

*Dedicated to People Flow™*



KONE MODERNIZATION SOLUTION FOR HIGH-RISE BUILDINGS

# KONE ReSolve™ 800

The KONE ReSolve™ 800 package includes:

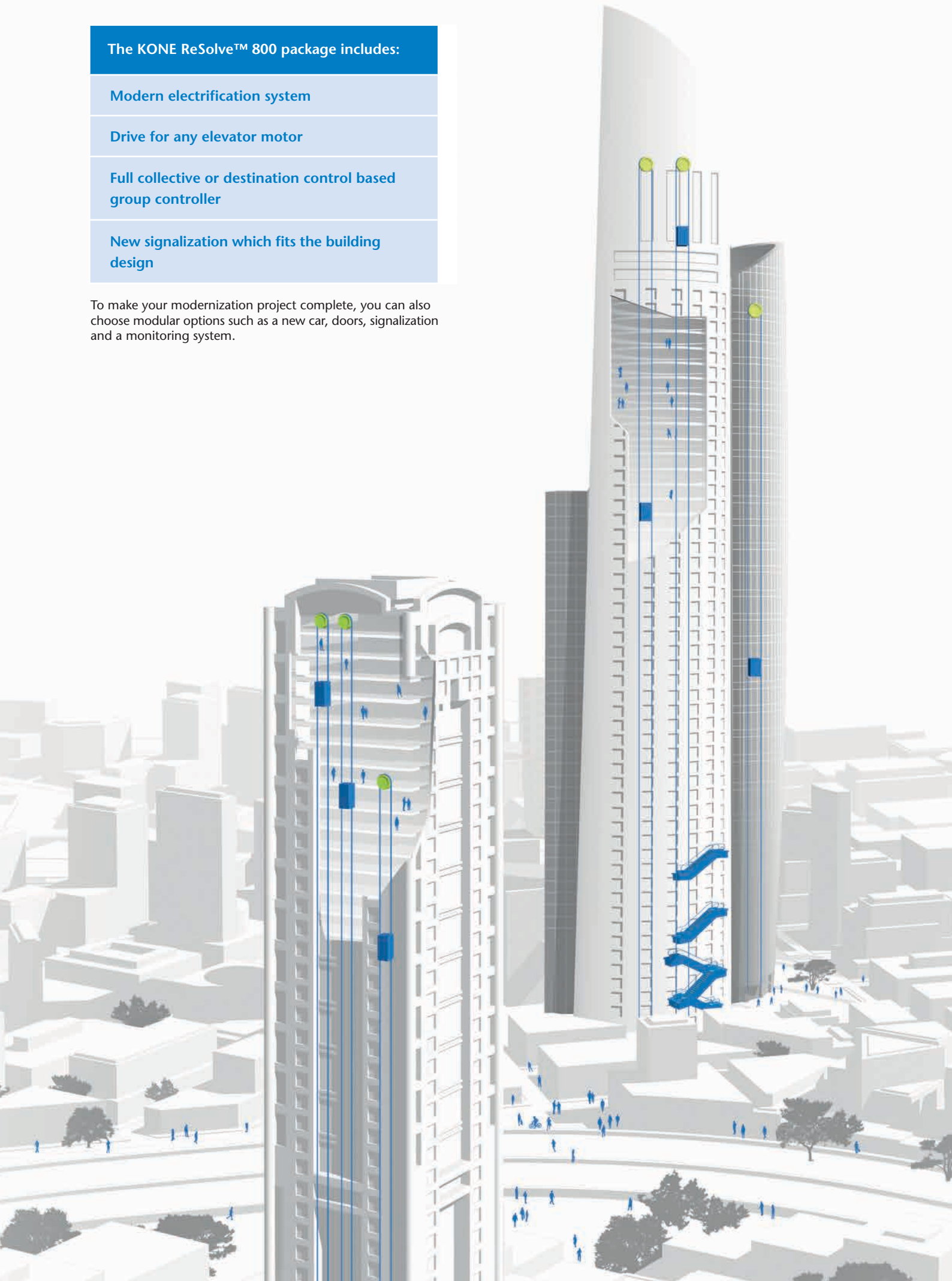
Modern electrification system

Drive for any elevator motor

Full collective or destination control based group controller

New signalization which fits the building design

To make your modernization project complete, you can also choose modular options such as a new car, doors, signalization and a monitoring system.



