S 280

S 380

Instructions for use
Models S 280, S 380

VOLKER

Help

Hyperlinks

Hyperlinks are cross-references in the text. They are marked with the 🕮 symbol. Entries in the table of contents also have hyperlink functionality.

- Clicking 🕮 takes you to the relevant page.
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Version, Imprint, Type label

Instructions for use G77
Version 1.0 (06.07.2009) for Völker care bed models S 280, S 380 built after April 2005

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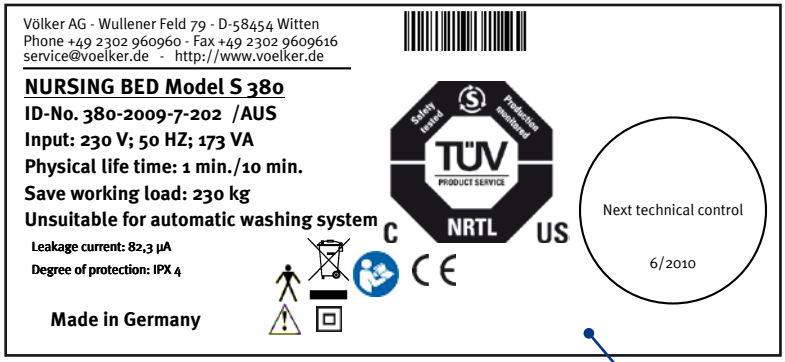
We reserve the right to make changes to reflect technical advances.

The contents of this document are subject to change without prior notification.

Customers are advised to contact the responsible area sales manager before placing an order.

Type label



The type label is located on the inside of the head panel.

Raise the rear section to read the type label.

For further information on the type label, see Appendix 📖 68.

Table of contents

Foreword

We are delighted that you have chosen Völker care beds.

We are also grateful for the trust you have placed in our company and our products.

This step is undoubtedly the result of extensive considerations and examinations of the requirements that you want to make on new care beds based on your previous experiences.

You clearly had good reasons to choose Völker care beds.

We promise you that Völker care beds will not disappoint you.

Not for nothing do Völker care beds enjoy a worldwide reputation as particularly innovative medical aids. This refers not only to the design principle, which was completely redeveloped by Völker. It also refers to the multitude of product advantages which were continually tested for their practicability in practice and improved. These will support the comfort of the occupant/patient and also help to reduce the load of daily care work.

Now, every care bed has product features that are of practical benefit to their users. However, as far as we know, none of them offers the range of advantages that a Völker care bed does.

Völker care beds not only look great, but they also offer functions that can be controlled or adjusted mechanically, although most of them are controlled or adjusted using electric motors or electronic components.

If you purchase these beds, the responsibility for their correct and appropriate use is transferred to you. Consequently, we strongly advise that you consult the enclosed instructions for use to learn about the technical features, handling and use of all the functions.

We wish you every success with Völker care beds

Heinrich Völker
Chairman, Völker Aktiengesellschaft

Notes

The **Notes** section contains information on the designated purpose of the product, as well as general safety notes.

CONTENTS

General notes

You have purchased a care bed from Völker AG. This care bed has been built in accordance with the applicable national and international standards and the regulations reflecting the current state of technology.

Völker care beds satisfy all the requirements in terms of safety and functionality. They are tested in accordance with international standards and bear the CE mark, which documents the beds' compliance with essential requirements for medical products.

Please read the general safety notes 📖 11. Please also note (with particular attention to any warranty claims) the further notes on the following pages.

Standard design

The standard design of the bed can be supplied with various options. A description of these options can be found in the section entitled Versions and options 📖 23.

Copyright protection

Warranty and liability

Völker AG is liable for any faults or failures, not including further claims arising in the context of the warranty obligations detailed in the main agreement. Claims for compensation, for whatever legal reason such claims may be raised, will not be entertained.

We reserve the right to make technical modifications as part of the further development of the care beds which form the subject of these instructions for use.

We accept no liability for damage and operational faults caused as a result of misuse and/or non-observance of these instructions for use.

The portrayal of the accessories does not necessarily match the actual product.

Correct use

Völker care bed models S 280 and S 380 are designed for the laying down and care of occupants/patients in care institutions, hospitals and in suitable rooms in residential buildings.

The bed is intended for use by people over the age of 12 or who are taller than 146 cm.

The safe working load of the bed is 230 kg (210 kg for beds built before 10/2008. The maximum permissible weight of the individual is derived by deducting the weight of the mattress, the trapeze handle and other accessories from this.

Any use of the Völker care bed other than for the purpose intended excludes the company from any possible liability.

Inappropriate use

Inappropriate use can be dangerous. This includes, but is not limited to:

- Incorrect actuation of electrical functions and uncontrolled positioning;
- Operation of the care bed by the occupant/patient without having received prior instruction in how to do so;
- Use of electrical equipment on the bed that is not intended for such use (subject to the operator's obligation to exercise care);
- Pulling on cables to move the bed;
- Loosening electrical plug connections by pulling on the cable;
- Use of the bed on a slope of more than ten degrees of inclination (the bed's brakes are designed for an angle of inclination of no more than ten degrees);
- Any attempt to move the bed while it is in braked position;
- Use of the bed for transport with a vehicle;
- Overloading of the bed beyond the specified safe working load.

⚠ **CAUTION** If, in an emergency situation, it is impossible to avoid putting children under the age of 12 or people who are less than 146 cm tall in the bed, protective covers must be placed on the side rails. This also applies to the use of the bed by weak or confused patients. The use of the bed for children under the age of 8 is absolutely forbidden.

General regulations

The care bed must only be operated and used in accordance with its designated purpose, in line with the conditions of the Medical Products Directive (MPG) and approved legislation pursuant to this, the generally-acknowledged rules of technology and the stipulations of occupational safety and accident protection guidelines. The care bed must not be operated in a faulty state that could endanger its occupant/patient, care personnel or third parties.

User training

The care bed may only be operated by individuals whose training or understanding and experience offer surety for correct handling (medical products directive).

User instruction

The thorough introduction of care personnel in the operation of the bed can be provided by Völker or its representative at the customer's request.

Attendance of such training can be certified and confirmed by Völker using the form provided for this purpose, specifying the name, date and signature.

Occupants/patients must be instructed in the use of the bed before care personnel hand over the hand control to them.

Other requirements

Whoever is in charge of the activation, operation or preparation of the bed must have been given a copy of these instructions for use (in printed or electronic form) and have read them.

To avoid operating errors and to safeguard the smooth operation of the bed, care personnel must always have access to the safety notes below.

Warning symbols
Information marked with this symbol must be read and its content strictly observed.

DANGER represents an immediate threat of danger that can cause serious physical injury or death.

WARNING represents potentially dangerous situations that can lead to serious physical injury or death.

CAUTION represents potentially dangerous situations that can cause slight physical injuries.

NOTE warns of potential damage to objects or property.

Before first activation

Before the care bed is put into action for the first time, care personnel must read these instructions for use in full and with care.

Before the bed is activated for the first time, care personnel must be instructed in the handling of the bed using the instructions for use. The potential dangers that can arise despite correct operation of the bed must also be pointed out in full.

Before and during use

Before each use of the bed, the user must be sure that the bed is in a good, safe condition and that safe use is ensured (Functional check 📖 33).

Position of the care bed

CAUTION To avoid injuries caused by falling, we recommend (except while care is being given) that the bed is generally set at its lowest position with the brake activated.

Transporting the bed

CAUTION When transporting the bed, it must always be ensured that the mains connection cable is not touching the floor.
The bed should only be moved on a solid floor. Never attempt to push it over obstacles of over 2 cm in height. The maximum angle of inclination of the floor must not exceed 10°.

Four castor central braking

⚠ **CAUTION "Risk of accident"**
If the bed is not being transported, the castors must always be in the braked position, since the bed may be required as a support for when the occupant/patient stands up or lies down. If the bed rolls away while unbraked, this can lead to a serious fall. After activating the central holding brake, 📖 36 it must be checked that the bed is actually fixed, i.e. the castors are adequately braked.

The bed can be in a non-fully-braked status even after first activation or reactivation, and consequently it must be checked that the castors are correctly braked.

One-sided load on the bed

⚠ ***NOTE*** In order to prevent one-sided loads on the bed, it must not be used as a seat for persons other than the occupant/patient (i.e. visitors must not sit on the edge of the bed).

Side rails

⚠ **WARNING "Risk of entrapment“**
In the case of occupants whose physical or mental condition makes necessary to use side rails to protect them from falling out of bed, the following safety measures must be observed:

- The legal permissibility of using side rails must be ascertained.
- The side rails may only be operated by trained care personnel.
- Ensure that the side rails (or parts thereof) are either fully raised and locked in position or completely lowered.
- It must be ensured that the occupant does not come into contact with the side rail elements when the electrical lying surface adjustment mechanism is actuated. It is also important to ensure that no part of the body is sticking out through the side rails.
- If the side rails are used with a person whose psychological condition makes their use necessary, then it must be ensured that the hand control is kept out of their reach or its functions are locked. It is strongly recommended that side rail covers are used.

- If these safety measures are not observed by care personnel, injuries can be caused to hands, knees, fingers, feet, legs and hips, along with haematomas and other injuries as a result of entrapment. In case of children or people who are less than 146 cm tall, non-observance of these guidelines can lead to death!

⚠ **WARNING "Risk of entrapment"**
On model S 280, the side rails must either be fully raised and securely locked in position, or be completely lowered.

⚠ **WARNING "Danger of injury"**
If the side rails are damaged, the bed must not be used and must be repaired.

Height adjustment

⚠ **DANGER "Risk of entrapment between the lower frame and/or floor and the bed frame when the bed is lowered"**
It must be ensured that no people, limbs, pets, bed linen or other objects are caught between the bed frame and the lower frame and/or floor.

⚠ **DANGER "Danger of movement"**
If any movement of the bed could represent a danger to the occupant/patient, all functions must be locked.

Accessories

⚠ **WARNING "Risk of injury"**
Only original Völker accessories should be used! Third-party accessories must be subjected to testing before use.

Using lifting devices

⚠ **WARNING "Risk of injury"**
No lifting device must be fastened directly to the bed (patient transport, repair).

The lifting devices specified are appliances that can be attached to the bed for transport purposes.Patient lifters can be used.

Using oxygen equipment

⚠ **DANGER "Risk of fire"**
Do not use any oxygen equipment other than that which is administered via nasal prongs or masks. Do not use the bed in a room with a potential explosion risk. (Provided it has been excluded (e.g. based on information in the instructions for use of the equipment being used) that the use of the equipment may cause the O_2 concentration to rise to such a degree that there is an explosion risk (even when there is no fault), then the equipment can be used).

Rail spacers

When using the rail spacer, please read the separate instructions for use for this accessory. During technical checks, the rail spacers should also be checked to ensure they are suitable for the size of side rail used.

Cleaning and disinfection

In order to maintain consistent functioning, the care bed should be cleaned, disinfected and tested as soon as possible following each use, so that it can be reused immediately without risk.

Dangers can arise from the incorrect cleaning / disinfection 🕮 48 of the bed.

Maintenance and repair

Anyone responsible for carrying out maintenance and repair work must at least have read the safety notes and the service manual and be qualified in accordance with MPBetreibV §§ 4 and 6.

After maintenance work or repairs have been carried out, a technical check 🕮 55 must be carried out on the affected parts and/or functions. During this check, it must be determined that the bed can be used in accordance with the specifications without risk to the occupant/patient, user or a third party.

The technical check must be carried out at least once a year and after every lengthy period of non-use.

Any discernible damage, such as signs of wear and tear, loose screws or breaks/fractures must be eliminated immediately.

