

**CLEARWIN** KR

Handrail UV Sterilizer

This is not for **CHOICE**,  
This is **ESSENTIAL**

**UV-C lamp**, which is installed inside the  
Clearwin device, **sterilizes 98%** of the  
harmful viruses, bacteria and germs





Using escalators or moving walks cause variety of health related issues such as ***"pathogenic diseases, minor to deadly viruses and other hygienic problems"***.

Grabbing onto an escalator handrail can prevent major accidents while on an escalator.

**BUT** when holding the handrail of escalators which were held by hundreds of people, we are exposed to harmful substances and can even cause infections to the users.

***"Clearwin can prevent infections from a simple daily activities."***



**Our product aims** to contribute into improving hygienic environment by sterilizing bacteria, viruses and germs.

**By simply attaching the device** to an escalator or moving walks handrail, the device generates power from the circular motion of the handrails and sterilizes the handrails.

#### **SURVEY RESULT**

Whether a person holds the handrail when on an escalator: **HOLD(54%), DO NOT HOLD(43%), OTHERS(3%)**

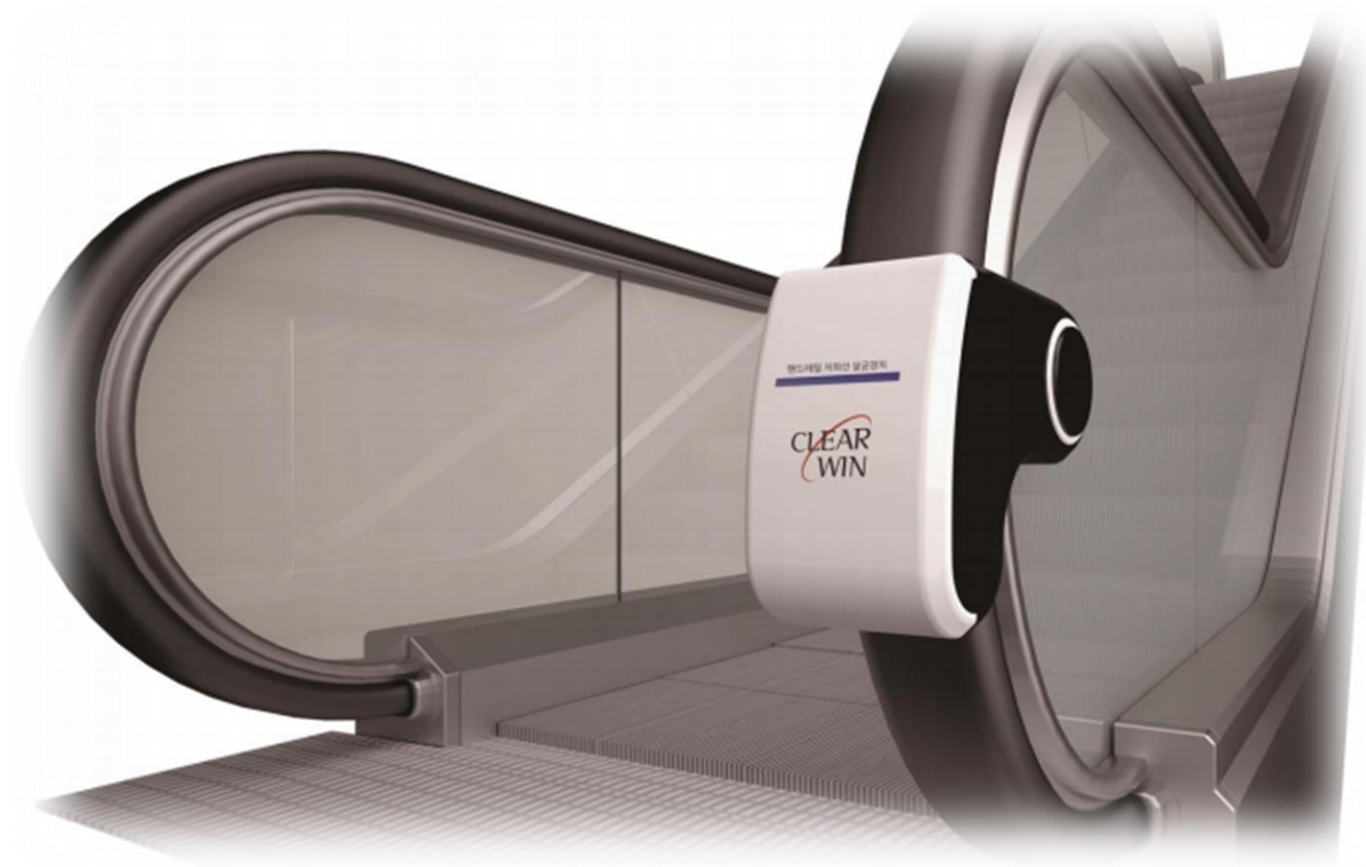
Main reasons why people don't hold handrails: **NOT SANITIZED(42%), UNCOMFORTABLE(53%), OTHERS(5%)**

Accident rates when NOT HOLDING HANDRAILS on an escalator: **78%**



UV Handrail Sterilization Equipment

*CLEAR WIN*




***Black & White Colored  
Simple Design  
Cover***

Simple cover design and device  
composed of lamp,  
housing, and power supply.

## ***PREVENT UNSANITARY and FATAL VIRUS, HIGH SAFETY with EASY INSTALLATION and GLOBAL AWARENESS***

TYPE	COST	CHARACTERISTIC
<b>CLEARWIN</b>	<b>Less than a cup of coffee per day</b>	<ul style="list-style-type: none"> <li>• <b>Safe, Easy Installation</b></li> <li>• <b>Economical cost - Affordable</b></li> </ul>
Electricity Connected Type	Between \$5,000 and U\$16,000/unit	<ul style="list-style-type: none"> <li>• Tough Regulation for the electrical equipment</li> <li>• Electric hazards</li> <li>• Mainly commercial purpose</li> <li>• Not economical – Expensive</li> </ul>
Wiping with Disinfectant	U\$100/unit 1 month	<ul style="list-style-type: none"> <li>• Temporary disinfecting effects</li> <li>• Customer unawareness</li> <li>• Unhygienic method</li> </ul>

TYPE	Sterilization of mycetoma	Physical property change	Permeability	Sterilization time	Usage
<b>UV Sterilization</b>	<b>Effective against all</b>	<b>Little change</b>	<b>No permeability</b>	<b>Short</b>	<b>Easy</b>
HEAT sterilization	Effective against all	Occasional	Effective even inside the object	Considerably	Occasionally
OZON Sterilization	Effective against all mycetomas	Occasional	Effective even inside the object	Long	Difficult
Chemical Sterilization	Effective against all specific	Occasional	Effective even inside the object	Considerably	Easy



UV Sterilization Escalator Handrail

CLEAR  
WIN

## 01 Easy Installation

- Able to install onto any types of escalators
- Installable during operational condition
- Easy and quick installation (10min) with ZIG installation tool
- Light weight with smart design

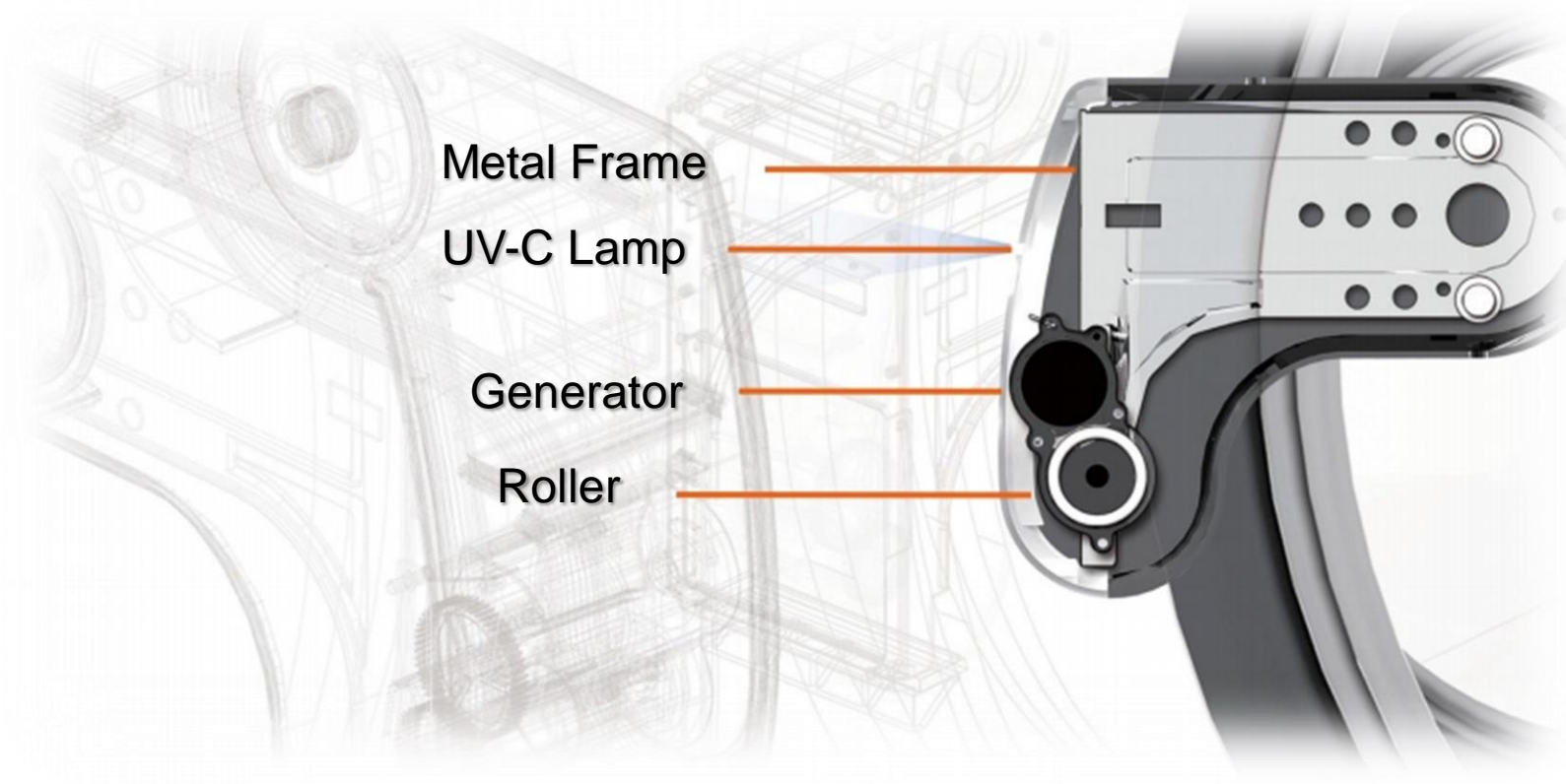
## 02

- Actuated by escalator driving force
- Does not require external electrical power (self generation)
- Custom logo design printing available for advertising effect

## 03

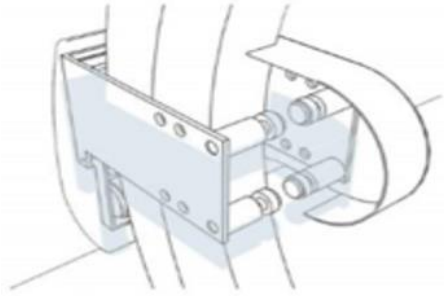
- LED UV Lamp developed by LG Innotek-98% sterilization UV-C wavelength, most suitable for handrail disinfection

## MAIN COMPOSITION

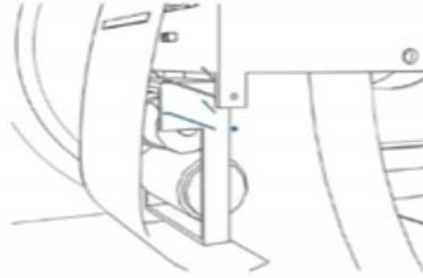


- Metal Frame: Easy installation with light weight
- UV-C LED Lamp: Virus sterilization
- Generator: Convert rotational power into UV-C light

