Hyundai Elevator

Trusted quality
We export products to 50 countries like Japan, Europe, East / West Asia, the Middle East and are recognized for excellence in quality.

Refined design
Refined design to give consideration to health and the environment adds new value to the elevator.

Content selection of passenger elevator system
The selection of elevators should be made in consideration of the building type/scale, tenant characteristics, elevator usage and the anticipated passenger carrying capacity at the building’s traffic peak time.

Hyundai elevators are available from geared traction elevator to gearless traction elevators, covering the full range of vertical transportation requirements.

Since the 1984 founding of South Korea, Hyundai Elevator, an affiliate of Hyundai Business Group, with leading technology has grown up to Korea No. 1 elevator company. Now Hyundai Elevator is aiming towards to top of the world. We value the safety, energy efficiency, and environment-friendly features of the highest standard for all products made by Hyundai Elevator.
Gearless Traction Machine

With the use of gearless traction machine, smoother ride, improved energy-saving, and environment-friendly features are enhanced.

+ Improved energy savings
  Gearless traction machine with permanent magnet synchronous motor provides up to 25% energy savings compared with geared traction machine with induction motors.

+ Comfortable riding
  Noise and vibration level have been decreased dramatically and car ride is improved thanks to the use of gearless traction machine with permanent magnet synchronous motor without toothed gear and rope swing.

+ Environment-friendly components
  It is environmentally friendly because gear oil is not required.

+ Reduced installation space
  It can save the building space as it needs smaller machine room space than the conventional.

+ Easy installation and maintenance
  The installation and maintenance is less complicated as the implementation is the same 1:1 roping for induction motor.
LUXEN (Medium speed gearless traction elevators)

A high-tech gearless traction machine which was used mainly in high-speed elevator is used for this product.

Excellent car ride
The LUXEN, using the gearless machine, provides a smooth and noiseless ride.

Increased energy efficiency
Gearless traction machine with permanent magnet synchronous motor application will increase energy efficiency.

Spacious car interior
The car is more spacious and more comfortable compared with existing product design which has low ceiling height.

Eco-friendly product
This is an environment-friendly product. It does not need to replace the gear oil regularly.

Enhanced safety
The self-checking system as part of the software/hardware design built-in the elevator and drive control system greatly improve safety of the elevator operation.
YZER (Machine-room-less elevators)

An innovative elevator which does not require a separate machine room.

High space efficiency
The thinner control panel and compact gearless traction machine eliminate the need for a separate machine room because the system is so compact it can be located at any floor or on hoistway wall.

More flexible architectural design
The building roof line can be enhanced due to the elimination of the conventional penthouse type machine room. It enables a free layout of hoistway position as the machine room is not necessary.

Reduction of building cost
Expenses for the construction of machine room as well as the completion time of building work can be reduced as the machine room is not necessary.

Compact gearless traction machine
By using gearless traction machine with permanent magnet synchronous motor, it provides smoother ride, improved energy-saving, and environment friendly features.

Enhanced safety
The self-checking system as part of the software/hardware design built-in the elevator and drive control system greatly improve safety of the elevator operation.
Geared Traction Elevators

The highest efficiency is achieved through the optimal combination of voltage and frequency, the latest and most advanced VVVF technology of electric power supply to the induction motor.

Extremely smooth riding comfort & accurate landing
Using computer control for acceleration and deceleration the riding comfort is improved.

Enhanced safety
The self-checking system as part of the software/hardware design built-in the elevator and drive control system greatly improve safety of the elevator operation.

Compact design
Minimized control panel enables to reduce installation costs.
**CAGE DESIGN**

**CEILING**
- CD597A, Painted Steel (P021), Skylite 10T, Indirect Lighting

**WALL**
- Hairline-Finished Stainless Steel, Hairline-Etched Stainless Steel (SE1172)

**CAR DOORS**
- Hairline-Etched Stainless Steel (SE1172)

**OPERATING PANEL**
- OPP-N241B / OPP-N241W (Hairline-Finished Stainless Steel)

**INDICATOR**
- PI10110

**HANDRAIL**
- Stainless Steel 1 Pipe / Polished (1B)

**FLOORING**
- Sense Tile (TN2402C)

**Notes:**
1. Finished product may vary slightly from these prints.
2. The price will vary depending on the customer’s specification.
3. The split may vary depending on the capacity.
### CAGE DESIGN

#### SE-38
- **Ceiling**: CD253A, Painted Steel (P021, P022), Skylite 10T LED Down Light
- **Wall**: Hairline Etched Stainless Steel (SE1168), Hairline-Finished Stainless Steel
- **Car Doors**: Hairline Etched Stainless Steel (SE1168)
- **Operating Panel**: OPF-N240B / OPF-N240W (Hairline-Finished Stainless Steel)
- **Indicator**: PI-D110
- **Handrail**: Stainless Steel 1 Pipe + Coated Chrome Bracket (1B)
- **Flooring**: Polyvinyl Tile (DTE2241, DTE2246)

**Notes:**
1. Finished product may vary slightly from these prints.
2. The price will vary depending on the customer’s specification.
3. The split may vary depending on the capacity.

