▲ HYUNDAI ELEVATOR CO., LTD.

Website   ▶ YouTube

H-SOLUTION

Conventional Group System · Destination Selecting System

▲ HYUNDAI ELEVATOR CO., LTD.

WHY H-SOLUTION?

Are you still using elevators that only have up and down buttons in the hallway?
Hyundai Elevator's H-Solution offers the most advanced group control
technology to take passengers to their destination floors in the shortest time
while optimizing operation and energy efficiency.

EFFICIENT

Travel time is minimized and energy efficiency
is maximized through the optimal dispatch of
elevators using traffic analysis.

CLEAN

Contact-free interfaces prevent the spread of
harmful viruses.

SECURE

Tenants' security is ensured through
interconnections with the building's security
system.

INTERACTIVE

Customized solutions are provided from UI to
contents provision tailored to customer tastes.

☀ 08:50 AM

🌤 12:10 PM

🌙 05:45 PM

* Product images have been created to help viewers' understanding. Design and colors depicted may differ from the actual products'.

WHAT IS H-SOLUTION?

Hyundai Elevator's H-SOLUTION is an elevator group operation system that can be configured according to the purpose and characteristics of a building to facilitate the movement of passengers and increase operational efficiency.
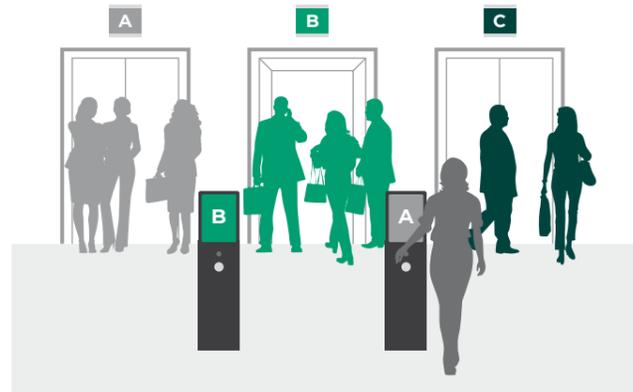
CONVENTIONAL GROUP SYSTEM

Dispatches the elevator that can reach a floor most quickly when a call button is pressed.
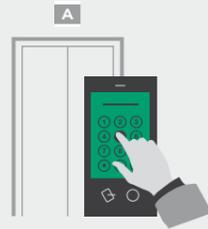
DESTINATION SELECTING SYSTEM (DSS)

Calculates the waiting time, travel time, and the number of passengers when a destination floor is registered and optimizes the dispatch of elevators.
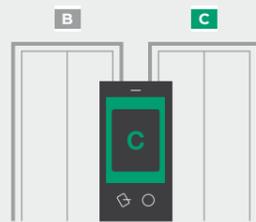
HOW DSS WORKS
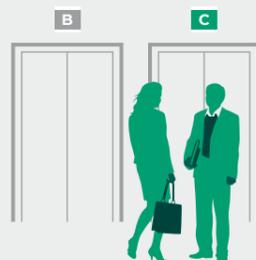
Step 1

Enter the destination floor into the input device

Step 2

An elevator is assigned and indicated

### Step 3

Board the assigned elevator

EFFICIENT

CONVENTIONAL GROUP SYSTEM · DESTINATION SELECTION SYSTEM (DSS)

Elevators are managed to minimize travel time to destination floors.
Big data and artificial intelligence determine peak-hour and door
operation patterns and optimize elevator operation efficiency.

MORE EFFICIENT OPERATION

### Performance comparison between Conventional Group System and Destination Selection System (DSS)

DSS sorts passengers according to destination floors to reduce the number of stops, waiting time, and boarding time.