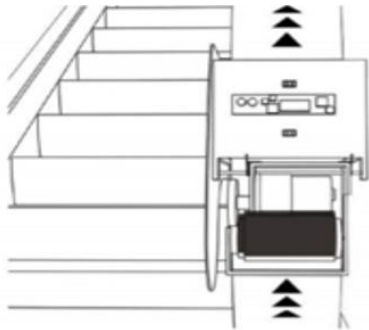
## PRINCIPAL OF OPERATION STERILIZER



**A.** The main body is fixed to the balustrade of the moving walks



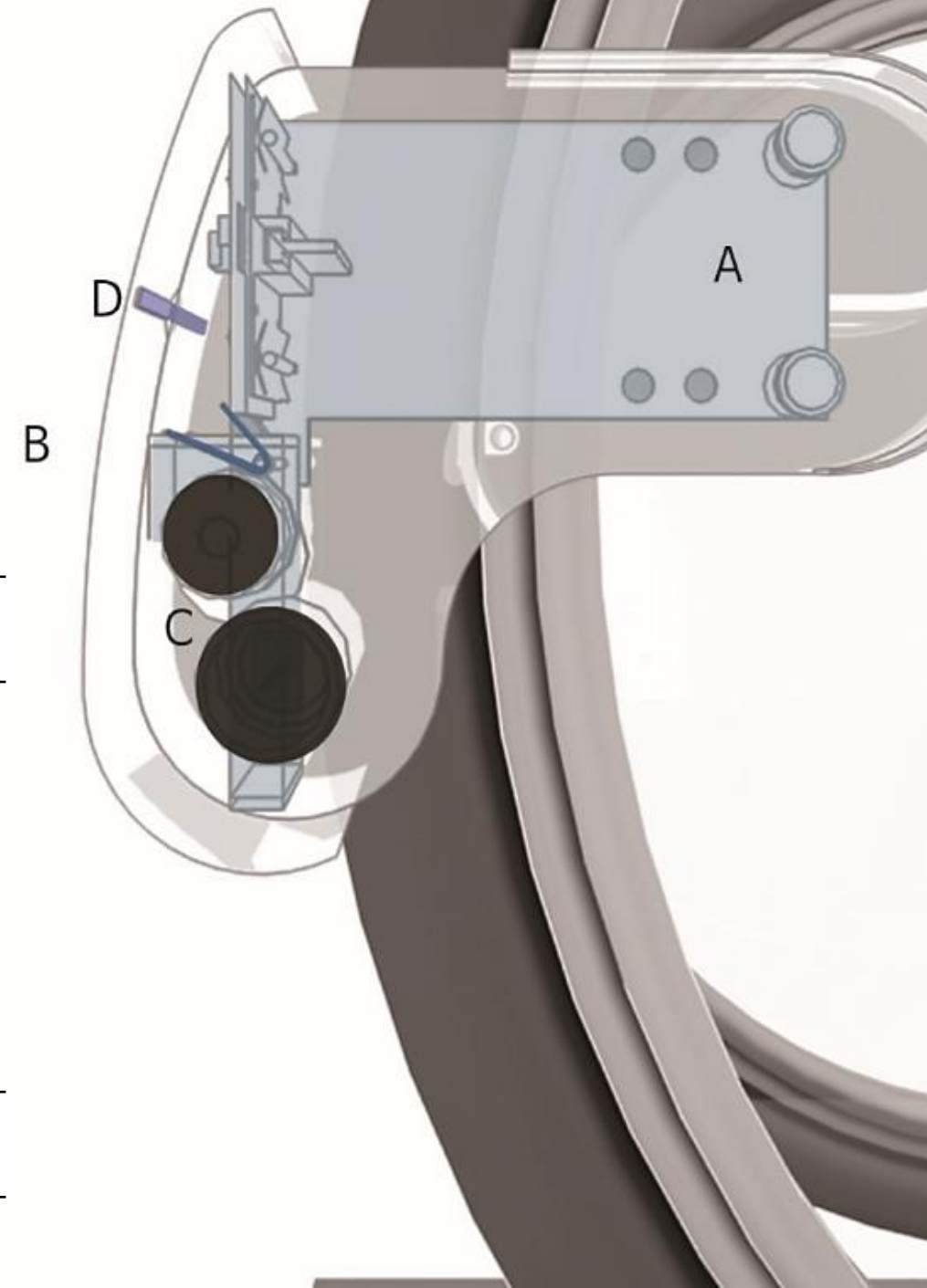
**B.** The torsion spring makes roller contact at a constant pressure on the handrail



**C.** The rear roller and the handrail's rotational force generates power



**D.** The generated power activities the UV germicidal lamp and operation indicator





(주)한국환경수도연구원  
Korea Environment & Water Works Institute  
26, Yangpyeong-ro 28a-gil, Yangpyeong-gu, Seoul, 150-108, Korea  
Tel: +82-2-2697-1234 Fax: +82-2-2697-4707

시험성적서

1. Client Name : SOOKYOUNG CO., LTD. Certificate No. : E-150006  
Address : 36A, HyundaiTower, 263, Mikkongdong-ro, Yangcheon-gu, Seoul-si, Republic of Korea Page(1) / (1)Page end  
Date of Receipt : Jan. 15, 2015 Date of Enforcement : Jan. 20, 2015

2. Use of Report : Quality management  
3. Test Sample : Escalator handrail UV sterilizer device  
4. Date of Test : Jan. 15, 2015 ~ Jan. 20, 2015  
5. Test method used : Pour Plate Method  
6. Testing Environment : Temperature : 25 ± 0.5 °C, Relative Humidity : (45 ± 5) % RH

Test Results

Items	Unit	The surface water	1 turn	10 turn	20 turn	30 turn	Remark
Staphylococcus aureus	CFU/mL	1000	180	280	98	110	-

Notice 1. The results shown in this test report refer only to the offered sample by client.  
2. The test report cannot be used for the purpose of litigation or advertising, and shouldn't be republished without document approval.

Received by: Hyunho Seo  
Tested by: Inkyu Beek  
Technical Manager: Minhyoung Song

Korea Environment & Water Works Institute

FPC05-3B(13) Korea Environment & Water Works Institute A4(210×297)

BEYOND ASIAN HUB, TOWARD GLOBAL WORLD

TEST REPORT

98, Gyeoulwon-ro, Gwachon-si, Gyeonggi-do, 13915, Rep. of KOREA TEL 82-2-2164-0011 FAX 82-2-9334-1008

Report No. : TBR-001447 Receipt Date : 2016.09.01  
Representative : Lee Jong Hoon Test Completion Date : 2016.10.07  
Company name : Clear Win Co., Ltd.  
Address : 1112-2, 293 Mokdongdong-ro, Yangcheon-gu, Seoul, Korea

Sample name : Handrail UV Sterilizer

Test Results

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
Bactericidal test(S.aureus)	CFU/Car	Control group (Initial)	$6.0 \times 10^6$	By The Client
Bactericidal test(S.aureus)	CFU/Car	Test group (After 1 cycle)	$4.2 \times 10^5$ (30.0 %)	By The Client
Bactericidal test(S.aureus)	CFU/Car	Test group (After 10 cycles)	$1.6 \times 10^5$ (73.3 %)	By The Client
Bactericidal test(S.aureus)	CFU/Car	Test group (After 20 cycles)	$2.0 \times 10^4$ (96.7 %)	By The Client
Bactericidal test(S.aureus)	CFU/Car	Test group (After 30 cycles)	$1.2 \times 10^4$ (98.0 %)	By The Client

\* Test condition  
- Carrier : 3mm transparent glass (2.5 cm X 1.5 cm)  
- Carrier lock : Refer to the test report  
\*\* Test strain  
- Staphylococcus aureus ATCC 6538  
\*\*\* Decrease rate (%) =  $\frac{(A-B)}{A} \times 100$  (Average)  
- A : Plate count of control group at initial  
- B : Plate count of test group after designated time (minutes)  
Attachment: Test report  
- Usage of Report: QUALITY CONTROL

Kim Jungsuk  
Tested by Kim Jungsuk  
E-mail: kimsj@kwii.or.kr

Technical Manager: Jin-Sik Cho  
Tel: 1577-6891/6892

2016.10.07  
Korea Testing & Research Institute  
President: Choi Hyeonjae

Page: 1 of 2

KTR KOREA TESTING & RESEARCH INSTITUTE

98% STERILIZATION

가속형벽, 안전에서 시작됩니다.

국민안전처

수신 수신자 참조  
(경유)  
제목 특수구조승강기 검사특례 인정 및 대체검사기준 통보(에스컬레이터 핸드레일 살균기)

1. 관련  
가. 「승강기 검사 및 관리에 관한 운용요령」 제10조  
나. CW 2017-03-001호(2017.3.15.) - 「특수구조승강기 검사특례 인정신청」

2. 위와 관련하여 「승강기 검사 및 관리에 관한 운용요령」 제10조제3항에 따른 승강기전문위원회(2017.3.28.)의 검토결과, 에스컬레이터 핸드레일 살균기에 대한 대체검사기준(안)이 적합한 것으로 인정됩니다.

3. 이에, 「승강기 검사 및 관리에 관한 운용요령」 제10조제2항에 따라 특수구조승강기 검사특례를 인정하고 대체검사기준을 불임으로 통보하오니, 에스컬레이터 핸드레일 살균기의 설치 및 안전관리에 만전을 기하시기를 바랍니다.

붙임 승강기 대체검사기준(에스컬레이터 핸드레일 살균기) 1부. 끝.

국민안전처장  
수신자 (주)클리어윈 대표이사, 한국승강기안전공단이사장

주무관 김필환 공업사무관 남승희 승강기안전과 전담 30장 이명수  
협조자  
시행 승강기안전과-1248 (2017. 4. 11.) 접수  
우 30129 세종특별자치시 향무2동사로 10, SM타워 402호 (4-서울) / http://www.mpsa.go.kr  
전화번호 044-205-4295 팩스번호 044-205-8910 / kmoonkim@korea.kr / 대국민 공개  
정보의 개방과 공유를 일차리는 높고 생활을 관리해 줍니다.

Ministry of Public Safety & Security  
Clear Win – grant special standard  
(2017.04.11)





CE CERTIFICATE



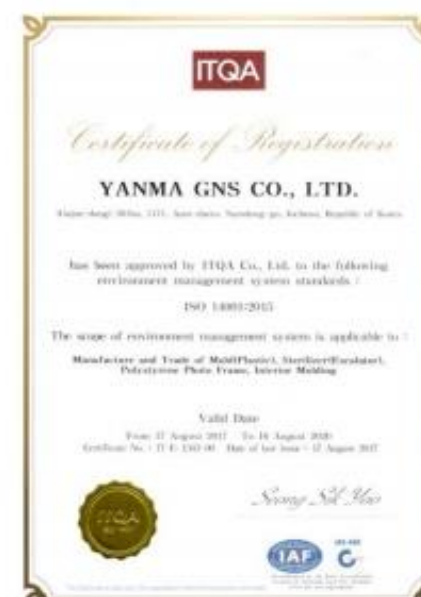
PATENT



INTERNATIONAL PATENT

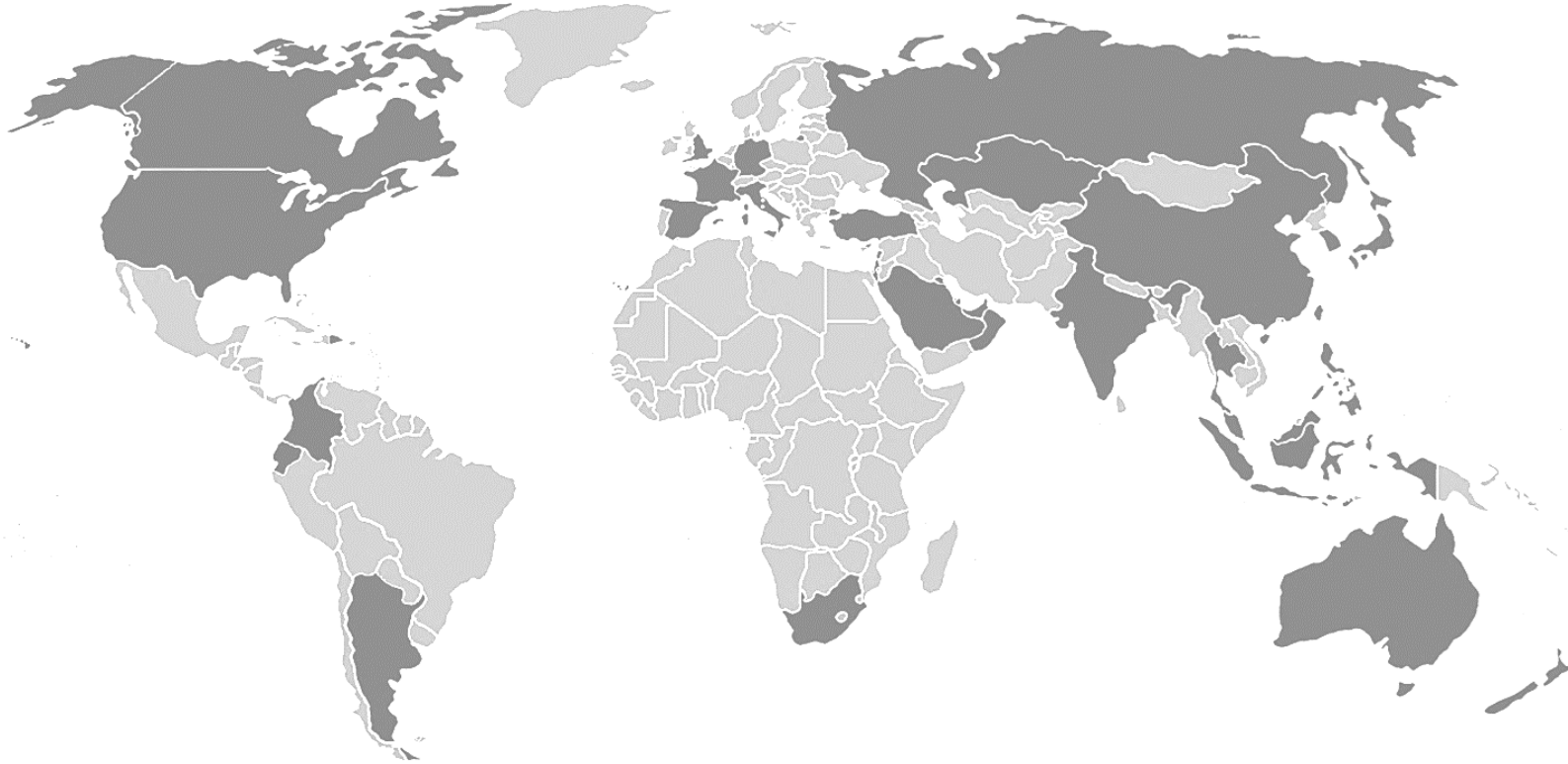


ISO9001



ISO14001

# *CLEARWIN Worldwide*



**Sole Agency :** USA, Canada, Dominican Republic, UK, Spain, Italy, German, France, Republic of South Africa, Australia, New Zealand, Saudi Arabia, Qatar, Bahrain, UAE, Lebanon, , Kazakhstan, Kuwait, Oman, Ecuador, Columbia, Argentina, Russia, Turkey, Israel, Indonesia, Thailand, Singapore, Philippines, Malaysia, Japan, Hongkong, Taiwan, China ...

