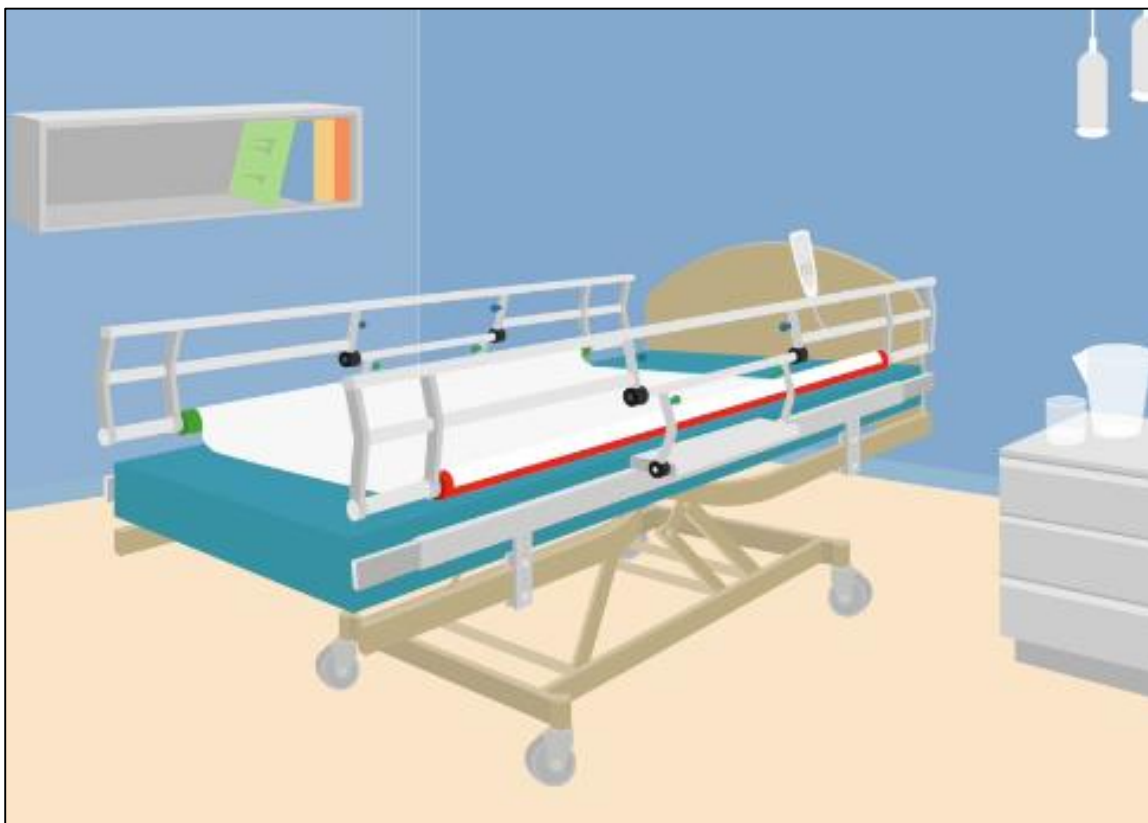


ORIGINAL



INSTRUCTION MANUAL  
&  
ASSEMBLY AND MAINTENANCE MANUAL  
FOR  
TURN AID T3 TURNING SYSTEM



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Certified ISO 13485:2016



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## 1. Manufacturer

### Manufacturer of TurnAid T3 System

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## 2. Application

This instruction manual is intended for the persons using the Turnaid for care, assembly, mounting or maintenance.



***ALWAYS READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE ASSEMBLY, MOUNTING, MAINTENANCE OR CARE TASKS***

Please pay special attention to chapter 4 (Important/Warnings) and to chapter 21 (Risk Assessment and Safety).

TurnAid ApS cannot be held responsible if:

- TurnAid T3 is not used as instructed.
- TurnAid T3 is altered/assembled not in accordance with this Instruction manual.
- Maintenance and storage requirements are not followed.

Should you have any comments or corrections to this instruction manual, the assembly/mounting and maintenance manual, or the TurnAid T3 system itself, please contact us.

### Warranty

For TurnAid T3, TurnAid ApS gives a two-year factory guarantee from supply of the system. The warranty is invalidated if the TurnAid is not used, assembled/mounted/dismounted or maintained according to this manual.

The expected useful life of the TurnAid is 10 years.

Only use original spare parts and accessories on the TurnAid.

### Description of TurnAid T3 system

The TurnAid T3 consists of:

- 1 set of side rails with integrated electric turning system (right and left side).
- Mounting fitting with electro units: 1 control box, 1 distributor box, 1 hand control, and various motor cables.
- 1 Slide sheet.
- 1 Turning sheet



The following are available as spare parts:

- Slide sheet
- Turning sheet
- 1 hand control (TurnAid T3 can be operated when 2 hand controls are mounted)
- 1 set of foot switches (operating both rolls on both sides of the bed)

TurnAid T3 is an accessory for mounting on care beds. It combines two well-known basic functions – bed rail and electric turning system.

The turning system operates two motors , one on each side of the bed, to drive a turning sheet to move a patient in the bed. With a hand control the nursing staff controls the motor rolls.

The turning sheet is attached to each motor roller with Velcro.

A slide sheet is placed on the bed’s mattress. To fix this sheet to the mattress you apply 4 elastic bands in the sheet corners and to the movable parts of the lying surface you apply 4 Velcro tapes.

TurnAid T3 has three settings:





- "bed rail-position"**
- "working-position"**
- "folded position"**






The TurnAid is adjusted between the settings by releasing the locking ratchets. Any alteration to/from the settings is only possible with two hands.

Purpose:

- To give a gentle and dignified transfer of a patient.
- To create a care environment with reduced stress and discomfort.
- The bed/side rails ensure safe environment for the patient and the nursing staff.
- To assist the nursing staff with heavy turns and transfers.

Explanation of Pictograms

Pictogram	Denomination	Description
	Warning	This warning sign calls for your special attention.
	CE mark	The mark shows that the product complies with CE requirements. Declaration of Conformity to be found later in the manual
	IMPORTANT	Note especially!
	Electronic waste	The symbol indicates that at the end of its useful life, the system should be delivered to the nearest recycling station for recycling and disposal

Pictogram	Denomination	Description
	Level of sealing	Level of sealing IPX0 => Not flush tight and not suitable for outdoor use.
Type	Type	Describes type of system.
	Stand-by (ON) push button	Push button to activate the system: Press the button twice (each of approx. 1 second) after each other. Remember: after 80 seconds you will receive an automatic warning of TIME OUT with a beeping sound, and the TIME-OUT function will be active for another 10 seconds. The system is reactivated through 1 push on the ON button. The ON button also serves as a STOP button; this requires a long push for more than 2 seconds.
• ON	Yellow diode lamp	The ON light diode is yellow when the system is active. If the system is not active, the light diode will be turned off. When the yellow ON lamp is glowing, the operator must <u>immediately operate</u> the TurnAid T3 system.
	Red and green push button	Operating buttons for red and green motor roll, respectively -> tighten turning sheet. Both rolls cannot be operated at the same time. If both buttons are pressed at exactly the same time, you will hear a warning sound, which will stop after 5 seconds. This is the procedure if something goes wrong when operating the rolls and the system has to be reset.
	Red and green push button in continuation of above push-button	Operating buttons for red and green motor roll, respectively -> loosening of turning sheet. It is possible to operate both buttons at the same time!
• TIME OUT	Yellow diode lamp	The TIME OUT light diode flashes when the system has not been activated for 80 seconds, and the system will give a beep. You can still operate the rolls. When the yellow ON lamp is glowing, the operator must <u>immediately operate</u> the TurnAid T3 system To proceed, the system can be reactivated by 1 push on the ON button. If the system is not reactivated, the lamp will illuminate constantly after 10 seconds, and the system cannot be operated before reactivation. If you do not reactivate the system, the system will <u>turn off completely after 60 seconds</u> .
	SLEEP push button	Pushing the SLEEP button twice will force the system into stand-by e.g. if you leave the room before the system itself has gone to stand-by. The button can also be applied as EMERGENCY stop; this is done with a long push for more than 2 seconds.

### Requirements to Users of TurnAid T3

Operation demands:

Maximum operation ambient humidity and atmospheric pressure range:

Temperature: minus 5 degrees up to 40 degrees Celsius.







HPA - atmosphere pressure: 800 – 1060

RH - air humidity: 20% - 90% not condensing

Duty cycle from control box →2min (on)/18min (off)

- Only competent persons should operate the system.
- ONLY competent persons may undertake assembly, mounting, service, and repair of TurnAid T3.
- The user of TurnAid T3, the person using the bed, is hereafter called the **patient**. This person may not operate TurnAid.

