tecfor care

INSTRUCTION MANUAL

ASSEMBLY AND OPERATION

CARE BED TYPE

Ecofit Xtra 120 / Ecofit Xtra 140

04442 - GA_Ecofit Xtra_EN_25102024

CE

Last update: 25.10.2024

Dear customer,

The team from tecfor care GmbH would like to thank you for the trust you have placed in our Ecofit Xtra care bed.
With the decision to purchase a care bed from „tecfor care“ you receive a care product with high functionality at the highest safety level.
With the purchased nursing bed we can guarantee you optimal lying comfort.
All beds are carefully checked by our staff before delivery.

The healthcare bed delivered to you has left our premises in perfect condition.
When you receive the healthcare bed, the responsibility for its proper and intended operation also passes to you at the same time.

These instructions for use inform you as the operator and your users in their daily work about the functioning and safe handling of the healthcare bed.
Please keep the instructions for use at hand near the care bed at all times.
We are convinced that our product will make a positive contribution to your care.

Best regards
Your tecfor care team

Please read and observe these operating instructions before each use!
If you change ownership, please include these instructions for use.

Example illustration with 2-part, undivided aluminum side rails

Ecofit Xtra 120
Lying surface 120 cm x 200 cm
head and foot section with solid wood panelling
Four rollers individually lockable.
with **2-part** aluminum side rails

Example illustration with 2-part, undivided wooden side rails

<u>Option:</u>
Ecofit Xtra 120
Lying surface 120 cm x 200 cm
with 3-part, undivided aluminium side rails
with 2-part, undivided wooden side rails
with 3-part, undivided wooden side rails

Example illustration with 3-part, undivided aluminium side rails

Ecofit Xtra 140
Lying surface 140 cm x 200 cm
head and foot section with solid wood panelling
Four rollers individually lockable.
with **2-part** aluminum side rails

Example illustration with 3-part, undivided wooden side rails

<u>Option:</u>
Ecofit Xtra 140
Lying surface 140 cm x 200 cm
with 3-part, undivided aluminium side rails
with 2-part, undivided wooden side rails
with 3-part, undivided wooden side rails

Note:
These instruction manual apply to the bed models: Ecofit Xtra 120 and Ecofit Xtra 140. For practical reasons, only Ecofit Xtra 120 illustrations are used here for explanation.

Before the first use:
Read the instructions for use conscientiously and completely!

⚠ Please pay particular attention to the various safety instructions. The care bed should be cleaned and disinfected before first use and before each re-use.

tecfor care healthcare beds carry the CE mark and meet the requirements for safety and functionality.
The Ecofit Xtra healthcare bed has been tested according to international standards, which include the safety requirements for medical devices.

However, these safety requirements can only be met if the user is convinced of the proper condition before using the healthcare bed (including accessories).

Please note the Medical Device Operator Ordinance (MPBetreibV, 2021).

1.1 Explanation of the symbols used

In these operating instructions, important information is indicated by the following symbols:


Read information with this symbol carefully and observe it urgently. This information is relevant to safety

This symbol warns of dangerous voltage. There is a danger to life!

This symbol warns of general dangers. There is danger to life and health.


Mark of conformity according to Medical Devices Regulation (EU) 2017/745


manufacturing date


Manufacturer of the medical device

medical device

Serial number

Protection of electrical equipment against splashing water

Symbol for device of protection class II, double protective insulation

Symbol for type B application part according to IEC 60601-1

The nursing bed may only be used indoors.

The product must be collected separately in the European Union. Disposal with normal household waste is not permitted.

Symbol for DC

Symbol for AC

Symbol for safe working load

Symbol for maximum patient weight

Symbol for reading instruction manual

1.2 Explanation of the designated groups of persons

Operator

The operator of a medical device is any natural or legal person who is responsible for the operation of the health facility in which the medical device is operated or used by its employees. Contrary to sentence 1, the operator of a medical device which is owned by a member of the medical profession or the medical industry and which is brought into a health facility by this member for use is the relevant member of the medical profession or the medical industry. A person is also considered to be an operator if he keeps medical devices ready for use outside of health facilities in his company or facility or in public space. [§2, paragraph 2, MPBetreibV, 2021]

Requirements to be met by the operator

- Please note that for you as the operator of this medical device, the requirements of the Medical Device Operator Ordinance (MPBetreibV, 2021) are binding.
- The Ecofit Xtra care bed is a medical device and may only be operated and used in accordance with its intended purpose, the regulations of the MPBetreibV, the relevant legal regulations as well as the generally recognised rules of technology.
- Only instruct persons to use this medical device who have the necessary training or knowledge and experience and who have been instructed in the medical device to be used.
- Instruct the user in the proper handling of this medical device and document the instruction in an appropriate form.
- A combination with other medical devices (including accessories) or with other objects may only be operated and used if they are suitable for use in this combination, taking into account the intended purpose and the safety of patients, users, employees or third parties.

User
The user is anyone who uses a medical device on a patient within the scope of the Medical Device Operator Ordinance (MPBetreibV). [§2, Para. 3, MPBetreibV, 2021]

User requirements
- Use the Ecofit Xtra care bed only as intended and in accordance with these instructions for use.
- Only use this product if you have been properly instructed in its use and have the necessary training or knowledge and experience (e.g. nursing staff).
- Before using the nursing bed, make sure that it is in good working order and condition.
- Observe the Instruction Manual and other safety-related information enclosed.
- If suspected serious events occur in connection with the Ecofit Xtra care bed, they must be reported to tecfor care GmbH and the responsible federal authority. Serious incidents occurring in other contracting states of the Agreement on the European Economic Area must be reported to the competent authorities of this state.
- Suspected Serious events means an event that cannot be ruled out due to an undesirable side effect of a product, a malfunction, deterioration in the properties or performance of a product, including application errors due to ergonomic features or an inadequacy of the information provided by the manufacturer is based. Such a suspected serious event can have led directly or indirectly to death, to a temporary or permanent serious deterioration in the state of health of a patient, user or other person, as well as to a serious risk to public health (refer to the Ordinance on the Reporting of Suspected serious incidents with medical devices as well as for the exchange of information between the responsible authorities - MPAMIV).

Patient / Resident
In these instructions for use, a patient is defined as a person who is in need of nursing care due to his or her illness, disability or age and is lying in a nursing bed.

requirements for the patient / resident
It is possible for the patient lying in bed to independently operate the electrical adjustment functions of the care bed via the hand switch if he has been instructed in the use of the care bed and is mentally and physically able to do so. Independent use of the care bed by the patient therefore requires that the patient can carry out the adjustment functions safely and specifically using the hand control and can also free himself from dangerous situations.

Qualified personnel
The operator's employees who are authorised to deliver, assemble, dismantle and transport the healthcare bed on the basis of their training or instruction are referred to as qualified personnel. In addition, these persons are instructed in the instructions for cleaning and disinfecting the healthcare bed.

2.1 Intended use (application environment)

Ecofit Xtra care beds are designed for the accommodation of adults with a body height from 146 cm and a body weight from 40 kg to max. 350 kg. They are suitable for use in senior residences, nursing homes and in home care - i.e. in application environments 3 and 4 - and may only be operated under the operating conditions described in these operating instructions.
Ecofit Xtra care beds are designed to alleviate or compensate for disability or incapacity and to facilitate working conditions for the caregiver. Any other use is considered improper and is excluded from possible liability.
Attention: Ecofit Xtra care beds are not designed for use in hospitals. They are not EX-protected and must not be operated in hazardous areas.
The Ecofit Xtra care beds may only be used in dry interior rooms. They are only suitable for transporting patients within the patient's room and with the lying surface adjusted to the lowest horizontal position.
The Ecofit Xtra care beds has no connection option for equipotential bonding.
You must therefore take this into account when combining the care bed with other electrical medical devices or with other mains-operated products.
The operator, as a competent person, must check whether the corresponding combination of the care bed with other electrical devices is safe during the service life and no unacceptable risks can occur.
The operator of the medical devices is responsible for ensuring that the combination of the devices meets the requirements of IEC 60601-1.
Non-electrical medical devices must comply with the IEC or ISO safety standards applicable to these devices if they are to be used / combined with the care bed.
If cables from other devices are routed in the care bed, precautions must be taken to prevent these cables from being crushed between parts of the care bed.
Take into account the information and safety instructions in the instructions for use of the electrical devices that you want to combine with the Ecofit Xtra care beds (e.g. anti-decubitus alternating pressure systems, feeding systems, infusion pumps, lamps, etc.) as well as the requirements of the IEC 60601-1 standard (in the current Version).
In this case, all bed functions must be deactivated for safety reasons for the duration of use via the integrated locking device on the hand control.

2.2 Unauthorized use

All uses deviating from the intended use, which can then also lead to hazards.

These include, for example:

- Loading of the nursing bed beyond the permissible safe working load (see para. 12.1 and type plate on bed frame)
- Operation of the care bed by the patient or occupant who has not received any instruction.
- Use of the nursing bed for children
- Try to move the nursing bed in the braked position
- Use of the nursing bed on a non-horizontal surface (max. inclination 5°)

3.1 General safety instructions

Possible potential dangers which may occur despite proper operation must be pointed out separately during the instruction. Before initial operation, the user/care personnel must read the operating instructions carefully and in detail.

No objects or body parts of persons may be in the movement area of the bed while the adjustment functions are being actuated. Risk of crushing!

Ensure that the care bed cannot be operated by children playing and that there are no pets under the bed when the bed is adjusted.