## ***Domestic / international Installation Status***

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Government office

Shopping mall

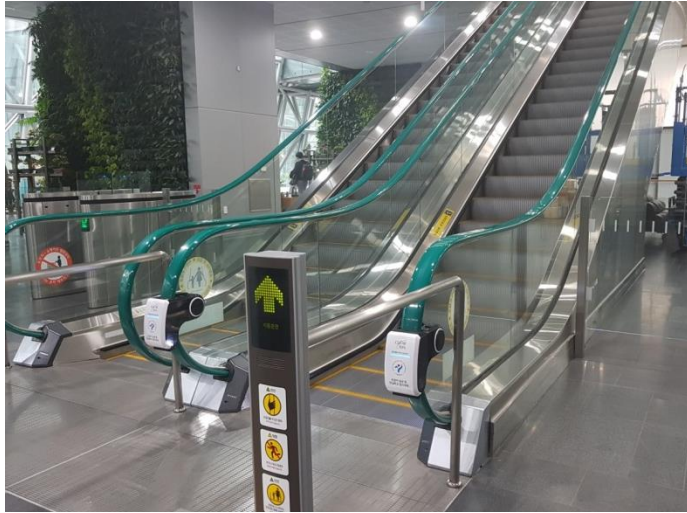
Office building

Station / Terminal

Hospital

Airport / International

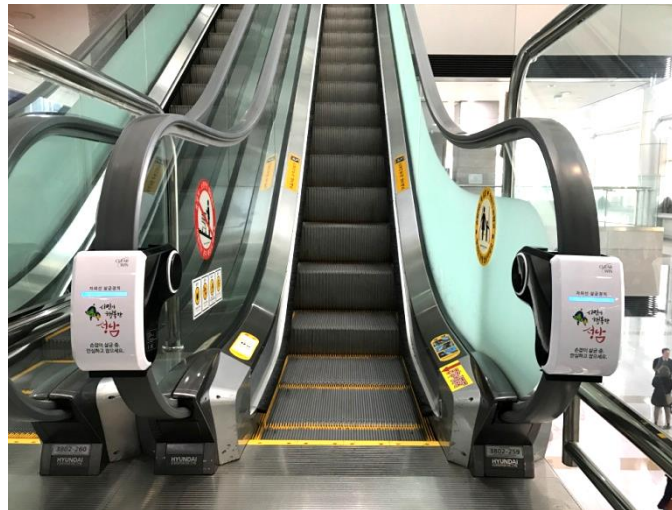
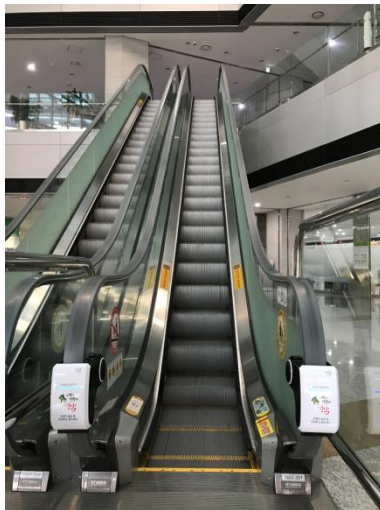
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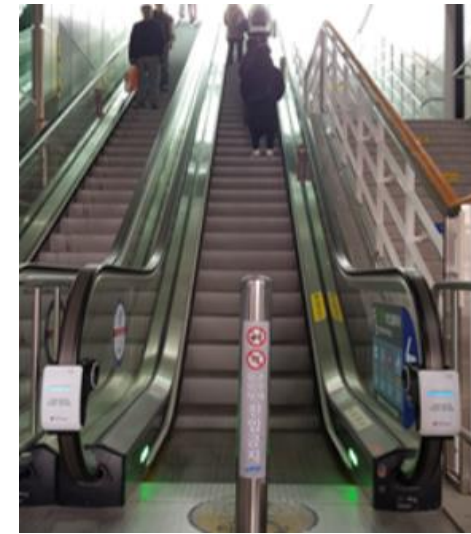
Government office

Seoul City Hall - Seoul

Sungnam City Hall – Sungnam, Gyeonggido







Government office

Daegu Infrastructure Corporation - Daegu

KOREA INDUSTRIAL SAFETY ASSOCIATION – Seoul



## ***Domestic / international Installation Status***

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Government office

Shopping mall

Office building

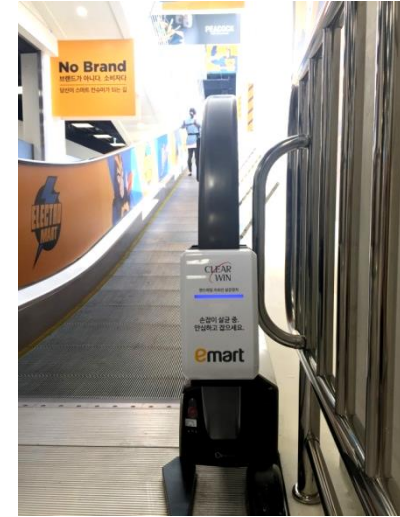
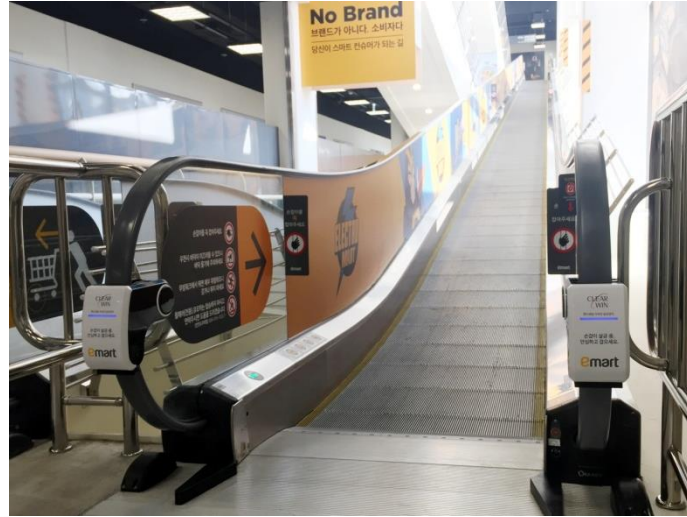
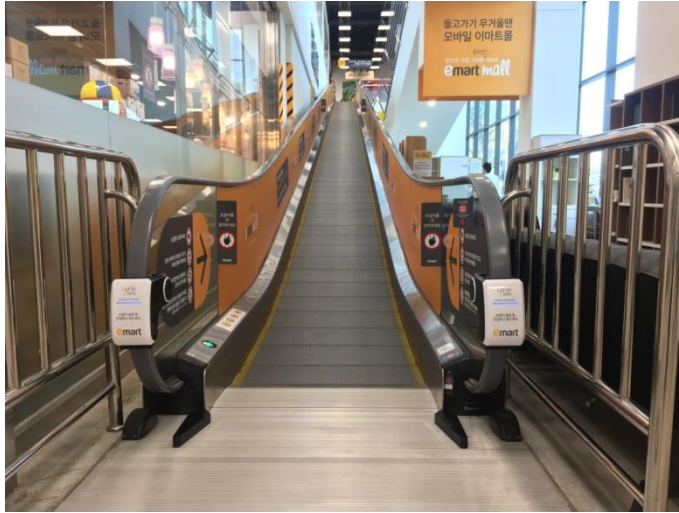
Station / Terminal

Hospital

Airport / International

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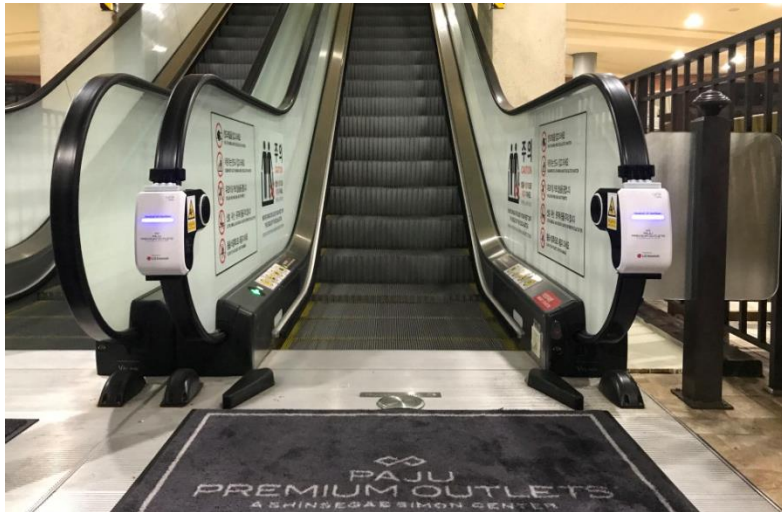




Shopping mall / Department

E-MART – Gimhae, Busan

SINSAEGAE Outlet - Paju , Gyeonggi-do



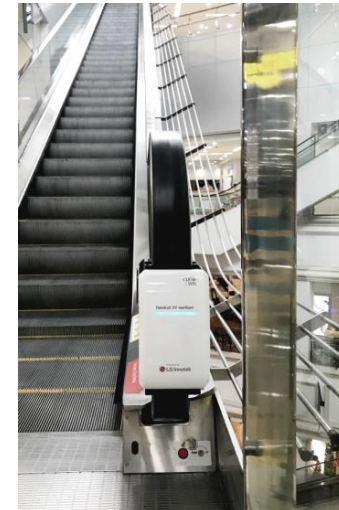
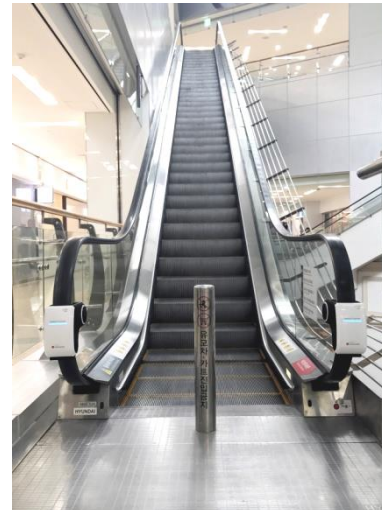




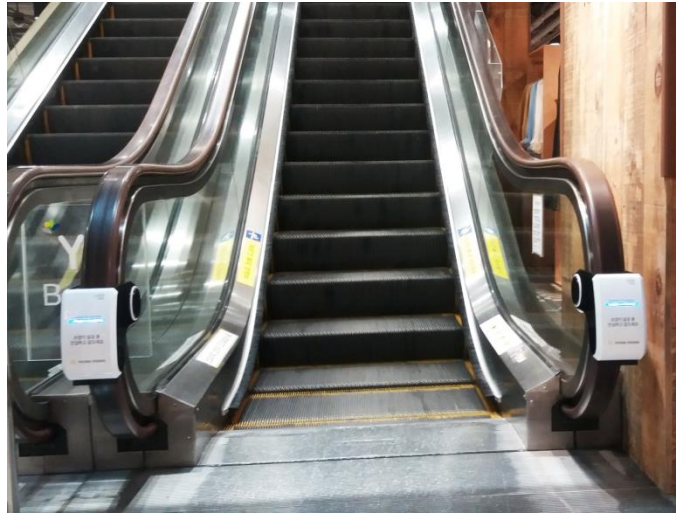
Shopping mall / Department

HYUNDAI Department - Bucheon, Gyeonggido

METAPOLICE shopping mall – Dongtan, Gyeonggido







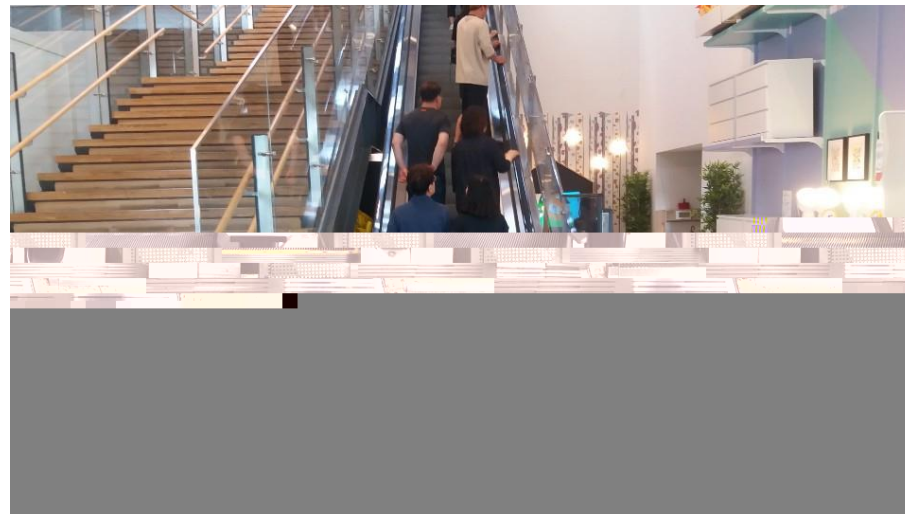
Shopping mall / Department

YOUNG POONG Book Store - Seoul

NEW CORE Department store – Gangnam, Seoul



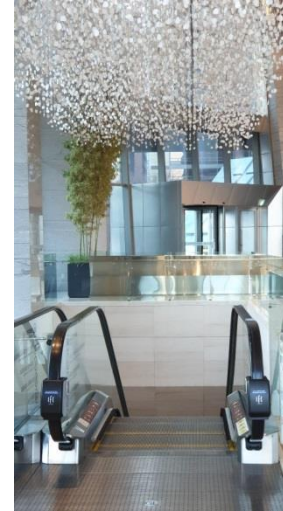
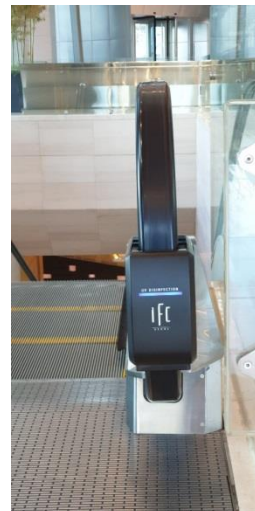
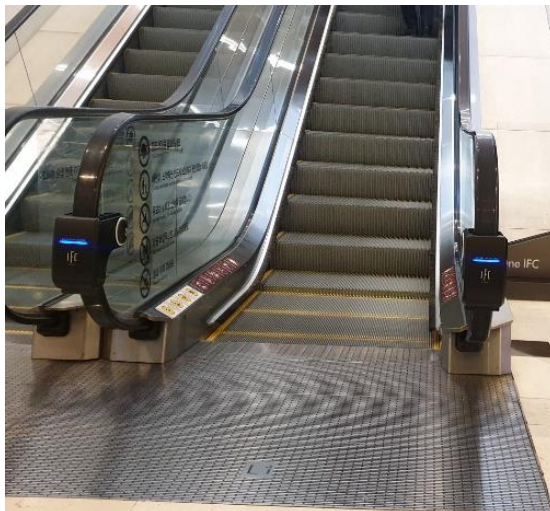