### Explanation of symbols/pictograms

  Gap between head or foot-board and Turnaid must be between 25-60 mm	Important	The correct distance between the head- or foot board and TurnAid is between 25-60 mm
 Consult instruction for use Input 24V DC	Read Instruction for use	To reduce the risk of injury and for correct use, the user must read instruction for use
 Risk of foot entrapment	Attention	Be aware when levering the bed, that the foot is not entrapped between the TurnAid bracket and the floor.
SWL	Safe Working Load	The mass or force that TurnAid T3 can safely be use to turn a patient with, without fear of breaking.
 KG	Weight	Weight indication for each TurnAid side
	Type of Equipment	Electricity Applied part. The degree of protection: Type BF
V	Volt	Voltage
Hz	Hertz	Frequency (cycles per second)
A	Amperes	Current
Min	Minute	Time
dB (A)	Decibel	Description of noise emission
IPX	Water resistance	Water resistance protection level

### 2.1 Area of application

TurnAid T3: has a safe working load of 40kg -200kg

- Minimum: 40 kg
- Maximum: 200 kg

Long-term care in a medical area where medical supervision is required and monitoring is provided if necessary and TurnAid T3 used in medical procedures may be provided to help maintain or improve the condition of the patient.

Use TurnAid T3 when the patient is to be transferred/placed in the bed:


- Between lying on the back, the side, or the stomach.
- Vertically and horizontally in the bed.
- Transfer (as assistance) in and out of the bed.




The target group comprises:

- ✓ Persons, in need of assistance with hygiene, getting dressed, and more, IN THE BED.
- ✓ Persons, lifted in and out of their bed (by means of separate lifting device).
- ✓ Persons mobilised by means of a standing aid.

The typical target group for TurnAid T3 is consequently a patient with reduced self-care or a palliative patient.

 Keep the hand control(s) out of the patient's reach.

 Prior to using TurnAid T3, make sure the system is well-suited for the patient.

### **3. Accessories**

#### Slide Sheet and Turning Sheet

TurnAid T3 presupposes the use of both a slide sheet and a turning sheet. Extra quantity of these to be ordered separately as the sheet quantity should fit the number of patients and relevant care situations. As a minimum, we recommend that you always have an extra set of slide sheet and turning sheet.


#### Extra Hand Control

If your supply of TurnAid T3 only comprises 1 hand control, TurnAid T3 may be equipped with one extra hand control. This means if you have two carers, it is possible to have a hand control each side of the bed.


#### Foot Operated Switches

TurnAid T3 to be mounted with one set of foot operated switches (contacts for both rolls on both sides of the bed). In general we refer to these as foot switches. They will ease operating the system if the care of the patient requires that you use both your hands. As the hand control the foot switches have been secured against faulty operation why simultaneous activation of foot switches and hand control(s) will have no effect.

### **4. Important warnings**

 NEVER use TurnAid T3 otherwise than stated in this instruction manual.

 Any children in the vicinity of the TurnAid T3 must be supervised at all times.

 Always check the TurnAid T3 according to the maintenance instructions in this instruction manual.

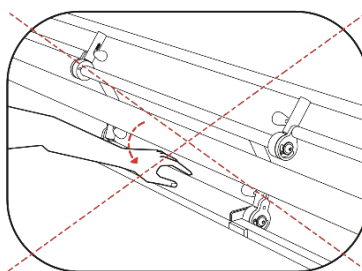


- ⚠ If the TurnAid is not operating correctly or corrosion has been detected, stop using the TurnAid T3 and contact the TurnAid company.
- ⚠ Never move the bed if the TurnAid T3 is plugged into the mains supply.
- ⚠ Only competent carers should operate the bed.
- ⚠ If the TurnAid T3 is being reused, be aware that it could be contaminated.
- ⚠ An assessment by a competent professional must be carried out on the patient to ensure the product is suitable.
- ⚠ Do not exceed the duty cycle of the motors.
- ⚠ The TurnAid T3 is intended for interior use only.
- ⚠ A patient showing violent behavior must not use the TurnAid T3.
- ⚠ Ensure mains cable does not get trapped in the TurnAid T3 or the bed.
- ⚠ Avoid spilling liquids or water on the electrical system.
- ⚠ Always fully check electrical system if it gets wet.
- ⚠ Patients must not smoke in a bed fitted with a TurnAid T3.
- ⚠ The TurnAid T3 can be used as a side rail so patients must be assessed for the use of a side rail.
- ⚠ The patient must never be allowed to operate the TurnAid T3.
- ⚠ Only competent persons should assemble /disassemble and maintain the TurnAid T3.
- ⚠ NEVER leave TurnAid T3 in "**working-position**" when a patient is in the bed.
- ⚠ ONLY use TurnAid T3 when correctly mounted.
- ⚠ WARNING: No modification of this equipment is allowed
- ⚠ Keep the hand control(s) out of the patient's reach.



**⚠** When setting the 3 TurnAid T3 positions ALWAYS pay attention and care to the following:

- Make sure the patient's fingers, arms, legs, hair and any connected equipment are not caught during the setting of the system.
- Before and after setting ALWAYS check for clearance around the patient.
- ALWAYS check that the locking ratchets are locked correctly after setting.
- NEVER use force or power when setting the system.
- Do not squeeze own hand/finger between the round metal bars when alternating position of the system.



Do not squeeze your hand/finger between the round metal bars when alternating position of the system.

**⚠** Warning: Risk of foot entrapment when used on a low bed.

**⚠** Warning: Materials used on the TurnAid could cause allergies.

During a transfer, do NOT pull the patient so that he/she touches the bed rails.

NEVER pull the patient over the bed side.

Having terminated turning or transferring the patient, ALWAYS check that the patient is positioned safely and correctly.

Familiarize yourself with the symbols of hand control– see chapter 2 (Explanation of Pictograms).

Pay attention to the location of the quick guide and use this in case you have doubts during an operation situation.

NEVER exceed the patient's MAX. weight of 200 kg.

NO extra persons in or on the bed besides the patient.

#### 4.1 Primary requirements for the bed

For mounting of TurnAid T3, the care bed must comply with the following demands:

- The Bed must be manufactured according to EN 60601-2-52. If the bed fails to comply with the standard, we cannot guarantee that TurnAid T3 complies with the safety demands.
- DO NOT EXCEED the bed's max. load and max. user weight when TurnAid T3 is mounted. The TurnAid T3 system has a total weight of 45 kg.

#### 4.2 Compatibility between the bed and the mattress

 Observe the following requirements for the bed and the mattress:

- BED: The TurnAid T3 system is designed for mounting on beds with square side bars on the lying surface between the headboard and footboard.
  - Ensure that the gap between the headboard or footboard and the TurnAid T3 meets the requirements for gaps to ensure there are not entrapment risks. Here you must observe a distance of 25 to 60 mm. You can adjust TurnAid T3 length to fit between the headboard and footboard. Cf. chapter 7.




- You may mount TurnAid T3 on beds with various widths. The only requirement is that both the slide sheet and the turning sheet must fit the width of the bed.
- MATTRESS: The mattress must fit the bed and comply with the demands of the bed manufacturer.

We recommend that you firmly inflate an alternating pressure mattress before operating the TurnAid T3. A soft mattress will give an uneven support for the patient and thus increase the friction towards the mattress. If you inflate the mattress firmly, friction is reduced and turning will become more gentle and pleasant for the patient. If the mattress is soft, you must ensure that there is no risk of entrapment due to extra compression at the mattress side.

CHANGE OF MATTRESS: When changing the mattress observe that the height for TurnAid T3 *may* have to be altered.

A too low positioning will exclude that the nursing staff can change between "**working-position**" and "**bed rail- position**" as the roll will go against the mattress.

### 4.3 In general

 Observe the following:

- During **assembly/mounting** ensure that no parts, fittings or wires are damaged or squeezed when changing between all the possible positions. This applies for both the bed and TurnAid T3.
- Leave the bed in a position where no one can get injured. If there is a person in the bed, TurnAid T3 must be folded to "**bed rail-position**". In this case, do not forget that the turning sheet must be tightened as much as possible.
- If there is NO person in the bed, you can leave TurnAid T3 in "**folded-position**".
- Do NOT expose the connection cable for TurnAid T3 to unnecessary pulls or sharp bends. In case of a damaged cable, disconnect TurnAid T3 from the power supply 230V and call for a service technician.
- Connect the TurnAid T3 plug to power from socket outlet.
- When applying other equipment with hoses, wires, or tubes take special care in connection with all moving parts. Cf. chapter 6.14.

### 4.4 Inspection upon receipt

Upon receipt of TurnAid T3 check packaging. If the system shows any sign of damage, please do not hesitate to contact TurnAid ApS.

### 4.5 Inspection prior to daily use

1. From top of mattress to top of bed rail ("**bed rail-position**") there has to be a minimum of 230 mm.
2. The TurnAid T3 length adjustment bar must be placed at the foot end of the bed.
3. From the end of the TurnAid T3 to the headboard or footboard of the bed there have to be min. 25 and 60 mm.