If the psychological or mental condition of the patient requires it, the hand control must be locked via the lock switch on the back of the hand control (nurse key). The locking function is described in detail in par. 6.3. For this patient group it may also be necessary to place the hand control outside the patient's access area in order to avoid the danger of strangulation by cables.

Bed adjustments may only be carried out by instructed persons or in the presence of an instructed person.

If a possibly necessary side guard (side rail) is used, pay particular attention to the following instructions:

- Only use side rails approved by tecfor care GmbH as optional accessories. The permissible dimensions can be found in chapter 12.1.
- The use of incompatible side rails is not permitted and can lead to hazards, e.g. due to trapping.
- The distance between two side rails lying one above the other or between the lower edge of the lower side rail and the lying surface must not exceed 12 cm.
- Only instructed personnel may operate the side rails.
- Side rails may only be fully raised and locked or fully lowered.
- When lowering the side rails, take care not to drop them.
- No parts of the patient's body may protrude over the lying surface or touch the side rails while the adjustment function is being actuated.
- The side rails only offer protection against rolling out when the backrest and knee adjustment are in the horizontal position.
- Under no circumstances should side rails be used improperly (e.g. for climbing over or supporting).
- The distance between the top edge of the side rail and the top of the mattress in non-compressed condition must be at least 22 cm. If the distance is less than the specified minimum, use a side rail elevation.
- When in use, the side rails must not remain in a diagonal position.

Before moving the bed, disconnect the mains plug from the socket and ensure that the mains plug does not rub against the floor while moving it.
The mains plug should always be accessible so that in an emergency the device can be disconnected from the mains supply by pulling it out of the socket.

The mains cable must be exposed and must not be trapped, as it is carried with the height adjustment of the care bed. Otherwise the mains cable may be torn out of its strain relief and damaged. In addition, the mains plug can be torn out of the socket and expose electrical cores.
Cables from other devices used in the Ecofit Xtra care bed must not be pinched, crushed or pulled by the functions of the care bed. Take appropriate precautions.

If the mains supply cable or the mains plug is damaged, the complete supply cable with plug must be replaced. The work may only be carried out by the manufacturer or authorized specialists.

Do not use multiple sockets to connect the mains plug, as liquids can penetrate through them.
(Fire hazard and electrical shock)
Before cleaning and disinfecting the care bed, the mains plug must be disconnected from the mains and securely hung up. The plugs for the handset and the motors which are plugged into the control unit on the lying surface drive must be plugged in. This is necessary so that no water can penetrate the control unit.

The maximum duty cycle and safe working load must not be exceeded, otherwise safe operation is no longer guaranteed (see technical data).
The Ecofit Xtra care beds must not be used in rooms where there is a risk of explosion.
The care bed may only be dismantled if there is no patient or occupant in it.

3.2 Safety instructions for the operator

Use these operating instructions to instruct each user on safe operation before initial use.
Inform the user of any hazards that may exist if the device is not handled properly.
Only instructed persons may operate the nursing bed. This also applies to persons who only operate the healthcare bed as representatives.
According to the Medical Devices Regulation (EU) 2017/745, care beds are Class I active medical devices.
This results in obligations for you in accordance with the Medical Device Operator Ordinance (MPBetreibV) in order to ensure the permanently safe operation of this medical device without endangering patients, users and third parties. For long-term use of the systems, function checks and visible damage must be carried out and documented at least once a year (see chapter 9.2).

3.3 Safety instructions for the user

Let the operator instruct you in the safe operation of the healthcare bed.
In particular, observe the general safety instructions as described in para. 3.1.
Bed adjustments may only be carried out by instructed persons or in the presence of an instructed person.
Move the lying surface to the lowest position if you leave the nursing bed unattended with the patient. This reduces the risk of injury to the patient when getting in and out.
If malfunction or damage is suspected, immediately unplug the power cord from the outlet.
Mark the care bed as a „defect“ and take it out of operation. After that, please inform the responsible operator immediately.

3.4 Cleaning and disinfection

Before cleaning and disinfection, the mains plug must be disconnected from the mains and securely hung up. The plug for the handset and the motors, which are plugged into the control at the lying surface drive, must be plugged in. This is necessary so that no water can penetrate the control unit.
Do not immerse the electrical components in water, but only wipe them off with a damp cloth.

The electrical components must not be sprayed with a high-pressure cleaner or water jet. Only wipe disinfection is permitted.

To avoid skin irritation, always wear liquid-impermeable gloves during cleaning and disinfection work.

Attention: When spray disinfecting with alcohol-containing agents, there is a risk of explosion and fire when used over large areas.

3.5 Maintenance and repair

Maintenance measures (inspection and maintenance) and maintenance (repair) may only be carried out by persons who have at least read the safety regulations, followed these operating instructions and are qualified in accordance with MPBetreibV (2021) §5.

Maintenance, inspection and repair work are not allowed to be carried out on the nursing bed when it is in use and the patient is in it.

In order to detect possible defects in time and to ensure safe use, a technical check (visual and functional check) must be carried out by qualified personnel at least once a year according to the maintenance schedule (see chapter 9.2) after a longer period of inactivity and before each reuse.

If the tests reveal errors, damage or defects, the healthcare bed may no longer be operated. Maintenance of the healthcare bed must be carried out by qualified personnel in accordance with MPBetreibV (2021) §5.

Only original spare parts and accessories of the manufacturer may be used, otherwise all warranty and product responsibility are excluded

The 9V block battery is the energy storage device for electrical emergency lowering in the event of a power failure. The energy storage is sufficient for max. one emergency lowering and must then be replaced. If the expiry date of the batteries has exceeded, they must also be replaced immediately. As batteries are self-discharging, it is recommended to replace them every two years if they are not used. Make sure that this is an alkaline manganese battery of type 6LR61 and that only this type may be used. Empty batteries must be disposed of in an environmentally friendly manner.

3.6 Accessories

An lifting pole is supplied as an accessory whose safe working load of 80 kg must not be exceeded. The trapeze bar is not used to lift persons, but makes it easier to change from a lying position to a sitting position or to change the position. The trapeze bar must not be swivelled outside the bed and must only be used within its permissible adjustment range, which is defined by the tube holder on the bed. Otherwise the bed may tip over completely and lead to serious injuries.

Please only use mattresses that are compatible with the side rails supplied. The distance between the mattress surface in the non-compressed state and the upper edge of the upper side rail must be at least 22 cm. If the distance is less than this, a side guard must be used. As a rule, a mattress thickness of 12 cm is suitable.

Make sure that the dimensions of the mattress match the dimensions of the lying surface of your care bed. When using mattresses that are not compatible with this care bed, hazards can arise, e.g. through falling out, trapping, etc.

Another accessory for the Ecofit Xtra care beds is a bed extension that can be retrofitted and offers the option of increasing the bed length to 220 cm. Note the descriptions in Chapter 5.5.

3.7 Storage

If the nursing bed is to be stored for a longer period of time, the 9V block battery should be removed as a precaution to prevent damage to the bed from any leaking liquid.

3.8 Useful life and disposal

With correct operation and appropriate use, this care bed has an expected service life of 7 to 10 years.
The nursing bed must not be disposed of with normal household waste at the end of its service life. For environmentally friendly disposal, please contact your local authority or tecfor care GmbH.
The electrical components (power supply units, control units, drives and hand controls) of these beds are to be treated like electronic waste in accordance with WEEE Directive 2012/19/EU (Waste Electrical and Electronic Equipment) and disposed of properly.
The components used conform to the directive 2011/65/EU (RoHS) on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

When disposing of it, please note that the bed or its accessories can be contaminated and contaminated with germs. Damage can also result in sharp edges, splintering, etc. These can lead to health risks.

Due to the modular design of the care bed, transport can be carried out effortlessly. This is made possible by a transport device. The care bed integrated in the transport frame can be manoeuvred in the narrowest space by means of the bed rollers.

As-received condition

Nursing bed in the transport device

The Ecofit Xtra care beds must be assembled and commissioned in accordance with the information in these instruction manual. Please take into account the Chapter 5.1 to 5.4.

5.1 Removal from the transport device

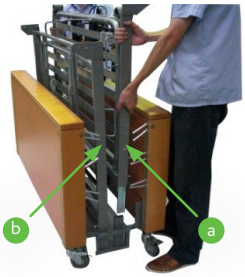
On receipt of the delivery and before assembly, check whether the packaging is damaged. Complain any visible damage immediately to the delivering company.

1. Cut the packaging tapes (if present) **(a)** with a side cutter or scissors.

2. Lift the transport carton **(b)** from the entire bed unit including the transport device.

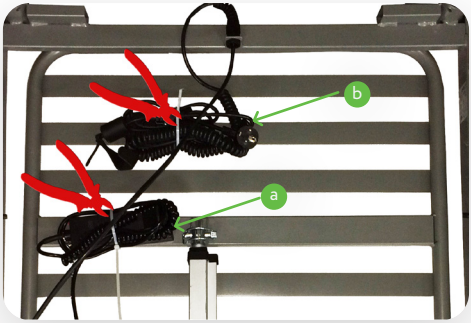
Please do not dispose of the cover! This can be used again as a dust cover when storing the nursing bed on the transport device later.

3. First lift the lying surface half for the foot end **(a)** and then the lying surface half for the head end **(b)** out of the transport device.