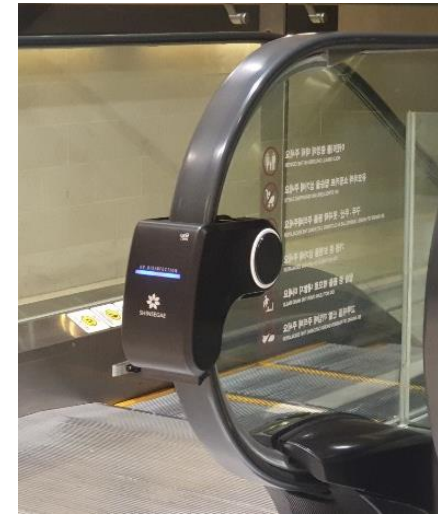


Shopping mall / Department

IKEA – Go Yang, Gyeonggido

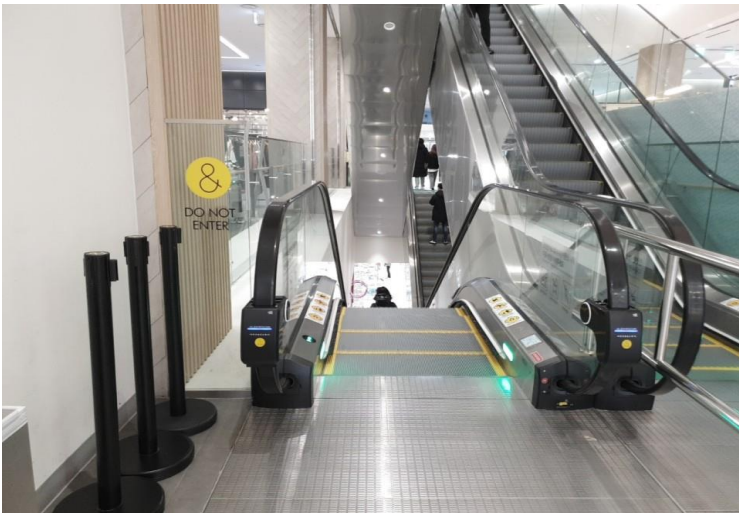
IFC SEOUL - Yeouido, Seoul





Shopping mall / Department

SHINSEGAE Department



Kiheung AK MALL – Kiheung , Gyeonggido



## ***Domestic / international Installation Status***

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Government office

Shopping mall

Office building

Station / Terminal

Hospital

Airport / International

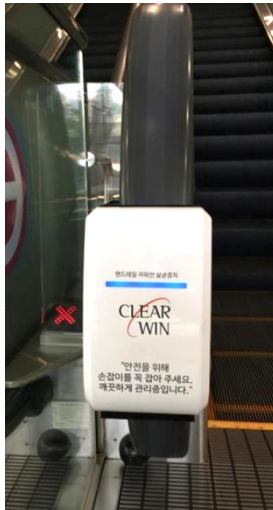
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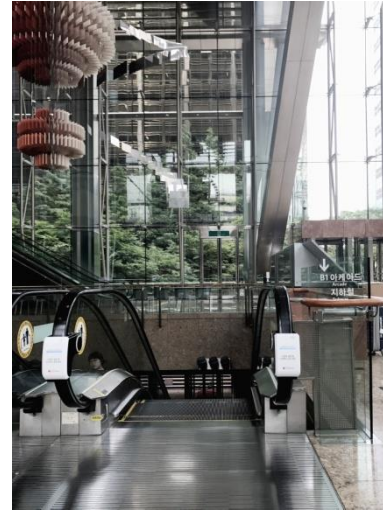
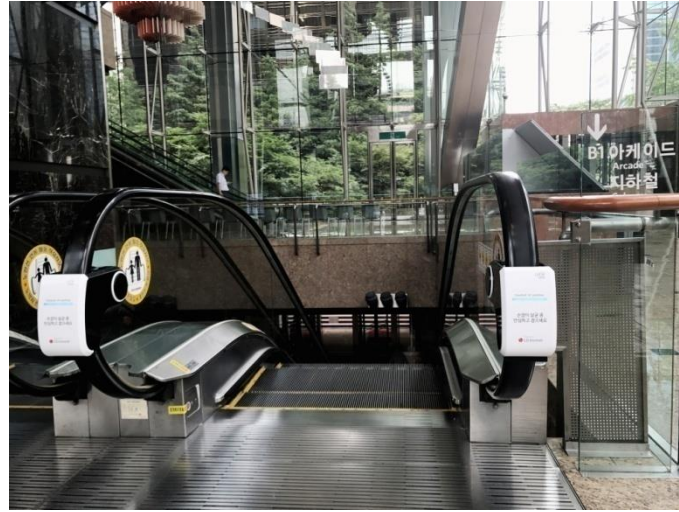
Office building

HYUNDAI 41 TOWER - Seoul

SAMSUNG R&D CENTER - Seoul







Office building

GS TOWER - SEOUL

LG TWIN TOWER - Seoul







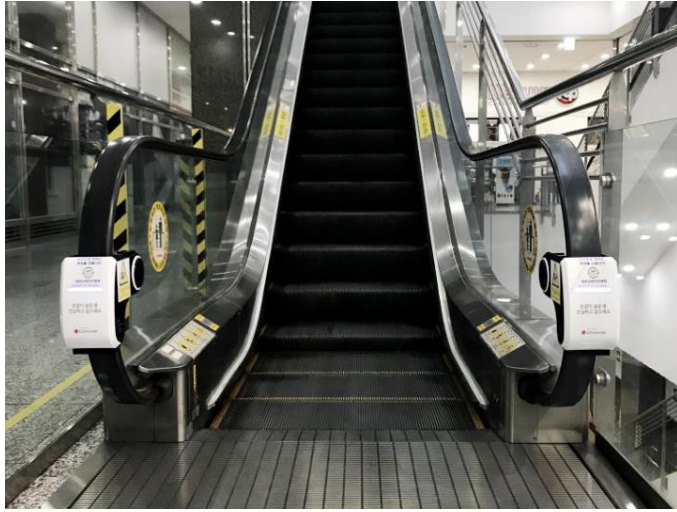
Office building

LG BUILDING – KwangHwaMoon, Seoul

LG SEOUL STATION B/D - Seoul



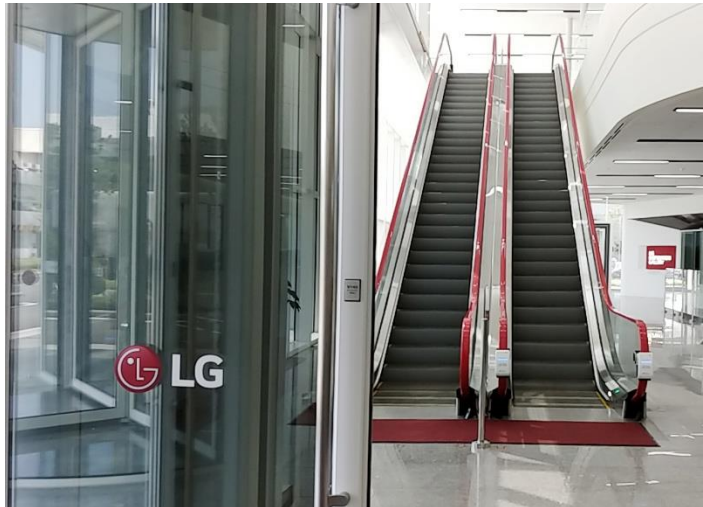




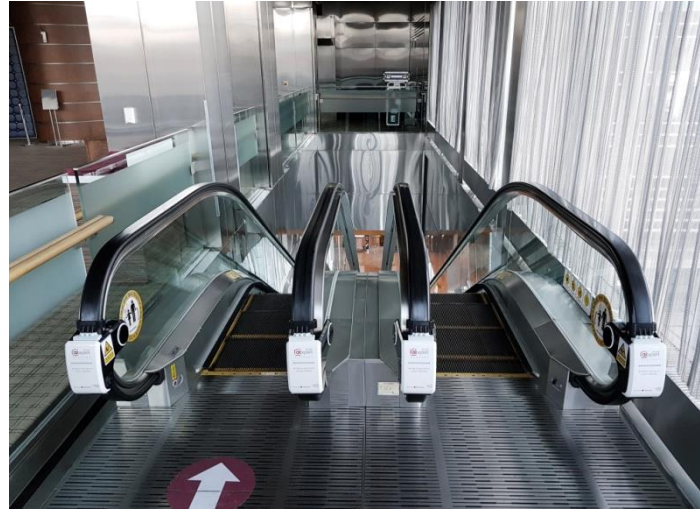
Office building

Korean industry safety corp. - Seoul

LG Electronics Changwon Factory – Changwon



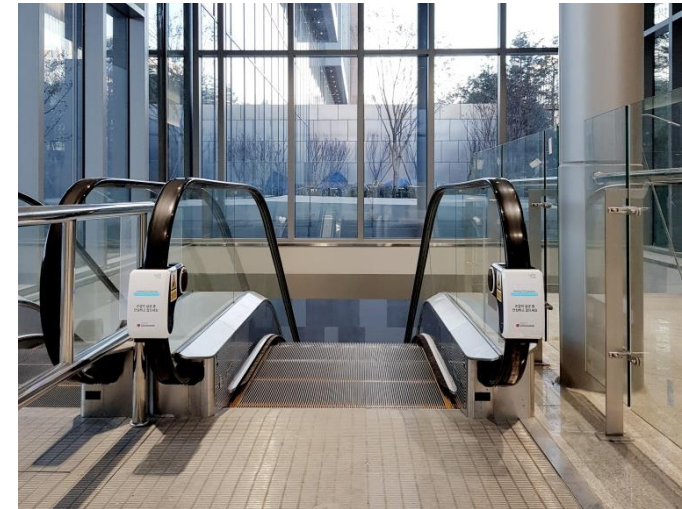




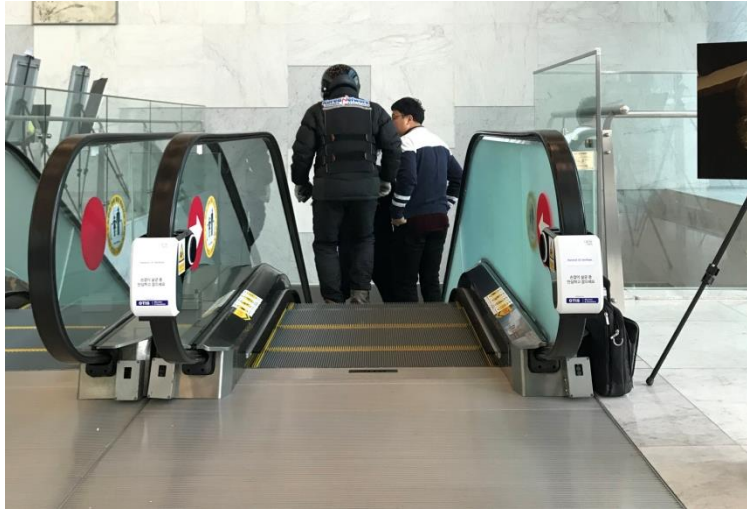
Office building

GS Tower Art center - Seoul

LG Science Hall Seoul - Seoul



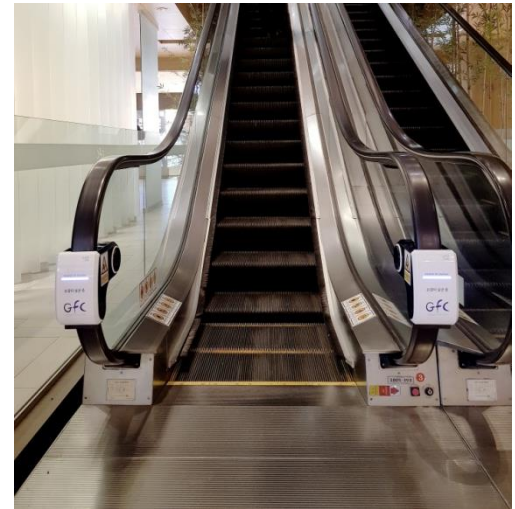
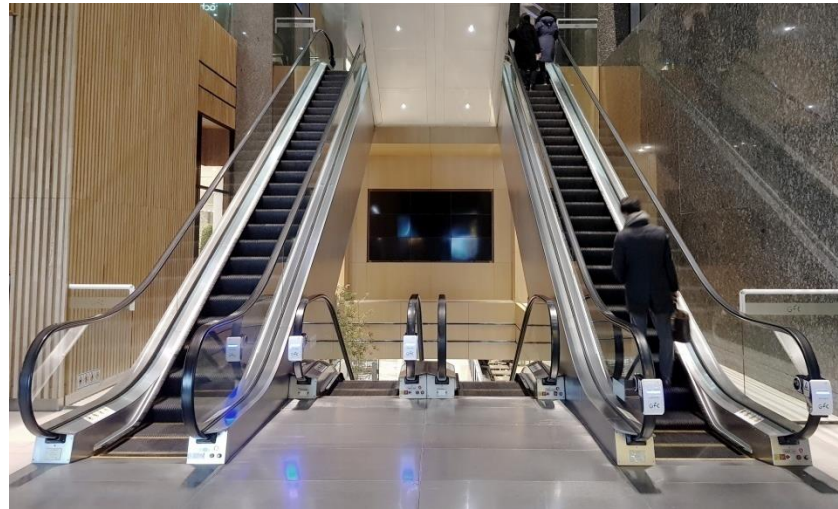




