

Spezialbetten



Service manual

**Stand: 12/2022
(Rev. 1.1)**

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1 Dimensional sketch of the movement space

For the rotating function of the lying surface, it is essential to keep the following space free for movement outside the nursing bed. (cf. Figure 1 & Table 1)

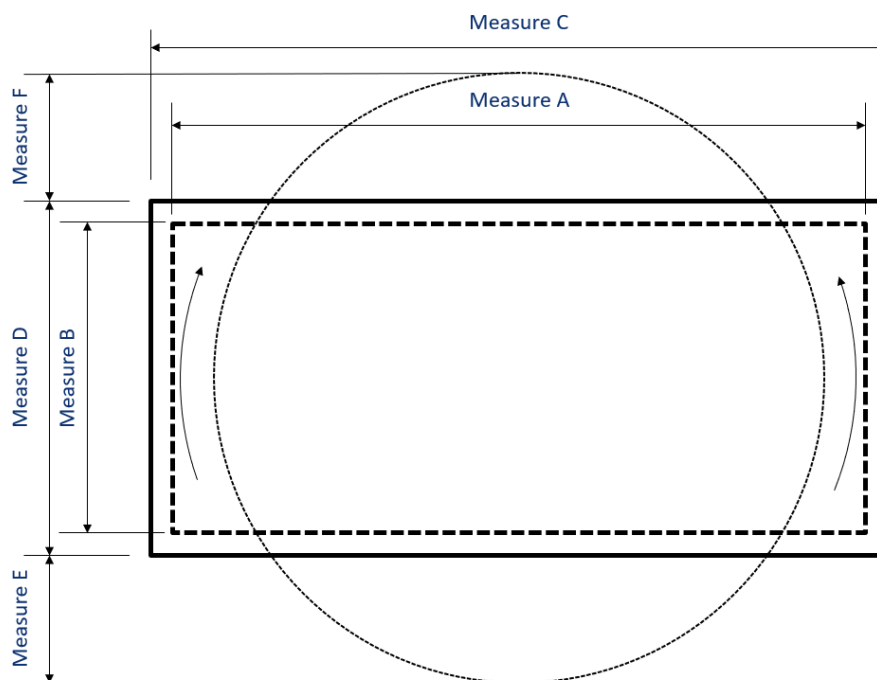


Figure 1: Dimensional sketch of the movement area of the Rotadorm Mobil

Type	SI-013-1
Measure A*)	200 cm
Measure B*)	90 cm
Measure C	215 cm
Measure D	108 cm
Measure E (head end)	40 cm
Measure F (foot end)	50 cm

Table 1: Dimensions to the dimensional sketch of the movement space



No objects, pieces of furniture or walls may interfere with the turning function within the specified range of motion. (Danger of crushing)