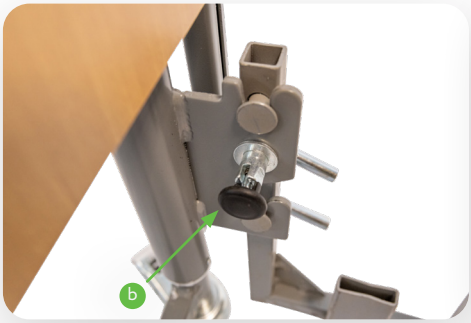


4. Remove the cable ties from the handset (a) and the power cord (b).

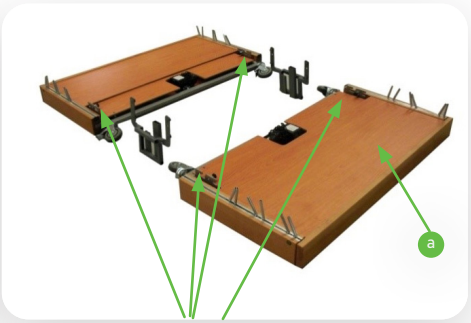
Attention! Do not damage the cable!



5. Remove the height-adjustable head and foot ends (a) from the transport device. To do this, unlock the drawbar catches (b), which will later be used to lock the height-adjustable head and foot ends to the lying surface.



Pull out and turn by 90°



Hanging brackets for the lying surface

5.2 Control of delivery and scope of deliver

On receipt of the delivery and before commissioning, check whether the nursing bed is damaged. Complain visible damage immediately to the delivering company.
After unpacking, please check that the delivery is complete. You will receive a fully assembled care bed consisting of the following parts:

a. Adjustable lying surface with mounted adjustment drive and control box

b. Half of the lying surface thigh rest with mounted adjusting drive

c. 2 x height-adjustable bed end pieces mounted height adjustment drives, castors

d. Lifting pole

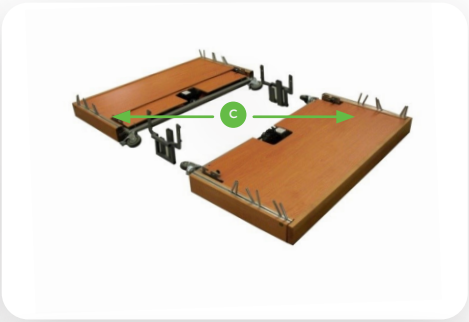
e. Triangle handle with belt strap

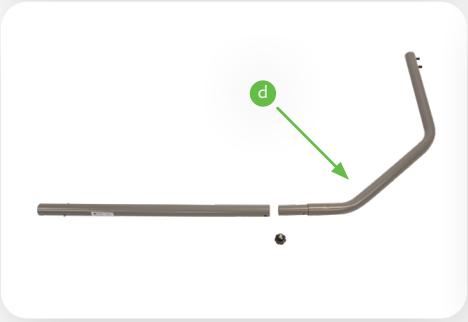
f. SMPS power supply with power cable

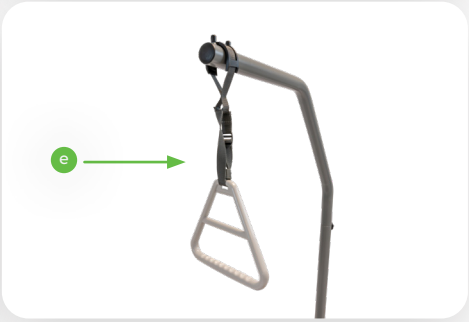
g. Hand switch with locking device

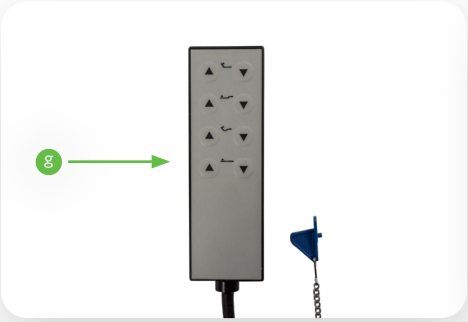
h. 4x Alu-side rails or 6x Alu-side rails

i. Instruction manual





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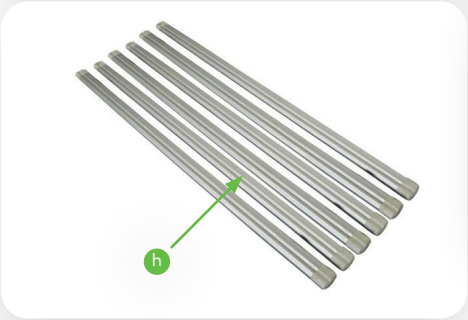
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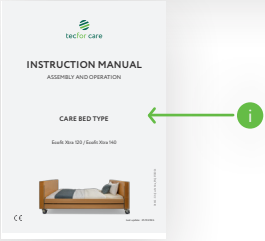
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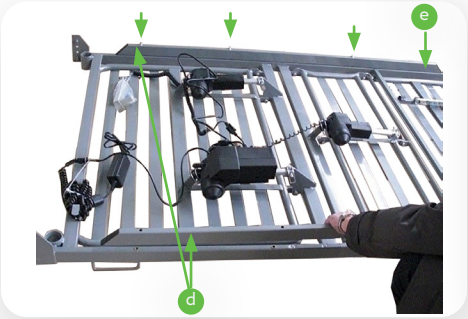
5.3 Assembly of the care bed

5.3.1 Connecting the two halves of the mattress platform

1. Now fit the two halves of the mattress platform together. To do this, push the connecting profiles (a) of the lying surface half at the head end (b) into the openings in the lying surface half at the foot end (c).

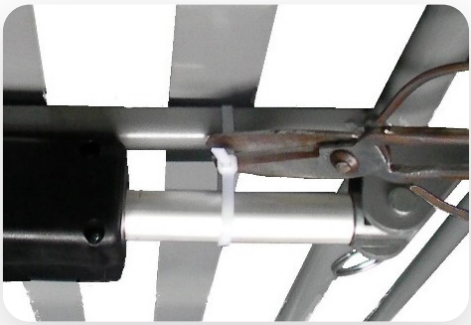
2. After the two platform halves are fixed together, the two platform support bars (d) (one on each side) mounted under the lying frame and screwed tight with M8 Allen screws (e) (4 on each side).



5.3.2 Assembling and connecting the motors

1. Remove the cable tie from the backrest motors (and the attached mains adapter) and the thigh rest adjustment motor.

⚠ Attention! Keep hold of the motor in question when cutting the cable tie, as the motors can fall when they are not secured in place (with safety bolts).

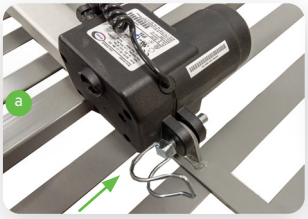


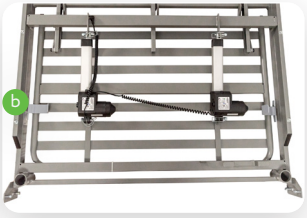
Note:
The Ecofit Xtra 1400 is provided with 2 thigh rest adjustment motors.

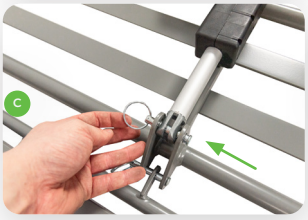
Please note
The drives are fixed in this position for transport. If the bed is adjusted with fixed drives, a first error is triggered. Therefore, loosen the safety bolt first, install the drive as described below and reinsert the safety bolt before adjusting the bed electrically!

2. Connect the fork heads of the motor units to the terminal links on the mattress base. To do so, use the safety bolt which is inserted into the hole for the terminal links. In order to loosen the bolt, throw the safety lever (or, in case of the thigh rest motor, remove the safety ring).

⚠ The safety lever must be locked again after connecting the motor to the mattress base (for the thigh rest motor, the safety ring must be put on the hole in the bolt).







a. Fasten backrest motor with safety bolt and safety clip

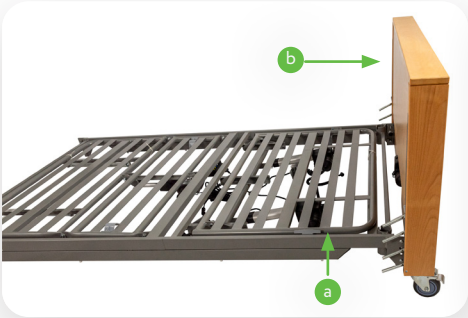
b. Backrest motor with closed safety bolts

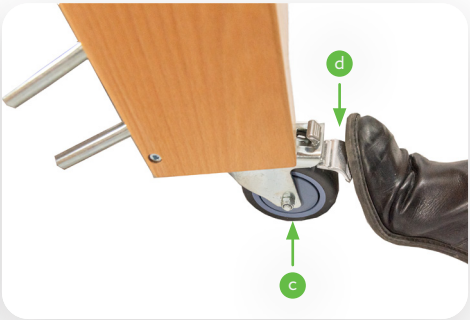
c. Fasten thigh rest adjustment motors with safety bolt and safety ring

d. thigh rest adjustment motor in the final secured state

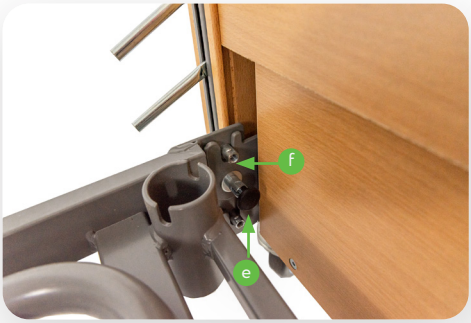
5.3.3 Fixing the mattress base to bed ends

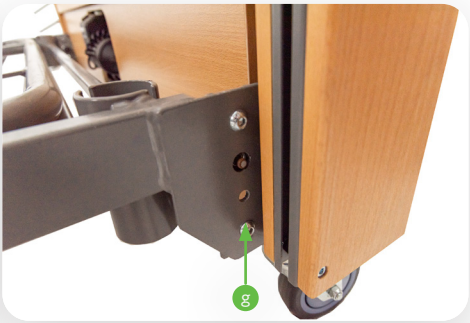
1. Now lay the mattress platform (a) on the floorand attach the first of the bed ends (head end) (b) to the mattress base.