Electromagnetic / static interference

The care beds in model series S 280 and S 380 satisfy the EMC requirements in accordance with the law on medical products (MPG). The basis for testing is standard EN 60601-1-2.

Functional description

The features of the Völker care bed and its function are set out in the section **Functional description**.

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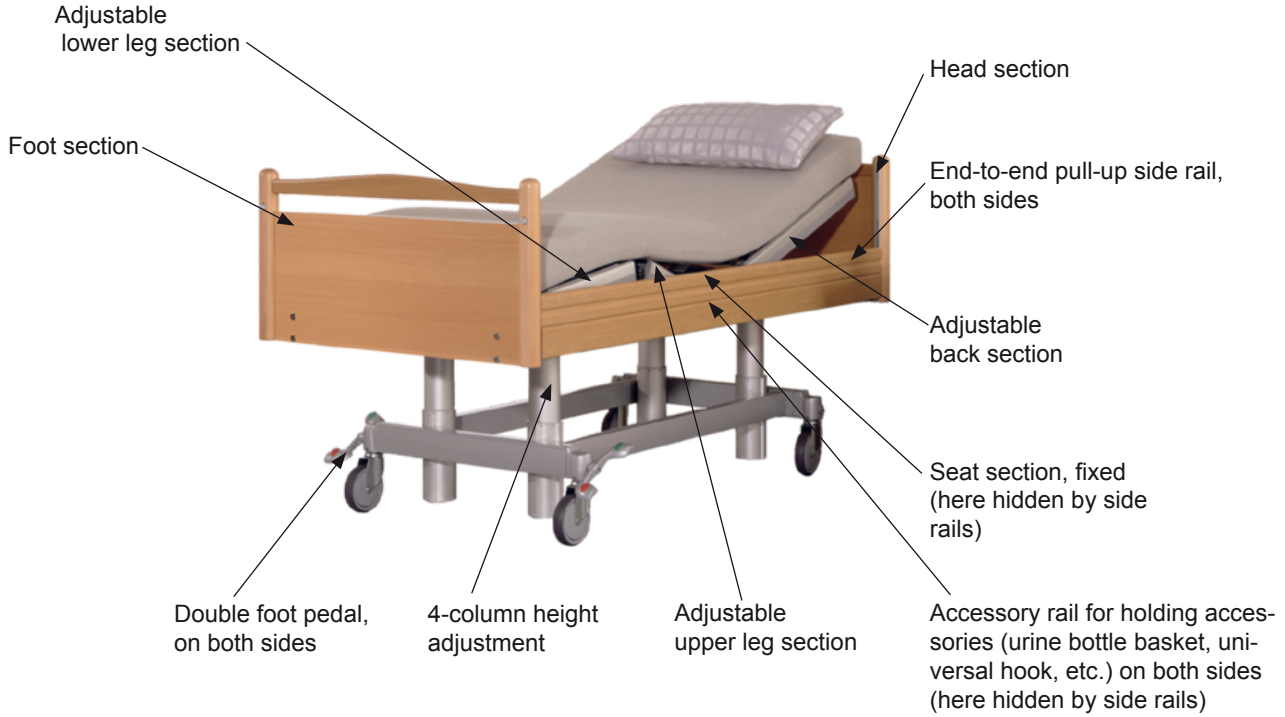
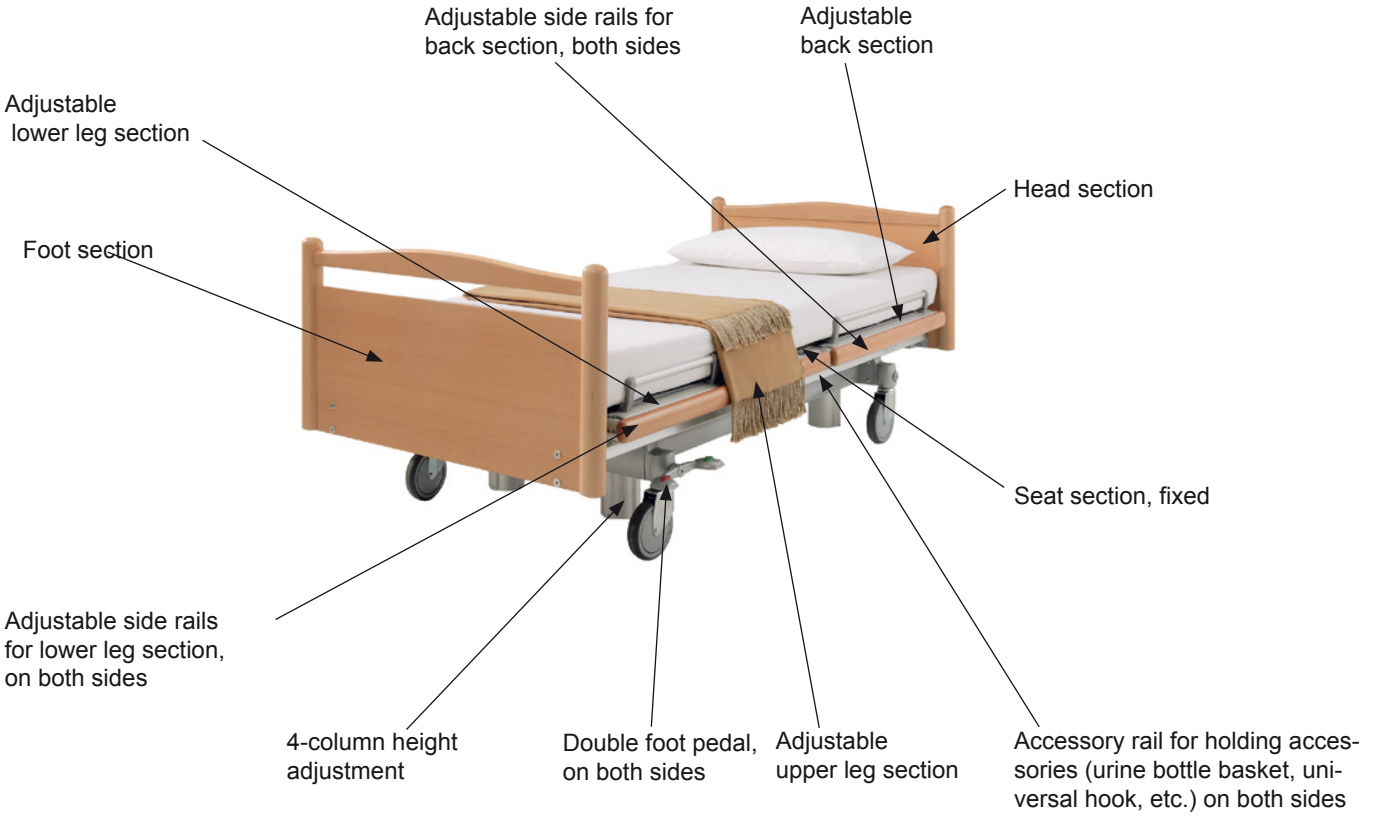

Adjustable lower leg section
Foot section
Head section
End-to-end pull-up side rail, both sides
Adjustable back section
Seat section, fixed (here hidden by side rails)
Double foot pedal, on both sides
4-column height adjustment
Adjustable upper leg section
Accessory rail for holding accessories (urine bottle basket, universal hook, etc.) on both sides (here hidden by side rails)


Adjustable side rails for back section, both sides
Adjustable back section
Adjustable lower leg section
Head section
Foot section
Seat section, fixed
Adjustable side rails for lower leg section, on both sides
4-column height adjustment
Double foot pedal, on both sides
Adjustable upper leg section
Accessory rail for holding accessories (urine bottle basket, universal hook, etc.) on both sides

Functional description | Hand control with hook

Back section up

Back section down

Upper leg section up

Upper leg section down

Anti-Trendelenburg positioning [1]

Auto-Contour [2] (optional)

Lying surface up

Lying surface down

Reverse:

Hand control unlocked

Hand control locked

WARNING When actuating motorised adjustments with the side rails raised, it must be ensured that the occupant/patient does not have any contact with the side rails, and that no parts of his or her body or that of other people are sticking through the side rails or are trapped between the lying surface and the lower frame and/or floor!

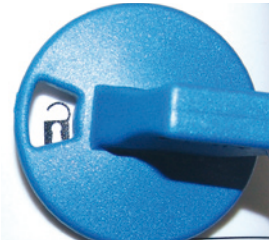
[1] Head end raised

[2] Back and upper leg section raised

Lying surface up | Anti-Trendelenburg positioning [1] | Upper leg section up | Back section up

Lying surface down | Auto-Contour [2] (optional) | Upper leg section down | Back section down

Reverse:



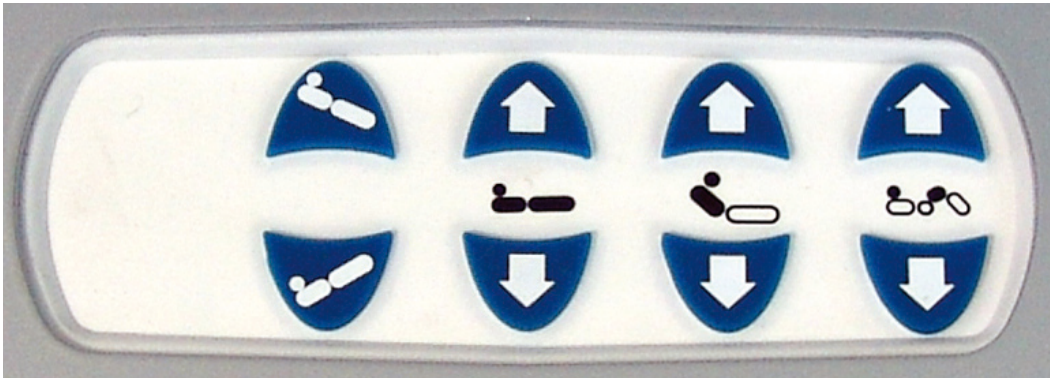
Hand control unlocked

Hand control locked

⚠ **WARNING** When actuating motorised adjustments with the side rails raised, it must be ensured that the occupant/patient does not have any contact with the side rails, and that no parts of his or her body or that of other people are sticking through the side rails or are trapped between the lying surface and the lower frame and/or floor!

[1] Head end raised

[2] Back and upper leg section raised



[1] Head end raised

[2] Head end lowered

[3] The nurse keypad can be equipped with an automatic function (double-click) on a country-by-country basis (see next page).

⚠ **WARNING** When actuating motorised adjustments with the side rails raised, it must be ensured that the occupant/patient does not have any contact with the side rails, and that no parts of his or her body or that of other people are sticking through the side rails or are trapped between the lying surface and the lower frame and/or floor!

Reverse:

Keypad unlocked

In this position, the keypad and hand control are completely locked.

Double-click function "Lying surface up/down"

The nurse keypad can be equipped with an automatic function (double-click) for lying surface height adjustment on a country-by-country basis.

With a double-click on the "Lying surface up" or "Lying surface down" button, the lying surface moves to the highest or lowest position, respectively. This function can be stopped at any time by pressing any button.

⚠ **WARNING "Risk of entrapment"**
If the double-click function is being used, the care giver must supervise the bed occupant/patient until the adjustment procedure has completed.

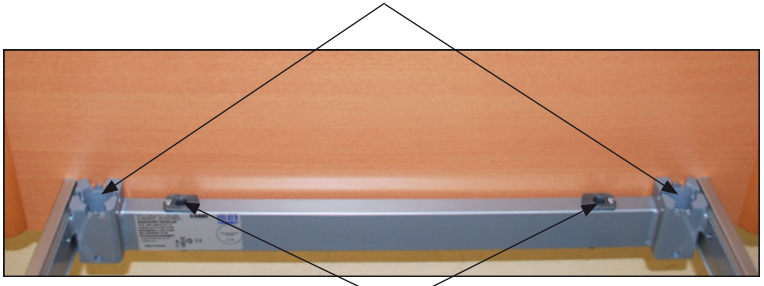
⚠ **DANGER "Risk of entrapment between the lower frame and/or floor and the bed frame when the bed is being lowered"**
It must be ensured that:
No people, limbs, pets, bed linen or other objects are trapped between the bed frame and lower frame and/or floor during adjustment manoeuvres.