VS

[CONVENTIONAL GROUP SYSTEM]

[DESTINATION SELECTION SYSTEM (DSS)]

60 (sec)
■ CONVENTIONAL GROUP SYSTEM
■ DESTINATION SELECTION SYSTEM (DSS)

50

40

30

20

10

0

24%

40%

[WAITING TIME]

[TRANSIT TIME]
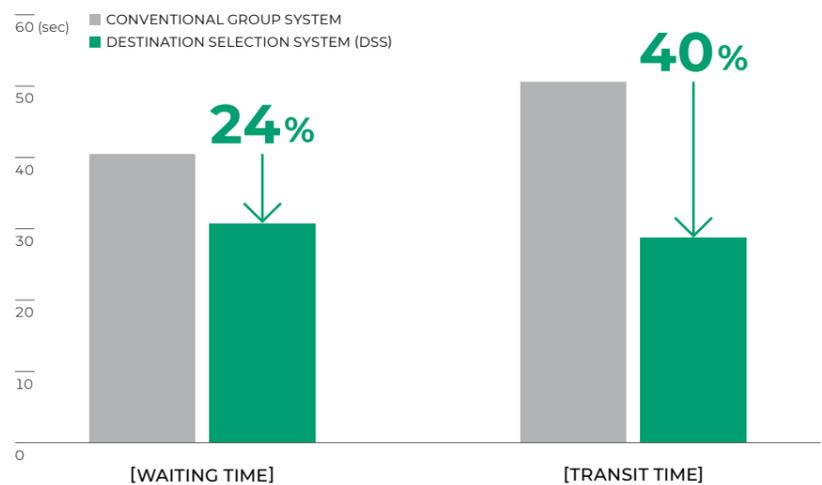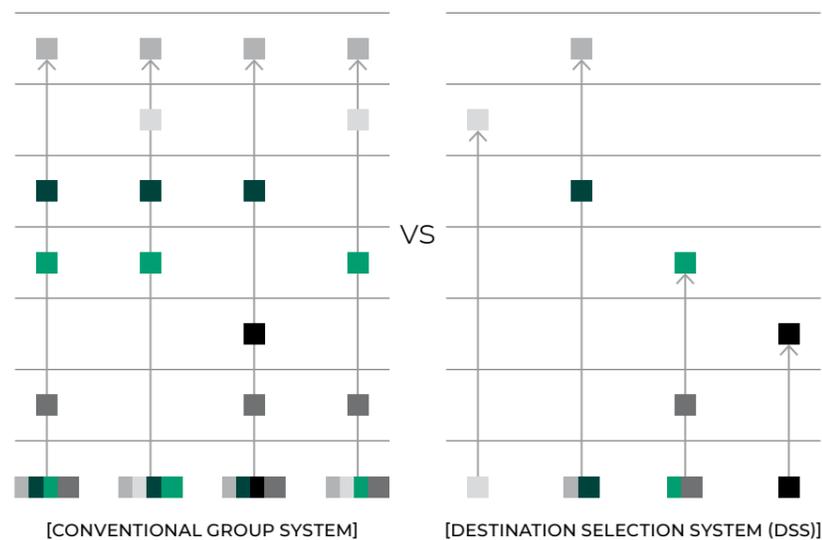
SMARTER CONTROL

Dynamic Zoning

DSS creates service zones automatically without pre-configurations to disperse passengers effectively. It shortens elevator travel distances and increases high-speed travel segments to reduce elevator round-trip durations during peak hours.

[CONVENTIONAL GROUP SYSTEM]

[DESTINATION SELECTION SYSTEM (DSS)]
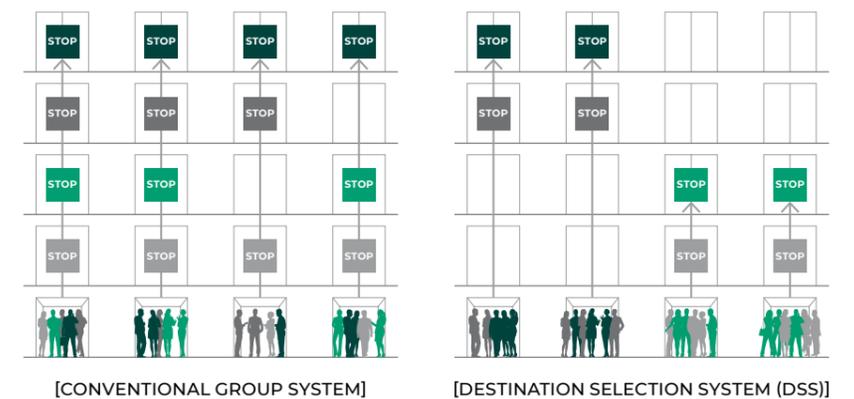
Learns and predicts elevator usage patterns using artificial intelligence technology

Daily traffic volume is predicted and group management is optimized with artificial intelligence to operate and control multiple elevators efficiently.