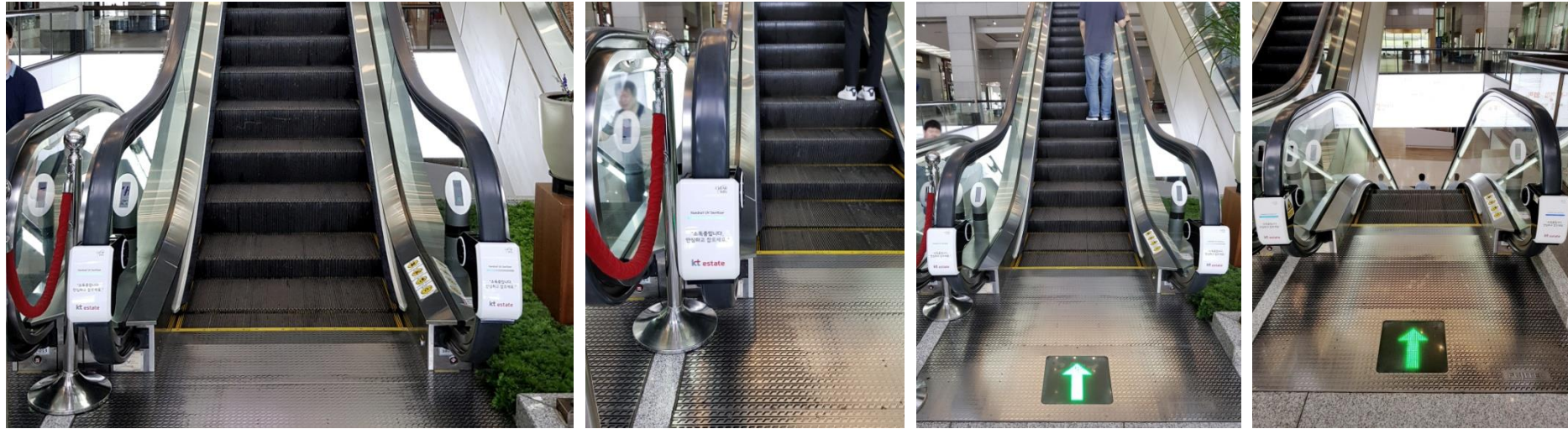
Office building

OTIS LS BUILDING - Seoul

GFC mall – Gangnam, Seoul



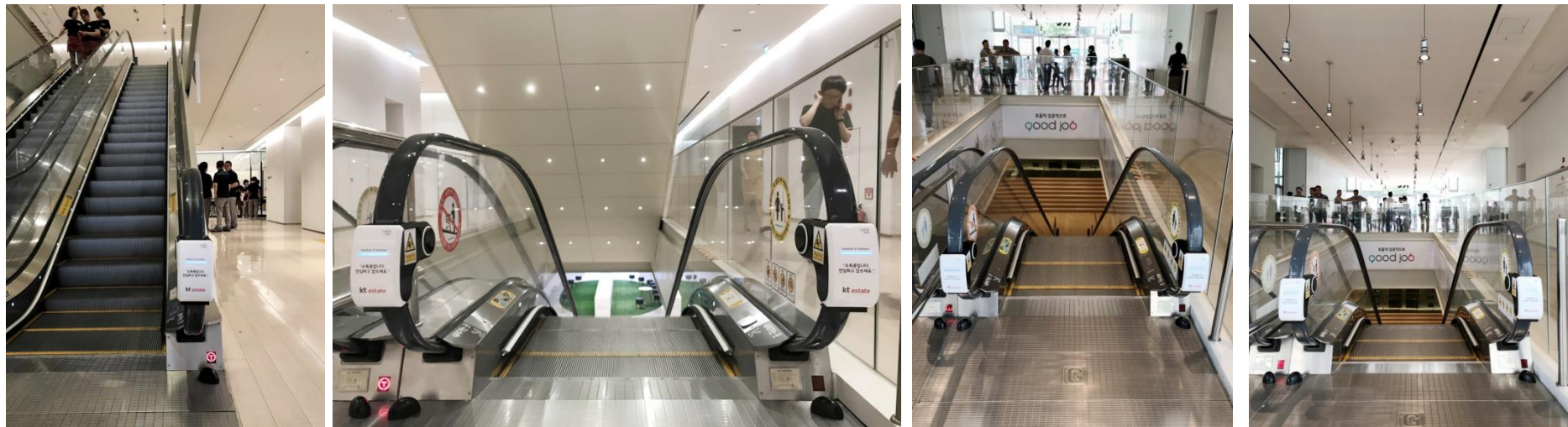




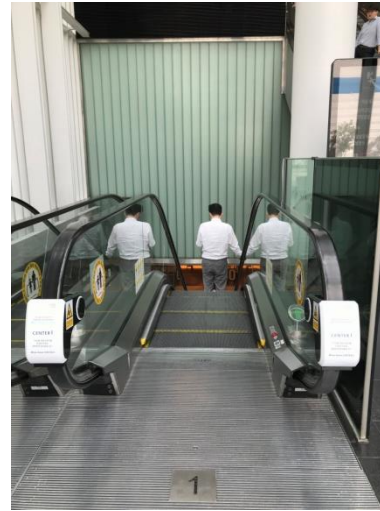
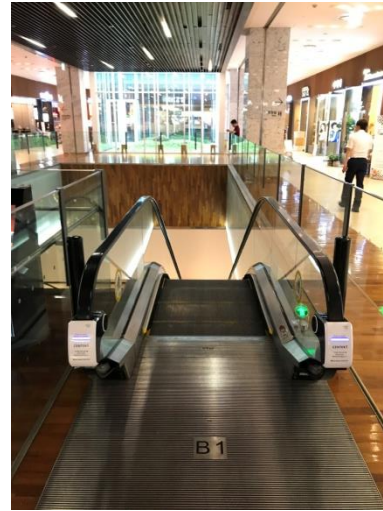
Office building

KT estate KOREA TELECOM HEADQUARTER – Seoul

KT KWANGHWAMOON B/D - Seoul







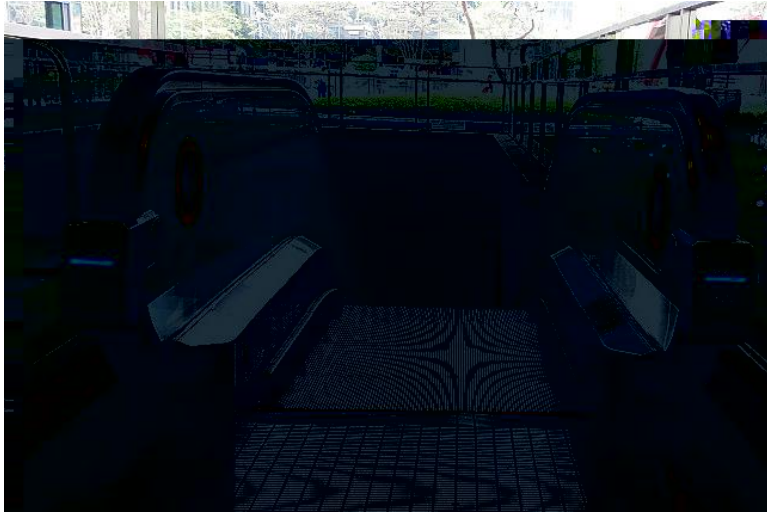
Office building

MIRAE ASSET CENTER 1 - Seoul

CJ Building - Seoul



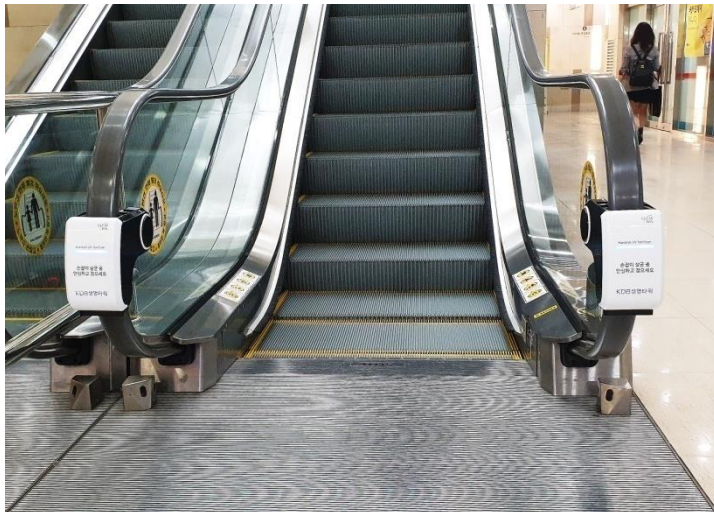




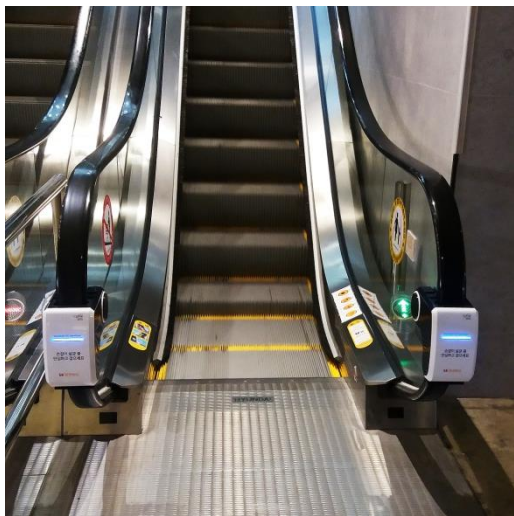
Office building

GRAN SEOUL – Jongro, Seoul

KDB LIFE TOWER - Seoul



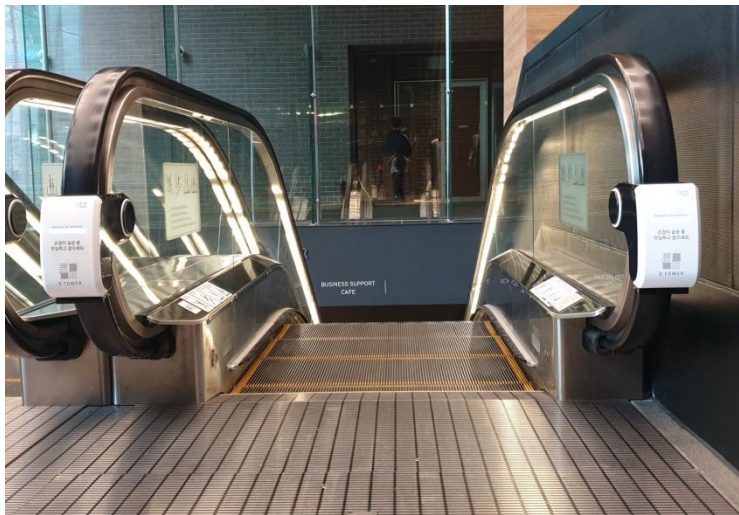




Office building

SK Securities Building – Yeouido, Seoul

D-TOWER Building – Jongro, Seoul



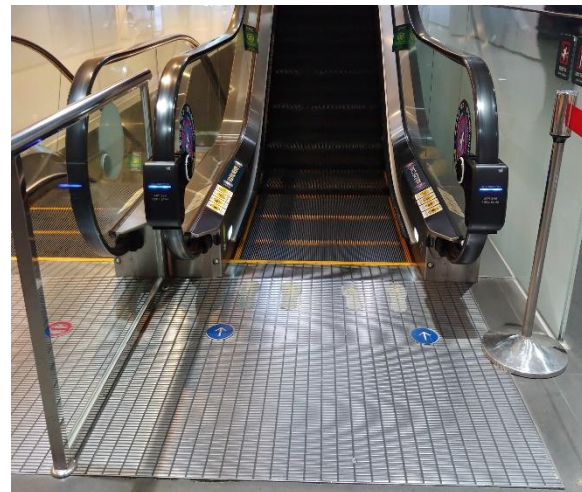
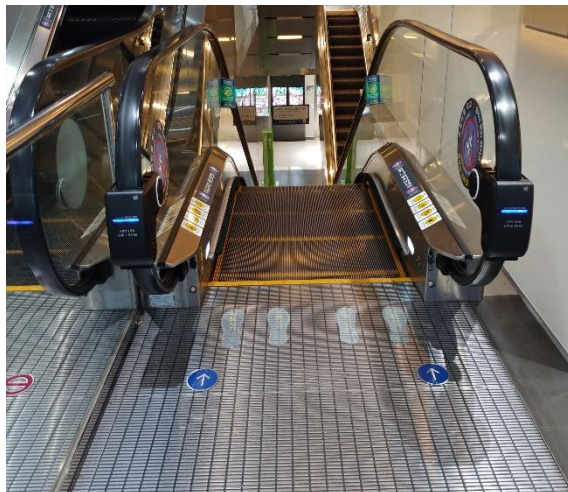




