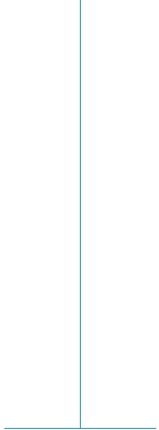




OBSERVATION  
ELEVATORS

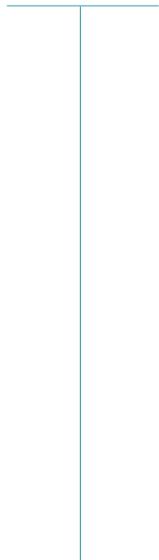


**HYUNDAI**  
ELEVATOR CO., LTD.



# THROUGH THE WINDOW

Experience  
Advanced Value



03

INTRO

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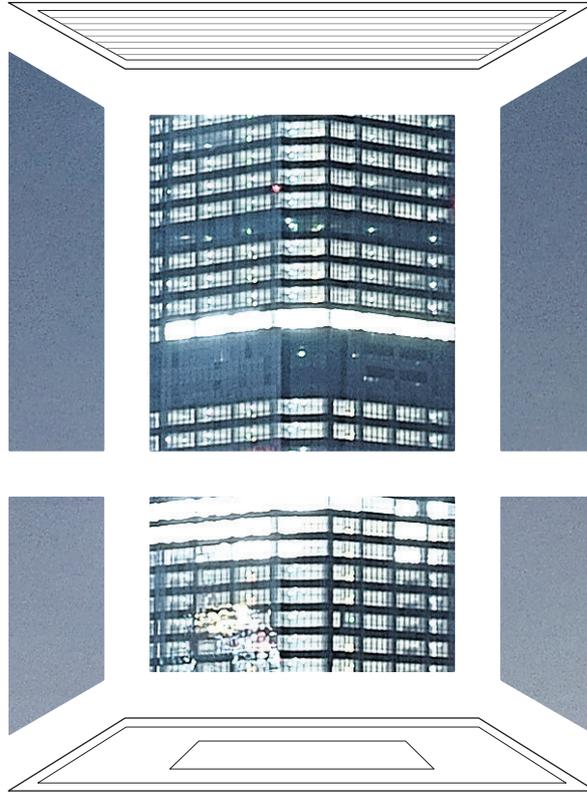
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36

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39

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THE INSTALLATION



# OBSERVATION ELEVATORS

**Add a touch of elegance to  
your buildings with Hyundai  
Elevator's proprietary  
cutting-edge technology  
and refined design**

Designed to offer passengers an enchanting view through partially transparent windows, Observation Elevators bestow a touch of elegance upon a diverse range of buildings, including hotels, shopping malls, offices, hospitals, and towers.

---

**△ HYUNDAI ELEVATOR CO., LTD.**

# THROUGH THE WINDOW

Experience  
Advanced Value

Experience for yourself the  
excellence of **Observation  
Elevators** – a **No. 1 brand in  
the global elevator industry**



#### **Diverse Product Lineup**

Elevate customer satisfaction a variety of panoramic window options, including 1-side, 2-side, 3-side, round type window or glass-walled elevators.



#### **Space Utilization**

Expand the space utilization by designing elevator shafts on the exterior of buildings



#### **Technical Prowess**

Ensure ultimate safety and pleasant experiences enabled by Hyundai's distinctive technological prowess and rigorous testing



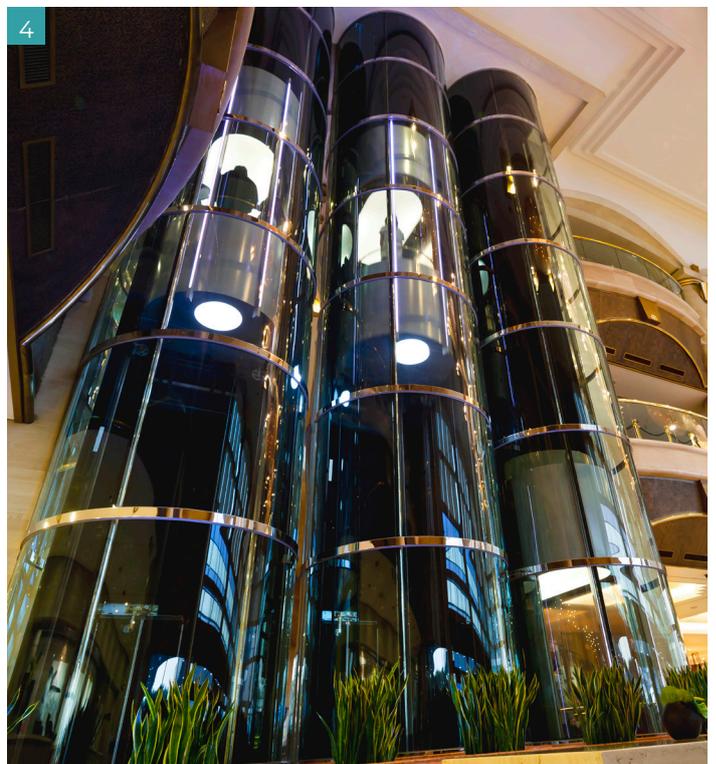
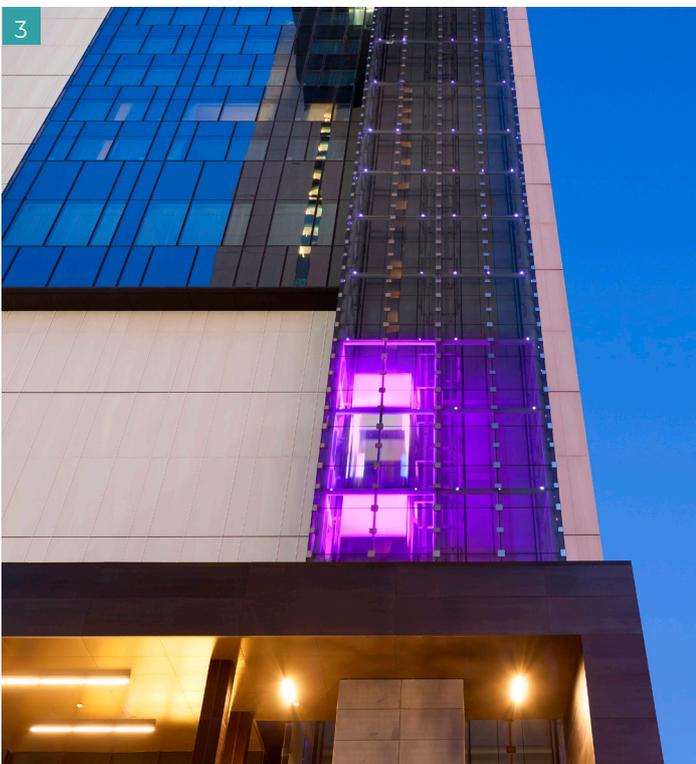
#### **Added Value for Buildings**

Further increase the value of your buildings with unobstructed panoramic views



# ADD A TOUCH OF ELEGANCE TO YOUR BUILDINGS WITH HYUNDAI ELEVATOR'S PROPRIETARY CUTTING-EDGE TECHNOLOGY AND REFINED DESIGN.

Observation elevators seamlessly match a wide array of architectural structures, ranging from hotels, shopping malls, and office buildings to hospitals, residential complexes, and observation towers. Embodying emerging trends and customer preferences, Hyundai Elevator's contemporary design and advanced technology have received significant recognitions for their value in numerous high-profile buildings.

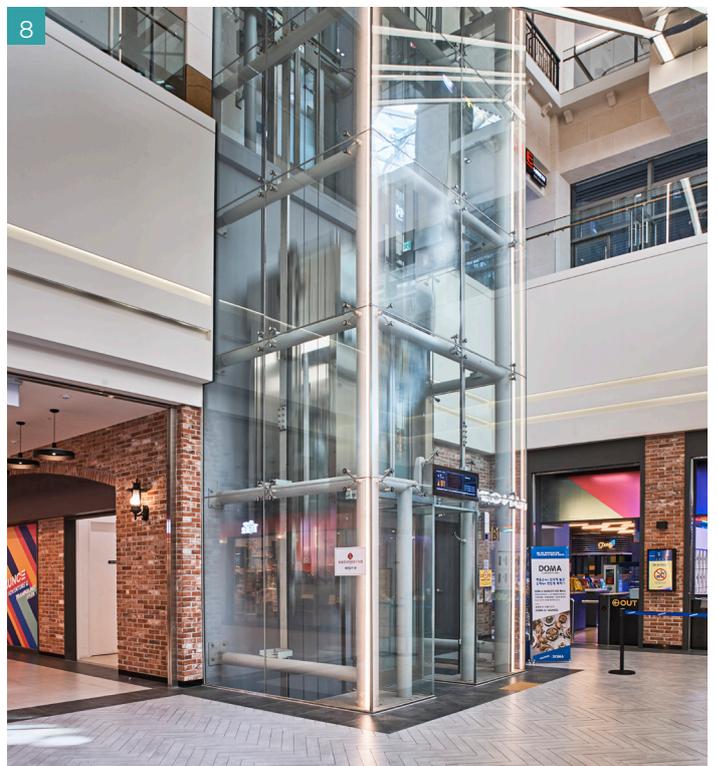
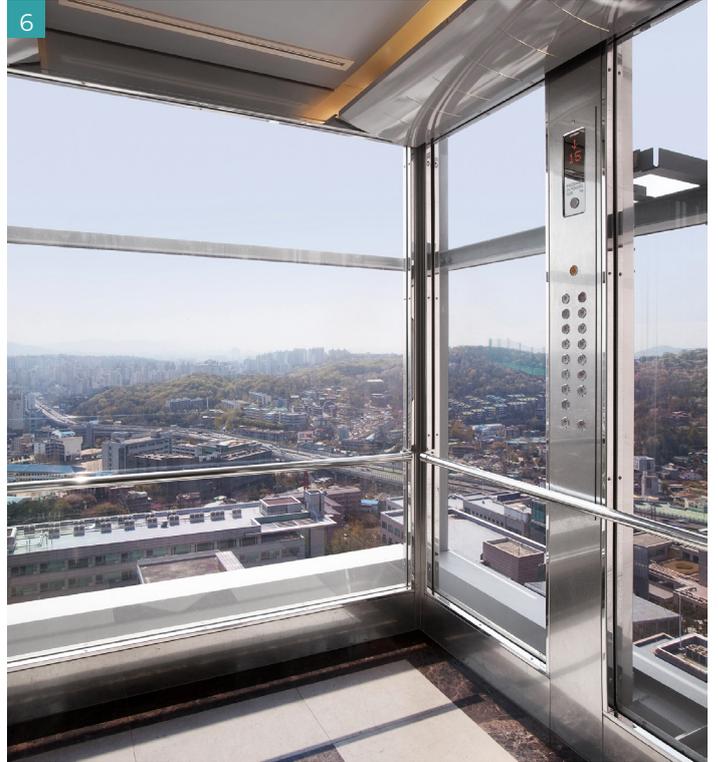


1. HD Hyundai Heavy Industries R&D Center

2. Lotte World Mall in Jamsil, Seoul

3. Dragon City Hotel in Yongsan, Seoul

4. Haeundae Grand Hotel in Busan



5. Park Hyatt Hotel in Busan

6. Kookmin University

7. Hill State Songdo The Terrace

8. W Apartment in Yongho-dong, Busan



# OBSERVATION ELEVATORS

## LINE-UP

Enable customers to select the optimal model that aligns with architectural needs, encompassing location, height, and interior space by offering an array of panoramic view options, including 1-side, 2-side, 3-side, semi-circled, and glass-walled designs. Elevate customer satisfaction by incorporating sleek and trendy designs that perfectly complement the building's aesthetics.





