Every person has a right to be treated with respect and dignity. Especially people in need of care. We think, develop and manufacture with this in mind.
## VÖLKER CARE CONCEPT
- More time for dignified care ..................................................... 4
- Pioneering products with innovative features .......................... 6
- Added value by competency .................................................... 8
- System partnership: a special advantage ............................... 10

## FEATURES
- Products................................................................................... 12
- Functions............................................................................... 16
- MIS®/MIS®Activ .................................................................... 18
- Assist rail system ................................................................... 26
- Hygiene.................................................................................. 32
- Motor drive system ................................................................. 38
- Production ............................................................................. 40
- Quality ................................................................................... 46
- Völker Diagnostic System .................................................... 52
- Safety.................................................................................... 58

## MODELS
- The complete program .......................................................... 60
- Twin room with S 962-2 and Vis-a-Vis ................................. 62
- Single room with S 962-2 ...................................................... 64
- VIP room with Vis-a-Vis ....................................................... 66
- Intensive care unit with S 962-2 ........................................... 68
- Intensive care unit with Vis-a-Vis ......................................... 70
- Vis-a-Vis: mobility made easy ............................................. 72
- Vis-a-Vis: sitting as usual ..................................................... 74
- Vis-a-Vis: forward movement ............................................. 76
- Low-height bed for fall-risk patients .................................... 78
- Bed 3082 K and 3082 K Vis-a-Vis ...................................... 82
- Bed S 382 and S 382 Vis-a-Vis ............................................ 84
- Völker hospital bed controls .............................................. 86
- Design choices .................................................................... 88
- Color collection choices ..................................................... 89

## ACCESSORIES
- Mattresses ............................................................................. 90
- Accessories ........................................................................ 92

## FURNITURE
- Völker bedside cabinets, Server and Butler ....................... 94
- Völker Supply Bar ............................................................... 98

## ABOUT VÖLKER
- Progress since 1912 .......................................................... 100
- Hospital beds Made in Germany ......................................... 102

## Credits.................................................................................. 104
For dignified care.
Völker hospital beds.

Völker beds for dignified care. This is our company philosophy and the target of our work now for more than thirty years. And as well remains, after the acquisition by Hill-Rom Holdings Inc. in early 2012, mandatory for development, production and service of Völker hospital beds.

It is our sincere desire to manufacture beds in which patients will feel comfortable and can get well. This means beds which can be used in all areas of the hospital, including intensive or intermediate care due to their comprehensive functionality. Not beds that look like medical devices, but beds which give the patient’s room a hotel like ambience despite their hospital functions – better explained as an environment to complement recovery.

With Völker hospital beds, which are distinguished by their successful synthesis of form and function we are meeting the demands of both patients and caregivers.

This present catalogue demonstrates how we are constantly successfully continuing our developments to achieve these goals in recent years. Functionality and technical requirements have been subject to continuous improvements. Our vision of a hospital bed that benefits both patient and caregiver has seen thoughtful innovation with two model versions of the Low-height bed (for extremely fall-prone patients) and the Vis-a-Vis (for patients with low physical strength).

Therefore we insist on production at German sites in cooperation with nearby suppliers. This improves our quality and allows delivery of quality products. Thus Völker hospital beds have been optimized more and more: by using Völker's own motor drive systems in order to meet the continuously increasing safety requirements on medical device products. With the Völker Diagnostic System, which allows quick and secure diagnosis, repair and therefore return of beds to use. Due to the sealed design of the new undercarriage as a contribution to ensuring hygiene in hospitals. And by further development of an active Micro-stimulation System for more lying comfort and fewer pressure-ulcers with immobile patients.

We will demonstrate page after page that the dignified care provided by Völker hospital beds delivers significant added value: economic advantages as well as an improved image. In combination with additional services and competencies we have combined everything in a lasting Völker Care Concept, which will offer you the approach for economizing procedures within hospitals.

Witten, June 2012
The Völker Care Concept.
A value-added concept: More time for dignified care.

Care and recuperation are based on a patient and caregivers relationship. It is the common goal to solve problems, or if this is impossible to minimize them. This results in a structured care process which should realize a comprehensive, individually oriented plan.

In order to achieve this goal for care there is more required than just any hospital bed. The patient’s potential for self support should be motivated and their independence should be encouraged. Limitations must be compensated for by instruction and support. This requires caregiving tools which support motivating care, protect those who are anxious, activate immobile persons, support and facilitate the work of caregivers during all these measures.

If this helps to create more time which can be used by the caregivers for more care and attention, then Völker will have successfully achieved its aim: *More time for dignified care.*
The Völker Care Concept.
Added value by pioneering products with innovative features.

A comprehensive Care Concept with pioneering products opens the way for meeting the various requirements, demands and expectations of patients in all units of hospitals and clinics. This includes the Völker hospital bed S 962-2, which covers (almost) all requirements – with the type S 962-2W suitable for bed washing systems. The Vis-a-Vis version of the hospital bed offers real mobility with a forward facing chair position for those cases where a lateral transfer is impossible. Finally the Low-height bed model with its positioning close to the ground offers an alternative for fall-prone patients in the care of the elderly and psychiatric units.

These hospital beds from Völker pointing the way to the future are furnished with numerous innovative features. These features include a four column telescopic lift, a height adjustable assist rail and a lying surface with a Micro-stimulation System, which can be upgraded to an active stimulation system for immobile patients. Motors and drives manufactured by Völker make Völker hospital beds powerful and reliable. In total all measures in the care process will be supported and the individual independence of the patients will be promoted.
The Völker Care Concept.
Added value by competency.

Products and product specific features are supplemented within the Völker Care Concept by additional competencies, which makes working together with Völker so desirable. This includes Healthcare Design as a significant feature for a clinic, providing both furnishing and public relations argumentation. Intensive Consulting is available from Völker after sales service; if desired a systems based partnership can be individually developed for the benefit of both parties (see also page 10). The logistic service provides rapid availability of spare parts, the technical service based on the Völker Diagnostic System delivers reduced failure rates. Our medical and nursing competency is supported by studies about individual design features and participation in symposiums. Moreover Völker offers various chances for training and further education for the employees of customers to improve care processes and technique. These competencies also include production Made in Germany with locally based suppliers and high quality standards.

These competencies can be brought together for the economic benefit of the clinic or hospital. Selection and application of these competencies in line with demands means the streamlining of nursing processes, minimizing follow-up costs, greater quality and better nursing standards, happier employees with less staff turnover, happy patients and better efficiency. All this makes a partnership with Völker an investment in a safe future.

Besides value-added beds Völker offers many areas of expertise which can be aligned to individual customer needs and contribute to targeted systems solutions.
The Völker Care Concept.
System partnership: a special advantage for Völker customers.

The Völker Care Concept is the implementation of the Völker corporate philosophy. It is the basis for all product developments at Völker and forms the basis for partnerships with customers through defined competencies. Völker focuses on people and counts on value based company philosophies which promote partnership, dialogue, transparency and performance.

In this sense system partnerships describe a cooperation with the common goal for product specific measures, such as improving nursing processes and the improving of service and maintenance. With common objectives it includes development of innovations, participation in clinical studies and field test of new developments, which are widely communicated.

In this way both sides develop and benefit from the system partnership. They are based on mutual commitments as well as on continuity and experience shows they lead to dynamic development to the benefit of both parties.

1. Dipl. Economist Heinz Kölling, Managing Director of the Deaconry Hospital Rothenburg (Wümme):
   “The sense of such a system partnership lies in articulating mutual interests, that they are intended for long-term use and both parties will profit, meaning a Win-Win model will be defined.”

