



wissner-
bosserhoff
design and health





a good design doesn't mean a luxury

A combination of design and health-care may appear absurd and unnecessary to somebody. Why waste money on designing furnishings and equipment which should serve well anyway? But this is what good design is all about – it means a combination of functionality and aesthetics. It means that the equipment is as functional and ergonomic as possible, and looks good too. The perception of design has registered a fundamental turn for the better in recent years.

Increased demands on the standard of health and social care play a considerable role in the positive approach to design. This relates to the aging population for in the year 2050 more than half of the population of the European Union will be over 65 years old! More and more health and social care establishments will be required. The number of such institutions is increasing and people are spending more and more time in them. They want to feel pleasant and content there. The older generation is becoming a demanding clientele. However the visual and aesthetic aspect is only half of what is required for good design. The other side represents high functionality, ergonomics, easy and friendly control. Hospitals and nursing homes are aware of the positive role of design:

- An appropriate design arouses the trust of patients or clients and their relatives.
- A good quality design of equipment makes the work of doctors and nurses easier and pleasanter.
- Well designed equipment contributes to the greater satisfaction and independence of clients.

The wissner-bosserhoff / Linet group devote great attention to design. The products combine not only functionality and good quality, but also a design of a high standard. It is marked for its specific features and nice appearance as well as pleasant servicing and ergonomics.

- The beds, bedside cabinets and other furnishings are developed in cooperation with top designers, but equally meet the most demanding functionality and quality requirements.
- Easy control: ergonomic control features ease the work of nurses and provide the patient with independence.
- wissner-bosserhoff / Linet group can boast prestigious design awards and several of their products rank among the most successfully designed on a worldwide scale.

what specific features has design got in health-care?

Design is a subject most talked about in connection with certain fields. Attention is paid to clothing and electronics design and the most focal point is design in the car industry. But we can now more often also come across good design in “marginal fields” such as health-care, nursing-care and medical equipment. In recent years the combination of design and health-care is taking on totally different values and it would now be difficult for anybody to doubt its contribution.

In view of the aging population, the relationship is substantially changing towards old age and sickness. It is important for the future to be aware of the respect for individual needs and consider the difficulties that unavoidably accompany old age. It is shown that the third stage of life offers many possibilities and ways of how to live a full and quality life.

Design does not merely mean the aesthetic aspect of things, but it includes the technical, production and artistic side. Several specialists - construction designers, technologists, marketing experts and artists – contribute to the development of complicated products. And this applies twofold to health-care products because the basic requirement in medicine is functionality.

A good design in health and nursing-care underlines the practicality, servicing and ergonomics of the products. An appreciable aspect is also the aesthetic side which should ideally go hand in hand with functionality.



The demands placed on design in health-care are high also because the products must be marked for their considerable degree of timelessness. Products are purchased so they can serve the patients and staff for many years, so for example, the service life of a bed is estimated at 10 to 15 years. Throughout this time it must not only be serviceable and reliable but its appearance must also be adequate. Hence it may not be designed in such a way so that goes out of fashion in a year and looks anachronistic.

*Ivan Dlačič, author of the design of the multicare resuscitation bed and the stretcher sprint:
A good health-care design should level out the technological qualities of a building, support and enhance its function. The equipment and furnishings in a hospital must look reliable. As soon as they appear cheap, the patient and the nursing staff lose trust. It must give the impression that the patient is safe when it is used.*



functionality and aesthetics

The distinguishing sign of wissner-bosserhoff / Linet group products is not only their quality and functionality, but also their aesthetic features. The construction designers base their work always on one basic fact, and that is that a bed is a piece of furniture, and this also applies to the design of special hospital and nursing beds. The turning point in the construction technology of wissner-bosserhoff beds was the idea of the column unit which was used to begin building the complete design of the present beds. The elegant construction combines an unusual appearance and exceptional technological qualities.

Perfect stability the three-column construction enables a lateral tilt and reliably ensures stability.

High load the bed is fully functional even at a load of 230 kg.



*PhDr. Jana Novotná, Design centrum CR:
The multicare bed is the embodiment of functional parameters that create above standard comfort in the care for the patient and bring new value to the nursing staff. The construction with its three telescopic columns is unique so the bed can be positioned in a free space.*

timeless design

The results of designer competitions are also proof of the standard of the design in individual fields. In recent years it has become a rule that products from the field of health-care have appeared in leading places of design. wissner-bosserhoff products are no exception and this group can boast a number of awards won at prestigious worldwide competitions.