# SQ-121A

1-side Observation Elevator

## Exterior Design

**Exterior panels** Painted steel (P021), Glass

## Interior Design

**Ceiling** CD219A (Painted steel/P022), Skylight 10T  
**Car wall** Stainless hairline, Stainless hairline etching (SE2302), Glass  
**Door** Stainless hairline etching (SE2302)  
**Hand rail** Single stainless rod (1R) / Glossy finishing  
**OPB** OPP-N264A / Stainless hairline  
**Position indicator** PI-D700  
**Flooring** Deco tile (DTE2246, DTE2251)

Front



Rear



- Precautions**
- Ceiling and wall divisions may vary according to passenger capacity.
  - The colors of indicator lights are subject to change for design change or improvement purposes. Please seek guidance from our sales team when making a purchase.
  - Product and design images are for reference purposes and may differ in color from the actual product.



# SQ-129A

1-side Observation Elevator

## Exterior Design

**Exterior panels** Painted steel (P016), Glass  
**Exterior lighting** Acrylic, LED lighting

## Interior Design

**Ceiling** CD253A (Painted steel/ P021,P022), Led down light, Skylight10T  
**Car wall** Stainless hairline, Stainless hairline etching (SE231), Glass  
**Door** Stainless hairline etching (SE231)  
**Hand rail** Single stainless rod (1R) / Glossy finishing  
**OPB** OPP-N264A / Stainless hairline  
**Indicator** PI-L700  
**Flooring** Deco tile (DTE2246, DTE2494)

Front



Rear





# SQ-129B

1-side Observation Elevator

## Exterior Design

<b>Exterior panels</b>	Painted steel (P021), Glass
<b>Exterior lighting</b>	Acrylic, LED lighting

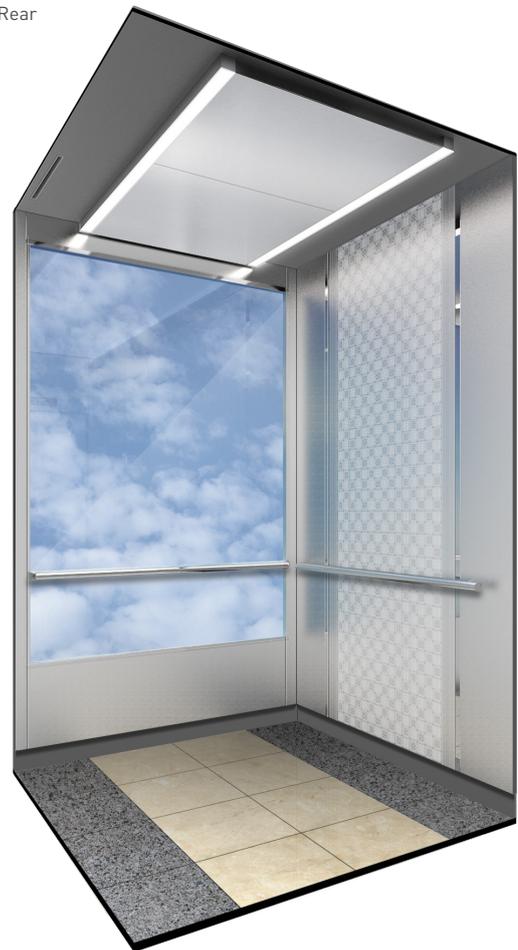
## Interior Design

<b>Ceiling</b>	CD191B / Artmetal silver (AM01), LED bar-type module (P022), Ceiling panel (Painted steel / P024)
<b>Car wall</b>	Stainless hairline, Stainless hairline etching (SE2303), Stainless mirror trim (30mm), Glass
<b>Door</b>	Stainless hairline etching (SE2303)
<b>Hand rail</b>	Single stainless rod (1R) / Glossy finishing
<b>OPB</b>	OPP-N264A / Stainless hairline
<b>Position indicator</b>	PI-D900
<b>Flooring</b>	Deco tile (DTE2125, DTE2415)

Front



Rear



- Precautions**
- Ceiling and wall divisions may vary according to passenger capacity.
  - The colors of indicator lights are subject to change for design change or improvement purposes. Please seek guidance from our sales team when making a purchase.
  - Product and design images are for reference purposes and may differ in color from the actual product.



# SQ-119C

2-side Observation Elevator

## SQ-119Z



\* Excluding external lighting

### Exterior Design

<b>Exterior panels</b>	Painted steel (P011), Glass
<b>Exterior lighting</b>	LED signal panel (with up/down arrow marks), LED down light

### Interior Design

<b>Ceiling</b>	CD219A (Painted steel/ P022), Skylight10T
<b>Car wall</b>	Stainless hairline, Stainless hairline etching (SE2310), Glass
<b>Door</b>	Stainless hairline etching (SE2310)
<b>Hand rail</b>	Single stainless rod (1R) / Glossy finishing
<b>OPB</b>	OPP-N264A / Stainless hairline
<b>Position indicator</b>	PI-L900A
<b>Flooring</b>	Deco tile (DTE2246, DTE2125, DTE2251)

Front



Rear



- Precautions**
- Ceiling and wall divisions may vary according to passenger capacity.
  - The colors of indicator lights are subject to change for design change or improvement purposes. Please seek guidance from our sales team when making a purchase.
  - Product and design images are for reference purposes and may differ in color from the actual product.



# HG-132A

3-side Observation Elevator

## Exterior Design

<b>Exterior panels</b>	Painted steel (P021), Glass
<b>Exterior lighting</b>	Acrylic lens/LED lighting

## Interior Design

<b>Ceiling</b>	CD524A (Painted steel/ P021), LED down light, Indirect lighting
<b>Car wall</b>	Stainless hairline, Stainless hairline etching (SE1591), Stainless mirror trim (30mm), Glass
<b>Door</b>	Stainless hairline
<b>Hand rail</b>	Single stainless rod (1R) / Glossy finishing
<b>OPB</b>	OPP-N264A / Stainless hairline
<b>Position indicator</b>	PI-D700
<b>Flooring</b>	Deco tile (DTE2125, DTE2246, DTE2415)

Front



Rear



- Precautions**
- Ceiling and wall divisions may vary according to passenger capacity.
  - The colors of indicator lights are subject to change for design change or improvement purposes. Please seek guidance from our sales team when making a purchase.
  - Product and design images are for reference purposes and may differ in color from the actual product.



# HG-339A

3-side Observation Elevator

## Exterior Design

<b>Exterior panels</b>	Painted steel (E56305), Glass
<b>Exterior lighting</b>	Acrylic, LED lighting, LED down light

## Interior Design

<b>Ceiling</b>	CD419E (Painted steel/ P024), LED down light, Acrylic
<b>Car wall</b>	Stainless hairline, Stainless hairline etching (SE1591), Stainless mirror trim (30mm), Glass
<b>Door</b>	Stainless hairline
<b>Hand rail</b>	Single stainless rod (1R) / Glossy finishing
<b>OPB</b>	OPP-N264A / Stainless hairline
<b>Position indicator</b>	PI-D700
<b>Flooring</b>	Deco tile (DTE2246, DTE2125)

Front



Rear



- Precautions**
- Ceiling and wall divisions may vary according to passenger capacity.
  - The colors of indicator lights are subject to change for design change or improvement purposes. Please seek guidance from our sales team when making a purchase.
  - Product and design images are for reference purposes and may differ in color from the actual product.



# SC-419A

Semi-circled Observation Elevator

## Exterior Design

<b>Exterior panels</b>	Painted steel (P021), Glass
<b>Exterior lighting</b>	LED lighting, Milky white acrylic lighting on the car bottom

## Interior Design

<b>Ceiling</b>	CD461F(Painted steel/ P017), Milky-white acrylic lighting
<b>Car wall</b>	Stainless linen, Stainless mirror trim (30mm), Glass, Sheet
<b>Door</b>	Stainless linen
<b>Hand rail</b>	Single stainless rod (1R) / Glossy finishing
<b>OPB</b>	OPP-N264A / Stainless linen
<b>Position indicator</b>	PI-D900
<b>Flooring</b>	Granite (Pocheon stone)/Water-jet-processed

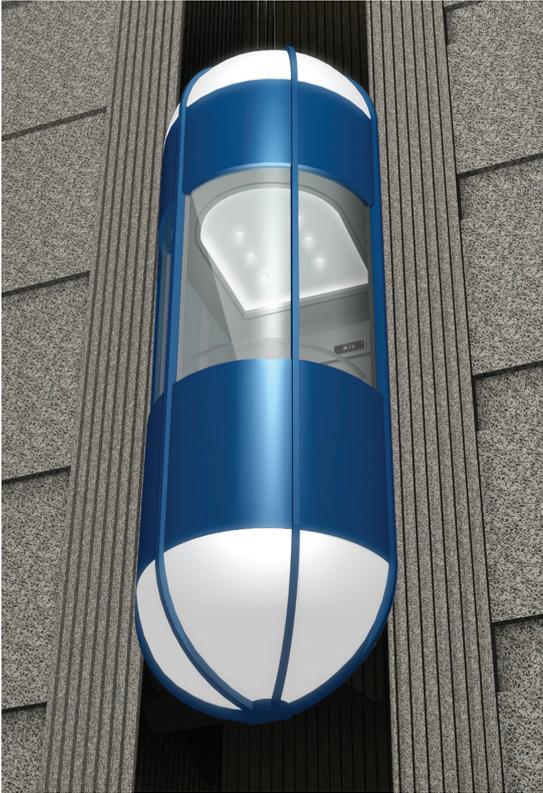
Front



Rear



**Precautions** -As this model is subject to site-specific certification for on-site panoramic glass from the Korea Elevator Safety Agency, please be aware that there will be additional costs and an extended lead time (anticipated to be approximately 7 months or more from order placement to installation commencement) due to individual certification processes. Please contact our sales representatives for further information.



# SC-846A

Semi-circled Observation Elevator

## Exterior Design

<b>Exterior panels</b>	Painted steel (G6114008), Glass
<b>Exterior lighting</b>	Milky white curved acrylic lighting on upper-bottom sides of the car

## Interior Design

<b>Ceiling</b>	CD523C (Painted steel/ P021, P022), Led down light, Indirect lighting
<b>Car wall</b>	Stainless 3S vibration, Stainless mirror, Glass
<b>Door</b>	Stainless 3S vibration
<b>Hand rail</b>	Single stainless rod (1R) / Glossy finishing
<b>OPB</b>	OPP-N264A / Stainless 3S vibration
<b>Position indicator</b>	PI-L900A
<b>Flooring</b>	Marble (Maron Emperado Dark, Crema Marfil) / Water-jet-processed

Front



Rear



- Precautions**
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  - The colors of indicator lights are subject to change for design change or improvement purposes. Please seek guidance from our sales team when making a purchase.
  - Product and design images are for reference purposes and may differ in color from the actual product.
  - As this model is subject to site-specific certification for on-site panoramic glass from the Korea Elevator Safety Agency, please be aware that there will be additional costs and an extended lead time (anticipated to be approximately 7 months or more from order placement to installation commencement) due to individual certification processes. Please contact our sales representatives for further information.

