

KL GATEWAY Building

Stand tall in the center Kuala Lumpur in Malaysia



KL Gateway is a large commercial and residential site located in the heart of Kuala Lumpur in Malaysia, with a retail shopping center, an F&B outlet, corporate suites, and residential space. It is spotlighted in Kuala Lumpur for its outstanding accessibility, located close to the Kerinchi Link federation expressway, and with a direct link to Universiti LRT station.

Hyundai Elevator won a \$178,000 contract in January 2014 to supply 4 elevators with a velocity of 2.5m/sec for Block A at KL Gateway, followed by contracts worth a total of \$11,199,000 to supply 27 elevators and 54 escalators as of May 2015.

Hyundai Elevator won a \$1,523,000 contract in September 2014 to supply 8 elevators with a velocity of 3.5m/sec and 2 escalators for Block D in the office tower, and won a \$1,150,000 contract to supply another 8 elevators with a velocity of 3.5m/sec in May 2015 for Block E.

The HELIAS System (Hyundai Elevator Intelligent Access System) has been applied at the main lobby and sky lobby of the office tower at KL Gateway. The touch screen of the HELIAS System won an iF Design Award in Shanghai in 2012, which is one of the world's three major design contests. Also, an ID card



is involved in the intelligent Speed Gate, which calls an elevator to the specific floor where a user works without needing to press a button.

Adding to this great news, Hyundai Elevator won a \$2,138,000 contract to supply 7 MRL (Machine Room Less) elevators with a velocity of 1m/sec, 47 escalators, and 5 moving walkways for Podium in May and July 2015. The escalators contracted for Podium feature semi outdoor, non-intermediate support, plus 9.9m and 10.8m in height between the floors which are optimized for a large building.

Furthermore, Hyundai Elevator also won a \$6,210,000 contract to install an auto parking systems that can accommodate 1,238 vehicles for Podium at KL Gateway. The auto parking systems for buildings

is mechanical parking equipment with a cart type, and is mainly applied in large buildings. This contract is an opportunity for Hyundai Elevator to expand its market from elevators to auto parking systems in Malaysia, a country that has severe parking difficulties.

The KL Gateway site is directly managed by Mr. Brian, the head of the corporate body in Malaysia, and Mr. Neo, the sales manager. Mr. Jacky, the manager at the Overseas sales dept. 1 at headquarters who is in charge of Malaysia, said “I am attached to the project for KL Gateway, as lavish technical support has been given to the whole process from the contract to shipment and installation.” He added that “we were required to submit most materials, including a quote, within one or two days. This meant we needed to communicate rapidly and effectively with staff at the corporate body in Malaysia, which contributed to our winning the contract.”

KL Gateway is a good example of how a strong network of close contacts and swift responses enhance the company's credibility and put it in a strong position to win large scale contracts. In addition to an increase in sales from winning contracts for large buildings such as KL Gateway, Hyundai Elevator expects these successes to have a strong promotional impact for the company.

Edited by HYUNDAI ELEVATOR PR Department

KL GATEWAY Order List

Date of Order	PROJECT	Order Details
January 2014	BLOCK A	4 elevators (2.5m/sec)
September 2014	BLOCK D	8 elevators (3.5m/sec) 2 escalators
December 2014	PODIUM	Auto Parking Systems 1,238 PALLETS
May 2015	BLOCK E	8 elevators (3.5m/sec)
May & June 2015	PODIUM	7 elevators (1m/sec) 47 escalators 5 moving walkways





Contract for Ist Marina in Turkey

Hyundai Elevator won a \$2,779,000 contract in April to supply elevators for the Ist Marina in Istanbul, Turkey, a residential-commercial complex of 62,000m² with hotels, offices and a shopping mall that Turkish construction companies DAP and ELTES built jointly in Kartal. Hyundai Elevator will supply 37 elevators (25 of which will have a velocity of 4m/sec), and 16 escalators until 2016 for the Ist Marina.

Following the \$13,100,000 contract for the Istanbul underground in 2014 and the \$8,107,000 contract for Metropol Istanbul this year, this is yet another great achievement for Hyundai Elevator in Turkey.