# Create value for your building with improved people flow

The best way to increase the performance, reliability, safety and energy-efficiency of an old elevator is to modernize its electrification system.

Malfunctions in old elevators often result from worn-out electrical components. Especially electromechanical components, such as relays and contactors, have a limited lifetime.

The KONE ReSolve™ 800 is a complete drive and electrification modernization solution for elevators in high rise buildings. Modernization with KONE ReSolve 800 improves reliability, safety and energy-efficiency. It is available with a choice of regenerative drives for both AC and DC motor applications. The KONE Unity Drive is for DC motor applications and the KONE Regenerative Drive is for asynchronous AC motor applications. For AC applications, KONE ReSolve 800 offers the possibility to replace the electrification now and the hoisting machine later with the KONE EcoDisc®.

The KONE ReSolve 800 is designed to interface easily with many types of pre-engineered elevator components, thus ensuring fast, trouble-free installation and reducing elevator downtime and disturbance to building visitors.



## Main features of KONE ReSolve 800

	KONE UNITY DRIVE (KDD)	KONE REGENERATIVE DRIVE (KDM)
Existing machine	Direct Current (DC)	AC gearless asynchronous motor
Elevator group	Up to 8 elevators	Up to 8 elevators
Regenerative functionality	Yes	Yes
Speed	Up to 7.0 m/s	Up to 6.0 m/s
Floors	Up to 63	Up to 63
Travel	Up to 250 m	Up to 250 m

The main applications for the KONE ReSolve 800 are office, hotel, medical and residential buildings. It is especially suited for modernizing high-rise elevators.

# Improve people flow

Optimized dispatching decisions and landing call allocations with KONE ReSolve™ 800 results in up to 50% less waiting time than with conventional relay systems.

## Destination control

In buildings such as office buildings with intense traffic flow periods, KONE Destination, available as an option, helps cope efficiently with changing conditions. Its real-time control system alters the optimization routines during the day depending on the traffic intensity.

By grouping people going to the same floor, KONE Destination reduces intermediate stops, decreases crowding in the elevator, and speeds up passengers' travel to their destination. KONE Destination increases people flow efficiency through the lobby and increases comfort and peace of mind for passengers. The KONE Destination with hybrid configuration provides the performance of a modern destination control system and the ease of use of a conventional collective system.



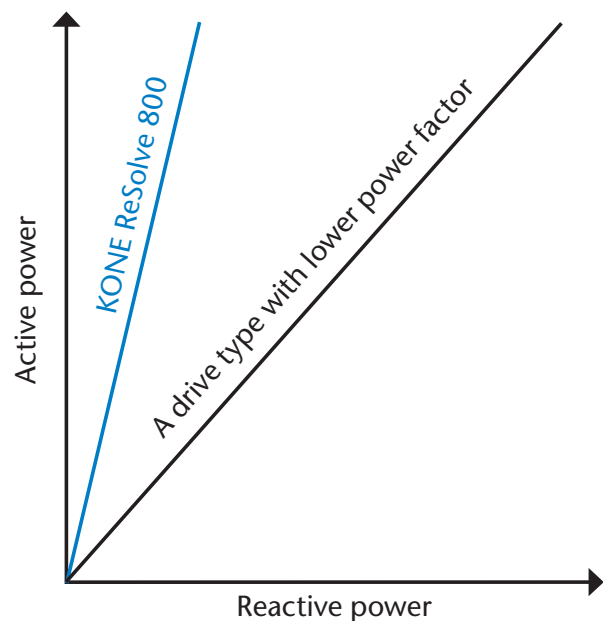
Upgrading to the KONE Destination control system increases handling capacity without increasing the number of elevators.

# Improve performance

The KONE ReSolve 800, using the latest drive technology, improves the power factor and reduces harmonic distortions and power line disturbances.