4. The sheet must be mounted so it goes from the top of the mattress to the top of the rolls. Make sure, when operating the rolls that direction and side correspond to the symbols on hand control.
5. Electric parts to be mounted with **red** roll to **red** input and **green** roll to **green** input. Make sure there is nothing underneath, above or close to the system which can restrict its movement, e.g. furniture, window seats, or storage boxes.
6. Avoid that the power cable being damaged in moving parts. Ensure that the bed, upon which TurnAid T3 is mounted, does not have any cables which could be damaged by the TurnAid T3.
7. No cables or other equipment to be squeezed or damaged in any other way when TurnAid T3 is in use.
8. Visually make sure that TurnAid T3 is without damage.
9. The turning sheet is in good condition and goes correctly on the motor rolls.
10. The slide sheet is in good condition and correctly mounted.
11. When connecting the system to the power supply, the function of the hand control(s) system are correct.
12. The quick guide for use of the system is visible close to the bed and is clean and undamaged.

## **5. Description of the functions – hand/remote control**

TurnAid T3 is designed according to the standard for care beds EN 60601-2-52, and TurnAid T3 complies with all relevant demands for a bed rail.

When working with TurnAid T3 and the care bed we recommend that you maintain the bed's height adjustment for the relevant working situations. The bed's height adjustment is not decisive for TurnAid T3's function, but it is important for the carers working position and health.

You operate TurnAid T3 by means of a hand contro

## HAND / REMOTE CONTROL

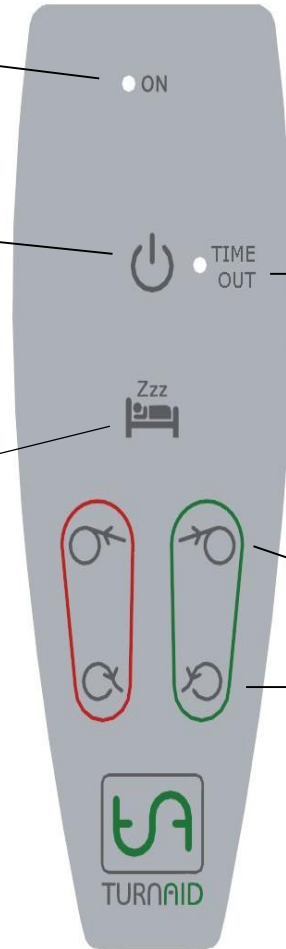
The ON light diode is yellow if the system is active. If the system is not active, the light diode will be turned off. When the yellow ON lamp is glowing, the operator must immediately operate the TurnAid T3 system.

Stand-by (ON) push button: Activate the system by 2 defined pushes (each of approx. 1 second) after each other.

ON button also serves as STOP button; this requires a long push for more than 2 seconds. The button is also used for reactivation at TIME-OUT.

SLEEP button: pushing the SLEEP button twice will force the system into stand-by. To be used if you leave the room before the system goes into stand-by.

SLEEP button also stop the TurnAid ; this requires a long push for more than 2 seconds.



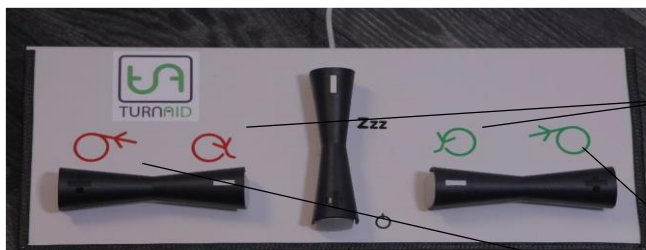
The TIME OUT light diode flashes when the system has not been activated for 80 seconds, and the system will give a beep. You can still operate the rolls. When the yellow TIME OUT lamp is glowing the operator must immediately operate the TurnAid T3 System.

To proceed, the system can be reactivated by 1 push on the ON button. If the system is not reactivated, the lamp will light constantly after 10 seconds, and the system cannot be operated before reactivation. In case you do not reactivate the system, the system will turn off completely after 60 seconds.

Operating buttons for red and green motor roll, respectively – tightening of turning sheet.

Operating buttons for red and green motor roll, respectively - loosening of turning sheet.

## FOOT SWITCH



The stand by (ON) button = the middle foot switch.

Operating switches for red and green motor roll, respectively -> loosening of turning sheet = 2nd outermost left and 2nd outermost right switch.


Operating switches for red and green motor roll, respectively -> tightening of turning sheet = outermost left and outermost right switch.

These instructions presuppose that TurnAid T3 is mounted so right motor roll is **GREEN** – seen from the top of the bed – and left motor roll is **RED** – seen from the top of the bed.

When you erect TurnAid T3 and fold it as shown here in fig. 5.1, the system is in "**bed rail-position**", and having ensured that the turning sheet has been reeled in adequately tightly it is safe to leave the patient without any further precautions.



Fig. 5.1 – "**Bed-rail position**" (during turning) one side has the roll on top and the other side operate as bed rail

-  For alteration of TurnAid T3 to "**working-position**", cf. fig. 5.2, release the two blue locking pins and fold the top part for the roll with sheet to go at the top. Note positions of your hands in relation to the locking ratchets. The opposite side remains as bed rail so the patient has a clear view.

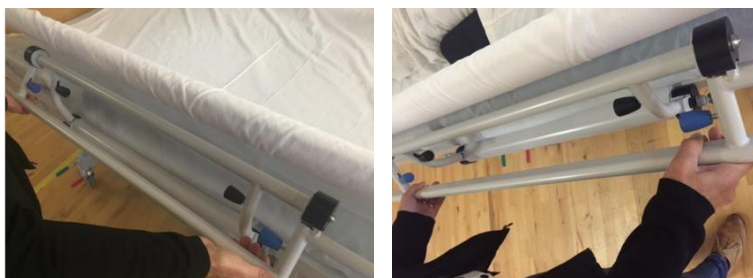


Fig. 5.2 – "**Working-position**" (during turning)  
the roll in one side is turned from the bottom position to the top position

Now, use TurnAid T3 as help for gentle turning of the patient. If the patient is to be turned by the motor roll, which is against a wall, do not forget to move the bed away from the wall.

The third position for TurnAid T3 is "**folded-position**" (out of bed-position).

If the patient cannot get to the bed side independently, the nursing staff may assist by pulling the person by the sheet. For this, lower TurnAid T3 to "**folded-position**", fig. 5.3.



 When you apply "**folded-position**" to move the patient out to the side of the bed, pay attention that the person is not moved over the edge. Also, note standard rules for any work with sheets and care beds.




Fig. 5.3 – "**Folded-position**" (out of bed position)  
for working with the patient at e.g. washing, dressing, undressing etc.


 Move the bed away from the wall, if "**folded-position**" is necessary on both sides of the bed. NEVER leave the patient alone in the bed with "**folded-position**".


## 6. Operating


### 6.1 In general

The next pages will give you various scenarios for operating and transfer situations.

 In operation, right side is the **green** motor roll (seen from the top of the bed) and left side is the **red** motor roll (seen from the top of the bed)

 For any transfer, consider if the action in question requires the bed to be moved away from the wall.

 During ALL turning and transfers of the patient, ALWAYS note the position of the patient's limbs. Thereby you avoid any unintentional entrapment of the limbs. Before commencing turning, note that turning of the patient should be made in ONE fluent movement with no interruptions.

 During change of slide or turning sheet or cleaning of the bed, when the patient is in the bed:

- Remove the care-bed from the wall if it was positioned against a wall.
- Keep the hand control(s) for TurnAid T3 out of reach of the patient.

We have described the following situations with the use of hand control:

- ✓ Turning.
- ✓ Transfer from side to side in the bed
- ✓ Transfer further up in the bed.
- ✓ Placement of sling.
- ✓ Mobilising out of the bed.
- ✓ Transfer from standing in front of the bed to sitting in the middle of the bed.
- ✓ Turning heel is incorrectly fitted on the motor rolls.
- ✓ Simultaneous use of the functions for TurnAid T3 and bed.
- ✓ Simultaneous use of 2 hand controls.
- ✓ Emergency Stop.
- ✓ Placement of sheet.
- ✓ Placement of slide sheet.
- ✓ Placement of turning sheet.
- ✓ Sheet sizes.
- ✓ Alternating pressure mattresses.
- ✓ Simultaneous use of TurnAid T3 and catheter bags, probes, drains may be many more scenarios, see [www.turnaid.dk](http://www.turnaid.dk) for further information.



## 6.2 Turning

You may use TurnAid T3 for turning the patient from the back to the side (and back) and from the side to the stomach (and back). Following example illustrates turning from the back to the left side.

- Adjust **red** motor roll to "**working-position**", cf. fig. 6.2.1 below, i.e. release the two blue locking pins and fold the top part for the roll with sheet to go to the top.

 Note the position of the nursing staff's hands in relation to the locking pins. **Green** motor roll can be set to "**bed rail-position**" or "**working-position**".