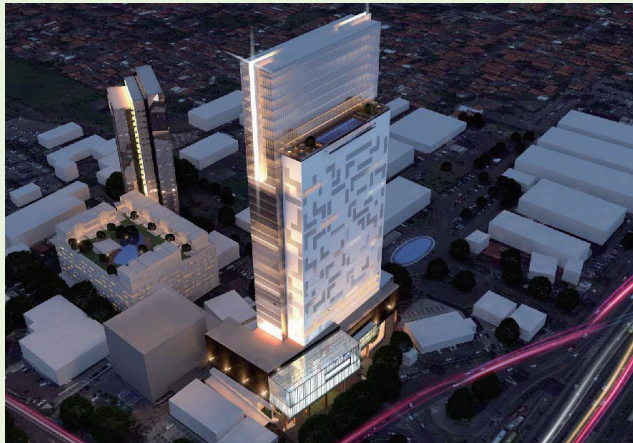
Contract for West Gallery in Indonesia

Hyundai Elevator was awarded a \$2,056,000 contract in May to supply elevators for the West Gallery in Jakarta, Indonesia.

Hyundai Elevator will supply 23 elevators (4 of which will have a velocity of 4m/sec), and 12 escalators until 2016.

West Gallery is a 38-story residential-commercial apartment complex with offices, hotels, a residential area and parking spaces.

It means a great deal to win a contract for West Gallery, a landmark in Indonesia, in a country that has a competitive market due to recent price competition. It is expected that this achievement will help Hyundai Elevator to secure a firm position in Indonesia's elevator market.



Contract for Technical and Vocational Training Corporation (TVTC) in Saudi Arabia

Hyundai Elevator has also achieved recent success in Saudi Arabia by gaining a \$2,200,000 contract to supply elevators for the Technical and Vocational Training Corporation. Hyundai Elevator will supply 125 elevators with a velocity of 1m/sec to 12 sites in three major cities in Saudi Arabia until 2016: Riyadh, Jeddah, and Mecca (four each).

TVTC is a government organization in Saudi Arabia in charge of vocational education and training. TVTC operates national policies in human resource development, consisting of a technology college, education and vocational training centers.

This is the second contract Hyundai Elevator has won for a large governmental project in Saudi Arabia, following the contract for the Courts Project to supply 176 elevators for 22 district courts in December 2014.



Contract for Complex Transfer Center at Dongdaegu Station in South Korea

Hyundai Elevator secured an \$8,600,000 contract to supply elevators for the Complex Transfer Center at Dongdaegu station that is constructed by Shinsegae E&C in South Korea. Hyundai Elevator will supply 36 elevators, 96 escalators, and 8 moving walkways until June 2016.

The Dongdaegu station Complex Transfer Center will be consist of 9-story above ground and 7-story underground, with a total area of 296,841m². There will be a massive department store with a combination of fashion, entertainment, a family themed park and retail cultural facilities.

Following successful contract bids for spotlighted large buildings including BIFC(Busan International Finance Center) and the Yongsan LG U+ company building, this contract strengthens Hyundai Elevator's status as the best elevator company in South Korea.



Technical Training for Engineers in South America

Engineers from South America visited Korea for technical training to enhance their understanding of products, ability to respond with agility in the field, and nurture sales skills.

Six installation engineers including four Cubans, one Panamanian, and one Venezuelan attended the training at headquarters in Icheon and installation sites located in Seoul between 8th-12th June. The training included visits to the factory line at headquarters in Icheon and to the Hyundai Asan Tower, as well as seminars to understand Hyundai Elevator products (traction machines and inverters etc.), a case study on trouble shooting for products, group control system, car LCD display and CRT education. Also, they visited installation sites to improve their understanding of the training.

In the meantime, engineers in Shanghai are planning to visit Colombia and Chile this coming October for a training tour in South America.



Launching MRL, YZER 1 made in Shanghai

Hyundai Elevator begins sales for the 'YZER 1', the new MRL (Machine Room Less), produced in Shanghai, China. YZER 1 is launched from a newly expanded production line in the Shanghai factory in order to meet various demands in the global market, and production starts from mid- August 2015 onwards.

The new YZER 1 improves space effectiveness with a minimally sized hoistway and shorter pit, and applies machine on rail and oil free traction for easier installation and maintenance. It also features a variety of options such as a smart indicator, security system and multi-beam door safety device. Hyundai Elevator aims to increase its global market share by securing price competitiveness of the YZER 1.



Business Improvement Workshop for Shanghai Corporation

Hyundai Elevator's Global Business Unit and the Shanghai Corporation conducted a workshop for business improvement.

The workshop was held at the Seoul office on 15th May to discuss business issues relating to sales, technologies, installation, production, service, quality and so on, and to seek improvements. Furthermore, they reviewed action plans to carry out those improvements.

Hyundai Elevator's Global Business Unit and the Shanghai Corporation have regular follow-up meetings on Fridays on the 4th week of every month based on the action plans from this workshop, in order to improve business at the Shanghai Corporation.



