

The Magazine of the International Building Transportation Industry

# ELEVATOR WORLD

January 2019

## Project of the Year 2019

2018 Wisconsin  
Elevator Symposium

Focus on Technical  
and Engineering Innovations

[www.elevatorworld.com](http://www.elevatorworld.com)







# ELEVATORWORLD'S

## *21st Annual Project of the Year*

EW is pleased to present the 2019 Project of the Year contest winners in this issue. We received many outstanding entries in all nine categories. Judges scrutinized each entry and, again, had difficult decisions to make. Each entry exemplified team members joining together to overcome challenges, while being focused and innovative to complete their projects on time, on budget, 100% complete and to the clients' satisfaction. Winners in each category have been presented with trophies commemorating their outstanding work.

The EW staff and Project of the Year judges appreciate the many entrants for their participation. We hope readers will enjoy some of our industry's most significant accomplishments from the past year.

Start thinking now of any noteworthy projects your company is working on that may be eligible for entry in next year's competition. The project should be

composed of a vertical, horizontal or inclined transportation system consisting of an innovative design, special application or approach that solved a major problem or overcame a unique challenge.

Complete contest entry details are available at [www.elevatorworld.com/poy](http://www.elevatorworld.com/poy).

The submission deadline is September 30. The transportation-system portion of the project must have been completed within two years of the opening of the contest (April 2017 or later). Don't forget about the new categories for 2020: **Elevators, Upgrades & Repairs** and **Escalators, Upgrades & Repairs**. 🌐



### Project Categories

- ◆ Elevators, New Construction
- ◆ Elevators, Modernization
- ◆ Escalators, New Construction
- ◆ Escalators, Modernization
- ◆ Moving Walks
- ◆ Inclined Elevators
- ◆ Platform Lifts & Stairway Chairlifts
- ◆ Private-Residence Elevators
- ◆ Special-Purpose Lifts







# Spiral Escalators Enhance “The Avenues” Mall Extravaganza

*Escalators, New Construction*

Al-Rai, Kuwait

Kuwait’s first public-use spiral escalators are installed in showy shopping space.

*submitted by Krishnan Subramanian, AG MELCO Elevator Kuwait Co. W.L.L.*

Mitsubishi Electric Corp. unveiled Kuwait’s first spiral escalators for public use at the Phase-IV expansion of “The Avenues” shopping mall in Al-Rai, Kuwait. The pair of unique units, created with proprietary escalator technologies from Mitsubishi Electric, lend an atmosphere of architectural elegance and sophistication to the large atrium of the mall’s “Prestige” luxury-shopping district. Mitsubishi Electric,

through its association with AG MELCO Elevator Kuwait Co. W.L.L., supplied and installed 75 elevators and 64 escalators including the two spiral escalators and two high-rise escalators serving a floor distance of 10.2 m.

Avenues Mall is the largest shopping mall in Kuwait and the second-largest mall in the Middle East, giving visitors a distinctive shopping experience through more than 1,100 stores spread over various districts inspired by classical and modern architecture. Over the span of 12 years, The Avenues has spent a total of US\$3.06 billion for architecture and construction of the shopping mall. Phase-IV, its final phase, opened in March 2018. This phase included the expansion of existing districts that are extremely popular among visitors: Prestige, Grand Avenue and The Souk. The extravagant architecture called for matching aesthetics across all districts, forcing a remarkable customization of Mitsubishi Electric’s spiral escalators with red/green/blue (RGB) handrail lighting and soffit glass outer sheathing to adapt them to the designer’s vision.



The spiral escalators’ outer sheathing works were carried out with the combination of gold-colored stainless steel and soffit glass per exact measurements taken during installation.





The curved outer sheathing for the spiral escalators has a combination of gold-colored stainless steel with etching designs, and the sandwiched soffit glass with bronze mirror has gold-colored mesh within.



The Avenues Mall is located in the Al-Rai area of Kuwait extending from Fifth Ring Road to the south and Ghazali Highway to the east.



This is one of AG MELCO Elevator Kuwait's most prestigious projects with the highest number of escalators. The spiral escalators are not simply a means of transportation. Passengers seemingly float on air or travel through space once on board. Their graceful arcs help widen passenger perspective and add new contours to the surrounding area. They also enhance the impact of the building's interior architecture and guide visitors smoothly into the building. Various safety devices and functions are incorporated to guarantee smooth boarding and exit. There is also a monitoring and control system managing the changing traffic patterns for optimized performance.

*Continued*



A high-rise escalator





At The Avenues, the spiral escalators are installed in an open-ceiling facility. The escalator symmetry enhances the feeling of spaciousness, sophistication and comfort, transforming the area into a cordial location where many people can gather. Mitsubishi Electric developed a “Centralized Motion Method” for their design. In it, the central point moves in stages based on the angle of incline.

As the spiral escalators were required to be installed at the Prestige district extension with no support system at the top for hoisting and positioning the escalators, AG MELCO’s engineers derived a new design of a structure for hoisting the escalators using scaffoldings with right supports and beams positioned above the scaffoldings at required places to withstand the load while hoisting. After elaborate load calculations, the spiral escalators were hoisted, positioned and aligned within the specified time period with complete pull load-test procedures.

The installation and alignment were very precise. They were carried out in critical conditions, allowing other subcontractors working around the installation team, while the hoisting and installation of other escalators were managed simultaneously. The specialized installers and technicians completed the installation by connecting up to 6,000 custom-sized parts. After installation, multiple quality-assurance and safety checks were carried out.

Further customizations were made that required installation of the RGB lighting using LED strips within the existing escalators without disturbing the performance of the equipment and ensuring convenient maintenance. An aluminum profile within the width of the guard rail below the handrail was fabricated and installed with screws. The radius of the curved portions was studied and calculated, and the curved aluminum profile was fabricated and installed to withstand the LED strips. The handrail lighting was grouped for a maximum of eight escalators in a group to give an elegant atmosphere to the escalator cores.

More escalators were added in the final stage of the project completion. These escalators were required to be installed inside the Debanhams and H&M shops. The logistics for shifting these escalators became a big challenge, as the materials were received at such a late stage. The hoisting and positioning of the two lengthy escalators with a rise of 10.2 m within the narrow space were also executed.

The hoisting and installation of the other 62 escalators were also carried out at various locations at the same time, and the entire installation was completed within the stipulated time in March 2018.

## Credits

**Client:** Mabanee Real Estate Co. (Al – Shaya Group)

**Operator:** Mabanee Facilities Management

**Architect/designer:** Gensler Architect

**Consultant:** Pan Arab Consulting Engineers

**Main contractor:** Ahmadiyah General Trading and Contracting Co.

**Conveying-systems subcontractor:** AG

MELCO Elevator Kuwait Co. W.L.L

**Conveying-systems manufacturer:**

Mitsubishi Electric Corp., Japan