2 System overview

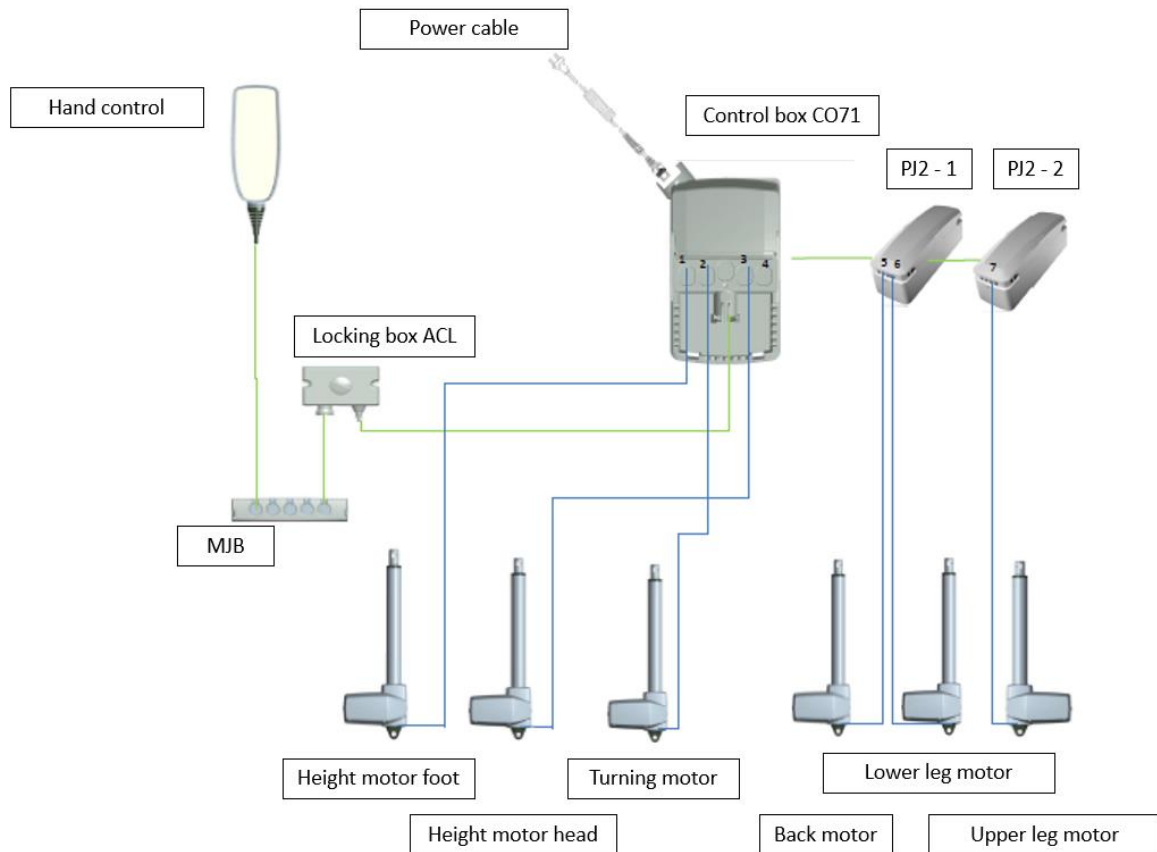


Figure 2: Graphical representation of the electrical system

Designation	Article number
Lower leg motor	SI-013.80.603
Back motor	SI-013.80.601
Upper leg motor	SI-013.80.602
Height motor	SI-013.80.600
Control box CO71	SI-013.80.605
Power cable	NS-011.80.903
Turning motor	SI-013.80.604
Modular Junction Box MJB	SI-011.80.895
Locking box	SI-011.90.010
Port Junction Box PJ2 - 1	SI-013.80.606
Port Junction Box PJ2 - 2	SI-013.80.607

Table 2: System specification

3 Description of hand controls

For the Rotadorm Mobil there is a customer hand control for daily use (Figure 3) and a service hand control V1 (Figure 4) for initializing the control box and motors and for programming the stand-up parameters.

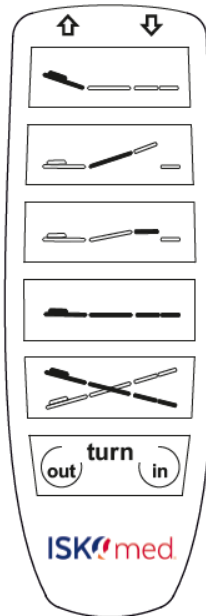


Figure 3: Customer hand control



Figure 4: Service hand control

Press the M4 key (red square) and the first row of keys simultaneously to set the rotation.



Before turning, the head and foot sections must be raised so that no collision can occur!

3.1 Function of the customer hand control

The bed is controlled by a 6-row customer hand control.

The upper four rows support the individual motors and the last row controls the program sequence for getting out of bed and changing the sitting/lying position in bed.

The extended end position for getting up and the sitting position during the turning process can be programmed in detail with the V1 service hand control.

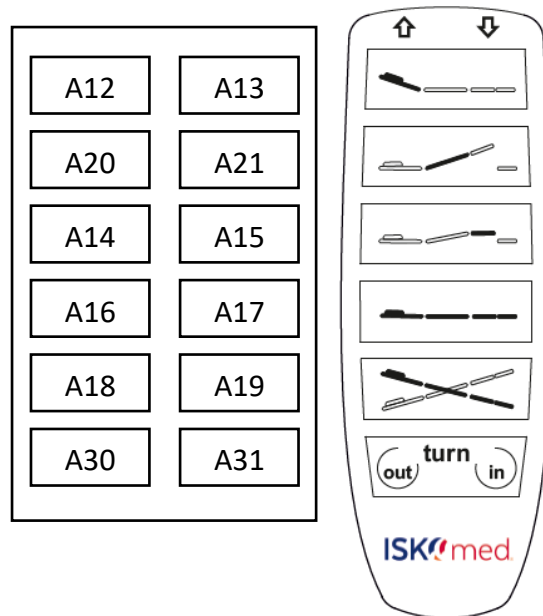


Figure 5: Service hand control key description of customer hand control

Reset:

Press and hold the second row of keys (upper leg part - up and down, A20 + A21) simultaneously (really simultaneously) and together until the interrupted signal tone changes to a continuous tone (after approx. 5 seconds). Then an initialization must be carried out directly.