Contract to Establish a Joint Venture for Logistics Automation Equipment in China

Hyundai Elevator won a contract on August 3rd to establish a joint venture in China for logistics automation equipment with Yantai Ande Aquatic Products (Group) Co., Ltd.

Yantai Ande Aquatic Products (Group) Co., Ltd, a food processing, logistics and overseas trading company, has been selected to manage a Chinese government construction project for a cold-chain logistics facility.

Prior to the contract, a senior leader at Yantai Ande Aquatic Products (Group) Co., Ltd visited Hyundai Elevator and the main logistics performance sites in South Korea last May, and signed a memorandum of understanding (MOU) in June to establish a joint venture.

Mr. Martin S H Han, the CEO and President of Hyundai Elevator Co., Ltd, Mr. Cong Zi Gang, the CEO and President of Yantai Ande Aquatic Products (Group) Co., Ltd, and Mr. Yongxia Zhang, the Mayor of Yantai attended the signing ceremony in China.

This contract for a joint venture is a great opportunity for Hyundai Elevator to enter the logistics automation equipment market in China.



Launching the Fork Type of Auto Parking Systems

Hyundai Elevator has launched a new fork type of auto parking systems. It presents improved quality on vibration, noise and speed compared to other companies' fork types.

The newly-launched fork type has the same mechanism as those in the current elevators, but features faster storage and release than the previous way of using pallets; instead of using pallets, it can store cars by crossing a lift that transports the cars and a tray where the cars are stored in.

The lift rail of the fork type enables a quiet service by using the T-rail which is being used for the elevators. In addition, the full vector inverter control can respond quickly by gauging the actual speed and send feedback, enabling more exquisite and accurate storage and release compared to other companies' products.

Hyundai Elevator's policy is to gain competitive advantage in the parking facility system market with the launch of new fork type, by providing high-class service such as HRTS (Hyundai Real Time Service) that is a remote maintenance service, as well as providing better quality compared to competitors.



HYUNDAI ELEVATOR

Free consulting service by foremost experts on ultra-high-speed and high-rise elevators

Major Project Dept. General Manager
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- Traffic analysis of elevator equipments and solution proposal
- Phased design support service (Schematic Design → Design Development → Construction Document)
- Introduction of new elevator technologies (Life Boat Lift, Stack Effect, Building Sway, Noise-Vibration Countermeasures)
- Analysis of building law and code / Review service
- Improvement service of elevator technology and safety through technical seminars
- Technical consulting support on application-specific elevator technology

Video Call System

Seung-Woo Lee

Researcher at R&D Center,
Converging Technology Department



People spend on average between 7 and 20 minutes in elevators per day, a not insignificant amount of time! According to statistics, accidentally locking oneself inside an elevator with closed doors is the biggest problem for elevator users. There is an increasing ratio of additional accidents arising from user mistakes when they feel anxious and confused having been locked inside. Hence, countermeasures are needed to effectively handle the situation of users locking themselves inside elevators.

When users are locked in, there is an emergency calling device inside the elevator which allows a passenger to press a button to deliver voice messages to an advisor.

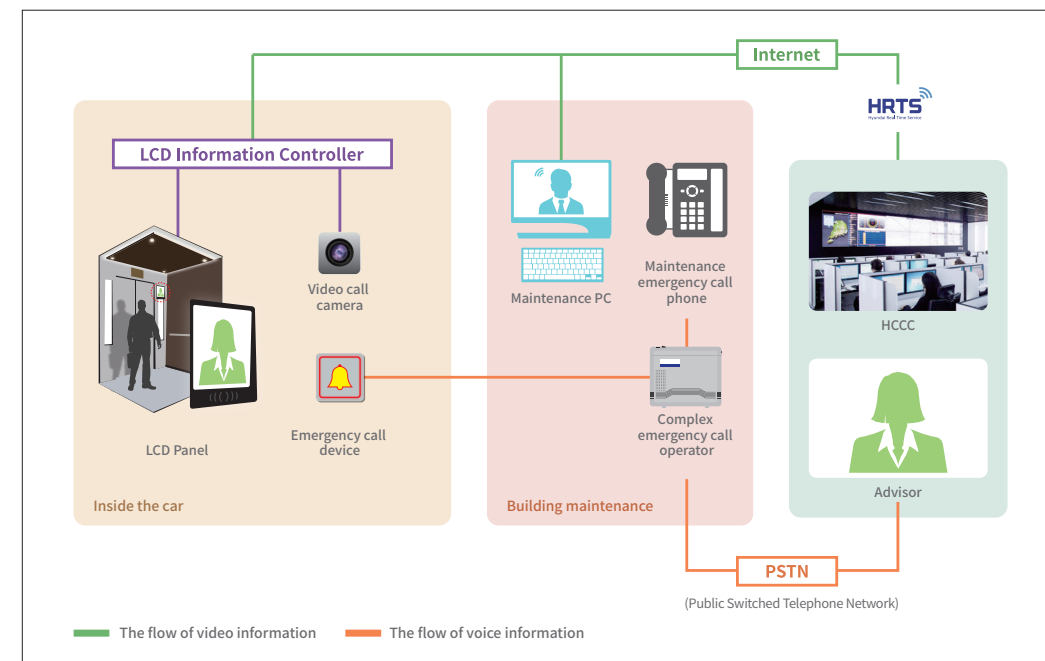
However, there are limitations in delivering messages clearly only with the voice, and the advisor can experience difficulties understanding what the passenger is trying to say. Moreover, a remote voice is less able to ease the passenger's fear, and as the advisor cannot see what is happening in the car and is not able to check whether the passenger has been locked in because of a mistake or due to an actual emergency.