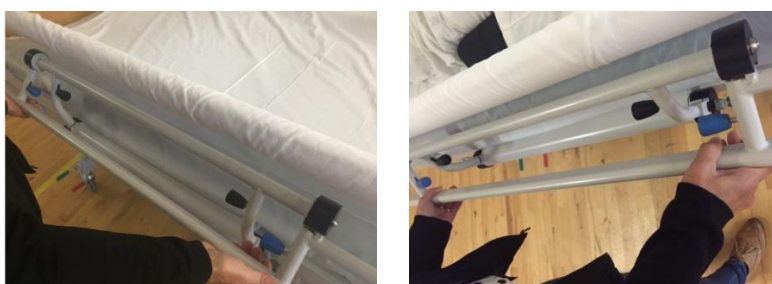


Fig. 6.2.1 – "**Working-position**" during turning



- Power on TurnAid T3 by double-clicking (2 defined pushes)  .
- Press  to pull the patient towards you. **Red** motor roll now helps with turning the patient from side to side
- Before the patient starts to turn, bend his/her leg closest to you and at the same time place his/her closest arm on his/her stomach or chest.



Fig. 6.2.2 – Initiating turning

- Continue turning of the patient with the motor roll while you support the person's head and hips until the patient is lying on the side. Then place the patient's bottom legs parallel while the upper top leg is slightly bent, cf. fig. 6.2.3. If needed, position a pillow along the patient's straight leg so the top leg may rest on this upon turning.






Fig. 6.2.3 – Adjustment at turning


Apply same turning principle in care and hygiene situations.

### 6.3 Transfer from side to side in the bed

TurnAid T3 works as an aid if the patient is to be transferred out to the bed side.

Small adjustments of the patient's lying position should be made at "**bed rail-position**" fig. 5.1.

- For easier access to the patient, fold down TurnAid T3 at the side to facilitate access for nursing staff, cf. fig. 6.3.1. In this case, we describe the scenario from the left side of the care bed, and the red motor roll is used.
- Power on TurnAid T3 by double-clicking (2 defined pushes)  .
- Active the motor on the side to which you want to move the patient
- Press – and keep pressing – one of the following   to pull the patient towards **red** or **green** side. The motor roll assists in the transfer of the patient in the bed.

 NEVER let the patient get into contact with the side rail.

 NEVER pull the patient further out than the mattress and lying surface.

### 6.4 Transfer further up in the bed

When the headrest section of the bed has been raised, the patient will often slide towards the bottom of the bed. To avoid this, raise the bed's knee break section before the headrest section. Having done so and the patient still slides down in the bed, the turning sheet will typically follow the person's body. To reposition the person in the top end of the bed:

- Place the bed platform in a horizontal level.
- If needed, fold TurnAid T3 to "**bed rail-position**", cf. fig. 6.4.1 below, to lower the motor rolls (in case they were folded to "**working-position**").



Fig. 6.4.1 – "Bed rail-position"






- Power on TurnAid T3 by double-clicking (2 defined pushes)  .
- Press   simultaneously to completely loosen the turning sheet. (If required, these two push buttons can be operated simultaneously).
- Place yourself at the top of the bed and alternating press   to pull the patient from side to side while, with a light hand, you guide the turning sheet back towards the top part of the roll motor.
- Repeat the procedure in the opposite side and so on until the sheet has reached its place.



Fig. 6.4.2 – Transfer further up in the bed

For detailed guidance, see the instructional video at [www.TurnAid.dk](http://www.TurnAid.dk).

## 6.5 Placement of sling

When using TurnAid T3, it is simple to place a sling for the patient.


- Power on TurnAid T3 by double-clicking (2 defined pushes)  .
- Use the turning function of TurnAid T3 to turn the patient onto the side.



Fig. 6.5.1- Turning onto the side

- Place the sling along the back of the patient. Make sure to center and place the sling correctly according to the instructions from the sling manufacturer.



Fig. 6.5.2 – Placement of sling

- Use the turning function of TurnAid T3 to reposition the patient onto the back.



Fig. 6.5.3 – Returning to the back

- Pull straps free from the opposite side.
- Place all straps so they are ready for attachment to the lift.
- Fold TurnAid T3 to "**folded-position**" (fig. 5.3)
- Now, you can lift the patient.

## 6.6 Mobilising out of the bed

TurnAid T3 may be used as an aid when you mobilise the patient out of the bed; below this is shown in combination with a person turning device.



- Power on TurnAid T3 by double-clicking (2 defined pushes)  .
- Apply TurnAid T3's turning function as described above to situate the turning device under the patient.



Fig. 6.6.1 – Situation of person turning device

Possibly fold TurnAid T3 to "**bed rail-position**" to lower the motor rolls if they were previously been folded to "**working-position**".

- Press  to loosen the turning sheet. (These two push buttons can be operated simultaneously, if required)
- Raise the backrest to allow the patient sit up.

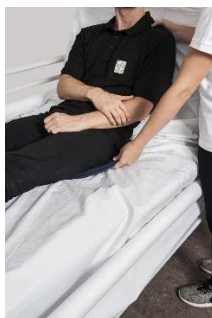


Fig. 6.6.2 – The patient gets into sitting position

- Lower the bed so the patient has good foot support when he/she is moved towards the bed edge.

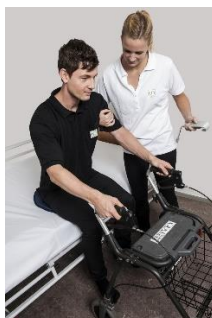




Fig. 6.6.3 – The patient sits on the edge of the bed

- Turn on the turning device so he/she gets the feet over the side of the bed. (When the patient has found his/her balance, you may raise the back part of the bed, and the patient can use this for support).
- Lower the bed's back part when the patient can balance or has alternative support.
- Press  to move the patient further out to the bed edge.
- Lower the bed until patient's feet have contact with the floor.
- Press  to move the patient closer to the bed side while the bed is lowered again. This will assist the patient to gain a standing position.

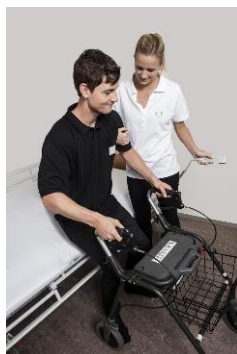


Fig. 6.6.3 – The patient gains a standing position

You may also use the above technique if the patient is to be pulled to the bed side. This could be in connection with care. REMEMBER: Lower TurnAid T3 to **"folded-position"** (out of bed position), cf. fig. 5.3.

### 6.7 Transfer from standing in front of the bed to sitting in the middle of the bed

Provided the patient still has a degree of independent standing function, the turning sheet of TurnAid T3 can assist the patient to get back into the bed.




- Fold TurnAid T3 to **"folded-position"** and tighten the sheet's middle mark( center stitch on fabric) towards the motor roll in front of you.
- Adjust the height of the bed to suit the patient, who with his/her ability to stand can seat himself/herself on the bed.
- Lower the bed height. Tightens the sheet with the TurnAid T3 motor roll the other side to the patient. Gently pull the patient into a sitting position in the middle of the bed.

### 6.8 Turning sheet in incorrectly fitted on the motor rolls

In some cases, the turning sheet can be at an angle to the motor rolls. In principle, this has no effect and you may still use TurnAid T3. However, prolonged oblique operation will give creases in the turning sheet under the patient with unfortunate consequences such as decubitus.

If the turning sheet goes less than 80 mm obliquely on one of the motor rolls, the nursing staff can straighten the turning sheet.

If the turning sheet goes more than 80 mm obliquely on one of the motor rolls, do the following:

- Power on TurnAid T3 by double-clicking (2 defined pushes)  .
- Loosen the turning sheet to make it go straight again. Press  .
- Tighten the sheet again by pressing  while you straighten/guide the sheet into correct position.

For a more detailed description, see cf. instructions under 6.12.2 – Positioning of turning sheet.

### 6.9 Simultaneous use of functions for TurnAid T3 and the care bed.

TurnAid T3 does not affect the functions of the bed. ONLY REMEMBER to loosen the turning sheet before raising the bed's back, thigh, or foot part.


Normally, you make the bed flat before the use of TurnAid T3. In some situations, it may be an advantage to raise the bed's backrest or footrest section before turning. If the patient is wide across the hips and at the same time narrow across the shoulders, a slight raise of the bed's backrest or footrest section during turning will provide a better placement of the patient.

Prior to raising bed's headrest or footrest, TurnAid T3 must be adjusted to "**working- position**".



### 6.10 Simultaneous use of 2 hand controls/1 hand control


As standard, TurnAid T3 will be supplied with one handset. It is possible to add another handset to allow activation from both sides of the bed.

With several operating units, you cannot activate several functions on each single unit at the same time. Excepted from this is loosening of the turning sheet, i.e. simultaneous use of .

With 2 hand controls, 2 persons may carry out transfer/turning without having to pass the hand control from one person to the other. Each person may have one hand control on his/her side of the bed.