#### SE-39
- **Ceiling**: CD291C, Acryl, Painted Steel (P021)
- **Wall**: Mirror-Trimmed Stainless Steel, Hairline Etched Stainless Steel (SE1673)
- **Car Doors**: Hairline Etched Stainless Steel (SE1673)
- **Operating Panel**: OPF-N241B
- **Indicator**: PI-D110
- **Handrail**: Stainless Steel 1 Pipe + Coated Chrome Bracket (1B)
- **Flooring**: Polyvinyl Tile (TN2422C, TN2601C)

**Notes:**
1. Finished product may vary slightly from these prints.
2. The price will vary depending on the customer’s specification.
3. The split may vary depending on the capacity.
**Notes:**
1. Finished product may vary slightly from these prints.
2. The price will vary depending on the customer’s specification.
3. The split may vary depending on the capacity.

**Ceiling**

- **CD251A** (P022 / Acryl / Convective Air Sterilization System)
- **CD253A** (P021, P022 / Skylite 10T / LED Down Light)
- **CD451B** (P022)
- **CD519D** (Indirect Lighting / Aluminium Silver / Convective Air Sterilization System)
- **CD516B** (Indirect Lighting / Convective Air Sterilization System)
- **CD597A** (P007, Lusterless White / Skylite 10T / Indirect Lighting)

**LED Ceiling**

- **CD299B** (P025 / LED Lighting/Daylight / LED Down Light / Skylight / Anion Air Cleaner)
- **CD699A** (Aluminium / Acryl / Sheet / LED Lighting/Daylight / Anion Air Cleaner)

<table>
<thead>
<tr>
<th>CAGE DESIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ceiling</strong></td>
</tr>
<tr>
<td><strong>Wall</strong></td>
</tr>
<tr>
<td><strong>Car Doors</strong></td>
</tr>
<tr>
<td><strong>Operating Panel</strong></td>
</tr>
<tr>
<td><strong>Indicator</strong></td>
</tr>
<tr>
<td><strong>Handrail</strong></td>
</tr>
<tr>
<td><strong>Flooring</strong></td>
</tr>
</tbody>
</table>

Notes:
1. Finished product may vary slightly from these prints.
2. The price will vary depending on the customer’s specification.
3. The split may vary depending on the capacity.

**LED Ceiling**

- **CD299B** (P025 / LED Lighting/Daylight / LED Down Light / Skylight / Anion Air Cleaner)
- **CD699A** (Aluminium / Acryl / Sheet / LED Lighting/Daylight / Anion Air Cleaner)
By grouping passengers having the same target floor to the same elevator, it will save energy and increase system efficiency.

Notes:
1. Finished product may vary slightly from these prints.
2. Boxless Type - If box button cannot be applied.
3. If card key system is applied, please select the box type hall button as card key system cannot be applied to boxless hall button.

To minimize waiting time at a special floor, a special car calling button can be installed in an office (e.g. Secretary for a CEO office) or in a penthouse (e.g. Penthouse for Executives or Government Officials or Special Guests) or in a high-rise apartment.

Notes:
1. Finished product may vary slightly from these prints.
2. Boxless Type - 90 type button cannot be applied.
3. If card key system is applied, please select the box type hall button as card key system cannot be applied on boxless hall button.

Notes: (Box Type) (Boxless Type)
Material Patterns

**Entrance (Etching)**

- **EE001** (SE695)
- **EE002** (SE800)
- **EE003** (SE801)
- **EE005** (SE814)
- **EE006** (SE743)
- **EE007** (SE1168)
- **EE008** (SE1171)
- **EE009** (SE1172)

Notices:
1. It’s different from actual size.
2. □ Emboss pattern
3. ▮ Intaglio Pattern
4. ▬ Etching
5. ▥ Entrance (Etching)

**Etching**

- **SE1168**
- **SE1169**
- **SE1172**
- **SE2304**
- **SE2302**
- **SE2306**
- **SE2310**

Notes:
1. It’s different from actual size.
2. □ Emboss pattern
3. ▮ Intaglio Pattern
4. ▬ Etching
5. ▥ Entrance (Etching)

6. If the above etching patterns are applied for fire protection doors, the left door is 20 mm bigger than the right one. Consult Hyundai.