The 'Video call system' is an effective alternative system to cope with such situations. This system enables the advisor and the passenger to see each other on a screen when the passenger presses the emergency call button. Advisors can understand the situation inside the elevator more accurately from the conversation as well as by viewing the passenger through the monitor. The sight of a human advisor is also likely to reassure the passenger better.

Even in the case of a blackout where elevators are not operating, the emergency call might need to last more than an hour. If electricity is cut off, the video call system blocks video information delivery for an effective use of energy to sustain emergency calls. As you can see from Picture 1, the conveyance paths for voice information and video information are different. Different conveyance paths are efficient for enabling the easy installation of the video call system in elevators with only a voice emergency call device.

On the video call system, the voice information is delivered in the same way as the existing emergency call device. When the elevator user presses

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the emergency button, the emergency call operator receives the signal, and sends the signal to the emergency call phone in the maintenance team so that the maintenance team can answer the call. If there is no response from the maintenance team after a certain amount of time, the call will be put through to HCCC (Hyundai Customer Care Center), the united call centers of Hyundai Elevator that are open for 24 hours a day, 365 days a year for maintenance, and HCCC will answer the call.

The video information will be delivered to the video call system server through the internet, and then delivered to the advisor from the server. The system server will recognize information about the elevator and the phone number of the site from the emergency call device and CTI (Computer Telephony Integration), and enable the video call by connecting the voice information and video information.

There is increasing social attention on accident prevention and the importance of safety. The video call system will be an effective solution not only for helping people who are locked inside elevators, but also for a variety of accidents that happen in everyday life.



World Elevator and Escalator Market 2015-2020

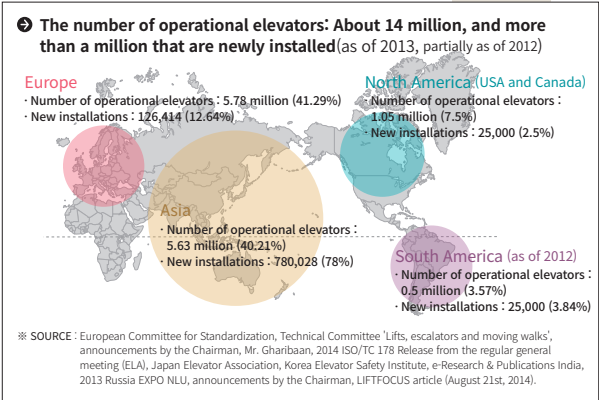
Ultra High-speed and Smart Markets Draw Attention with Average Annual Growth of 10%

Dae-Seong Park (The Editor of LIFTFOCUS.com)

There are currently about 14 million elevators (including escalators) operating around the world, and one million are newly installed each year. There are roughly 5.78 million elevators in Europe, making up 41.29% of the world's elevators. Asia accounts for 40.21% with 5.63 million elevators, followed by North America's (USA and Canada) 1.05 million (7.5%), and South America's 0.5 million (3.57%, as of 2012). The country that has the largest number of elevators in the world is China with about 3 million, followed by Spain (about 1.02 million), the USA (0.97 million), Italy (0.95 million), Japan (0.8 million), Germany (0.72 million), France (0.56 million), Russia (0.54 million), South Korea (0.5 million), and Greece (0.42 million elevators).