# ND-01

Glass-walled elevator



## Interior Design

<b>Ceiling</b>	CD511B (Painted steel/ P021), Aluminum (Dark grey), NST Embo Beads, PSU Panel, LED lighting
<b>Car wall</b>	Stainless hairline, Glass
<b>Door</b>	Stainless hairline, Glass, Semi-opaque sheet
<b>Hand rail</b>	Single stainless rod (1R) / Glossy finishing
<b>OPB</b>	OPP-N264A, OPP-N264A(for the disabled) / Stainless hairline
<b>Position indicator</b>	PI-D700
<b>Flooring</b>	Deco tile (DTE2246, DTE2251)

Front



Rear



- Precautions**
- Ceiling and wall divisions may vary according to passenger capacity.
  - The colors of indicator lights are subject to change for design change or improvement purposes. Please seek guidance from our sales team when making a purchase.
  - Product and design images are for reference purposes and may differ in color from the actual product.



# ND-02

Glass-walled elevator

## Interior Design

<b>Ceiling</b>	CD253A (Painted steel/ P021, P022), LED down light, Skylight10T
<b>Car wall</b>	Stainless hairline, Glass
<b>Door</b>	Stainless hairline, Glass, Semi-opaque sheet
<b>Hand rail</b>	Single stainless rod (1R) / Glossy finishing
<b>OPB</b>	OPP-N264A, OPP-N264A(for the disabled) / Stainless hairline
<b>Position indicator</b>	PI-L700
<b>Flooring</b>	Deco tile (DTE2245, DTE2251)

Front



Rear



- Precautions**
- Ceiling and wall divisions may vary according to passenger capacity.
  - The colors of indicator lights are subject to change for design change or improvement purposes. Please seek guidance from our sales team when making a purchase.
  - Product and design images are for reference purposes and may differ in color from the actual product.

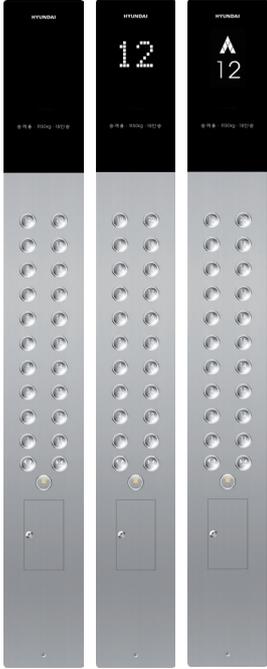
# FIXTURES

## CAR OPERATING PANEL

D: DOT TYPE / L: LCD TYPE

### Standard type

\*3 Digit Possible Type



OPP-N521A / OPP-D521A / OPP-L521B

Compatible button 21, 64 TYPE

### Premium type



OPP-N264A / OPP-D264B / OPP-L264

Compatible button 21, 64, 66, 90, 94, 5A, 9A TYPE



OPP-N364 / OPP-L300TA\*

### Handicapped Type



OPP-N221W

Compatible button 21, 64, 66, 5A TYPE

※ When applying the door hold button (open), please contact us.

※ \* is not applicable for the handicapped elevator.

※ The control panel image is for emergency use reference.

## BUTTONS

### Standard type



21 TYPE

64 TYPE

5A TYPE

### Premium type



66 TYPE

90, 94 TYPE\*

※ 90 TYPE is a premium type (with welcome lighting), and 94 TYPE is an economic type (without welcome lighting).

※ The product's illumination color may be subject to change due to design development and enhancement.

※ \* is not applicable for the handicapped elevator.

**Precautions** · Product images are for reference purposes and may differ in color from the actual product.

## HALL BUTTONS

D: DOT TYPE / L: LCD TYPE

### General type



HIT-DC100 / HIT-LC100A / HTB-C100\*



HIP-D221A / HPB-221



HIP-D8211 / HPB-821



HIP-D664C / HPB-664

### Foot buttons

Inclined for enhanced convenience



HIP-DB64(F) / HIP-LB64(F) / HPB-B64(F)  
HIP-DB64 / HIP-LB64 / HPB-B64\*\*

Compatible  
button Boxless type: 21, 64, 5A TYPE  
Box type: 21, 64, 5A, 9A, 94 TYPE

Compatible button Boxless type: 21, 64, 5A TYPE

- ※ HIP-D221A / HPB-221 are box type hall buttons, others are boxless type.
- ※ Depending on the selection button, fire rescue applicability varies for hold button types, please consult the sales representative when purchasing.
- ※ \* is not applicable for the handicapped elevator.
- ※ \*\* Applicable for general types excluding foot button function.  
When applying the general type, the model name (F) and bottom foot button sensor are excluded.

## POSITION INDICATORS

D: DOT TYPE / L: LCD TYPE



PI-D700



PI-DC



PI-D110A



PI-L900A



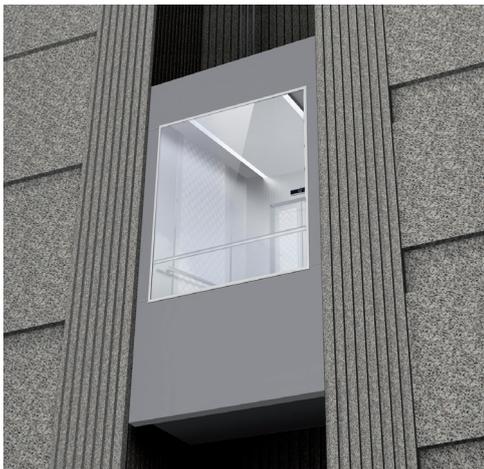
PI-D900



PI-L700

## WINDOW SIZE

### Standard sizes



### Optional sizes



# FIXTURES

## CEILING

### Premium type



CD399A\*  
Barrisol, LED lighting, Lighting area (Painted steel P022),  
Ceiling panel (Painted steel P024)

※ \*is eligible for firefighting and rescue with an interior depth of 1400 or more.

### Standard type



CD191B\*  
Artmetal silver(AM01), LED bar-type module  
(P022), Ceiling panel (Painted steel/P024)



CD199A\*  
Aluminum (silver), PC ABS, LED lighting, Ceiling  
plate (Painted steel/P021)



CD219A\*  
Painted steel(P022), Skylight10T

※ When replacing with stainless steel mirror, the model name changes to CD191D from Art Metal Silver (AM01).



CD253A\*  
Painted steel(P021, P022), SKYLITE 10T, LED down  
light



CD571C  
Aluminum (Silver), Stainless Mirror Trim, NST Embo  
Bead Trim, PSU panel, LED lighting, Ceiling plate  
(Painted steel/P021)



CD511B\*  
Aluminum (dark gray), NST Embo Beads, PSU Panel,  
LED lighting, Ceiling panel (Painted steel/P021)



CD571B\*  
Aluminum (silver), PSU panel, LED lighting, Ceiling  
plate (Painted steel/P021)



CD571A\*  
Aluminum (silver), PSU panel, LED lighting, Ceiling  
plate (Painted steel/P021)

※ \*is eligible for firefighting and rescue with an interior depth of 1400 or more.

**Precautions** · Product images are for reference purposes and may differ in color from the actual product.

## HALL LANTERNS

D: DOT TYPE



※ The color of the hall lantern lamp is Lime Green when lighting upwards and Yellow Gold when lighting downwards.

## HANDRAILS



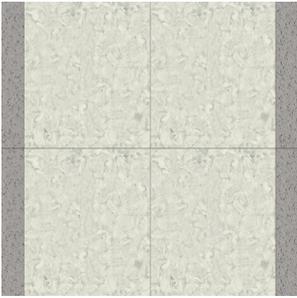
By incorporating anti-viral materials on handrails, a high-contact area, we ensure the safety of users from potential virus exposure.

※ \* is not applicable for the handicapped elevator.

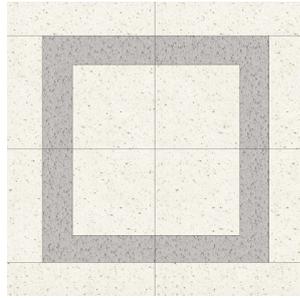
# FIXTURES

## FLOOR

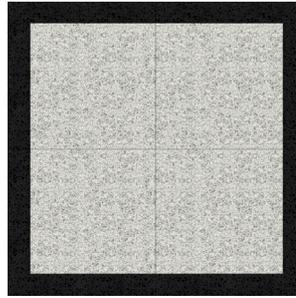
### Artificial marble



BL05, HS05



BL03, BL05

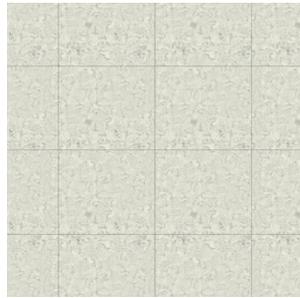


BL01, HS04

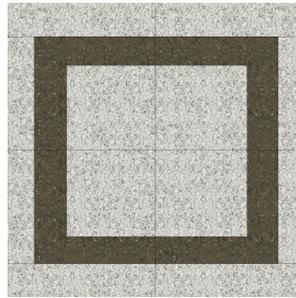
**Artificial marble flooring (12T)**  
The modern and stable pattern makes it blend seamlessly with any interior design and introduces elegance and sophistication to the ambiance.



HS02, BL03



HS05



HS03, HS04



BL01



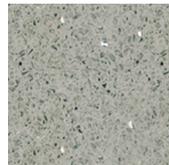
BL02



BL03



BL04



BL05



HS01



HS02



HS03



HS04



HS05

### Deco tile



DTE2125



DTE2245



DTE2246



DTE2251



DTE2415



DTE2402



DTE2494

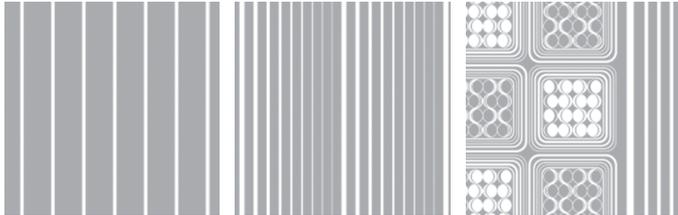


DTE2905

**Precautions** · Product images are for reference purposes and may differ in color from the actual product.

## ETCHING PATTERN

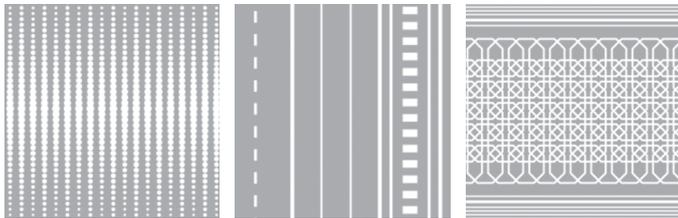
### Normal



SE1591

SE2302

SE2303



SE2304

SE2310

SE2311



SE2312

SE1168

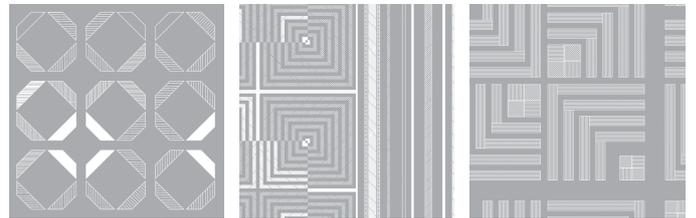
### Nano



SE3712

SE3713

SE3714



SE3715

SE3716

SE3717



SE3718

SE3719

※ The etched pattern in this catalog is depicted at 1/3 scale of the actual product.