2. Dipl. Economist Bernd Sieber, Managing Director of the Clinical Center Esslingen:
   “As a clinical center which is involved in a multitude of studies, but also as an academic educational hospital for the university of Tübingen we are committed to apply and to further develop medical standards. Intensive exchange of views with Völker makes an important contribution to this.”

3. André Willems, Project Management new building, Meander Medisch Centrum, Amersfoort/NL:
   “Since 2007 we have been in an exchange of ideas with Völker. This dialog has contributed to results allowing us to realize our “1 Persoonkamer Concept” (single room concept) with starting the construction of our new building in 2010.”
Völker hospital bed. Völker Vis-a-Vis. Völker Low-height bed.
Three versions for different therapies.

Völker delivers functional beds which can be used for improving efficiency and promoting recovery. In intensive care as well as in the intermediate care, surgery and internal medicine, care of the elderly and psychiatric units, rehabilitation centers or in elective surgery units. These demands are fulfilled by Völker hospital beds by three model versions. By the classic hospital bed for the majority of patients, cleaned manually or prepared by a central, automated facility. By the Vis-a-Vis for patients with poor physical condition, especially after abdominal surgeries. And the Low-height bed for individuals with a high risk of falling. Each bed supports care through its specific design features, facilitates and promotes individual independence and the mobility of the patients. Always with the objective of reducing patient recovery times.

Adapted to the needs of clinics and their disciplines, the total concept of investment can be split between these different bed versions. To ensure exclusive reliability for very special therapeutic objectives, all models feature a modular design based on a commonality of parts, which keeps the number of different components low. Therefore maintenance and inspections for different versions run on the same Diagnostic system (see also page 52 and following), expenditure on repairs and spare parts can be reduced to a minimum.
Völker hospital beds for all applications.
A coordinated appearance for each clinical setting.

Völker beds can easily be designed to your taste. The S 962-2, Vis-a-Vis, and the Low-height bed for example can all be designed with the same head- and footboards to match (see page 88) or in the same color (see page 89). The look and color of the healthcare suite provides continuity, an attractive appearance and an enjoyable experience, which has been proven in studies to be an important factor in the recovery process. This is one of the top requests by patients.

Because patients do not always focus only on their medical condition, they often look at the accommodations. This includes Healthcare Design and also the functionality and comfort of a hospital bed. This can be marketed very well by the facility with the goal to be preferred when it comes to selecting one hospital competitively over another. It is an example how a hospital bed can contribute to cost return and profitability even when facing limited reimbursement from government agencies. Unique Völker features can, in some cases, justify billing for optional services. In this case Völker hospital beds provide a hotel ambiance, full functionality and in the case of the Vis-a-Vis “optional services for accommodation”.

Together with minimizing the number of staff required, which comes with the functional advantages of Völker hospital beds, they are exactly right for realizing the economic targets of a hospital.

2) Völker World 3/2010, page 8 f.: “Meeting patient's desires. The way to comfort rooms with value-added bed.”

Figure on the right:
1. Twin room with Völker Vis-a-Vis (front) and Völker’s hospital bed S 962-2 (at the back), both in the design S in anthracite.
2. Single room with Völker hospital bed S 962-2, also in the design S in anthracite.
3. VIP room with Völker hospital bed S 962-2 in the design S in maple after eight.
4. Intensive care unit with Völker Vis-a-Vis in the design S in white.
Völker hospital beds.
Everything you would want from hospital beds with added value.

Those who look at Völker hospital beds will quickly realize that management, planners, account executives and experts have all considered the situations which may occur daily within facilities for patients and caregivers. With the objective to develop and design hospital beds which make caregiving easier for hospital staff and which facilitate and perhaps enhance nursing care in order for nurses to provide more care for patients.

Innovations which can be found uniquely on Völker hospital beds only.

1.–3. The patient’s hand control unit can be placed on the optional flexible hand control holder to be easily seen and reached on the left or right side of the bed or put on the assist rail (figure page 17). The nurse control is normally stored in a slide out under the footboard, can also be easily placed on the footboard or on the foot section assist rail for easy access.
Features:

- Head- and footboards easy to remove and to replace
- Four-part lying surface, infinitely adjustable; with removable sections for easy cleaning
- Nurse control in the bedding storage
- Four castor central braking
- Castors
- Accessory rails on both sides of the bed
- Bed extension

Models:

- Völker MiS® Micro-stimulation pressure reducing system which can be upgraded to MiS® Activ
- Patient’s hand control unit w/lockout
- Telescoping assist rails provide two levels of assist and protection
- Head and foot end adapters for IV pole on both sides
- Trapeze-bar on the head end
- Horizontal bumpers on all four edges of the bed
- Quick release back-rest (CPR)
- Three-stage telescoping height adjustable column

Accessories:

- Mattress compensation
- Synchronization
- Telescoping assist rails provide two levels of assist and protection
- Mattress compensation

Furniture:

- Straight steering castor activated by foot pedal
- Nurse control in the bedding storage
- Four castor central braking
- Accessory rails on both sides of the bed
- Bed extension

About Völker
The comfortable lying system from Völker: Völker MiS®.
Sleeping well. Waking up well rested. Starting the day feeling motivated.

The patented Völker Micro-stimulation System (MiS®) is a standard feature on all Völker beds. Völker MiS® maintains and promotes patients’ independent movement through systematic somatic and vestibular stimulation. The Völker MiS® is based on neuroscience basics. Minor spontaneous movements of the patient will be detected and returned as tactile stimulus to the body. The steady feedback leads to a better body awareness, promotes spontaneous movements as well as micro circulation in the tissue and thus enhances blood circulation in the skin by minimizing pressure peaks.

This all leads to a better sleeping and lying comfort and thus to more mobility. It will make patients more receptive to care giving measures and promotes their participation in the activities of daily life. At the same time MiS® supports pressure-ulcer prophylaxis efficiently and therefore meets Völker's central objective of “dignified care”. The results are economical in that quick mobility reduces the length of stay, pressure reduction minimizes ulcer occurrences, both of which are positive for the bottom line. Together this promotes the good reputation of the hospital, and encourages patients to discuss the high quality of care they have received.

1.–2. The design of the MiS® system with special butterfly springs on flexible support profiles, attached to the frame by flexible suspension units. For a mattress, we are recommending the three layer special Rubex® Finess, which measures a thickness of only 4.72 in. (12 cm) and enhances the effects of both Völker MiS® systems.

“A long-term study in the MMC with Völker MiS® reduced pressure-ulcer II, III and IV by 35 percent, reduced usage of air therapy mattress systems by 57 percent and reduced the amount of days that air therapy mattress systems were in use by 52 percent.”

Dr. Hennie G. M.
Luchtenberg,
Social Care Advisor,
Meander Medical Center, Amersfoort/ NL (Long-term study 2003–2006)
Völker MiS® Activ.
Moving immobile patients.

The Völker Micro-stimulation System MiS Activ® is an upgrade of the pressure reduction system MiS®. Völker MiS® Activ provides the missing feedback through specially developed motor drives which move immobile patients, who may require prophylactic care measures. It is therefore the right system for sedated patients, for intensive care patients prior to and after an operation, for neurological or geronto-psychiatric patients. The combination of continuously distributing the pressure and movement promotion, provides better blood circulation and awareness of the body especially for the previously mentioned patients. This results in greater vigilance and reduction of chronic (non malignant) pain as well as an effective pressure-ulcer prophylaxis and is supportive of appropriate therapy.