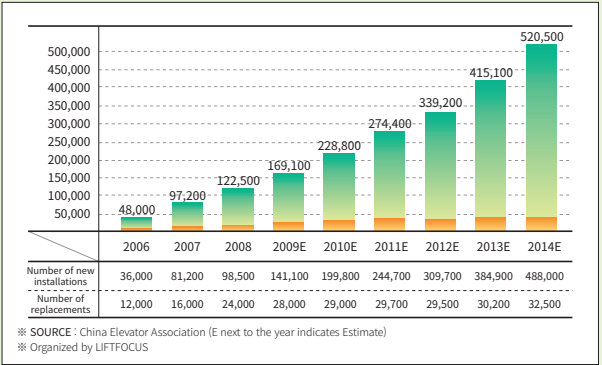
The Asia-Pacific region including China is remarkable in the installation market. World-leading research companies have forecast that the size of the Asia-Pacific region elevator market will be \$110 billion in 2017 due to the explosive increase of demand in China. According to analysis and reports, the market for elevators and escalators in the Asia-Pacific region will maintain an average annual growth of 10.01% during the five years until 2019, and energy efficiency and smart elevators will become major trends.

Let's look in more detail at the market movements of the Asia-Pacific region which will be the center of the world market. Firstly China, whose thirst for new elevator installation constitutes half of the world's demand, was originally forecast in 2012 to have 12% growth but growth turned out to be a remarkable 25%. China Elevator Association (CEA) estimated that 488,000 new elevators were installed and 32,500 elevators were replaced, so in total 520,500 elevators were installed in 2014. Consistent growth is expected in China, as a recent forecast predicts that 700,000 new elevators will be installed this year. India, the country with the second largest population in the world after China, is also expected to undergo explosive growth in its architecture and elevator industries based on rapid economic growth and rising incomes. The income level in India as of 2012 was \$5,600 based on Purchasing Power

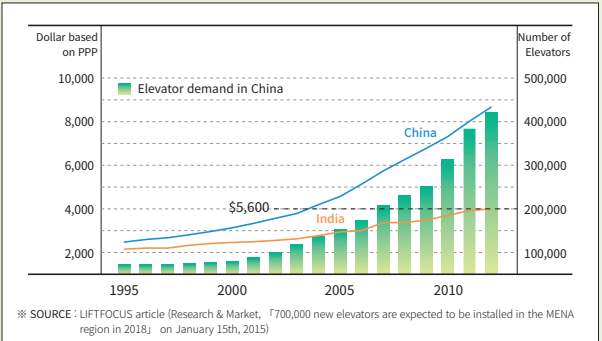


[Diagram 01] Operational elevators and new installations globally (as of 2013)

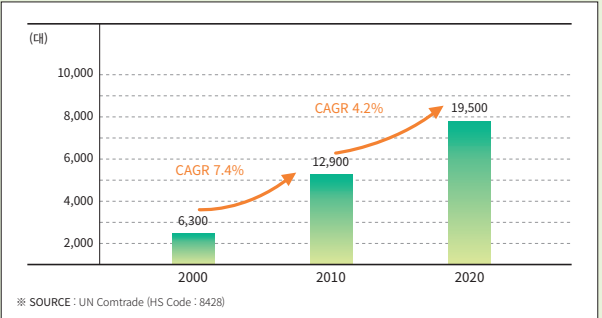
Parity (PPP), a similar level to that of China in 2003. This means that India has the potential to be a massive market if it experiences fast economic growth and industrial development like China has. It is anticipated that demand in India will reach more than 100,000 elevators based on a Compound Annual Growth Rate (CAGR); the demand for passenger and freight elevators rose by 18.7% during 2000-2010, followed by 50,000 elevators in 2010, and growth rates are predicted to be between 8-15% every year in the decade leading up to 2020. Next, there are continuous increases in housing construction demand, the middle class, high-rise buildings in urban areas, high fixed investment rates, and high-income brackets based on oil money in the Middle East. Hence, we can expect consistent expansion of elevator demand in major point cities such as Dubai, Abu Dhabi, and Jeddah in Saudi Arabia where the Kingdom Tower with a height of 1 km will be built. North Africa has experienced frequent rebellions and conflicts, lower average income levels, and a wide income gap between urban and rural areas which is likely to limit the growth of demand for elevators in this region. Hence we can cautiously anticipate that the rate of increase is differentiated based on regions, products, and markets. Along with the Middle East and India, much attention in the



[Diagram 02] Elevator installations in China (2006 ~ 2014)



