the piston rod does not move.	Motor is damaged	* Replace the motor
The motor cannot lift full load.		
Motor noise, but no movement of piston rod.		
Piston rod operates inwards and not outwards.		
<p>* Service and maintenance of the bed must only be performed by personnel who have received the necessary instruction or training.</p> <p><b>Risk of personal injury and damage to the product.</b>  – The bed must be unplugged from the main power source before opening or repairing electrical parts.</p>		
<p> <b>WARNING!</b>  <b>Risk of personal injury and damage to the product.</b>  – The bed must be unplugged from the main power source before opening or repairing electrical parts.</p>		

## 6 Technical Data

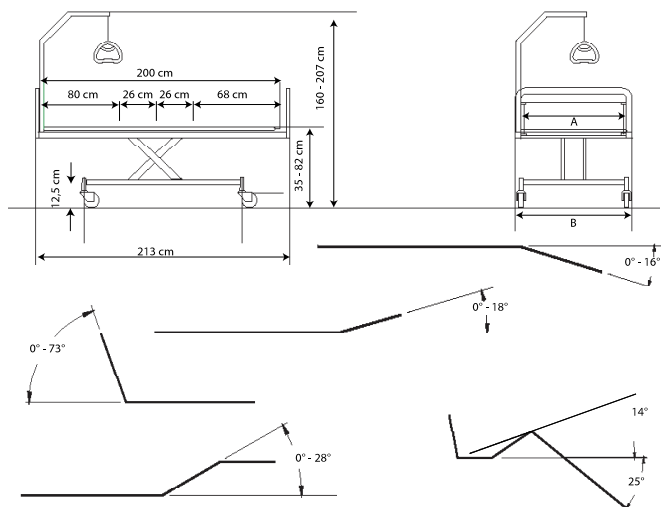
### 6.1 Dimensions bed

- All measurements are stated in cm.
- All angles are stated in degrees.
- All measurements and angles are stated without tolerances.

Length measures are stated for an non-extended bed. The bed can be extended respectively 5 and 10 cm's in both ends.

Height measures are stated for a bed with castors of 10 cm diameter. With smaller or bigger castors, the heights differ accordingly.

*Invacare®* reserves the right to change the stated measurements and angles without warning.



SB 755	
Mattress support width A	85 / 90 / 105 / 120 cm
Total width B	95 / 100 / 115 / 130 cm
Mattress support length	200 (80+26+26+68) cm
Total length	213 cm
Bed to floor height	35 – 82 cm
Base to floor height	15 cm
Total height (with lifting pole)	160 – 207 cm

### 6.2 Dimensions side rails

Side rail	Type	Measures	Information
Line standard	Full length aluminium side rail	206 cm x 40 cm	Mounted on the bed end guideways. Release buttons in the middle.
Line Extendable	Full length aluminium side rail with telescopic extension	206-226 cm x 40 cm	Mounted on the bed end guideways. Release buttons in the middle.

Britt V	Full length wood side rail	205 cm x 40 cm	Mounted on the bed end guideways. Release buttons in the middle.
Scala Basic 2 / Scala Basic Plus 2	3/4 length collapsible steel side rail	168 cm x 40 cm	Mounted on the side tube. Release button in the head section.
Scala Medium 2	3/4 length collapsible steel side rail	165 cm x 46 cm	Mounted on the side tube. Release button in the head section.
Scala Decubi 2	3/4 length collapsible steel side rail	168 cm x 54 cm	Mounted on the side tube. Release button in the head section.
Verso II	3/4 length collapsible steel side rail	156 cm x 40 cm	Mounted on the side tube. Release button in the foot section.
Torill short	Split side rail	76 cm x 56 cm	Mounted on the bed frame. Release buttons in both ends.
Torill long	Split side rail	98 cm x 56 cm	Mounted on the bed frame. Release buttons in both ends.

### 6.3 Allowed mattress sizes

Allowed mattress height and length depending on the side rail in use

Bed side rails	Allowed mattress sizes		
	Max height (cm)	Min height (cm)	Min length (cm)
Line/Line Extendable	18	12	200
Britt V	18	12	200
Scala Basic 2	15	8	200
Scala Basic Plus 2	15	8	200


Scala Medium 2	20	8	200
Scala Decubi 2	29	21	200
Verso II	18	10	200
Torill	16	12	200

**Allowed mattress width (for all side rails)**

Bed width	Allowed mattress width
85 cm	83–85 cm
90 cm	88–90 cm
105 cm	103–105 cm
120 cm	118–120 cm

**6.4 Environmental conditions**


	Storage and Transportation	Operation
Temperature	-10°C to +50°C	+5°C to +40°C
Relative humidity	20% to 90% at 30°C - not condensing	
Atmospheric pressure	800 hPa to 1060 hPa	

-  Allow the product to reach operation temperature before usage:
- Warming up from minimum storage temperature might take up to 24 hours.
  - Cooling down from maximum storage temperature might take up to 24 hours.

**6.5 Electrical system**

	Non-washable version	Washable version
Voltage supply	Uin 230 Voltage, AC, 50–60 Hz (AC = Alternating current)	Uin 100–240 Voltage, AC, 50–60 Hz (AC = Alternating current)
Maximum current input	Iin max. 1,5 Ampere	Iin max. 2.5 Ampere

	Non-washable version	Washable version
Intermittent (periodic motor operation)	10 % 2 min ON / 18 min OFF	
Insulation class	CLASS II equipment	
Type B Applied Part	Applied Part complying with the specified requirements for protection against electrical shock according to IEC60601-1.	
Sound level	55 dB (A)	
Degree of protection	<p>The control unit, external power supply, motors and hand controls are protected according to IPx4, IPx6 or IPx6w (depending on configuration). See bed product label and label on each electric device for correct IP class. The lowest IP-classification decides the overall classification of the bed.</p> <p><b>IPx4</b> - The system is protected against water splashed from any direction.</p> <p><b>IPx6</b> - The system is protected against water projected from any direction (not high pressure).</p> <p><b>IPx6w</b> - The system is protected against high pressurized water and steam projected from any direction.</p>	

-  The bed has no isolator (main switch). If the bed needs to be electrically disconnected, it has to be unplugged from the mains socket.









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