### 6.11 Immediately Stop

Both the ON button  and the SLEEP button  work as immediately stop.

An activated function can always be stopped if you press one of these buttons. This is useful should a malfunction of the buttons on the hand control. The motor rolls cannot operate again before you restart the system, as normally, by 2 defined pushes on .

### 6.12 Placement of sheet



*A slide sheet is placed directly on the bed's mattress. On top of this, the turning sheet is placed attached to the 2 motor rolls - the **green** and the **red**, respectively **NEVER** place*



*anything between the slide sheet and the turning sheet. This will impact on the sliding effect. For placement of both sheet types, make always sure that the bed is in a flat position!*

*The below instructions for placement of slide and turning sheet, respectively, are without the patient in the bed. However, both the slide and the turning sheet can be changed with the patient in the bed*

### 6.12.1 Placement of slide sheet

- Place the slide sheet on top of the mattress with sheet top turning upwards. To make sure of this, check the sheet seams.
- Fit each of the 4 elastic band of the slide sheet around each corner of the mattress.
- Attach the 4 Velcro tapes (located onto the bottom side of the slide sheet). Each tape is attached around the bed's adjustable surface parts





 If the straps are wrongly attached to the bed's outer frame or the motor rolls, the straps and possibly the system together with the bed will be damaged, when the bed's surfaces are raised.




Fig. 6.12.1.1 – Placement of slide sheet

 *The slide sheet for TurnAid T3 creates the sliding effect between the slide sheet and the turning sheet. For this reason, this slide sheet may not be compared with the slide sheet traditionally used at the transfer of persons without the use of a transfer system.*

 *When placing the slide sheet on an alternating pressure mattress, the mattress should be fully inflated. This should be done before any placement of the sheet takes place, and you should make sure that the straps are not tightened too much as this will decrease the functionality of the mattress.*

 *The side sheet is a wearing part. In case there is any damage to the sheet, make sure to replace it.*

### 6.12.2 Placement of Turning Sheet

- Power on TurnAid T3 by double clicking (2 defines pushed)  .
- Fold both sides of the system to "**working-position**" so both motor rolls will turn upwards.



- Turn each motor roll so the Velcro tape appears on the top side of the roll.
- Place the turning sheet in the middle of the bed with the Velcro tapes on each side of the sheet along the rolls. REMEMBER to place the sheet with its bottom side downwards so its Velcro tapes also turn downwards.
- Starting with the upper sheet corner, attach the Velcro tape to the roll in one sliding movement while your hand straightens the sheet all the way down to the bottom end. The sheet must turn across the top side of the roller, to ensure a correct direction of the sheet when you operate the rolls. A wrong placement may cause the patient's arms, fingers or others to be trapped between the sheet and the roll. The control only provides a low power to the motors in the tightening direction and they will stop in case there is any overload in this direction.



Fig. 6.12.2.1 – Attachment of turning sheet to motor roll





- Tighten in approx.  $\frac{3}{4}$  of the sheet on the motor roll by pressing  or  on the hand control.
- Attach the turning sheet to the Velcro tape on the opposite motor roll.
- Tighten the turning sheet on the motor roll by pressing  or  until it is straight on the mattress with its dark stitching in the middle of the mattress.



Fig. 6.12.2 – Reeling in of turning sheet

**RECOMMENDATION:** If possible, keep the sheet's dark stitching in the middle of the mattress. This ensures the same amount of sheet on both sides.



*Attention: If the turning sheet is worn or damaged it should be replaced.*



### 6.12.3 Sheet sizes

Both the slide sheet and the turning sheet are available in sizes suitable for standard beds. They are also available in larger widths, allowing TurnAid T3 to be fitted to wide beds.

#### For Mattress Width 80-90 cm (Standard)

Slide sheet width 95 (standard)      Turning sheet width 350 cm (standard)

#### For Mattress Width 95-110 cm

Slide sheet width 115 cm      Turning sheet width 400 cm

### 6.13 Alternating pressure mattresses

If you use an alternating pressure mattress for the patient, to set the mattress to firm before you commence turning with the turning sheet. This will reduce the friction and increase the comfort for the patient.



*After use, only loosen the turning sheet a little.*



**NEVER** mount the slide sheet too tightly so it pulls the mattress down.

### 6.14 Simultaneous use of TurnAid T3 and catheter bags, probes, drains, and similar

You may use TurnAid T3 for a patient who also use a catheter bag, probes, drains, infusion or similar. Cables, hoses, and pipes for the above systems risk being squeezed or damaged by the system if they are not positioned correctly through the system sides. Consequently:



Always position hoses, pipes, and cables through the opening between each system side and the head or footboard.

**NEVER** hang containers for infusion, nutrition or drain fluids directly on any parts of the system.

**NEVER** position hoses, pipes, and cables through any openings in the system sides.

## 7. Unpacking and preparation

A complete TurnAid T3 system consists of 2 system sides (bed rail sides) with motor rolls and electronic parts. The motor rolls for the bed side rails are color coded, where **GREEN** is right side, seen from the top of the care bed, and **RED** is the left side, seen from the top of the care bed.

Always make sure the system is complete. A parts list and an assembly/mounting guide will accompany your product.

The standard version includes all parts to fit the bed/mattress, and for TurnAid T3 to function as intended.

We recommend that you use a bed trolley when transporting the system. If the system has to



go upstairs, all lifts, where possible, should be made by 2 persons.

Warning: if the TurnAid T3 is being reissued, assembly instructions must be followed.

## 8. Assembly prior to use

Prior to use check that the bed is suited for TurnAid T3. Assembly of TurnAid T3 must be carried out by a competent person. .

### 8.1 Requirements for the bed

*The bed must comply with the standard EN 60601-2- 52.*

Demands of the bed manufacturer: NEVER exceed the bed manufacturer's guidance for max. user load and max. user weight when TurnAid T3 is been mounted.

Weight TurnAid T3: 45 kg.

Calculation of user weight: With a bed of SWL(safe working load) of 250kg, the maximum patient weight may reduce due to the weight of the Turna. Please refer to the bed instruction manual for information on the weight capacity.

### 8.2 Compatibility between the bed and the mattress


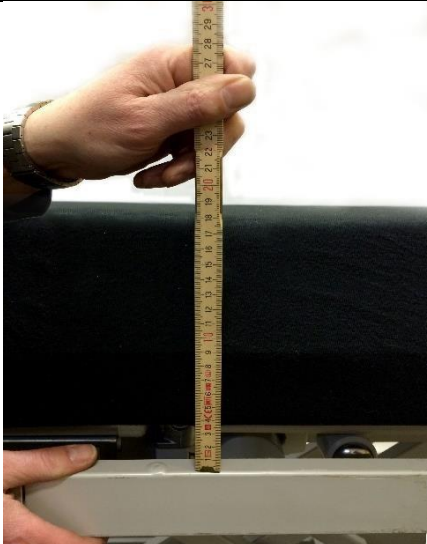

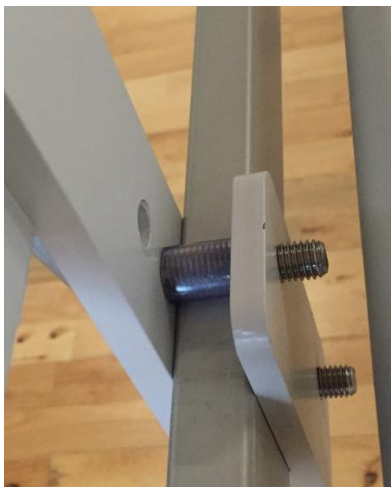


TurnAid T3 is intended for mounting on the above bed types with a wide selection of mattresses. ALWAYS observe below specific demands to bed and mattress.

- TurnAid T3 is intended for mounting on beds with square side bars on the lying surface between the headboards.
- It must be possible to meet the safety demands for gaps e.g. bed headboards. Here distances have to be between 25 and 60 mm. (Never allow a gap between TurnAid T3 and the headboard or footboard larger than 60 mm). You can adjust the length of TurnAid T3 in order to fit between the headboards. See also chapter 3.
- TurnAid T3 suits several bed widths, as the slide sheet and the turning sheet only have to fit the bed width.
- The mattress must fit the bed and otherwise comply with the requirements of the bed manufacturer. The weight of the user must never exceed the advice of the bed manufacturer. We recommend fully inflating an alternating pressure mattress before operating TurnAid T3. A soft mattress will give an uneven support for the patient and thus increase the friction towards the mattress. A firmly pumped mattress will reduce the friction and facilitate a gentler and comforting turning for the user.

If the mattress is soft, make sure that there is no entrapment risk due to extra compression at the edge of the mattress.

When you change the mattress make sure to adjust the height setting of TurnAid T3 This will make it more difficult to alternate between "**working-position**" and "**bed rail-position**", as the roll will go against the mattress.

