



A real sense of security

FP-Secure, the optimum combination of fire protection, acoustics and sustainable LED lighting

PERFEKT
FURAL
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PHILIPS

Sustainability in the healthcare sector



Sustainability is playing an increasingly important role in the healthcare sector, due to rising costs, limited resources and the high level of social responsibility. The aim is to save significant amounts of energy, reduce CO2 and operate plants, machinery and buildings in an environmentally friendly way.

Towards a stronger environmental focus

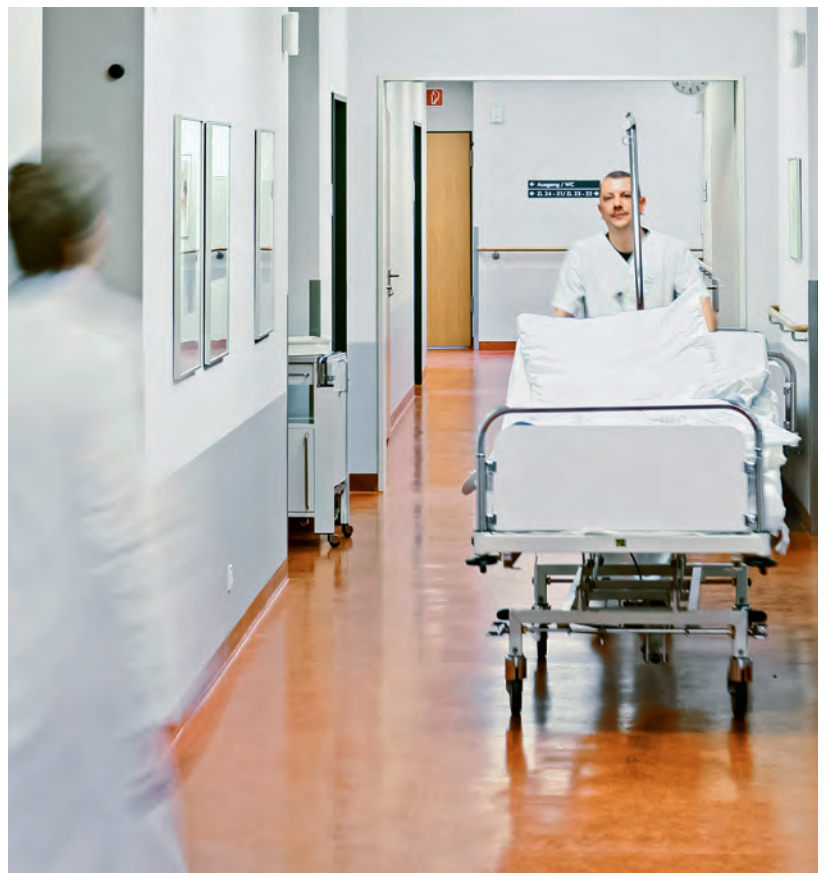
Various concepts and programmes are now slowly establishing themselves in hospitals. One of the most widespread is the GreenHospital Programme devised by Asklepios Clinics and their partners, which focuses on the following points:

- ecological use of energy,
- precautions in the human-environment system,
- product innovations for environmentally friendly and
- socially acceptable construction and operation of hospital premises.

Philips and FURAL – a partnership with added value

In the form of Philips and FURAL, the GreenHospital Program now has two more official partners that make a specific contribution towards sustainability in the healthcare sector. FURAL is a leading manufacturer of metal, fire protection and acoustic ceilings. Philips is the market leader for LED lighting solutions.

Their joint solution FP-Secure is the groundbreaking result of an R&D project initiated by Asklepios as part of the GreenHospital Program. It offers an impressive level of performance, helps hospitals to become more ecologically orientated and makes an effective contribution towards successful implementation of the GreenHospital Program.



Gemeinsam für Gesundheit

FP-Secure is the first fire protection ceiling with integrated LED lighting.



„At FURAL, fire protection is a very sensitive subject. After all, we are responsible for many people – both healthy and ill. The fact that we now have a fire protection ceiling with integrated LED lights is fantastic. And the result is even better than expected. The metal ceiling looks great and emits a uniform level of light. It has also made things easier for our installers. The lights are low-maintenance and durable.”

Georg Gerg, CTO Asklepios Stadtklinik Bad Tölz

A safe bet

An optimum combination

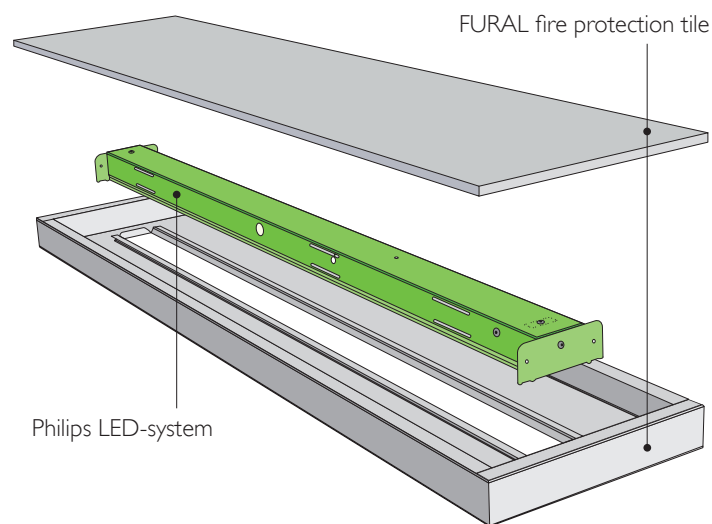
FP Secure is a sophisticated system that offers you many benefits:

- maximum safety in the event of fire,
- outstanding room illumination,
- modern ceiling architecture.