MiS® Activ makes the patient more receptive to active care with increased lying comfort and better mobility. In this way therapy targets can be realized resulting in fast-track treatment and individuals with poor physical condition will be activated faster. Not only can the length of stay be shortened, but also the pressure-ulcer rate can be minimized. Usage of Völker MiS® Activ means more comfort and less risk for patients, less effort for the caregiver and therefore a favorable cost/benefit solution.

1.–2. With Völker MiS® Activ the spring components are moved by electro motor activators. This lifting and lowering replaces missing spontaneous movements thereby providing the feedback which leads to the desired continuous stimulus reactions. Various movement patterns can be selected and individually programmed and will provide, in combination with the special mattress Rubex® Finess, the optimum sleep and lying comfort. After the active system has been switched off, the micro-stimulating effects of the standard system continues to provide benefit.

“Pressure-ulcers are neither the regular result of an illness nor are they inevitable. By reacting timely to specific risks, a chain of mutually influencing risk factors can be interrupted. The challenge lies in avoiding pressure-ulcers. A calculated risk analysis and an effective lying surface to promote movement are the best possible prophylaxis and support for therapy.”

Dipl. Ing. Norbert Kamps
Chairman of the Deutsche Dekubitus Liga (ddl)
System change from MiS® to MiS® Activ. Simple. Quick. And without risks.

The standard pressure reduction system Völker MiS® can easily be exchanged with the four elements of the Völker MiS® Activ, being equal in size and shape. The advantages of this system, which is integrated into and fully compatible with all Völker hospital beds, are convincing: ergonomics of the bed remain as well as does its look. In addition, the MiS® Activ does not raise the height of the mattress, and thereby does not require special additional height assist rails.

Thus the patient will still have the impression of lying on their bed as usual. For housekeeping the process of making the bed is simple and easy. Care giving measures can be performed as usual on the bed since the functionality of all features remains unchanged. Facilities are able to react fast in meeting the expert standards in care, as Völker’s Micro-stimulation Systems require only simple care, installation and service.

All in all the combined usage of Völker MiS® and MiS® Activ leads to better satisfaction for patients and staff.

1) Applies to all Völker beds with a removable MiS® lying surface from Autumn 2005 onward.
2) Expert standard pressure-ulcer prophylaxis during the caring process, 3.4., standard statement 3b: pressure reducing aids are available immediately.

1.–2. Exchanging Völker MiS® for the active system can be handled by one person in four steps: taking off the mattress, removing the lying surface elements (also for cleaning), inserting the active elements and connecting the plugs, putting the mattress back on.

“Simple to handle therapy systems facilitate transfer of patients with chronic wounds, and are also easier for caregivers. If then, as is the case with MiS® Activ, the ergonomics and functionality of the bed remain fully available, additional risks during the caring process will be minimized.”

Slavtscho Georgiev
Manager of the caring unit, Vivantes Klinikum Wenckebach
Völker MiS® Activ.
Applied technology for innovative therapy.

Compared with many other systems, Völker MiS® Activ is directly integrated into the bed – handy and practical. Nevertheless it features numerous technical capabilities, which make it suitable for immobile patients. A normal bed appearance and function is maintained. This includes a reasonable lying surface height, standard bedding, a safe work load of 550 lbs. (250 kg) and low noise operation. In order to adapt therapeutic measures individually to the patient there are four programs available to be processed by intuitive menu navigation. They can be set for different movement patterns in three speeds including breaks and night programs, which are controlled by a real time clock. The individual therapy units can be documented by registering protocols in a logbook. Updates and fault diagnostic are performed as well on the central control panel.

For simple usage with preprogrammed menu selection the system is controlled with its 14 motors by a real time CAN bus. The motor drive technology functions almost free of wear. An overload protection keeps the movement process running at punctual peak loads, thus neither the program nor the therapy will be interrupted.

1. Program selection – and also customized programming – is performed on the central control panel, which allows you to choose many further options.
2. Pressure-ulcers develop often times because of convex bone structures. Exactly where Völker MiS® Activ has an effect (the activator at the head section can be turned off if required).
3. View into the motor drive of an activator: the gear parts are mounted in bearings of high performance ceramic zirconium oxide. With its extra-ordinary hardness and smooth surface this material provides outstanding efficiency and a long service life.
Völker assist rail system.
For as much protection as necessary.

The Völker assist rail system is completely flexible. It consists of head and foot section assist rails that telescope from a lower height to a higher height as needed and a central gap, which complies with applicable standards. Völker introduced this patented system in 1999 as a prompt response to all seven entrapment zone recommendations by the HBSW and after studies in the USA have demonstrated the danger of full length side rails. Full length side rails will increase the risk of accidents according to the EXPERT STANDARD FALLING PROPHYLAXIS, since patients try again and again to get over them. Additionally, side rails should not be used as restraints. Patients should feel secure and not caged in. In order to avoid severe results (accidents) the expert standard recommends part-assist rails or sectional assist rails. Normally patients feel sufficiently protected if they can touch the borders of their bed. Völker assist rails in their half height position provide this facility. This is possible because the assist rails are not being fixed on the frame, but are integrated directly into the lying surface. They also articulate with the head and foot sections when they are adjusted and guarantee the standard height above lying level in any position for the protection of the patient.

1) see page 58: Safety.
2) Hospital Bed Safety Workgroup, Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment, FDA documented March 6, 2006.

1.–3. The four secure sections of the Völker assist rail system are directly integrated into the head and foot sections of the lying surface and will articulate correspondingly. It is in this way that they provide the desired protection by maintaining consistent height above the mattress level in any position. If required the gap between the rails can be closed by assist rail spacers (for extremely fall-prone patients Völker offers the Low-height bed).
Völker assist rail system.
As much freedom as possible.

Völker hospital beds provide the technology and function to encourage individual independence. This is accomplished with a combination of the infinitely adjustable lying surface and the secure, height adjustable assist rails. Using this support, patients with sufficient physical strength will be able to sit up, to move and to leave the bed from the side without any additional assistance. The Völker assist rail system allows as much freedom as possible with its head and foot section height adjustable assist rails that provide a secure support and open space for getting into and out of bed.

The mobility of patients helps prevent pressure-ulcers, the risk of falls and encourages motivation and greater self esteem. This means, in addition to a benefit for the physical safety of the patient, there is a well being benefit that also relieves the caregiver.

1) For immobile patients Völker has developed the hospital bed S 962-2 Vis-a-Vis.

1.–2. Völker assist rails adapt to the individuals requirement for assistance and safety: in the low position they offer a bed edge indicator and convenient height to push up from, while in the high position they help to roll over or to pull up when exiting the bed. They also articulate with the head and foot section of the bed to ensure protection while adjusting the lying surface.

“Compared with full length side rails, head and foot section telescoping assist rails with a central gap promote the independent mobility of patients and thereby also provide assistance to the caregivers.”

Siegfried Huhn
Health teacher, Berlin,
member of the expert work shop Fall prophylaxis in the DNQP
Völker assist rail system.
Help for patients and caregivers.

Modern hospital beds are furnished with assist rails options: Either the traditional full length side rails or sectional assist rails on either end of the bed, consisting of two parts which allow leaving the bed in a normal way despite the rail being raised \(^1\). The latter is used with Völker hospital beds. They have been deliberately called assist rails, because they have been developed to assist patients and prevent them from unintentionally falling out. Not in order to force patients to stay in bed.

Völker assist rails are specified according to clamping safe engineered gap dimensions and based on ergonomic experience. Each element is extremely stable and cannot be released even under load. They are suitable as an aid for leaving the bed on the side by providing the patient with a support handle when first attempting to walk. When pulled out only to the side, the assist rail can act as an extension for special positioning. They also allow access to the patient for the caregiver through the central gap or by adjusting the assist rails to a convenient position.