On the inside of the head panel are holders for the trapeze bar and accessories.

The trapeze bar and other accessories must be slotted into the holders until they audibly engage.

⚠ **WARNING "Risk of injury"**
Ensure that the trapeze bar is completely slotted into the holder and securely seated.
Note: the safe working load of the trapeze bar is max. 75 kg.

⚠ **WARNING "Risk of falling"**
The trapeze bar must not be used by the occupant as an aid for climbing into the bed.
The trapeze bar must never jut out beyond the outer edge of the bed and then be used as a pulling-up aid (e.g. when getting out of a wheelchair).



There is an accessory rail on either side of the bed to accommodate accessories.

Functional description | Versions and Options 1/2

The standard designs of the care beds can be supplied with various versions and options:

Version/option	Description
Hand control (versions)	1. With hook (standard) *:  2. Transverse on the side rail with clip (option for S 380)*: 

Version/option	Description
Nurse keypad (options)	1. In drawer:  2. In bed linen storage area:  3. Attached to the accessory rail: 

*A hand control with Auto-Contour button is optionally available

Version/option	Description
Castors	The standard design has 150 mm standard castors. Different types of castors are available as an option. The design and the diameter are variable. This can lead to the variation in the lifting adjustment area of around 20 mm.
Bed extension (option)	The S 380 model can be extended by 20 cm with a telescopic bed extension.
Side rails (versions)	Models S 280 and S 380 K (except design version LP) can be equipped with various side rail versions:

	Back/lower leg section:
1.	Can be pulled out up to 34* cm (standard)
2.	Can be pulled out up to 40** cm (version S 380) Can be pulled out up to 38** cm (version S 280)

* continuously for model S 280.

** Measured from the top edge of the side rail to the lying surface (without the mattress).

These instructions for use cover all of the versions and options listed.

Precise details of the supplied bed designs can be found in the order specifications for your beds. If the original bed specification should no longer be available, please contact Völker Customer Services. Make a note of the Völker serial number (ID No.) on the type label 🕮 68 before you call.

Functional description | Accessories 1/2

In order to obtain the greatest possible degree of flexibility, Völker offers a wide range of easy-to-attach accessories. The care beds are equipped as standard with holder devices for accessories, such as drip stands and trapeze bars. Urine bottle baskets, universal hooks, standard bars, etc., can be mounted on the accessory rails provided on both sides of the bed.

Further information about accessories can be found in our current information brochure or on the Internet at www.voelker.de 🕮. Our staff will gladly provide you with more details on the accessories that are able for your bed model.

⚠ **WARNING** Only original Völker accessories should be used! Third-party accessories must be subjected to testing before use.

Mattresses

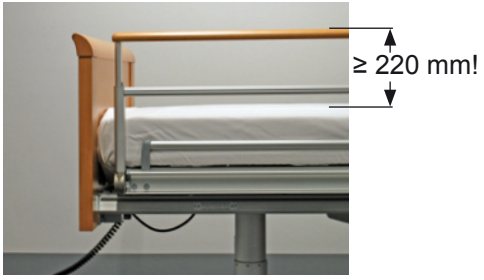
Mattress size	Mattress frame size	Density
88 x 200/210/220 x 12 cm	90 x 200/210/220 cm	40 - 50 kg/m³
98 x 200/210/220 x 12 cm	100 x 200/210/220 cm	40 - 50 kg/m³
108 x 200/210/220 x 12 cm *	110 x 200/210/220 cm *	40 - 50 kg/m³ *

* only possible for S 380 model

To minimise the risk of injury, only use mattresses with the dimensions and properties detailed above. If you do not use Völker mattresses, please contact a dealer in whom you have confidence.

⚠ **DANGER** If mattresses are used that do not match these specifications, there is a risk of suffocation!

⚠ **DANGER** The height of the raised side rail above the mattress must always be greater than or equal to 220 mm; otherwise the occupant/patient may accidentally fall out of bed. Please note that the height of the mattress has a direct influence on this.



Use of securing systems

Securing systems such as belts or straps should only be used exactly as specified by the manufacturer.

If securing systems in the form of abdominal belts are used, then it must be ensured that the side rails are completely raised. The gap in the middle of the rails must always be closed using a rail spacer .

⚠ **DANGER** When using securing systems and rail spacers, please note the separate instructions for use pertaining to these accessories.

The lying surfaces must **never** be adjusted while the patient is secured **and** must always be in the lowest position!

The lying surface adjustment functions must be locked when a patient is secured, and the hand control must be kept out of the occupant's/patient's reach!

Activation

The section entitled **Activation** describes the preparation of the bed for use, including the functional check.

CONTENTS

On-time

The maximum on-time for the electromotive bed functions is specified on the bed (type label 🕮 68) or in the technical data sheet.

1 min/10 min. means that each electromotive adjustment may be operated for a maximum of 1 minute in 10 minutes (protection against overheating).

> ***NOTE*** Should the maximum on-time of 1 minute be exceeded repeatedly or for longer, safety cutout devices on the bed may cause the electromechanical motor system to fail. The bed must not be manoeuvred using the motors until it has cooled down sufficiently! In the event of severe overloading, damage can occur to the motor.

Battery pack (option)

The battery pack in the bed has a charge capacity that is equivalent in theory to a constant operation of 2 lifting and lying surface adjustments with a working load of 230 kg.

> ***NOTE*** If the bed is parked at its location and the mains plug is not connected, this will cause self-discharging of the battery pack!
>
> Deep-discharged battery packs can be damaged to the extent that premature replacement is needed!
>
> Appropriate and correct use of the battery is essential for achieving a long service life for the battery pack!

In order to guarantee electrical functionality at all times, the bed should be connected to the mains as much as possible.

Safety cut-out device

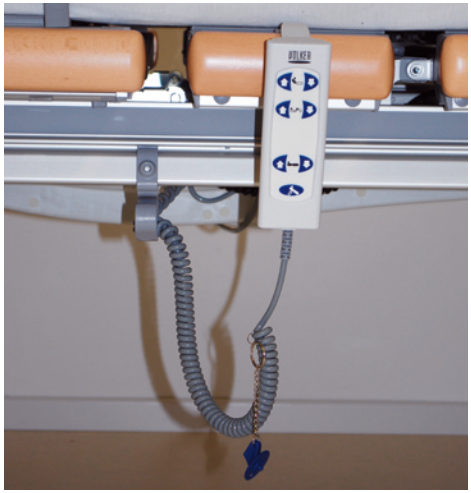
The bed is equipped with an electrical, self-resetting safety cut-out device that prevents overloading of the motor systems. In the event of very severe overloading, the bed is automatically switched off.

Conditions for set-up

The bed is only approved for use in dry rooms (technical data sheet). A mains power supply is required for operation of the bed in any suitable room.

Hand control connection

The hand control should be connected to the socket provided, where appropriate. The spiral cable must be routed so that it is not under tension.



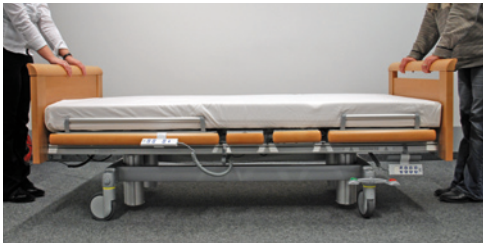
Routing the hand control cable

Bed transport

The bed can be moved without auxiliary transportation devices. If necessary, release the brakes (📖 36).

⚠ **CAUTION** The bed should only be moved on a solid floor. Never attempt to push it over obstacles of over 2 cm in height. The maximum angle of inclination of the floor must not exceed 10°.

NOTE The bed must be transported by at least two people, taking hold of the bed at the head and foot section.



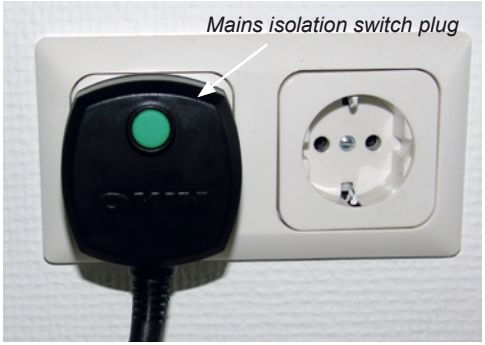
Bed transport by at least two people

⚠ **WARNING** Ensure that the plug connection between the mains cable and the lying surface adjustment motor is correctly positioned!

⚠ **WARNING** Check the mains cable for damage. If the cable is damaged, the bed must not be used and must be taken out of service immediately!

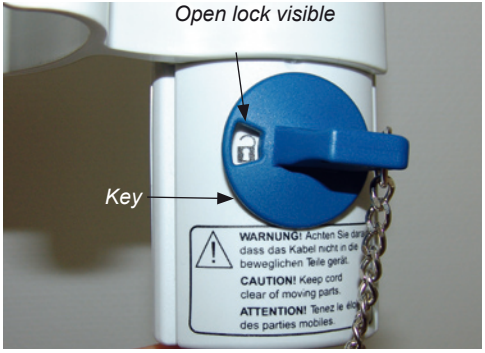
NOTE Please be aware that incorrect handling of the mains isolation switch can lead to the battery pack (option) no longer charging.
Incorrect handling can include allowing the mains isolation switch to fall, pulling the mains isolation switch cable to release it from the socket and driving over the cable when transporting the bed.

1. Connect the mains isolation switch to the mains power socket.



2. Press the green button on the mains isolation switch for a second to allow the mains connection.

3. Unlock the locking switch on the reverse of the hand control and the nurse keypad (option) using the key (open lock visible) in order to activate the bed's electrical functions.



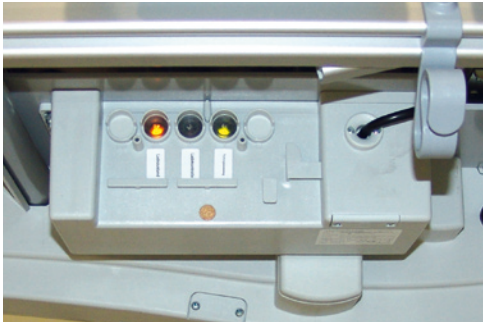
Activation | Using the battery pack (option) 1/2

The battery pack (option) allows the bed to be operated independently of the mains supply for at least two adjustment cycles.

The LED displays three colours:

Green	The battery pack is connected to the mains supply. The charging cycle is running.
Orange	The battery charger is being charged. The bed should not be operated independently of the mains supply.
Red	DANGER ZONE. The battery pack must be charged. The bed cannot be operated independently of the mains supply.
All lights off	The battery pack is fully charged: the mains cut-off is activated. No current flows in standby mode.

If you hear a beep, the battery pack needs to be recharged. The beep becomes weaker as the battery pack's charge diminishes. The battery pack is switched off shortly before deep discharging. After the bed is connected to the mains supply, press any button on the hand control to render it fully functional again. The battery pack is charged when it is connected to the mains after every use or if the charge has fallen too low.



NOTE If the bed is stored for a long period without being connected to the mains supply, the battery pack can discharge. The degree of discharge depends on the environmental conditions.

NOTE During the charging cycles, the battery pack is connected to the mains supply and is therefore supplied with electricity. The LED displays the battery pack's charging status during the charging cycle. The current cut-off is deactivated and current flows to the bed.