7. Etching patterns shown above are available for car doors and entrance doors.

8. For entrance opening, EE002, EE003, EE008 are not applied.
**Paint Color**

- P003: 02.3Y 8.5/2.3
- P006: 02.5Y 7/7.2
- P008: 0.5YR 7.1/2.5
- P009: 4.18.7/2.0
- P011: 4.0K 4.3/1.2
- P012: 0.19K 4.5/9.6
- P016: 0.19YR 5.0/3.1
- P017: 0.7Y 8.7/2.6
- P019: 5.1Y 7.6/1.1
- P020: (Metallic Gold)
- P021: (Metallic Silver)
- P022: (Black)

**Polyvinyl Tile**

- DTE2109
- DTE2115
- DTE2126
- DTE2241
- DTE2246
- DTE2402
- DTE2412
- DTE2417
- TN2230C
- TN2233C
- TN2601C
- TN2604C

**Car Operating Panels**

- Opp-N240W

**Hall Buttons**

- 40 TYPE
- 41 TYPE

**Type of Buttons**

- HPB-240 (Box Type)
- HPB-641 (Boxless Type)
- HPBE-240 (Boxless Type)
- HPB-641 (Boxless Type)

**Reference Data (Wheelchair)**

- Rear/Side View
- Required Space (if rotated 90-degrees)
- Car and Door Size

Note: Finished product may vary slightly from these prints.
# Standard & Optional Features

## Standard

<table>
<thead>
<tr>
<th>Items</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simplex Selective Collective Operation</td>
<td>The whole operation process is automatically carried out by the calls registered.</td>
</tr>
<tr>
<td>Car Call Cancellation</td>
<td>Allows cancellation of an incorrectly registered car call. If you push a wrong floor button in the car, you can cancel it by pressing the registered button one more time.</td>
</tr>
<tr>
<td>Door Open/Closure Time Adjustment</td>
<td>Door open and close are automatically adjusted depending on whether the car is a hall call or an intercom call to increase the operating efficiency.</td>
</tr>
<tr>
<td>Automatic Car Light &amp; Fan Turn-off</td>
<td>Car illumination and fan are turned off automatically in case there is no hall call or car call to save energy.</td>
</tr>
<tr>
<td>Car Door Safety Edge with Single Side</td>
<td>Extending the full height of the car door, this device causes the doors to return to the fully open position should the door encounter a person or obstacle while closing.</td>
</tr>
<tr>
<td>Landing Door Interlock Switch</td>
<td>In case on opening the door, the switch installed at the door operator is activated and keeps the car from moving. During the operation of car, it locks the door completely so as not to open the door from outside.</td>
</tr>
<tr>
<td>Overload Holding Stop</td>
<td>When the load of passengers exceeds the maximum capacity, a buzzer sounds and the remains stops at that floor. When the passengers get off, the buzzer will stop. Consequently elevator doors will close and operation continues.</td>
</tr>
<tr>
<td>Emergency Lighting Feature</td>
<td>In case of main power failure, the emergency light will turn on automatically and maintain a period of time.</td>
</tr>
<tr>
<td>Interphone(Intercom)</td>
<td>Provide emergency communication between passengers in the car, the machine room or building personnel in security or maintenance room.</td>
</tr>
<tr>
<td>Micro Leveling</td>
<td>An automatic two-way leveling device is provided to maintain the elevator car level with the landing, regardless of elevator load or direction travel.</td>
</tr>
<tr>
<td>Safety Drive Operation</td>
<td>During the normal operation, if the car stops between floors and safety device doesn’t work, the car automatically moves to the nearest floor with the low speed. Then, it opens the door to allow the passengers to exit off.</td>
</tr>
<tr>
<td>Automatic by Pass</td>
<td>When a car is 80% loaded, it will automatically bypass all hall calls as the bypass load weighting device is activated.</td>
</tr>
</tbody>
</table>

## Efficient

<table>
<thead>
<tr>
<th>Items</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficient</td>
<td></td>
</tr>
</tbody>
</table>

## Option

<table>
<thead>
<tr>
<th>Items</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duplex Selective Collective Operation</td>
<td>Two units of elevator provide the effective service for the common hall calls.</td>
</tr>
<tr>
<td>N-PLEX Operation (Group control)</td>
<td>3~8 units of elevator provide the effective service for the common or dual hall calls by combining each other systematically.</td>
</tr>
<tr>
<td>DSS(Destination Selection System)</td>
<td>Register destination floor before entering car, allowed elevator will be displayed. Passengers could reach their destination floor in shortest time without pushing button in control operation panel.</td>
</tr>
</tbody>
</table>

