**Optimum quality of light – smooth luminaire logistics**

**ERCO supplies exhibition lighting and a customised transport solution for Scandinavia's largest museum**

**The new National Museum in Oslo: a mammoth 54,600 square-metre project that unites previously dispersed institutions under a single roof. The new building, crowned by a shimmering "light hall", preserves and presents Norway's cultural heritage in all of its variety and complexity. The exhibition lighting with spotlights in the building comes from ERCO, embedded in an intelligent, holistic concept for luminaire logistics that meets the challenges of museum operations of this dimension both now and in the future.**

A reclaiming of waterfronts is a global trend in urban development. Oslo has also very successfully converted former traffic and harbour areas on its banks facing the fjord into an attractive cultural district. The 2008 Opera House and the striking Munch Museum are now joined by the timelessly simple building of the Norwegian National Museum of Art, Architecture and Design on the site of the city's former west railway station. The building, composed of reduced cubic volumes, does not renounce its sheer size, and frames the former station building, now accommodating the Nobel Peace Centre, in an L-shape. The granite facade emanates a sense of durability, whilst the "light hall" seemingly supplanted on the roof and with a translucent shell of glass marble laminate sets a shimmering accent in the city panorama at any time of day or night.

This extraordinary space for temporary exhibitions, a key element of the design by the architect Klaus Schuwerk of Kleihues + Schuwerk, clearly demonstrates the importance afforded to light in this project. "Initially there was the exhibition concept. Together with the architects we asked ourselves how we could translate the idea into a building- and space concept. It's really succeeded. The museum experience is significantly determined by the architecture and interior design – in which, of course, the light also makes a significant contribution," says project director Jon Geir Placht. The museum represents a point of crystallisation for the cultural identity of affluent Norway. Quality was thus given absolute priority, and, accordingly, the planners and curators made no compromises regarding exhibition lighting for more than 90 halls. The National Museum now unites four institutions that were previously housed separately: the Norwegian National Gallery, the Museum of Contemporary Art, the Museum of Decorative Arts and Design and the Museum of Architecture, which, however, continues to also occupy its previous location designed by Christian Heinrich Grosch.

**High-contrast lighting – flexible and future-proof**

“With lighting design, it is possible to create certain narratives and trigger emotions in the observer, it is essential to give meaning to art.” explains Mai Britt Guleng, Senior Curator at The National Museum. The museum placed the exhibition design and lighting in Italian hands: the architects Guicciardini & Magni from Florence worked closely with the experienced lighting designer Massimo Iarussi, whose portfolio includes not only the highlight of the Uffizi Gallery but also many further premium exhibition and museum projects. He succeeded in creating a lighting concept that achieves a fine balance – on the one hand doing justice to the enormous range of different themes, exhibits and media as well as maintaining a sense of suspense with atmospheric contrasts, and on the other, enabling rational installation and operation thanks to flexible, modular technology. "The light merges with the exhibition and guides visitors through the museum. Our aim was to give them a calm, pleasant experience despite the sheer size and quantity of art," explains Massimo Iarussi. "Variation typifies both the exhibition concept and the lighting concept. Through the art, the materials and also the lighting, each room is different from the others."

The universal basis is a ceiling grid made of track. Supplemented with square light ceiling modules from another manufacturer, the impression of a classic hall of skylights is created. Depending on the desired atmosphere in the hall, spotlights and wallwashers are able to highlight individual exhibits almost imperceptibly from the dominant general brightness or carve them out of the darkness with powerful accents. "The light is a metaphor for journeying through time. The exhibition design depicts a chronology that symbolically emphasises the lighting," Iarussi explains. "In the rooms displaying art from antiquity we worked with strong contrasts. Light is very focused on the works to give them more plasticity and presence. Coming towards the contemporary, the lighting becomes increasingly 'democratic': less concentrated and more diffuse. After all, art has been accessible to everyone, to the entire population, since the modern era. The diffuse light symbolises this complete access to art."