Peak   Peak

Prediction

[ELEVATOR TRAFFIC DISTRIBUTION AND AUTOMATIC ELEVATOR OPERATION]

[FUTURE CALL PREDICTION AND REAL-TIME CONGESTION MANAGEMENT]
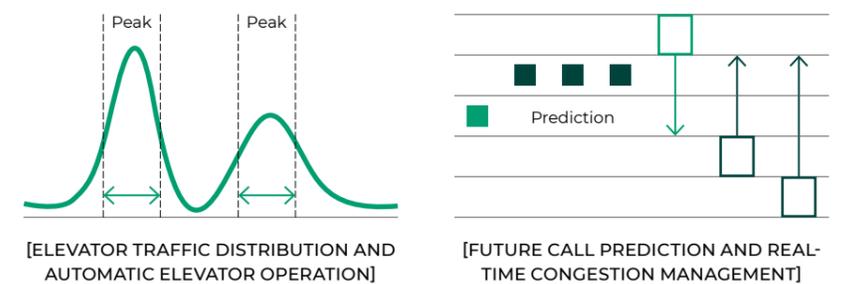
Elevator door time learning

Elevator door control patterns are learned automatically and incorporated into the group control algorithm, dispatching elevators in a way that optimizes passenger waiting times and operational efficiency.

CLEAN
DESTINATION SELECTION SYSTEM (DSS)

Elevator panels used by the public can be operated without physical contact to minimize the risk of viral transmission.

HYGIENIC ELEVATOR CALLING

Contact-free touch screen interface

With H-Solution's electrostatic contactless touch screen, destination floors can be entered without direct contact with the surface of elevator panels. (* for 10.1 Inch Untact Type - Capacitive Touch Screen LCD)
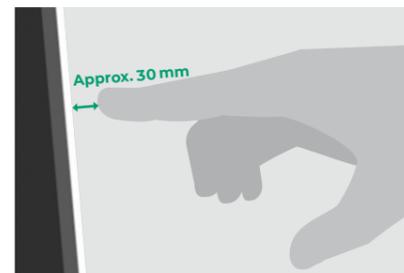
Hovering touch-type Destination Selection System(DSS) interface
[HTS-UB02 (UNTACT BOXLESS TYPE)]

Sensors' range

The interface recognizes finger motions within 30 mm of the surface.

* Virtual images have been used to help viewers' understanding.

Approx. 30 mm

SECURE
DESTINATION SELECTION SYSTEM (DSS)

A sophisticated design adds to the elegance of the building's lobby and enhances security by preventing unauthorized entry.

BUILDING SECURITY AND VISITOR MANAGEMENT

Building security system connection

IoT sensors can be linked to the building's security system to block unauthorized entry and ensure tenants' secure and efficient movement.
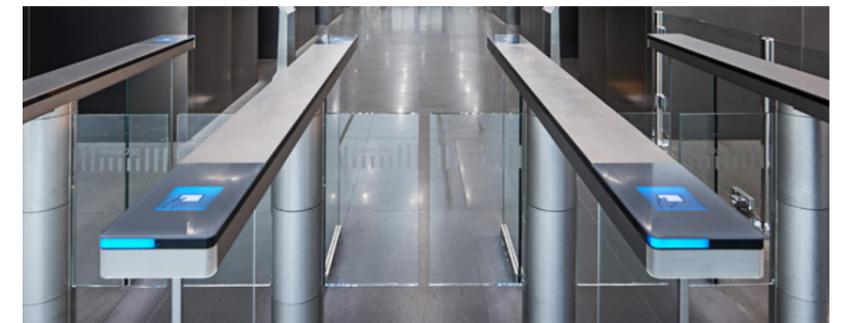
[CONTACT-FREE SPEEDGATE CALLING]