A reset must be performed in case of an error in the system, this will reset all errors.

Initialization:

For initialization, simultaneously press the first row of keys (head part - up and down; A12 + A13) until a long signal tone sounds. During this process, the motors may search for their end position.

Manual Mode:

Press and hold the fourth row of keys (height - up and down, A16 + A17) simultaneously (really simultaneously) and together until the interrupted signal tone changes to a slower signal tone (after approx. 10 seconds). In the Manual Mode you have the possibility that each drive can be moved individually to its end position (e.g. in case of a signal-lost of a motor).

3.2 Function of the customer hand control

When starting up the bed for the first time or after replacing the control unit, motors or other electrical components, the bed must be reinitialized. To do this, you must start each motor (not the turning motor) for 5 seconds and return it to each end position. (The control box must learn where the motors are located).

Reset - Initialization:

Press and hold the second row of keys (upper leg part - up and down, H10 + H11) simultaneously (really simultaneously) and together until the interrupted signal tone changes to a continuous tone (after approx. 5 seconds). Then an initialization must be carried out directly.

A reset must be performed in case of an error in the system, this will reset all errors.

For initialization, simultaneously press the first row of keys (head part - up and down; H12 + H13) until a long signal tone sounds. During this process, the motors may search for their end position.

Factory setting (resetting the changed memory values):

To reactivate the factory settings, press the third row of keys (leg section- up and down, H14 + H15) simultaneously (really simultaneously) and together until a short signal tone sounds (after approx. 5 seconds).

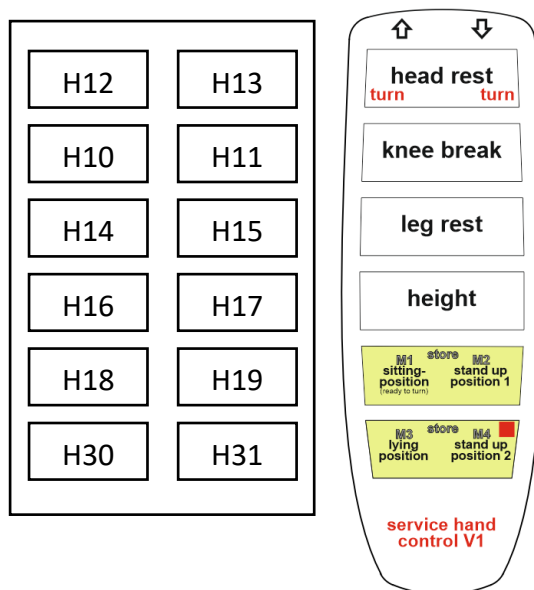


Figure 6: Service hand control key description of service hand control

4 Programming

4.1 Programming the parameters of the sitting position

The V1 service hand control can be used to move the head, knee and leg section motor and the height motor. (Upper four rows of the hand control)

The turning motor must not be moved for the exit and must remain in the end position, the lying surface is turned in the direction of the bed!



Figure 7: Sitting position

Save the pre-set sitting position (M1):

The fifth row of keys is pressed on the right M1 (H18) until the signal tone goes out after 5 seconds. The customer-specific values now set for the seat position are now fixed and can be controlled by the customer's manual operation.

4.2 Programming the parameters of the stand-up position 1

The V1 service hand control can be used to move the head, knee and leg section motor and the height motor. (Upper four rows of the hand control)

The turning motor must not be moved for the exit and must remain in the end position, the lying surface is turned in the direction of the bed!



Figure 8: Stand-up position 1

Save the pre-set stand-up position 1 (M2):

The fifth row of keys is pressed on the right M2 (H19) until the signal goes out after 5 seconds. The customer-specific values now set for the stand-up position 1 are now fixed and can be controlled by the customer hand control.