The high power factor ( $> 0.95$ ) minimizes the consumed power supply kVA compared to the lifting power. The active power is equal to the apparent power, minimizing power loss due to minimized reactive power. The high power factor also minimizes stress on the building's electrical supply system and can significantly reduce electricity consumption.

The low harmonics distortion (THDI  $< 8\%$ ) reduces the stress on building transformers and wiring and eliminates the need for additional equipment to isolate the source of the interference.



If the power factor is poor - if there is a lot of reactive power and less active power - there will be more heat loss and larger fuses will be required. With its high power factor, the KONE ReSolve 800 minimizes heat loss and increases the lifetime of the equipment.

# Improve safety

Modernizing the electrification system eliminates potential safety hazards.



One clearly visible result of modernization with the KONE ReSolve 800 is improved floor leveling, which increases safety and accessibility for passengers.

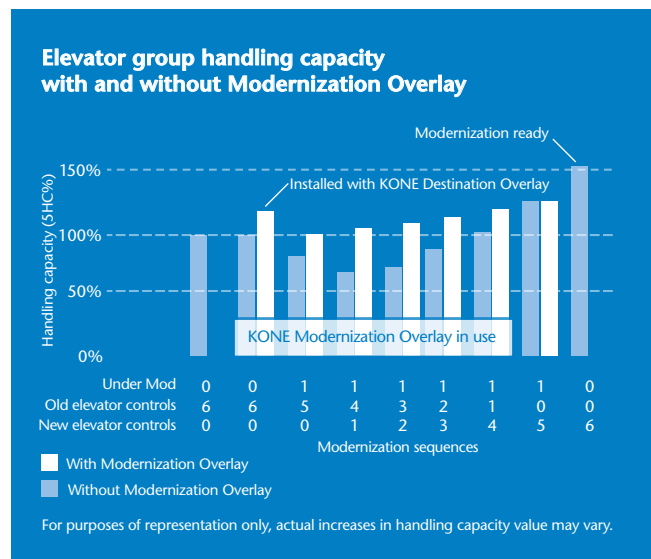
The KONE ReSolve 800 features a closed-loop control, which directly controls the current to the motor. It uses the actual speed and position of the elevator car in the hoistway in conjunction with car speed and location determined by a motor mounted digital encoder. A patented algorithm allows load compensation at both normal and leveling speeds. In many old elevators, the elevator may not stop level with the landing floor, which may cause accidents. With the KONE ReSolve 800 the leveling accuracy is improved. The KONE ReSolve 800 complies with EN81-1 A3 (Additional stopping device for uncontrolled movement protection).

KONE ReSolve 800 solutions replace the large numbers of relays in the existing installation with microprocessor control and simple yet safe main power circuits. The serial transmission technology results in significantly fewer wires in the elevator shaft, further improving the reliability of the equipment. KONE technicians can adjust the ride comfort to meet the level specified by the customer.

## KONE Modernization Overlay: For a smoother project from start to finish

During elevator modernization, you might expect people flow capacity to decrease when elevators are out of service or there are both old and new elevator groups operating in the same lobby area. With the KONE Modernization Overlay, you can eliminate capacity decrease during modernization and even increase people flow capacity while the first elevator is being modernized.

The KONE Modernization Overlay is a new group control system that is compatible with both old and new elevator systems. It ensures an integrated elevator group during the modernization project. Passengers use common landing stations for service requests to both old and new elevators.



# KONE regenerative drives for an energy-hungry world

Up to 30% of the total electricity used by an elevator can be recovered. The regenerative drive brings cost savings over the lifetime of the equipment.