Reinforced security and convenience	Speedgate (card key) and Smart DSS connection
Floor access restriction linked to the building's security system	VIP elevator calling linked to the building's security system
Connection with a biometric (fingerprint, iris recognition) security system	OnePass high-rise building transfer system (call the elevator and transfer elevator in a single motion)

INTERACTIVE

CONFIGURED ACCORDING TO CUSTOMER PREFERENCE

Communicate with customers even during short waiting moments
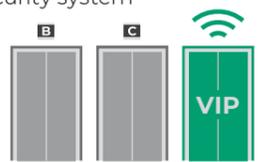providing LCD color themes, button designs, building information
and customized content for customers to choose.

4 TYPES OF LCD THEMES

Selectable screen color according to customers preference

LCD screen colors are provided in 4 types of themes so that customers can
choose according to customers preference or building design.
(*for 10.1 or 29 inch LCD)

| White | Black | Grey | Bronze |
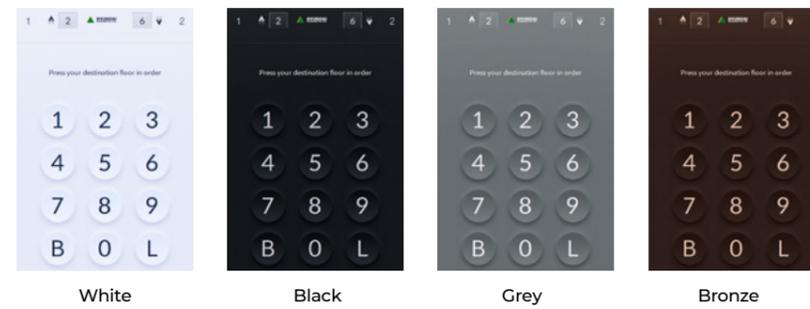
3 TYPES OF BUTTON DESIGNS

Button design choice according to customers preference

Buttons are provided in 3 types of designs so that customers can choose
according to customers preference or building design.
(*for 10.1 or 29 inch LCD)

| Grid | Square | Circular |
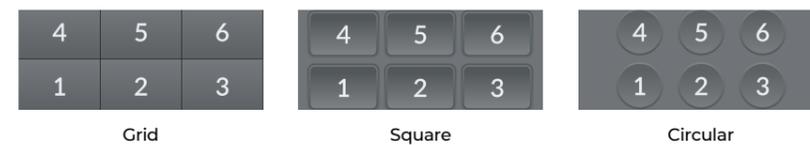
3 TYPES OF BUTTON INPUT MODES

Input method provided for convenience

Buttons input modes are provided in 3 types – destination floor selecting
type, 10 key type and group selecting type. (*group selecting type only for
10.1 inch LCD / others for 10.1 or 29 inch LCD)

destination floor selecting type   10 key type   group selecting type

CUSTOMIZED CONTENT

From building floor information to entertainment content

The 29-inch large LCD can display building floor information,
real-time weather & news and video contents in addition to the DSS.
(*for 29 inch LCD)

CI / LOGO

Video Contents
(advertisement,
real-time weather &
news and etc.)

