

# FROM INDIA TO THE WORLD

## OMEGA'S 40-YEAR ASCENT IN VERTICAL MOBILITY

*For over four decades, Omega Elevators has been part of India's journey skyward. Founded in 1984 by IIT graduate Kumarpal Desai, the company transformed vertical mobility from a rare luxury into an essential part of everyday urban life. Today, under the leadership of **SAMEEP DESAI**, Omega is blending engineering excellence with smart technology to meet the demands of modern cities, infrastructure projects, and high-performance buildings across India and beyond.*

In this exclusive Homes & Buildings Magazine conversation, Sameep talks about Omega's evolution, its pioneering innovations, and the trends that will define vertical transportation in the decade ahead.

### From Vision to Vertical Leadership

In the early '80s, even five- or six-storey buildings often didn't have elevators. It was only much later that lifts became mandatory in buildings three storeys or taller. My father, Kumarpal Desai, saw this as an opportunity to make vertical mobility not just accessible but reliable and safe.

We started small, but with a strong focus on service. In 1989, Omega Services was launched under my mother, Damini K. Desai, to ensure quick and effective maintenance. Her proactive programmes significantly reduced downtime and extended operational lifespans.

From those early days, Omega has grown into a trusted name in vertical transportation, with over 55,000 installations in India and worldwide. We offer passenger, goods, commercial, capsule, car, home, and hospital elevators, as well as premium escalators, travellers, and moving walks.

Our portfolio includes some of India's most iconic projects — BAPS Akshardham Mandir, Patang Revolving Restaurant (220 ft), Palladium Mall, Gujarat Vidhansabha, Club-07



Ahmedabad, Rajasthan International Centre, The Park Lodha Mumbai, BARC Kakrapar & Mumbai, IIT Kharagpur, IIM Ahmedabad, multiple airports, Mumbai's busiest railway stations, Somnath Mandir, Siddhivinayak Mandir, and, most recently, Ahmedabad-Gandhinagar Metro Phase 2.

We pioneered smart elevators in India in 2014, integrating remote monitoring systems for predictive, preventive, and analytical maintenance — keeping us ahead of the curve. That ability to think like a founder and act quickly is still at the heart of Omega's culture.



An Exclusive Conversation with **SAMEEP DESAI**, Managing Director, Omega Elevators

### The Changing Skyline

India is now the fifth-largest economy in the world and its most populous nation. Cities are becoming denser, smarter, and taller. In Tier 2 and Tier 3 cities, we're already seeing 17–18 storey buildings becoming the norm. Even luxury bungalows and multi-generational homes now integrate private lifts into their design.

Our 450,000 sq. ft. manufacturing facility in India gives us the ability to design and produce equipment tailored to Indian conditions — from climate extremes to voltage fluctuations — while creating local jobs.

Vertical mobility will be at the heart of India's next phase of urbanisation. Omega is ready to deliver the technology and capacity to meet that challenge.

### Engineering That Adapts to Every Challenge

We have always approached innovation through the lens of real-world problem solving. Some of our notable advancements include:

■ **Fire Evacuation Elevators** — specially designed with pressurised shafts to prevent smoke infiltration during emergencies, usable by trained fire safety officers.

■ **90° Door Opening Elevators** — for buildings with spatial constraints, allowing entry and exit from different sides.

■ **Extreme-Climate Lifts** — built for challenging environments like Ladakh, able to withstand sub-zero conditions.

■ **Pitless Elevators** — ideal for retrofits where creating a pit is impractical.

■ **Machine Room-Less (MRL) Elevators** — efficient, space-saving solutions for low-rise buildings.

■ **Cabin Disinfecting Systems** — introduced during the COVID-19 pandemic to ensure hygiene after each use.

■ **AI-Powered SMART Connect** — IoT-enabled systems with QR-based access, Wi-Fi connectivity, and custom algorithms for individual buildings.

In escalators, we are experimenting with stainless steel tube structures instead of traditional galvanised steel for superior corrosion resistance in outdoor installations. We have also developed patent-pending rescue systems, slot-less bottom sills, and folding cabin doors — features designed to simplify installation and enhance durability.

### Smart Technology in Motion

Elevators today are sophisticated electro-mechanical systems with intelligent control software. At Omega, we use:

■ **AI-driven traffic flow optimisation** to study passenger patterns and predict peak usage, reducing wait times and optimising travel routes.

■ **IoT integration** for real-time monitoring, predictive maintenance, and remote diagnostics.

■ **Touchless operation** via mobile apps and voice commands, enhancing hygiene and accessibility.

These features make systems smarter, safer, and more efficient — especially in high-traffic environments.

### Safety as a Non-Negotiable

We use the CAN bus protocol for precise communication between components, conduct 48-hour burnout testing on all PCBs and control cards, and design for resilience in high-temperature and high-humidity conditions. All electronics receive a conformal coating to protect against moisture, condensation, and corrosive gases.

Our engineering precision is such that our motors can operate with extraordinary stability — you can balance a 50-paisa coin on its edge in a moving cabin and it will not topple.



*From  
Ladakh's  
Icy Terrain  
to Mumbai's  
Railway Station to  
Ahmedabad Metro,  
OMEGA is built for  
the environment  
it serves.*

### Global Standards with Local Relevance

We meet EN 81, ISO, and NBC codes, and we adapt those standards to Indian realities. This includes:

■ **Fire-compliant designs** using fire-resistant materials and heat-detection mechanisms.

■ **Touchless and voice-activated controls** for hygiene and accessibility.

■ **Regenerative drive technology** to store and reuse energy generated during operation.

■ **Secure digital access control** to prevent unauthorised floor entry.

### Sustainability at the Core

Sustainability is built into our operations. Our manufacturing plant has a 10 MW rooftop solar system. We use oil-free permanent magnet synchronous (PMS) motors that eliminate waste and improve recyclability.

Regenerative drives in high-speed elevators recover up to 80% of energy

during deceleration and feed it back into the system. We also use LED lighting and low-VOC interior materials to reduce environmental impact and improve indoor air quality.

These measures help clients achieve IGBC and LEED green building certification points while lowering operational costs.

### Scaling with Smart Cities

Omega has provided customised vertical transport solutions for metros, airports, railways, dams, industrial facilities, and large residential developments.

For Tier 2 and Tier 3 cities, we design systems that can handle voltage fluctuations and prolonged outages. We integrate high-capacity battery backups, use remote diagnostics for proactive service, and offer simplified interiors for cost efficiency without compromising safety.

### The Road Ahead

Land scarcity will continue to drive vertical development. We expect to see more towers in the 17–20 storey range in Tier 1 and Tier 2 cities, along with faster elevators — 2.5 to 7.5 m/s speeds becoming standard in high-rises.

Parking is another area of opportunity. Multi-storey smart parking systems with advanced car lifts will become essential in urban centres.

As India modernises, Omega will continue to lead with technology, innovation, and expertise — ensuring that every ride is faster, safer, and more sustainable.