※ ■:■ Embossed / □:□ Engraved etching

## PAINTED STEEL



P003

P009

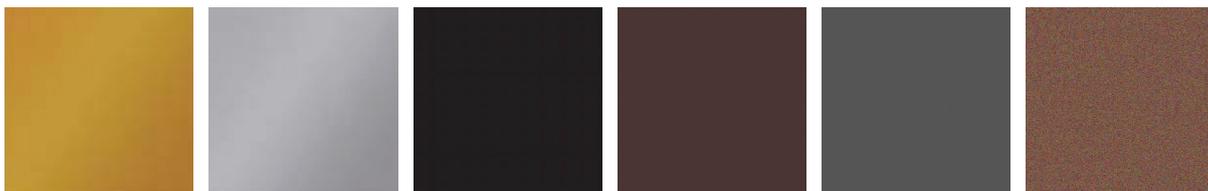
P011

P012

P016\*

P017

P019



P020\*

P021\*

P022

P023

P024

P025

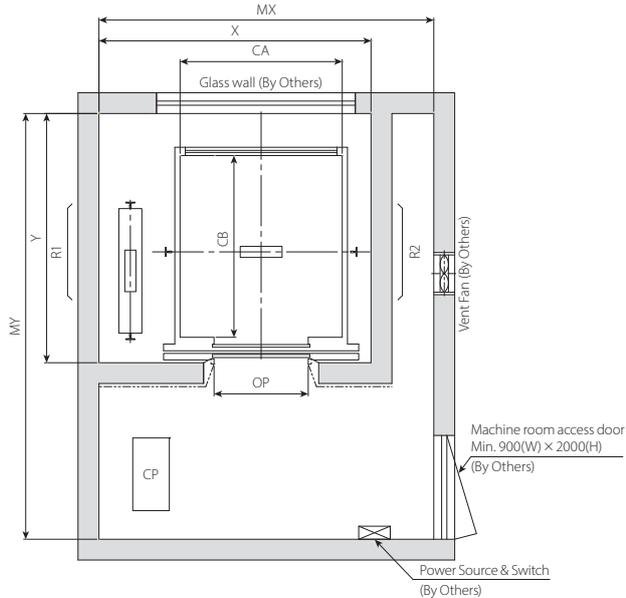
※ \* is a metallic color, so it may differ from the actual color.

# LUXEN(GEARLESS) LAYOUT PLAN

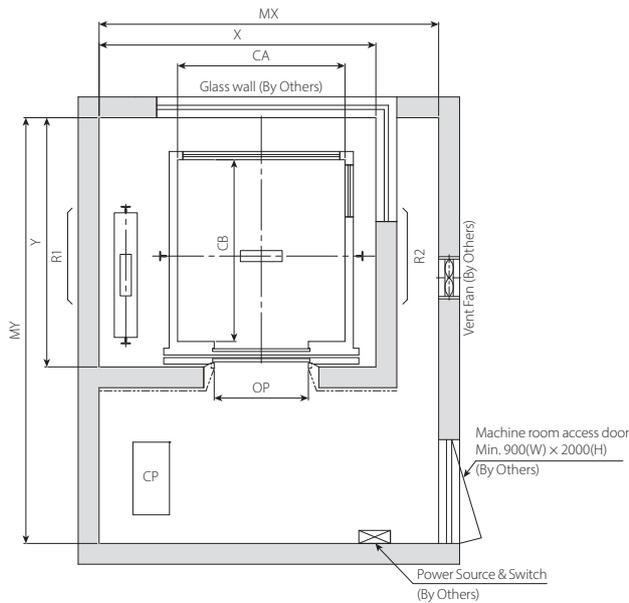
1-SIDE TYPE, 2-SIDE TYPE ELEVATORS

## LAYOUT PLAN

Plan of Hoistway & Machine Room

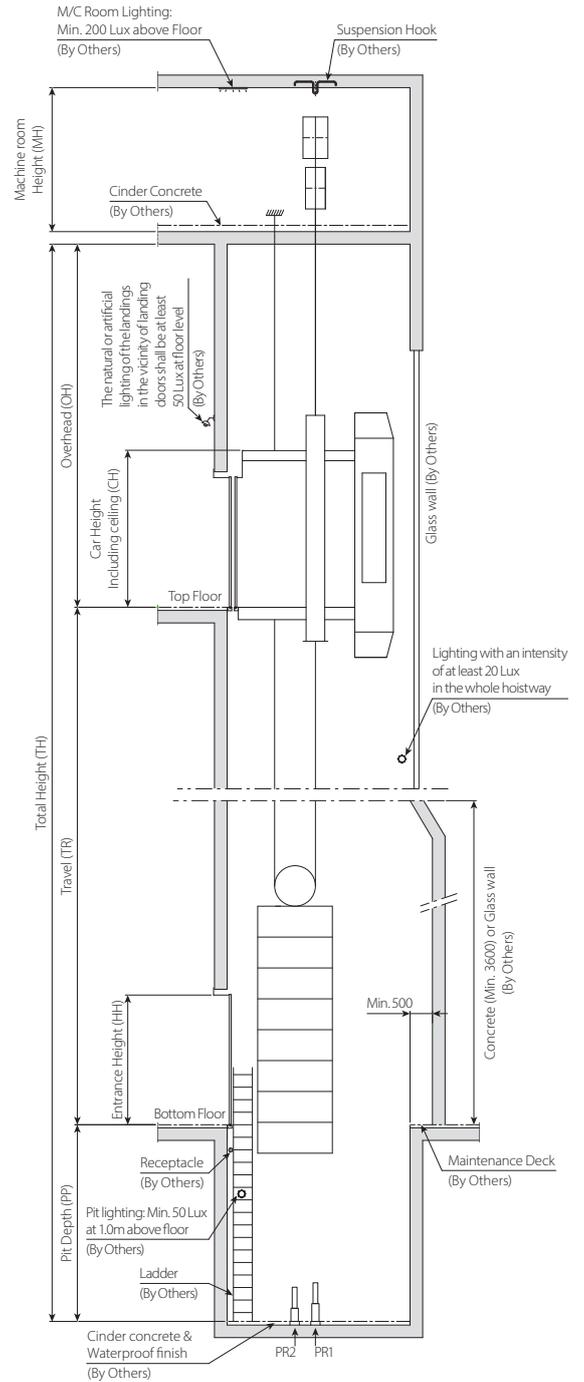


1 SIDE TYPE



2 SIDES TYPE

Section of Hoistway



## MANUFACTURER STANDARD

(Unit:mm)

Type	Speed (m/sec)	Capacity		Opening Type	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)	M/C Room Reaction (kg)		Pit Reaction (kg)	
		Persons	Kg		OP	CA x CB	X x Y	MX x MY	R1	R2	PR1	PR2
1 SIDE (REAR)	1.0	7	550	1S-CO	800	1100 x 1300	2100 x 1800	2450 x 3800	5350	3000	7300	6200
		8	600 (630)		800	1100 x 1400	2100 x 1900	2450 x 3900	5550	3100	7600	6400
		9	700		800	1250 x 1350	2150 x 1850	2500 x 3850	5900	3300	8200	6800
		10	750 (800)		800	1300 x 1400	2200 x 1900	2550 x 3900	6100	3400	8500	7000
	1.5	12	900		900	1600 x 1350	2500 x 1850	2850 x 3850	6800	3750	9550	7750
		13	1000		900	1600 x 1400	2500 x 1900	2850 x 3900	7100	3900	10100	8150
		15	1150		1000	1800 x 1400	2850 x 1900	3200 x 3900	8900	5300	12800	10500
		18	1350		1000	1800 x 1600	2850 x 2100	3200 x 4100	9000	6650	14100	11400
		21	1600		1100	2000 x 1700	3050 x 2200	3400 x 4200	9850	7050	15500	12300
		24	1800		1100	2000 x 1800	3050 x 2300	3400 x 4300	9950	7300	16300	12900
2 SIDES (REAR & 1 SIDE)	1.0	7	550	1S-CO	800	1100 x 1300	2100 x 1800	2450 x 3800	5400	3050	7500	6400
		8	600 (630)		800	1100 x 1400	2100 x 1900	2450 x 3900	5600	3120	7800	6600
		9	700		800	1250 x 1350	2250 x 1850	2600 x 3850	5950	3350	8400	7000
		10	750 (800)		800	1300 x 1400	2300 x 1900	2650 x 3900	6100	3450	8700	7200
	1.5	12	900		900	1600 x 1350	2600 x 1850	2950 x 3850	6850	3750	9750	7950
		13	1000		900	1600 x 1400	2600 x 1900	2950 x 3900	7150	3930	10350	8350
		15	1150		1000	1800 x 1400	2800 x 1900	3150 x 3900	9000	5400	13000	10700
		18	1350		1000	1800 x 1600	2900 x 2100	3250 x 4100	9100	6700	14250	11600
		21	1600		1100	2000 x 1700	3100 x 2200	3450 x 4200	9950	7100	15700	12500
		24	1800		1100	2000 x 1800	3100 x 2300	3450 x 4300	10050	7300	16300	13000

- \*Note:**
1. The table of dimensions as per Hyundai standard or EN81-20, For other country codes and spec requirements, Please contact us.
  2. If apply the safety gear on Counterweight side, please contact us
  3. In case of duplex, please secure the distance between car and car more than 500mm. if not secured, please install a middle partition in hoistway
  4. The Hoistway dimensions width & depth are based on clear dimension +20mm horizontal tolerances over the total hoistway height

## Overhead & Pit Depth

[Unit:mm]/\*CH:(External) Car Height

Duty Load (kg)	Speed (m/s)	Overhead (OH) *2		Pit Depth (PP)	M/C Room Height (MH)
		EN81-1	EN81-20		
550 - 1800	1.0	CH+1850	CH+2150	1750	2300
	1.5	CH+2000	CH+2300	1850	2500
	1.75	CH+2050	CH+2350	1900	2500

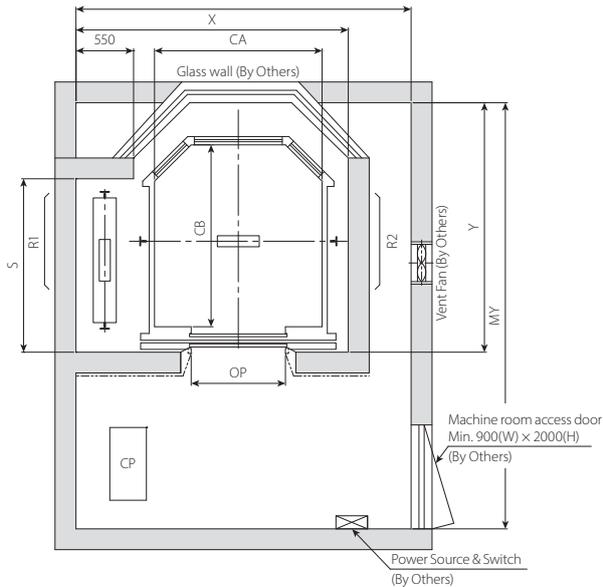
- \*Note:**
1. Above dimensions are applied base on EN81-1 & EN81-20.
  2. Regarding the Overhead(OH):
    - 1). If applied air conditioner, the Overhead(OH) should be increased by 400 mm
    - 2). In case of applied emergency exit door on car top, the Overhead(OH) should be increased as below.
      - EN81-1 : OH + 400mm
      - EN81-20 : OH + 200mm
  3. If necessary to reduce the overhead & Pit, shall be proposed with semi-observation type. It means that without exterior panel and lighting.
  4. M/C room height shall be increased 200mm in case of the traction machine with double isolation pad.
  5. Machine room temperature should be maintained below 40°C with ventilating fan and/or air conditioner (If necessary) and humidity below 90%.
  6. If the height of non-stop floor is over 11m, please consult us as to the needs for emergency exit.