FP-Secure, which consists of a high-quality FURAL fire protection ceiling and a high-performance Philips LED solution, fulfils all lighting and common fire protection standards, including those for hospitals in particular.

Always ready for use

Due to its modular system, FP-secure can be used in corridors and hallways of any length or width. Installation is surprisingly easy, as the integrated lighting in the fire protection ceiling means that only one system needs to be installed. And using the system is just as easy: The intelligent swing-out system enables quick access at any time. That's how easy a modern, future-proof solution can be.



Totally safe

- Protection in accordance with DIN 4102-02 in the event of a fire (standard for the fire behaviour of construction materials and components)
- Lighting meets the requirements of DIN EN 12464-1 (standard for workplace lighting)
- Homogeneous illumination with a high level of light
- Conformity with international standards

Totally easy

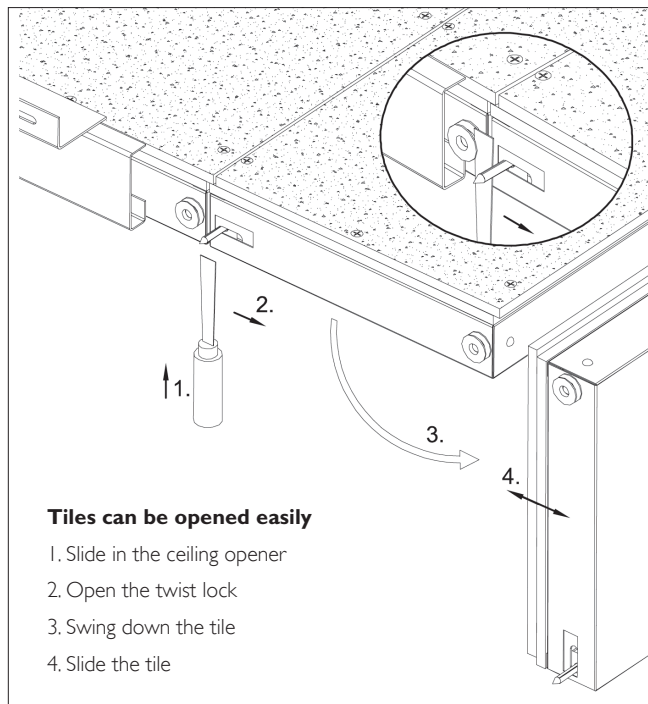
- Easy installation due to modular system and robust technology
- Low-maintenance operation due to easy-to-service swing-out system

Totally cost-effective

- Minimum maintenance costs due to the long service life of the LED solution
- Lower energy costs due to high efficiency
- Short pay-back period of around three years

A winning combination of permanent fire protection, acoustics, serviceability and sustainable LED lighting!

- up to 50% less energy consumption for the same light yield
- three times the service life with minimum maintenance costs



Benefits of the swing-out system

- Variable ceiling-opening width depending on requirements, as each individual element can be swung down and slid
- Integration of visible or concealed twist locks possible
- Safety due to certified fire protection F30/F90
- Optimum room acoustics (up to α_w 0.80)
- Lower floor-to-floor height due to flat LED lights (no additional structure)

FURAL fire protection ceilings - effective fire protection in an innovative ceiling system

Next-generation fire protection

Fire protection ceilings from FURAL have been used very successfully in hallways and corridors for many years now. They are an important component in structural fire protection, shielding the ceiling cavity from the corridor below, and vice versa. As a result, people and technology (such as pipes and cables in the ceiling cavity) are protected against fire and heat for either 30 or 90 minutes, depending on the legal requirements. Much of this is down to the innovative structure and installation of the Philips LED lights as well as the plasterboard panelling with no additional penetrations.

- Classification according to DIN EN 13501-2: EI30
- Fire resistance class according to DIN 4102-02: F30 from above and below

For every requirement

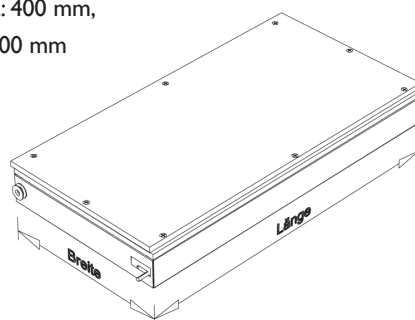
FURAL fire protection ceilings are available as a conventional lay-in system or a modern swing-out system. With appropriate plasterboard friezes, the ceiling can be spanned freely up to 3.8 metres.