This lighting task in the National Museum is performed by approximately 5,700 spotlights and floodlights from the ERCO [Parscan range](https://www.erco.com/press/1473/en). The product family is ideally suited for diverse and changing applications that require maximum flexibility. This is because [Parscan's](https://www.erco.com/press/1473/en) technical platform with Spherolit lens technology and LEDs with CRI>97 not only features superior efficiency and quality of light, but also an enormous range of wattages and light distributions. The inherent flexibility of track-mounted spotlight systems is further enhanced by tool-free interchangeable lenses for different light distributions. The archetypal and minimalist design of [Parscan spotlights](https://www.erco.com/press/1473/en) forms a design thread throughout the entire museum. "The ERCO solution enabled the widest variance, for example with colour temperature, which can differ from room to room, and through different light distributions. For the high-contrast displays we used narrow spot distribution in dark surroundings. This required maximum-precision optics that project precise beams of light without any light spill," says Massimo Iarussi.

A modified version of [Parscan](https://www.erco.com/press/1473/en) with an extended bracket is used, required due to peripheral steps in the ceiling construction. Such project-specific adaptations are covered by the ["ERCO individual"](https://www.erco.com/press/6770/en) service, creating lighting tools that adapt to the needs of designers and specifications on site.

**Transport trolleys as a customised logistics solution**

Simply delivering spotlights is not enough in today's close cooperation between clients, lighting designers and suppliers. In addition to the actual products and individual problem solutions, packages increasingly include consulting and services that draw on ERCO's decades of experience in museum lighting. At the National Museum, this went far beyond the supply of the customised spotlights: In collaboration with the museum, ERCO technicians developed compact, customised transport trolleys for smoothly installing the several thousand luminaires in the different halls. The trolleys can stock the spotlights of a particular room on 15 track segments arranged like a shelf and roll them conveniently through the museum. A textile covering protects against dust from construction operations. Because the [track](https://www.erco.com/press/7300/en) is electrified, work such as DALI addressing of the spotlights can be done on site on the floor. "The trolleys mean we can transport a variety of luminaires more easily in the new National Museum, cover long distances quicker and also programme them directly. The trolleys make daily work more efficient and also help in preparing for future exhibitions," explains exhibition technician Magnus Mikaelsen. After the initial installation phase, the trolleys now serve as compact storage modules for the museum's pool of lighting used for temporary exhibitions. Such solutions for optimum lighting quality and smooth luminaire logistics constitute the added value that repeatedly convinces leading museums around the world to work with ERCO.

[**Link to**](https://www.youtube.com/watch?v=NRuKHZyP6PI) **the film**

[**Link to the trolley film**](https://www.youtube.com/watch?v=_AbE3UhFOH0)

**Project data**

Project: The National Museum Oslo, Oslo / Norway

Architecture: Klaus Schuwerk, Naples / Italy,  
Arge Kleihues + Schuwerk, Berlin / Germany

Lighting design

(architecture): Rambøll, Copenhagen / Denmark

Lighting design

(exhibition): Massimo Iarussi, Florence / Italy

Exhibition design: Guicciardini & Magni Architetti, Florence / Italy

Photography: Iwan Baan, Amsterdam / the Netherlands,

Tomasz Majewski, Oslo / Norway

Products: Parscan

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Photography: Iwan Baan, Tomasz Majewski

**About ERCO**

ERCO is an international specialist for high-quality and digital architectural lighting. The family-owned company, founded in 1934, operates globally in 55 countries with independent sales organisations and partners.

ERCO understands light as the fourth dimension of architecture – and thus as an integral part of sustainable building. Light is the contribution to making society and architecture better and, at the same time, preserving our environment. ERCO Greenology® – the corporate strategy for sustainable lighting – combines ecological responsibility with technological expertise.

At the light factory in Lüdenscheid, Germany, ERCO develops, designs and manufactures luminaires with a focus on photometric optics, electronics and sustainable design. The lighting tools are developed in close collaboration with architects, lighting designers and electrical designers. They are used primarily in the following applications: Work and Culture, Community and Public/Outdoor, Contemplation, Living, Shop and Hospitality. ERCO lighting experts support designers worldwide in transforming their projects into reality with highly precise, efficient and sustainable lighting solutions.

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