# LUXEN(GEARLESS) LAYOUT PLAN

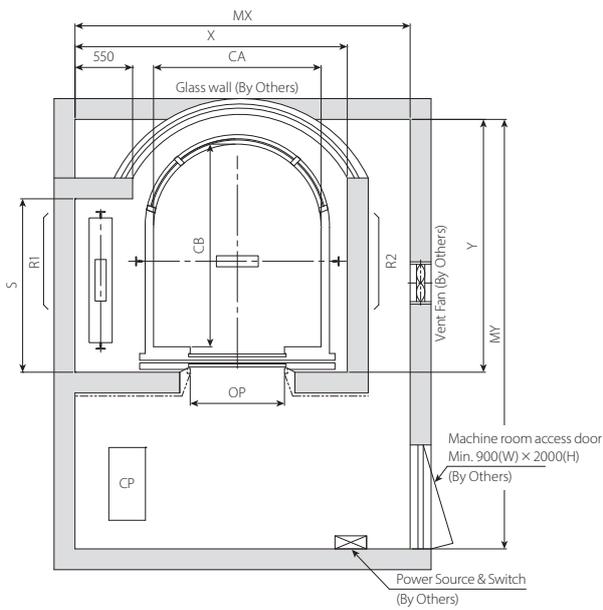
3-SIDE TYPE, ROUND TYPE ELEVATORS

## LAYOUT PLAN

Plan of Hoistway & Machine Room

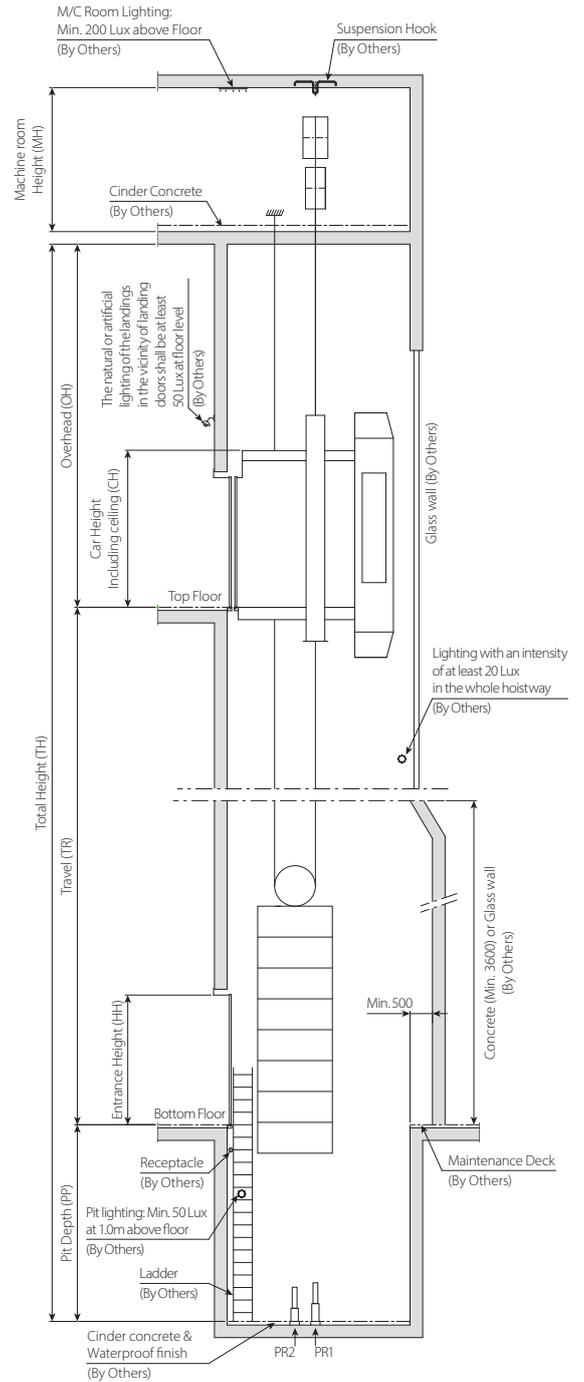


3 SIDES TYPE



ROUND TYPE

Section of Hoistway



## MANUFACTURER STANDARD

(Unit:mm)

Type	Speed (m/sec)	Capacity		Opening Type	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)		Machine Room Size (mm)	M/C Room Reaction (kg)		Pit Reaction (kg)	
		Persons	Kg		OP	CA x CB	X x Y	S	MX x MY	R1	R2	PR1	PR2
3 SIDES	1.0	10	750 (800)	1S-CO	800	1400 x 1400	2450 x 2000	1400	2900 x 4000	6150	3450	8700	7150
		12	900		900	1600 x 1450	2650 x 2050	1550	3300 x 4050	6900	3750	9700	7900
		13	1000		900	1600 x 1570	2650 x 2200	1550	3300 x 4200	7200	3950	10300	8300
	1.5	15	1150		1000	1800 x 1580	2850 x 2200	1700	3500 x 4200	9100	5450	13150	10900
		18	1350		1000	1800 x 1800	2850 x 2400	1800	3500 x 4400	9150	6750	14550	11850
	1.75	21	1600		1100	1800 x 2000	2850 x 2600	1800	3500 x 4600	10000	7150	16100	12900
		24	1800		1100	1800 x 2150	2850 x 2750	1800	3500 x 4750	10250	7300	16800	13300
ROUND	1.0	10	750 (800)	1S-CO	800	1400 x 1480	2450 x 2000	1400	2900 x 4000	6180	3450	8700	7150
		12	900		900	1600 x 1500	2650 x 2100	1550	3300 x 4100	6930	3750	9700	7900
		13	1000		900	1600 x 1650	2650 x 2250	1550	3300 x 4250	7220	3950	10300	8300
	1.5	15	1150		1000	1800 x 1650	2850 x 2250	1700	3500 x 4250	9100	5450	13150	10900
		18	1350		1000	1800 x 1900	2850 x 2500	1800	3500 x 4500	9150	6750	14550	11850
	1.75	21	1600		1100	1800 x 2130	2850 x 2700	1800	3500 x 4700	10050	7200	16100	12900
		24	1800		1100	1800 x 2230	2850 x 2800	1800	3500 x 4800	10250	7350	16800	13400

- \*Note:**
1. The table of dimensions as per Hyundai standard or EN81-20, For other country codes and spec requirements, Please contact us.
  2. If apply the safety gear on Counterweight side, please contact us
  3. In case of duplex, please secure the distance between car and car more than 500mm. if not secured, please install a middle partition in hoistway
  4. The Hoistway dimensions width & depth are based on clear dimension +20mm horizontal tolerances over the total hoistway height

## Overhead & Pit Depth

(Unit: mm) / \*CH: (External) Car Height

Duty Load (kg)	Speed (m/s)	Overhead (OH) *2		Pit Depth (PP)	M/C Room Height (MH)
		EN81-1	EN81-20		
750 - 1800	1.0	CH+1850	CH+2150	2000	2300
	1.5	CH+2000	CH+2300	2100	2500
	1.75	CH+2050	CH+2350	2200	2500

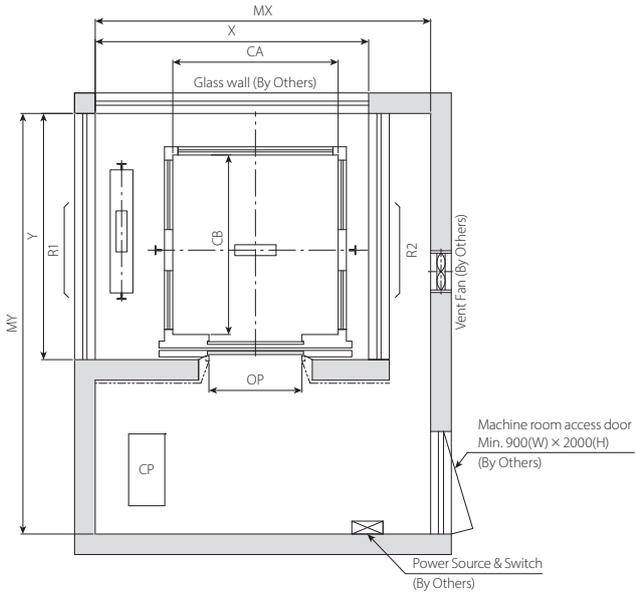
- \*Note:**
1. Above dimensions are applied base on EN81-1 & EN81-20.
  2. Regarding the Overhead(OH):
    - 1). If applied air conditioner, the Overhead(OH) should be increased by 400 mm
    - 2). In case of applied emergency exit door on car top, the Overhead(OH) should be increased as below.
      - EN81-1 : OH + 400mm
      - EN81-20 : OH + 200mm
  3. M/C room height shall be increased 200mm in case of the traction machine with double isolation pad.
  4. Machine room temperature should be maintained below 40°C with ventilating fan and/or air conditioner (If necessary) and humidity below 90%.
  5. If the height of non-stop floor is over 11m, please consult us as to the needs for emergency exit.

