



# MOVING UP IN STYLE

THE ELEVATORS & ESCALATORS INDUSTRY IS COMING UP WITH NEW SOLUTIONS FOR THE POST PANDEMIC WORLD THAT COMBINE FORM AND FUNCTION

BY BINDU GOPAL RAO

The elevator industry is making bold and strong footholds in technological advancements and customer usability. Skyscrapers, commercial spaces, hospitals, hotels and high-rise buildings are useless without elevators, but today the meaning of elevators & escalators has changed to reach a new high.

**THE SPECIFICS**

Elevators & escalators have been an integral part of public spaces throughout the world. Their technology and design are always evolving and, with the outburst of industrial manufacturing, it has become an easy facility for everyone. The design of elevators has evolved from steam driven to traction, hydraulic, vacuum and a few other types. Due to this evolution, elevators have expanded in scope from public spaces to private spaces like multistorey residences, from big machine rooms to machine room-less elevators. Use and type vary; i.e. a double storey building can have a pneumatic elevator for its compact and efficient design.

“For a commercial complex where many elevators are in use, the concept of smart elevators has kicked in. Smart elevators are a set of elevators where it helps in crowd management and helps sorting population during rush hours. These smart elevators

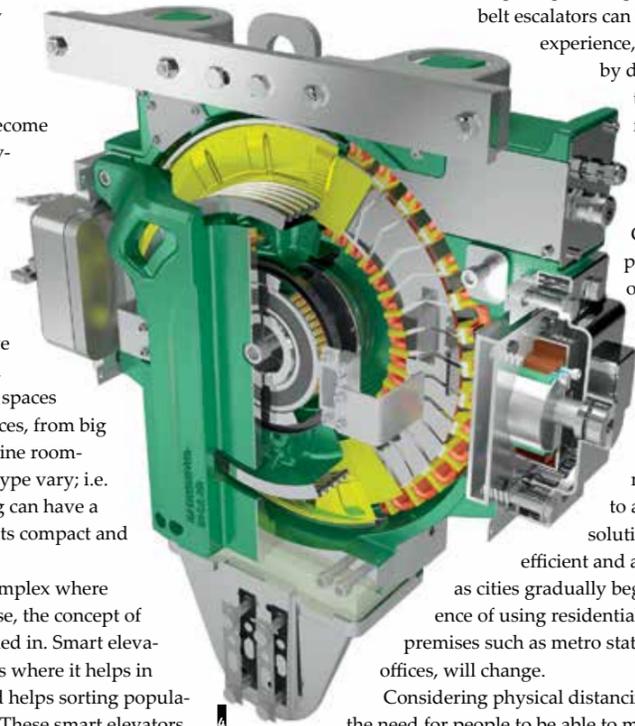
also cater to the energy savings and condition the energy wastage for various functions when not in use. The intelligent system also takes care of crowd movement in such a way that they can understand the number of users to floor ratio and categorise elevators for dedicated floors,” says Arun Chaubey, architect and interior designer, Uniworks Design.

Similarly, for escalators, the designs have evolved to smart by conserving energy when not in use and handling users more efficiently. We can classify escalators from steps to the belt kind. For a compact space, steps are usually used, but belt escalators can be used for a better user experience, which can also be used by differently-abled people to commute between floors.

**PANDEMIC CONSIDERATIONS**

Given the current pandemic, conscientious organisations are working to address the challenges of adapting to a new way of life. “We studied the everyday challenges in urban residential environments and felt the need to address them with new solutions that are functional, efficient and adaptive. We realised that as cities gradually begin to open, the experience of using residential buildings and public premises such as metro stations, shopping malls and offices, will change.

Considering physical distancing measures as well as the need for people to be able to move around in shared



1. The KONE UltraRope in elevator shaft provides unrivalled elevator eco-efficiency, reliability and durability.

2. Arun Chaubey, architect and interior designer, Uniworks Design.

3. KONE's 24/7 Connected Services provides valuable information on upcoming maintenance needs and identifies any potential issues.