One of the most prominent international competitions is Red Dot, organised by the Design Centre in North Rhineland-Westphalia. Red Dot has been held since 1955 and in its history, scope and quality it ranks among the most prominent competitions of this type in the world. The Red Dot mark is a recognised synonym of high utility and aesthetic, quality and products awarded this mark, enjoy great prestige not only among the professional but also the lay public.

Of equal prestige is another German award with a similar long history called iF design which is awarded at the iF International Design Forum. Each year 1,800 design products from 30 countries participate in this competition. For fifty years now, products from throughout the world have also received awards in the Good design competition in Japan. The G-Mark is one of four of the most prestigious awards in the world.

Designer competitions are also held on a national basis. In the Czech Republic the Design centrum Czech Republic organises an annual competition in cooperation with the Czech Ministry of Industry and Trade called Excellent Product of the Year and awards prizes in three categories – National Design Prize, Excellent Design and Good Design.



intensive care bed multicare

The intensive care bed multicare is designed for critical patients and is the only bed in the world enabling a lateral tilt, x-ray scanning and accurate weighing. Its construction with its three telescopic columns is also unique so the bed can be positioned in a free space. The design of the bed as well as independent position control and the transparent siderails make a difficult stay in hospital more pleasant for the patient. The multicare bed gained the highest award of the National Design Prize from the Design Centrum Czech Republic in 2000. The bed originates in the workshop of leading Czech designer Ivan Dlabáč.

- The unique 3-column construction enables a lateral tilt, ensures perfect stability and an extraordinarily high load of 230 kg while maintaining all its functions.
- The lateral tilt of +/- 30° helps to avoid treatment complications of critical patients and actively supports their treatment. It also prevents bedsores, atelectasis, pneumonia and complications of the circulatory system.
- The possibility of x-ray scanning of patients on the bed reduces handling of the patient to a minimum – reduces the physical strain of staff and respects the patient's state of health.
- The bed can be controlled from 8 places altogether: There are double-sided controls in the siderails, a removable central control panel at the foot end and a panel at the head end for the anaesthetist and the height may be adjusted by a foot control.
- The integrated weighing system not only determines the real weight of the patient to an accuracy of 200 g but also its changes so the patient's direct water balance can also be monitored.

- By pressing a single button the nurse can adjust the bed to an anti-shock position, cardiac chair, examination position with easy access to the patient or to CPR position to begin resuscitation.

- 01** The transparent siderails enable the patient's greater contact with his surroundings.
- 02** The bed's central positioning, memory and braking control is clear and simple to use.



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Hanna Schnackenberg, M.A., Internationales Design Zentrum Berlin, Germany:

In the case of health-care products, design, form and function have a special meaning. They serve to ease the work of nursing staff and contribute to making patients feel better. If medical technology takes into account functionality and needs it should serve as well as it does in its aesthetic aspect, then the design of such an object can be described as being optimal and humane. The combination of function and aesthetics as well as the requirement for the latest technologies and materials places great demands on medical technology. These products rank among the leading products in complex designer art. I can state that wissner-bosserhoff's multicare bed, which became part of the re: DESIGN EUROPE exhibition, is a successful example of the synthesis of the aforementioned qualities.

The design of wissner-bosserhoff products arouses attention not only in the field of health-care, but also brings the interest of curators of designer exhibitions. The multicare bed has already several times been exhibited next to other top products at prominent exhibitions rooms.



The Re: Design Europe exhibition in Berlin in 2004 presented designer products from the new countries of the European Union.



The multicare bed is permanently exhibited at the National Gallery exposition in Prague, Czech Republic, as part of the exhibition on the development of industrial design.



universal hospital bed eleganza

The universal hospital bed eleganza combines high functionality with an attractive design. It is convenient for intensive care units and for standard hospital departments.

The eleganza is highly variable and can be modified in line with the specific needs of any hospital department. It gained the Excellent Design prize of the Design centrum Czech Republic in 2000. The bed was designed by prominent Czech designer and academic sculptor Jiří Španihel.