Building Floor
Information
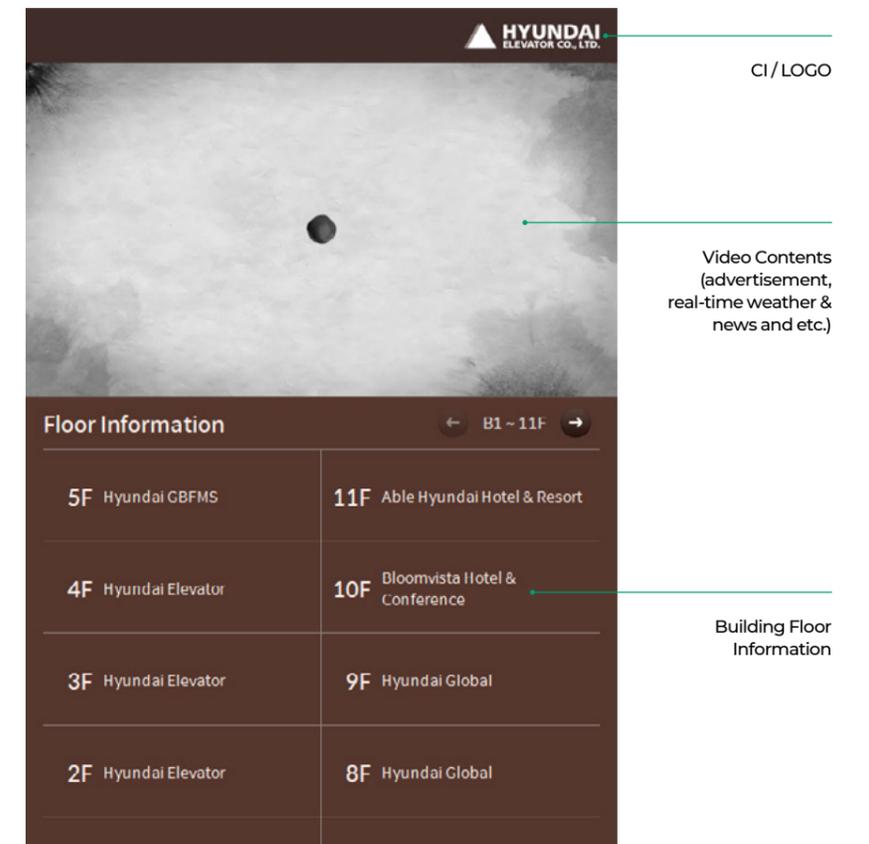
[EXAMPLE OF SCREEN CONFIGURATION]

DESIGN & DETAILS

A modern design suits any lobby and fine details reflect a deep consideration given to functionality and eco-friendliness.

SLIM SHAPE

The interface panel tapers toward the back to reinforce its slim form when viewed from the front. It can be embedded in the wall for an even slimmer, sleeker look.

HIGH-END MATERIALS

The front panel and buttons are made with metals such as hairline stainless steel and aluminum for durability and a sense of luxury.

USER-FRIENDLINESS

The spacing of buttons and the size of button labels have been optimized. The front surface of wall-mount panels comes with a 5-degree angle to improve visibility.

ECO-FRIENDLY MATERIALS

The frame and rear structure casing were minimized and the use of plastic was reduced to promote eco-friendliness.
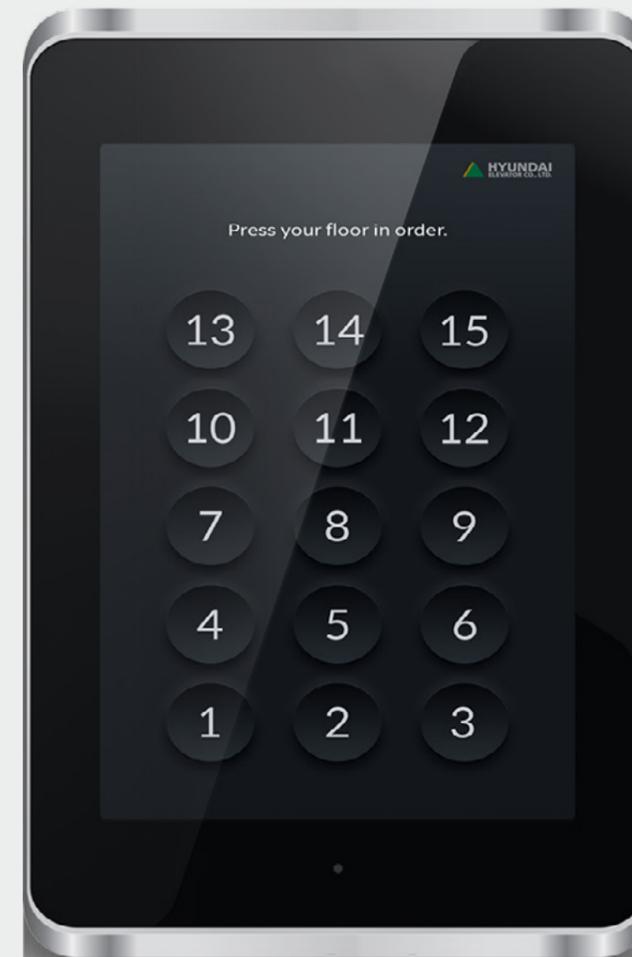
WINNER OF A GOOD DESIGN AWARD

The Good Design Award is one of the most prestigious design awards in Korea created in 1985 that is given based on a comprehensive evaluation of a product's appearance, functionality, materials, and economic feasibility.