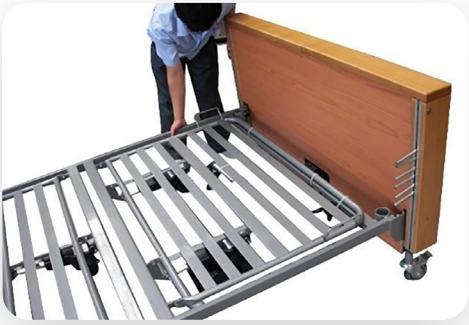
2. To do this, apply the brakes on the bed castors (c) of the care bed by pressing the brake pedal (d).





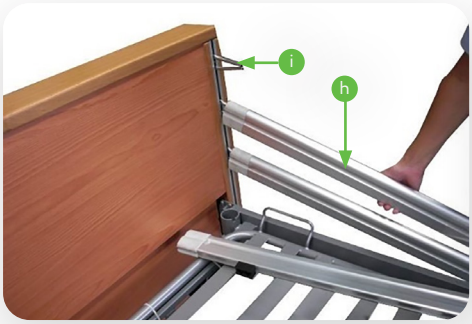
3. Release the spring-loaded catches (e) at the height-adjustable head and foot end panels, so that the mattress base can be slotted onto the mounting lugs(f).

The bolt of the Spring-loaded catch (g) must be securely latched!



4. Now slot the mattress base into place on the second height-adjustable bed-end panel at the other end of the bed. Please do not lock the Spring-loaded catch on this side, because they still have to remain open for the assembly of the wooden side rails.

5. Now slide the side rails (4 or 6 pieces) (h) onto the location bolts (i) df the side guard guides, resting the other ends of the side rails on the mattress base at the other end of the bed.



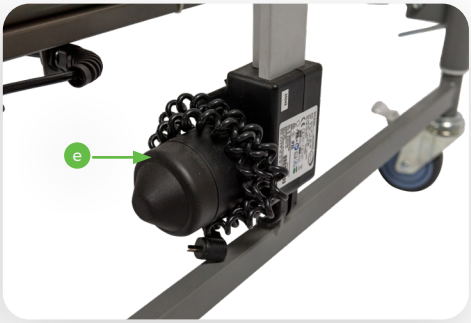
6. Now unhook the lying surface on one side (lift on one side) of the mounting tab on the side where the side rails have not yet been pushed on and pull the lying surface back so far that you can push the side rails onto the location bolts.

7. Now, the bed end panel can be pushed back up to the mattress base and secured with the locking catch. Repeat this procedure on the other side of the bed with the remaining three and then fix the two spring-loaded catches securely to the mattress base.

8. Lock the spring-loaded catches securely to the lying surface on each side of the bed..

5.3.4 Connection of the adjustment drive system

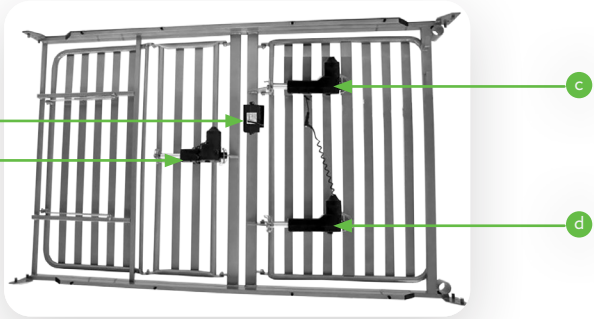
Now connect the height adjustment motors (a) and the thigh rest adjustment motor (b) to the control box (c). First remove the plug cover (d), by unscrewing the two fixing screws. The power supply cables for the height adjustment motors are wound around its housing (e). The backrest motor (f) and the hand switch (g) is supplied already plugged in. After you have inserted all the plugs, screw the plug cover back onto the power supply unit housing.



Power supply includes mains plug-cable to Safe Low Voltage Transformer.
Cable and connectors from Transformer to control box.

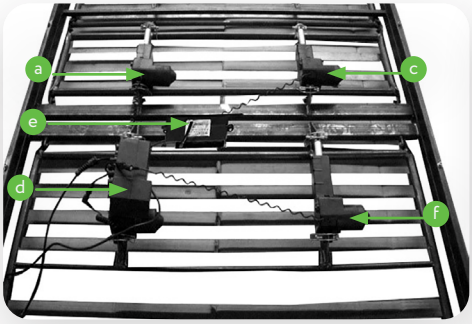
5.3.5 Connection of the lying surface drives of Ecofit Xtra 120

1. Connect the the thigh rest motor (a) to the control box (b).
2. Connect the first backrest motor (c) to the control box (b).
3. Connect the second backrest motor (d) to the first backrest motor (c).

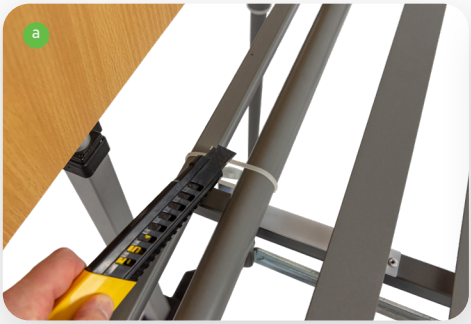


5.3.6 Connection of the lying surface drives of Ecofit Xtra 140

1. Connect the first thigh rest motor(a) to the second thigh rest motor (c) using the Y-connection cable (b) .
2. Connect the first backrest motor (d) to the control box (e).
3. Connect the second backrest motor (f) to the first backrest motor (d).



Now remove the transportation safety ties from the mattress base by cutting through the cable ties (a) with a side cutter or a knife.

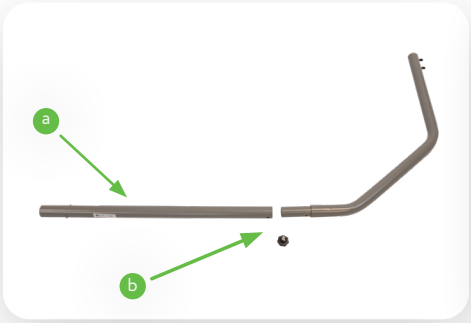


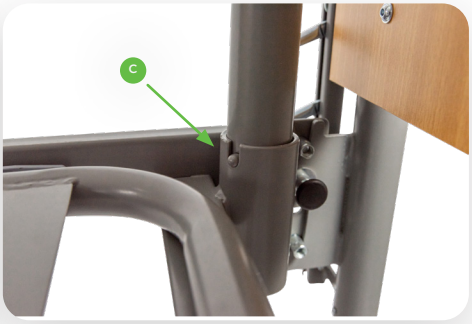
5.4 Assembly of the lifting pole

Now assemble the erecting yoke by putting the two parts together (a) and screwing the star grip screw into the threaded hole (b) and tightening it! Now insert the trapeze bar into the trapeze bar mount in the lying surface.

⚠ Make sure that the locking pin (c) engages in the bulge of the lifting pole holder.

⚠ Attention: The erecting bracket must not be used outside the latching mechanism.





Slide the fixed loop of the triangle belt over the first bolt of the lifting pole (a) and check its secure hold by pulling the triangle handle firmly downwards.

5.5 Mounting the bed extension (optional)

The Ecofit Xtra nursing home beds offers the possibility of extending the lying surface up to 220 cm by means of the integrated bed extension, in order to be able to provide even larger patients with optimal lying comfort while maintaining the same functionality.

Note: If you want to extend the Ecofit Xtra nursing home beds to 220cm, you will need the following additional components to keep the care bed in proper condition. These components must be purchased in advance.

No.	Component	Article number	Unit
1	Bed extension metal to 220cm for Ecofit Xtra 120	BC 05 004 or 01313	Set
	4x side rails	208 or 00013	
2	Bed extension metal to 220cm for Ecofit Xtra 140	BC 1.16.0150340 or 01318	Set
	4x side rails	208 or 00013	
3	20cm mattress extension (1 piece) or one mattress 120x220cm or 140x220cm	depending on existing mattress height	piece

Consider the following assembly instructions for the use of the bed extension:

⚠ The patient must not be in the nursing bed while the bed extender is being set up.

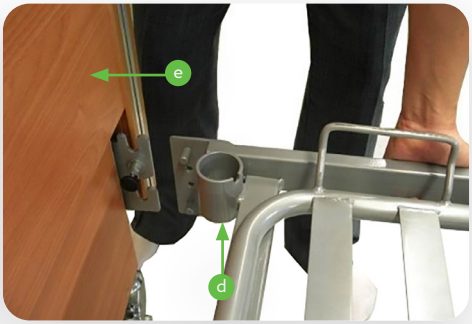
1. Remove the mattress from the care bed.