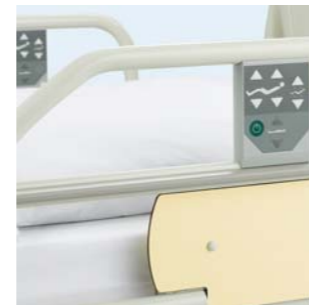
- The electric motors can adjust the height of the bed surface, the tilt to TR/ATR and the position of the back and thigh rest. The calf rest is adjusted mechanically.
- The column construction: adequate stability and rigidity for performing resuscitation. The eleganza is fully functional even at a load of 230 kg.
- The central 5th castor ensures easy control of the bed. One person may turn the bed even in a narrow corridor without overtaking or driving along.
- The activating GO button on the controls guarantees increased protection against arbitrary positioning and subsequent injury. After pressing the GO button, the control is activated for 3 minutes after pressing the arbitrary button.
- The bed can contain a manual control and also a foot control for adjusting the height.

- The collapsible siderails and ends may be chosen from various colours according to the requirements of the interior.
- The removable central Supervisor control enables adjustment of the bed to the required position by pressing a single button.
- The central Supervisor memo control version is equipped with four memories for the TR position, cardiac chair and CPR or the examination position.

- 01** Significant anti-decubitus effect: double auto-regression (backrest 11 cm, thigh rest 7 cm).
- 02** The double-sided control panels integrated into the siderails are easily accessible for the patient and nurse. They are simple and easy to control.



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care bed contempora

The contempora nursing home bed is designed for clients requiring long-term care. It was developed in wissner-bosserhoff with emphasis placed on having a pleasant appearance, functionality and individual comfort.

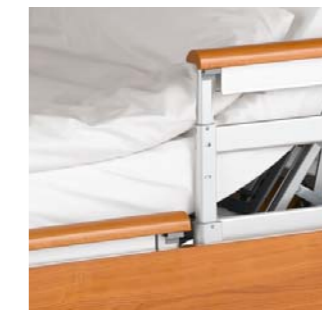
The contempora therefore undoubtedly ranks among highly functional furniture flexibly meeting the requirements of the ordinary day of a resident. The bed also accommodates the highest demands on design and quality. This is confirmed by the bed winning two designer awards in 2005 – G-Mark and iF design award. The design comes from the German designer studio sieger design.



- Thanks to its clear-cut lines and pleasant appearance, the contempora easily and harmoniously blends into a residential area. The design imitates a traditional home bed in its contours and wooden construction offering several different wooden decors.
- At first glance, it is impressive for its functional details such as the head and foot ends with their curved shape.
- The bed has either two or four collapsible siderails, can be adjusted independently and cover the entire length of the bed guaranteeing error-free safety.
- The siderails can be adjusted to a height of 40 cm or totally slide in so maximum freedom of movement is ensured as well as safety in accordance with individual needs.
- Equally safe is the control with protection against the first error – an intelligent solution that prevents unwanted positioning of the bed.
- Maximum safety is also ensured by the automatic central braking system – with a change in the height of the bed surface all the brakes on the mobile castors are automatically activated.

- The contempora is fully electrically adjustable and the sit-up position can be automatically set while the control has a memory for commonly used positions.
- The height adjustment of the contempora ranging from 36–76 cm enables pleasant work for nurses without incurring back strain.
- The contempora can brake simply by pressing down the foot brake at every position of the bed. The foot control allows effortless adjustment of the bed for nursing or for simply lowering the bed position.

- 01** The split siderails support the bed user when getting up and allow individual mobility.
- 02** The lifting unit is concealed in elegant columns.



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stylo C2 bedside cabinet and stylo S3 / S3T server

The Stylo bedside cabinet with server increases user comfort and eases the work of nursing staff. The design corresponds to the eleganza bed and can be selected from five colour shades. The designer of wissner-bosserhoff, Carlos Bernal worked on the design of the bedside cabinet and server and both products won the prestigious Red Dot award in 2004 and have been nominated for the design prize of the Federal Republic of Germany 2006.



reddot design award
winner 2004



DESIGNPREIS
2006
NOMINIERT



Carlos Bernal



- The cabinet with its high stability is suitable for hospitals and nursing homes.
- The innovative lifting mechanism allows the simple tilting of the server with the aid of one hand.
- The unique lifting mechanism is fully integrated into the body of the cabinet.

- Thanks to the U-shaped under-carriage and the collapsible dining board, it fits into the bedside cabinet and saves space.
- Its advantage is its mobility which allows its use in more than one room.

bedside cabinet mano

The unique construction of the mano bedside cabinet, enables the patient to use all its functions independently without the necessary assistance of a nurse.