[Diagram 03] GDP per person in India and China & elevator demand in China



[Diagram 04] Forecast elevator demand in Brazil

current elevator market has been paid to Brazil with its new development potential. Its stable economic development, relatively higher GDP (just over \$2 trillion), purchasing power (GDP per person: \$11,700 based on PPP, 107th in the world), and the world's 6th largest population (201.01 million) are suitable for the growth of an elevator market compared to other rising countries. Furthermore, government infrastructure and housing investment are likely to increase considering the lack of housing facilities due to high population density, an aging population, rising income levels and the growth of the middle class. These factors indicate that the Brazilian market has entered a stage of stable growth, and is expected to undergo a radical expansion in demand -even in the short term- based on government policy on housing supply (Minha Casa, Minha Vida¹⁾ etc). The demand for passenger and freight

elevators based on CAGR increased by 7.4% during 2000-2010, followed by 12,000 elevators in 2010, and annual growth rates are predicted to be 4.2% until 2020, leading to an anticipated demand for more than 19,500 elevators.

The USA is a traditionally strong market for elevators, but has been slow in the market for new elevator installation. It has, however, increased its market share for maintenance including remodelling. More than half of new elevator installation in the USA is accounted for by MRL (Machine Room Less) elevators for energy efficiency.

The tendency to focus more on maintenance than new installation is also seen in Europe, a continent that has strengthened safety regulations, because, like in the USA, half of buildings there are more than 20 years old.

Traditional markets such as North America and Europe are now focused on maintenance, component replacement and remodelling for existing elevators. The component industry in South Korea is called on to expand exports to those regions by developing technology and research, securing production bases, reinforcing global marketing, and accelerating trade.

We also need to consider relevant tasks and trends when reviewing regional elevator markets. The task is how to change the cognition of users who are negative towards high investment costs at the early stage of elevators; the trends are to respond to the ultra high-speed market, and to realize energy efficiency and smart elevators.

The Council on Tall Buildings and Urban Habitat (CTBUH) released a recent report forecasting that Asia stands out in the future market for ultra high-rise buildings. 86 of the world's top 100 ultra high-rise buildings, for which there were plans to build as of June 26th, 2014 are located in Asia, including Sky City, an 838 m tall building with 202-story in China. Asia shows great growth acceleration, followed by 11 ultra high-rise buildings in America (USA, Canada and Panama), 2 in Europe (France), and 1 in Africa (Ethiopia).

Recently, suppliers have developed elevator products with the best energy efficiency among equals to defeat their competition, which indicates that smart elevators such as DSS (Destination Selecting System) will be one of the main future trends. Research companies forecast that the smart elevator market will reach about \$23.16 billion until 2020, following renewed annual growth of 13.8% in 2014.

1) 'Minha Casa, Minha Vida' is a housing supply program in Brazil, meaning 'My home, my life'. The value of elevator imports was \$290 million in 2009 when the program started, and it increased by 2.6 times to \$750 million in 2012.

References

1. Research & Markets, 'Elevator and Escalator Market in the APAC Region 2015-2019'
2. RNR Market Research, 'World Elevators to 2017'
3. LIFTFOCUS, Inside DB and Policy Research Projects 'Investigation and Analysis on Domestic and Overseas Elevator Industries'



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Central and South America are particularly attractive among the world's rising markets. Possessing 28% of the world's bio fuels, there are also plenty of major mineral resources such as iron, copper, zinc, and aluminum in Central and South America, which have the world's largest amounts of oil deposits. There has been a particular increase in factories for cars, electronics, machinery, and fuel in Brazil. The size of the elevator market in South America including Brazil is estimated to be 3 billion dollars for product installation and maintenance. Brazil is expected to be a growing market for elevators due to the need for new infrastructure for hosting the World Cup in 2014 and the 2016 Olympics. Hyundai Elevator established Brazil Hyundai Elevator Co., Ltd in January 2013 as a base camp to target the fast growing South American market and keep pace with global

changes. In April 2014, Hyundai Elevator built an elevator factory with a capacity of 3,000 elevators per year in São Leopoldo in the state of Rio Grande do Sul. The factory in Brazil has a land area of 80,799 m² and gross area of 10,333 m², consisting of factories, offices, cafeterias and utilities with about 200 personnel including resident and local workers. Hyundai Elevator plans to expand human resources to meet market demand based on high expectations of growth in Brazil and South America. Prior to building the factory, Hyundai Elevator was spotlighted for a contract for the Olympic Village in Brazil to supply 159 elevators. Hyundai Elevator was also contracted by the Hotel Sheraton Paiva to supply 11 MRL elevators, and by Novo Mundo Empresarial to supply 28 high end MRL elevators. Other contract wins have included supplying 19