4. The EcoDisc motor is the heart of KONE's elevator solution.

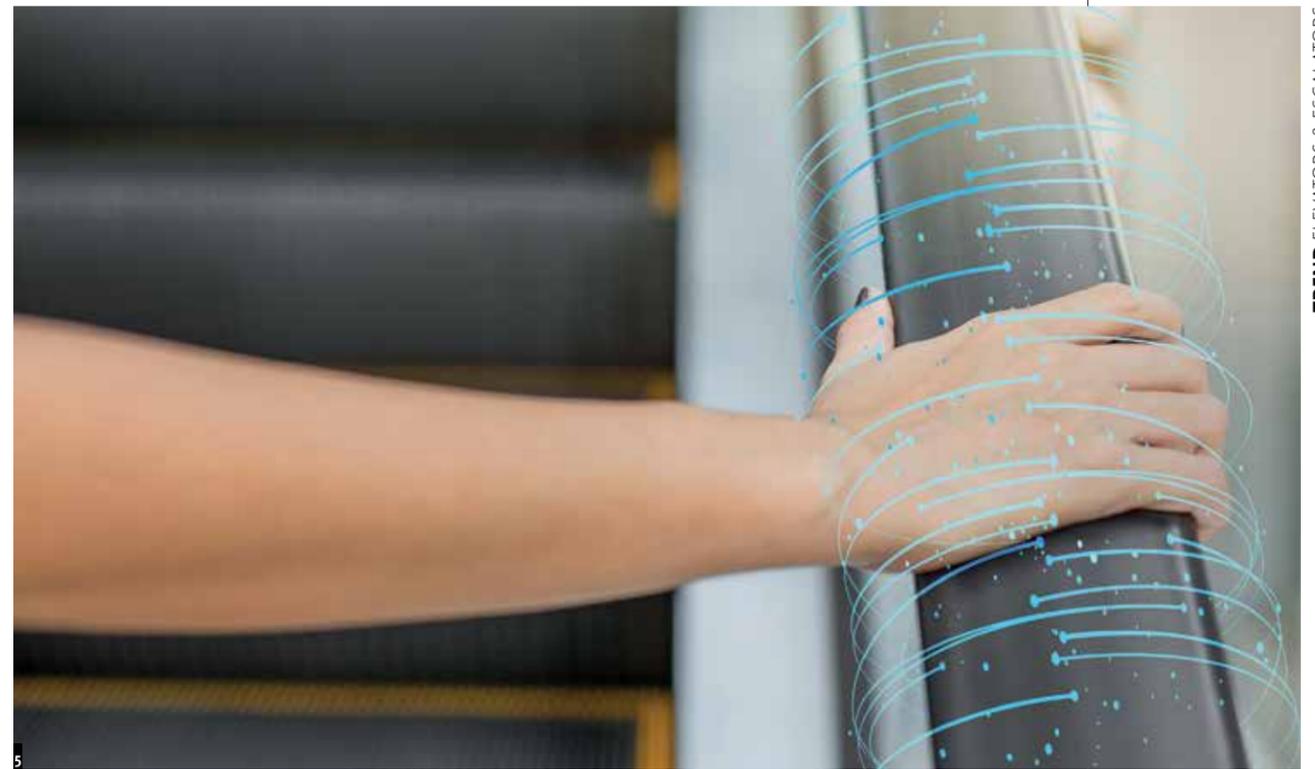


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spaces safely, KONE's technical knowhow and innovation came together to create Health and Wellbeing Solutions, that can be used to encourage physical distancing while enabling a safe and convenient return to public settings. These solutions that can be added to all KONE elevators, range from Escalator Handrail Sanitiser, Elevator Call using mobile phones to Elevator AirPurifier. KONE Handrail Sanitiser, an escalator handrail cleaning solution, uses a type of ultraviolet light (UV-C) to gradually disinfect escalator handrails. To remove the need to touch possibly contaminated buttons or displays, the Elevator Call Feature allows users to call an elevator using a social messaging channel like WhatsApp,” says Amit Gossain, managing director, KONE Elevator India. The KONE Elevator Air Purifier uses an advanced photocatalytic oxidation (PCO) process developed by NASA for air control on spaceships to improve air quality in the elevator car by removing most of the potential pollutants, like bacteria, viruses, dust and odours, in the air. The KONE Handrail Sanitiser uses ultraviolet light to gradually disinfect escalator handrails.

**TECH CUES**

Otis is developing a connected elevator capable of communicating with passengers, building managers, service staff and other building systems to improve the passenger experience and elevator performance, especially through improved elevator maintenance. This is often referred to as a smart elevator.

Also, KONE joined hands with IBM Watson and introduced KONE's 24/7 Connected Services, which are touted as the world's most intelligent elevator and escalator services that monitor round-the-clock, resulting in fewer faults, faster repairs and peace of mind for the customer. Using Cloud technology, these elevators & escalators can now speak their minds and keep technicians informed of what's happening.