⚠ **WARNING** If electromagnetic interference occurs with other equipment in the area around the bed, please refrain from using these devices.

When the bed is being transported, it must always be handled carefully and protected from moisture.

NOTE The bed is designed for use in an ambient temperature range from 10 °C to 40 °C, with a relative humidity of 30% to 40% and an air pressure of 700 to 1060 hPa.

⚠ **WARNING** The battery pack must only be replaced by personnel trained by Völker AG.

⚠ **WARNING** If the battery pack is faulty, degassing can occur. In rare cases, this can cause deformation of the battery pack housing. If this occurs, the bed must be immediately taken out of service and taken to an adequately ventilated room without sparks (electrical or fire). Immediately inform customer services should this occur!

⚠ WARNING The battery pack must be disposed of in an environmentally responsible manner using the appropriate services. Alternatively, you can return it to Völker AG for disposal.

To activate the hand control and the nurse keypad once the bed has been activated, the function key block must be disabled 🕮 35.

Taking out of service

The bed is taken out of service by disconnecting it from the mains supply. To do this, the mains plug is disconnected from the mains socket and, if necessary, the optional battery pack disconnected from the control unit. If the bed is to be out of service for a period longer than two weeks, then the 9V battery must also be disconnected from the motor.

To disconnect the 9V block battery, remove the two screws from the battery compartment lid on the two-side drive.

Then pull the contact strip off the battery.

Visual inspection

Before each new occupancy of the bed, the following checks must be carried out:

1. Ensure the bed exhibits no visible signs of damage.
2. Ensure that the insulation of the electrical cables is intact.
3. Ensure that the next testing date has not been missed (see testing label).

⚠ **WARNING** Only undamaged beds that are still within their testing interval periods may be used!

Functional check

A functional check must be carried out before each new occupancy:

1. All electrical functions must be actuated once to their terminal positions.
2. The function of all side rails must be checked.
3. The braking function of the bed must be checked.

Once a fault-free functional check has been carried out, the bed is ready for use.

Operation

The **Operation** section provides you with all the information required to operate the Völker care bed.

CONTENTS

Operation | Key lock

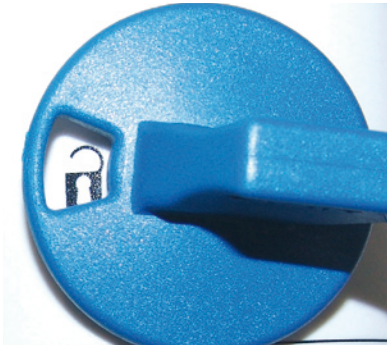
Activating the key lock disables all of the bed's electrical functions.

The locking switches are located on the reverse of the hand control and the nurse keypad (option). They are un-locked and locked with the key (open lock visible).

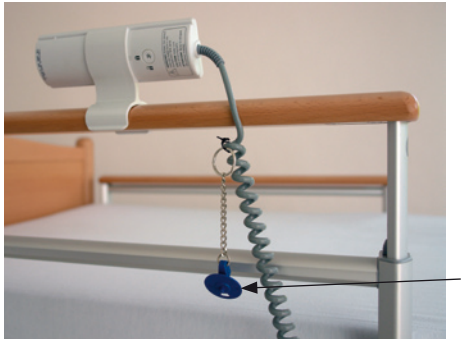
If the bed functions cannot be actuated, check whether the key lock is activated.

The key should be removed from the bed when it is not required.

Hand control or keypad locked



Hand control or keypad unlocked



If the nurse keypad is locked, the hand control is also automatically blocked (system lock).

If only the hand control is locked, the nurse keypad retains its full functionality.

To brake the bed, step on the **red spot** on the double foot pedal. As soon as the double foot pedal is engaged in a 30° position, the bed is braked.

To move the bed into the desired position, move the double foot pedal into a horizontal position.

To angle the steering castors in the direction of travel, step on the **green spot** on the double foot pedal. As soon as the double foot pedal is engaged in a 30° position, a steering castor is fixed and the bed can be controlled safely.

⚠ **CAUTION "Risk of accident"**
If the bed is not being transported, the castors must always be in the braked position, since the bed may be required as a support for when the occupant/patient stands up or lies down. If the bed rolls away while unbraked, this can lead to a serious fall. After activating the central holding brake, check whether the bed is actually fixed, .i.e the castors are adequately braked.

The bed can be in a non-fully-braked status even after first activation or reactivation, and consequently it must be checked that the castors are correctly braked.

Bed braked

Everything free

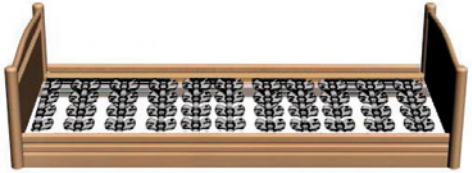
Moving position (castors engaged)

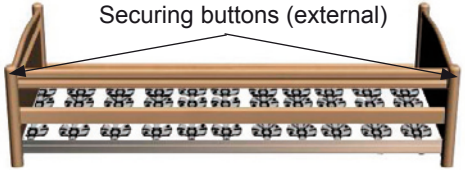
⚠ **WARNING** All people whose duties involve manoeuvring of the side rails must have read and understood the following information:

- During actuation of the back, upper leg or lower leg section adjustment, of the lift or of the side rails, it must always be ensured that the occupant/patient is not touching the side rails, and that no part of their body is sticking out through the side rails.
- If the side rails are used for an individual whose psychological condition necessitates their use, it must be ensured that the hand control is stored completely out of their reach or its functions are completely locked. In all cases, care must be taken to ensure that entrapment risks are minimized.
- Protective covers (cot side pads) are available as an accessory for the side rails. These provide additional protection against injury from contact with the side rails. The use of these protective covers is recommended for all persons for whom the risk of injury from unavoidable contact with the side rails is very high. Even with the covers, the care staff or occupant/patient must still take the necessary care when operating the bed.
- If the side rails are used, they must always be either completely raised and securely engaged, or completely lowered to the end stop. Because of the risk of entrapment, they must **never** be left in a position where they are not completely engaged.
- If the side rails are damaged, there is a risk that the patient will fall out of bed.

Raising the side rails

To raise the side rails, take hold of the grip recess and lift it first at the head end and then at the foot end until the rail audibly engages.





Lowering the side rails

Starting at the foot end, take hold of the recess grip and lift the top rail slightly. Press the button on the side and allow the side rail to lower. Repeat at the head end.

⚠ **WARNING "Risk of entrapment"**
On model S 280, the side rails must be either completely raised and securely engaged or be in the fully lowered position.

For safety reasons, the side rails cannot be released when there is pressure being exerted on them from above.

Two configurations are possible for the side rails on model S 280:

All side rails down: the bed is accessible without restriction from both sides.

All side rails up: The occupant/patient enjoys maximum protection from rolling out of bed.

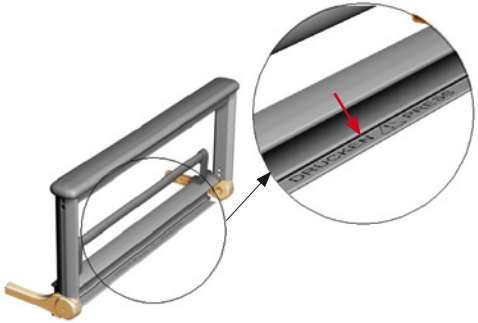
Raising the side rails

1. Pull the side rail element out horizontally until the end stop, and fold it upwards.
2. To adjust the height of the side rail, pull the telescopic section upwards until it reaches its end stop.

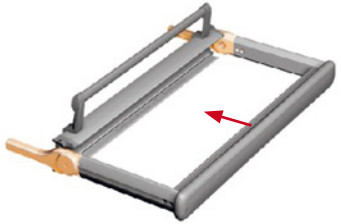
Lowering the side rails

1. Press both buttons on the outside of the frame, right under the cross-member, to bring the height-adjustable rail element to its lowest position.

2. Press the "Drücken / Push" trigger at the lower edge of the side rail element and tilt it sideways into the horizontal plane, so that it lies parallel to the floor.



3. Push the rail element completely underneath the lying surface.



The side rail elements can be used various times as required to protect the occupant of the bed/patient.

Raising all four rail elements offers the occupant/patient maximum protection.

⚠ WARNING The side rails should always be gripped with two hands at the ends of the element in question and guided upwards or downwards.

⚠ **CAUTION** Any weight on side rail elements that are pulled out horizontally must not exceed 15 kg!

NOTE Due to their exceptional stability, the side rail elements can also be used as a surface for storing bed linen (max. 15 kg) or as an additional supporting surface for care-related positions, such as Bobath treatments, or for the delivery of physiotherapy-related treatments.

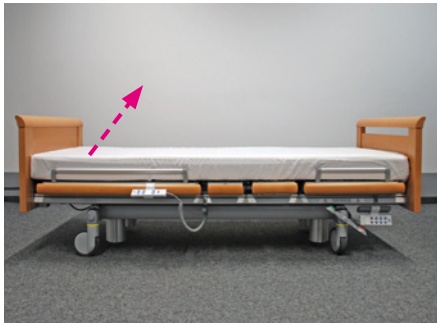
Operation | Back section

The back lying surface can be adjusted using the hand control or the nurse keypad (option).

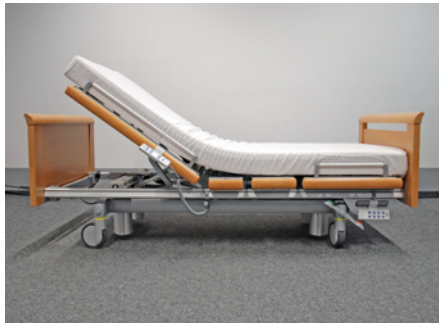
If necessary, disable the keypad lock 📖 35.

The back section of the lying surface can be raised up to an angle of max. 70°.

⚠ **WARNING** When the back section is being raised with the side rails up, it must be ensured that none of the occupant's/patient's or any other person's body parts are sticking out through the side rails or are on top of them!

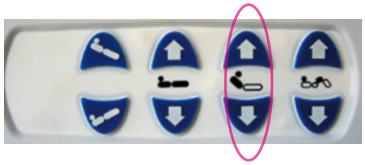


Back section up/down



Back section up/down

Hand control



Nurse keypad (option)

⚠ **WARNING "Risk of entrapment"** When adjusting the position of the back section, do not touch the frame in the area of the back section!

Operation | Mechanical rapid lowering of the back section / CPR function (option)

The S 280 and S 380 models can optionally be fitted with a mechanical rapid lowering function of the back section for resuscitation.

WARNING
The CPR function (**C**ardio**p**ulmonary **R**esuscitation function) may only be operated by qualified personnel!

Hold the back section on the mattress holder and pull the red lever located at the left or right underneath the seat section upwards to lower the back section rapidly. The back section can now be moved quickly downwards. The lowering process can be interrupted by letting go of the red lever.

WARNING The back section must always be held on the mattress holder so that the bed is not lowered suddenly with the occupant/ patient.

NOTE When the CPR function has been used, the back section must then always be lowered to its lowest position. This can be done by activating the "back section down" button on the hand control or the nurse keypad or by activating the red lever on the left or right underneath the seat section again (CPR function) and lowering the back section to its lowest position.

If this note is not observed, the back section adjustment range of 70° can no longer be fully utilised.

Red lever for mechanical rapid lowering of the back section for resuscitation:

Operation | Upper leg section

The position of the upper leg lying surface can be adjusted using the hand control or the nurse keypad (option).