**8.3 Assembly**

		
<p>Tools necessary for assembly:</p> <ul style="list-style-type: none"> <li>• 8 mm Allen HEX wrench</li> <li>• 4 mm Allen HEX wrench</li> <li>• 3 mm Allen HEX wrench</li> <li>• Folding ruler or measuring tape</li> </ul>	<p>Measure the height from the bed's side-frame bar to the top of the mattress.</p>	<p>Take off the mattress and existing bed rails to make room for TurnAid T3.</p>
		
<p>Place the fitting in the correct height in relation to the distance you measured between frame and mattress. Screw in the bolt with the plastic hose in the top. Cf. this picture for correct height.</p>	<p>Place the 2 combined bed rails with motor roll from TurnAid T3 on the bed sides. The bar marked with <b>green</b> goes to the right side of the care bed (seen from the head end) and the bar marked with <b>red</b> goes to the left side of the care bed (seen from the head end).</p>	<p>Situate both bed rails with the square bar at the bottom right to the headboard at the top of the bed allowing between 25 mm and 60 mm between bed rail and headboard.</p>

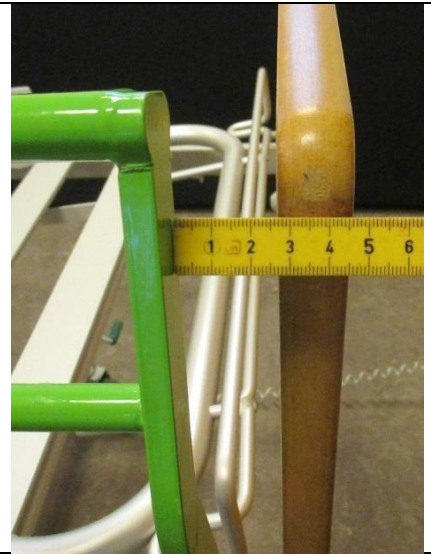




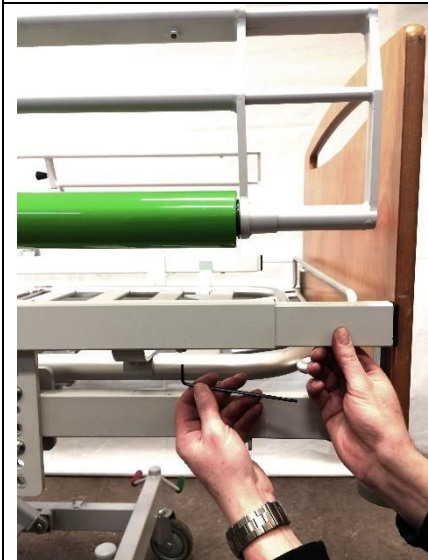
Tighten both bolts in both sides.  
Torque 24 Nm.  
Warning: If fitted to a low bed, ensure the TurnAid T3 does not hit the floor.



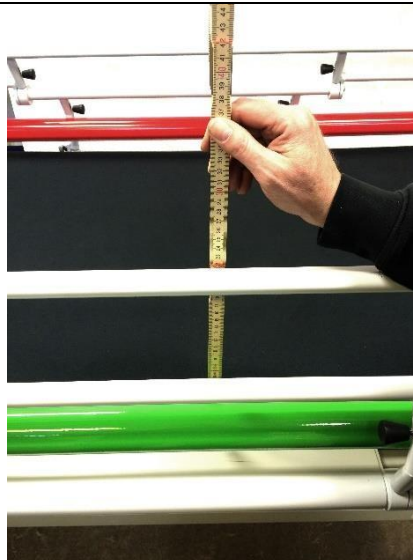
Loosen the shoulder bolt in the bottom part with a 3 mm Allenkey.



Pull out the extension allowing for a 25-60 mm gap between the footboard and TurnAid T3. Retighten the shoulder bolt. Repeat on the opposite side.



Loosen the shoulder bolt to adjust the lower bar. Pull this out towards the footboard and tighten the bolt again. Repeat on the opposite side.



Height adjustment is correct when the bar is just above the mattress top side and there is a gap of 23 cm from the mattress surface to the top of the bed rail.  
Do not forget to retighten the bolts.



The control box and hand control are pre-assembled and it should not be disassembled. Only pull out the plugs for the motor rolls if you have to transport the system



Loosen the 3 screws of the fitting so the bracket goes over the frame at the top end of the bed.



Mount the control box with the fitting on the traversing bar at the top of the bed so the cable fittings turn downwards. Tighten the 2 top screws to fix the fitting. Tighten the 3<sup>rd</sup> screw for it to support and thus the fitting is placed straightly.



Check the cables for motor rolls are mounted. Red side into CH1 and green side into CH3.




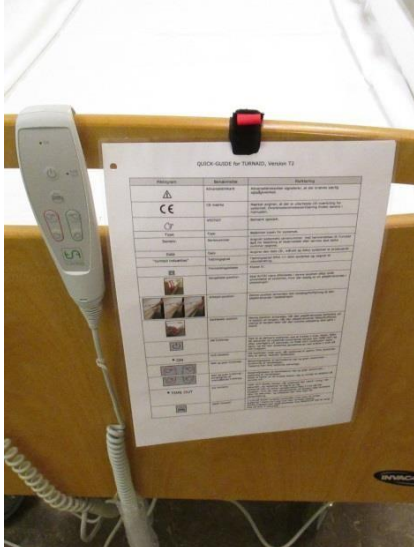
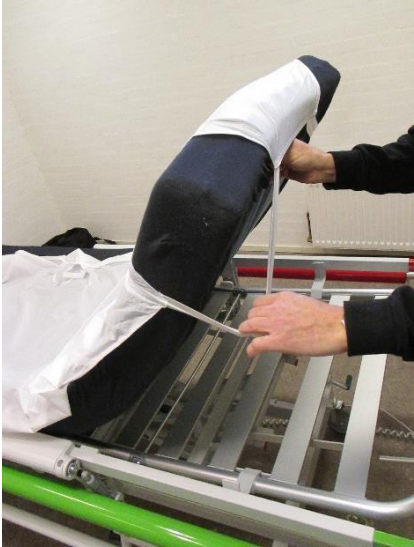


Mount the jack plug for the motor roll in the end of each roll. Make sure the cable from CH1 is the red side and cable from CH3 is the green side.



Position the cables to the control box so they do not get crushed or trapped. Check this with the bed in its lowest position.



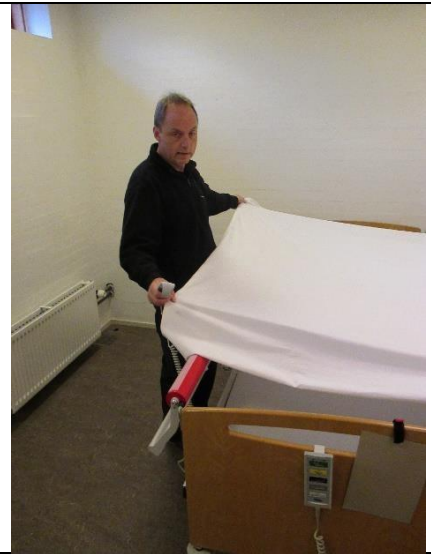
		
	<p>Let the cables of the motor roll hang in a loop from under the roll on the exterior side of the square bar to under the bed. Check: motor cables are not too tight with the motor rolls in top position. Ensure there is no risk of cable entrapment e.g. by a brake pedal, when the bed has been completely lowered.</p>	<p>Adjust the length with the roll folded to "<b>working-position</b>" (rolls in top position). Thus, the jack plugs will not be damaged during use .</p>
		
<p>Test all functions of TurnAid T3 and the bed. Make sure that nothing is trapped and no electric cords are pulled.</p>	<p>Attach the quick guide to the footboard of the bed.</p>	<p>Fix the slide sheet to the mattress (cf. chapter 6.13.1). Start by positioning the elastic cord around its corresponding corner on the mattress.</p>



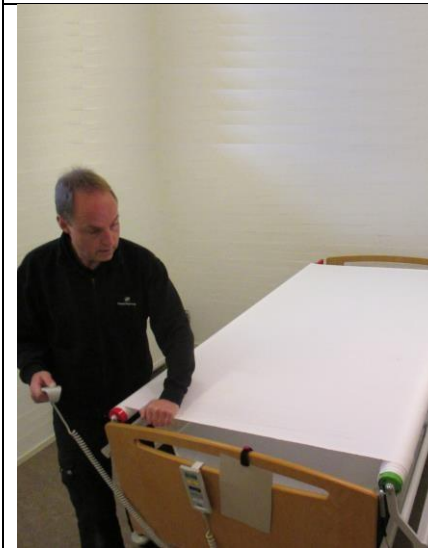
Slightly elevate the lying surfaces of the bed and with the Velcro straps attach the slide sheet to the parts of the lying surface. Make sure not to fasten the straps to the bed itself - only to the movable parts of the lying surface.



Fix the turning sheet (cf. chapter 6.13.2.). Fold the motor roll upwards. Place the sheet on the bed with the Velcro side facing down. Start at the top end of the bed and attach the sheet to the roll in one long sliding movement.