PUSH BUTTON TYPE

HTL-B01 (BOXLESS TYPE) / HTL-A02 (BOX TYPE)

TOUCH SCREEN TYPE

HTS-B02 (BOXLESS TYPE) / HTS-A03 (BOX TYPE)

4.3" TFT LCD

The screen offers outstanding brightness and visibility

BLACK HAIRLINE

The surface has a durable black hairline finish with a spin hairline post-treatment that reinforces aesthetics.

DIAMOND CUTTING

Micro-spin diamond-cut button surfaces prevent finger slippage.

EN81-70:2018

Application of EN 81-70:2018 standards fulfill the needs of people with disabilities. Embossed button labels can be easily read even by the visually impaired.

180 mm (W) x 348 mm (H) x 65 mm (D)

TEMPERED GLASS

Tempered glass front panel resists strong impact.

10.1" TOUCH LCD

Large full-color touch screen features an intuitive user interface.

BUTTON DESIGN

High contrast between screen elements maximizes button visibility.

RF CARD READER

RF card recognition area complies with ultra-compact card reader standards

LCD GUI

A choice of 4 interchangeable background colors (black, gray, bronze, white) facilitate the matching with the interior of the hallway.

180 mm (W) x 348 mm (H) x 65 mm (D)

LCD GUI Colors

1. Welcome screen

2. Keypad screen before/after touch

3. Elevator dispatch screen
   (configured according to the site)
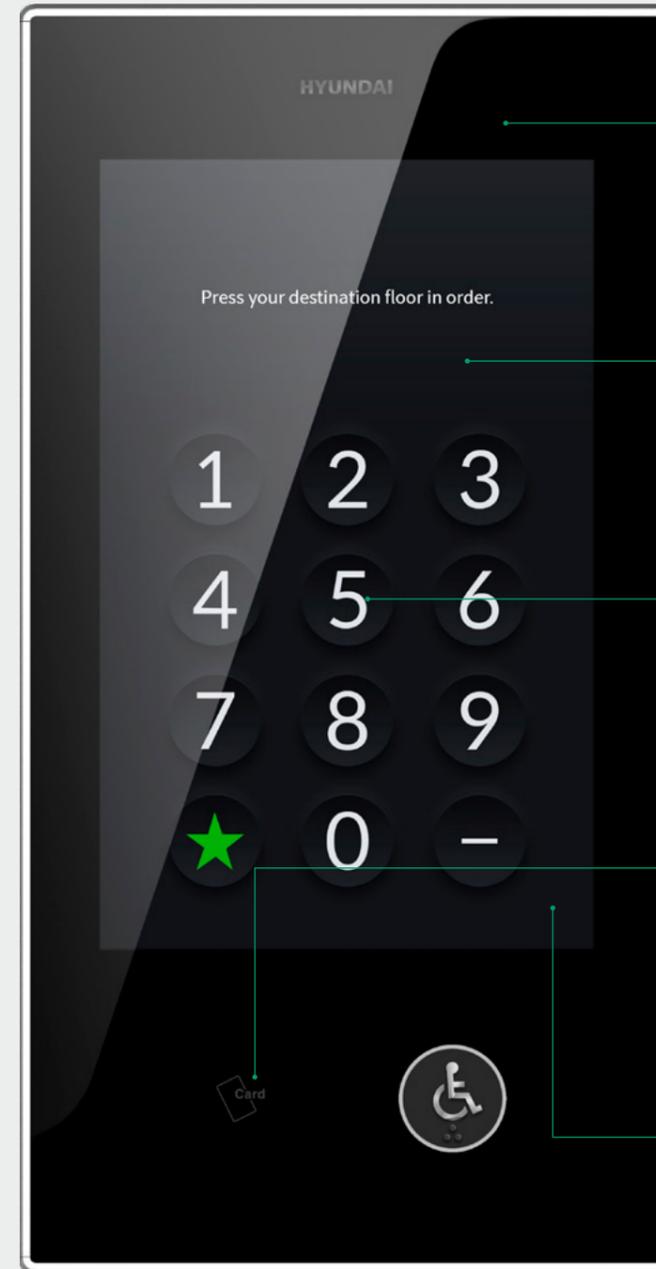
TOUCH SCREEN TYPE (29 INCH LARGE LCD)