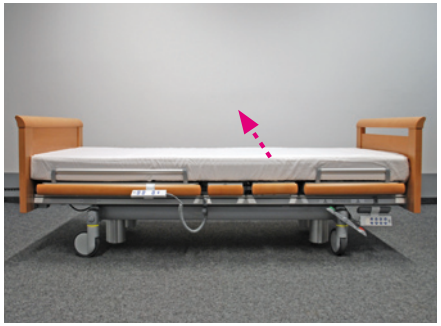
If necessary, disable the keypad lock 📖 35.

The upper leg section of the lying surface can be raised up to an angle of max. 45°.

⚠ **WARNING** When the upper leg section is being raised with the side rails up, it must be ensured that none of the occupant's/ patient's or any other person's body parts are sticking out through the side rails or are on top of them!

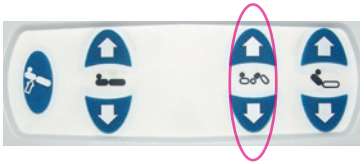
Please note that the position of the lower leg section can be adjusted by pulling on the mattress holder (or on model S 280 on the lying surface) (see also next page).

⚠ **WARNING** "Risk of entrapment with the S 380" When the position of the upper leg section is being adjusted, there is a risk of entrapment between the raised side rail and the foot section.

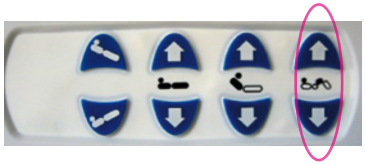


Upper leg section up / down

Upper leg section up / down



Hand control

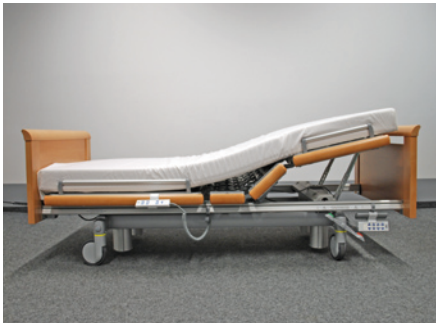


Nurse keypad (option)

Operation | Lower leg section

The lower leg section can be moved manually to any position of maximum 45° angle by pulling on the mattress holder (or the lying surface on model S 280).

To lower the lower leg section, the mattress holder (or the lying surface on model S 280) is pulled and the section lifted to the end stop and then lowered. The locking mechanism is disengaged automatically.



⚠ **WARNING** When the lower leg section is being raised with the side rails up, it must be ensured that none of the occupant's/patient's or any other person's body parts are sticking out through the side rails or are on top of them!

Operation | Lying surface height

The position of the entire lying surface can be adjusted using the hand control or the nurse keypad (option).

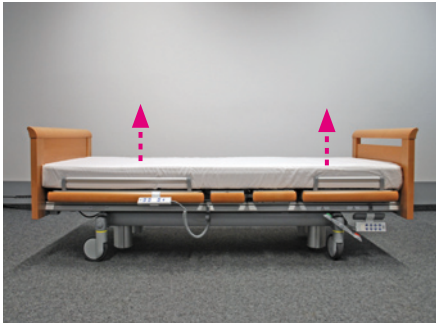
If necessary, disable the keypad lock 📖 35.

The lying surface height can be adjusted from 40 cm to 80 cm.

⚠ **WARNING** To avoid dangers to the occupant/patient from falling, we recommend that the bed be lowered all the way except when delivering care.

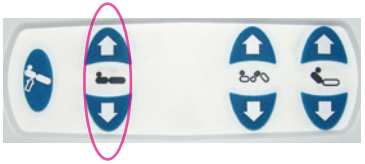
⚠ **DANGER** Before lowering the bed, it must be ensured that no people, limbs, pets, bed linen or other objects are trapped between the lying surface and the lower frame or floor. The bed's position must be stable (castors braked) when the patient is getting in and out of the bed!

⚠ **WARNING** When the height adjustment mechanism is actuated with the side rails up, it must be ensured that the occupant/patient does not have any contact with the side rails, or that any parts of either the patient's body or of other persons are sticking through the side rails!

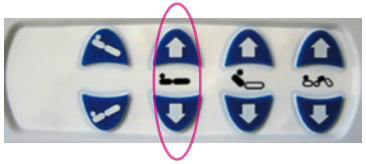


Lying surface up / down

Lying surface up / down



Hand control



Nurse keypad (option)

Operation | Anti-Trendelenburg[1] and Trendelenburg positioning[2]

Trendelenburg positioning can only be set using the nurse keypad (option).

If necessary, disable the keypad lock 🕮 35.

The Trendelenburg position can be adjusted up to an angle of 12°.

⚠ **CAUTION** If a fault occurs with the lifting function, or the mains power supply fails and the battery pack is completely discharged, the Trendelenburg function cannot be engaged. The occupant/patient may have to be placed in a different bed. With the optionally-available battery pack, all of the bed's functions remain available to you even in the event of a power failure.

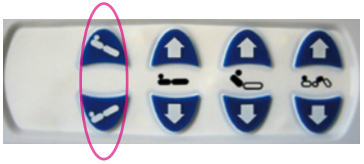
⚠ **WARNING** Since the Trendelenburg position depends on clinical indications, it must only be used with appropriate clinical approval.

The lying surface is automatically returned to its horizontal position if it is moved to its highest or lowest position.

Anti-Trendelenburg positioning [1]

Anti-Trendelenburg positioning [1] and Trendelenburg positioning [2]

Hand control

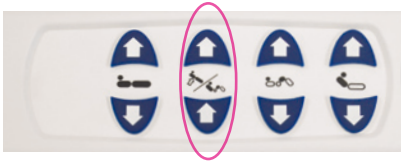


Nurse keypad (option)

[1] Head end raised
[2] Head end lowered

Occupants/patients who are unable to leave the bed either because their circulatory system is too unstable or they first have to be "taught" how to sit can gain a lot of benefit from the comfort seating position as it provides an active sitting position in the bed.

Anti-Trendelenburg positioning



Auto-Contour

Hand control with anti-Trendelenburg positioning and Auto-Contour (option)

Adjusting the comfort seating position

1. Move the back and the upper leg section upwards a little to a comfortable position.
   You can alternatively reach this position in a single step by pressing the Auto-Contour button .
2. Swivel the bed to the comfort seating position by pressing the Anti-Trendelenburg button .

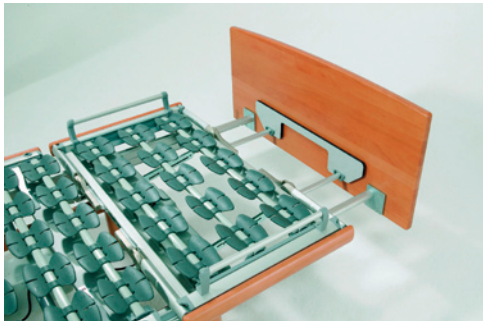
Restoring the straight lying surface

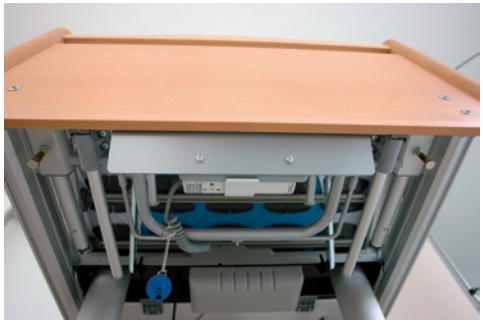
To return to a horizontal lying position, move the lying surface and the back and upper leg section in any preferred order to their lowest position.

Model S 380

The bed can be extended using a telescopic bed extension (option) by 20 cm.

To pull out the bed extension, pull the two pins located on the underside of the bed extension simultaneously downwards.





Cleaning and disinfection

This section contains details on the **cleaning and disinfection** of the bed.

CONTENTS

Cleaning and disinfection 1/2

In order to maintain consistent functioning, the care bed should be cleaned, disinfected and tested at the soonest possible time following each use, so that it can be reused immediately without risk. Incorrect cleaning/disinfection of the bed can cause danger.

Cleaning

Depending on the degree of soiling, we recommend cleaning the bed with a damp cloth or similar.

Wipe and spray disinfection

For wipe and spray disinfection, the disinfecting agents featured in the VAH (Verbund für angewandte Hygiene e.V.) list dated 01.01.2008 can be used in their specified concentrations. They must be applied at the dilution ratio specified by the relevant manufacturer's instructions for use. The list can be obtained under ISBN Number 978-3-88681-089-5.

NOTE Solvents are not permitted. Scouring agents, abrasive sponges or other blunting agents must not be used.
Organic solvents such as halogenated / aromatised hydrocarbons and ketones must not be used.

Depending on the degree of soiling, we recommend cleaning the bed with a damp cloth or similar.

The following instructions must be noted when using cleaning and disinfecting agents:

- The working solutions should generally be freshly prepared.
- The concentrations used should be neither higher nor lower than those given in the list. The so-called "shot" method should not be used under any circumstances. Under no circumstances should someone using a disinfectant follow their own judgement to add a detergent such as a soap or detergent substance (leads to soap failure).
- There is a risk of fire or explosion from alcoholic spray disinfectants when these are used over large areas.
- They must not contain any corrosive or irritant components.
- They must not contain any substances that change the surface structure or gripping properties of the materials.
- Lubricants must not be touched.
- The pH value of the water must be no higher or lower than 6 - 8.
- Water should not exceed a total water hardness of 0.9 mmol/l (up to 5 deg d). (Desalinated water should not be used).

Cleaning and disinfection 2/2

Chloride	< 100 ppm
Silicates as SiO_2	< 15 ppm
Iron	< 0.05 ppm
Manganese	< 0.01 ppm
Copper	< 0.05 ppm

The specifications in the VAH list, as well as the specifications we have issued do not absolve the user of the obligation to carry out his or her own checks and investigations, since the ratios (e.g. water hardness) can vary depending on the geographical location. It is therefore impossible to offer legally binding assurance of certain properties.

If unsuitable washing and disinfecting agents are used, if the mixing ratio is incorrect or if there is inadequate care of the beds, damage can occur to the surface coating for which Völker AG is not liable.

WARNING "Risk of electric shock / fire and functional failure"
The bed must always be disconnected from the power supply during cleaning and disinfection.

The plug and the socket of the hand control are only protected against spray when the control is stowed and the appropriate cover is in place.

Spray lances and automatic washing systems

Cleaning and disinfection using spray lances from high-pressure cleaning equipment and in automatic bed washing systems is **not** permissible.

Maintenance

The **Maintenance** section contains information on how to carry out maintenance work.

CONTENTS

Staff training

Every person involved with maintenance or servicing must at least have read

- the safety notes and
- the service manual

and be qualified in accordance with MPBetreibV §§ 4 and 6. To avoid errors and ensure that the care beds work properly, these documents must always be accessible to service personnel.

Before commencing maintenance work, the service manual and the instructions for use must be read in full by the person responsible for carrying out the servicing.

Safety notes

During maintenance and technical checks, the following specifications must be strictly observed:

- The room's electrical installations must satisfy the requirements of the current state of the technological art and the care bed must be used accordingly.
- The castors must be placed in the "brake position".
- The care beds are not protected against explosion and must therefore only be maintained in an environment free from flammable substances and materials.

⚠ **WARNING** Before carrying out any maintenance work, always disconnect the mains plug **and** disconnect the bed from the battery pack.

⚠ **WARNING** Maintenance and repair work should only be carried out after the bed has been disinfected.

⚠ **WARNING** After maintenance (repair) work is complete, always check that the bed is functioning correctly. It must be checked that the bed can be used correctly without risk to the occupant/patient or care personnel.

The care beds require little maintenance. All movable parts for the height adjustment mechanism, the lying surface motor systems and the side rails are provided with long-lasting lubricant at the factory. It is recommended that the care beds are subjected to a regular, or at least once a year, technical check 🕮 55 (incl. visual inspection and functional check) as described in the checklist 🕮 80 and any damage uncovered as a result, such as signs of wear and tear, loose screws or breaks/fractures, be eliminated immediately.

