



marWorld® ICU

Extensively thought-out solutions.
By us as experts. From a single source.



"People are the focus of our ICU spatial planning. This applies above all to the patients, the medical teams and the hospital staff."

All-round intensive care begins with the right advice and planning.

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Optimal patient care in the ICU begins with proper planning.

Hospitals have a special focus on departments for intensive care, such as the Intensive Care Unit or ICU, which serve to recover and restore the vital functions of seriously ill or recently operated patients. The reason being that patients undergoing intensive care require an environment with special needs in terms of medical technology and hospital hygiene.

Therefore, when constructing an intensive care unit, attention must also be paid to user-friendliness and functionality in addition to the availability of adequate medical equipment. Smooth workflows in the immediate vicinity of the patient as well as in supplies and disposal can significantly support the healing process of life-threateningly ill or injured patients.

In addition, short distances and a sensible, clear arrangement of the functional rooms make daily routines easier for staff in the intensive care unit. Flexible spatial concepts ensure individual treatment of patients requiring intensive care and, if designed appropriately, can also be divided into individual, separate areas and be managed independently of each other in an emergency or crisis situation. By the same token, it should generally be possible to treat infectious or infection-prone patients in isolation rooms with airlock access at all times separate from other patients.

Three steps to the ideal ICU.

When implementing an ICU project, we focus on three interlinked project phases - from consulting to planning through to implementation. As an experienced partner, we are there to support you in all phases.

Customized solutions: Extensively thought-out and supplied from a single source.

With KLS Martin's marWorld® concept, you can build or expand an intensive care unit relatively easily. Both our modular room system as well as our examination lights and products for media supply are involved here. All materials used meet the highest standards in terms of hygienic, mechanical and chemical material properties, also with regard to stress factors.

This enables us to supply all the permanently installed components of an intensive care facility from a single source. Apart from the installation of our products, we also offer all the necessary services via our accomplished, worldwide partner network.

Furthermore, we support our customers in all phases of project development with advice and planning and develop the project

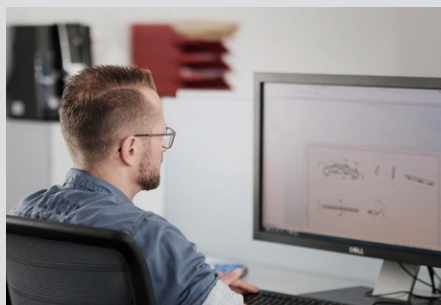
together with you. KLS Martin thus not only offers you ready-made planning concepts but also the entire spectrum of project management - all from a single source.

As a full-service supplier, we are obviously very familiar with the requirements of an intensive care unit. Our ICU experts will always advise you from a holistic point of view and thus already assure an optimal workflow during the planning phase. Ready-made planning concepts and standard solutions facilitate conceptual design, provide early orientation and form the basis for your individual project development - depending on specific requirements.



1. Consulting

In the consulting phase we determine the basics, conduct a feasibility check, take care of workflow optimization and create the first outlines.



2. Planning

In the planning phase we cooperate closely with designers, architects, specialist planners, medical engineers and the operational organization.



3. Realization

The implementation phase begins with execution and detailed planning and extends to commissioning. In doing so, we ensure perfect project planning and coordinate with all project participants.



Perfect planning. Taking everything into consideration. Trusting experience.