Company Profile

Date of Foundation
: January 7th, 2013
Number of Employees
: 179 (as of June 2015)



elevators with a velocity of 3m/sec to São Paulo LED BARRA FUNDA, and supplying 8 elevators, escalators and moving walkways for the underground metro connection at Recife airport. Brazil Hyundai Elevator Co., Ltd provides products and services for elevator manufacture, sales, installation, and maintenance. Also, they operate eight business offices in cities like São Paulo and Rio de Janeiro, and two business agencies currently in São Paulo (Helbra) and Recife (Wollk). Brazil Hyundai Elevator Co., Ltd aims to secure supplies by winning strategic contracts and improving price competitiveness by reducing costs, as well as strengthening installation and maintenance in order to make provision for increased supply. To realize these aims, Hyundai Elevator has undertaken tasks and strategies including launching and selling new products, localizing imported components, and increasing productivity. Hyundai Elevator will support Brazil Hyundai Elevator Co., Ltd to be a leader in the South American market.

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01, 02 Brazil Hyundai Elevator Co., Ltd
03 Performance of Brazil Hyundai Elevator Co., Ltd_ Olympic Village in Brazil **04** Performance of Brazil Hyundai Elevator Co., Ltd_ hotel sheraton
05 Encouraging local staff **06** Employees of Brazil Hyundai Elevator Co., Ltd



Hyundai Elevator Smart System Collection

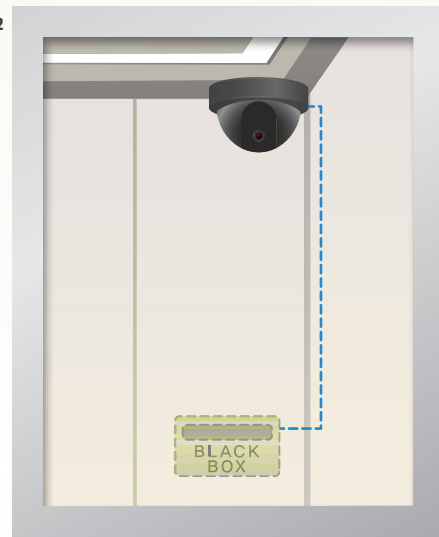
01

Video Call System

This is a system with increased safety; when users are locked in the elevator, they can make a voice call and/or video call to the maintenance team or HCCC (Hyundai Customer Care Center), the united call centers of Hyundai Elevator. The team member can check inside the elevator more quickly and take appropriate measures, as well as preventing additional accidents arising by relieving the anxiety -via the monitor- of passengers that have been locked inside the elevator, thus preventing user mistakes.



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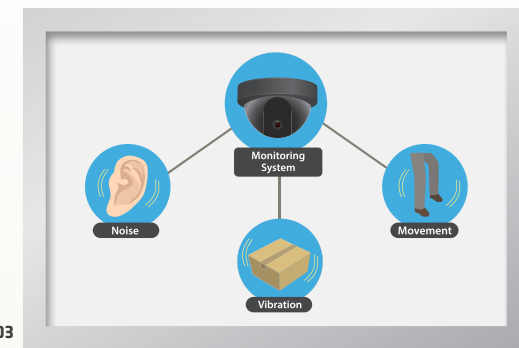


02

Black Box Type of CCTV

This is a device to increase the safety of passengers by monitoring inside the car, which is easy to install and costs less than existing means of DVR. It is available for small or single housing units where there is no security guard. High-definition cameras with a million pixels can record great quality video.

01



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Security Run System

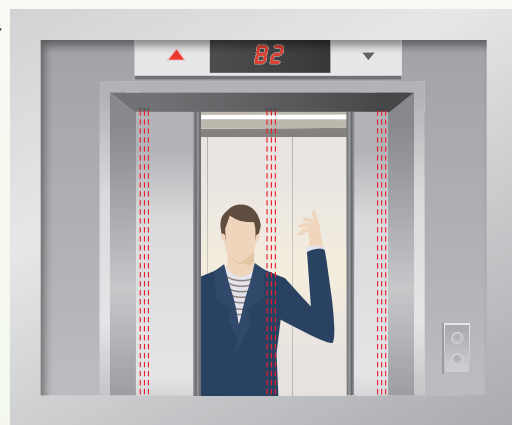
An alarm is sent to the security team when vibrations, videos and/or sounds inside the elevator indicate suspicious behaviour. The team reacts to this alarm to prevent any crimes. 24 hour monitoring increases passenger safety even during the night and at sensitive times.