After every lengthy period of non-use, a technical check 🕮 55 must be carried out.

Period	Work to be carried out
Annually and after lengthy periods of non-use	Technical check 🕮 55
Every 2 years*	Replace the 9V block battery (see below)
As required	Lubricate mechanical parts Replace the battery pack or other wear parts (see service manual)

Replace the battery

To replace the 9V block battery, remove the two screws from the battery housing on the double drive.

Use only brand-name batteries, and dispose of spent batteries in an environmentally friendly way.

* as well as after every emergency lowering of the back section with a 9V block battery, if the bed does not have a battery pack (option).

Technical check

The section entitled **Technical check** contains all the information needed to carry out the technical check in accordance with MPBetreibV, BGVA3, UVV on care beds and measurement as per VDE 0751-1. Other (e.g. country-specific) specifications have not been included here. This does not absolve the operator from the obligation to observe any such specifications.

CONTENTS

Technical check 1/3

1. Visual inspection

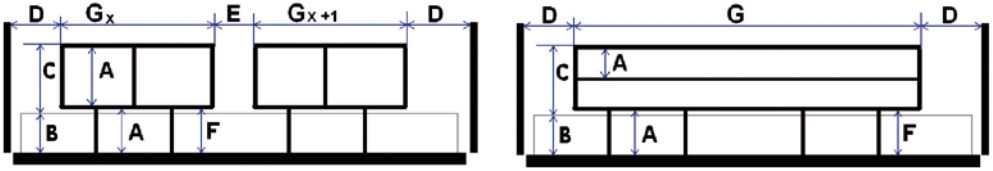
Check the frame parts for plastic deformations and / or wear and tear. These include the lower frame, the lifting mechanism, all parts of the lying surface (back, seat, upper leg and lower leg sections), trapeze bar, trapeze bar holder and castors.

2. Functional check of the side rails

Check that the locking mechanism for the side rails is working correctly and that there are no visible deformations or signs of wear and tear on the side rails.

Check that the prescribed distances are maintained, even when the side rails are placed under load. All measurements of side rail distances must be carried out in the flat lying surface position.

The measurement of A must be performed using a cone as defined in IEC 60601-2-38. The force used for measurement A must be at least 50 N.



Letter	Description	Dimension
A	The greatest distance between the elements within the scope of the SIDE RAIL in a raised / engaged position or the area formed by the SIDE RAILS and fixed parts of the BED.	≤120 mm
B	Thickness of the mattress for CORRECT USE	defined by the manufacturer
C	Height of the upper edge of the SIDE RAILS above the mattress (see "B") without compression	≥220 mm
D	Distance between the HEAD or FOOT SECTION and the SIDE RAIL	≤60 mm or ≥235 mm
E	Distance between the separated SIDE RAIL with the LYING SURFACE in flat position	≤60 mm or ≥235 mm
F	Distance of all accessible openings between the SIDE RAILS and the LYING SURFACE	if D or E≥235 mm then F ≤60 mm / if D or E ≥60 mm then F ≤120 mm
G	Total length of the SIDE RAIL or sum of the length of the divided SIDE RAILS on one side of the BED	∑ Gx ≥1/2 the length of the LYING SURFACE

Technical check 2/3

3. Functional check of the brakes

Check that the brake is functioning correctly (braked, steer, free running).

4. Functional check of the motors

Travel through the full adjustment range of each motor. Look out for any unusual noises, watching the speed, ease of running etc., and check that the selected function travels in the correct direction. Particularly ensure that the motor switches off automatically when it reaches its terminal position* (terminal position switch).

* Please note that the terminal position can vary from bed model to bed model. Please consult the technical specifications for this, or if in doubt, contact our service department.

5. Mains connection cable

Check

- the mains connection cable, incl. cable guides,
- the strain relief, including kink protection sleeve,
- the mains connection plug

for damage.

6. Cabling

Check the cable guides and that the plug connectors are correctly seated and do not exhibit any damage.

Check the cables for damage.

7. Housing

Check all housings for damage. All screws must be firmly tightened and seals must not exhibit any visible damage.

8. Mechanical check

Check the function of the Rastomat or the pneumatic spring (where fitted) by manually moving the lower leg section to the individual positions.

9. Changing the battery

Replace the 9V block battery at 2-yearly intervals. Only use brand-name batteries and dispose of the old ones in an environmentally responsible manner (Replacing the batteries 📖 54).

10. Measurement as per VDE 0751-1

The bed must be checked electrically in accordance with VDE 0751-1. The equivalent unit current leakage must be measured.

Technical check 3/3

11. Trapeze bar grab handle

Check whether the plastic and holding frame of the grab handle exhibit any damage and that the fixing rods on the trapeze bar are intact.

The handle of the trapeze bar, including the fastening strap, must be replaced every five years.

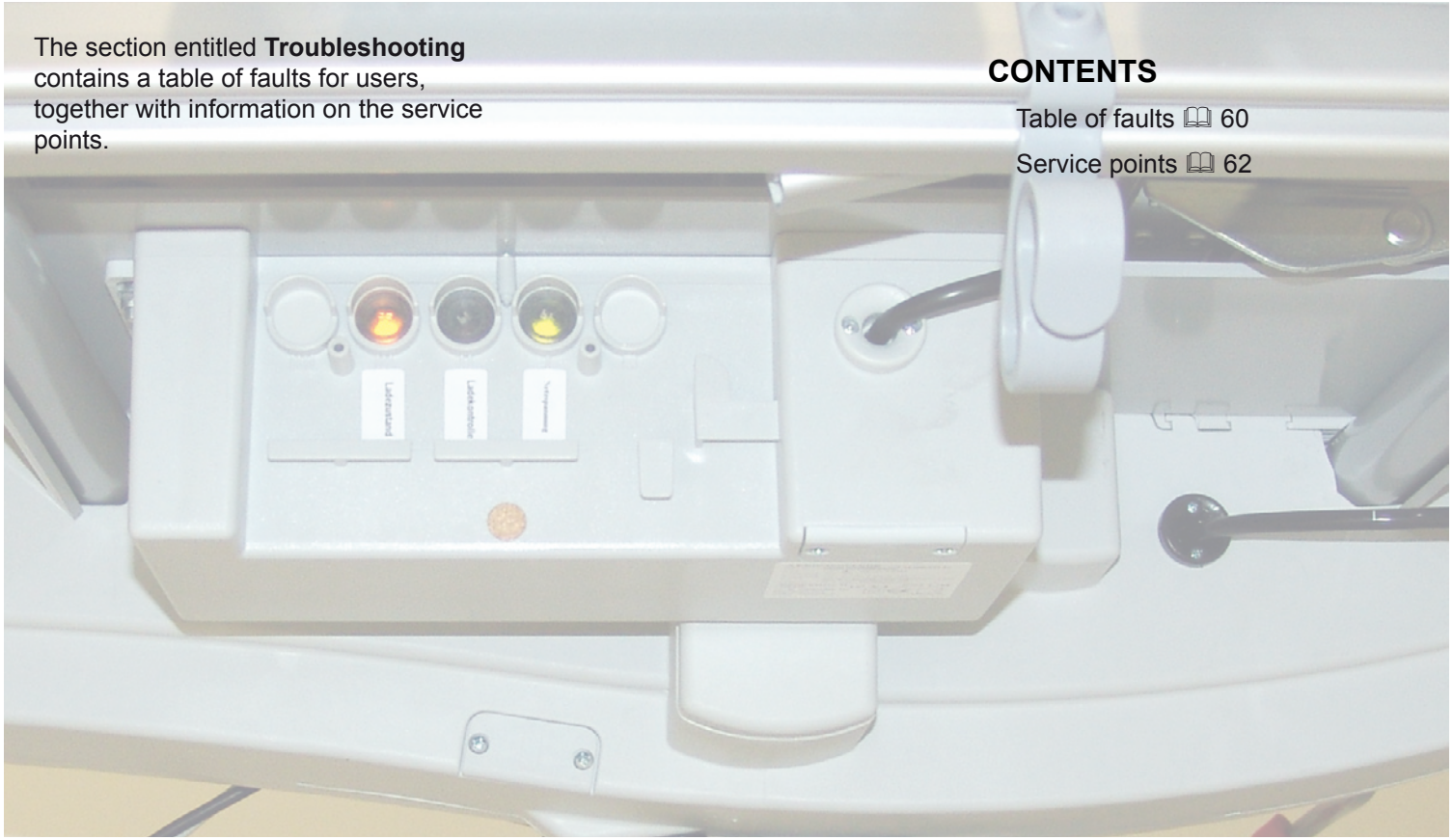
12. Other accessories

Other accessories must always be checked in accordance with the manufacturer's instructions.

Troubleshooting

The section entitled **Troubleshooting** contains a table of faults for users, together with information on the service points.

CONTENTS



Troubleshooting | Table of faults 1/2

The following table contains information on possible functional problems that the users can resolve themselves.

Faults that can only be eliminated by technical engineers are described in the service manual.

Anyone responsible for carrying out maintenance and repair work must at least have read the safety notes and the service manual and be qualified in accordance with MPBetreibV §§ 4 and 6.

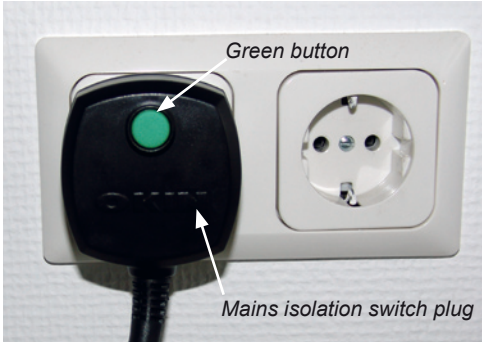
NOTE Before carrying out any troubleshooting, ensure that the battery pack (option) is charged (the yellow LED flashes during the charging process at intervals commensurate with the charge level) and that the bed is connected to the mains supply (the mains plug is in a live socket).

WARNING Before carrying out any repair work, ensure that the bed has been disconnected from the power supply and the battery pack has been disconnected if present.

Troubleshooting | Table of faults 2/2

Fault	Possible cause	Troubleshooting
The bed cannot be adjusted electrically.	• The keypad lock is engaged. • The mains plug is not plugged in or the socket is not live. • The battery pack (options) is not connected or is flat. • The hand control is faulty.	(1) Deactivate the key lock 🕮 35. (2) Connect the plug or check the socket. (3) Press the green button on the mains isolation switch[1] while simultaneously actuating any function on the hand control. (4) Replace the hand control.

[1] Green button on the mains isolation switch:



The mains isolation switch ensures that when no electrical function is being actuated, there is no mains voltage to the bed. (Exception: while the battery pack (option) is being charged, there is mains voltage to the bed. This is indicated by a flashing LED on the battery pack).

If necessary, please seek assistance from the relevant contact at your nearest Völker sales organisation. You will receive all the information you need for comprehensive service promptly.

Appendix

The **Appendix** section contains the technical specifications and classifications, details on the service life and disposal of the equipment and links to the manufacturers' declarations and forms found in the appendix.