## Safety

<table>
<thead>
<tr>
<th>Items</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendant Operation</td>
<td>The operating mode of an elevator can be changed from the normal automatic operation to the attendant service by an attendant switch on COP.</td>
</tr>
<tr>
<td>Voice Synthesizer</td>
<td>Provide to riding passengers with audio information about car operation such as direction of ride, landing floor, emergency, etc.</td>
</tr>
<tr>
<td>Anti-nuisance Operation</td>
<td>In case of substantial difference between the number of calls registered on the car operating panel and actual load in the elevator, the elevator prevents unnecessary operation by canceling all registered calls when it arrives at the nearest floor.</td>
</tr>
<tr>
<td>Hold Door Closing</td>
<td>In case of register the door holder button, the car wait with opened door during the time that the program.</td>
</tr>
<tr>
<td>Parking Operation</td>
<td>The elevator can be automatically parked at the predetermined floor with its doors closed, and the lights and ventilation will be turned off as well.</td>
</tr>
<tr>
<td>VIP Operation</td>
<td>A specified car can be withdrawn from group control and carries out independent operation in accordance with the hall call for VIP.</td>
</tr>
<tr>
<td>Air-cleaning System On Ceiling</td>
<td>Multi-beam from the top of the door to the bottom of the door senses any obstruction caught in the door. It makes the door re-open, or keep open/close before the door touches such obstruction.</td>
</tr>
<tr>
<td>Multi-beam Device For Car Door</td>
<td></td>
</tr>
<tr>
<td>Supervisory Monitoring &amp; Control With Computer</td>
<td>To monitor and control the elevator operation such as including floor, running direction, door opening, over load, fire alarm, fault and all elevator status by PC system.</td>
</tr>
<tr>
<td>ELD (Emergency Landing Device)</td>
<td>In case of power failure, when the building has no emergency power supply, the elevator is sent to the nearest floor by power of rechargeable battery to prevent passengers from being trapped in the car.</td>
</tr>
<tr>
<td>Emergency Fire Operation</td>
<td>In case of fire, every car should be returned to the specified floor in order to evacuate passengers to safety.</td>
</tr>
<tr>
<td>Emergency Fireman’s Service</td>
<td>In case of fire, fireman can use the elevator which is stopped at the specified floor in order to support fireman of fire-fighting.</td>
</tr>
<tr>
<td>Emergency Power Operation</td>
<td>When power off, receive power from buildings generator, and operate according to procedure of generator.</td>
</tr>
<tr>
<td>Emergency Earthquake Operation</td>
<td>The earthquake sensor detects whether the earthquakes occur or not. When earthquakes occur, the device forces the elevator to stop at the nearest floor with door fully open, and the elevator can’t operate any more.</td>
</tr>
</tbody>
</table>

Note: Consult Hyundai if you need the specific features except the above items.
### Layout Plan - LUXEN(Gearless Elevators) 1~2.5m/sec | Center open

#### Plan of Hoistway & Machine Room

#### Section of Hoistway

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### Standard Dimensions & Reactions

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#### Manufacturer Standard

<table>
<thead>
<tr>
<th>Speed (m/sec)</th>
<th>Capacity</th>
<th>Opening Type</th>
<th>Clear Opening</th>
<th>Hoistway Size</th>
<th>Machine Room Size</th>
<th>M/C Room Reaction (kg)</th>
<th>Pit Reaction (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>6, 8</td>
<td>600</td>
<td>800, 1000</td>
<td>1600 x 1400</td>
<td>1800 x 2000</td>
<td>2000 x 2200</td>
<td>3600, 2000</td>
</tr>
<tr>
<td></td>
<td>10, 11</td>
<td>500</td>
<td>800, 1000</td>
<td>1600 x 1400</td>
<td>1800 x 2000</td>
<td>2000 x 2200</td>
<td>3600, 2000</td>
</tr>
<tr>
<td></td>
<td>13, 750</td>
<td>400</td>
<td>800, 1000</td>
<td>1600 x 1400</td>
<td>1800 x 2000</td>
<td>2000 x 2200</td>
<td>3600, 2000</td>
</tr>
<tr>
<td></td>
<td>15, 1000</td>
<td>300</td>
<td>800, 1000</td>
<td>1600 x 1400</td>
<td>1800 x 2000</td>
<td>2000 x 2200</td>
<td>3600, 2000</td>
</tr>
<tr>
<td>1.5</td>
<td>17, 1150</td>
<td>250</td>
<td>1000, 1200</td>
<td>1900 x 2000</td>
<td>2300 x 2500</td>
<td>2600 x 2700</td>
<td>4200, 2400</td>
</tr>
<tr>
<td>2.0</td>
<td>20, 1350</td>
<td>200</td>
<td>1200, 1400</td>
<td>2100 x 2200</td>
<td>2500 x 2700</td>
<td>2700 x 3000</td>
<td>4800, 2800</td>
</tr>
<tr>
<td></td>
<td>24, 1600</td>
<td>150</td>
<td>1400, 1600</td>
<td>2300 x 2400</td>
<td>2700 x 2900</td>
<td>3000 x 3200</td>
<td>5400, 3200</td>
</tr>
</tbody>
</table>