\(^1\) Quote of expert standard fall prophylaxis during care, DNQP, 2006, page 58.
Bed cleaning: automated machine cleaning or manual cleaning?
Völker has the right beds for both concepts.

For answering the question “mechanical or manual” there are a lot of arguments for and against\(^1\). Völker is dedicated to serve both methods completely. For manual cleaning through the hygienic design of Völker hospital beds: closed components including undercarriage, smooth surfaces and light weight construction. These features enable easy yet thorough manual cleaning, especially when combined with ergonomic aids such as bed lifting and turning devices.

For central automated cleaning facilities Völker provides the hospital bed S 962-2W. In order to guarantee protection to IPX6\(^2\) it is necessary to protect various parts of the beds against direct spray water and chemical additives: the housings of the motor drives of the lying surfaces and height adjustment devices are sealed accordingly and enclosed in special housings. The dual motor system for the lying surface has been replaced by two single drives, with the control components and batteries in a separate watertight housing. In order to be prepared for all eventualities the steel spindle cartridge in the lifting unit of the S 962-2W has been replaced with rust proof stainless steel spindles.

\(^1\) Please see also C. Winkelmann: Efficiency analysis of the bed maintenance in hospitals, Saarbrücken 2009.
\(^2\) Protected against heavy spray water: water directed from all directions as heavy jet against the housing may not have any adverse effect.
Völker hospital beds with new undercarriage.
A further contribution to bed hygiene.

One of the most important projects to be completed by the Völker development department in the first half-year of 2010: Development of a fully sealed undercarriage to prevent an environment for the collection of pathogens. An undercarriage which can be used with all Völker hospital beds; spindle cartridges, brake shafts and connecting rods are securely encapsulated in half-liners with smooth surfaces. Therefore the undercarriage can be cleaned more easily and safely, contributing significantly to infection control.

Any manufacturer will supply its new beds in a clean condition. To keep them clean is, however, up to the owner1). Frequently there are many open electrical lines, plugs, motor components, mechanical levers, rods and supports between the lateral profiles of the undercarriage. Edges and corners make cleaning more difficult, which places time pressures on the process leading to inefficiencies. A comprehensive prevention concept in which the bed hygiene must be integrated2) can only be realized if the manufacturer cares about hygienic design. Bearing this in mind the hospital beds from Völker ensure that hospitals can fully meet their obligations from the MPBetreibV (Medical Device Operating Regulations).

1) Medical Device Operating Regulations § 4 (2): “Conventionally sterile or almost sterile medical devices have to be processed as per the manufacturer's instructions and by applying validated procedures in a manner that provably guarantees said procedures' success and doesn't jeopardize patients, users or third parties' safety or health.”
2) Additionally: messages of the DGKH, in: HygMed 28, year 2003, leaflet 1/2; see also www.dgkh.de

1. The new undercarriage of Völker hospital beds with three-fold spindle telescopic lift in the four lifting columns.

Figure on the right:
The hygienic design principle of Völker hospital beds is well visible at the first glance.
Up to one million patients catch an infection annually. Pathogens can be transmitted via the hospital bed.

The guideline “Requirements for bed hygiene” states: “The bed is a significant transmission area for pathogens.” This results in “transmission of pathogens at new occupation as well as during internal transports.” There are also “special problems for bed hygiene for patients with multi resistant pathogens”, intensive use of a hospital bed around the clock promotes reproduction and transmission of pathogens. Bed hygiene encompasses the complete bed including accessories.

The closed undercarriage on each Völker hospital bed is thus a real economic advantage, as longer patient stays due to hospital acquired infections will reduce profitability and high infection rates may lead to severe financial losses. In addition, hospitals often have to report MRSA infection rates to the public health authority and failure to reduce rates of infection can lead to reduced public confidence in the hospital. Positive measures for quality assurance and patient safety including those for infection control improve public perceptions and drive up occupancy rates.

1) Guideline “Requirements for bed hygiene”, in: HgyMed. 28. Year 2003, leaflet 1/2; see also www.dgkh.de
2) “Realization of the MRSA recommendations of the KRINKO from 1999 - current notes of the DGKH”, in: HygMed 2009; 34 [3]; see also www.dgkh.de
3) See. K.-D. Zastrow: “Importance of hospital hygiene for German hospitals”; see also www.drzastrow.de

1. The open undercarriage of a hospital bed. According to the regulations regarding medical products the owner is responsible for cleaning the hospital beds. However, manufactures should design products that can be cleaned easily and according to the regulations.

“Hospital beds with their frequently exposed components are ideal carriers of MRSA being closely associated with patients. Bed cleaning is therefore an important measure for fighting hospital infections. If this task can be accomplished professionally, hygienically and at the same time economically depends to a large extent on the bed design. Encapsulated designs can solve these problems and minimize the risk of distributing infection germs.”

Dr. med.
Klaus-Dieter Zastrow
Physician for hygiene and environmental medicine, Berlin
Völker hospital beds are furnished with *Original Völker Motor Drives.* Because medical devices must be safe.

Hospital beds should support a patient’s required positioning and movement needs and assist with their mobilization. This has driven the development of hospital beds from mechanical and hydraulic based engineering to electrically driven medical devices. Originally only height and lying surface adjustments were possible; over time Völker hospital beds have been developed with far greater movement and positioning features controlled by more complex systems. Failures and defects should not occur if activating care and therapeutic goals are to be achieved. Motor drives are therefore the core competency of manufacturers of hospital beds.

Völker has faced this demand. In cooperation with **Porsche Engineering** a bus based motor drive has been developed which is produced in-house at Völker. It consists of the four basic components electrical drive motor, patient hand control unit, nurse control and power supply. This motor drive and control engineering is focused on safe application for medical devices and exceeds the standards by its specification. Völker motor drives make the hospital beds from Völker safer and reduce failures. The quality and reliability of the medical device is significantly improved.

The service friendly design is supported by the compatibility of the motor drives with the Völker Diagnostic System.

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1. The dual motor drive with two easy to exchange standard batteries.
2. The Völker Motor is used as multipurpose drive in all hospital beds from Völker.

Image on the right:
Schematic location of single motor drives installed in the bed frame together with the two traverses left and right for the telescopic lift.
Original Völker motors and drives.
Safety with concept.

Manufacturers of medical devices are increasingly subject to strict safety and quality requirements by both law and standards, but also by hospitals and patients. Only by in-house production of motors and drives can it be ensured that supplier deficiencies do not impact the final customer. At the same time long-term stability and availability of beds and spare parts can be guaranteed.

This can be achieved by an optimized approach during development and production of all components. For Völker motors and drives standard processes are being used that have delivered reliability for decades in the automotive industry. In order to identify and avoid potential weaknesses and safety risks, analytical methods are applied during the development phase of new products.¹.

Original Völker control elements.
Bed control at all events.

The hardware and software of the Völker LIN-Bus system developed in cooperation with **Porsche Engineering** is a fully LIN\(^1\) standard with plug-and-play extension\(^2\). It allows adding and removing components on the LIN-Bus during running operation. All bus components, such as motor control, power supply and keyboards are capable of continuous self-monitoring independently from each other. A redundant test of safety relevant parameters will be conducted. If these tests do not indicate correct information, the power supply and therefore also the movement of the bed and control functions will be blocked.

The new electronics guarantee a first fault safety without the need to block for example functions for patients. A pulse width modulation provides a consistent adjustment speed for the lying surface positioning even at different loads. It is because of this the safe work load could be increased to 550 lbs. (250 kg).

\(^1\) Local Interconnect Network for communication between intelligent sensors and actuators.
\(^2\) "Connect and start" without the need for any other set-up.