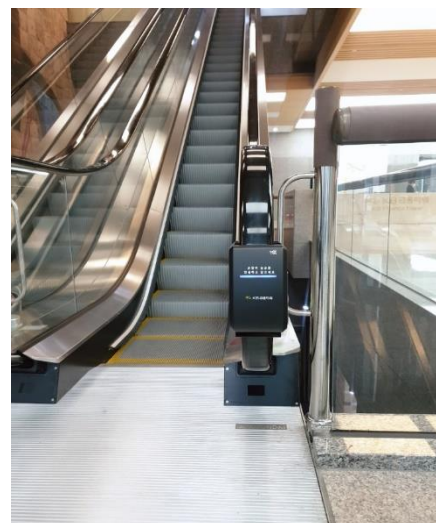
Office building

O2 TERRACE – Yeouido , Seoul

Seocho Building – Gangnam, Seoul



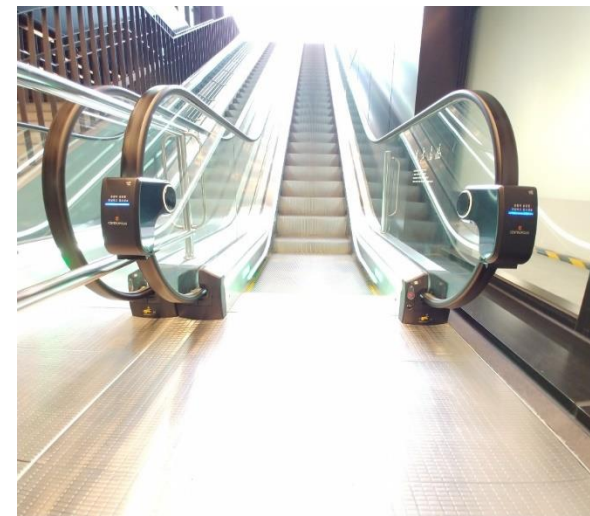
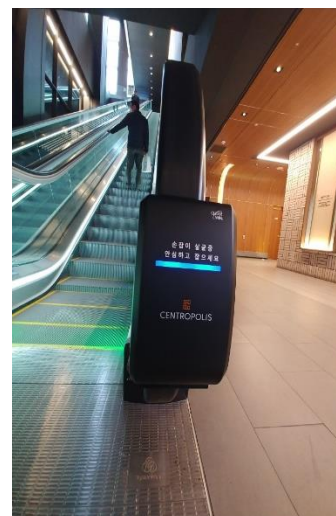
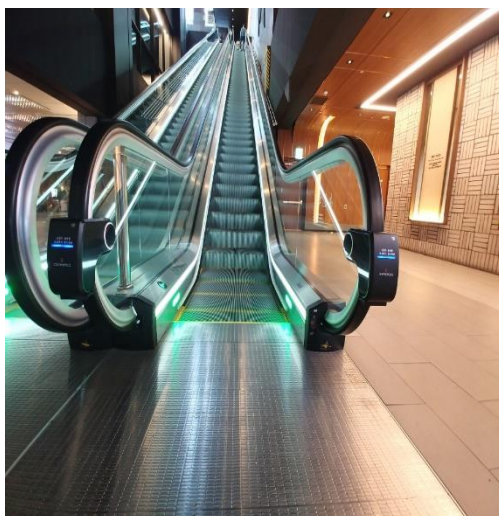




Office building

KB Financial Tower - Seoul

Central Police Building - Seoul







Office building

Woori Bank - Seoul

Twin tower – Euljiro, Seoul





## ***Domestic / international Installation Status***

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Government office

Shopping mall

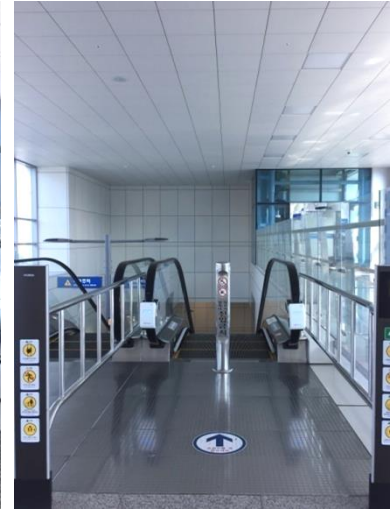
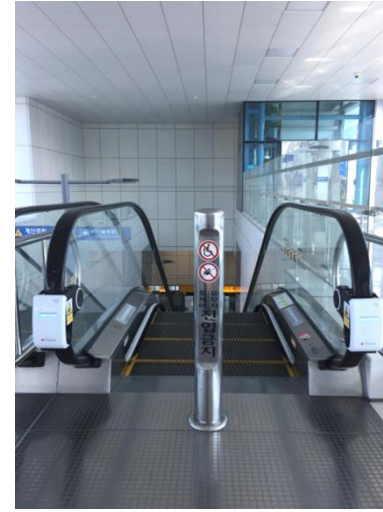
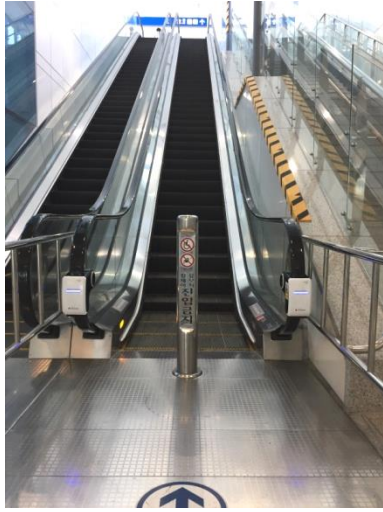
Office building

**Station / Terminal**

Hospital

Airport / International

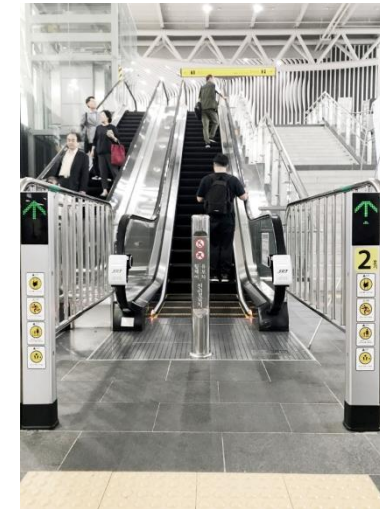
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Train station

ktx train station in Pohang - Pohang

SRT express train station - Suseo







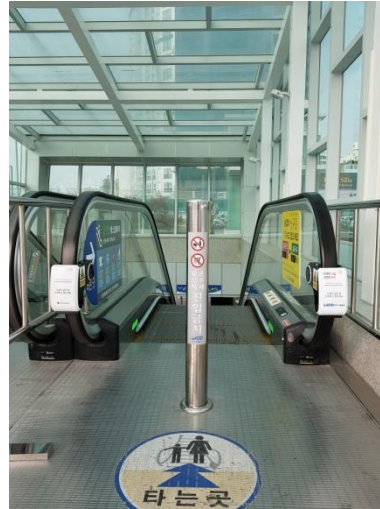
Subway station

DAEGU-SUBWAY - Daegu

DAEGU-SUBWAY 2 - Daegu



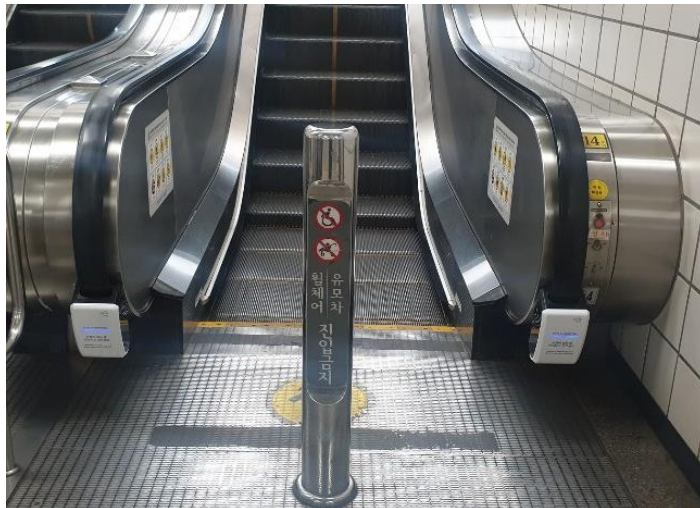




Subway station

DONGDAE-GU TRAIN STATION - Daegu

ONSU-SUBWAY - Seoul







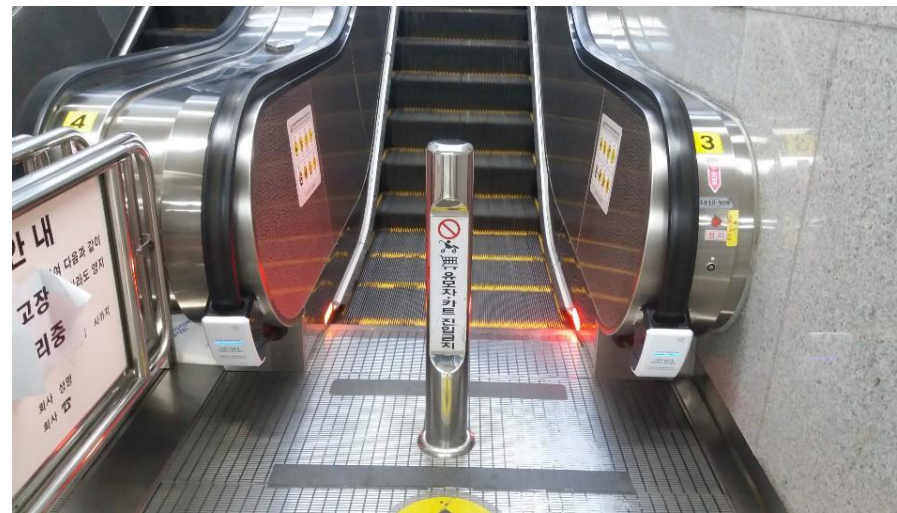
Subway station

SADANG SUBWAY - Seoul

YANGCHEON-GU OFFICE SUBWAY - Seoul



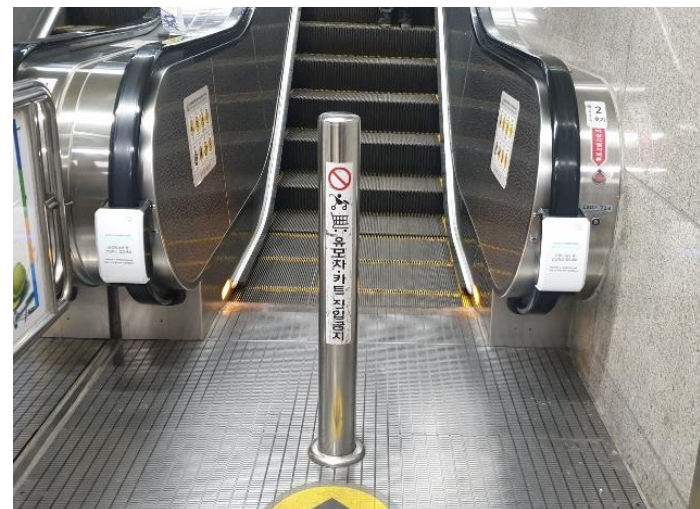




Subway station

CHEON WANG SUBWAY - Seoul

CHONG SHIN UNI SUBWAY - Seoul







Subway station

CHUNGMURO SUBWAY - Seoul

GAYANG SUBWAY- Seoul







Bus Terminal

SEOULEXPRESS BUS TERMINAL - Seoul



## ***Domestic / international Installation Status***

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Government office

Shopping mall

Office building

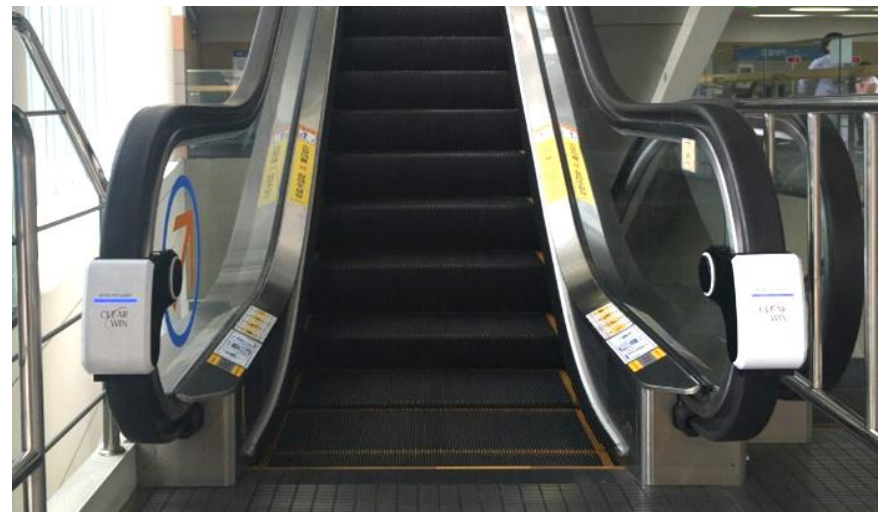
Station / Terminal

Hospital

Airport / International

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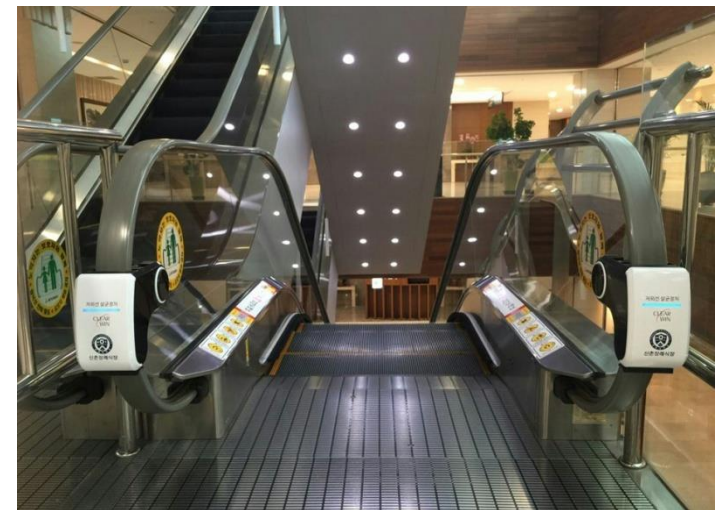