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#### EN1 Standard

<table>
<thead>
<tr>
<th>Speed (m/sec)</th>
<th>Capacity</th>
<th>Opening Type</th>
<th>Clear Opening</th>
<th>Hoistway Size</th>
<th>Machine Room Size</th>
<th>M/C Room Reaction (kg)</th>
<th>Pit Reaction (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>6</td>
<td>600</td>
<td>1100 x 1100</td>
<td>1600 x 1400</td>
<td>1800 x 2000</td>
<td>3600, 2000</td>
<td>5400, 3000</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>700</td>
<td>1100 x 1100</td>
<td>1600 x 1400</td>
<td>1800 x 2000</td>
<td>3600, 2000</td>
<td>5400, 3000</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>800</td>
<td>1100 x 1100</td>
<td>1600 x 1400</td>
<td>1800 x 2000</td>
<td>3600, 2000</td>
<td>5400, 3000</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>1000</td>
<td>1100 x 1100</td>
<td>1600 x 1400</td>
<td>1800 x 2000</td>
<td>3600, 2000</td>
<td>5400, 3000</td>
</tr>
<tr>
<td>1.5</td>
<td>13</td>
<td>1150</td>
<td>1200, 1400</td>
<td>1900 x 2000</td>
<td>2300 x 2500</td>
<td>2600 x 2700</td>
<td>4200, 2400</td>
</tr>
<tr>
<td>2.0</td>
<td>18</td>
<td>1350</td>
<td>1400, 1600</td>
<td>2100 x 2200</td>
<td>2500 x 2700</td>
<td>2700 x 3000</td>
<td>4800, 2800</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>1600</td>
<td>1600, 1800</td>
<td>2300 x 2400</td>
<td>2700 x 2900</td>
<td>3000 x 3200</td>
<td>5400, 3200</td>
</tr>
</tbody>
</table>

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### Notes:
1. All dimensions are applied for car height of 2500mm, for other applicable dimensions, contact us.
2. In case of a double isolation pad, machine room height should be increased 220mm.
3. Machine room temperature should be maintained at max. 40°C with venting if needed for air conditioning (if necessary) and humidity below 95%.
Plan of Hoistway & Machine Room

| Layout Plan - LUXEN(Gearless Elevators) 1~2.5m/sec | Side open |

**Plan of Hoistway & Machine Room**

- **Rear Drop**
- **Side Drop**

**Section of Hoistway**

- **Overhead & Pit Depth**
  - **Load (kg)**: 450 ~ 1000, 1150 ~ 1600
  - **Speed (m/sec)**: 1.0, 1.5, 2.0
  - **Proposed Height (m)**: 2400

**Notes:**
1. Above dimensions are applied for car height of 2500mm, for other applicable dimensions, contact us.
2. In case of requested double isolation pad, machine room height should be increased 220mm.
3. Machine room temperature should be maintained below 40°C with venting or air conditioning (if necessary) and humidity below 95%.

**Standard Dimensions & Reactions**

<table>
<thead>
<tr>
<th>Speed (m/sec)</th>
<th>Capacity</th>
<th>Opening Type</th>
<th>Clear Drop</th>
<th>C.W.T Drop</th>
<th>Car</th>
<th>Machine Room Size</th>
<th>M/C Room Reaction (kg)</th>
<th>Pit Reaction (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Car</td>
<td>Machine Room Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A x B</td>
<td>X</td>
<td>Y</td>
<td>Z</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>6, 450</td>
<td>800</td>
<td>Rear</td>
<td>1110 ~ 1700</td>
<td>1160 ~ 1472</td>
<td>1550</td>
<td>3200</td>
<td>1800</td>
</tr>
<tr>
<td>1.5</td>
<td>8, 550</td>
<td>800</td>
<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1442</td>
<td>1550</td>
<td>3200</td>
<td>1950</td>
</tr>
<tr>
<td>1.75</td>
<td>9, 600</td>
<td>600</td>
<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1425</td>
<td>1550</td>
<td>3200</td>
<td>2100</td>
</tr>
<tr>
<td>2.0</td>
<td>10, 700</td>
<td>800</td>
<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1425</td>
<td>1550</td>
<td>3200</td>
<td>2200</td>
</tr>
<tr>
<td>2.5</td>
<td>11, 750</td>
<td>800</td>
<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1425</td>
<td>1550</td>
<td>3200</td>
<td>2300</td>
</tr>
<tr>
<td>2.0</td>
<td>12, 800</td>
<td>800</td>
<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1425</td>
<td>1550</td>
<td>3200</td>
<td>2400</td>
</tr>
</tbody>
</table>