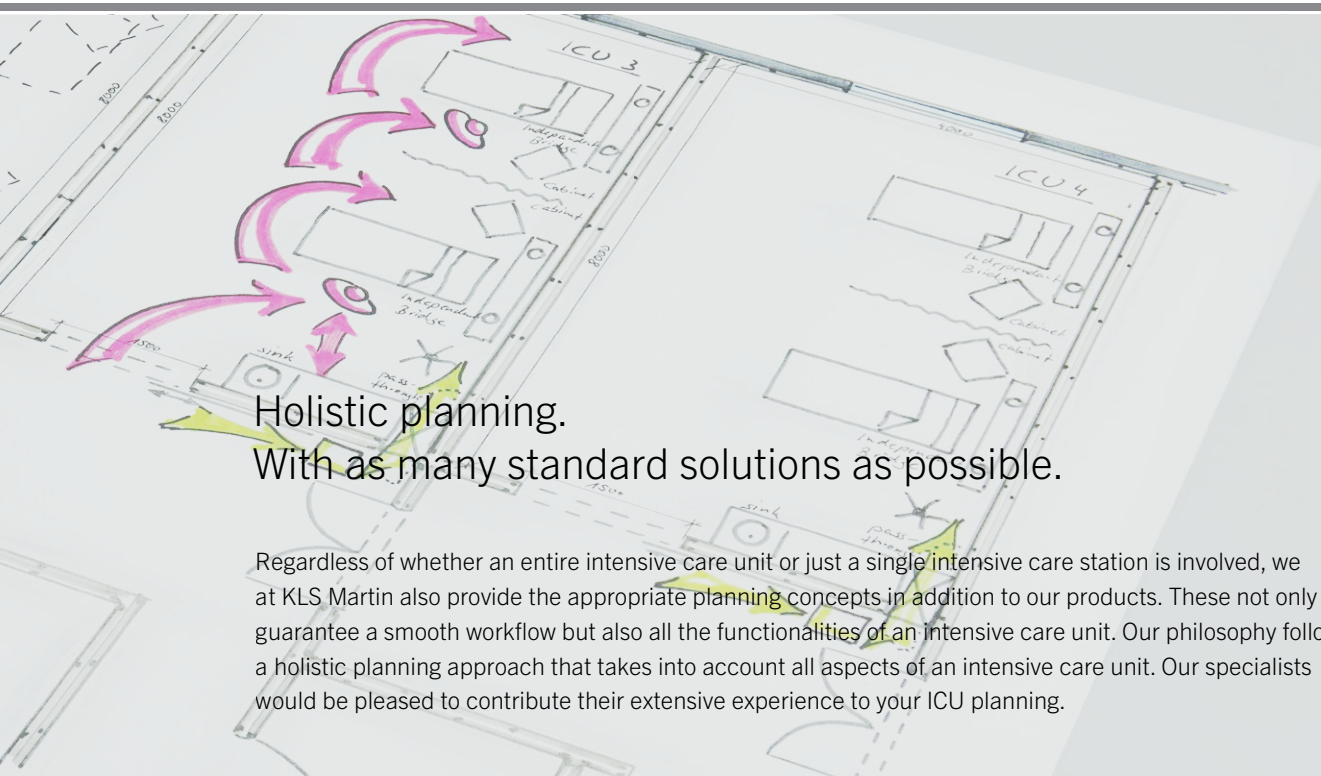
With KLS Martin, you can rely on a partner that thinks holistically right from the start and provides you with optimal support all along your way to a new ICU.

Our range of services

- Consulting / planning / conception
- ICU solution competence
- Project support and management
- Construction and design
- Hygiene concepts
- Medical technology installations
- Repairs and service

The advantages of a modular ward solution from KLS Martin in intensive care units

- Ready-made planning concepts and standard solutions as the basis for individual project planning and an overall concept
- Flexible, individual ward solutions based on a high-performing modular system that can be expanded at any time
- Permanently installed medical technology from a single source - from KLS Martin as a complete supplier
- Project support right from the start - up to commissioning
- Short construction times due to a maximum degree of prefabrication of the products
- Technical installations such as cables and medical gas lines are installed invisibly in the system wall - largely dust-free and low-noise installation on-site
- Flush integration of wall installations into the system wall, taking into account all hygiene standards by using disinfectable and antibacterial surfaces
- Quick and uncomplicated execution of repairs and service calls due to the modular system
- Wide range of design options in terms of materials, wall colors, RGB lighting and murals



Holistic planning. With as many standard solutions as possible.

Regardless of whether an entire intensive care unit or just a single intensive care station is involved, we at KLS Martin also provide the appropriate planning concepts in addition to our products. These not only guarantee a smooth workflow but also all the functionalities of an intensive care unit. Our philosophy follows a holistic planning approach that takes into account all aspects of an intensive care unit. Our specialists would be pleased to contribute their extensive experience to your ICU planning.