2. Dismantle the side rails. To do this, unscrew the socket screws (a) at the bottom of the foot section and pull the support block out of the side rail. For this dismantling step, the side rail bars should first be pulled up and locked in place.

3. Press the side rail lock release button (b) on one side and carefully lower the side rails until they have slid completely out of the guide rails. Keep the side rail stiles for possible dismantling.

4. Loosen the two spring-loaded catches below the mattress base frame on the foot side (c).

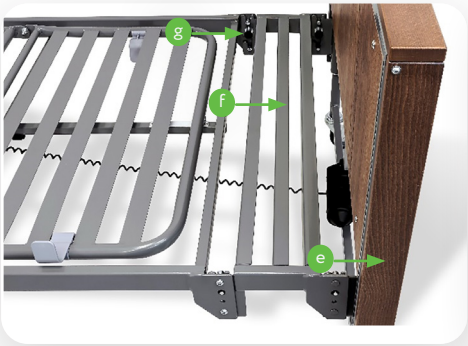
5. Lift the mattress base (d) and pull the foot section (e) out of the mattress base frame.



6. Take the bed extension (f) and hook it into the end of the mattress base frame. Then the spring-loaded catches (g) have to be engaged.

7. Place the foot section (e) behind the mattress base and lift it up to connect it to one another. To do this, hook the rear end of the bed extension into the tabs on the foot section. Then the pull catches (c) have to be engaged.

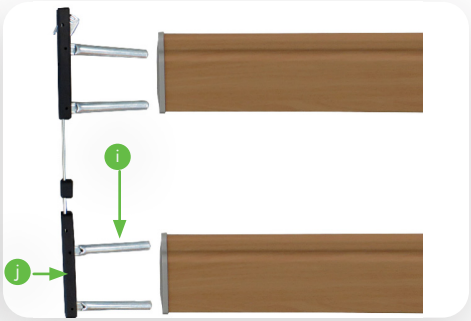
⚠ Check that all hooks are fully in the intended slot openings and that all 4 spring-loaded catches are fully engaged.



8. Insert the extended side rails (h) into the locating bolts (i) on the head side. Do this step on both sides of the bed.

9. Push the locating bolts of the side rail slider into the holes on the other end of the side rail. Do this step on both sides of the bed.

10. Insert the side rail slider (j) from below into the guide rail of the foot section and pull the side rails up until they click into place. Finally, screw in the socket screws (a) at the lower end of the guide rail of the foot section. Do these steps on both sides of the bed.



5.6 Commissioning

Connecting the care bed to the mains socket.

1. Unwind the mains cable wound up under the mattress base.

a. Bracket for winding up the mains cable

b. Uncoil the coiled power cord!

2. Lay the mains cable over the crossbar from the head or foot end as shown in the illustration. This reduces the risk of running over the power cord when the bed is moved. Always avoid running over the power cord!

3. Insert the mains plug into the socket.

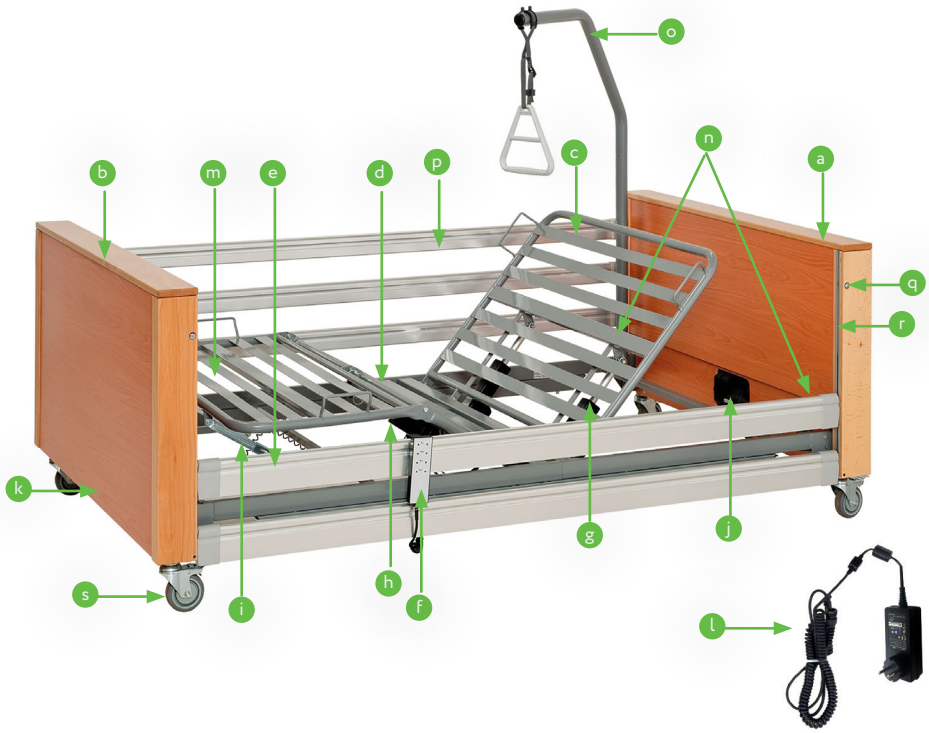
⚠ The mains plug should always be accessible so that in an emergency the system can be disconnected from the mains supply by pulling it out of the socket. The electric actuators are now ready for operation.

After successful execution and observance of all steps from chapter 5, paras. 5.1 to 5.4, the Ecofit Xtra care bed is ready for operation.
After the care bed has been installed, carry out a check in accordance with Chapter 9, Para. 9.2.
Clean and disinfect the bed before using it for the first time and before each use according to chapter 7.

5.7 Disassembling the care bed

Always disconnect the mains plug from the socket before dismantling!
Disassembly of the care bed is carried out in reverse order to the assembly.

6.1 Technical overview



a. Head end with integrated height adjustment

b. Foot end with integrated height adjustment

c. Electrically adjustable backrest

d. Electrically adjustable thigh support

e. Mechanically adjustable lower leg support

f. Hand switch with nurse key

g. Electric drive for backrest with slide-on power supply unit

h. Electric drive for thigh support

i. Mechanical grid fitting for adjusting the lower leg support

j. Electric height adjustment drive at the head end

k. Electric height adjustment drive at foot end

l. Mains cable with SMPS

m. Mattress guide

n. Tube holder for erecting bracket (on both sides)

o. Erecting bracket with triangle handle

p. Aluminium side rails (4 or 6 pieces)

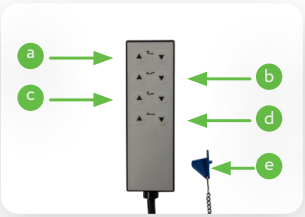
q. Release button for side rail locking

r. Side rail guide

s. Mechanically adjustable castors with single parking brake

6.2 Handset with locking function

The electric bed functions can be operated via the handset. All functions can be locked with the nurse key.



a. Backrest adjustment up/down electric infinitely variable 0°-70°

b. Thigh adjustment up/down electric infinitely variable 0°-30°

c. Backrest and lower leg section simultaneously up/down

d. Lying surface up/down

e. Nurse key

f. Hand switch hook

g. Lock for activating/deactivating the handset functions

⚠ To avoid damage, the hand control should always be suspended from the hand control hook when not in use (e.g. lying surface frame or side rails).

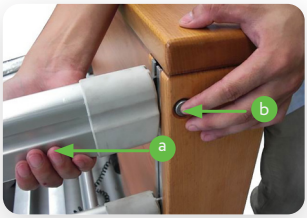
⚠ Do not press multiple keys at the same time as this may overload and damage the system.

6.3 Locking function for handset

There is a lock on the back of the hand control. All electrical adjustment functions can be locked simultaneously by turning the enclosed nurse key in the lock **(a)**.

6.4 Operation of the side rails

To use the side rails, lift the upper side rail until it engages in the highest position.
To lower the side rail **(a)**, lift the upper side rail and simultaneously press the release button **(b)** for the side rail lock and release the side rail.



⚠ When the side rail is raised, always ensure that it is securely engaged!

⚠ The side rails are only intended to prevent people from falling out of bed. Do not climb or lean over them under any circumstances!

⚠ Use the following overview to check the use of the correct side rail and the permissible positions or distances of the side rail variants.

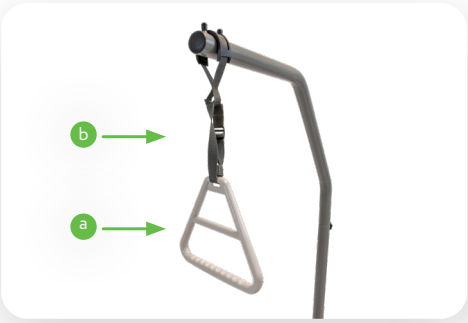
Non-split aluminium side rail, divided in two with 115mm wide uprights (item no. BC 1.09.3020000 or 01771)
Associated bed types: Ecofit Xtra 120 and Ecofit Xtra 140

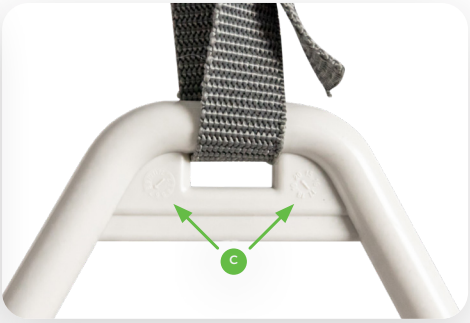
Non-split aluminium side rail, divided in three with 95mm wide uprights (item no. BC 1.23.0080001 or 01743))
Associated bed types: Ecofit Xtra 120 and Ecofit Xtra 140

6.5 Lifting pole with triangle handle

With the help of the , the patient can stand up and move more easily into another position. A triangle handle (a) is attached to the lifting pole.
The length of the strap of the triangle handle can be adjusted by the buckle (b).
Select an adjustment that allows the user to easily reach the handle when lying down (usually between 55-70 cm measured from the upper edge of the mattress). The triangle handle has a shelf life of at least 5 years under normal use.
(see embossing of production date) (c). Afterwards it is recommended to replace the triangle handle.