# LUXEN(GEARLESS) LAYOUT PLAN

NUDE TYPE ELEVATORS

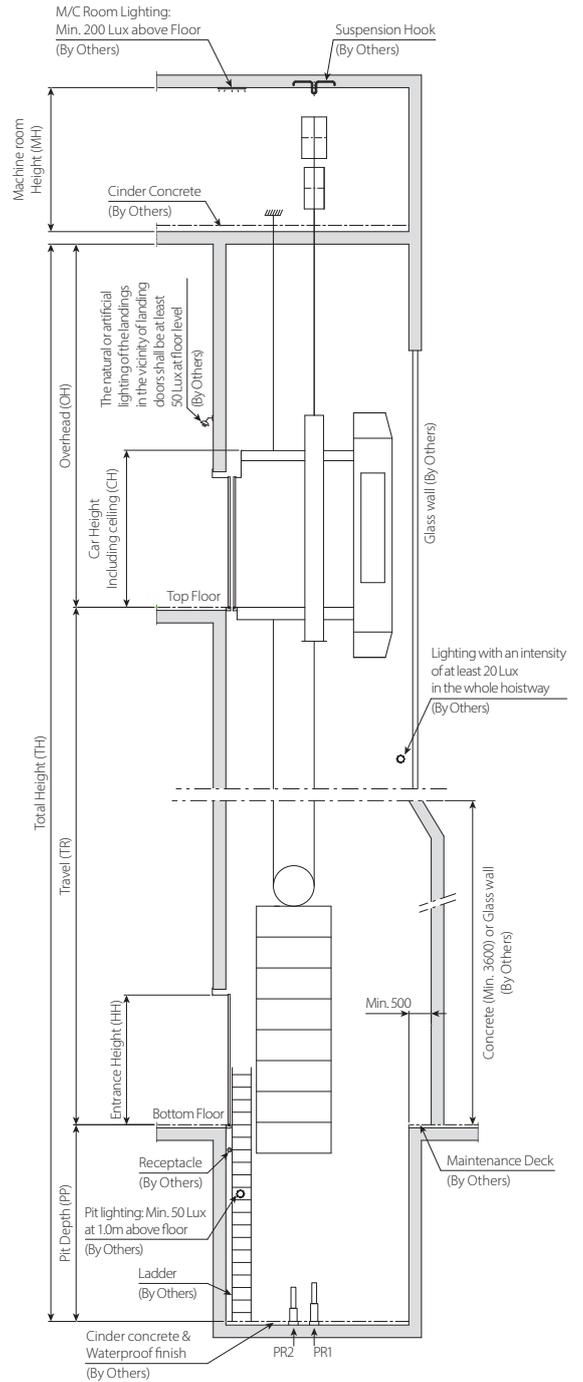
## LAYOUT PLAN

Plan of Hoistway & Machine Room



**NUDE TYPE**

Section of Hoistway



## MANUFACTURER STANDARD

(Unit:mm)

Type	Speed (m/sec)	Capacity		Opening Type	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)	M/C Room Reaction (kg)		Pit Reaction (kg)	
		Persons	Kg		OP	CA x CB	X x Y	MX x MY	R1	R2	PR1	PR2
NUDE	1.0	7	550	1S-CO	800	1100 x 1300	2100 x 1800	2700 x 3800	5450	3050	7800	6700
		8	600 (630)		800	1100 x 1400	2100 x 1900	2700 x 3900	5650	3150	8200	7000
		9	700		800	1250 x 1350	2250 x 1850	2850 x 3850	6000	3400	8750	7350
		10	750 (800)		800	1300 x 1400	2300 x 1900	2900 x 3900	6200	3500	9300	7800
		12	900		900	1600 x 1350	2600 x 1850	3200 x 3850	6950	3800	10350	8550
	1.5	13	1000		900	1600 x 1400	2600 x 1900	3200 x 3900	7200	4000	11050	9050
		15	1150		1000	1800 x 1400	2800 x 1900	3400 x 3900	9100	5450	13650	11350
		18	1350		1000	1800 x 1600	2900 x 2100	3500 x 4100	9150	6750	15300	12600
		21	1600		1100	2000 x 1700	3100 x 2200	3700 x 4200	10000	7200	16800	13600
		24	1800		1100	2000 x 1800	3100 x 2300	3700 x 4300	10500	7300	17200	14800

- \*Note:**
1. The table of dimensions as per Hyundai standard or EN81-20, For other country codes and spec requirements, Please contact us.
  2. If apply the safety gear on Counterweight side, please contact us
  3. In case of duplex, please secure the distance between car and car more than 500mm. if not secured, please install a middle partition in hoistway
  4. The Hoistway dimensions width & depth are based on clear dimension +20mm horizontal tolerances over the total hoistway height

## Overhead & Pit Depth

[Unit:mm]/\*CH:(External) Car Height

Duty Load (kg)	Speed (m/s)	Overhead (OH) *2		Pit Depth (PP)	M/C Room Height (MH)
		EN81-1	EN81-20		
550 - 1800	1.0	CH+1850	CH+2150	1450	2300
	1.5	CH+2000	CH+2300	1600	2500
	1.75	CH+2050	CH+2350	1900	2500

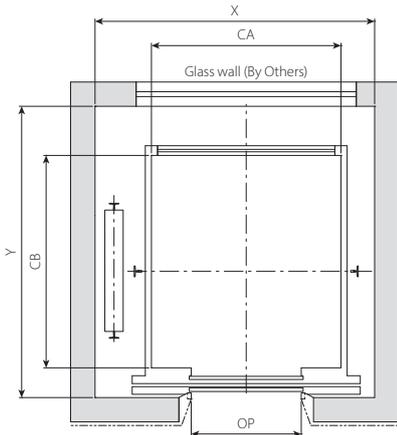
- \*Note:**
1. Above dimensions are applied base on EN81-1 & EN81-20.
  2. Regarding the Overhead(OH):
    - 1). If applied air conditioner, the Overhead(OH) should be increased by 400 mm
    - 2). In case of applied emergency exit door on car top, the Overhead(OH) should be increased as below.
      - EN81-1 : OH + 400mm
      - EN81-20: OH + 200mm
  3. M/C room height shall be increased 200mm in case of the traction machine with double isolation pad.
  4. Machine room temperature should be maintained below 40°C with ventilating fan and/or air conditioner (If necessary) and humidity below 90%.
  5. If the height of non-stop floor is over 11m, please consult us as to the needs for emergency exit.

# NEW YZER LAYOUT PLAN

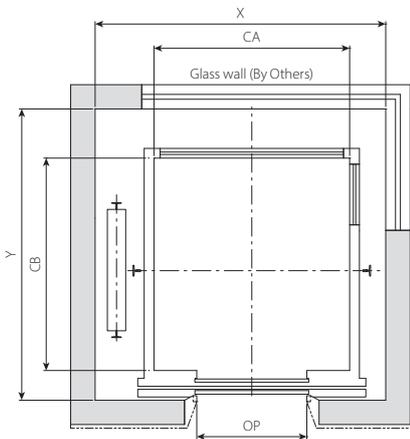
1-SIDE TYPE, 2-SIDE TYPE ELEVATORS

## LAYOUT PLAN

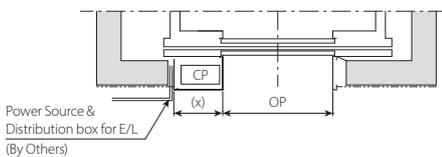
Plan of Hoistway & Machine Room



1 SIDE TYPE

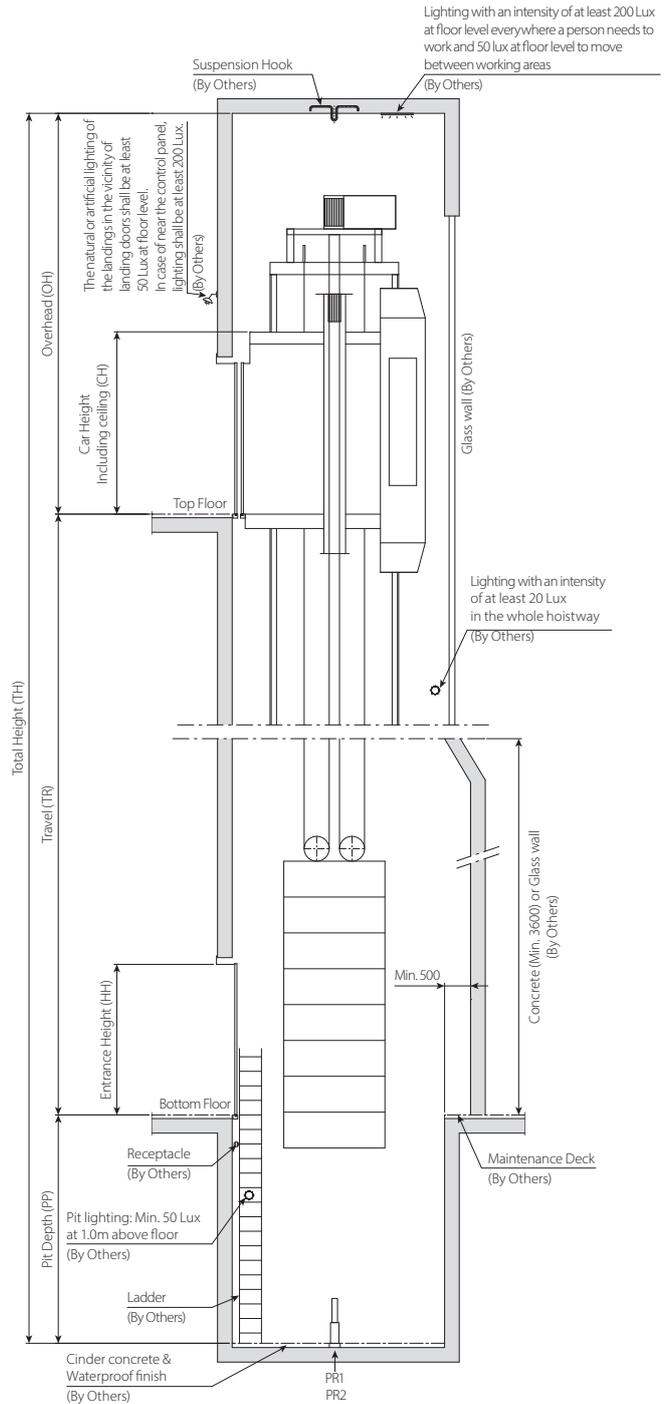


2 SIDES TYPE



TOP FLOOR

Section of Hoistway



- ※ The Lighting of hoistway should be installed less than 500mm from above the ceiling of hoistway and within 500mm above the Bottom of the Pit (By Others)
- ※ The arrangement & size of Control Panel, shall be refer to the dimension table

**MANUFACTURER STANDARD**

(Unit:mm)

Type	Speed (m/sec)	Capacity		Opening Type	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)		Control Panel *3 Box size in Hall	Pit Reaction (kg)		
		Persons	Kg				CP on Hall	CP in Hoistway		PR1	PR2	
					OP	CA x CB	X x Y	X x Y	CP			
1 SIDE (REAR)	1.0 <sup>*5</sup>	7	550	1S-CO	800	1100 x 1300	1800 x 1800	1800 x 1800	430	7500	6400	
	1.0	8	600 (630)		800	1100 x 1400	1800 x 1900	1800 x 1900	430	7800	6600	
		9	700		800	1200 x 1400	1850 x 1900	1950 x 1900	1.0m/s:430 1.5 & 1.75m/s:505	8400	7000	
		10	750 (800)		800	1300 x 1400	1950 x 1900	2050 x 1900		8700	7200	
		12	900		900	1500 x 1400	2150 x 1900	2250 x 1900	9750	7950		
		13	1000		900	1600 x 1400	2200 x 1900	2300 x 1900	10300	8350		
		1.5	15		1150	1000	1800 x 1400	2550 x 1900	2650 x 1900	505	13000	10700
			18		1350	1000	1800 x 1600	2550 x 2100	2700 x 2100	1.0m/s: 505 1.5 & 1.75m/s: 605	14300	11600
			21		1600	1100	2000 x 1700	2750 x 2200	2900 x 2200		15700	12500
	1.75											
2 SIDES (REAR & 1 SIDE) <sup>*4</sup>	1.0 <sup>*5</sup>	7	550	1S-CO	800	1100 x 1300	1900 x 1800	1900 x 1850	430 <sup>*3</sup>	7700	6600	
	1.0	8	600 (630)		800	1100 x 1400	1900 x 1900	1900 x 1900	430	8000	6800	
		9	700		800	1200 x 1400	1950 x 1900	2000 x 1900	1.0m/s:430 1.5 & 1.75m/s:505	8600	7200	
		10	750 (800)		800	1300 x 1400	2050 x 1900	2100 x 1900		8900	7400	
		12	900		900	1500 x 1400	2250 x 1900	2300 x 1900	9950	8150		
		13	1000		900	1600 x 1400	2350 x 1900	2400 x 1900	10550	8550		
		1.5	15		1150	1000	1800 x 1400	2600 x 1900	2700 x 1900	505	13200	10900
			18		1350	1000	1800 x 1600	2600 x 2100	2800 x 2100	1.0m/s: 505 1.5 & 1.75m/s: 605	14450	11800
			21		1600	1100	2000 x 1700	2800 x 2200	3000 x 2200		15900	12700
	1.75											