4.3 Programming the parameters of the lying position

The V1 service hand control can be used to move the head, knee and leg section motor and the height motor. (Upper four rows of the hand control)

The turning motor must not be moved for the exit and must remain in the end position, the lying surface is turned in the direction of the bed!



Figure 9: Lying position

Save the pre-set lying position (M3):

On the bottom row of keys, press M3 (H30) on the left until the signal tone goes out after 5 seconds. The customer-specific values now set for the seat position are now fixed and can be controlled by the customer hand control.

4.4 Programming the parameters of the stand-up position 2

The V1 service hand control can be used to move the head, knee and leg section motor and the height motor. (Upper four rows of the hand control)

The turning motor must not be moved for the exit and must remain in the end position, the lying surface is turned in the direction of the bed!

The stand-up position 2 is moved to in the program sequence after the stand-up position 1 and is intended to support the get-up process once again. The bed moves higher and lowers the thigh support so that the patient is supported when getting up.

Save the pre-set stand-up position 2 (M4):

On the bottom row of keys, press M4 (H31) on the left until the signal goes out after 5 seconds. The customer-specific values now set for the stand-up position 2 are now fixed and can be controlled by the customer hand control.

5 Changing the direction of rotation

The Rotadorm Mobil is delivered with the direction of rotation set to "left" as standard. The specified direction of rotation refers to a patient in the supine position. The direction of rotation of the Rotadorm Mobil can be changed from left to right or vice versa by a few simple assembly steps. To do this, please proceed as follows.

Loosen the pin of the bolt (1) to be able to adjust the rotator. Remove the pin from the hole so that the rotary motor is exposed. The pin is very tight so that there is as little play as possible. Now move the rotary motor to position (2) and mount the bolt again. Do not forget the pin to secure the bolt. With the adjustment of the rotary motor, the direction of rotation has been adjusted. Now pay attention to the cable routing of the cable that connects the base frame with the turnstile on the upper side. This must be placed on the opposite side. (cf. Figure 10)

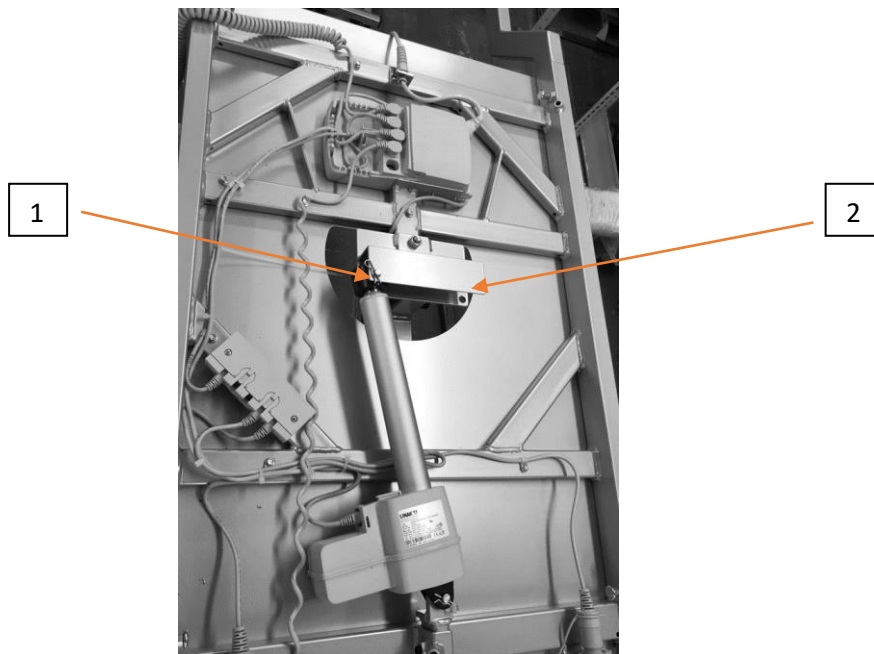


Figure 10: Changing the direction of rotation

6 Troubleshooting

6.1 Operation via the hand control not possible

You try to control the functions of the bed via the hand control, but the bed does not react at any of the available keys? Then the guideline for error detection is as follows:

Initial situation: Bed does not move at all when the buttons of the hand control are pressed.