Our recommendations for your ICU

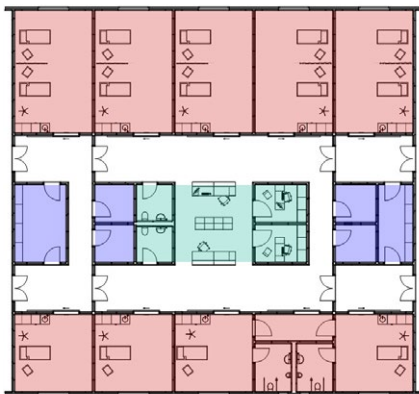
To provide maximum user-friendliness and maximum functionality in intensive care units, we have compiled the following expert tips for you:

- Room sizes in the intensive care area: single room approx. 25 m², double room approx. 40 m²
- Sufficient space around the intensive care bed and accessibility from all four sides
- Additional isolation rooms in the intensive care unit - with a separate airlock
- Entry to the intensive care units for staff, patients and visitors is only possible via an airlock
- Sufficient and wide enough transport routes for patients, equipment and material
- Sufficient storage space for consumables and medical equipment as well as the possibility for their preparation
- Several decentralized stores for a fast and comprehensive supply of materials and consumables
- Open and clear design of the ICU to ensure short distances and a smooth workflow in patient care
- Quick access to patient rooms and functional rooms
- Proactive division of the intensive care unit to allow for the separation or isolation of patients within the department in case of an emergency or crisis

We rely on proven structures for ICU everyday routines. You too?

At KLS Martin, we regard intensive care units as separate functional departments within a hospital: with their own clear room structures, predefined zones, optimal medical equipment and space concepts that have already proven themselves in intensive care practice. This ensures smooth processes and makes it possible to maintain an overview even in critical situations, to act in a structured manner and to treat patients optimally in every case. These are precisely our success factors when planning your ICU.

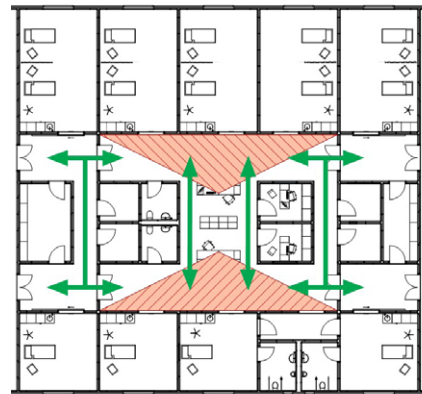
marWorld® structural recommendations for the intensive care unit.



Clear separation of zones

- Clear structure of the facilities
- Intensive care rooms placed at the periphery
- Stores and other functional rooms are located centrally
- Good accessibility to neighboring, hygiene-relevant functional units

■ Patient rooms/areas
■ Staff areas
■ Stores, material supplies and waste



Clear structure of the department

- Short distances and clear structure
- Open structure
- Optimal and smooth workflows for patient therapy



Adequate traffic areas

- Sufficient traffic areas for patient and equipment transport
- Adequate corridor widths
- Consideration of patient and equipment transport criteria



Separation of partial areas

- Possibilities for partial separation or isolation of partial areas
- Short-term conversion to isolation or quarantine station



Functionality needs a system.
Space a consistently well thought-out concept.

An intensive care unit has many functional areas, which must be arranged according to their interrelationships and ward procedures. Here we rely not only on our experience in planning, but also on our marWorld® ICU construction kit, which enables us to think about rooms on a modular basis right from the outset.

The functional areas at a glance:

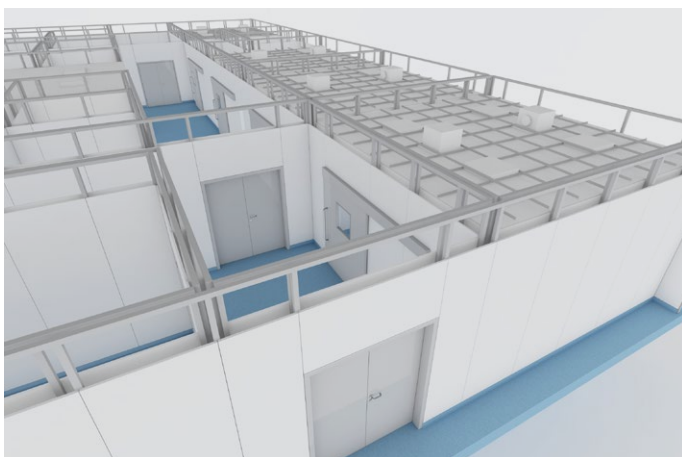
1. Patient rooms
2. Isolation rooms
3. Care support point
4. Store for consumables
5. Equipment store
6. Office
7. Restroom
8. Disposal

Conceiving rooms on a modular basis. With the marWorld® ICU modular kit.