⚠ Make sure that the belt is securely fastened again.

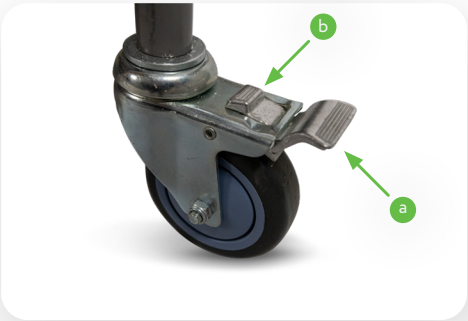




6.6 Operation of the track rollers

All rollers of the bed can be locked and must always be locked during normal operation. This is total locking, i.e. directional locking and simultaneous braking of the roller.

⚠ The brake may only be released to move the bed! See also safety instructions!



a. Pedal lever for releasing the locked brake

b. Step lever for locking the track roller

6.7 Emergency lowering

6.7.1 Emergency lowering via integrated 9V battery (electric)
The control unit mounted on the lying surface is equipped with a 9V block battery, which enables the individual electrical adjustment functions to be lowered in the event of a mains power failure. If the mains power should fail, you have the option of returning the electric drives to their lowest position. Please note that this is only possible once per 9V battery, as the capacity of the 9V battery is very limited.

⚠ After using the emergency lowering once, the 9V block battery must be replaced with a new equivalent one. (Alkaline manganese battery type 6LR61)
However, the 9V block battery should be replaced every 2 years even if not in use.

6.7.2 Battery replacement
To replace, check or remove the 9V battery for longer storage, the battery must be removed from the battery compartment of the control unit, which is installed under the lying surface.
Replace the battery as follows:

- Disconnect the mains plug!
- Remove the plug lock by unscrewing the two cross-head screws.
- Pull the battery compartment together with the 9V battery out of the control unit (a)
- Disconnect the batteries from the battery clip
- Replace the batteries with new equivalent batteries of the type „Alkali-Manganese battery type 6LR61
- Slide the batteries back into the battery compartment.
- Close the battery cover again

⚠ Make sure that the seal is not damaged and that the fastening screws of the plug lock are not overtightened when tightening.

6.7.3 Emergency lowering of the backrest (manual)
If the backrest has to be lowered in less than 30 seconds in the event of a power failure or the electric drive system of the nursing bed has failed, you can lower the backrest manually.

⚠ Observe these safety and implementation instructions, as non-compliance can lead to uncontrolled falls from the backrest and thus to serious injuries for the user and the patient!

⚠ Always carry out the emergency lowering of the backrest by hand with two users!

⚠ Manual emergency lowering may only be carried out by instructed users and should be practised several times under normal conditions in order to be able to lower the backrest safely in an emergency.

Execution of mechanical emergency lowering:

- The first user relieves the backrest before the emergency lowering by lifting the frame and holding it in this position. If necessary, the second user supports this process.
- The second user folds the bent safety clip of the pin at the end of the backrest lift motor **(a)**.
- Then he pulls the socket pin out of the lifting rod. The lift motor is now separated from the backrest and swivels downwards **(b)**.
- Both users lower the backrest slowly and in a controlled manner.

Restoration of the original condition:

- Swivel the lift rod of the lift motor up again in the direction of the backrest.
- Insert the socket pin into the mounting of the lifting rod and the bed frame.
- Make sure to reinsert the socket pin from the operator side so that it is accessible at all times.
- Close the safety clip on the socket pin.

6.7.4 Trendelenburg / Antitrendelenburg function (option)

Optionally, the Trendelenburg positioning function or Anti-Trendelenburg positioning function is available for the Ecofit Xtra nursing beds.

In Trendelenburg positioning, the lying surface of the nursing bed is inclined towards the head (a).

In the case of Anti-Trendelenburg positioning, the support surface is inclined towards the feet (b).

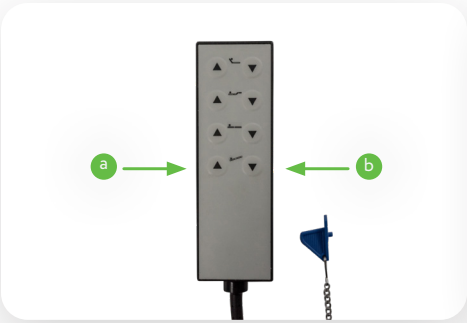
Trendelenburg positioning may only be used at the instigation of a doctor, as it can have an effect on the clinical condition of the patient.

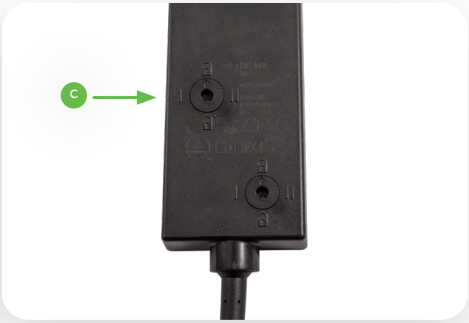
Do not leave the patient unattended during Trendelenburg or anti-Trendelenburg positioning.

Another handset HC140 (item number LI-500287) is required for the Trendelenburg function or the Antitrendelenburg function. Only this handset may be used in combination with the Ecofit Xtra care beds.

Locking function on the hand switch for the Trendelenburg / Anti-Trendelenburg function: If the care bed is optionally equipped with the Trendelenburg / Anti-Trendelenburg function, this function can be locked separately, i.e. independently of the locking function (c) of the general adjustment functions (see Chapters 6.2 and 6.3) on the back of the hand control with the nurse's key.

Lock the Trendelenburg function when using the care bed in application environment 4 (home care).





Before cleaning and disinfecting, the mains plug of the care bed must be disconnected from the mains and hung up securely.
Clean and disinfect the Ecofit Xtra care bed before first use and before each reuse. The care bed should be wiped by hand with a damp cloth for cleaning. We recommend suitable cleaning and care products as cleaning agents for wooden and plastic furniture.
Household cleaners without ammonia and abrasives are also permitted, but should be dermatologically tested.
Solvents and abrasives are not permitted as they attack and damage the various surfaces of the healthcare bed.

For disinfection:
Note: In order to achieve effective disinfection, the nursing bed must be cleaned beforehand. Disinfection is possible by spray or wipe disinfection with commercially available disinfectants. Do not use disinfectants containing chlorine as they can have a corrosive effect on metals, plastics etc. and are not environmentally friendly.
For wipe disinfection (surface disinfection) we recommend approved disinfectants and disinfection procedures from the list of disinfectants and disinfection procedures tested and approved by the Robert Koch Institute (https://www.rki.de) or from the VAH disinfectant list (Verbund für Angewandte Hygiene e.V. / https://vah-online.de).

Before cleaning and disinfection, the mains plug must be disconnected from the mains and securely suspended. The plugs for the handset and the motors which are plugged into the control unit on the lying surface drive must be plugged in. This is necessary so that no water can penetrate into the control unit.

The electrical components must not be sprayed with a high-pressure cleaner or water jet. Only wipe disinfection is permitted.

Not every malfunction is directly attributable to a defect in the nursing bed. Before contacting your dealer or tecfor care, please check the malfunction using the table below.

Disruption	Possible cause	Remedy
No function	Mains plug not plugged in	Plug in the mains plug.
	Lock function on handset activated	Unlock the handset.
	Handset not plugged in	Insert the handset into the control unit.
	Drive not plugged in	Plug the drive into the control unit.
Reversed adjustment functions	Connection cable on the sockets reversed	Check plugs and sockets and reconnect.
No function after power failure	9V block battery is empty	Replace 9V block battery.
Bed moves very slowly	Bed can only be adjusted via battery. Mains plug not plugged in	Plug in the mains plug and replace the 9V block battery preventively.

9.1 Bases

In accordance with MPBetreibV §7 (as of 2021), operators of care beds are obliged to ensure the safe and proper operation of the medical device on an ongoing basis by means of maintenance measures (inspection and maintenance).
The service life of the healthcare bed depends essentially on handling and maintenance. To ensure safe operation, we recommend that a visual and functional check, including an electrical check, be carried out at least once a year and before each reuse as a guide value, under your own responsibility and with verifiable compliance with the 2% error rate (see also DGUV regulation 3 §5, table 1B). If an error rate of <2% is demonstrably achieved during the electrical test, the test cycle can be extended to a maximum of two years.

Carry out maintenance at least once a year and before each reuse according to the maintenance schedule and the test regulations according to IEC 62353 in its current version.
The following tests according to IEC 62353 apply to our care beds:

1. Visual inspection
2. Leakage current measurement
3. Insulation resistance measurement
4. Functional test
5. Overall assessment and documentation

If you have any doubts about the safety or function of even a part of the healthcare bed during the maintenance measures described below, the bed must never be put back into operation. Then contact the supplier or manufacturer.

