



# Case study

# Koopmannndruck

Location  
Philips Lighting

Stuhr, Germany  
Maxos LED



**PHILIPS**



"Sustainability is an important part of our company policy. But profitability is naturally also a decisive factor. With LED lighting we achieve both: We reduce our energy consumption and at the same time improve the CO<sub>2</sub> balance of our printing work."

Knut Winneckens, Manager Koopmandruck



# Innovative LED lighting meets the highest print quality



## Project info

### Customer

Koopmannndruck

### Location

Stuhr, Germany

### Project team

Koopmannndruck, Folker Neetzow (project manager)  
Lichtpunkt Weyhe, Dirk Pistol (lighting design and installation)  
Henkel & Gerlach GmbH & Co., Holger Lange (wholesaler)

### Philips products

Maxos LED (4MX850)

### Results

- Innovative LED lighting solution with short cost recovery period (around 3.5 years)
- Significant reduction of CO<sub>2</sub> emissions and high energy efficiency (117 lumens per watt)
- Good colour rendering: Ra >80

## Background

August Koopmann GmbH offers environmentally conscious clients a complete service based on the most up-to-date production techniques. Sustainability and the careful handling of commodities have been central to the company's philosophy and to their daily business for decades. This is demonstrated by its use of various measures for climate neutral production: from solar energy to green power by way of the appropriate certifications and memberships.

## The challenge

In 2012 the lighting in the 3500 m<sup>2</sup> production facility at Koopmannndruck needed to be converted to environmentally friendly LEDs. The change involved machine lighting, work stations and intermediate stock, thus optimising their activities, while also achieving high energy efficiency and productivity. Legal requirements relating to the safety of the workplace, as well as ecological, technical, human and interim guidelines all needed to be taken into account. The workers' biggest wish was to have a light that is kind on the eyes, coupled with the best illumination and colour rendering with a high reliability.

## The solution

Maxos LED was chosen; an innovative, highly efficient light-line system for production, storage and sales areas. It has been developed for the 1:1 exchange of conventional fixtures and can therefore be quickly mounted

on existing support rails. In just 3 days, all 800 fluorescent tubes were replaced by 335 Maxos LED light-lines with wide respectively narrow beam optics. To ensure optimal results, the combined calculation of both optical systems was made individually for each production space, each machine and the intermediate stock. The high value of the colour rendering index (>80) means that the quality of print work can be better evaluated. The increase in illumination from 200-300 lux to partially 600-700 lux supports the relaxed look, provides safety and contributes to the welfare of the staff. Above all, the installation has made sound preparations for the future: Through wiring was used so that a light management system can be added at any time to save energy and reduce costs.

## Benefits

Thanks to the high energy efficiency (up to 117 lm/W) of the Maxos LED, Koopmannndruck achieved energy savings of almost 67%, compared to the energy use of the former fluorescent tubes. The CO<sub>2</sub> emissions were reduced by 70% to an absolute minimum. The company itself estimates savings of around 27,000 euros per year, which yields a cost recovery period of only about 3.5 years. The staff really value the bright, pleasant, even lighting. According to the printers, Maxos LED guarantees excellent colour rendition, far exceeding the required standards. All things considered, the results of the new lighting installation are very pleasing. The staff in the central warehouse have also asked if their department can now convert to LED-Light.



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