1. Automatic function tests of a hand control unit.
2. Mounting the holding clip with a guided screw driver.
3. Laser inscription on the rear of the hand control unit.
Hospital beds “Made in Germany”.
Lean production makes Völker beds good value.

The Völker facilities in both Witten and Hainichen have realized the principles of lean production. The objective is to control the required material for all assembly lines over the complete process chain, in the correct sequence, to transport it in the required quantities directly to the line and to assemble it there within a defined period of time. The core is a defined time schedule that is applied to all incoming bed orders and on the next two days production\(^1\). The function of a logistics center in the plant is reduced to bed specific commissioning of part sets. These will be made available to the individual stations on the assembly lines on order picking trolleys. The workers don’t have to worry about material supply, but can fully concentrate on the assembly process. The objective is a fault free production. Due to the strict final testing it is guaranteed that only hospital beds that are fault free will leave the plant. Production processes which deliver safety and flexibility are being continually developed\(^2\). The individual workers play an important role in these cases, because he or she is fully responsible for the quality of each single Völker hospital bed – and therefore ultimately for customer satisfaction.

\(^1\) The pull-principle adapted from the Japanese automotive production Kanban, which has been introduced in the Völker plants together with Porsche Consulting.
\(^2\) Corresponds to the Japanese work philosophy Kaizen, which features the steady striving for improvements.

1. Assembly of the hydro lift for foot section adjustment.
2. Final inspection of the hospital bed on fault free function of all components.

Image on the right:
The final assembly of the hospital bed runs with automatic conveying of the assembly and commissioning trolleys.
Quality and safety.
Future oriented Völker technologies.

The diversity of customer demands and continuously increasing requirements based on standards have caused Völker GmbH to develop new technologies for motor drives and beds and to apply those at the in-house production. In this way standard procedures will be used for example during development which have proven in the automotive industry to be very reliable. This includes the V-model for planning and successful conduction of development projects from the view of Völker's Project Management and Völker's Quality Assurance. Here additionally an iterative (step by step) development model is used, in order to allow continuous revisions and improvements of the individual development cycles. Finally Völker focuses on the FMEA (Failure Mode and Effects Analysis) as an analytic method, in order to identify potential weak points and safety risks during the development phase of new products and to avoid those by applying appropriate measures.

It is ensured by a defined development model with several prototype phases, that the first bed delivered will meet the desired requirements.
Quality and safety.
Technologies which make Völker hospital beds a lasting investment.

The established standards in the automotive industry have been integrated at Völker into all production processes from first development design up to the final production step. In particular the FMEA has proven very successful along side the many years of in-house experience at Völker. Due to the support of Porsche Engineering potential weak points in the system, in the engineering and in the processes could be found and removed by means of this analytical method.

This guarantees that each hospital bed from Völker will meet the various requirements during its service life.

The images show a selection of examples how the results of analysis have been purposefully applied for Völker hospital beds:
1. A LIN-Bus established in the automotive industry is used as a communication standard, which is secure, effective and cost efficient.
2. Two standard batteries are used, offering by their high capacity highest possible safety and flexibility for the user.
3. An electronic battery control ensures always fully charged batteries. This enables a significantly longer service life at reduced costs.
4. A potentiometer controls electronically the travel distances and thus the normally used end position switches can be dropped.
5. A reliable brake provides an absolutely secure stop of the selected lying surface positioning by a) wrap-spring, b) latching the spindle and c) intervention on shaft/motor drive.
6. By using two opposing drive wheels mechanical damages of the gear can almost be excluded.
7. Connection of all components is made with water tight plug-in connectors, especially optimized for Völker.
8. Due to the laser inscription all safety notes are abrasion and wiping resistant and the serial number can be traced back permanently.
9. Housing, upper and lower parts are laser welded and are thus excluding processing problems, such as adhesives escape etc. Moreover all housing parts are made of polyamide; that means good chemical resistance and very good suitability for automatic cleaning plants.
4. Potentiometer
5. Brake
6. Drive wheels
7. Plug
8. Hand control inscription
9. Welding device
Quality and safety.
Permanent inline inspections. 100 percent final tests.

Any order is exactly defined by the central ERP system. For avoiding faults any order will be completed by one person each. Pick-to-Light is supported, in order to avoid picking errors or counting mistakes. Application of lubricants is exactly dosed by control devices, intelligent screw drivers guarantee the specified torques, screwing times and screwing sequences ensure reliability. Assembly is performed for greater safety to high industrial standard with plug-in connectors according to the Poka-Yoke principle.
After each manufacturing step an intermediate test is conducted, the respective final test ensures the fault free quality of the complete system. All test results are documented. The completely assembled hospital bed is checked prior to leaving the assembly line for final quality and fault free function and then transported to the automatic and documented final test under maximum permissible work load ("iron man dummy"). Only after this 100 percent test will a bed be released for delivery.
Saving time with the Völker Diagnostic System.  
Simplify maintenance and reduced costs with Völker Services.

The in-house development of the Völker motor drive system has also allowed the technical service and maintenance of Völker beds to be optimized. This became possible due to the Völker Diagnostic System (VDS): A gateway that connects the LIN-Bus of the Völker bed with a PC, on which the diagnostic software is installed. Here all relevant parameters of the various components can be accessed and checked. Problems will be diagnosed immediately. Frequently irregularities of the system can be analyzed and corrected by test runs and recording the performance curves. Results can be saved centrally on a Web-Server. Bed documentation is assured.

Of course, it is up to you to decide whether you want to use the Völker Diagnostic System and to what extent you wish to be integrated into the overall system. There are many advantages; the Völker Diagnostic System delivers a comprehensive overview of the entire bed stock, all configurations of motor drive components are stored for each bed. This does not necessarily require a Völker service engineer to be on site. This can be accomplished by the hospital’s own technical department if furnished with the Völker Diagnostic System. The principle of the service concept is: *Helping people to help themselves.*

1. The repair rate of the new Völker hospital beds with the Völker motor drives is extremely low. If a problem does occur your own technical staff will be able to solve it by means of VDS. If the internal technical department is not (yet) furnished with a VDS, the Völker service engineers are available.

2. By means of the VDS the in-house technician can quickly diagnose the problem. Here specified parameters of all components and possible deviations will be indicated. Repairs can be made quickly, enabling the bed to be returned to the users immediately.
Technical inspections with the Völker Diagnostic System.
The TÜV (German Technical Control Board) for Völker hospital beds.

Technical inspections can be compared with the TÜV test for a car. Hospital beds must be inspected at regular intervals to check compliance with the technical requirements for safe operation. Both the mechanical and electrical safety must be verified. Völker recommends documented annual inspections, in order to detect wear and to minimize resulting risks.

The Völker Diagnostic System (VDS) supports this process in many ways. In the first step it provides the applicable test plan with test points to be checked. Every point is described in detail, in order to allow correct testing by the technician. Documentation of the test is made by the VDS. In the next step the data will be uploaded to a central Web-Server. Thus the data is not only available locally on a PC, but world wide for assessment and printing for authorized persons. In a final step the hospital can save and print the test reports, in order to present those for example to the appropriate authorities. At the same time a report about the current status of inspections can be created to see if further steps may be necessary.

1) Technical inspections with the VDS can be conducted for both the latest generation of beds as also for all previous Völker beds.

1. If the annual inspection is due the Völker service technician will complete this as well as any repairs. The schedule is listed in the current documentation for each individual bed.
2. Not only repair data, but also the data of technical inspections can be uploaded to the Web-Server. In this way they have been collected for taking further measures if required and are available to the customer.
Spare parts ordering with the Völker Diagnostic System.
Complete. Quick. And reliable.