The author of the design is Czech industrial designer Jiří Španihel. The mano cabinet won the Excellent Design Prize of the Design centrum Czech Republic in 2002.

- It has manually controlled castors: by turning the handle the brakes on the cabinet can be locked or unlocked and the patient can move the cabinet closer to the best distance.
- The patient can adjust the height and position of the server independently with one hand. The strengthening mechanism eases handling considerably.
- The patient is able to achieve and use the top drawer, niche, bottom cupboard with one shelf, the towel holder and bed-pan holder under the bed.

- 01** The plastic handle is shaped in such a way so even a hand with reduced sensitivity can grasp it.
- 02** A drawer instead of a cupboard ensures easier access to stored objects.



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hospital bed image

The hospital bed image respects the growing demands of the patient and nursing staff. The attractive design of the bed can be implemented in an entire spectrum of standard hospital care. It contains Mobi-Lift: totally unique features supporting the active mobility of the patient. The bed was designed by Jiří Španihel.

- The siderails provide perfect protection against a fall in all the bed's positions even when the highest anti-decubitus mattresses are used.
- The construction of the bed allows it to be closely positioned next to a stretcher or operating table and guarantees the safe transfer of the patient.
- The design evokes an atmosphere of a pleasant homely environment so it encourages mental harmony in patients.

- The basic height of the siderails is 45 cm and they can be raised up to 59 cm.

- 01** The special Mobi-Lift handles make it easier for the user to get up and lie down.
- 02** Patient satellite with clear relief pictograms even for patients with bad eyesight.



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stretcher sprint

The stretcher sprint was developed for emergency admission and transfer of critical patients. All its features have been adapted as much as possible to quick examination and easy transport.

The design of the stretcher, which has won several awards at medical equipment trade fairs, was created by Czech industrial designer, Ivan Dlačič.

- The patient can be x-rayed on the stretcher or with the use of a C-arm.
- The unique mattress contains extendable sliding mats for the transport of the patient.
- All the controls are robust and easily accessible.
- The robust handrail or fifth castor makes it easier to handle the stretcher and the height of the bed surface can be adjusted by foot levers.

- The height of the bed surface on its two hydraulic columns can be adjusted with the aid of foot controls.
- The robust handrail at the head end of the stretcher can be folded and slid under the stretcher.
- The siderails are collapsible and in their bottom position they can even be slid beneath the level of the mattress.



reducing patient stress

The appropriate equipment of a hospital room and well designed furnishings can have a positive effect on the patient in two ways, each of which supports the success of treatment. The first way is that they lower the stress of the patient and the second is their ergonomic benefit. Stress caused by a stay in hospital, dissatisfaction with the equipment or lack of independence and being dependent on the nursing staff places a burden on the human organism, negatively contributes to the process of treatment and slows down the patient's recovery.

Correctly and ergonomically planned equipment and accessories ease the work of nurses and contribute to the mental comfort of the patient. Each means that it can reduce stress and mental burden is welcomed from the medical point of view.

So health-care and nursing products accommodate the needs of the users as much as possible, their creator must be acquainted with the clinical environment. Successful designers do not leave anything to chance and they get to know the reality of hospitals and nursing homes themselves. Perfect knowledge of the circumstance makes their work easier and is of true benefit to the end users.



Christian und Michael Sieger, sieger design (design of the contempora nursing bed):
 When developing the contempora bed, we did not merely take into account the technical aspect of the task, but we returned to the basics and concentrated on what people using the bed would require – both the clients of nursing homes and the nurses who handle the beds. In order to understand the environment and get to know its specific requirements, we went to nursing homes and talked to their residents and employees. Their opinions and experience were an important guideline for us when designing the bed.

Dr. Věra Reichlová, Child Hematology and Oncology Clinic of the Second Medical Faculty of Charles University in Prague, Motol, CR: The ergonomics of equipment, i.e. the possibility of adapting equipment to the needs of the patient, his anatomy and state of health plays a vital role. Suitably designed and located control features are a godsend to the patient. For example, the possibility of being able to control the position independently significantly improves the comfort of the patient, increases his independence in not having to rely on the staff. This strengthens his self-confidence and again contributes towards reducing stress.



comfort and independence of the patient

wissner-bosserhoff beds and other equipment offer an elaborate system of individual features that make a patient's stay in hospitals and nursing homes easier. The patient feels comfortable, his independence increases as does the independence of the staff.

mano bedside cabinet The elaborate ergonomics and the high functionality increase the independence of the patient and contribute to his mental comfort. In the case of the mano cabinet the patient does not have to rely on the assistance of a nurse and thanks to the practical functions of the cabinet he has a feeling of safety and privacy.