HTS-B03 (BOXLESS TYPE)

VARIETY CONTENTS DISPLAY

Variety contents are displayed including building floor&elevator operation information, real-time weather & news and video contents etc

29 INCH LARGE LCD APPLICATED OF TEMPERED GLASS

A large touch LCD is applicated excellent durability thanks to the use of tempered glass on the front and can provide variety contents in addition to DSS functions.

BOARDING INFORMATION

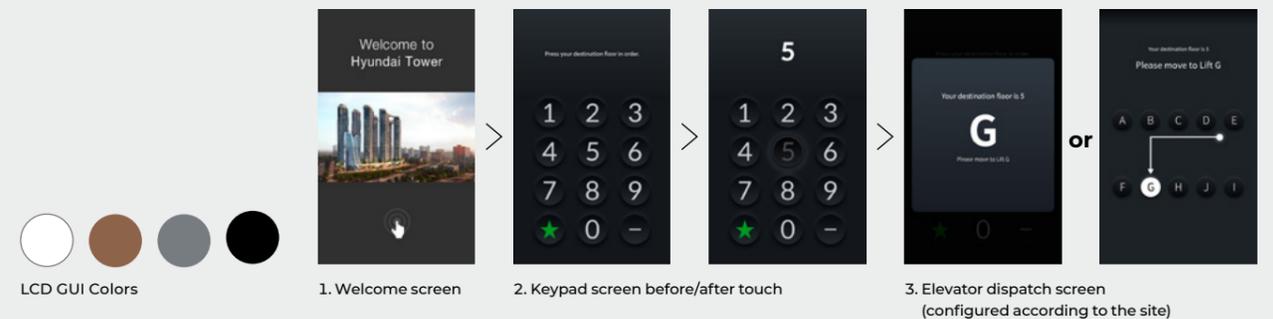Boarding elevator guidance is available by Pop-up or navigation(route guidance).

Pop-up   Navigation(route guidance)

VARIETY BUTTON FOR CUSTOMERS PREFERENCE & CONVINIENCE

Customers can choose 3 types of button designs(grid/Square/Circular) and 3 types of button input modes (destination floor selecting /10 key / group selecting).

Floor Information

3F	Hyundai Elevator	7F	Hyundai Movex
2F	Hyundai Elevator	6F	Hyundai Movex
1F	Lobby. Hana Bank	5F	Hyundai GBFMS
B1	Parking lot	4F	Hyundai Elevator

Lift 1	11 10 9 8 7 ·	1 ∨
Lift 2	10 5 1 B2	B3 ∨
Lift 3	1 4 7 9	7 ∧
Lift 4	1 3 6 9	10 ∧

Press your destination floor

13 14 15
10 11 12
7 8 9
4 5 6
1 2 3
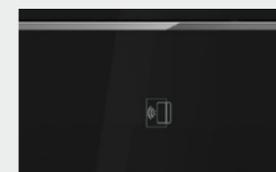B2 B1

224mm (W) x 840mm (H) x 45mm (D)

LCD THEMES

Customers can choose 4 types of LCD themes according to preference or building design. (white/black/grey/bronze)

RF CARD READER/EN81-70:2018

A large touch LCD is applicated tempered glass.

RF CARD READER APPLICATED 1)

RF CARD READER AND EN81-70:2018 APPLICATED 2)

1) Only ultra-small card device can be embedded.
As a standard product,
Hyundai Elevator supply the device.
2) Application of EN81-70:2018 standards fulfill the needs of people with disabilities.
Embossed button labels can be easily read even by the visually impaired.