**EN81 Standard**

<table>
<thead>
<tr>
<th>Speed (m/sec)</th>
<th>Capacity</th>
<th>Opening Type</th>
<th>Clear Drop</th>
<th>C.W.T Drop</th>
<th>Car</th>
<th>Machine Room Size</th>
<th>M/C Room Reaction (kg)</th>
<th>Pit Reaction (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Car</td>
<td>Machine Room Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A x B</td>
<td>X</td>
<td>Y</td>
<td>Z</td>
<td></td>
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<tr>
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<td>6, 450</td>
<td>800</td>
<td>Rear</td>
<td>1110 ~ 1700</td>
<td>1160 ~ 1472</td>
<td>1550</td>
<td>3200</td>
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</tr>
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<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1442</td>
<td>1550</td>
<td>3200</td>
<td>1950</td>
</tr>
<tr>
<td>1.75</td>
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<td>600</td>
<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1425</td>
<td>1550</td>
<td>3200</td>
<td>2100</td>
</tr>
<tr>
<td>2.0</td>
<td>10, 700</td>
<td>800</td>
<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1425</td>
<td>1550</td>
<td>3200</td>
<td>2200</td>
</tr>
<tr>
<td>2.5</td>
<td>11, 750</td>
<td>800</td>
<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1425</td>
<td>1550</td>
<td>3200</td>
<td>2300</td>
</tr>
<tr>
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<td>12, 800</td>
<td>800</td>
<td>Rear</td>
<td>1110 ~ 1580</td>
<td>1160 ~ 1425</td>
<td>1550</td>
<td>3200</td>
<td>2400</td>
</tr>
</tbody>
</table>

**Notes:**
1. Above dimensions are applied for car height of 2500mm, for other applicable dimensions, contact us.
2. Speed (m/sec) is increased to 2.0 and 2.5.
3. Machine room temperature should be maintained below 40°C with venting or air conditioning (if necessary) and humidity below 50%.
### Plan of Hoistway

- Overhead:
  - Overhead Duty Load
  - Speed (m/s)
  - Pit Depth (mm)
  - Control Panel (CP)

- Side Open:
  - Overhead Duty Load
  - Speed (m/s)
  - Pit Depth (mm)
  - Control Panel (CP)

### Section of Hoistway

- Overhead & Pit Depth

<table>
<thead>
<tr>
<th>Duty Load (kg)</th>
<th>Speed (m/s)</th>
<th>Overhead (DH)</th>
<th>2 Panel Center Open</th>
<th>2 Panel Side Open</th>
<th>Pit Depth (PP)</th>
<th>Control Panel (CP)*</th>
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<tbody>
<tr>
<td>0.5 - 1150</td>
<td>1.5</td>
<td>2000</td>
<td>2200</td>
<td>1500</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>900 - 1150</td>
<td>2.0</td>
<td>3600</td>
<td>4000</td>
<td>3000</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>1350 - 2000</td>
<td>2.5</td>
<td>5100</td>
<td>5600</td>
<td>4500</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>1750 - 2500</td>
<td>3.0</td>
<td>6300</td>
<td>7000</td>
<td>5500</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>2250 - 2500</td>
<td>3.5</td>
<td>7500</td>
<td>8000</td>
<td>6500</td>
<td>500</td>
<td></td>
</tr>
</tbody>
</table>

Note 1: All values are applied for car height of 2500mm and standard car & opening for other applicable dimensions, please contact us.

Note 2: In case of side open or requested wider opening size to compare car width, OH should be increased 500mm.

Note 3: When non-standard capacities and dimensions are required to meet the local codes, please consult us.

### Layout Plan - YZER (Machine-Room-Less Elevators) 1~2.5m/sec | Side open

### Manufacturer Standard

<table>
<thead>
<tr>
<th>Speed (m/sec)</th>
<th>Capacity</th>
<th>Opening Type</th>
<th>Clear Opening</th>
<th>Car</th>
<th>Hoistway Size</th>
<th>M/C Room Reaction (kg)</th>
<th>Pit Reaction (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>1000</td>
<td>1800</td>
<td>1000</td>
<td>600</td>
</tr>
<tr>
<td>1.5</td>
<td>800</td>
<td>800</td>
<td>800</td>
<td>1200</td>
<td>2200</td>
<td>2200</td>
<td>1500</td>
</tr>
<tr>
<td>2.0</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1400</td>
<td>3000</td>
<td>3000</td>
<td>2100</td>
</tr>
<tr>
<td>2.5</td>
<td>1200</td>
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<td>1200</td>
<td>1600</td>
<td>4000</td>
<td>4000</td>
<td>2600</td>
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</table>

### EN81 Standard

<table>
<thead>
<tr>
<th>Speed (m/sec)</th>
<th>Capacity</th>
<th>Opening Type</th>
<th>Clear Opening</th>
<th>Car</th>
<th>Hoistway Size</th>
<th>M/C Room Reaction (kg)</th>
<th>Pit Reaction (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>750</td>
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<td>750</td>
<td>1250</td>
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<td>1200</td>
<td>1750</td>
<td>5200</td>
<td>5200</td>
<td>2600</td>
</tr>
<tr>
<td>2.5</td>
<td>1400</td>
<td>1400</td>
<td>1400</td>
<td>2000</td>
<td>6700</td>
<td>6700</td>
<td>3100</td>
</tr>
</tbody>
</table>

Note 1: All values are applied for car height of 2500mm and standard car & opening for other applicable dimensions, please contact us.