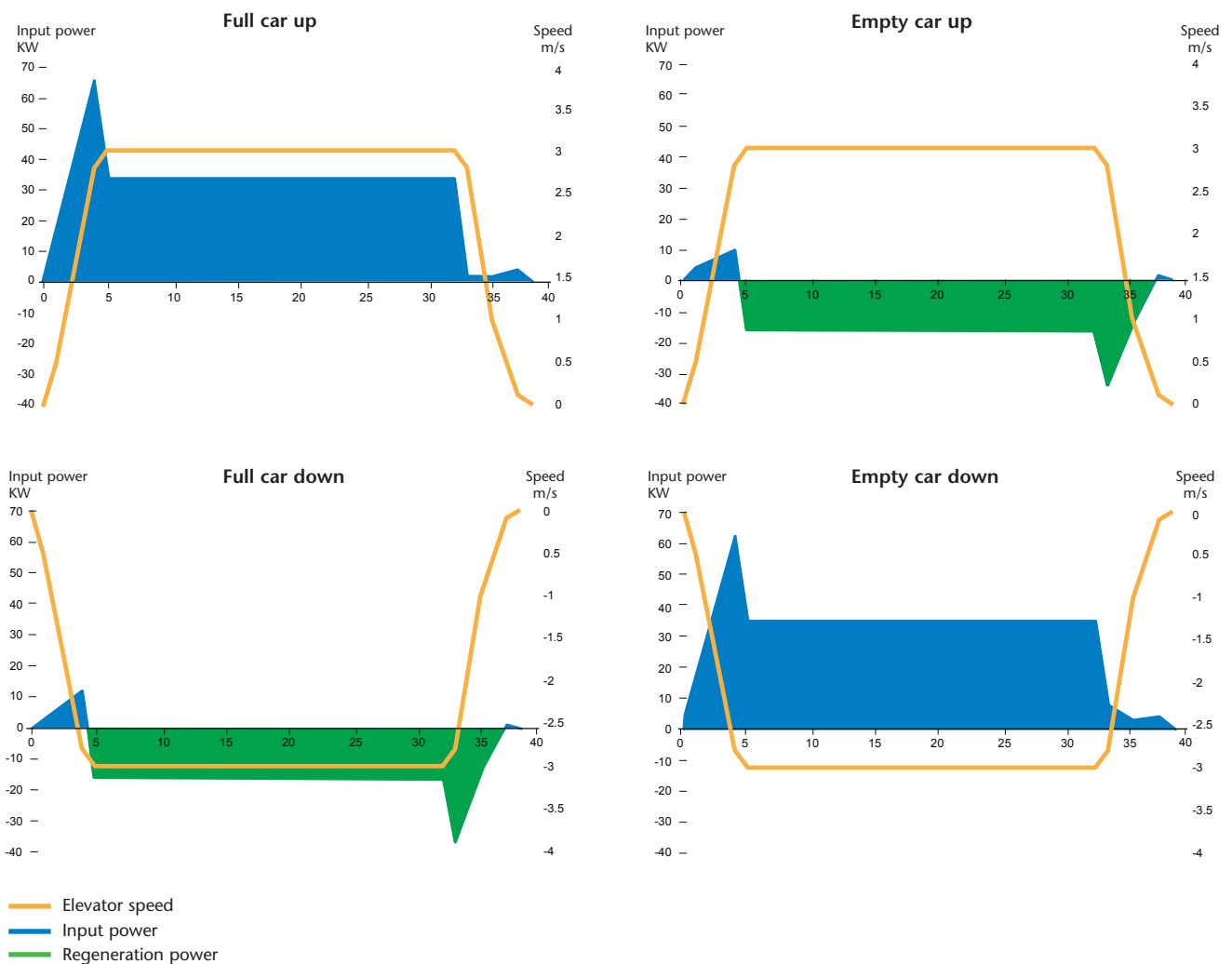
## Economical operation

KONE regenerative drives continuously supply energy back to the power network during the braking phase. With the existing motor acting as a generator, the car, counterweight and braking system generate energy that is converted into electrical current. The regenerated power is 'clean' with low harmonic distortions.

## Top quality ride comfort

The KONE drive system features adjustable acceleration and deceleration profiles. This allows the speed and acceleration curves to be 'programmed' to meet local expectations while optimizing the system's energy performance.

## Savings up to 30% with KONE regenerative solution

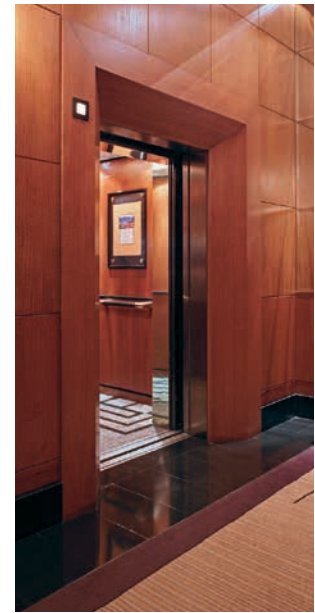


When a full car is going down or an empty car is going up, the system is regenerating energy into the building's power network. So, for most of the elevator's travel time, the system generates energy.