- \*Note:**
1. The table of dimensions as per Hyundai standard or EN81-20, For other country codes and spec requirements, Please contact us.
  2. If apply the safety gear on Counterweight side, Hoistway Width(X) needed to add 100mm
  3. The control panel box size(CP) may varied depending on the type of control type as PWM( Power Regeneration function), please refer to layout drawing for exact size.  
In case of control panel box size 605mm in Hall side, Min. wall + finished thickness 405mm is needed.
  4. It has limited to applicable a view type. The SQ-119Z type only can be used which doesn't be applied exterior panel included lighting.
  5. If capacity 550kg and speed 1.5 or 1.75m/s, please consult with us.
  6. If control panel is located in the hoistway, remote control box should be installed at hall side of top floor and box hole should be needed.  
Please refer to layout drawing for exact box hole size & location.
  7. The Hoistway dimensions width & depth are based on clear dimension +20mm horizontal tolerances over the total hoistway height

**Overhead & Pit Depth**

[Unit: mm] / \*CH: (External) Car Height

Duty Load (kg)	Speed (m/s)	Overhead (OH) <sup>*2</sup>		Pit Depth (PP)
		EN81-1	EN81-20	
550 ~ 1000	1.0	CH+1700	CH+2100	1750
	1.5	CH+1900	CH+2250	1800
	1.75	CH+2000	CH+2300	2000
1150	1.0	CH+1700	CH+2100	1800
	1.5	CH+1900	CH+2250	1900
	1.75	CH+2000	CH+2300	2000
1350 ~ 1600	1.0	CH+2100	CH+2400	1800
	1.5	CH+2300	CH+2800	1900
	1.75	CH+2400	CH+2800	2000

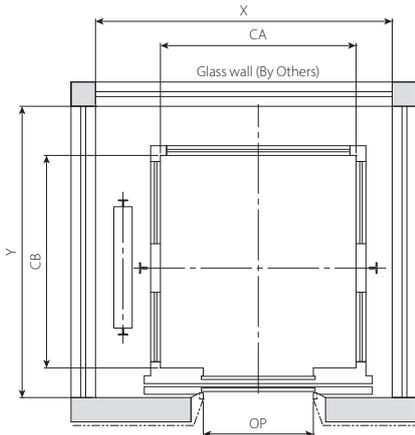
- \*Note:**
1. Above dimensions are applied base on EN81-1 & EN81-20.
  2. Regarding the Overhead(OH):
    - 1). If applied air conditioner, the Overhead(OH) should be increased by 400 mm
    - 2). In case of applied emergency exit door on car top, the Overhead(OH) should be increased as below.
      - EN81-1 : OH + 400mm
      - EN81-20 : OH + 200mm
  3. If necessary to reduce the overhead & Pit, shall be proposed with semi-observation type. It means that without exterior panel and lighting.
  4. If the height of non-stop floor is over 11m, please consult us as to the needs for emergency exit.

# NEW YZER LAYOUT PLAN

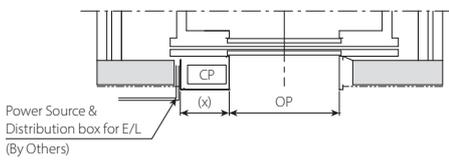
## NUDE TYPE ELEVATORS

### LAYOUT PLAN

Plan of Hoistway & Machine Room

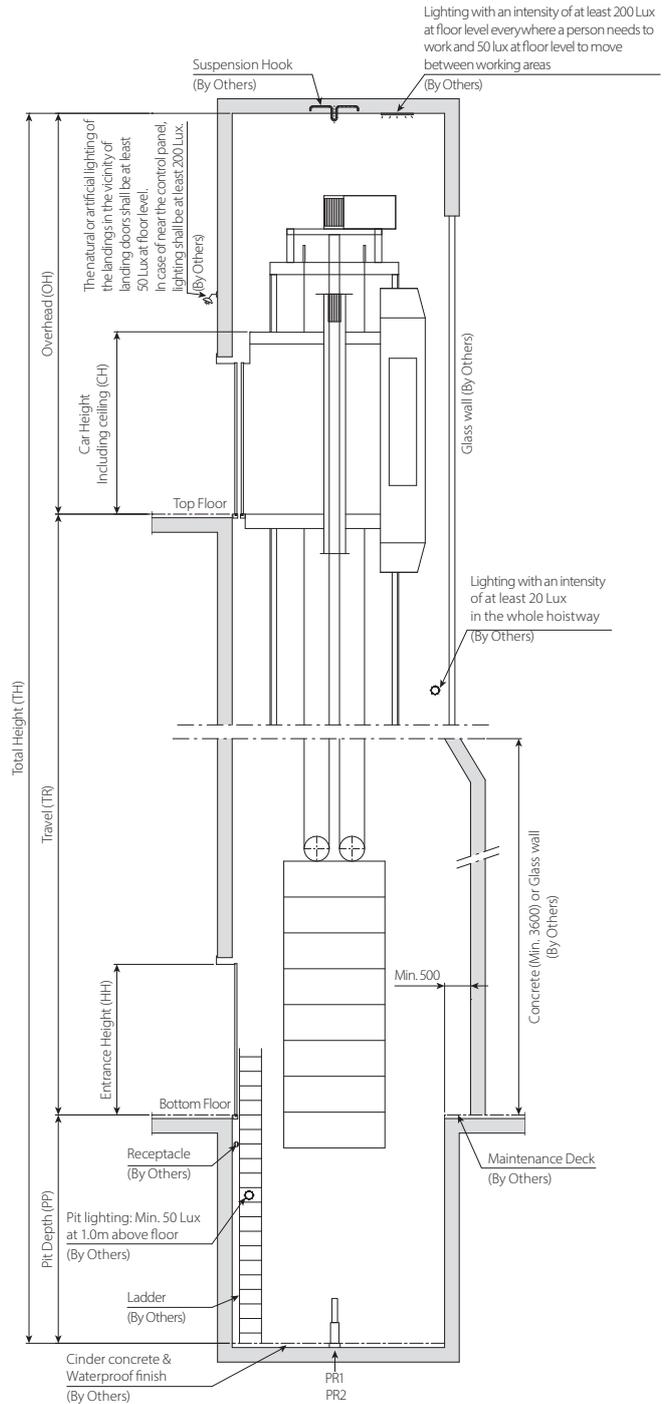


NUDE TYPE



TOP FLOOR

Section of Hoistway



## MANUFACTURER STANDARD

(Unit:mm)

Type	Speed (m/sec)	Capacity		Opening Type	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)		Control Panel *3 Box size in Hall	Pit Reaction (kg)	
		Persons	Kg				CP on Hall	CP in Hoistway		PR1	PR2
							OP	CA x CB	X x Y		
NUDE	1.0 *4	7	550	1S-CO	800	1100 x 1300	1900 x 1800	1900 x 1850	430	8150	7050
	1.0	8	600 (630)		800	1100 x 1400	1900 x 1900	1900 x 1900	430	8500	7300
		9	700		800	1200 x 1400	1950 x 1900	2000 x 1900	1.0m / s:430 1.5 & 1.75m / s:505	9050	7650
		10	750 (800)		800	1300 x 1400	2050 x 1900	2100 x 1900		9450	7950
		12	900		900	1500 x 1400	2250 x 1900	2300 x 1900		10500	8700
		13	1000		900	1600 x 1400	2350 x 1900	2400 x 1900		11150	9150
		15	1150		1000	1800 x 1400	2600 x 1900	2650 x 1900	505	13750	11450
	18	1350	1000		1800 x 1600	2600 x 2100	2800 x 2100	1.0m / s: 505 1.5 & 1.75m / s: 605	15650	12950	
	1.0 *5	21	1600		1100	2000 x 1700	2800 x 2200		3000 x 2200	16850	13650

- \*Note:**
- The table of dimensions as per Hyundai standard or EN81-20, For other country codes and spec requirements, Please contact us.
  - If apply the safety gear on Counterweight side, Hoistway Width(X) needed to add 100mm
  - The control panel box size(CP) may varied depending on the type of control type as PWM( Power Regeneration function), please refer to layout drawing for exact size.  
In case of control panel box size 605mm in Hall side, Min. wall + finished thickness 405mm is needed.
  - If capacity 550kg and speed 1.5 or 1.75m/s, please consult with us.
  - If capacity 1600kg and speed 1.5 or 1.75m/s, please consult with us.
  - If control panel is located in the hoistway, remote control box should be installed at hall side of top floor and box hole should be needed.  
Please refer to layout drawing for exact box hole size & location.
  - If apply through(180 degree) type, please consult with us.
  - The Hoistway dimensions width & depth are based on clear dimension +20mm horizontal tolerances over the total hoistway height.

## Overhead & Pit Depth

[Unit:mm] / \*CH: (External) Car Height

Duty Load (kg)	Speed (m/s)	Overhead (OH) *2		Pit Depth (PP)
		EN81-1	EN81-20	
550 - 1000	1.0	CH+1700	CH+2000	1500
	1.5	CH+1900	CH+2100	1800
	1.75	CH+2000	CH+2200	2000
1150	1.0	CH+1700	CH+2000	1600
	1.5	CH+1900	CH+2100	1800
	1.75	CH+2000	CH+2200	2000
1350	1.0	CH+2100	CH+2650	1600
	1.5	CH+2300	CH+2800	1800
	1.75	CH+2400	CH+2800	2100
1600	1.0	CH+2100	CH+2650	1600

- \*Note:**
- Above dimensions are applied base on EN81-1 & EN81-20.
  - Regarding the Overhead(OH):
    - If applied air conditioner, the Overhead(OH) should be increased by 400 mm
    - In case of applied emergency exit door on car top, the Overhead(OH) should be increased as below.
      - EN81-1 : OH + 400mm
      - EN81-20 : OH + 200mm
  - If the height of non-stop floor is over 11m, please consult us as to the needs for emergency exit.

# WORKS TO BE DONE BY OTHER CONTRACTORS

## CONSTRUCTION WORK

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### HOISTWAY

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1. Forming holes on the wall surrounding the entrance on each floor. (entrance, hall button, hall lantern, etc.), and finishing the walls and floors after installation of the elevator. (including mortar filling)
2. Installation of steel frame to fix the left / right jambs on the entrance.
3. Installation of ladder for pit inspection where there the pit depth not exceeding 2.5 m.
4. Installation of Pit access door where the pit depth exceeds 2.5 m.  
- Access door size: Min. 600 mm (W) × Min. 2000 mm (H)
5. Waterproofing work inside the pit and finishing work after installation of the buffer.
6. Installation of hoistway partitions or separating beams. (If necessary)
7. Removing various tie pins and molds.
8. Others. (items indicated on the layout plan)
9. Construction of concrete structures (thickness of 150 mm or above) or steel structures to fix the rail brackets.
10. Destruction and finishing of concrete structures that are not constructed as indicated on the layout plan.
11. Installation of lifting beam or hook that is designed to lift the machine to the top of hoistway.