Tighten the sheet on the roll and attach the sheet in the same way on the opposite roll.



Straighten any creases by tightening the sheet forwards and backwards between the rolls. If needed guide the sheet by the hand.



Loosen the sheet allowing the center mark of the sheet to be in the middle of the mattress.




Congratulations!  
You have now completed the correct assembly and ensured a safe use of TurnAid T3





Electric Components

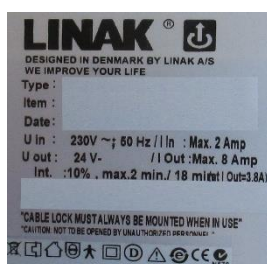
(Electric components have been assembled prior to delivery to you; you only have to plug in the plugs for the motors.)

Pos. No.	Description
1	Control CB06, for TurnAid T3
2	Cable-distribution box for open-bus cables for TurnAid T3
3	Junction box, type Linak MJB-UBL, open-bus cables
4	Hand control, type HB34, for TurnAid T3, standard
5	Gear motor for roll, incl. gear (2 pcs. mounted inside the rolls)
6	Cable for motor, type LA23 – pos. 7, L=115 mm
7	Cable between control and distribution box for TurnAid T3
8	Cable between two distribution boxes for TurnAid T3
9	Net cable for control, 230 V
10	Motor cable for motor in roll for TurnAid T3, L=1200 mm (Fitted to control box)
11	TurnAid T3 bed rail with roll right side (GREEN) - for serial no. see label on the rail
12	TurnAid T3 bed rail with roll left side (RED) - for serial no. see label on the rail
13	 Type 2 applied part

**9. Electric connection**

Connect TurnAid T3 to the power supply, 240 V, 50 Hz AC. Electrical connection preferably is made through grounded socket outlet.

Marking of control box:



If you detect damage to the electric parts, pull out the plug and call a service technician.

**10. Disassembly of TurnAid T3 and transport instructions**

In case you want to dismount TurnAid T3 from the bed, follow below instructions.

- Pull out the main cable from the socket plug.
- Pull the 2 cables from the motor rolls out of the control box, plug no. 1 and 3.
- Clip off the strips attaching the cables to the bed.



- Dismount the 2 system sides. If you can remove the parts without any cables getting stuck, it is not necessary to pull the cables out of the distribution box. (Otherwise, the locking cam on the distribution box must be taken off before plugs can be pulled out).
- Dismount fittings for electric parts. Place these parts in the bag for electric parts.
- If needed, remount the original bed rails on the bed. Follow the instructions from the bed supplier.
- TurnAid T3 has now been dismantled.
- Special packaging for storage of the system sides and the electronic units is not necessary.

Maximum transport ambient humidity and atmospheric pressure range:

- Temperature: minus 5 degrees up to 40 degrees Celsius.
- HPA - atmosphere pressure: 800 – 1060
- RH - air humidity: 20% - 90% not condensing

## 11. Maintenance and storage

In daily use you must each day check the following points. Prior to any maintenance make sure that TurnAid T3 has been disconnected from the power supply

### Daily

1. Visually check that TurnAid T3 is without damages and oblique fittings.
2. Ensure turning sheet is in good order and runs correctly on the motor rolls.
3. Slide sheet is in good order and is correctly mounted.
4. When you plug in the system to the main supply, check that the function of the hand control is correct.
5. Quick guide for use of the system is visibly close to the bed, clean, and without any damages.

### In General

Please note that only competent personal should perform maintenance of the TurnAid, and no parts serviced with patient in the system.


<b>What</b>	<b>How</b>	<b>When</b>	<b>Possible Storage</b>
The entire system	Check the entire system.	Monthly	
All system parts	Check all system parts for wear, damage, and correct function.	Once a year	Dry.
Locking parts	We recommend you to lubricate locking parts with Teflon based spray oil.	Once a year; or if they emit any noise or are very tight.	



End of motor roll	We recommend lubricating all ends of the motor rolls with Teflon based spray oil.	Once a year; if it emits any noise or is very tight.	
Cables and wires	Check cables and wires are not damaged or at risk of being damaged	Day-to-day. If you detect damages to cables or wires, order new ones for replacement or call a service technician.	Dry.
Bolts, screws, nuts, and the like	Check that all bolts, screws, nuts, and the like have been tightened. Retighten if necessary.	Day-to-day.	
Hand control(s),	Check all operating units for wear, damages and correct function.	Day-to-day; however at least once a year, where a thorough inspection is made.	Dry
Slide and turning sheet	Check sheets for wear, tear, and correct funct.	Day-to-day; especially after each wash.	

## 12. Cleaning

TurnAid T3 has two cleaning aspects: The system itself, the slide, and the turning sheets.

 Turnaid could be contaminated so wear protective clothing



**Before cleaning: Make sure the plug for TurnAid T3 has been pulled out of the socket in the wall! Do not spill liquid on the electrical system**

<b>Part</b>	<b>Description</b>	<b>Cleaning Instruction</b>	<b>Treatment</b>
The TurnAid T3 system	TurnAid T3 has the level of sealing IP40, and is thus not flush tight.	Using a twisted cloth, wash in a solution of e.g. Virkon (or similar) and water with a twisted cloth. ⚠ NEVER USE acids, bases, or solvents during cleaning.  Having completed cleaning, disinfect the system with 70% hospitals spirit.  TurnAid T3 cannot be autoclaved  Upon washing and drying, lubricate moving parts with Triflow or similar Teflon based lubrications.	Upon completing the cleaning, check that the system is completely dry.
Slide sheet	Slide sheet in 100% polyamide. Supplied only in white.	Washed at 95°C.	÷ machine drying ÷ ironing
Turning sheet	Turning sheet in 100% cotton. Supplied only in cotton.	Washed at 95°C.	÷ machine drying + ironing at ••

After cleaning, always check the functionality of the TurnAid T3.

### 13. Storage

Storage demands:

Maximum storage ambient humidity and atmospheric pressure range:

Temperature: minus 5 degrees up to 40 degrees Celsius.

HPA - atmosphere pressure: 800 – 1060

RH - air humidity: 20% - 90% not condensing. Store TurnAid T3 in a dry room

### 14. Maintenance to be undertaken by the owner

Check frequently that all parts move easily and freely and that no cables are damaged. If necessary, tighten bolts. We recommend that you lubricate all the locking parts and the shaft for the roll with a Teflon based spray oil once year, if you hear any noise or it seems the system is not turning correctly.




## 15. Lubrication

Lubrication – as you find stated in chapter 11 and chapter 16.

## 16. Check - in general

<b>What</b>	<b>How</b>	<b>When</b>	<b>Possible Storage</b>
The entire system	Check the entire system.	Monthly	
All system parts	Check all system parts for wear, damage, and correct function.	Currently, however, at least once a year, with a careful inspection.	Dry.
Locking parts	We recommend you to lubricate locking parts with Teflon based spray oil.	Once a year; or if they emit any noises or are very tight.	
End of motor roll	We recommend lubricating all ends of the motor rolls with Teflon based spray oil.	Once a year; if it emits any noises or is very tight.	
Cables and wires	Check cables are not damaged or at risk of being damaged	Day-to-day. If you detect damages to cables or wires, order new ones for replacement or call a service technician.	Dry.
Motor	Safety test of the motor's yield and mechanical condition.	At least once a year.	
Bolts, screws, nuts, and the like	Check that all bolts, screws, nuts, and the like have been tightened. Retighten if necessary.	Day-to-day.	
Hand control(s),	Check all operating units for wear, damages, and correct function.	Day-to-day; however at least once a year, where a thorough inspection is made.	Dry.
Slide and turning sheet	Check sheets for wear, tear, and correct function.	Day-to-day; especially after each single washing.	

## 17. Trouble Shooting

<b>Problem</b>	<b>Remedy</b>
No light in the ON diode	No current - connect the power.
System not operating	No current - connect the power.
System not operating	Check if there is a power failure in the power supply (only if TurnAid T3 is connected to the power).
System not operating	<p>Press the  button twice.</p> <p>Check there is power to the control box. Any light in the green lamp on the box? (Has the TurnAid T3 system been connected to the power supply?).</p> <p>Press   simultaneously until the beeping stops (approx. 5 seconds), then try again.</p> <p>All plugs connected properly? Locking cams placed correctly?</p> <p>If you have just assembled and mounted the system, check that all plugs are placed correctly. Cf. view in chapter 8.</p> <p>Dismount the small motor for foot switches, plug no. 2 on the control box, and pull the plug out of the switch for 20 seconds. Then replace the plug in the switch. Now try again without connection of the motor.</p>
Motor cannot work with full load	Motor damaged - contact TurnAid ApS.
Green or red motor roll will not operate	Check that all plugs have been correctly placed in the control unit - cf. chapter 8.
Green or red motor roll can only rotate one way	Check that all plugs have been correctly placed in the control unit - cf. chapter 8.
Turning sheet is positioned in the wrong direction on the motor roll	Dismount the turning sheet from the motor rolls. Turn it and position it again according to instructions in chapter 6.13.2.
Turning sheet has/makes creases /folds during reeling	Dismount the turning sheet from the motor rolls. Straighten possible creases/folds and position it again according to the instructions in chapter 6.13.2
Slide sheet has/makes creases/folds	Dismount the slide sheet from the bed's movable lying surfaces. Straighten the creases/folds and mount it again. Cf. chapter 6.13.1.
Turning sheets does not operate smoothly over the slide sheet	Check that turning and slide sheet have been mounted correctly. Cf. chapter 6.13.1 and 6.1.2.



