



EControl glass

For the atmosphere of openness in the atrium of the new European headquarters of the Lapp Group in Stuttgart only one intelligent solar protection solution came into consideration. As a worldwide leading supplier of integrated solutions in cable and connector technology as well as components for intelligent factories, the entrance area of the new headquarters needed to be the calling card of the high-tech company. The main challenge was to realize both the desire for transparency and protection from heat and glare in a 'visible' way. Detailed product research finally led the planners from Schwarz Architects to the perfect solution – dimmable glass from the company EControl in Plauen. "The diverse list of references supported us in the desire to work together with

**DYNAMIC
TRANSPARENCY
WITH 16-METRE-
HIGH ATRIUM**

Interior of the atrium. The dimmable glass ECONTROL can be adapted to meet any requirement and individually controlled. The internally positioned nano-structured coating of ECONTROL creates the so-called "electrochromic effect" via an electrical voltage and colours the glass blue

Open, communicative, creative: at the new European headquarters of the Lapp Group (U.I. Lapp GmbH) in Stuttgart-Vaihingen the open-space concept is lived right into the detail. This central theme influences the entire architectural concept: the transparent exterior of the administration building is characterized by large window areas; the two L-shaped wings of the building are connected by a 16-metre-high glass atrium. In order to maintain the openness, Lapp decided to use the dimmable glass ECONTROL smart 45/8 (EControl, Plauen). It offers two advantages: an unobstructed view to the outside remains guaranteed — and the intelligent glass has a positive effect on the air conditioning of the atrium.

EControl,” explains Dr. Uwe Lehmkuhler from the architect’s office in Stuttgart.

ENTRANCE AREA AS HIGH-TECH CALLING CARD

In the atrium, with its 16-metre-high glass façade, 85 square metres of ECONTROL smart 45/8 provides shading within the glass, an unobstructed view in the best weather and a pleasant climate in the foyer. With their electrochromic properties, the glass panes combat overheating of the atrium whilst maintaining transparency. The solar factor (total energy transmittance) of the dimmable triple-pane insu-

lation glass ECONTROL 45/8 at the strongest dimming level is only eight per cent – which also reduces the requirement for air conditioning. Because the panes can be regulated in steps, the shading always matches the current weather conditions. When it is dull outside, the glazing allows a lot of daylight to enter the building. External shading is unnecessary with this glass. “Whereas blinds block the view to the outside, our glass preserves the transparency,” explains EControl Managing Director Tobias John.

The highly functional principle behind the glass is the internally positioned

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Building owner:	U.I. Lapp GmbH, Schulze-Delitsch-Straße 25, 70565 Stuttgart
Glazing area:	85m ²
Glass product:	ECONTROL smart® 45/8
Installation and completion of the building:	2016
Architect:	Schwarz Planungsgesellschaft mbH & Co. KG Bludenzer Straße 6, 70469 Stuttgart





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The intelligent glass panes can be switched to form a mosaic

nano-structured coating. This creates the so-called 'electrochromic effect': an electrical voltage causes the glass to adopt a blue colour. "The dimming level can be controlled either automatically or manually, for example via a tablet," adds John.

ADAPTIVE GLAZING BRINGS THE SOLUTION

EControl supported the metalwork contractor during the fitting of the triple-pane insulation glass. "The installation of dimmable

glazing is comparable with that of normal insulation glass. In the planning of the wiring we work closely together with the façade constructor. Our many years of experience show that this close cooperation is always worthwhile," says EControl Sales & Marketing Director Manfred Dittmar.

The European headquarters of the Lapp Group is today regarded as exemplary in relation to the

The 16-metre-high glass atrium connects the two wings of the European headquarters. Even at the highest dimming level enough daylight enters the interior of the building



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German energy saving regulations – it undercuts them by 20 per cent. The climate-intelligent ECON-TROL glass integrates perfectly into the efficient overall structure.



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