04

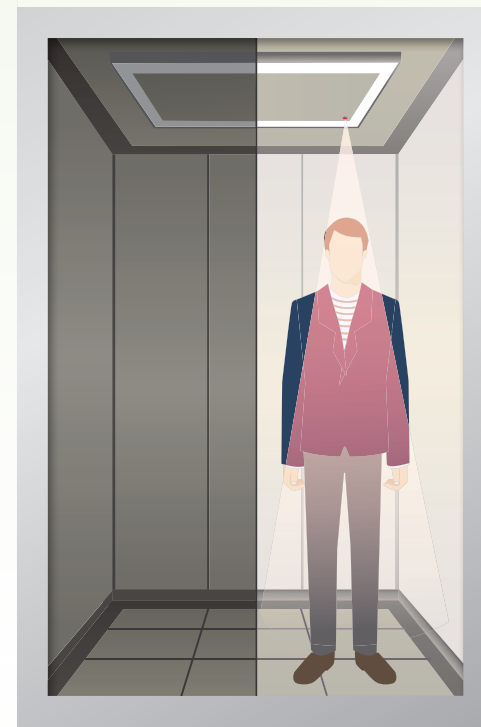
Device to Prevent Catching Fingers in the Door

This is a device to protect fingers from being caught between doors by reflecting objects with infrared rays. It can prevent such incidents happening in blind spots unlike existing safety measures such as the Multi-Beam or Safety Shoe.

04



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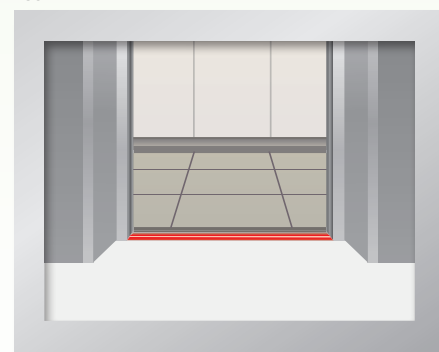


05

Power-saving LED Light Control System

The power-saving LED light control system controls lights on elevators that service passengers and keeps the most suitable level of illumination for passengers based on outside lighting levels. This is to save energy, and provide a comfortable level of light for passengers' eyes.

06



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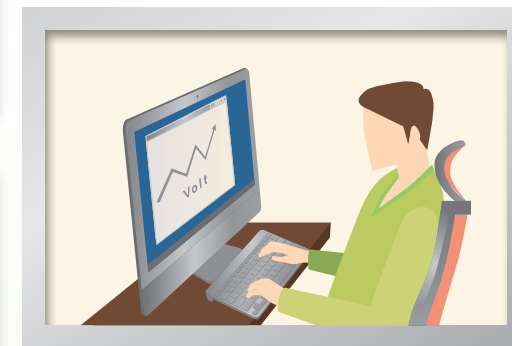
Safety Light for Elevator Doors

When the elevator doors open at the destination floor, an LED light from a Car Sill is turned on to prevent any potential accidents. By refreshing passengers' attention, it is expected to prevent the danger of a child falling down or becoming caught between the doors.

07

Regenerated Energy Monitoring System

This is a management system through which the CRT in the emergency room monitors each elevator's or all elevators' regenerated energy to enhance energy saving, and increase the efficiency of energy management.



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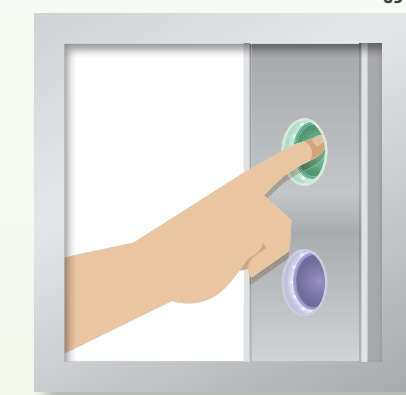
Touchless Foot Button System

When the passenger's hands are unavailable to touch the button, the elevator recognizes the movement of the user's feet and calls the car. This is the first touchless button registration system for elevators in the world. Since the button is not touched, the button can be used semi-permanently without being damaged or contaminated.



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Touchless button

Touchless buttons are able to recognize information via infrared light, without being touched. This is particularly desirable for elevators in multiuse facilities or hospitals where there is a higher risk of transferring viruses from touching hard surfaces.