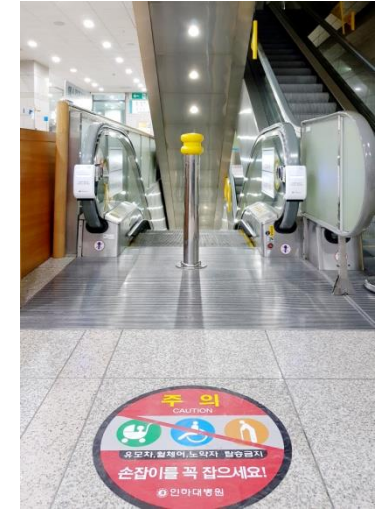
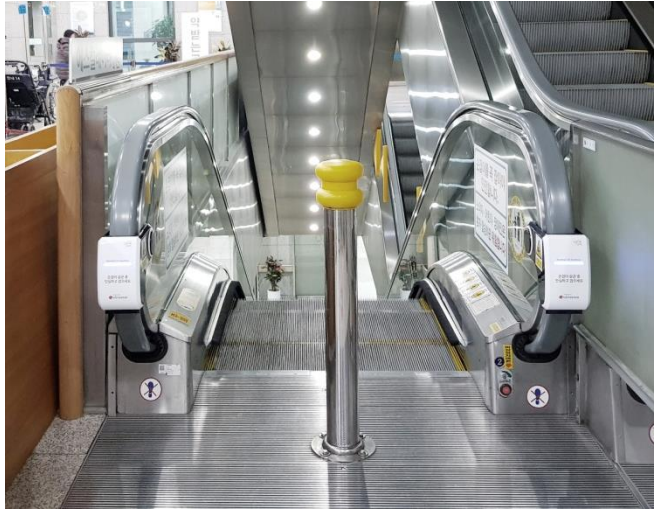
Hospital

PUSAN NATIONAL UNIVERSITY HOSPITAL - Busan

YONSEI SEVRANCE HOSPITAL - Seoul



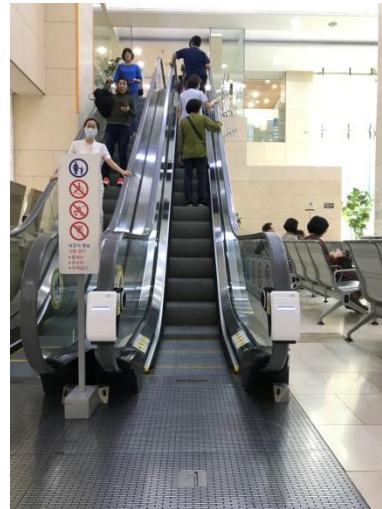
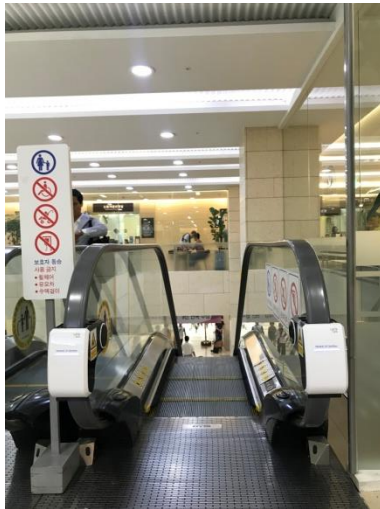




Hospital

INHA-UNIVERSITY HOSPITAL - Incheon

EWHA WOMANS UNIVERSITY MOKDONG HOSPITAL - Seoul







Hospital

HALLYM UNIV. MEDICAL CENTER - Seoul

Keimyung Universtiy Dongsan Hospital - Daegu





Hospital

Gachon University Gil Medical Center - Incheon





## ***Domestic / international Installation Status***

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Government office

Shopping mall

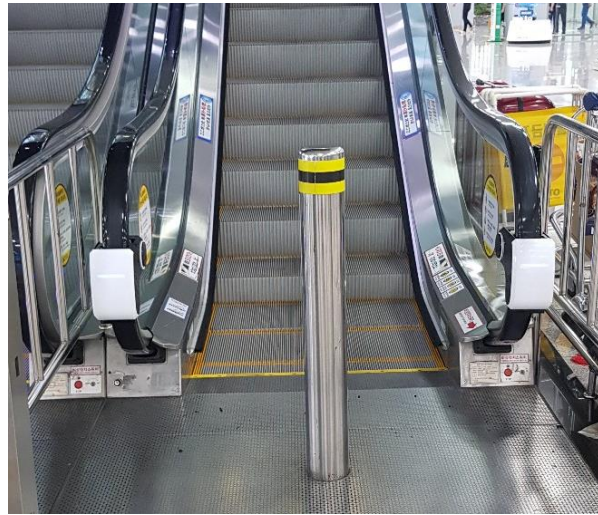
Office building

Station / Terminal

Hospital

Airport / International

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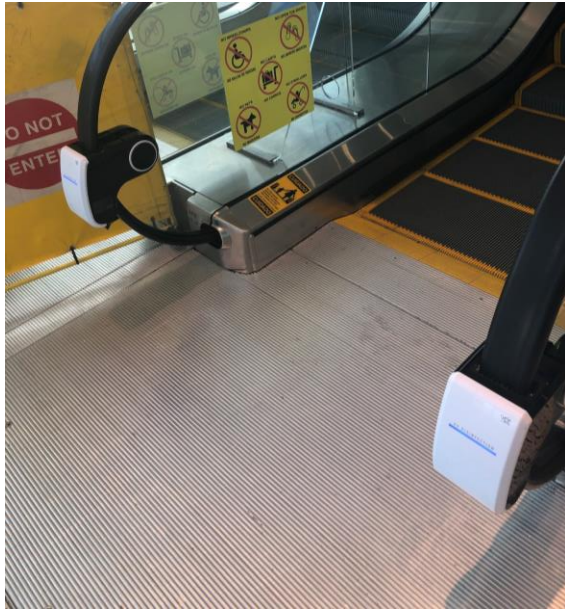
Airport Korea