- **The control** is accessible in all the positions: when positioning the backrest it moves with him.
- **The symbols** controlling each function are easy to understand and clear, the diagrams of human figures are found in public transport and in daily life.
- **The pictograms** are large and well visible. Moreover, the buttons of each function are distinguished by different colours and for patients with bad eyesight they are raised above the surface of the keyboard so they can control them by touch.

- By turning the handle, the patient can lock or unlock the cabinet and move it to the best distance.
- By the easy to turn cabinet, the patient can reach all the drawers and shelves. Even the shelves for the bedpan under the bed are easily accessible.
- The drawers can be pulled out in both directions.
- A holder for the safe storage of three bottles forms part of the bottom drawer.
- The server – its height and position can be adjusted independently. The controls are strengthened mechanically.



- 01** The appearance of a bed can make the time spent in a hospital pleasant for the patient as in the case of the transparent siderails which allows the patient contact with his surroundings.
- 02** The design of the image bed in imitation wood makes a pleasant impression and enhances the mental comfort of the user.
- 03** Thanks to the simple and user-friendly controls, the patient is able to position the bed himself as he wishes and requires.
- 04** The MobiLift handles of the image bed enable the patient to get up safely and comfortably, increases independence and enables mobility.



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ergonomics and safety

The elaborate design, ergonomics and best shape may significantly increase the work performance and reduce the fatigue of nurses and doctors. On the other hand, a badly shaped design may considerably complicate work. Sharp edges and protrusions may not only delay work but are all the more dangerous because they can injure both the staff and the patient. A disturbing and risky feature may often be a badly shaped base of a chair or bed which the nurse can trip over when handling the patient. The functionality of the equipment also has an effect on the contentment and health of the staff. If the staff does not have to spend unnecessary time and physical strain on handling unpractical equipment, it can devote more time to the client and self-education. Only trained staff is able in the present world to use the technology that is available.



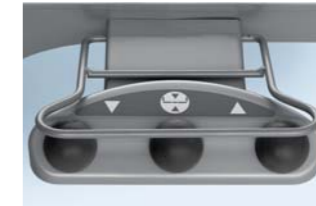
The environment has a direct effect on nurses but it also helps them to work better with patients who are happy and adapt easier to the routine of the ward. The work of the nurses is easier because it is better to communicate with a patient who is willing to cooperate in the process of recovery rather than having to constantly struggle with an unsatisfied patient. It is also a question of prestige for doctors to work on a ward that functions well and in an environment which meets the standards of a top hospital.

design eases work and saves time

When developing its beds, wissner-bosserhoff / Linet group place stress on the design in the true sense of the word – as a combination of functionality and aesthetics. The high functionality of the beds focuses on maximum comfort and eases the heavy work of nurses.

- The nurse's Supervisory control panel also contains a memory for commonly used positions so it saves time.
- Easy electric positioning reduces physical strain. Height adjustability facilitates examination of and work with the patient.
- The siderails are easy to fold and no physical strain is required to handle them.
- The rail for accessories is easily accessible. It can also be folded under the bed and create space for easy and safe movement of the nurse.

- 01** The foot control facilitates the height adjustment of the bed.
- 02** The central 5th castor enables easy control of the bed. One person can turn the bed in a very narrow space without the need of overtaking or driving along.



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easy and safe handling

The beds and other products of wissner-bosserhoff / Linet group not only make it easier to position and handle a patient, but the transport and handling of the bed itself becomes child play. The beds have excellent mobility features – one nurse can master the handling of the bed without the need of great physical strain. All equipment contains inconspicuous details which protect the safety of the nurse as much as possible.



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01 The unique Sprint mattress contains stiffened sliding mats, which create a firm surface when transferring the patient from one bed to another or an operating table.

- All the control features are robust and easily accessible. The robust handrail at the head end of the stretcher enables easy handling also allowing it to be slid beneath the stretcher.
- A collapsible infusion stand can be placed at each corner of the stretcher.
- The fifth castor facilitates the handling of the stretcher, the 200 mm diameter castor increases height clearance.
- Protective bars and corner castors minimise collisions during transport.





wissner- bosserhoff

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