The Völker Diagnostic System supports ordering of spare parts of all Völker hospital beds. The user can display all spare parts – or filter them for a certain bed model. For easy determination all spare parts are stored incl. the accompanying serial numbers together with the corresponding image. An order mistake is virtually excluded due to the visual comparison. In order to maintain the clear arrangement spare parts are listed for each bed model. There is of course the possibility to order any other spare part. In order to find the right order number and to be able to enter it correctly into the Völker Diagnostic System the current spare parts list of a bed will be used. If several beds are concerned also collective orders are possible.

Orders to Völker GmbH can be placed any time online, by Fax or by mail. It is possible any time to print the shopping basket list in order to get an overview about the spare parts list or to use it for internal approval. With the online order the data will be transferred to the Völker ERP system (Enterprise Resource Planning) and processed immediately. By this approach a quick and reliable ordering process is guaranteed. Identical possibilities for spare parts ordering is also available on the Web-Server. In this way spare parts can be ordered without the need for further software.

1. Your technical department can request spare parts any time via the Völker Diagnostic System. For this VDS helps with images and descriptions for exact determination of the needed parts.
2. For a better overview or for internal approval, shopping basket lists can be printed out. Every order will be acknowledged immediately.

“The Völker Diagnostic System is a simple and secure process to recognize and to solve technical problems, to perform inspections and maintenance, to order spare parts and to document everything completely. This will significantly reduce expenditure and time for the customer. And also for us. A real Win-Win situation.”

Christian Pfeiffer
Manager Service,
Völker GmbH
Völker hospital beds comply with the new DIN EN 60601-2-52. Including all test criteria for side rails.

Important changes in the new standard\(^1\) concerning the section of “Mechanical Hazards”. Based on documented accidents with side rails the test criteria have been tightened. They concern dimensions, load forces, reliability of engaging and robustness\(^2\). Before the new standard the dimension (C\(_1\)) between headboard and side rail had to be either smaller than 2.36 in. (60 mm) or larger than 9.25 in. (235 mm), the new standard specifies the dimension to always be smaller than 2.36 in. (60 mm). For the central gap (C\(_2\)) more than 12.51 in. (318 mm) or less than 2.36 in. (60 mm) measured with the lying surface in a flat position. This measure is also valid for the distance between side rail and footboard in the case of a bed extension being used. Because of poor bending properties, especially of full length side rails, the test force has been increased from 50 N to 250 N. Robustness and reliability of engaging of the side rails will be determined by completely new long-term function tests of 30,000 cycles\(^3\). A further long-term test with 3,000 cycles simulates the shaking of patients on the side rail\(^4\).

Völker beds fitted with the Völker assist rails meet all requirements of the new standard since March 2010 and offer the highest level of safety for patients, caregivers and managers.

\(^{1}\) Since December 2009, the IEC 60601-2-52 applies. The transition period of 36 months starts with the ratification of European standard EN 60601-2-52 and ends in April 2013. There are provisions to safeguard existing standards for beds built according to the previous standards.

\(^{2}\) Völker produces beds exclusively according to the new standard IEC 60601-2-52 already since March 2010. The appropriate test certificate of the TÜV Süd for meeting the standard is available.

\(^{3}\) Völker beds have passed these tests (30,000 cycles from the engaged position on top into the lower one not engaged position) and also the following load and function tests.

\(^{4}\) The Völker assist rail is loaded 3,000 times in longitudinal and cross direction each at 100 N.

1. The tests of the gap dimensions are conducted with dimensionally specified cones and at a load of 250 N.
2. The sketch from the standards shows the specifications for the gap dimensions which are complied with by the Völker hospital bed (see image on the right).
Völker hospital beds: The complete program.
Matching the individual needs of the patients.

Völker offers functionally different hospital beds which have been developed to help facilitate different therapeutic treatments and support patients with their individual care requirements.

What can be recognized, despite all the different functionality of each Völker bed model, is that the modular design and common components allow a uniform appearance to be maintained.
Model Low-height bed

Model 3082 K

Model S 382

Model S 382 Vis-a-Vis
The classical twin room.
Furnished with a Völker hospital bed S 962-2 and a Völker Vis-a-Vis.

Two functionally different hospital beds give a uniform appearance in this patient room. Only when it becomes necessary to activate a patient by means of the forward sitting position does the right bed transform to a Vis-a-Vis.

1. Patient and caregiver communicate on the Völker Vis-a-Vis at eye level. The available space used by the bedside cabinet between the two beds is also sufficient for the laterally shifted undercarriage.
2. The vertical Völker Supply Bar is integrated in the horizontal supply unit.

Image on the right: a twin room furnished with Völker hospital beds, both in the design S. Light and supply unit from ZUMTOBEL LIGHTNING, table and chairs from BRUNNER.
The modern single room.
Furnished with a Völker hospital bed S 962-2.

Völker hospital beds in the best Healthcare design – complemented by matching equipment, such as the Völker Supply Bar and Völker Server – give the single room the desired environment for recovery.

1. The hospital bed S 962-2 is moved by the nurse into the comfort sitting position by using the patient’s hand control unit.
2.–3. The supply system is installed in this example behind the sliding picture.

Image on the right: the hospital bed S 962-2 in the design B. On the wall next to the bed is the Völker Supply Bar with a drawer element and a tray. Along-side the bed is the Völker Server RT-985.

Bed linen for hospitals from KARL DIECKHOFF.
The comfortable VIP room.
Furnished with a Völker Vis-a-Vis hospital bed.

VIP rooms combine medical safety with individual living comfort. Here especially the Völker Vis-a-Vis fulfills the demand for a hotel ambience in combination with functional requirements of pre- or post operative treatment.

1. The Völker Vis-a-Vis in the design MA in the sitting position allows the patient a new way of communication.
2.–3. The Völker Vis-a-Vis in its standard position in the design S or in the design MN with low footboard.

Image on the right: the Völker Vis-a-Vis in the design MA. Along-side the bed is the vertical Völker Supply Bar.
In front of the window a three-piece-suite from WALTER KNOLL.
Intensive care.
Furnished with a Völker hospital bed S 962-2.

With a hygienic design, multi-purpose functionality, micro-stimulating lying surface and the multi-position assist rail system, Völker hospital beds S 962-2 are used in intensive care or intermediate care. Here they meet medical requirements on one hand and on the other hand their multi purpose usage supplements the often limited availability of specialist beds.

1.–2. The height adjustable Völker assist rail system allows a great variety of care activities and can be adapted to the respective needs during care and for protecting the patient. When not used the rail sections slide under the lying surface and leave the accessory rail open with the attached accessories in place.

3. The nurse controls can attach to the top of the Völker assist rail at the footboard for easy access at all times.

Image on the right:
The Völker hospital bed S 962-2 (design S in white) in the intensive care (all pictures taken on pages 68 through 72 with medical equipment by DRÄGER MEDICAL).
Intensive care.
Furnished with a Völker Vis-a-Vis hospital bed.

More and more hospitals prefer the Völker Vis-a-Vis for their intensive care or intermediate care. This is because of the ability to reposition patients from a lying to a therapeutic sitting position with minimal disturbance and greater security for both patient and staff.

1.–3. The Völker Vis-a-Vis offers the same possibilities as a Völker hospital bed and additionally the advantage of the sitting position for the patient.

Image on the right:
A vis-à-vis care also promotes the recovery process of intensive care patients.
The Völker Vis-a-Vis hospital bed.  
Mobility made easy.