The marWorld® room system also enables the structural design of intensive care units to be based on modularity right from the start and to proceed according to the modular principle during planning and implementation.

marWorld® ICU: numerous products— a single modular room system

- Wall systems in various material designs
- Sliding and revolving door systems and wall-integrated windows
- Easy-to-service ceiling systems
- Basic lighting (LED, RGB)
- Ventilation components for supply air, filtration and exhaust air
- Built-in wall elements
- Cabinet systems and other furniture
- Storage shelves
- Washing facilities
- Control panel for room functions
- Wall-integrated monitors
- Curtains
- Wash basins and disinfectant dispensers
- Patient lifts
- Wall-integrated clocks
- Wall prints - with or without backlighting



Our medical equipment is also modular. And can be implemented in many variants.

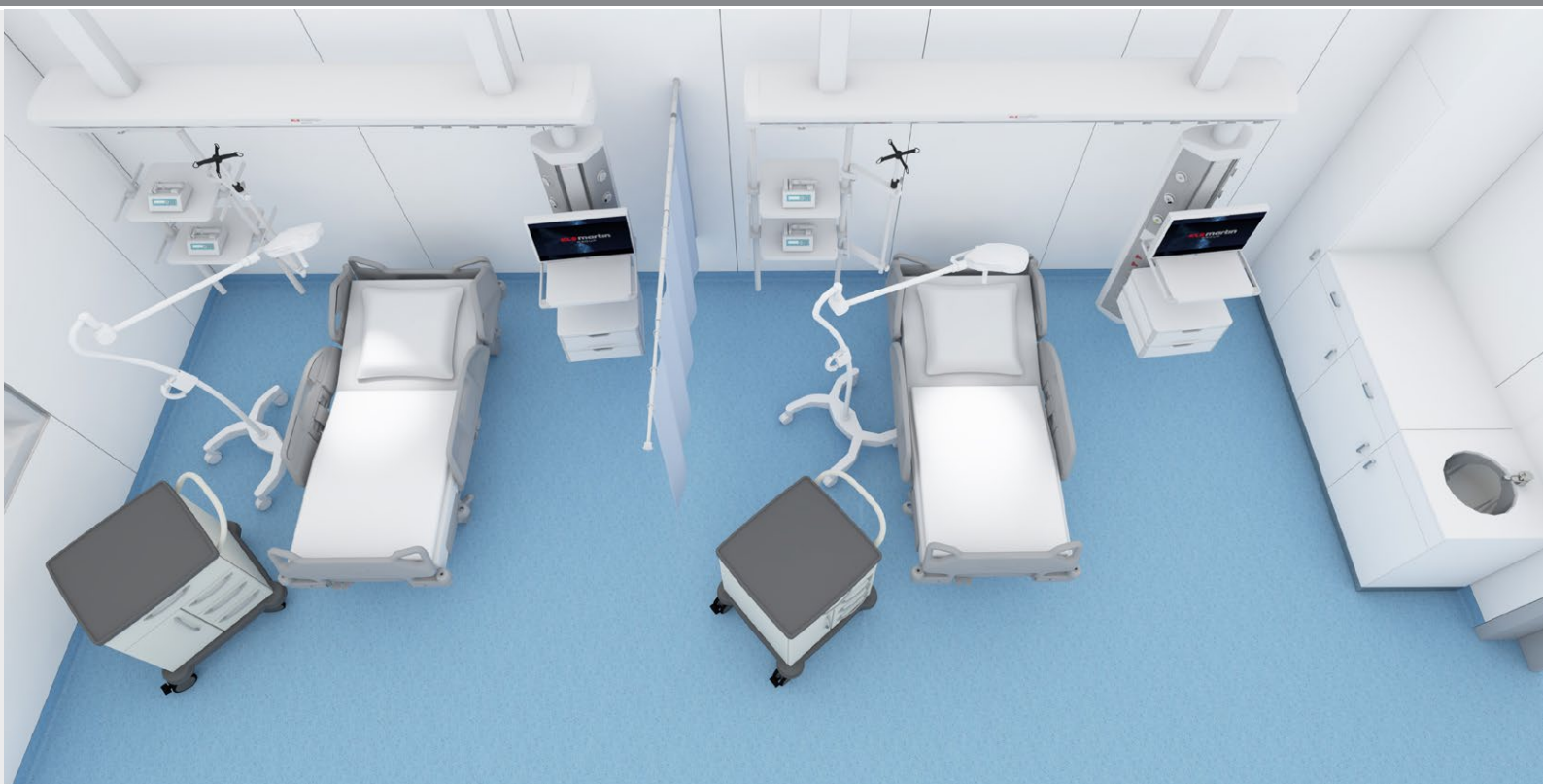
The following variants each show only one of many possible configurations. Due to the consistently modular design of the products and available accessories as well as our many years of experience, further configurations are possible at any time. You can find further information in our detailed catalogs.