Note 2: In case of side open or requested wider opening size to compare car width, OH should be increased 500mm.

Note 3: When non-standard capacities and dimensions are required to meet the local codes, please consult us.
Notes: Machine room temperature should be maintained below 40°C with ventilating fan and/or air conditioner (if necessary) and humidity below 90%.

Notes: 1. The minimum hoistway dimensions are shown on the above table. Therefore, some allowances should be made considering the sloping of the hoistways.
2. Above dimensions are based on center opening doors. For applicable dimensions with side opening doors, consult Hyundai.
3. When non-standard capacities and dimensions are required to meet the local code, consult Hyundai.
4. This capacity in persons is calculated at 85kg/person (160kg/2 persons).

### Standard Dimensions & Reactions [mm]

<table>
<thead>
<tr>
<th>Speed (m/sec)</th>
<th>Capacity</th>
<th>Clear Openings</th>
<th>Car</th>
<th>M/C Room</th>
<th>M/C Room Reaction (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Persons</td>
<td>kg</td>
<td>CA</td>
<td>A x B</td>
<td>X1 X2 X3</td>
</tr>
<tr>
<td>1.0</td>
<td>6</td>
<td>630</td>
<td>800</td>
<td>1600 x 1800</td>
<td>1800 1800 1800 1800</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>630</td>
<td>800</td>
<td>1600 x 1800</td>
<td>1800 1800 1800 1800</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>630</td>
<td>800</td>
<td>1600 x 1800</td>
<td>1800 1800 1800 1800</td>
</tr>
<tr>
<td>1.5</td>
<td>10</td>
<td>630</td>
<td>800</td>
<td>1600 x 1800</td>
<td>1800 1800 1800 1800</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>630</td>
<td>800</td>
<td>1600 x 1800</td>
<td>1800 1800 1800 1800</td>
</tr>
<tr>
<td>1.75</td>
<td>12</td>
<td>630</td>
<td>800</td>
<td>1600 x 1800</td>
<td>1800 1800 1800 1800</td>
</tr>
</tbody>
</table>

Notes: 1. Above hoistway dimensions are based on 15-storied buildings. For application to over 16-storied buildings, the hoistway dimensions shall be at least 5% larger, considering the sloping of the hoistways.
2. Above dimensions are based on center opening doors. For applicable dimensions with side opening doors, consult Hyundai.
3. When non-standard capacities and dimensions are required to meet the local code, consult Hyundai.
4. This capacity in persons is calculated at 85 kg/person (160 kg/2 persons).
Typical Entrance Layouts – 2-Panel Center-Opening Doors (CO)

Plan of Entrance

Section Entrance

Works To Be Done By Other Contractors

The following works are not included in the elevator contract, and shall be done by other contractors in accordance with the Hyundai Elevator’s drawings and the applicable codes and regulations.

Hoistway

1. Clear, plumb hoistway with fire resistant hatch walls as required by the applicable code. (Rule 100.1a)
2. Vertical guards on all projections, recesses, or setbacks over 50mm except on sides used for loading or unloading. (Rule 100.6)
3. Venting of the hoistway as required by the applicable code or responsible authority. (Rule 100.4)
4. Supports for rail brackets at each floor, roof, and machine room. (Rule 200.19)
5. Maximum allowable vertical spacing of rail supports without backing. (Rule 200.4 and 301.1) Divider beams 100mm between hoistway at each floor and roof, for guide rail bracket supports. (Rule 200.4, 300.1, and 301.1)
6. Recesses supports and patching as required to accommodate hall button boxes, signal fixtures, etc.
7. All hall mirrors at the inside elevator hoistways or between inside hoistways as required.
8. Dry pit reinforced to sustain normal vertical forces from rails and buffers. (Rule 106.1b and 109) Consult Hyundai Elevator Company for special requirements. (Rule 300.4) Cylinder holes, casings under the pit as required, and backfilling around the cylinder casings when direct plunger type is to be installed.
9. Where access to the pit is by means of the lowest hoistway entrance, vertical iron ladder extending 1060mm minimum above sill of access door. (Rule 106.1d)
10. Entrance walls and finished floor are to be constructed until after doors frames and sill are in place. Door frames are to be anchored to walls and properly grouted in place to maintain legal fire rating.
11. For application as indoor or outdoor observation elevator, a glass enclosure of at least 3.8m in height at the bottom landing is recommended for safety. For use as an outdoor observation elevator, a full height glass enclosure is required.