### MACHINE ROOM (MR)

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1. Forming holes for machines and ropes on the floor, finishing on cinder concrete, and installation of those indicated on the layout plan.
2. Installation of lifting beam or hook on the top of machine room.
3. Installation of reinforcement beam on the machine room floor. (If necessary)

## ELECTRIC WORK

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### HOISTWAY

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1. The natural or artificial lighting of the landings in the vicinity of landing doors shall be at least 50 lux at floor level.
  2. Lighting with an intensity of at least 50 lux at 1.0 m above the pit floor everywhere a person can stand and 1.0 m above the car roof within its vertical projection.
  3. Lighting with an intensity of at least 20 lux in the whole hoistway.
  4. Piping and wiring work from monitoring panel to hoistway when monitoring panel is installed. (Wire specifications: UL2919 × 2 EA per one bank (Max. 20 units))
  5. Piping and wiring work when CCTV is installed.
  6. Others. (items indicated on the layout plan)
  7. Wiring work on power system within the hoistway for supplying power and lighting. (Refer to the layout plan for electrical power requirements.)
  8. Installation of distribution box for elevator (including N.F.B) on electrical room. (Install near the hoistway. Refer to the layout plan for electrical power requirements.)
  9. Construction for power supply to maintain the voltage regulation of distribution source within ±5% to and lighting within ±2%.
  10. Piping and wiring work on lighting outlet for pit inspection.
  11. Supplying power needed during installation and commissioning free of charge.
  12. Piping and wiring work on emergency communication device between elevator control panel and central control room. (Wire specifications: UTP × 4P per each elevator)
- ※ Communication device that connects the inside and outside of the elevator should be installed redundantly on the area where the managing personnel is stationed (security office, electric room, and central control room). In case of the facility where the managing personnel is stationed in only one place, only one communication device may be installed.

### MACHINE ROOM (MR)

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1. Piping and wiring work outside the hoistway for the installation of emergency call equipment (intercom) in a place other than the machine room.
2. Construction of lighting and lighting outlets for inspection in machine room.
3. Supplying power needed during installation and commissioning free of charge.
4. Installation of lighting for power system and car, and construction of machine room incoming panel and its wiring for emergency power.
5. Lighting with an intensity of at least 200 lux at floor level everywhere a person needs to work and 50 lux at floor level to move between working areas.

### MACHINE ROOM LESS (MRL)

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1. Power supply (including piping and wiring work) to the control panel and permanently installed lighting with an intensity of at least 200 Lux from the bottom of the control panel.

## MATTERS TO NOTE

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1. Exit for machine room should be made of fire-proof material and should be installed in a structure that does not lead to other places.
  2. Do not install ducts or pipes for other purposes (electricity, water, gas, hydrant) on the hoistway and walls inside the machine room.
  3. Lower part of pit should not be used as residence, pathway, or for other purposes.
  4. Power and voltage regulation should be within +5% to -5%.
  5. Temperature in machine room should be 40°C and humidity should be 90% or below. Be sure to install the entilation window, ventilator, or other air-conditioning facilities to prevent generation of dust or poisonous gas inside the machine room.
- ※ When you wish to build the hoistway in steel frame, please contact us. (Steel frame construction for hoistway is excluded from our supply scope.)
- ※ Construction errors: Inner hoistway size that is indicated on the blueprint of this catalog is the minimum size that is designed to fit the size of the elevator interior. So, the construction error limit for hoistway width and overall height is ±20 mm.
- ※ Calculation equation for heat generation in machine room (based on one elevator)
- |                             |  |
|-----------------------------|--|
| Q: (kcal/H) = W × V × F × N | V: Rated speed (m/min.)                          |
| W: Loading capacity (kg)    | F: Coefficient based on control type (1/42:VVVF) |
| N: Number of elevators      |  |

## LUXEN (MR GEARLESS)

[380V]

Load (kg)	Speed (m/s)	Motor Capacity (kW)	MCCB Capacity of Building (A)		Power Supply Capacity (kVA)		Power Cable Size (mm <sup>2</sup> )		Earth Wire Size (mm <sup>2</sup> )	
			1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars
550	1.0	3.4	20	20	7	13	4	4	4	4
	1.5	5.1	20	30	9	18	4	6	4	6
	1.75	5.9	20	40	11	21	4	10	4	10
600	1.0	3.7	20	20	7	13	4	4	4	4
	1.5	5.6	20	30	10	19	4	6	4	6
	1.75	6.5	20	40	12	23	4	10	4	10
700	1.0	4.3	20	30	7	14	4	6	4	6
	1.5	6.5	20	40	12	23	4	10	4	10
	1.75	7.5	20	40	13	26	4	10	4	10
750	1.0	4.6	20	30	8	16	4	6	4	6
	1.5	6.9	20	40	12	24	4	10	4	10
	1.75	8.1	30	50	14	28	6	16	6	16
900	1.0	5.6	20	30	10	19	4	6	4	6
	1.5	8.3	30	50	14	28	6	16	6	16
	1.75	9.7	30	60	17	34	6	16	6	16
1000	1.0	6.2	20	40	11	21	4	10	4	10
	1.5	9.2	30	50	16	31	6	16	6	16
	1.75	10.8	30	60	19	37	6	16	6	16
1150	1.0	7.6	20	40	12	24	4	10	4	10
	1.5	11.3	30	60	19	37	6	16	6	16
	1.75	13.2	40	75	21	42	10	25	10	16
1350	1.0	8.9	30	50	16	31	6	16	6	16
	1.5	13.3	40	75	24	47	10	25	10	16
	1.75	15	50	100	27	54	16	35	16	16
1600	1.0	10.5	30	60	19	37	6	16	6	16
	1.5	15.7	50	100	28	55	16	35	16	16
	1.75	18.3	50	100	32	63	16	35	16	16
1800	1.0	11	30	75	20	42	6	25	6	16
	1.5	16.6	50	100	30	60	16	35	16	16
	1.75	19.3	60	125	35	70	16	50	16	25

\*Note: 1. The above table is for lengths of electric wire to 50 meters from the machine room to the building transformer

2. If the cable lengths above 50meters, the following formula should be applied:

$$\text{Power Feeder size (mm}^2\text{)} = \frac{\text{Power feeder length(m)}}{50} \times \text{size in the above [mm}^2\text{]}$$

3. The above power feeder thickness are based on copper wires use and metallic tubing

4. It is recommended a larger diameter earth wire be used

5. Please consult us if you need electric power requirements for 220V or 440V Class

6. For installing several elevators, apply the following formula

$$\text{Transformer Capacity[kVA]} = \text{Number of elevator} \times \text{Diversity factor}$$

Number of Elevator	1	2	3	4	5
Deversity Factor	1.00	0.91	0.85	0.8	0.76

# POWER SUPPLY PLAN

## NEW YZER (MRL)

[380V]

Load (kg)	Speed (m/s)	Motor Capacity (kW)	MCCB Capacity of Building (A)		Power Supply Capacity (kVA)		Power Cable Size (mm <sup>2</sup> )		Earth Wire Size (mm <sup>2</sup> )	
			1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars
550	1.0	3.6	20	20	7	13	4	4	4	4
600	1.0	3.9	20	30	8	15	4	6	4	6
	1.5	5.9	20	40	11	21	4	10	4	10
	1.75	6.9	20	40	13	25	4	10	4	10
700	1.0	4.6	20	30	9	17	4	6	4	6
	1.5	6.9	20	40	13	25	4	10	4	10
	1.75	7.5	30	50	15	29	6	16	6	16
750	1.0	4.9	20	30	9	18	4	6	4	6
	1.5	7.4	20	40	13	26	4	10	4	10
	1.75	8.6	30	50	15	30	6	16	6	16
900	1.0	5.9	20	40	11	21	4	10	4	10
	1.5	8.9	30	50	16	31	6	16	6	16
	1.75	10.3	30	60	19	37	6	16	6	16
1000	1.0	6.6	20	40	12	23	4	10	4	10
	1.5	9.8	30	60	18	36	6	16	6	16
	1.75	11	40	75	21	41	10	25	10	16
1150	1.0	7.5	20	40	14	27	4	10	4	10
	1.5	11.3	40	75	21	41	10	25	10	16
	1.75	13.2	40	75	24	47	10	25	10	16
1350	1.0	8.9	30	50	16	31	6	16	6	16
	1.5	13.3	40	75	24	47	10	25	10	16
	1.75	15.5	50	100	27	54	16	35	16	16
1600	1.0	10.5	30	60	19	37	6	16	6	16
	1.5	15.7	50	100	28	56	16	35	16	16
	1.75	18.3	50	100	32	64	16	35	16	16

**\*Note:**

1. The above table is for lengths of electric wire to 50 meters from the machine room to the building transformer
2. If the cable lengths above 50meters, the following formula should be applied:

$$\text{Power Feeder size (mm}^2\text{)} = \frac{\text{Power feeder length(m)}}{50} \times \text{size in the above [mm}^2\text{]}$$

3. The above power feeder thickness are based on copper wires use and metallic tubing
4. It is recommended a larger diameter earth wire be used
5. Please consult us if you need electric power requirements for 220V or 440V Class
6. For installing several elevators, apply the following formula

$$\text{Transformer Capacity[kVA]} = \text{Number of elevator} \times \text{Diversity factor}$$

Number of Elevator	1	2	3	4	5
Deversity Factor	1.00	0.91	0.85	0.8	0.76

# SPECIAL NOTES ON PLANNING THE INSTALLATION

In planning the installation of observation elevators, the architect as well as the product designer should consider the unique design features and special requirements of observation elevators.

These special notes should be carefully considered for both building construction and product engineering.

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## ■ Observation Elevator Hoistway Requirement

- Observation and glass-walled elevator's hoistway glass needs to be laminated glass. Please consult Hyundai when using other type of glass.
- Hoistway's glass joint needs to be water-proof.

## ■ Exterior Lighting

- The lamps used for the exterior illumination shall be designed for long life and easy replacement.
- The electric power requirements may vary per elevator models and illumination designs, however the proper power source required is AC 1Ø, 220V, 20-30A range.

## ■ Air-Conditioning & Ventilation

- The in-car temperature of the observation elevator can be highly increased because of the solar radiation heat, this factor should be considered in planning the hoistway layout.
- When required by the building, the air-conditioner can be installed on the observation elevator. When the air-conditioner is installed, a water drain is required in the pit.
- The hoistway and the machine room should be properly ventilated to prevent excessive temperature rise.

## ■ Hoistway Structures & Others (Proposal)

- To facilitate the inspection, maintenance and cleaning of the car exteriors, an access hole and min. 500mm wide maintenance deck with a glass or concrete enclosure should be provided at the bottom of the hoistway (usually at the basement level).
- To prevent the breakage of the hoistway glass from the outside, 1.8 meters high concrete enclosure shall be provided at ground level.
- When the hoistway glass is directly exposed to the public, a fence should be installed at min. 1.5 meters distance from the hoistway to prevent access.
- When any especially-designed car top & bottom is required, the pit depth and overhead requirement may change.
- When an outdoor type observation elevator is required for application in an outside open hoistway, special engineering is required for protection from water, corrosion, ice, wind, dusts, etc.



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