CONTENTS

Konformitätserklärung
Anhang VII
EU-Richtlinie 93/42/EWG

Der Unterzeichnende
Völker AG
Wullener Feld 79
58454 Witten

mit einer Fertigungsstätte unter der Adresse:
Völker AG
Ahornstraße 4
09661 Hainichen

bestätigt, dass die nachfolgend bezeichneten Produkte in der von uns in Verkehr gebrachten Ausführung die grundlegenden Anforderungen des Anhangs I der EU-Richtlinie 93/42/EWG erfüllen. Es wurden die folgenden Normen angewendet :

Declaration of conformity
Appendix VII
EU Directive 93/42/EEC

The signatory
Völker AG
Wullener Feld 79
58454 Witten/Germany

with a manufacturing side at:
Völker AG
Ahornstraße 4
09661 Hainichen/Germany

confirms that the products described below and in the form distributed by ourselves meet the basic requirements of Appendix I of EU Directive 93/42/EEC. The following standards are applied :

DIN EN 60601-1,

Déclaration de conformité
Annexe VII
Directive EU 93/42/CEE

La soussignée
Völker AG
Wullener Feld 79
58454 Witten/Allemagne

avec un site de production à:
Völker AG
Ahornstraße 4
09661 Hainichen/Allemagne

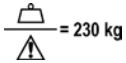
confirme que les produits spécifies ci-dessous sont conformes, dans le modèle mis en circulation, aux exigences fondamentales de L'annexe L de la directive européenne 93/42/CEE. Les standards suivants sont appliqués :

Appendix | Symbols used

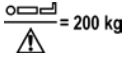
Warning symbols
Information marked with this symbol must always be read and strictly observed!

Warning about the risk of crushing and entrapment!

Note the information in the instructions for use!



Safe working load 230 kg



Max. permissible weight of the occupant/patient 200 kg
(approx. 30 kg for the mattress, trapeze bar and accessories)

Direct current

Alternating current

Protection class II device, protection-insulated

Type B device as per DIN EN 60601-1

The product satisfies the fundamental requirements of Appendix 1 of
EU Directive 93/42/EEC.

The product must be disposed of in accordance with
EU Directive 2002/96 pertaining to old electrical and electronic equipment.

* this value is 20 kg lower for beds built before 10/2008

Appendix | Technical data (standard design) 1/2

The details marked below with * are dependent on the length, width or model of the bed. The values specified relate to model 380 S.

External dimensions (W x L) for lying surface 90 x 200 cm * for lying surface 90 x 210 cm * for lying surface 90 x 220 cm * for lying surface 100 x 200 cm * for lying surface 100 x 210 cm * for lying surface 100 x 220 cm * for lying surface 110 x 200 cm * for lying surface 110 x 210 cm * for lying surface 110 x 220 cm *	 98 x 210 cm 98 x 219 cm 98 x 229 cm 109 x 210 cm 109 x 219 cm 109 x 229 cm 119 x 210 cm 119 x 219 cm 119 x 229 cm
Height of the lower edge (min./max.) *	approx. 25 cm / 65 cm
Height of the upper edge (min./max.) *	approx. 76 cm / 116 cm
Height of the upper edge of the lying surface *	approx. 40 cm - 80 cm
Lying surface (4-part) *	90 x 200/210/220 cm 100 x 200/210/220 cm 110 x 200/210/220 cm
Volumetric weight of the mattress material	40 - 50 kg/m^3
Dead weight *	135 kg

Safe working load for the bed	230 kg** As a result of the weight (approx. 30 kg) of the mattress, trapeze bar and other accessories, the maximum permissible weight of the occupant/ patient is 200 kg. If another mattress is used or other accessories, this value must be recalculated!
Safe working load for the trapeze bar holder	75 kg
Safe working load for drip stands	2 kg / hook
Castors	4 pcs, Ø 150 mm
Max. castor load	100 kg (dynamic)
Mains voltage Rated power Rated frequency	AC 220 - 240 V, 100 - 120 V 173 VA 50 / 60 Hz

** this value is 20 kg lower for beds built before 10/2008

Appendix | Technical data (standard design) 2/2

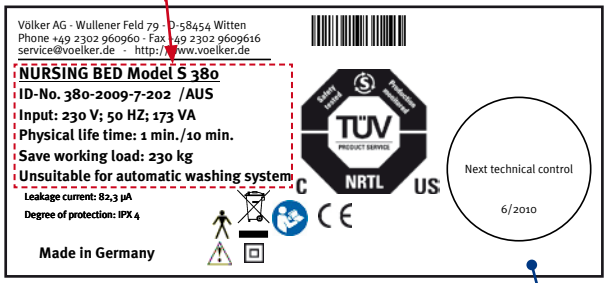
Primary fuse	2.0 A
Hand control fuse	Type: Polyswitch RXE 025
Lying surface motor fuse	Type: Polyswitch, solid, 2.5 A
Lifting motor fuse	Type: Polyswitch, solid, 3.75 A per motor
Battery	Type: 9 V block battery (alkali manganese, commercially available)
Battery pack (option)	Type: 4 x 6 V block battery (lead gel) 1.2 Ah
Operating temperature range	+ 10 °C to + 40 °C
Transport / storage temperature range	- 20 °C to + 60 °C
Air humidity	30 % to 75 % rel.
Atmosphere range	700 hPa to 1060 hPa

Protection against electric shock	Protection class II or device with internal electrical current sour 
Protection type by housing as per EN 60259	IPX4 not suitable for cleaning in automatic washing systems
Degree of protection of the applied part against electric shock as per DIN EN 60601-1	Type B 
Degree of protection against explosive substances and mixtures	The bed is not protected against explosion and should not be used in an environment in which flammable anaesthetics or flammable cleaning agents are present (see brochure from accident prevention organisation ZH 1/200)
MPG grouping	Class I

Mode of operation	Int. 1 min. / 10 min. On-time max. 1 min. Off-time 10 min.
Technical check	1x yearly

Appendix | Type label 1/2

Type specifications

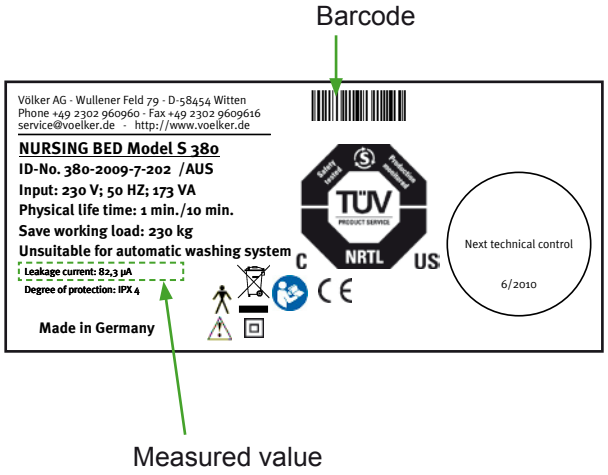


The type label is located on the inside of the head panel.

Raise the back section to read the type label.

Type specifications	Declaration
1st line	Model designation. In the example: NURSING BED Model S 380
2nd line	ID No. (made up as follows): S 380 = Model -2009 = Year of construction -7 = Production week (calendar week) -202 = Consecutive number AUS = Mains plug version (e.g. AUS = Australia)
3rd line	Input: mains voltage; mains frequency; consumed power
4th line	Physical life time: Max. uninterrupted on-time of electric motor adjustment. In the example: 1 min./10 min. In other words, the bed may be operated with the electric motors for max. 1 min uninterrupted within a 10-minute period (protection against overheating).
5th line	Safe working load (accessories, mattress and weight of occupant/patient).
6th line	Suitability for automatic washing systems. In the example: Unsuitable with automatic washing system.

Appendix | Type label 2/2



Measured values	Declaration
1st line	Equivalent unit current leakage in µA

The specified initial measured values were measured in accordance with VDE 0751-1.

The barcode (code 39) contains the numeric ID No. (10 digits).

Appendix | Service life / disposal

The care bed's expected service life is approx. 10 years. To ensure environmentally responsible disposal after decommissioning, please contact your responsible area sales manager.

Appendix | Manufacturer's declarations, forms, electronic instructions for use

Manufacturer's declarations

- Declaration of conformity 🕮 72
- Table 201 – Guidelines and manufacturer's declaration – Electromagnetic compatibility (6.8.3.201 a) 3)) 🕮 73
- Guidelines and manufacturer's declaration – Electromagnetic compatibility (6.8.3.201 a) 6)) 🕮 74
- Table 204 – Guidelines and manufacturer's declaration – Electromagnetic compatibility for all devices and systems that are not life-sustaining (6.8.3.201 b)) 🕮 76
- Table 206 - Recommended protected distance between portable and mobile HF telecommunications equipment and the S 280 or S 380 – for devices and systems that are not life-sustaining (6.8.3.201 b)) 🕮 78

Forms

- Technical check as per MPBetreibV, BGVA 3, UVV on hospital and care beds, incl. measurement as per VDE 0751-1 🕮 80
- Spare part order form 🕮 81

Electronic instructions for use

- Requirement for the use of the electronic instructions for use 🕮 82
- CD-ROM with electronic instructions for use 🕮 83

VÖLKER

Konformitätserklärung / Declaration of Conformity / Déclaration de conformité

Konformitätserklärung
Anhang VII
EU-Richtlinie 93/42/EWG

Der Unterzeichnende
Völker AG
Wullener Feld 79
58454 Witten

mit einer Fertigungsstätte unter der Adresse:
Völker AG
Ahornstraße 4
09661 Hainichen

bestätigt, dass die nachfolgend bezeichneten Produkte in der von uns in Verkehr gebrachten Ausführung die grundlegenden Anforderungen des Anhangs I der EU-Richtlinie 93/42/EWG erfüllen. Es wurden die folgenden Normen angewendet :

DIN EN 60601-1,
DIN EN 60601-1-2,
DIN EN 60601-2-38 (Anwendungen der relevanten Teile),
EN 1970 (Anwendungen der relevanten Teile).

Damit sind die Anforderungen des Medizinproduktegesetzes zur Anbringung einer **CE Kennzeichnung** erfüllt.

Bei einer nicht mit dem Hersteller abgestimmten Änderung des Produktes verliert diese Konformitätserklärung ihre Gültigkeit.

Bezeichnung der Produkte :
Pflegebetten 5380, 2080, 3080, S 380 und S 280.

EG-Richtlinien :
Richtlinie 93/42/EWG vom 14.06.1993 über Medizinprodukte (Anhang I „Grundlegende Anforderungen").
Die Produkte sind Produkte der Klasse I gemäß Anhang VII des Medizinproduktegesetzes MPG vom 02.08.1994.

Witten, 22.01.2009

Declaration of conformity
Appendix VII
EU Directive 93/42/EEC

The signatory
Völker AG
Wullener Feld 79
58454 Witten/Germany

with a manufacturing side at:
Völker AG
Ahornstraße 4
09661 Hainichen/Germany

confirms that the products described below and in the form distributed by ourselves meet the basic requirements of Appendix I of EU Directive 93/42/EEC. The following standards are applied :

DIN EN 60601-1,
DIN EN 60601-1-2,
DIN EN 60601-2-38 (applicable parts only),
EN 1970 (applicable parts only).

The requirements of the medical products law pertaining to the display of a **CE seal** of approval are thereby fulfilled.

This declaration of conformity becomes invalid if the products are altered without the agreement of the manufacturer.

Description of products Type/Article No.:
Nursing beds 5380, 2080, 3080, S 380 and S 280.

EU Directives :
Directive 93/42/EEC of 14.06.1993 concering medical products (Appendix I, Basic requirements). The design and construction of this product conforms to Class I (Appendix VII) Medical products law (MPG) of 02.08.1994.

Déclaration de conformité
Annexe VII
Directive EU 93/42/CEE

La soussignée
Völker AG
Wullener Feld 79
58454 Witten/Allemagne

avec un site de production à:
Völker AG
Ahornstraße 4
09661 Hainichen/Allemagne

confirme que les produits spécifies ci-dessous sont conformes, dans le modèle mis en circulation, aux exigences fondamentales de L'annexe L de la directive européenne 93/42/CEE.
Les standards suivants sont appliqués :

DIN EN 60601-1,
DIN EN 60601-1-2,
DIN EN 60601-2-38 (en partie applicable),
EN 1970 (en partie applicable).