1. Check the connection of the power cord.
The power cord may have lost contact either at the outlet or at the plug which is connected to the bed's controller.
2. Check whether the ACL shut-off box is "On" or "Off".
The ACL locking box locks out operation via the hand control when "Off". The lock-off box is located underneath the lying surface.
3. Check the hand control cable for pinch points.
Incorrect operation of the hand control cable can result in crushing, which can be caused by jamming in the lying surfaces.
4. If an acoustic signal sounds when the hand control is actuated, please check all motor connections. If all drives are properly connected and an acoustic signal still sounds, perform a reset (s. chapter 3.1).

6.2 Operation via the hand control only partially possible

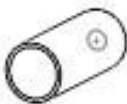
You are trying to control the functions of the bed via the hand control, but the bed only reacts when the individual components are actuated? The keys "out" and "in" do not work? Then the guideline for error detection is as follows:

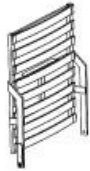
Initial situation: Only the get-up "out" and "in" buttons do not work (continuous beep when pressed). The individual motors can still be operated individually.

1. Perform a reset or initialization of the rotating seat bed (see chapter 3.1 & 3.2)

7 Assembly instructions

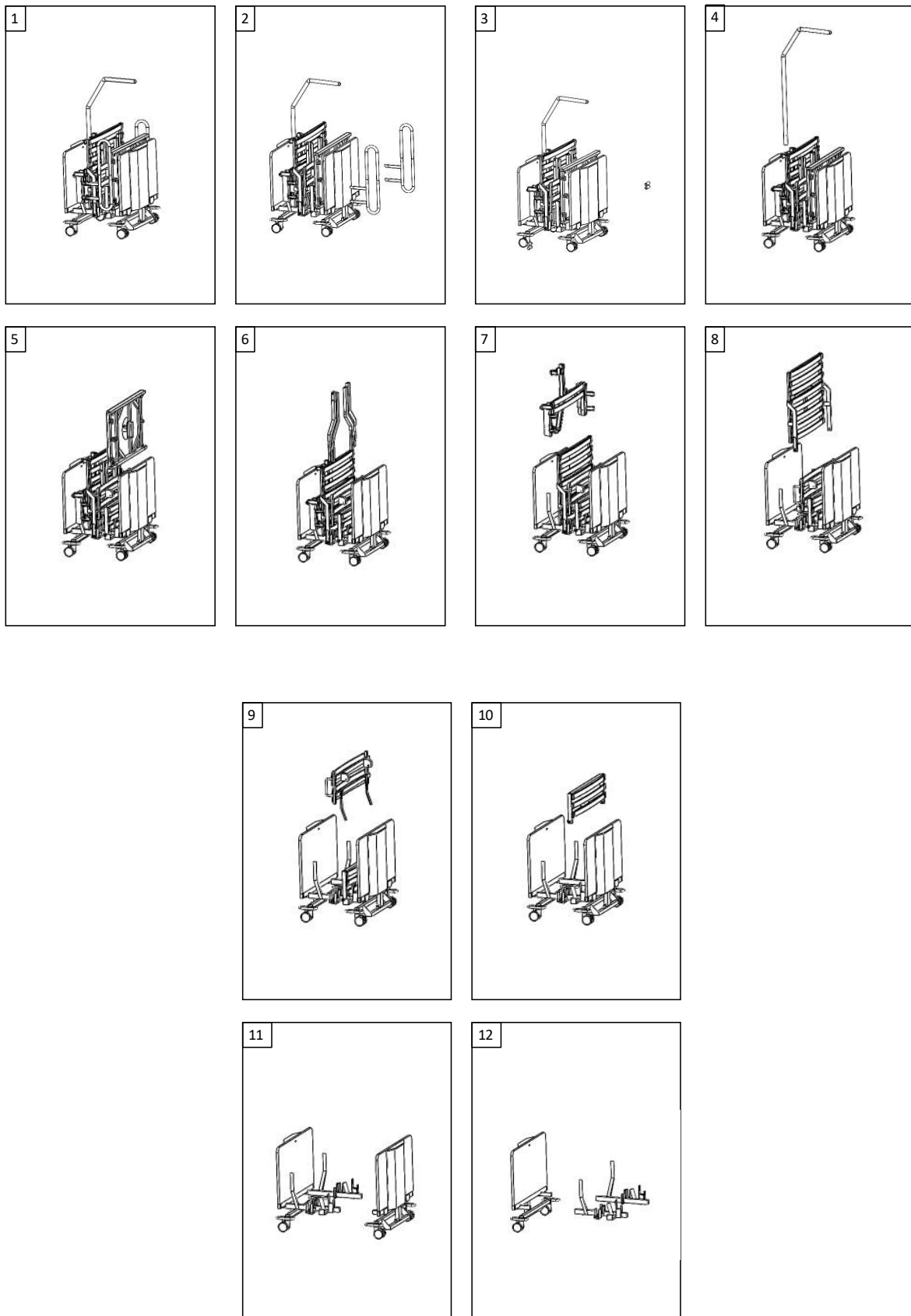
7.1 Component overview

Article discription	Part	Quantity	Weight
Transport adapter left		1	4,5 kg
Transport adapter right		1	4,5 kg
Mounting foot		4	0,1 kg
Lifter head		1	32,0 kg
Lifter foot		1	32,0 kg
Ground frame		1	21,5 kg

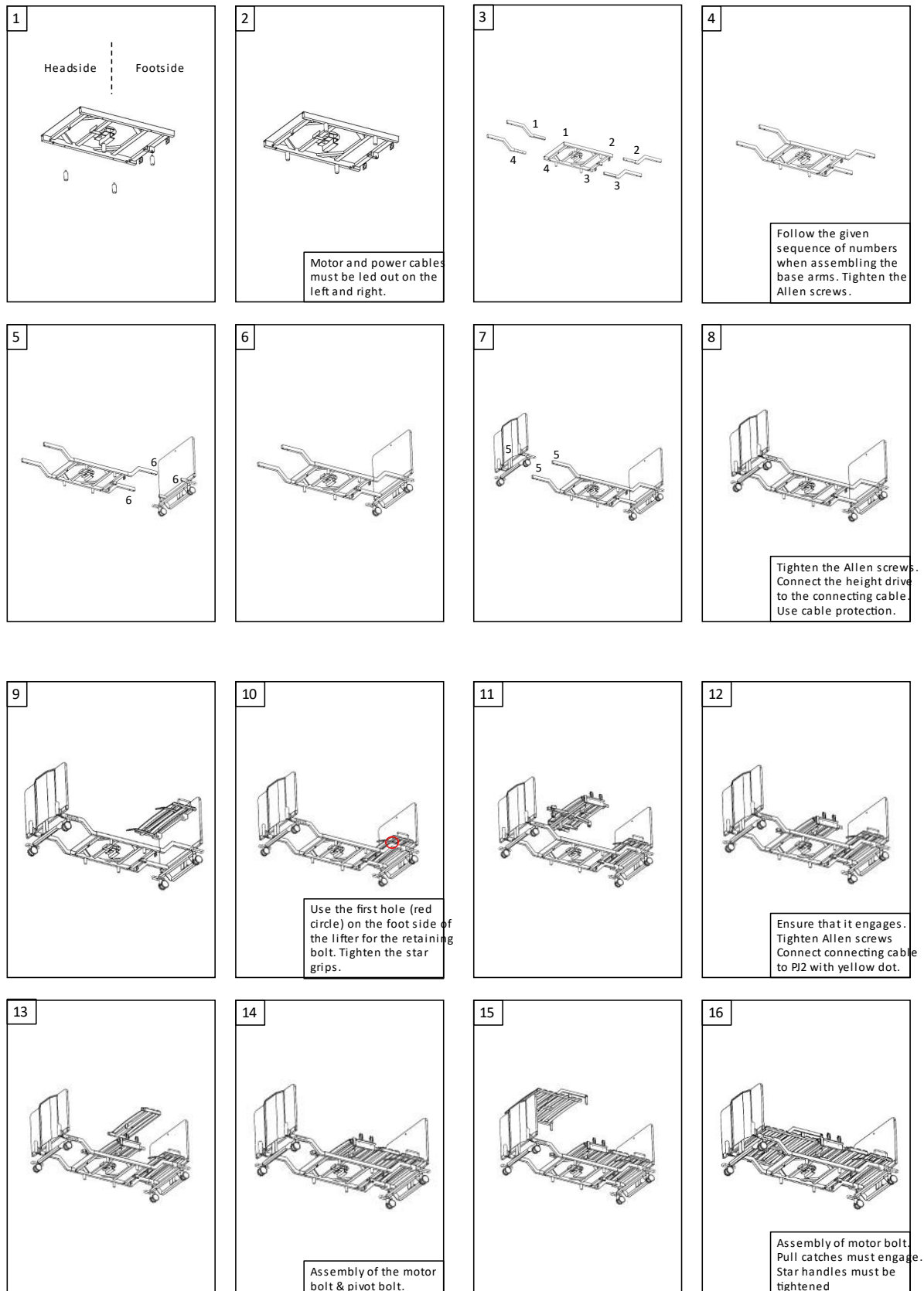
Article discription	Part	Quantity	Weight
Lower leg support		1	6,5 kg
Foot support		1	7,0 kg
Head part		1	12,0 kg
Base armhead		2	2,0 kg
Base armfoot		2	2,0 kg
Turning cross		1	27,5 kg