Modules for the medical equipment of an intensive care workstation.



Media supply in different variants

- Media rails
- Rigid media supply via wall- or ceiling-mounted consoles
- Flexible ceiling supply units
- Media bridge
- Examination lights
- Individual light
- Integrated in the ceiling supply unit
- Mobile lights



Independant® Care Plus MD

Horizontal, flexible wall supply unit in elegant design, individually configurable according to customer specifications.

Supply system with up to three profiles to allow the installation of accessory components, lighting, standard rails, monitor and infusion poles.



Independant® Fix wall

Easy to install, vertical wall supply unit with flexible configuration options.

The multifunctional rack mounting system allows the adaptation of various accessories, trays and monitors to the supply unit.

The choice is yours.
We have the modules and experience.

Further medical equipment variants for the
intensive care workstation.



Independant® Fix ceiling

Rotating ceiling supply unit for equipping the console on both sides to make the workplace efficient and flexible.

Access to the patient is facilitated by closer positioning of the ceiling supply unit.



Independant® Fix bridge

Ceiling-mounted supply bridge for intensive care.

With rails for individual, flexible positioning of the adaptable consoles and accessories on the bridge.



Independant® S

Ceiling-mounted tandem supply unit with one- or two-part extension arms for individual accessory configuration.

Mobile system concept for efficient care and unrestricted access to the patient. Can be ideally combined with KLS Martin examination lights, e.g. marLED E3 and other accessories for intensive care.



Bed head elements

Flush supply unit for installation in the variable marWorld® wall element. Slim, space-saving and functional design with a choice of different colored and wood decors made of fireproof HPL laminate panels.

Optional equipment with brackets for mounting accessories as well as an LED night light or RGB ambient light.

Excellent advice. Perfectly planned. Virtual and real – with KLS Martin.

Whether this relates to the overall structuring of your intensive care unit, the development of your individual project or the detailed planning of your individual intensive care beds - our ICU specialists are at your service to provide advice and planning for all questions. Here, we are also happy to act as a link between the future user, who specifies the requirements with regard to the planning and functionality of the ICU facility, and technical planning, which is responsible for the appropriate infrastructure and equipment in the ICU functional unit.

We are at your service - in each and every phase.

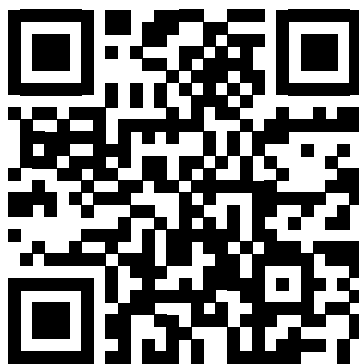


Our services and planning offers within the spectrum of intensive care

- Determining the basics by conducting user interviews
- Matching know-how between our experience with standards and guidelines as well as the medical devices as a basis for planning
- Feasibility check to ensure that wishes and expectations also fit the budget
- Target definition and creation of a final requirement profile
- Workflow optimization through coordination of itineraries and detection of bottlenecks and intersections
- Professional zone planning for smooth workflows in the ICU



Perfect planning begins in the mind.
And with the right vision.



www.klsmartin.com/en/marworldicu

To the video: Example for planning an intensive care unit

🔗 Point your smartphone camera at the QR Code and follow the link.

