



**PHILIPS**

GreenParking

Klosterhof



Case study

**Intelligent,  
energy-efficient  
lighting** makes  
people feel safer  
in parking garages

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 The benefits of choosing such an innovative technology as the GreenParking system guarantees **performance, security, and cost-effectiveness.**”

Axel Martin Schmitz  
 Project Manager, Ralf Schmitz GmbH & Co. KGaA



When Kempen announced the construction of the Klosterhof, a modern residential and commercial complex in the heart of this German city, plans included extensive underground parking facilities. It was important to attract visitors without aggravating the parking situation for existing residents. To ensure the modern underground parking garage was visitor-friendly, the developers specified clear signage, pedestrian walkways and generous parking spaces. However, one of the main objectives was to ensure optimum illumination in all areas, despite the low ceilings. The lighting solution they chose is a highly efficient LED lighting system from Philips that recognizes the presence of vehicles and people. This not only makes the parking garage safe and secure for customers, but it also saves on maintenance and running costs.

**Making a difference in indoor and underground parking**

The developers of the complex, German company Ralf Schmitz GmbH, had initially planned to install a conventional lighting solution. However, after making the necessary preparations, they later decided on a more innovative solution that combines energy efficient LED lighting with presence detection and wireless control. Axel Martin Schmitz, Project Manager for Ralf Schmitz GmbH, said, “We are pleased that design consultancy Ingenieurbüro Huber, who worked with us on the project, told us about the innovative GreenParking system from Philips. As a result, we have been able to install a flexible lighting system that is extremely cost-effective. The additional investment for the system will be paid back in less than four years! And after that, we will save energy and money year on year.”

**How it was done**

The patented technology in the GreenParking system combines highly-efficient PacificLED with wireless control and presence recognition, a combination that has an added bonus for the Klosterhof project because the wireless sensor system means no wiring modifications were necessary for the retrofit. It was easily installed without incurring further wiring costs. There are also important benefits in terms of lighting effectiveness and cost efficiency because the intelligent LED system provides the same light output as traditional fluorescent lighting, but with much lower energy consumption. The presence recognition system detects people and cars in the vicinity, maximizing the potential energy savings.

By carefully locating the presence sensors and dividing the car park into different lighting zones, the intelligent lighting system increases the level of illumination only in the areas where people and cars are moving. It stays one step ahead of visitors in the parking garage, illuminating their path. Once people have left that zone, the light is dimmed to 20% light output and in ‘energy-saving’ mode. An emergency lighting system is also integrated into some of the PacificLED luminaires.

**What it means**

Lighting in parking garages is essential for safety and guidance, but because it is not possible to predict exactly when light is needed, it is often left on permanently. As a result, lighting energy costs can account for up to 70% of the total operational costs of a parking garage. The GreenParking system reduces energy consumption by as much as 80%. The integrated emergency lighting has also made it possible to satisfy regulations without additional investment in an independent emergency lighting system.

**The last word...**

“Drivers are very impressed with our ultra-modern underground parking garage. They feel safe and more secure, and we are very happy with the cost savings too”, said Axel Martin Schmitz.

Lighting solutions realised in this project



**GreenParking**

The GreenParking system is a flexible and fully retrofittable system based on the latest PacificLED luminaires and optics. The system features presence-detection controls that can reduce energy consumption by up to 80% (compared to fluorescent lighting). Offered as a complete system only, it is easy to install and commission due to self-addressing, wireless controls.