<b>Problem</b>	<b>Remedy</b>
	Check that turning and slide sheet have no defects. If necessary, replace a damaged sheet.

## 18. Technical Specifications

Total weight of system:	46 kg
Length of the system:	190 cm
Height of the system	57 cm
Width of the system	10 cm.
Max work load (SWL = SafeWorkLoad)	200 kg
Noise level:	>70 dB(A)
Motor system:	
Duty cycle of motor system	100%
Protection level	IPX0
Electric connection	Input: UK: 240V 50Hz A: 0,5 Input power (VA) 24V
Control box, with integrated adapter:	
Brand	Linak
Type	CB6S634+X2009
Item	CB6722-00
U in	230 V -, 50/60Hz
I in	Max 2 A
Int.	10%, max 2 min./18.min
Protection level	IPX6

The specified electric connection is valid for Denmark. If TurnAid T3 is used outside Denmark, the electric connection for the unit will be calibrated according to the power supply of the country in question.

TurnAid ApS will make available on request circuit diagrams, component parts list, descriptions, or other information that will assist service personnel to repair those parts of TurnAid T3, that are designated by the TurnAid ApS as repairable by service personnel.

## 19. Disposal

TurnAid T3 is manufacture red by an environmentally conscious supplier according to the requirements of the WEEE-directive 2012/19/EU concerning disposal of electric and electronic waste. The product may contain parts hazardous to the environment if it is disposed of in refuse/recycling sites which do not comply with the regulations. To encourage that the material in TurnAid T3 is recycled as much as possible, we have marked the two system sides and the electro part with following symbol:



Upon termination of the use of TurnAid T3 we recommend following disposal (through your local recycling station):

- All electronic parts be dismantled and disposed of as electronic components.



- Metal parts which cannot be reused to be disposed of as waste.
- Sheet parts which cannot be reused locally to be combusted or otherwise reused.

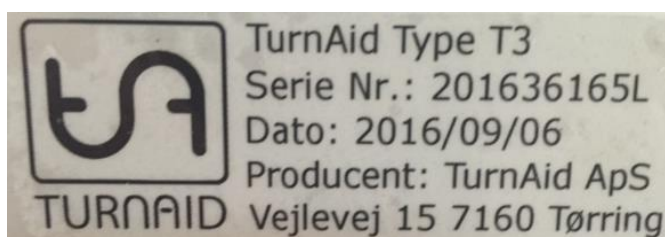
Disposal of waste must follow the rules and regulations of each country in respect of waste handling. In case of questions, do not hesitate to contact TurnAid ApS.

## 20. Marking

On the top inside of each system side you find a label, containing information about:

Type	Serial number
Production date	Producer
CE mark	Sealing class
Disposal	

Example of CE label:



## 21. Risk Assessment and Safety

### 21.1 Risk Assessment

Upon delivery, TurnAid T3 is equipped with safety functions according to the Medical Device Directive applying for the area to which the system is supplied. In case of resale of the system either in country or across the borders please be advised that you as the responsible owner/user of the system are also responsible for the equipment being equipped and mounted/assembled according to the rules for your working place.





TurnAid T3 is designed so there is NO imminent danger of wrong operation with harmful consequences for the patient or the nursing staff.


TurnAid T3 should only be used, maintained, assembled/dismounted competent persons.

- In no way try to circumvent the built in safety functions of the system.
- ALWAYS read and understand the instruction manual prior to taking the system into use.
- If the system is used other than intended, please contact TurnAid ApS.
- TurnAid T3 CANNOT operate unless it has been connected to the power supply and it has been powered on.
- TurnAid T3 has no electric back up function so unintended use of the system cannot happen if it has been disconnected from the power supply.












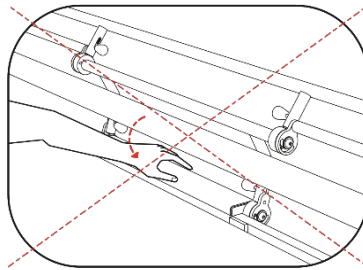


- When TurnAid T3 is connected to the power supply, it is secured against unintended movement, as the TurnAid T3 will only start by double clicking (2 long pushes)  . Unauthorised persons such as visitors or the patient cannot start the system. Should the patient accidentally be lying on a hand control, the person cannot activate TurnAid T3. Bedding on a hand control gives one long push and this is insufficient to start the system! Electrical functions were secured against unintended operation as defined double clicking on the ON button is ALWAYS needed to activate the system. Furthermore, the system has a built-in timer which will turn off the system after 150 seconds.
- Both the ON button  and the SLEEP button  work as safety stop if here should be a malfunctions of the buttons of hand control.
- To the power supply (so the motor rolls will be activated), the activated function can always be stopped if you push one of these button for more than 2 seconds. Then the motor rolls cannot be operated until you start again as usually with 2 long pushes of .

 TurnAid T3 is an auxiliary for the transfer of a patient. Observance of safety regulations in connection with the use of the system rests with the buyer.

### 21.2 Safety

-  NEVER use TurnAid T3 otherwise than stated in this instruction manual.
-  NEVER leave TurnAid T3 in "**working-position**" when a patient is in the bed.
-  ONLY use TurnAid T3 when correctly mounted.
-  Keep the hand control out of the patient's reach.
-  Warning: Risk of foot entrapment when used on a low bed.
-  Warning: Materials used on the TurnAid could cause allergies.
-  ALWAYS disconnect the system from the power supply if you have to clean, service, repair or dismount the system. No parts must be services with patient in the system.
-  Frequently check that the system's electric wires are intact and ok. All electric parts have been shielded and double-isolated. Movable parts have been secured with a spring device to eliminate the danger of clipping/squeezing.
-  When setting the 3 TurnAid T3 positions ALWAYS pay attention and care to:
  - Make sure the patient's fingers, arms, legs, hair and any connected equipment are not caught during the setting of the system.
  - Before and after setting ALWAYS check for clearance around the patient.
  - ALWAYS check that the locking pins are locked correctly after setting.
  - NEVER use force or power when setting the system.
  - Do not squeeze your hand/finger between the round metal bars when alternating position of the system.



Do not squeeze finger/hand between the round metal bars when alternating position of the system.

ALWAYS pay attention to the following and show caution:

- During a transfer, do NOT pull the patient so the person touches the bed rails.
- NEVER pull the patient over the bed side.
- Having terminated turning or transferring the patient, ALWAYS check that the he/she is bedded safely and correctly.
- Familiarize yourself with the symbols of a hand control and foot switches – see chapter 2 (Explanation of Pictograms).
- Pay attention to the location of the quick guide and use this in case you have doubts during an operation situation.
- TurnAid T3 may only be used correctly mounted and with the slide sheet below the turning sheet.
- The turning sheet must be made reasonably tight if the system is left in "**bed rail-position**" with a patient in the bed.
- When adjusting height of TurnAid T3 always make sure that there is a clearance of min 22 cm from the top of the mattress to the bed rail.
- If you change the mattress on the bed, ALWAYS evaluate the height adjustment of TurnAid T3. The mounting conditions may have changed when you remount TurnAid T3 after change of mattress.
- To fold down each bed rail the carer must use both hands. The carers both hands are consequently secured against unintentional placement, and are therefore protected from being squeezed.
- All guards are fixed mounted and cannot be easily removed.
- When changing the turning sheet with a patient in the bed, the prescribed application of TurnAid T3 ensures that he/she stays in the bed.



**WARNING:**

SGS Report No. LR / 2017/10015, EN 60601-2-52

Clause: 201.9.1.101 PROTECTION AGAINST PATIENT INTRACTION IN NON-moving PARTIES. In violation of the rules and guidelines as described in this User Guide for the TurnAid T3 Reversing System, and the TurnAid T3 is malfunctioned and left in "Work Position" / with the scrolls at the top, TurnAid T3 does not comply with Clause 201.9.1.101.

SGS Report No. E1 / 2017/10065, IEC 60601-1-2

Clause 7 - Emissions. Conducted RF Emissions. TurnAid T3 does not comply with the requirements of this clause. Conducted RF Emissions. If there are problems with emission noise, contact TurnAid Aps for replacement of power cable for TA-External power cord, and the TurnAid T3 will then meet the requirements of Clause 7.