Plenty of action in ICU daily routines. As little noise and stress for the patients.

Additional aspects for improving patient care in intensive care units undoubtedly include sound, light and color. In general, it is important here to prevent or minimize sensory overload for patients in intensive care units. This is because the main stimuli here are largely of an acoustic and visual nature. At KLS Martin, we have also given these stimuli considerable thought.

Noise-reducing measures.

As things are usually very hectic in an intensive care unit, the noise level here is generally somewhat higher than elsewhere in the hospital. Measurements have shown that a noise level of up to 80 dB is experienced in intensive care units, which is roughly equivalent to a busy street. In intensive care units, one generally deals with patients who are particularly sensitive to noise due to the severity of their illness or injury. Sound-absorbing measures are therefore indispensable here and these can also have a positive influence on the healing of the patients.

With marWorld® we offer various sound-absorbing or sound-minimizing measures

- Minimization of structure-borne noise by decoupling the wall shells from existing floor and ceiling panels
- Insulation material packed into the partition walls
- Additional sound absorbers, which can be attached to the wall and also be used as design elements
- Sound-absorbing modular ceiling systems - hygienic and disinfectable



A little daylight provides a feeling of well-being.
Also in the ICU.

Wherever possible, we recommend bringing some daylight into the intensive care ward. The reason being that natural light has an extremely positive effect through its ultraviolet and infrared radiation - not only on the hormone balance, but also on body temperature, metabolism, heartbeat, brain activity and daily rhythm.

This is why we at KLS Martin like to rely on natural light to contribute to the well-being and recovery of intensive care patients in addition to medical treatment.

We add color to the dreary ICU everyday routines.
And this benefits everybody.

Color brings orientation into sterile intensive care wards and creates positive moods in the sensitive areas of intensive care. Here colors can help to somewhat reduce so-called delirious states, i.e. slight disorientation and confusion. For this reason, we are happy to provide a feel-good atmosphere created by colors upon request. This can also result in patients having to take fewer analgesics. The effect of the colors depends on the respective hue, the color saturation as well as the degree of brightness.

Color tones and philosophy

Generally speaking, dark colors tend to be oppressive, whereas light colors are perceived as being light and calming.



Green

has a calming and harmonizing effect and implies security and hope.



Blue

implies rest, helps with sleep disorders and inflammations.



Yellow

implies light and optimism and soothes fears and has a detoxifying effect.



White

is the symbol for hygiene, neutralizes and is ideal as a combination color.

The right color saturation.

Less is sometimes more: when it comes to color saturation, one should pay attention to moderation.

Strong colors are rather stimulating, too weak colors on the other hand are hardly noticed and therefore have no real effect.