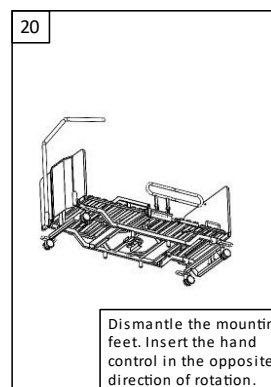
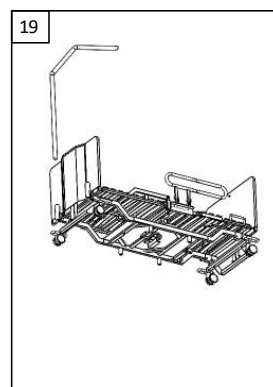
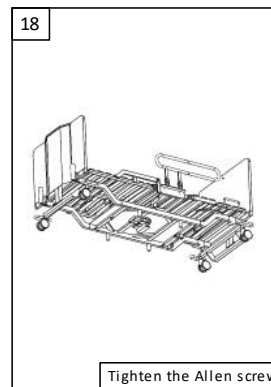
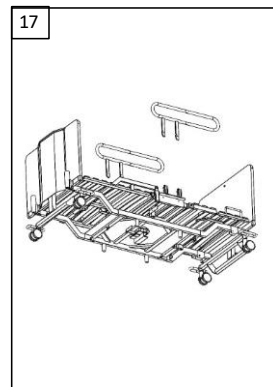
Article discription	Part	Quantity	Weight
Handle		2	2,5 kg
Lifting pole		1	5,0 kg
Mattress 161 x 90 x 12 cm		1	9,5 kg
Mattress Foot block 36 x 90 x 12 cm		1	2,5 kg
Mattress Foot block 46 x 90 x 12 cm		1	3,0 kg