**70 Pirie Street, Adelaide, Australia**

*"KONE are currently upgrading the elevators at 70 Pirie with the first elevator now in service and the second ahead of schedule. The building owners and tenants are very happy with the new elevator and the way that the whole modernization is proceeding. The modernization includes their latest KONE ReSolve™ with Unity Drive controllers and KONE ReNova™ door equipment as well as design upgrades. I would have no hesitation in recommending the team at KONE to any prospective customers."*

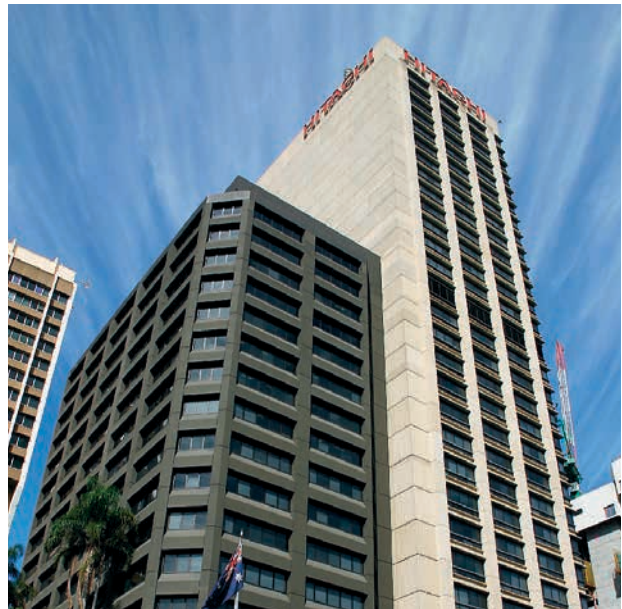
*Elio Colalancia, Managing Director  
System Design Engineering Pty Ltd.*



**Adjacent buildings at 239 George St. and 15 Adelaide St., Brisbane, Australia**

*"Upgrading these elevators with KONE ReSolve 800 has delivered two advantages. Their reliability has improved and they have provided significant energy savings due to the highly efficient drives. KONE has led the way with the first Quattro DC (Unity) drive operating in Australia."*

*Greg Smith, Lift Consultant  
Norman Disney & Young*



**Emily Morgan Hotel, San Antonio, Texas, USA**

*As part of the renovation of 3 elevators, a study of energy usage was conducted to determine consumption before and after the modernization. Data showed a 45.7% reduction in Watt-hours and a 78% reduction in Volt-Amp hours. While cutting electricity consumption, the KONE ReSolve 800 also improves passenger handling capacity.*

*"The energy savings this product delivers is a windfall for us. It wasn't on our radar. We were used to paying our electric bill and were interested in an upgrade to improve service and reliability. KONE showed us we could have more. I am comforted in knowing we will have elevator service for the foreseeable future that costs less and is more reliable. I am very happy with KONE's service."*

*William P. Brendel, General Manager  
Emily Morgan Hotel*





KONE provides innovative and eco-efficient solutions for elevators, escalators, automatic building doors and the systems that integrate them with today's intelligent buildings.

We support our customers every step of the way; from design, manufacturing and installation to maintenance and modernization. KONE is a global leader in helping our customers manage the smooth flow of people and goods throughout their buildings.

Our commitment to customers is present in all KONE solutions. This makes us a reliable partner throughout the life cycle of the building. We challenge the conventional wisdom of the industry. We are fast, flexible, and we have a well-deserved reputation as a technology leader, with such innovations as KONE MonoSpace<sup>®</sup>, KONE NanoSpace<sup>™</sup> and KONE UltraRope<sup>®</sup>.

KONE employs close to 50,000 dedicated experts to serve you globally and locally.

**KONE Corporation**  
**[www.kone.com](http://www.kone.com)**

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