Machine Room

1. Enclosed and protected machine room. (Rule 101.1)
2. Access to the machine room and machinery space as required by the applicable code or responsible authority. (Rule 101.3)
3. Reinforced concrete machine room floor or grating, as specified, which must be placed over the hoistway until elevator machinery is set in position. (Rule 100.3 for Traction Elevators)
4. Clear access above ceiling or trench in floor, for oil line and wiring duct from machine room, if machine room is separate from elevator hoistway. (For Hydraulic Elevator Contact through machine room wall, for oil line and wiring duct as required by Hyundai Elevator’s shop drawings. (For Hydraulic Elevator)

Emergency Provisions

9. Elevator fireman’s and other emergency services wiring and interconnections to automatic sprinkler systems or heat and smoke sensing devices furnished by others and installed to termal points on the elevator controller.
10. When automatic power operation of elevators is required, the electrical contractor should coordinate with Hyundai Elevator Company or local distributor for operation requirements.

Hydraulic Elevators

1. Light outlet for each elevator, in center of hoistway (or in machine room) as indicated by Hyundai Elevator Company. (Rule 101.1a)
2. Convenience outlet and light fixture in pit with switch located adjacent to the access door. (Rule 106.1a)
3. Wiring and piping work of emergency bell, interphone, etc. Outside the hoistway and the machine room.

Electrical Work

6. A fused disconnect switch or circuit breaker for each elevator and light switch located per necessary, and humidity below 90%.
7. A fused disconnect switch or circuit breaker for each elevator and light switch located per the applicable code and where practicable located adjacent to the door of the machine room. (Rule 210.5 and 300.7)
8. A fused disconnect switch or circuit breaker for each elevator and light switch located per the applicable code and where practicable located adjacent to the door of the machine room. (Rule 210.5 and 300.7)
9. Feeder and branch wiring to the controller, including main-line switch and convenience outlets.
10. Suitable power feeder and branch wiring circuits as required for elevators with power-operated doors, including disconnect switch or circuit breaker.

Heat Emission of Machine Room

\[ Q = \frac{W \cdot V \cdot F \cdot N}{1000 \cdot 3.6} \]

- \(Q\): Heat emission of the machine room (Kcal/hr/\(\ell\) of air)
- \(W\): Capacity (kg)
- \(V\): Speed (m/sec)
- \(F\): Factor (1/40: VVVF)
- \(N\): Number of cars
### Electric Power Requirements (By others)

#### VVVF (50/60Hz, 380V)

<table>
<thead>
<tr>
<th>Persons (kg)</th>
<th>Speed (m/sec)</th>
<th>Motor (kW)</th>
<th>MCCB (A)</th>
<th>Power (kWVA)</th>
<th>Cable (mm²)</th>
<th>Earth (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Car</td>
<td>2 Cars</td>
<td>1 Car</td>
<td>2 Cars</td>
<td>1 Car</td>
<td>2 Cars</td>
</tr>
<tr>
<td>4/50</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>8/50</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>9/60</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10/700</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>11/750</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13/1000</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15/1000</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20/1350</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>24/1650</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

#### VVVF (50/60Hz, 220V)

<table>
<thead>
<tr>
<th>Persons (kg)</th>
<th>Speed (m/sec)</th>
<th>Motor (kW)</th>
<th>MCCB (A)</th>
<th>Power (kWVA)</th>
<th>Cable (mm²)</th>
<th>Earth (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Car</td>
<td>2 Cars</td>
<td>1 Car</td>
<td>2 Cars</td>
<td>1 Car</td>
<td>2 Cars</td>
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<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>8/50</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
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<td>4</td>
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<td>6</td>
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<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
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<td>3</td>
<td>4</td>
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<td>6</td>
</tr>
<tr>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
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<td>2</td>
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<td>4</td>
<td>5</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>24/1650</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Notes:
1. Above power feeder sizes are for the length of electric wire up to 50m from elevator machine room to power.
2. Above cable sizes are for copper wires inside electrometallic tubings.
3. For power requirement of 3 cars or more, consult Hyundai.
4. Machine room temperature should be maintained below 40°C with ventilating fan and air conditioning, and humidity below 90%.
5. Data shown in (   ) is applied to the Machine-Room-Less elevators and gearless elevators.
6. Power feeder sizes are for the length of electric wire up to 50m from elevator machine room to power.
7. Above power feeder sizes are for the length of electric wire up to 50m from elevator machine room to power.
8. Above cable sizes are for copper wires inside electrometallic tubings.
9. For the length being 50m or more, the following formula should be applied.
10. Above power feeder sizes are for the length of electric wire up to 50m from elevator machine room to power.
11. Above power feeder sizes are for the length of electric wire up to 50m from elevator machine room to power.
12. Above cable sizes are for copper wires inside electrometallic tubings.
13. For power requirement of 3 cars or more, consult Hyundai.