



Dignified and economical: New light for Milan Cathedral

The Milan cathedral works organisation has been taking care of the completion and preservation of the cathedral for more than 600 years. Which makes all the more remarkable its decision to install new lighting in the church for the EXPO 2015 – based on a perception-oriented concept by lighting designers Ferrara Palladino e Associati – and highly efficient LED lighting technology supplied by ERCO.

Project data

Client: Cathedral works organisation
"La Veneranda Fabbrica del
Duomo di Milano",
Milan / Italy

Lighting
designer: Ferrara Palladino e Associati,
Milan / Italy,

Photographer: Dirk Vogel, Dortmund /
Germany

Completion: May 2015

Standing proudly as the third largest Gothic cathedral in the world, the Duomo di Milano was completed in 1858 after nearly five centuries of construction. Yet to this day its restoration and maintenance remains a constant focus of the "Veneranda Fabbrica del Duomo di Milano", the historic organisation concerned with all operational aspects of the cathedral. With millions of visitors expected to converge on Milan for the EXPO 2015 from May, the monumental church interior now presents itself at its most dignified – innovatively illuminated by local lighting designers Ferrara Palladino e Associati. Next to aesthetics the clients based their decision on very pragmatic concerns: The LED lighting tools supplied by ERCO provide the means to implement a complex lighting solution while helping the Veneranda Fabbrica reduce the operating costs for maintenance and energy on a permanent basis.

This is an issue of key importance for the Veneranda Fabbrica in view of its formidable responsibilities working with limited resources. The old lighting system had consisted of

175 floodlights, each with 400W metal halide lamps, which had been mounted to the base of the vault at a height of up to 33m for a uniform, zenithal illumination of the interior. Arguably the most economical solution in its day, the technology from today's vantage point was outdated and the system lacked aesthetic appeal. The low maintenance and energy efficiency of current LEDs, combined with the precision and light quality of innovative ERCO LED lenses, give lighting designers an altogether new scope for design.

In the new lighting concept LED luminaires from the Parscan range solve a variety of different lighting tasks with suitably nuanced power outputs and light distributions. An investment in light quality that will pay off in the long run considering the energy savings achieved as a result. Whereas the old system used a cool light colour resembling daylight, the new lighting with neutral white LEDs in 4000K creates a more pleasant ambience and renders the surrounding surfaces in the most natural colour. The lighting concept forms

a consistent hierarchy of perception by using brightness contrasts in the room: discreet horizontal ambient lighting combines with brighter illumination for the vaulted ceilings, thereby reinforcing the sense of height and lightness as principal characteristics of Gothic architecture. Defined light accents direct the attention of the visitor onto the altars, pulpits and column capitals so richly adorned with sculptures. The result gives worshippers and tourists alike a tangible experience of the vast dimensions and artistic quality of this sacred place.

The Parscan spotlights in the naves are mounted in the same positions as their predecessors, at the base of the vault. LED lenses project the light precisely without spill light and in combination with the significant height of the light sources ensure good visual comfort. A compelling factor driving the decision of the lighting designers in the end, however, was the fact that ERCO LED spotlights with spot and narrow spot Spherolit lenses and outputs of up to 42W master the different lighting re-

quirements in the cathedral with accuracy even from significant distances. The luminaires are mounted on track elements and for safety purposes additionally secured with steel ropes. During their installation, they were aligned precisely, locked in position with a fixing screw and dimmed to the required level of brightness using the integrated potentiometer. The vision of the lighting designers thereby became a reality, providing a lighting system that requires no maintenance for years to come thanks to the long life of the LED light sources. The bottom line presents a connected load that reduces by around two thirds, from 70kW to 23.7kW, even if there are now as many as 784 luminaires. A success that has earned the project an A+ rating for energy efficiency along with an Environment-Friendly Innovation Award 2015 by Italian environmental organisation Legambiente – and which may point the way ahead for innovative lighting in historic and sacred buildings.

Luminaires used in the project



Parscan spotlights
and floodlights

Copies and links requested.

For further information or image material
please contact:

ERCO GmbH

Nina Reetzke, Press Officer
Postfach 2460
58505 Lüdenscheid
Brockhauser Weg 80-82
58507 Lüdenscheid
Germany

Tel: +49 (0) 2351 551 690
Fax: +49 (0) 2351 551 340
n.reetzke@erco.com
www.erco.com

mai public relations GmbH

Arno Heitland
Leuschnerdamm 13
10999 Berlin
Germany
Tel: +49 30 66 40 40 553
erco@maipr.com