Not every patient who cannot or does not wish to leave his/her bed is completely immobile. Frequently physical or medical conditions do not allow a patient to leave the bed via a lateral transfer. However, assisted or independent mobility is often possible if the bed can form an open, forward sitting position, with the patient having secure ground contact for his/her feet. In this way – depending upon the physical condition of the patient – mobility and independence can be encouraged. From lying, to sitting, to standing and walking.

The Völker Vis-a-Vis has been developed on the basis of the well proven Völker hospital beds and looks the same as any other Völker hospital bed at first glance. But it features a very important additional advantage: by pushing a button and with some additional manual actions it can be separated between the upper and lower leg sections of the four section lying surface. In order to allow the lower leg section to move to either side in a way that sufficient space remains for a comfortable sitting position, the complete lying surface is moved forward electrically in relation to the undercarriage. Lateral protection for the patient while in the sitting position is maintained by the use of the assist rail system.

1. The Völker Vis-a-Vis in the sitting position offers patients optimum forward mobilization possibilities.
The Völker Vis-a-Vis hospital bed.
Sitting as usual.

Compared with a recumbent sitting position, sitting in the Völker Vis-a-Vis with the feet firmly on the ground has a very special meaning for patients. It gives them a feeling of participation in life and speeds up recovery.

Sitting a patient up is also possible in a normal hospital bed, but this supine positioning and any subsequent transfer to a chair can be painful for post-operative patients, especially those with abdominal surgery. In this and similar cases promp mobility is required and compromising this could lead to increased nursing requirements, prolonged care and frequently, longer hospitalization.

Moreover, the sitting position offers the possibility of improved vis-à-vis/face-to-face communication with caregivers and visitors. Sitting vis-à-vis signifies that you are paying time and attention to the person you are with. Time for caring, time which is gained by improved efficiencies and the independence of the patient.

1) e.g. after cardiac surgery, after a stroke or frequently at neurologic/geriatric illnesses

1.–2. Patients in the Vis-a-Vis can be adjusted to the sitting position quickly and easily. Back rest up and moving the lying surface forward. The lower leg section is released manually and shifted smoothly to the desired side, while – depending on existing physical condition and if required by assistance of the nurse – the patient puts his/her legs one after the other on to the ground. The patient can communicate in this way on eye level with the nurse or his/her visitors.

“...In a pre-study, patients who need significant care could be brought into a real sitting position by only one nurse for a certain period of time securely and without being afraid. There was minor stress sitting compared with exiting the bed on the side.”

Professor Marlies Beckmann
Professor for clinical care and nursing science at the technical college Frankfurt/Main
The Völker Vis-a-Vis hospital bed.  

Forward movement.

Rising or sitting out of a normal hospital bed usually requires a transfer into a more comfortable sitting position in an armchair, wheel chair or the like, a position which is provided by the Völker Vis-a-Vis already. From the Vis-a-Vis rising and standing is the “transfer” to walking. Experienced caregivers know that getting a patient from lying to sitting to standing as soon as possible has many benefits for the patient – with Vis-a-Vis this process can be started earlier. The patient should be encouraged toward independent mobility, but always with the appropriate assistance allowing him/her to use his/her abilities and with due regard for their physical and medical condition. According to the Aktvitas Care® concept it is important that the patient has enough self control and can transfer their body weight continuously for proper support on the ground).

Independent mobility is supported by means of the stable and elevated assist rails on the foot section. By using these, assisted movement of immobile patients can be achieved by one nurse far easier than the traditional sitting up, rotation and exit as with normal hospital beds.

1) see also “Nursing people” volume2, Springer 2006, page 520

1.–2. When rising or sitting out from the Vis-a-Vis the patient is supported by the elevated back rest, additional assistance by a second nurse is not required. Sitting up impulses are introduced by means of the correct sitting posture, which is promoted with the Völker Vis-a-Vis by lowering the upper leg section and raising the bed frame at the headboard.

“Those who cannot be mobilized laterally because of a lack of physical condition or physical trouble is preventing this, can be – apart from some exceptions – forward activated.”

Dr. Clemens Becker
Manager of the Geriatric Rehabilitation of the Robert-Bosch hospital, Stuttgart
The Völker Low-height bed.
The right hospital bed for fall-risk patients.

Studies have shown that patients who are prone to falling do indeed fall frequently. The most documented incidents are falls by patients over 65 years old in connection with a bed. More than half of these patients have a (baseless) fear of falling from the bed’s normal height. In such cases, the Völker Low-height bed is the bed of choice.

The Völker Low-height bed is a combination of the normal Völker hospital bed’s design and an undercarriage with a special trapezoid lift that lowers the bed to 25 cms above the floor. This low height makes it ideal for fall-prone patients, even when the use of side rails is considered inappropriate.

The stable lift also raises the bed to an ergonomically appropriate working height of up to 80 cms. The height can be easily adjusted to suit nurses providing treatment and patients receiving visitors.

1.–3. The Völker Low-height bed Model 582 has a stable trapezoid lift and an adjustment range of 25–80 cm.

Image on the right:
The possibility of being close to the floor and sensing the ground increases the assurance of fall-prone patients and avoids falls.
Two-part assist rails for enhanced safety and mobility.

While experts are generally critical of using full-length assist rails to prevent falls (see page 26), for Low-height beds they are not usually discussed at all and would run contrary to the bed’s fall prevention purpose.

However the Völker two-part assist rail system with its central gap is different. The four-part assist rails make for a number of variable, individual uses, providing a high degree of clinical choice geared to the patient’s need for safety and mobility. For patients with a fear of falling, raising the assist rails at the head-end to the first level, slightly above the mattress, enhances safety by outlining the perimeter of the bed. Even when fully raised, the assist rails provide a central gap with enough leg room and also enough space to position the patient (see figure at the top of the page on the right) and use the assist rails to safely egress from the bed. If a patient does fall out of a Völker low-height bed without raised assist rails it is generally without significant risk and patients will be able to get back into their bed on their own (see figure at the bottom of the page on the right).

Völker assist rails are also extremely stable and cannot be loosened, even under load. They are an ideal aid to self-mobilization when getting out of the bed, standing up, and as something to hold onto when attempting those first few steps.

1.–3. The Völker Model 5 380 K in its variant with four smaller double castors on the head and foot-end for better maneuverability. As with the classic Völker hospital bed, all positions are possible. A stable trapezoid lift will lower the bed to 25 cm and raise it to an ergonomically appropriate working height of 80 cm.
The Völker bed 3082 K and 3082 K Vis-a-Vis.
Beds with completely removable head- and footboards.

These beds are a successful combination of the Völker hospital beds’ superstructure and the Völker healthcare beds’ undercarriage, geared to the needs of patients or residents whose head- and footboards often have to be removed. You will find these beds in rooms with clinical standards that nonetheless are supposed to convey a feel-good ambience.

1. These Völker beds feature head- and footboard in various designs, which, if required, can be quickly removed.
2. The bed 3082 K in design B.
3. The bed 3082 K Vis-a-Vis in design S.

Image on the right:
The bed 3082 K in design W in anthracite with anodized undercarriage. Together with a Völker bedside cabinet and Server.
The Völker bed S 382 and S 382 Vis-a-Vis.
Combined healthcare and hospital bed.

The beds S 382 and S 382 Vis-a-Vis are the successful combination of Völker healthcare beds with the undercarriage of the Völker hospital beds. In this way a cosy ambience remains, at the same time these beds fulfill those demands expected from a bed: easy to move and transportable over longer distances.

A combination which makes these Völker beds perfect for rehabilitation.
Völker hospital bed controls.
Operation at only a glance.

Völker hospital beds are easily controlled at the push of a button. This is accomplished with an ergonomically designed hand control and specially developed nurse controls. Therefore a variety of compatible nurse controls are available that meet the needs of the patient and caregiver.