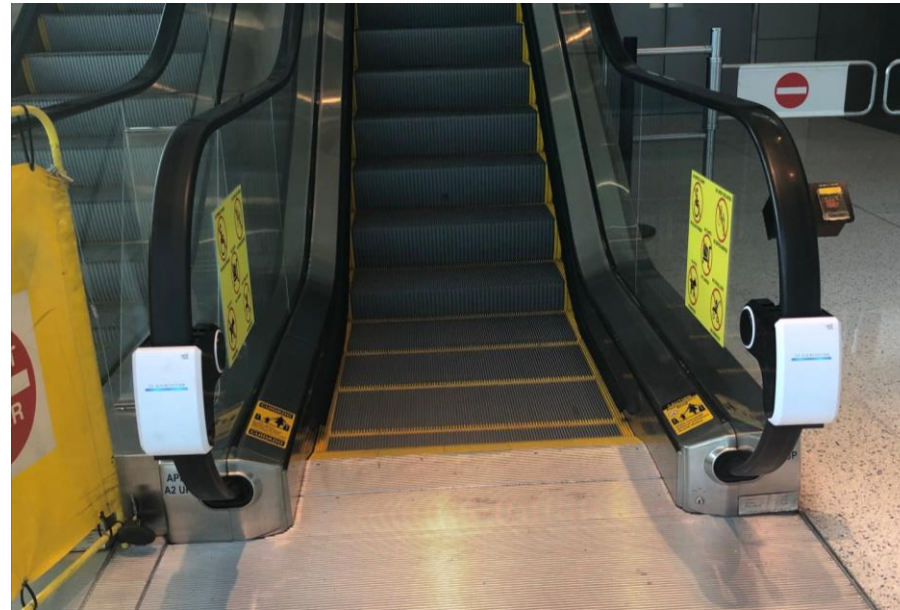
Gimhae International Airport - Busan



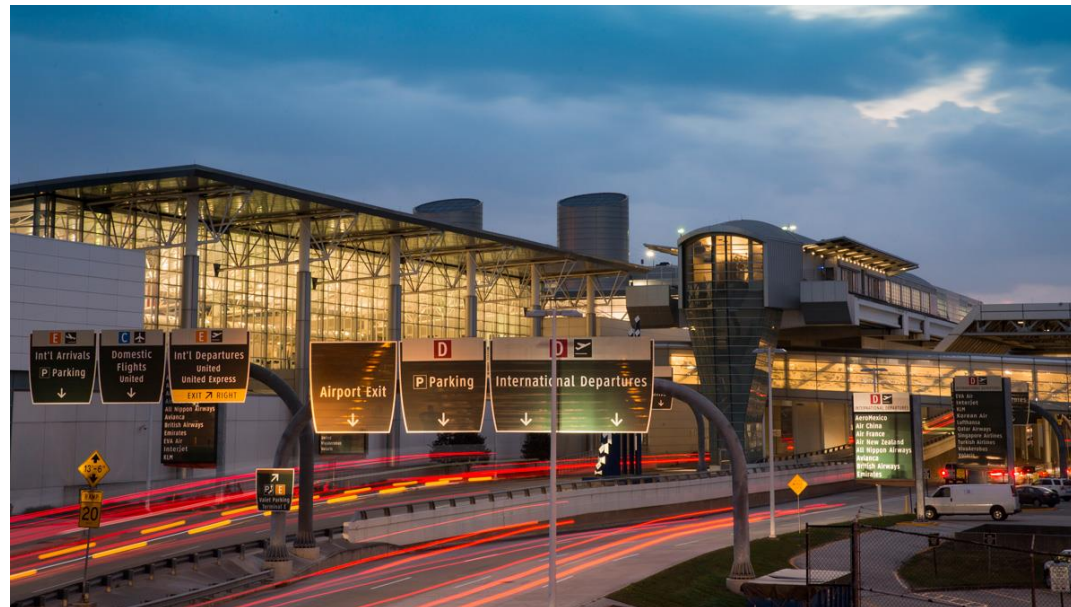




United States



Texas Houston Airport - United States





China

CHINA CITY-HOSPITAL

BEIJING POSCO B/D



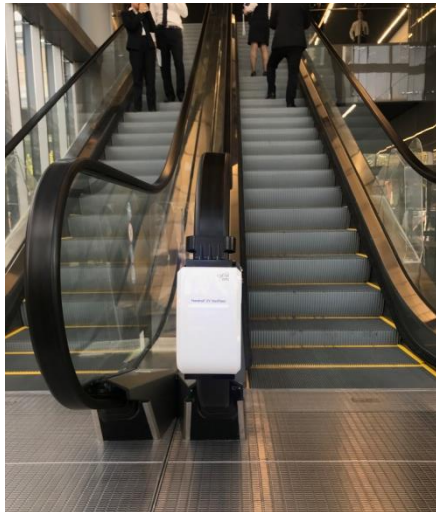




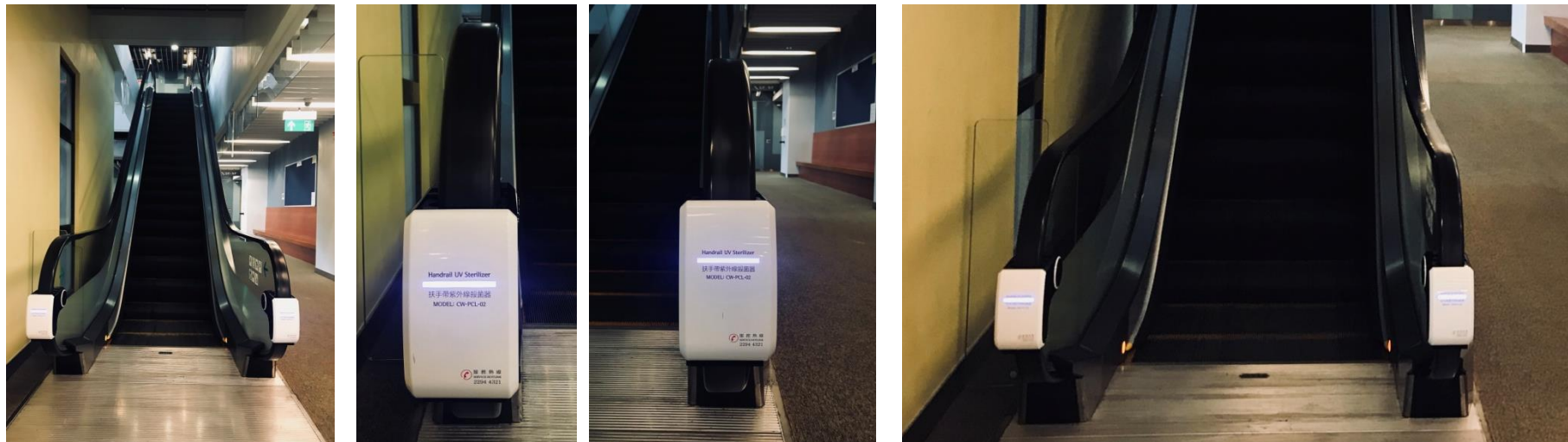
China

BEIJING TWIN TOWER

前滩世贸中心



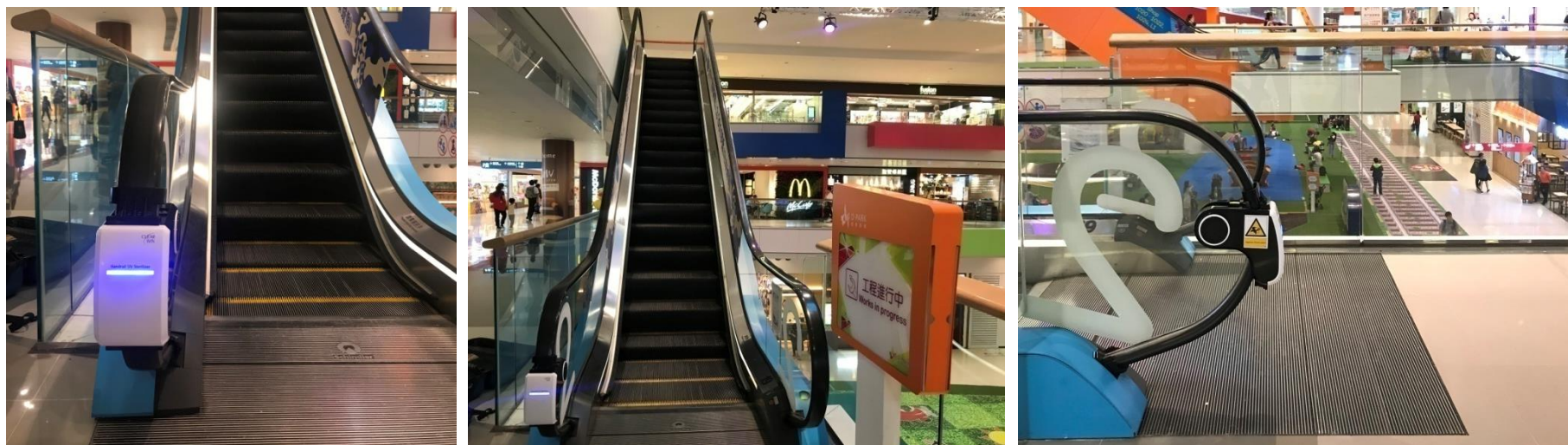




Hongkong

HONG KONG POLYTEC UNIVERSITY

D-PARK

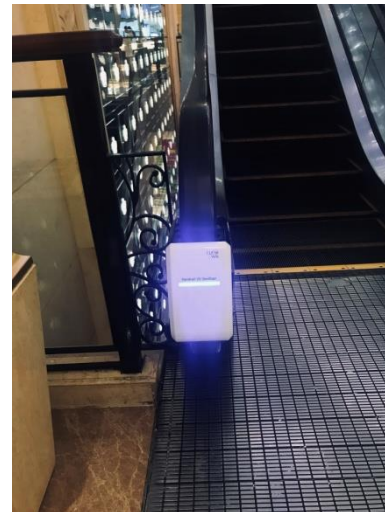






Hongkong

YOHO MALL



Macau

Grand Emperor Hotel

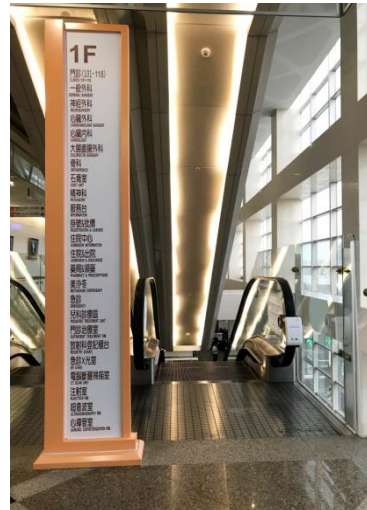




Taiwan

TAINAN CITY Sin-Lau Medical Foundation

TAINAN municipal an-nam hospital – china medical university



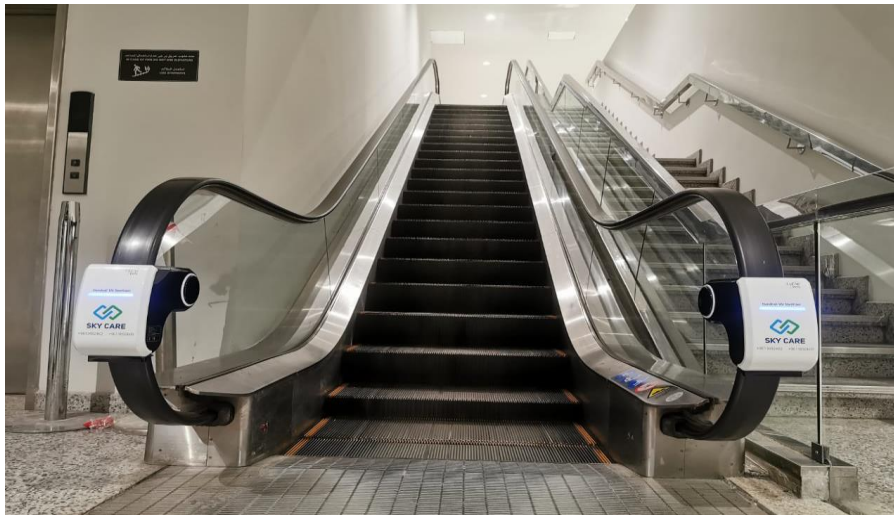




Taiwan

TAOYUAN International Airport - TAIPEI

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Lebanon

Beirut International Airport - Lebanon

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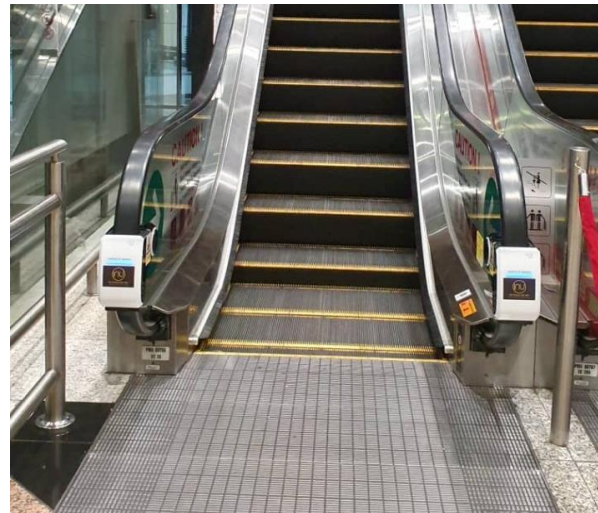




Turkey

TURKEY ISG Sabiha Gokcen Airport

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Malaysia

Malaysia Kuala Lumpur International Airport

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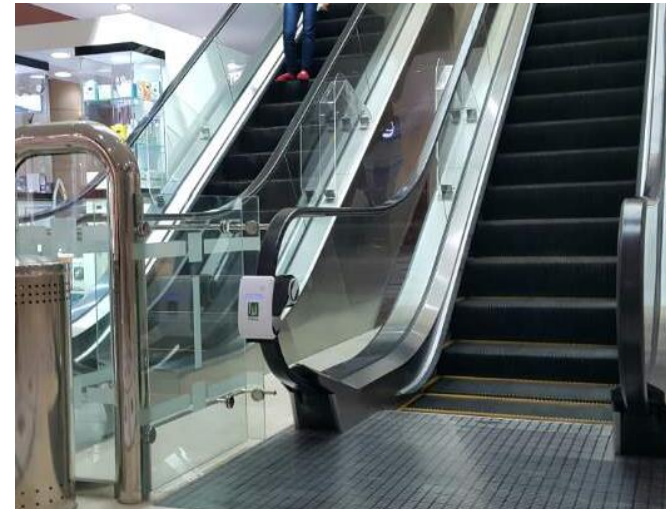


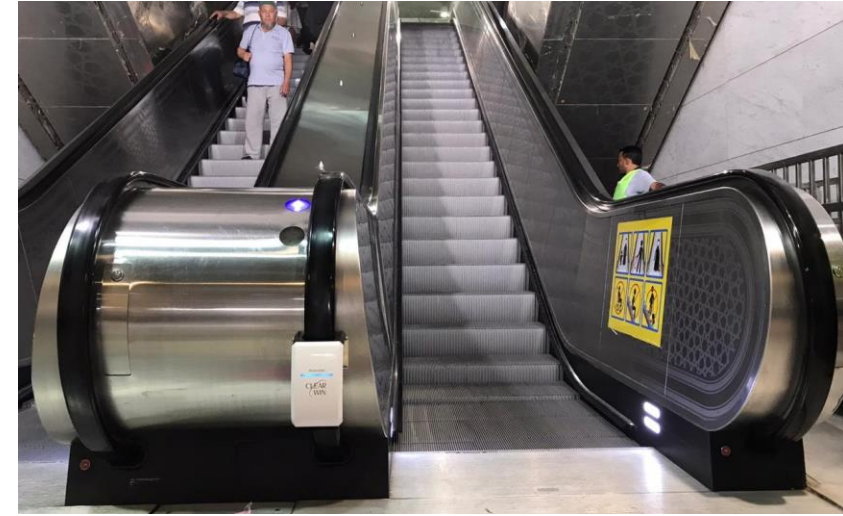


UAE

UAE – Sahara Mall

DUBAI Bin Sougat Centre SHOPPING MALL





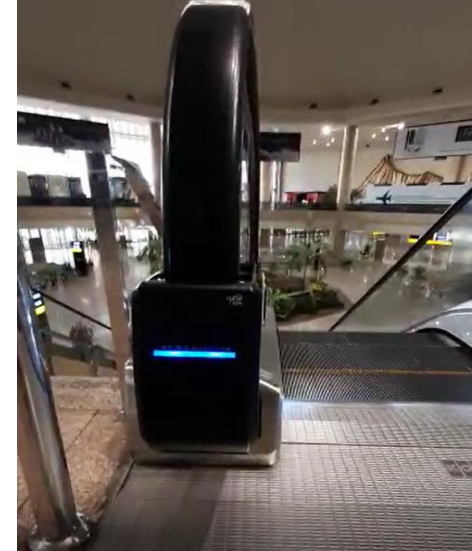
Saudi Arabia

Saudi Arabia – Grand Mosque

Saudi Arabia – Jeddah King Abdulaziz International Airport







Saudi Arabia

Saudi Arabia – Dammam International Airport



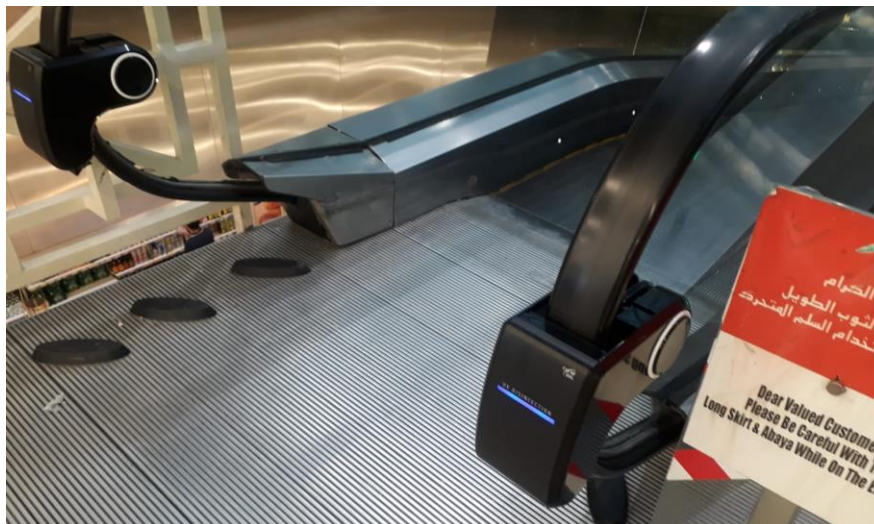




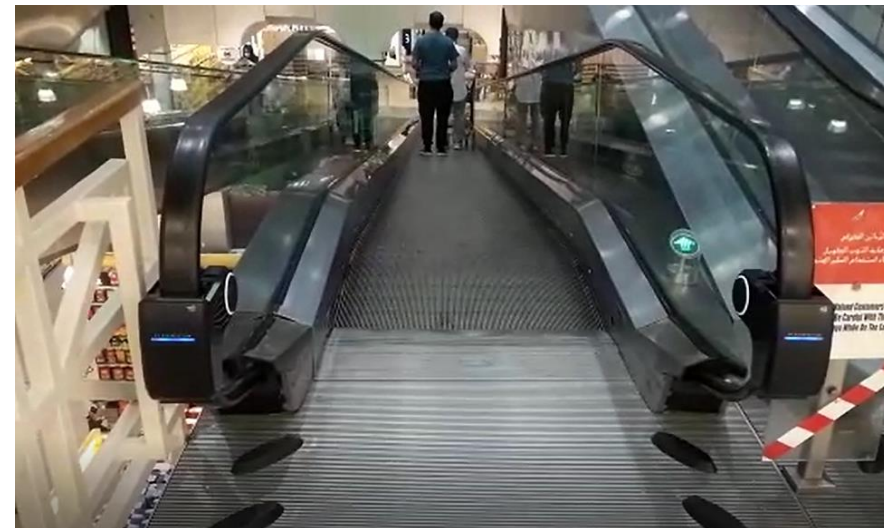
Saudi Arabia



Saudi Arabia – Riyadh International Airport



Kuwait



Kuwait – LULU Hypermarket at Qurain





Dublin Airport - Ireland



Mexico Airport – Mexico



GRU Airport - Brazil



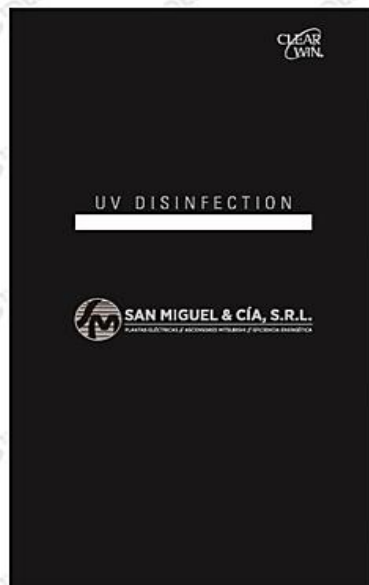
Sydney Airport - Australia



Changi Airport - Singapore



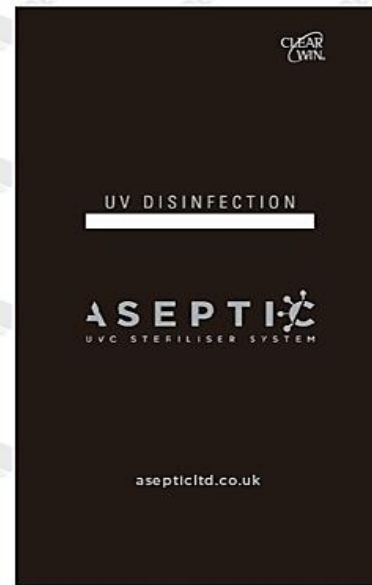
Paris Metro- France



< Dominican Republic >



< Ecuador >



< UK >



< US >



< South Africa >



< Russia >



< Malaysia >



< France >





Would you  
still hold  
any handrail?

# CLEARWIN<sub>KR</sub>

H a n d r a i l   U V   S t e r i l i z e r

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