Les exigences de la loi sur les produits médicaux concernant leport de la **marque CE** sont ainsi satisfaites.

Cette déclaration de conformité est invaledée en cas de modification des produits, non autorisée par le fabricant.

Désignation des produits Modèle/Référence :
Lits médicalisés 5380, 2080, 3080, S 380 et S 280.

Directives européennes :
Directive 93/42/CEE du 14.06.1993 sur les produits médicaux (annexe I « Exigences fondamentales »). La conception du produit est conforme à la classe I (annexe VII). Loi sur les produits médicaux (MPG) du 02.08.1994.

Heinrich Völker
Vorstandsvorsitzender / Executive board (chair) / Dirctoire (Président)

Info
To print out this document, please use the corresponding PDF file on the CD-ROM.

Table 201 - Guidelines and manufacturer's declaration - Electromagnetic compatibility

(6.8.3.201 a) 3))

The S 280 and S 380 are intended for use in the electromagnetic environment as described below. The customer or user of the bed should ensure that it is used in such an environment.

Emissions measurements	Conformities	Electromagnetic environment - guideline
HF emissions IEC 61000-3-2	Class A	The S 280 and S 380 are suitable for use in all institutions, including residential areas and such that are directly connected to a public mains supply network that also supplies buildings intended for residential purposes.
Fluctuations in voltage / flicker IEC 61000-3-3	Satisfied	
RF emissions CISPR 14 – 1	Satisfied	The S 280 and S 380 is not suitable for connection to other equipment.

Guidelines and manufacturer's declaration - Electromagnetic compatibility (6.8.3.201 a) 6))			
The S 280 and S 380 are intended for use in the electromagnetic environment as described below. The customer or user of the bed should ensure that it is used in such an environment.			
Compatibility check	**IEC 60601 Testing level**	**Conformity level**	**Electromagnetic environment - guideline**
Discharge of static electricity (ESD) IEC 61000-4-2	± 6 kV contact discharge ± 8 kV air discharge	± 6 kV contact discharge ± 8 kV air discharge	The ground should be made of wood or concrete and be laid with ceramic tiles. If the ground is covered with synthetic material, the relative air humidity must be at least 30%.
Rapid transient electrical disturbance / bursts IEC 61000-4-4	± 2 kV for voltage supply ± 1 kV for input and output cables	± 2 kV for voltage supply Not suitable!	The quality of the voltage supply should be commensurate with a typical commercial or hospital environment.
Surge voltages IEC 61000-4-5	± 1 kV series mode voltage ± 2 kV common-mode voltage	± 1 kV series mode voltage Not suitable!	The quality of the voltage supply should be commensurate with a typical commercial or hospital environment.

☞ *Continued on next page.*

Compatibility check	IEC 60601 Testing level	Conformity level	Electromagnetic environment - guideline
Voltage drops, short interruptions and voltage fluctuations in the mains voltage supply IEC 61000-4-11	< 5 % U_T (>95 % voltage peaks in U_T) for 0.5 cycles 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles < 5 % U_T (>95 % dip in U_T) for 5 sec	< 5 % U_T (>95 % voltage peaks in U_T) for 0.5 cycles 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in UT) for 25 cycles < 5 % U_T (>95 % dip in U_T) for 5 sec	The quality of the voltage supply should be commensurate with a typical commercial or hospital environment. If the user requires continued function from the S 280 or S 380 when interruptions in the power supply occur, it is recommended that the S 280 or S 380 be powered via an uninterruptible power supply or a battery.
Magnetic field at supply frequency (50/60 Hz) IEC 61000-4-8	3 A/m	3 A/m	Magnetic fields at mains frequency should correspond to the typical values present in commercial and hospital environments.
Remark 1: U_T is the mains AC voltage before the testing level is applied.			

Table 204 – Guidelines and manufacturer's declaration – Electromagnetic compatibility for all devices and systems that are not life-sustaining (6.8.3.201 b))

The S 280 and S 380 are intended for use in the electromagnetic environment as described below. The customer or user of the bed should ensure that it is used in such an environment.

Compatibility check	IEC 60601 Testing level	Conformity level	Electromagnetic environment - guideline
Conducted HF disturbances IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	Portable and mobile radio equipment should not be used any closer to the S 280 or S 380, or their cables, than the recommended protective distance which is calculated based on the equation applicable for the transmission frequency. **Recommended protective distance** $d = 1.17\sqrt{P}$ $d = 1.17\sqrt{P}$ 80 MHz to 800 MHz $d = 2.33\sqrt{P}$ 800 MHz to 2.5 GHz

☞ *Continued on next page.*

Compatibility check	IEC 60601 Testing level	Conformity level	Electromagnetic environment - guideline
Radiated HF disturbances IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	Where *P* is the rated output of the transmitter in Watts (W) as specified by the transmitter manufacturer and *d* is the recommended protective distance in metres (m). The field strength of stationary radio transmitters should be less than the conformity level[b] at all frequencies, as verified by an on-site test[a]. Disturbance is possible in the environment of equipment that bears the following label. 
Remark 1: At 80 MHz and 800 MHz, the higher frequency range applies. Remark 2: These guidelines may not be applicable in all cases. The spread of electromagnetic parameters is influenced by the absorption and reflection of buildings, objects and people.			
[a] The field strength of stationary transmitters, such as base stations of cordless telephones and mobile land radio, amateur radio stations, AM and FM radio and TV stations cannot be quantified in theory in advance accurately. To determine the electromagnetic environment in relation to a stationary transmitter, a study of the site should be considered. If the measured field strength at the site where the S 280 or S 380 is used exceeds the conformity levels stated above, the S 280 or S 380 should be observed to ensure that it functions correctly. If unusual features are observed, additional measures may be required, such as modified alignment or a different location for the S 280 or S 380. [b] In the frequency range from 150 kHz to 80 MHz, the field strength should be less than 3 V/m.			

Table 206 - Recommended protective distance between portable and mobile HF telecommunications equipment and the S 280 or S 380 – for devices and systems that are not life-sustaining (6.8.3.201 b))

The S 280 or S 380 are intended for operation in an electromagnetic environment in which HF disturbances are controlled. The customer or user of the S 280 or S 380 can help to avoid electromagnetic disturbances by respecting the minimum distance between portable and mobile HF telecommunications equipment (transmitters) and the S 280 or S 380 The recommended minimum distance d is dependent on the maximum power output of the communication device (see below).

Use in environments specified in which the radiated RF disturbances are controlled. The buyer or user of the S 280 or S 380 can help avoid electromagnetic interference by respecting the minimum distance between portable and mobile RF communications equipment and the S 280 or S 380. The recommended minimum distance is dependent on the maximum power output of the communication device.

Rate output of the transmitter W	Protective distance according to the frequency of the transmitter m		
	150 kHz to 80 MHz $d = 1.17\ \sqrt{P}$	80 MHz to 800 MHz $d = 1.17\ \sqrt{P}$	800 MHz to 2.5 GHz $d = 2.33\ \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.17	1.17	2.33
10	3.69	3.69	7.38
100	11.67	11.67	23.33

☞ *Continued on next page.*

For transmitters whose maximum rated output is not specified in the table above, the recommended protective distance *d* in metres (m) can be calculated using the equation in the column that features *P* as the maximum power output of the transmitter in Watts (W) as defined by the transmitter manufacturer.

Remark 1: At 80 MHz and 800 MHz, the higher frequency range applies.

Remark 2: These guidelines may not be applicable in all cases. The spread of electromagnetic parameters is influenced by the absorption and reflection of buildings, objects and people.

Technical check of Völker hospital and healthcare beds in accordance to German standards and safety regulations incl. measurements required

VÖLKER
Wullener Feld 79
58454 Witten/Germany
Tel.: +49 2302 96096-62
Fax: +49 2302 96096-66
E-Mail: service@voelker.de

Project/customer no.:	Location of the bed:	Type of bed/product :

Identification of the hospital and healthcare beds (e.g. due to the inventory of the facility and Völker bed identification number):			
Date of check:		Name of technician:	

Kind of check	Component to be checked	Anually	Accepted	Not accepted	Not applicable
Visual inspection	Inscription on device readable				
	Instructions for use available				
	Base frame	B*			
	Lying surface	B*			
	Trapeze bar adapter/infusion bar adapter	B*			
	Power supply cable and plug/charging connection (charging connection only for S 960, S 960-1 and S 960-1MT)	B*			
	Pull relieve/bend protection	B*			
	Fit of plug-and-socket connections	B*			
	Motor housing/transformer housing	B*			
	Housing of hand control	B*			
	Cable of hand control	B*			
	Nurse control	B*			
	Trapeze bar, assist rail spacer, additional accessories	B*/F*			
	Stroke head traverse, head and foot section	B*			
	Castors	B*			
	Repulse rolls (if existing)	B*			
	Side rails, if applicable with telescope	B*			
	HiLow-elevation: check screw locking (only for 5380)	S*			
Functional inspection of side rails, if applicable with telescope	Locking devices	X*			
	Deformation	X*			
	Abrasions	X*			
Functional inspection of drives with hand control and caregiver's console	Lying surface, back section, upper leg section, lower leg section, height adjustment, Trendelenburg position / reverse Trendelenburg position, base frame, approach all end switches	X*/M*			
	Angle limitation of back section and upper leg section > 90° (only for hospital beds)	X*			
	Catch adjustment of foot section/gas spring	X*			
	CPR function (if existing)	X*			
	Brake (electrical of mechanical) - brake applied - brake not applied (only for hospital beds and S 280 / S 310 / S 380) - straight forward	X*			
	Mechanical release (only for electrical brakes of hospital beds)	X*			
Functional inspection replacement	9V battery (only for healthcare beds and S 960-2) Replaced (Yes/No)	A2*			
	Trapeze bar handle and belt (if existing) Replaced (Yes/No)	A5*			
Functional inspection miscellaneous	Bed extension (if existing)	B*			
	Bedding storage / bedding drawer (if existing)	B*			
Comment					
Legally relevant for Germany only	Leakage current < 5000 µA, in accordance to VDE 0751	µA			
	Potential equalization impedance < 0.2 Ohm, in accordance to VDE 0751 (if existing)	Ω			
	Measuring instrument S/N				
Total result of the inspection:					
Signature of technician:					
Next regular inspection:					

Info
To print out this document, please use the corresponding PDF file on the CD-ROM.

Spare part order

Völker AG
Service
Wullener Feld 79
58454 Witten/Germany

Tel.: +49 2302 96096-62
Fax: +49 2302 96096-66
E-Mail: service@voelker.de

Address: _____

_____

Contact person: _____

Street address:: _____

Zip code/city/country: _____

Telephone number: _____

Customer number: _____

Customer order number: _____

Purchase order date: _____

Signature: _____
(Please, to fill in the form use block letters)

Stamp

Shipping address, if differently from the billing address

Address: _____

_____

Attention of: _____

Street address: _____

Zip code/city/country: _____

Please, fill out all information carefully and complete in the form, otherwise we have problems in delivery and processing this order.

MODEL (Bed-type)	SERIAL NO./ YEAR OF MANUFACTURE (Identifaction label inside of the bed-head)	SPARE PART DESCRIPTION	ITEM NUMBER	QUANTITY

Info
To print out this document, please use the corresponding PDF file on the CD-ROM.

Requirement for using the electronic instructions for use

In order to open the electronic version of these operating instructions (PDF file) found on the CD-ROM, you must have Adobe Reader 7.0.5 or later (or the corresponding Adobe Acrobat version) installed on your PC.

Adobe Reader is available for nearly all operating systems. The newest version can be obtained free of charge by download from *www.adobe.de/products/acrobat/readstep2.html* 🕮 .

CD-ROM

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