7.2 Taking the bed from the transport set in sequence

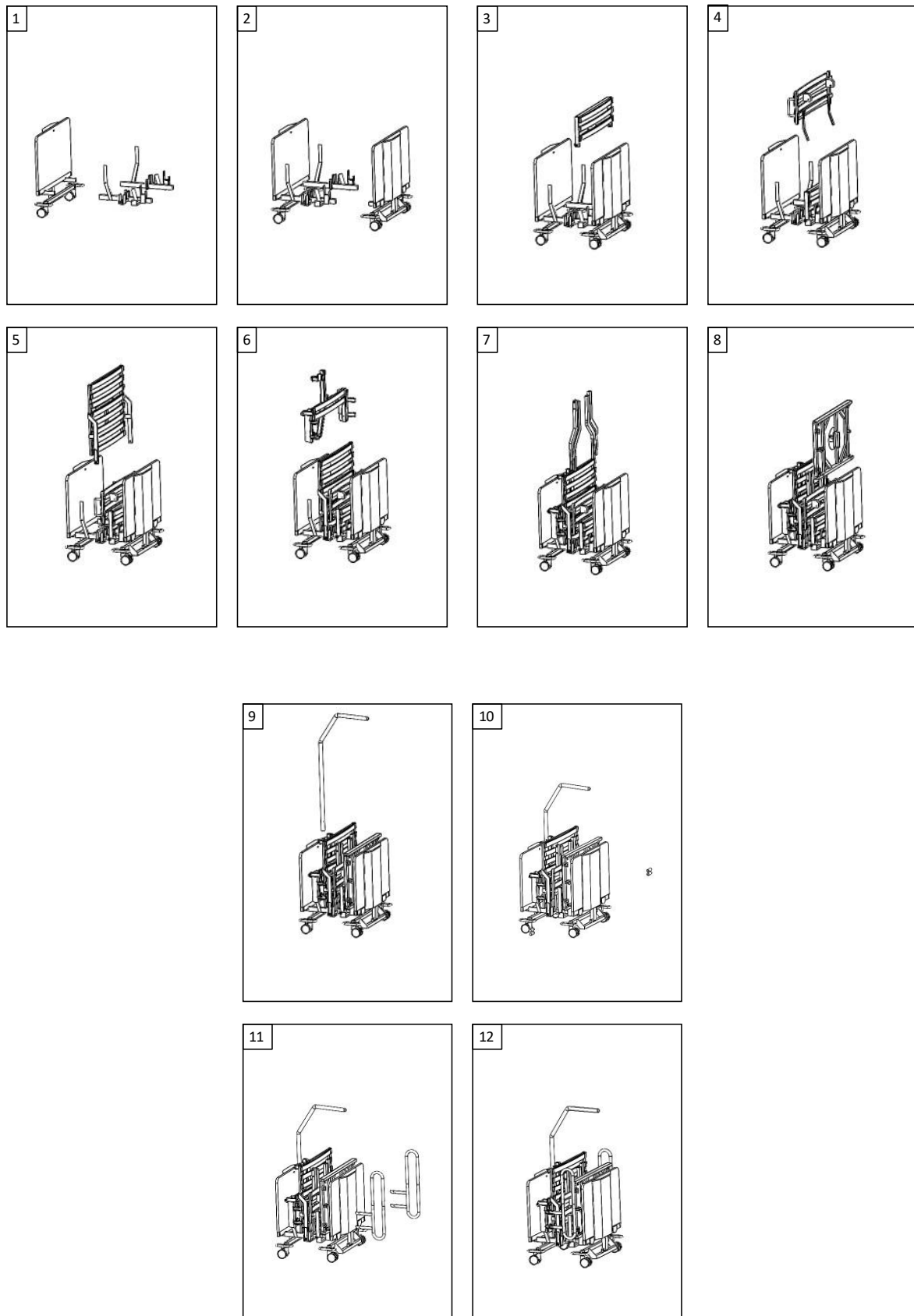


7.3 Assembly procedure





7.4 Sequence of mounting the bed on the transport set



8 Spare parts

8.1 Electrical components

Pos.	Qty	ISKO Art.-No.	Description
1	1	SI-013.80.603	Lower leg motor
2	2	SI-013.80.610	Connection cable lower (upper) leg motor
3	1	SI-013.80.601	Back motor
4	2	SI-013.80.612	Connection cable back (turning) motor
5	1	SI-013.80.602	Upper leg motor
6	1	SI-013.80.600	Height motor
7	2	SI-013.80.609	Connection cable height motor
8	1	SI-013.80.604	Turning motor
9	2	SI-013.80.608	Extension cable for hand control
10	3	SI-013.80.616	Mounting bracket for CO71 & PJ2
11	1	SI-013.80.605	Control box CO71
12	2	SI-011.80.935	Dummy plug for control box
13	1	NS-011.80.903	Power cable
14	1	SI-011.80.895	Modular Junction Box MJB
15	2	SI-011.80.894	MJB Plug
16	1	SB-011.85.095	Connecting cable ACC to MJB
17	2	SI-013.80.614	Battery connection cable for PJ2
18	1	SI-011.90.010	Locking box
19	1	SI-013.80.606	Port Junction Box 1.PJ2
20	1	SI-013.80.607	Port Junction Box 2.PJ2

Table 3: Spare parts electrical components

8.2 Other components

Pos.	ISKO Art.-No.	Description
1	SI-013.80.012	Headboard / footboard
2	SI-013.80.013	Cover plate lifter
3	NS-011.85.223	Castor for central brake ø 100 centrally lockable
4	SB-023.80.100	Brake pedal

Table 4: Spare parts other components