Colorful light scenarios using RGB lighting

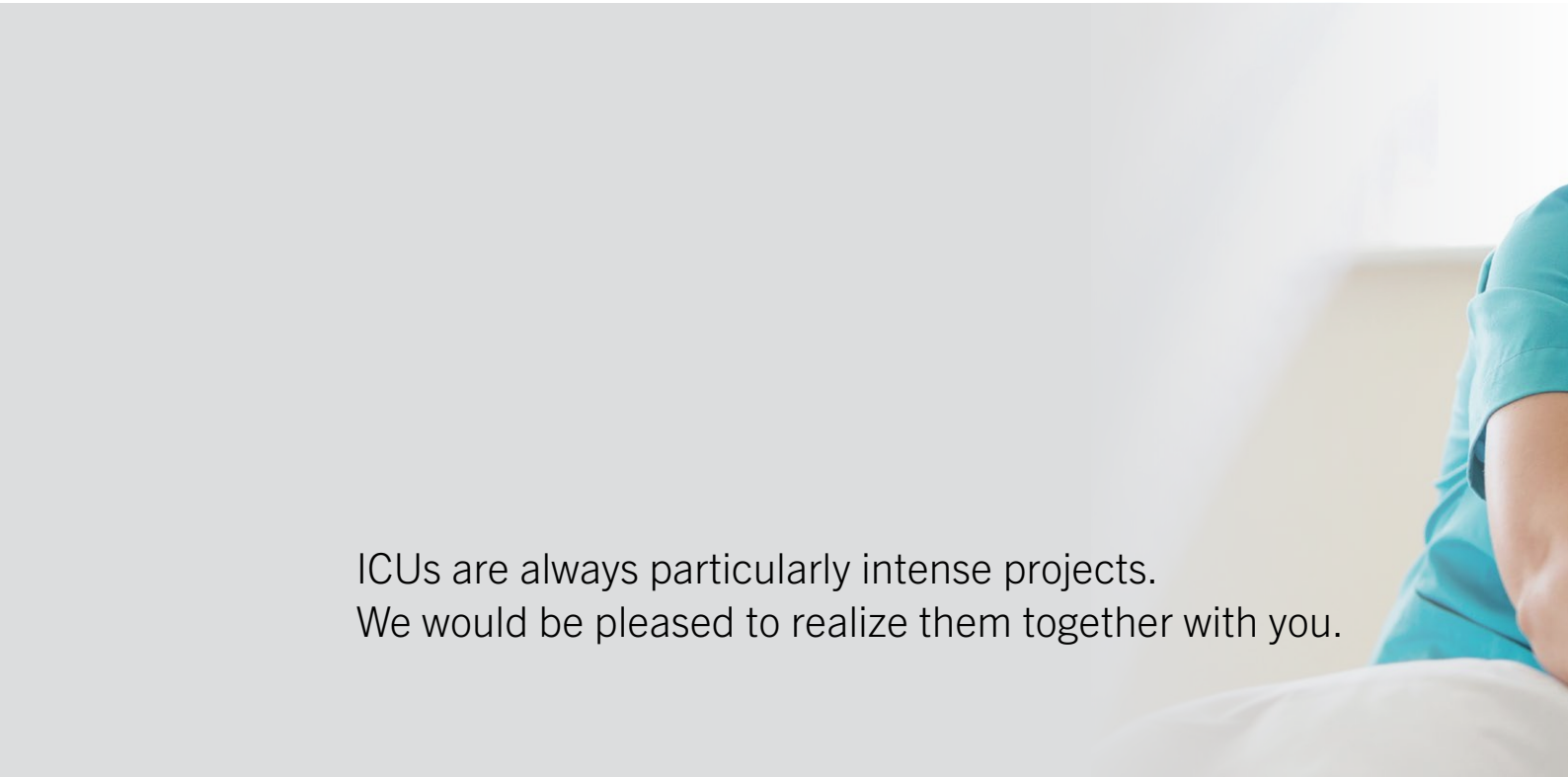
Soothing, infinitely variable colored light scenarios can be realized in intensive care units with LED RGB ceiling lighting. The positive effect of the different lighting moods increases the satisfaction of the staff, the confidence of relatives and the health of the patient.



Room design with mural concepts

Even in intensive care units, the integration of pictures or motifs applied to the wall systems can have a great impact visually. This allows the room design to be varied even further and brightens up the rather functional ambience. Talk to us about the various options!





ICUs are always particularly intense projects.
We would be pleased to realize them together with you.

Our objective is to create a patient-friendly and health-promoting environment for patients requiring intensive care. For this purpose, numerous principles and necessities must be observed and a wide variety of equipment and design options need to be taken into consideration. After all, in the end it is all about the smooth operation of the entire intensive care unit.

With this brochure, we would like to give you, our customers, an overview of the numerous possibilities we offer at KLS Martin. We are your partner when it comes to expert advice as well as the safe and reliable planning and realization of an intensive unit.

Trust in our expertise and in us as specialists - anywhere in the world.

We look forward to your inquiry!



"If the medical and nursing teams in intensive care units can work smoothly and without stress and if patients and visitors feel comfortable under the circumstances, then we at KLS Martin, together with our specialist dealers, have done a good job".

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