[EXAMPLE OF DISPLAY DESIGN]

FIXTURES

INPUT DEVICE

HTL-B01 (BOXLESS TYPE)   HTS-B02 (BOXLESS TYPE)
HTL-A02 (BOX TYPE)   HTS-A03 (BOX TYPE)
                         HTS-UB02 (UNTACT BOXLESS TYPE)
                         HTS-UA03 (UNTACT BOX TYPE)

HTK-B05C (BOXLESS TYPE)   HTK-B15C (BOXLESS TYPE)

HTS-B03 (BOXLESS TYPE)

KIOSK

HTS-K03

CUBIC HALL LANTERN

HLS-NA1
UP: GREEN
DOWN: ORANGE

HLS-NA2
UP & DOWN: WHITE

* Product images have been created to help viewers' understanding. Design and colors depicted may differ from the actual products'.

APPLICATIONS

H-solution's functions and cost can be optimized to fit the size and purpose of a building so that group control can be implemented effectively.

APARTMENTS AND MIXED-USE BUILDINGS
– 2 elevators
– DUPLEX

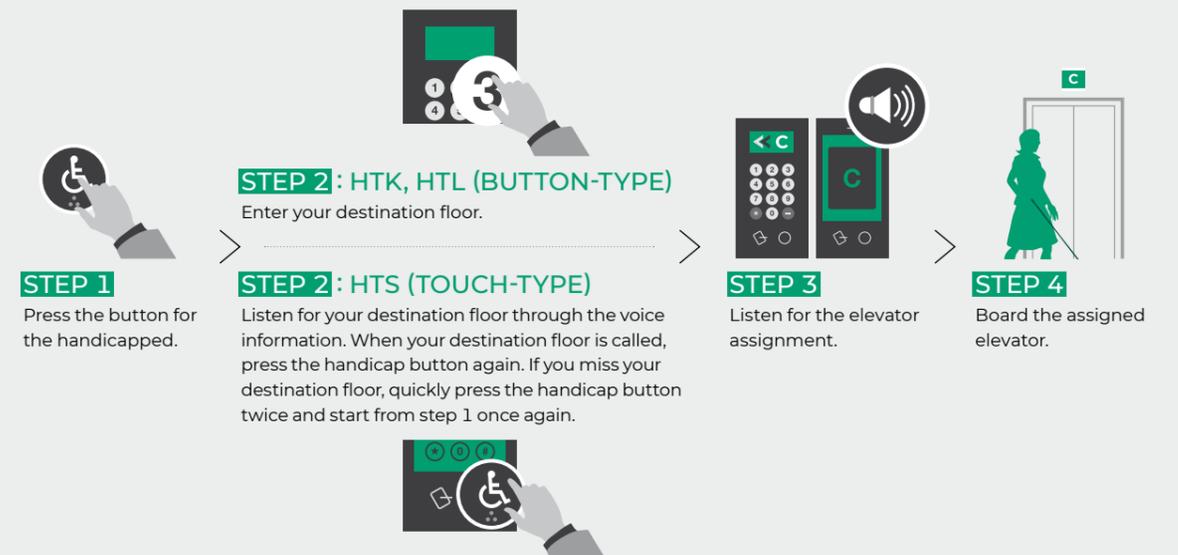## SMALL AND MEDIUM-SIZED OFFICES, HOSPITALS, HOTELS
– 3~4 elevators
– HRGC-500

MULTIPLEX, HIGH-RISE, AND ULTRA HIGH-RISE BUILDINGS
– 5~10 elevators
– HRGC-5000

EN81-70 COMPLIANT HANDICAP ELEVATOR CALL PROCEDURES

STEP 1
Press the button for the handicapped.

STEP 2 : HTK, HTL (BUTTON-TYPE)
Enter your destination floor.

STEP 2 : HTS (TOUCH-TYPE)
Listen for your destination floor through the voice information. When your destination floor is called, press the handicap button again. If you miss your destination floor, quickly press the handicap button twice and start from step 1 once again.

STEP 3
Listen for the elevator assignment.

STEP 4
Board the assigned elevator.