Völker operating controls are supplied with laser marking, which guarantees the permanent legibility of the serial and article numbers.

The hand control unit with all functions, which facilitate self-mobilization. The height and lying surface position can be adjusted.
All hand control units for patients are completely lockable and are also available in an infrared version (IPX4) upon request.

1. Hand control unit with hook (longitudinal) and clip (lateral).
2. Hand control unit with Auto-Contour function (raise the back rest and upper leg sections simultaneously) with hook (longitudinal) and clip (lateral).
3. Hand control unit mounted on the assist rail.
4. Hand control unit hung on a holder (optional).

Images on the right:
5. Nurse hand control as an optional extra with the Völker Vis-a-Vis.
7. Nurse hand control with individual locking/automatic functions hung on the footboard.
8. Nurse hand control with complete locking in the bedding storage.

Please note that individual nurse control units may be subject to country-specific regulations.
Völker hospital beds.
Design choices.

Völker hospital beds and furniture offer the possibility to design the bed model. Hospitals and health care facilities have the unique possibility to differentiate with the color and design choices available from Völker. It is in this way that the beds can, through design, become a strategic investment.

A wide range of laminates and materials are available for the head- and footboards to meet almost any design criteria.

Design S
Design B
Design W
Design MA

Depending on design not all bed models can be furnished with all finishes.

Designs (depending on the model) are also available with lower footboard, see image on the right.

*) For model S 382 / S 382 Vis-a-Vis
Völker hospital beds and furniture.

Color collection choices.

The fantasy and wood decors of the Völker color collection are extremely resistant against scratching, denting and abrasives, as well as resistant to most common chemicals. The laminate inserts are manufactured according to DIN 68765 – corresponding to emission class E1 – or DIN EN 438.

In addition, requests for custom laminates are in most cases possible.
Better lying and sleeping comfort.
With the right mattress for Völker hospital beds.

Völker hospital beds meet the recommendations of the DBfK with their Micro-stimulation System combined with a range of specifically designed mattresses for improved comfort and protection. The 4.7 in. (12 cm) mattresses have differing densities and foam constructions which address the demands of both patients and caregivers. Focus is put on providing the highest quality materials married with the knowledge and expertise of a renowned mattress manufacturer.

All foams are hygienic, dust free, shape and age resistant. The open cell structure of the foams used delivers a highly breathable structure with almost unhindered moisture exchange. A higher density central core covered by softer outer layers provide the optimum support characteristics when combined with the Völker MiS® System.
Accessories for Völker hospital beds.
Ideal compatibility in quality and function.

Völker hospital beds are equipped for all accessories: as both sides of the bed have integrated accessory rails that run the full length. Völker offers the matching necessary accessories, from urine bottle basket to trapeze bar with handle, from universal hook to IV pole. All accessories are compatible and are easily dropped into place, clipped on or placed on adaptor rails.

Any accessory offered by Völker is subject to strict quality requirements. This provides reassurance that the best material available is being used.
Völker bedside cabinets, Server and Butler. The ideal compliment to each hospital bed.

To complete the furnishing of the patient room there is more than a just the hospital bed to consider: bedside cabinet, Server (over bed table), and Butler, all of which are complimentary and make the patients stay easier.

Patients truly appreciate the value of furnishings that provide a nice hotel like ambiance. Therefore healthcare furnishings from Völker always offer the best Healthcare Design in order to bring together functionality and a comforting atmosphere.

1. Völker bedside cabinets are multi functional furniture which make life easier for patients in the bed and around the bed: movable on castors, able to be used on both sides of the bed, even with hidden integrated fold away or height adjustable tables. The right choice for everybody. And always coordinating the bed to the other furnishings.
Völker hospital bedside cabinets, Server and Butler.
Furnishing options.

Bedside cabinets are for more than just sitting things on top of. What’s inside can make a difference in the comfort and convenience of the patients stay.

From an easy to reach call system to bottle holders and a convenient waste receptacle, optional features on Völker furnishings just make life easier.

1. The latest development offering perfect access to the lower compartment of a bedside cabinet next to the bed: the folding compartment furnished with waste receptacle and bottle holder.
The Völker Supply Bar.
Almost everything in easy reach.

The vertical Völker Supply Bar is a supply and storage system integrated into the furnishing of a patient room without dominating it. In cooperation with Porsche Design Studio a modular system has been developed creating an ideal work place for the caregivers. It offers multiple possibilities – well thought out in its appearance and ergonomically engineered – for storage and accessories and yet allows good access for the patients in their bed.

For the patients themselves the Völker Supply Bar improves comfort and safety at the same time: all switches and controls are located within comfortable reach as are the table top or drawer unit that can also be used as/or in conjunction with a bedside cabinet.
About Völker. Progress since 1912.
And the vision of a better hospital bed.

Völker's success has a good reason: In 1912, Heinrich Völker I, founded a furniture factory in Witten that specialized in furnishings for the hospitality industry. His son Heinrich Völker II continued the business from 1939 and focused production on the complete furnishing of hotels, hospitals, healthcare facilities and nurses' homes. Since the early death of his father in 1967, Heinrich Völker III, the founder's grandson, ran the company. From his grandfather’s furniture making business, the company has become one of the largest in the area of specialized healthcare furniture in Germany. And the Völker name has quickly become a synonym for innovative hospital and healthcare beds around the world.

Back in 1970 the company was forced to move into larger facilities, in 1981 Völker launched his first healthcare bed. Since 1986 all Völker healthcare beds are furnished with an integrated assist rail. In 1991 the electrically operated healthcare bed 2080 E is introduced. Völker beds present a new generation, leaving previous technical conventions behind. That is exactly Völker's vision: converting the weak points of the previous types of beds into strong points. With a new design which meets both the demands of hospitals for caregiving and also the requirements of the patient. And the absolute best in Healthcare design. With its now comprehensive line of products in both the nursing care and hospital markets, an innovative market leader in Germany is introduced. In 1994 moving into the today’s production facilities became necessary. In 1995 the Völker hospital bed is introduced on the market and two years later a modern production plant was built in Hainichen near Dresden, because of the growing demand for hospital beds. In 1998 the inauguration of the administration and showroom building followed in Witten, in 2005 a further building complex for development, service and logistics was completed. Finally, in 2008 the plant expansion for the production lines for the Völker motors, drives and hand control units in Hainichen marks the latest growth.

One thing however remained the same over the years: productivity is a continuous improvement process at Völker and still remains, after the acquisition by Hill-Rom Holdings Inc. in early 2012.
About Völker and the German locations.
Hospital beds *Made in Germany*.

Currently, over 350 employees produce roughly 35,000 beds per year. Nonetheless, Völker has remained true to its *Made in Germany* quality promise. The company continues to manufacture only in Germany. At the beginning of every development project, the experts from the development and production departments as well as suppliers and external experts sit together at a table to exchange knowledge. And last but not least, our Witten and Hainichen locations simultaneously make a statement. The Völker company stands for *Made in Germany*. You cannot simply outsource traditional German engineering excellence. All suppliers are located near both the Witten and Hainichen locations; all special parts – including drives produced in-house – are collected and shipped just in time in a revolving process. This procedure is methodical and reliable, providing a guarantee for comprehensive total quality management, which permits not only the certification of all production facilities, but also close and continuous monitoring according to Völker’s standards.

The key suppliers are located nearby the production sites in Witten/Westphalia and Hainichen/Saxony. A company owned transport provides supplies just-in-time.

Image on the right:
View on the administration building and the production facilities in Hainichen/Saxony.
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