Maintenance, inspection and repair work are not allowed to be carried out on the nursing bed when it is in use and the patient is in it.

Electrical components must not be opened and must be replaced as a whole. Defective electrical components must be replaced by qualified personnel.

The electrical tests described here in accordance with IEC 62353 may only be carried out by a qualified electrician or, if suitable measuring and testing equipment with an automated measuring sequence is used, by an electrically trained person.

The safety assessment and documentation of the test results must be carried out by a qualified electrician who has the appropriate knowledge for testing care beds.

9.2 Maintenance schedule

Care bed Type	O	Ecofit Xtra 120	O	Ecofit Xtra 140	Class II , Type of application part B	
Accessories	O	with lifting pole	O	with 2-part alu side rails	O	with 3-part alu side rails
Serial No.:	.....		Responsible:		.....	
Location:	.....		Inspector:		.....	
	O	Test before commis-sioning	O	periodic inspection	O	Inspection after repair
Test devices used (type/inventory number):						

Pos.	Test instruction	OK	n. OK	Comment
1.	Examination of the basic prerequisite			
1.1	Is the general condition okay?			
1.2	Type plate from the nursing bed and the electrical components, legible?			
1.3	Instructions for use available and accessible to personnel?			
1.4	Appropriate and safe use?			
2.	Visual inspection			
2.1	No surface damage or corrosion?			
2.2	Mechanical components and welds without defects?			
2.3	All mechanical connecting elements are fixed?			
2.4	Lying surface floor without damage?			
2.5	irm fit and no damage to the head and foot end pieces?			
2.6	All 4 rollers undamaged and fixed?			
2.7	Parking brakes are undamaged and fixed?			
2.8	Side rails without break, crack or other damage?			
2.9	Fixed seat of the side rails in their fastening?			
2.10	lifting pole with grab handle and holder undamaged and no wear?			
2.11	Mains cable, connecting cables and plugs without damage?			
2.12	Transport protection for mains plug available?			
2.13	Strain relief for mains cable and handset securely fastened?			
2.14	All plug connections are firmly plugged in? (sealing rings without damage)			
2.15	Correct and safe cable laying? (no damage)			
2.16	Motor, SMPS power supply and mains plug housings without damage?			
2.17	Handset without damage?			
2.18	Thrust tubes of the height adjustment drives are undamaged?			
2.19	Socket pin with safety bracket on backrest drive is freely accessible for mechanical emergency lowering?			
2.20	9V block battery OK / expiration date sufficient until next test?			
2.21	Is the safe working load maintained?			

3.	Electrical test according to IEC 62353			
3.1	Insulation resistance >7MΩ? / measured value: **Note:** The measurement of the insulation resistance must be carried out in addition to the device leakage current measurement if there is any doubt regarding the insulation (IEC 62353). Examples: • if the RCD circuit breaker (residual current circuit breaker) has tripped several times, • if liquid has been spilt over the appliance and creepage distances are therefore doubtful, or • if certain parts/components or devices are present where the insulation properties can change depending on the temperature, for example heating elements.			
3.2	Device leakage current <0.1mA? / measured value: **Notes:** • Possible measurement methods Direct measurement or differential current measurement (IEC 62353) • Observe the test device manufacturer's specifications for the leakage current test • The measurement of the device leakage current does not have to be carried out in the normal life expectancy of the care bed (within the first 10 years) if the visual and functional test has been passed if these care beds are equipped with a drive set from the manufacturer limoss and a power supply unit (SMPS) from the manufacturer limoss. With these care beds, the incoming mains voltage is converted into a protective low voltage of 35V in the power supply unit (SMPS).			
4.	Functional test			
4.1	All adjustment possibilities of the nursing bed without obstacles on site?			
4.2	Does the locking mechanism for lower leg adjustment work?			
4.3	Stress test successfully carried out according to regulations?			
4.4	Function test of the handset: correct operation of the keys?			
4.5	Function test of the handset locking device: On/Off OK?			
4.6	Check of the first-error safety by means of an integrated locking box in the handset without complaint?			
4.7	Function of the side rails, secure engagement?			
4.8	Side rails run smoothly in their guide rails			
4.9	Max. Distance between the side rails 12 cm?			
4.10	Side rail height above the mattress at least 22 cm?			
4.11	Track rollers, easily rotatable by 360°?			
4.12	Wheels, individual parking brakes are functional (sufficient braking effect available)?			

Overall rating

Test passed

O No safety or functional defects were found

O No direct risk, the defects detected can be rectified at short notice

Test not passed

O Device must be taken out of service until the defects have been rectified!

O Device does not meet the requirements - Modification/ replacement of components/ decommissioning is recommended!

Remarks: .....

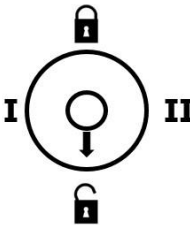
Place / Date: ..... Inspector: .....

Next test: ..... Signature: .....

9.3 Check of first-error safety by means of integrated locking function in the handset

Proceed as follows to check the safety device:

⚠ The switching positions I and II are test settings which are only used for safety checks as part of the annual inspection or after repair or before each re-use of the healthcare bed.



Check the switch positions on the back of the handset using the following four points:

- Setting the switch position 🔓 : Move all bed adjustments to a slightly raised position.
- Setting the switch position 🔒 : Electrical adjustments must not be possible when the adjustment keys are pressed.
- Set the switch on the back of the hand control to test position I: Electrical adjustments must not be possible when the adjustment keys are pressed.
- Move the switch on the back of the handset to test position II: Electrical adjustments must not be possible when the adjustment keys are pressed.

Within the scope of our terms of delivery and payment, we guarantee the perfect condition of our care beds.
In the event of unauthorised modifications to the product, improperly carried out maintenance work and use contrary to the instructions for use, warranty and product liability claims shall lapse.

The service life naturally depends on the way in which the bed is used. With correct operation and appropriate use, this care bed has an expected service life of 7 to 10 years.
The Ecofit Xtra nursing beds are suitable for re-use in accordance with the measures in chapters 7 and 9. Frequent transport, installation and adjustment reduce the service life just as much as improper handling, irregular maintenance and exceeding the safe working load or permissible load cycles of the electric drives. The healthcare bed must not be disposed of with normal household waste at the end of its service life. For environmentally friendly disposal, please contact your local authority or tecfor care GmbH.

The electrical components (power supply units, control units, drives and hand controls) of these beds are to be treated like electronic waste in accordance with WEEE Directive 2012/19/EU (Waste Electrical and Electronic Equipment) and disposed of properly.
The components used conform to the directive 2011/65/EU (RoHS) on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

12.1 Technical data (mechanical)

Safe working load (max. permissible load)	390kg	
Individual loads of the safe working load	max. patient weight	350kg
	mattress 200x120x12cm	25kg
	Accessories	15kg
	Total	390kg
Individual loads of the safe working load	80kg	
Max. Patient weight	350kg	
Min. mattress height - Max. mattress height	20cm-25cm	
Length	225 (with 200cm long lying surface)	
Width	134cm (with 120cm wide lying surface) 154cm (with 140cm wide lying surface)	
Height of upper edge of head/foot section	85 cm – ca. 126,5 cm	
Height adjustment of lying surface	electric stepless from 270-695mm	
Accessibility:	24cm	
Backrest adjustment	electrically stepless up to approx.70°	
Thigh rest adjustment	electrically stepless up to approx.30°	
Foot elevation	mechanical, -25°to 0° in 5 steps	
Angle Trendelenburg position:	15°	
Angle Anti-Trendelenburg position:	15°	
Lying surface floor	Steel spring slats	
Aluminium side rails incl. end caps can be lowered on both sides:	201 x 11,5 x 2,8cm (version 4 pieces) or 201 x 9,5 x 2,8cm (version 6 pieces)	
Track rollers	Ø 100 mm with single parking brake	
Max. Track roller load capacity	120kg (static)	
Unladen weight of the bed 120cm	170kg	
Unladen weight of the bed 140cm	178kg	
materials	frame, lying surface etc:	steel (powder-coated)
	Headboard and footboard:	wood-based material (veneered)
	Side rails:	aluminium
	Electronic components:	plastic and aluminium

12.2 Technical data (electrical)

Control + power supply SMPS	MC220 + PS1102 (Limoss company)
Handset	HC140 (Limoss company)
Nominal voltage	230V
Nominal frequency	50/60Hz
Current type	AC~
Output SMPS	35V, 1,7A
Max. power consumption	2,4A
Rated recording in idle state	0,5 watt
Switch-on cycle	Max. ED 2 Min. / Min. AD 18 Min (max. 5 switching cycles.)
Emergency lowering battery	9V block battery (Alkali-Mangan Typ 6LR61)
Protection class	II
Protection class of the motors	IPX4 (protec. against splashing water all sides)
Operating noise	<53 db(A) at a distance of 1m
Reclining surface drive backpart	2 x MD 120 (Limoss company)
Reclining surface drive thighpart	1 x MD100 (Limoss company) with Ecofit Xtra 120 2 x MD100 (Limoss company) with Ecofit Xtra 140
Height adjustment drive	2xMD121 (Limoss company)
electrical cables	Power cable: length approx. 2,10-2,60m spiral cable); 0,75mm^2 Handset cable: length approx.2,60m (spiral cable); 0,75mm^2 Motor cable: Lengths different (spiral cable); 0,75mm^2

12.3 Technical data environment

Temperature range Operation	+10°C to +40°C
Temperature range storage/transport	-20°C to +60°C
Atmospheric humidity	30% to 75% rel
Atmospheric pressure	between 795 and 1060 hPa

