

New Operation Building, Karlstad

From operation to intensive care

Ergonomic Lighting

In all operation rooms

As the first hospital in Scandinavia the new operation building in Karlstad, Sweden, have chosen a complete lighting solution – from operation room to recovery and intensive care. The result is an improved environment for patients, doctors and nurses.

In April, the Central Hospital in Karlstad, Sweden, opened a new operation building – a modern building ready to meet the needs of the future.

"With the right lighting, we create a better working environment for the staff and good surroundings for the patients," says Tobias Kjellberg, Healthcare manager, at Region Värmland.

Operation light for keyhole surgery

Today, an increasing amount of operations are made as keyhole surgery. The method is gentle for the patient but can be very exhausting for the surgeons, because it means long hours with eyes focused on small details on monitors.

To improve the conditions for patients, nurses and surgeons all 25 new operation rooms have Ergonomic Lighting. It is a lighting concept that combines the colors green and red and divides the room in different lighting zones depending on the tasks. The results from Karlstad is less strain in the eyes, less fatigue and improved quality.

"The combination of the complementary colors red and green improve the image quality on the monitor and create a balanced and good light in the whole room. By installing it in all operating rooms of the new building, we ensure that it is being used during all operations"

*Tobias Kjellberg,
healthcare manager*

Satisfied users

The staff at the hospital are very satisfied with Ergonomic Lighting.

"The light is very pleasant to work in, and I have no reflections on the monitors. When we move around during surgery, all we do is to change the light setting and the light follows. It's great," explains Chief Physician Marina Sorensson, from the Central Hospital in Karlstad. She operates in Ergonomic Lighting during both laparoscopic, robot and open surgery.

Lighting setting

Every operation room has nine preprogrammed light settings. The settings are customized to each room to fit the operation – both before, during and after procedure.

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*Marina Sorensson,
chief physician*

"At the Central Hospital we have analyzed every single room looking at the different procedures, the users' needs which we have combined with our knowledge about light and experience from other hospitals. We adjust colors and intensity according to the conditions in the room, how the monitors are positioned and different work zones.

We focus on making the user interface user-friendly, so it is easy to change the light during the complex surgeries. We also have a thorough process for user implementation and staff training," explains Director in Chromaviso, Claus Puggaard. Chromaviso is specialized in lighting for the healthcare sector.

Reliable solution with follow up

The fact that a Danish lighting company was chosen was a result of a thorough decision-making process and several years of cooperation and dialogue regarding different options.

"Chromaviso has been a good business partner since 2007, where we installed Ergonomic Lighting for the first time. They provide very competent consultancy, and throughout the years, they have proven that they also follow up with user implementation. Therefore, when we had to choose a supplier for the new construction project, we considered factors such as effect, price and competencies. And in than connection, we all agreed that we would get the best complete solution from Chromaviso", says Tobias Kjellberg.

Chromaviso have led the entire process from initial analysis, consultancy and lighting design to integration, programming and user training and follow up. The solution was complete and ready to use as planned and has run reliable since day 1.



“With the right lighting, we create a better working environment for the staff and good surroundings for the patients”

Tobias Kjellberg, healthcare manager



Benefits of Ergonomic Lighting

Ergonomic Lighting is a zoned, coloured lighting for operating and examination rooms.

This lighting solution consists of an effective combination of green and red light that provides documented results with regard to working environment, quality and safety.

- Minimise reflections and glare on monitors and optimise image quality on monitors
- Less strain on the eyes and less tension
- Less fatigue and increased concentration
- Zoned lighting creates the right light for everyone at the same time
- A high level of user satisfaction and a user-friendly operating system
- Possibility of daylight simulation between procedures
- Fixtures of highest quality with LED
- Based on 10 years of experience, latest knowledge and user documentation from more than 750 installations

Lighting options

The lighting is adapted to the users' needs in the specific room and includes customized light settings for selected zones and activities before, during and after a procedure.

A specially designed operating system means that optimal lighting can always be achieved with just a simple push of a button.

Central Hospital, Karlstad uses the following lighting options:

- There are 9 light settings. They are different in each room depending on the area of specialty and types of procedures.
- The specific light settings have been chosen in collaboration with the users to be optimal to the tasks.
- The user interface is integrated with the other technologies in the room – all controlled from the same monitor



About Chromaviso – experts in health-promoting lighting solutions

At Chromaviso, we have an ambition to lift the standard for lighting in the health sector. Our solutions are user-oriented and unite extensive insight into the users' needs with expert knowledge about the effect of light on people and intelligent control, operation and integration.

We are experts in health-promoting lighting solutions, and together with scientists, doctors and nurses, we continuously work on developing our products for the health sector of the future.

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