Sebi Joseph, president, Otis India, opines, “I believe that



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5. The KONE Handrail Sanitiser uses ultraviolet light to gradually disinfect escalator handrails.

6. KONE's UltraRope MBS is a completely new hoisting technology that eliminates the disadvantages of conventional steel rope.

7. Amit Gossain, managing director, KONE Elevator India.

8. Sebi Joseph, president, Otis India.

9. Aura from Otis captures the senses, transporting you away from the ordinary.

10. CompassPlus is the most advanced destination management system from Otis.



the next developments in elevator technology will leverage digitalisation. Existing Otis technologies such as our Compass Destination Management System, which constantly evaluates real-time passenger traffic to improve flow and travel time in busy mid- and high-rise buildings, are at the start of this trend. Otis is helping customers around the world prepare for the safe reopening and continued maintenance of their buildings. Touchless technologies are especially attractive options in this current environment. One example of touchless technology is the Otis eCall app. The app enables passengers to use their cell phone as their personal elevator call button and call an eCall-equipped elevator when approaching it."

#### DESIGN INTENT

Modern elevators allow architects to be creative with the interior of the car and its user interface. Materials such as marbles, veneers and mirrors are used to decorate the interior of the elevator to make it one with the home. As a result, the elevator becomes a part of the house as opposed to being just a piece of machinery.

Hardesh Chawla, founder, Essentia Environments, avers, "Residential and commercial elevators provide relatively greater freedom for design. "We, as architects, explore design options for lift lobbies, lift interiors and user interface controls. There are a host of new elevator systems that cater to various needs, from room-less machine systems to hydraulic lifts. Their applications depend upon the requirements and budget of the client."

Behind the scenes, the industry has been develop-



ing innovations and protocols that will help us emerge into a new way of life, arming facility management teams and riders with specific solutions to help us all adjust to our new environments. "Elevators, while a necessary daily ride for many — are not spaces people spend much time in. But it's important for building professionals to understand how the elevator is managed and designed, so they — and their tenants — can feel safe in these high traffic machines. For example, the ventilation systems in elevators are designed to provide plenty of fresh air for passengers, even when fully occupied," says Imran Shaikh, director, Cubix Architects Associates.

#### ECO VIBE

Solar energy usage has ensured that a lift that is wholly based on solar power has become somewhat acceptable for saving high power consumption from elevator operation. "Our next generation methodology is more than just a new technology or single piece of equipment — it represents a commitment by the entire Otis team to help the world become taller, faster and smarter. Our efforts ultimately align with the outlook of the Smart Cities initiative. Additionally, I find more customers requesting energy-efficient equipment options such as power standby mode. At Otis, we are meeting this call with products like our Gen2 elevators featuring the ReGen drive. These energy-saving units recycle energy and provide clean power for other building systems to use. They are up to 75% more energy-efficient than traditional elevators with conventional drives," says Joseph.

#### LOOKING AHEAD

Connectivity is the future of elevators. It will not be long before Internet-connected elevators become more commonplace. Sensors gather data about usage, which is then

transferred to a Cloud-based platform where it is processed and analysed to predict when maintenance might be needed. Another benefit is that companies would be able to service some aspects of elevators remotely, which can help save money and time when repairs are needed. Technology can make your elevator ride as safe and touch-free as possible, but there are still human behaviors that will impact how safe we all are in this new world. This includes continuing to enforce physical distancing in elevator cabs as well as the routine cleaning of equipment. Physical distancing will likely be keeping us apart for some time, so it is important that facility professionals understand these recommendations. A standard elevator car, for example, will allow for two — maybe three — passengers to maintain appropriate physical distancing, which may mean slow-moving lines in the lobby on your way to the office.

In response, NEII (National Elevator Industry, Inc.) recommends several steps such as placing decals on the cab floor to indicate where riders should stand and staggered arrival and departure times in heavy traffic buildings to prevent crowding.

"To expand on the concept of speed, our engineers are working to develop the next generation of elevators. This new generation will strengthen connections between the manufacturing, installation, and service segments of our product life-cycles. Further, we are transforming our service business on a global level to incorporate smarter, more connected technology that delivers proactive, quick and effective diagnostics and repair. The transformation is an investment in digital tools, mobility solutions, IoT-based technologies and operational excellence to enhance customer experience and accelerate business productivity," concludes Joseph.

Things are definitely looking up for the elevators & escalators industry. 



11. Otis Elevator Company has elevators that are dedicated to reinventing the way you move.

12. Hardesh Chawla, founder, Essentia Environments.