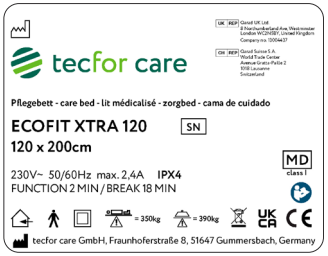
12.4 Classification

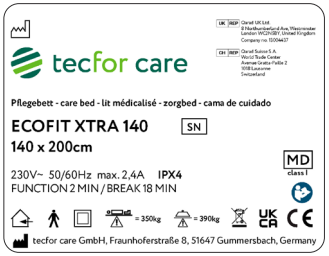
Medical device	Class 1
Degree of protection according to IEC 60601-1	Application part of type B (Protection against electricshock)
Housing protection class according to IEC 60529	IPX4 (protection against splashing water on all sides, but not suitable for wash tunnels)
Max. Duty cycle	10%, On 2Min/Off 18Min
Max. Switch-on cycles / min	5
Safety inspections	1x yearly

12.5 Weights of the individual components

Ecofit Xtra Model	120	140
Mattress base / Head side (incl. motor)	26 kg	30 kg
Mattress base / Foot side (incl. motor)	24 kg	28 kg
Head end / Foot end (lifting steel frame incl. motor and full wooden cover)	45 kg (per piece)	52 kg (prer piece)
Optional Aluminium side rails	14,5 kg/set version with 4 pieces 16 kg/set version with 6 pieces	
Patient's lifting pole	4,2kg (optional)	
Transporting device	3,4 kg	

12.6 Identification plates



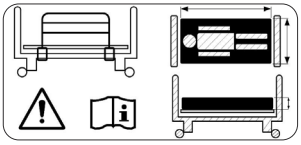


Identification plate

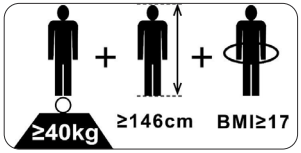
Position:
Glued to the right inside of the lying surface frame

(01)	Indicator that GTIN code follows	
04068429	Assigned base number	UDI-DI
00400	Article number	
5	Check digit	
(21)	Indicator that serial number follows	
24	production year	
01	customer	
1	Place of manufacture	
01	Bed type	
12345	Consecutive serial number	

Barcode with UDI-PI
Position:
Lying surface frame head and foot end, adjustable parts and cardboard packaging



Note:
1)Exchangeable mattresses
2)Removable side rails
Position:
Frame upper side of the bed lifting frame at the foot side



Note:
Use of the care bed for adults
Position:
Frame upper side of the bed lifting frame at the foot side

Identification plate
Lifting pole (Accessories)

Position: Lfiting pole

Identification plate
Bed extension (Accessories)

Position:
Top side bed extension

12.7 Information on electromagnetic compatibility

The care bed meets the normative requirements with regard to its electromagnetic interference emissions and its immunity to interference. Therefore, if the care bed is used as intended, no functional restrictions are to be expected due to possible electromagnetic interference from adjacent electrical devices.

⚠ Attention:
Nevertheless, the use of the care bed Ecofit Xtra in the immediate vicinity of other electrical devices should be avoided in order to prevent the care bed from malfunctioning due to electromagnetic interference. If it is necessary to use the care bed in addition to other electrical devices, the proper functioning of the care bed and these devices should be observed.

⚠ Only spare parts (mains cable, handset, motors, etc.) and accessories that have been approved by the manufacturer tecfor care GmbH may be used in order to be able to guarantee trouble-free operation of the care bed.

⚠ The use of other accessories, other converters and other cables than those provided by tecfor care for this care bed can result in increased electromagnetic interference emissions or reduced electromagnetic interference immunity of the care bed and lead to faulty operation.

⚠ Portable HF communication devices (mobile phones, two-way radios, etc.) including their accessories (e.g. antenna cables and external antennas) should not be used within a distance of less than 30 cm from the electrical components and cables of the Ecofit Xtra care bed. Non-observance can lead to a reduction in the performance characteristics of the care bed.

⚠ HF surgical equipment must not be used on Ecofit Xtra care beds, as this can lead to unpredictable malfunctions of the care bed.

⚠ The Ecofit Xtra care bed is intended for use in the following specified electromagnetic environment during its entire service life in order to maintain basic safety and functional characteristics.
The operator or user of the care bed should ensure that it is used in such an environment.
The Ecofit Xtra care bed meets the requirements of the following EMC standards for interference emission and interference immunity:

Ambient limit values of the interference emissions	
Phenomenon	operation site in the field of medical care in a home environment
Conducted and radiated interference emissions	CISPR 11, Group 1, Class B
Harmonic distortions	see IEC 61000-3-2
Voltage fluctuations and flicker	see IEC 61000-3-3

Sheathing		
Phenomenon	EMC basic standard or test method	Immunity test level
Electrostatic discharge	IEC 61000-4-2	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air
High-frequency electromagnetic fields	IEC 61000-4-3	10 V/m ;(80 MHz up to 2,7 GHz; 80% AM at 1 kHz)
High-frequency electromagnetic fields in the immediate vicinity of wireless communication devices	IEC 61000-4-3	see table Test specifications for the immunity of sheathings to high-frequency wireless communication equipment (at the end of this chapter)
Magnetic fields with energetically rated frequencies	IEC 61000-4-8	30 A/m, 50 Hz or 60 Hz
Magnetic fields at close range	IEC 61000-4-39	no magnetically sensitive components, therefore no immunity rating required

AC port for supply input		
Phenomenon	EMC basic standard or test method	Immunity test level
Short, transient electrical disturbances / bursts	IEC 61000-4-4	± 2 kV, 100 kHz repetition frequency
Surges: conductor to conductor	IEC 61000-4-5	± 0,5 kV, ± 1kV
Conducted interference induced by high-frequency fields	IEC 61000-4-6	3 V 0,15 MHz up to 80 MHz 6 V in ISM and amateur radio frequency bands between 0,15 MHz and 80MHz 80 % AM at 1kHz
voltage dips	IEC 61000-4-11	0% U_T ; ½ period at 0, 45, 90, 135, 180, 225, 270 and 315 degree
		0% U_T ; 1 period and 70% U_T; 25/30 periods single-phase at 0 degree
voltage interruptions	IEC 61000-4-11	0% U_T; 250/300 periods

DC port for supply input		
Phenomenon	EMC basic standard or test method	Immunity test level
Short, transient electrical disturbances / bursts	IEC 61000-4-4	± 2 kV 100 kHz repetition frequency
Surges: conductor to conductor	IEC 61000-4-5	± 0,5 kV, ± 1kV
Surges: conductor to earth	IEC 61000-4-5	± 0,5 kV, ± 1kV, ± 2kV
Conducted interference induced by high-frequency fields	IEC 61000-4-6	3 V 0,15 MHz up to 80 MHz 6 V in ISM and amateur radio frequency bands between 0,15 MHz and 80MHz 80 % AM at 1kHz

Patients' connection ports		
Phenomenon	EMC basic standard or test method	Immunity test level
Electrostatic discharge	IEC 61000-4-2	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air
Conducted interference induced by high-frequency fields	IEC 61000-4-6	3 V 0,15 MHz up to 80 MHz 6 V in ISM and amateur radio frequency bands between 0,15 MHz and 80MHz 80 % AM at 1kHz

SIP/SOP-Tor (Signal Input/Output Part)		
Phenomenon	EMC basic standard or test method	Immunity test level
Electrostatic discharge	IEC 61000-4-2	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air
Short, transient electrical disturbances / bursts	IEC 61000-4-4	± 1 kV 100 kHz repetition frequency
Conducted interference induced by high-frequency fields	IEC 61000-4-6	3 V 0,15 MHz up to 80 MHz 6 V in ISM and amateur radio frequency bands between 0,15 MHz and 80MHz 80 % AM at 1kHz

Test specifications for the immunity of sheathings to high-frequency wireless communication equipment				
Test Frequency (MHz)	Frequency band (MHz)	Radioservice	Modulation	Immunity test level (v/m)
385	380 to 390	TETRA 400	Pulse modulation 18 Hz	27
450	430 to 470	GMRS 460, FRS 460	FM ± 5% lift, 1kHz sine	28
710	704 to 787	LTE band 13, 17	Pulse modulation 217 Hz	9
745				
780				
810	800 to 960	GSM 800/900, TETRA 800 iDEN820, CDMA 850, LTE Band 5	Pulse modulation 18 Hz	28
870				
930				
1720	1700 to 1990	GSM 1800, CDMA 1900, GSM 1900, DECT, LTE band 1;3; 4; 25; UMTS	Pulse modulation 217 Hz	28
1845				
1970				
2450	2400 to 2570	Bluetooth, WLAN 802.11 b/g/n, RFID 2450, LTE band 7	Pulse modulation 217 Hz	28
5240	5100 to 5800	WLAN 802.11 a/n	Pulse modulation 217 Hz	9
5500				
5785				

⚠ The minimum distances for higher immunity test levels shall be calculated using the following equation.

$$E = \frac{6}{d}\sqrt{P}$$

P = maximum power in watts (W)
d = Minimum distance in meters (m)
E = Immunity test level in volts per meter (V/m)

If a test with these increased test levels is passed, the stated minimum distance of 30cm can be replaced by the new minimum distance calculated for the increased immunity test levels.

notes:

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