FURAL fire protection ceilings with Philips LED lights are supplied in two standard widths and various lengths. Special widths can be supplied on request.

Module width 01: 300 mm,
Length: up to 3,000 mm
Module width 02: 400 mm,
Length: up to 2,500 mm

At home in many areas

FP-Secure is also available as a SWING system without fire protection, as a strip grid or as a clip-in system. This means that you can also use the highly effective combination of FURAL metal ceilings and innovative Philips LED lighting as acoustic ceilings, cooling ceilings, hygiene ceilings, etc.

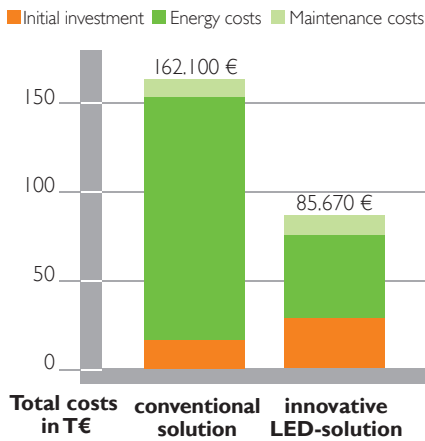


Philips LED-systems – durable, environmentally friendly lighting solutions

Economical lighting that makes an impression

In medical care facilities, many areas are illuminated around the clock. The energy-efficient Philips LED systems in FP-Secure allow costs and power consumption to be reduced significantly, while maintaining the light yield. Furthermore, the innovative LED lights ensure homogeneous room illumination, thereby providing patients and staff with a sense of security and orientation.

Higher initial investment offset by significant reductions in energy and maintenance costs



The aforementioned figures are based on an observation period of 15 years, an illumination time of 8,760 hours (continuous) and energy costs of 0.14 € per kWh. The comparison lamp was a conventional T5 fluorescent light with a system output of 54 W and 59.6 W.

Control the lighting, reduce costs

At night or during periods of low activity, it is often unnecessary to keep hallway and corridor lighting switched on. That's why the Philips LED lights can be controlled individually and turned on, off or dimmed automatically by means of an intelligent light regulation system. This not only saves even more energy, it also reduces costs.

The benefits at a glance

Compared with conventional fluorescent lights, the LED solution from Philips offers significant benefits in terms of performance, cost effectiveness and environmental compatibility.

Savings (with 100 lights)*

Energy: 400.000 kW = 50 %

CO₂: 230 t = 50 %

Cost reduction: 76.430 R = 47 %

*For calculation basis, see bar chart on the left

Other plus points

- Long service life (50,000 h instead of only 15,000 h)
- More uniform illumination
- Lower maintenance
- High light yield
- No glare

Lighting specifications

Light source:	replaceable LED-modules
System output:	29 W (replaces 1x54 W)
Light output:	1,500–3,600 lm (depending on configuration)
Correlated colour temperature:	4,000 K
Colour rendering:	Ra > 80
Service life:	50,000 h at 70 % ϕ
Driver:	integrated
Driver failure rate:	0.75 % per 5,000 h
Service temperature:	+10 °C to +30 °C
Mains voltage:	220–240 V 50–60 Hz

Light planning corridor

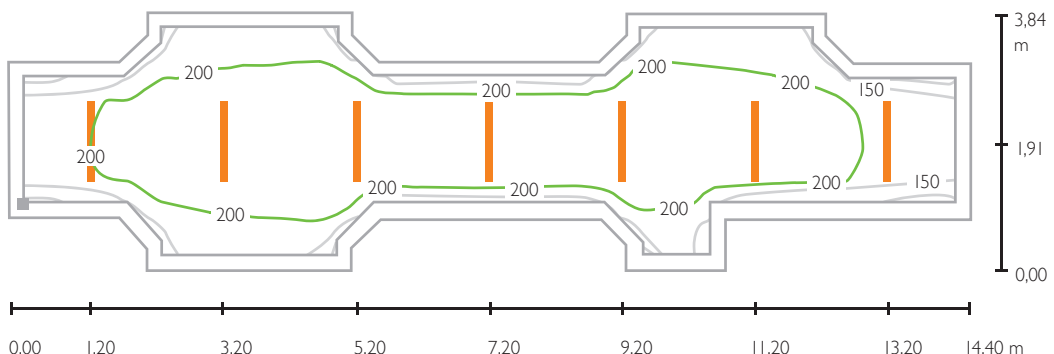
Room height: 2.7 m

Maintenance factor: 0.8

Illumination: 212 lx

Specific connected load: 2.26 W/m²/100 lx

Due to the rapid rate at which LED technology evolves, we reserve the right to make changes to the lighting specifications.



Please contact one of our specialists if you have any questions or would like a detailed consultation:

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