MITSUBISHI ELECTRIC
Changes for the Better

PASSENGER ELEVATORS
MACHINE-ROOM-LESS SYSTEM
Series-IP/AP Version3

ELENESSA

2nd Edition

Eco Changes is the Mitsubishi Electric Group’s environmental statement, and expresses the Group’s stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

Mitsubishi Electric elevators and escalators are currently operating in approximately 90 countries around the globe. Built placing priority on safety, our elevators, escalators and building system products are renowned for their excellent efficiency, energy savings and comfort. The technologies and skills cultivated at the Inazawa Works in Japan and 12 global manufacturing factories are utilized in a worldwide network that provides sales, installation and maintenance in support of maintaining and improving product quality.

As a means of contributing to the realization of a sustainable society, we consciously consider the environment in business operations, proactively work to realize a low-carbon, recycling-based society, and promote the preservation of biodiversity.
Utilizing its technological prowess and extensive experience, Mitsubishi Electric has remained a leader in the vertical transportation market since entering the business in 1931. The Company’s creative, innovative spirit, represented by production of the world’s first spiral escalator and elevator group-control systems that use artificial-intelligence technologies, continues to receive high evaluations industry-wide. Our products and systems are renowned for their high levels of quality, reliability and safety; and it is this sense of security and trust fostered with building owners and end-users alike that has led to the global expansion of our elevator/escalator business and the after-sales network to service it.

We understand responsibilities as a good corporate citizen, and continue to implement measures for protecting the environment and ensuring a sustainable society for future generations. A number of original technologies are being introduced to ensure more efficient products, systems and manufacturing operations, thereby enhancing productivity, reducing energy consumption and providing smoother, faster and more comfortable vertical transportation systems.
Based on our policy, “Quality in Motion”, we provide elevators and escalators that will satisfy our customers with high levels of comfort, efficiency, ecology and safety.

We strive to be green in all of our business activities.
We take every action to reduce environmental burden during each process of our elevators’ and escalators’ lifecycle.

Mitsubishi Elevator, escalators and building management systems are always evolving, helping achieve our goal of being the No.1 brand in quality.
In order to satisfy customers in all aspects of comfort, efficiency and safety, while realizing a sustainable society, quality must be of the highest level in all products and business activities, while priority is place on consideration for the environment.
As the times change, Mitsubishi Elevator promises to utilize the collective strengths of its advanced and environmental technologies to offer its customers safe and reliable products while contributing to society.

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Application

<table>
<thead>
<tr>
<th>(m/s)</th>
<th>450</th>
<th>550</th>
<th>610</th>
<th>825</th>
<th>1050</th>
<th>1275</th>
<th>1350</th>
<th>1600</th>
<th>1825</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1.2</td>
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<tr>
<td>1.6</td>
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<td>2.0</td>
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</tr>
</tbody>
</table>

Note: The applicable range of the rated capacity may differ depending on the manufacturing factory, please consult our local agents for details.
Welcome to a New Era in Vertical Transportation
Introducing the ELENESSA Version3...

...technologically advanced elevators that consume less power, have minimal impact on the global environment and harmoniously serve people and buildings with smooth, seamless operation. The refined design produces a high-quality atmosphere that reassures passengers of the superior safety and comfort synonymous with Mitsubishi Electric products. Regardless of the use or purpose, the ELENESSA Version3 is a best match solution for virtually any elevator installation.
Using Energy Wisely
Our long-term commitment to developing energy-efficient elevators has created systems and functions that make intelligent use of power.

Milestones of Energy-saving Technologies in Elevator Development

<table>
<thead>
<tr>
<th>Year</th>
<th>Motor</th>
<th>Traction Machine</th>
<th>Motor Drive</th>
<th>Control Circuit</th>
<th>Power Consumption/CO2 Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1980</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1990</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2000</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2010</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Notes:
1. Alternating current, variable voltage
2. Variable voltage, variable frequency
3. CO2 emissions are from fuel use for elevator operation and do not include emissions from manufacturing, transportation and other processes.
4. Approx. 70% reduction

Advantages of LEDs

<table>
<thead>
<tr>
<th>LED</th>
<th>Power consumption (W)</th>
<th>Service life (hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incandescent Lamp</td>
<td>2000</td>
<td>132</td>
</tr>
<tr>
<td>LED</td>
<td>32.5</td>
<td>25000</td>
</tr>
</tbody>
</table>

Approximately 12.5 times longer
Approximately 75% reduction

Maximizing Operational Efficiency and Minimizing Energy Consumption

Energy-saving Operation – Allocation Control: ESO-W (EAI-2200C only)
This system selects the elevator in a group that best balances operational efficiency and energy consumption. Priority is given to operational efficiency during peak hours and energy efficiency during non-peak hours.

Through a maximum 10% reduction in energy consumption compared to our conventional system, this system allows building owners to cut energy costs without sacrificing passenger convenience.

Reusing Energy

Regenerative Converter: PCNV (Optional)
Elevators usually travel using power from a power supply (powered operation); however, when they travel down with a heavy car load or up with a light car load (regenerative operation), the traction machine functions as a power generator.
Although the power generated during traction machine operation is usually dissipated as heat, the regenerative converter transmits the power back to the distribution transformer and feeds it into the electrical network in the building along with electricity from the power supply.
Compared to the same type of elevator without a regenerative converter, this system provides an energy-saving effect of approximately 35%.*

In addition, the regenerative converter has the effect of decreasing harmonic currents.

Note:
*The value is a reference datum and may increase or decrease in accordance with actual conditions of use and elevator specifications.

LED Lighting (Optional)
Used for ceiling lights and hall lanterns, LEDs boost the overall energy performance of the building. Furthermore, a long service life eliminates the need for frequent lamp replacement.
Group Control Systems: ΣAI-22 and ΣAI-2200C

When a building is expected to have heavy traffic, optimum car allocation suited for every condition makes a big difference in preventing congestion at a lobby floor and reducing long waits.

ΣAI-2200C Performance

<table>
<thead>
<tr>
<th>Ele. No.</th>
<th>Hall call</th>
<th>Traveling direction</th>
<th>Car call</th>
<th>Car</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning up peak</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daytime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lunchtime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evening down peak</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved: Max. 40%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Forecasting a Near-future Hall Call to Reduce Long Waits

Cooperative Optimization Assignment (ΣAI-2200C)

When a hall call is registered, the algorithm assumes a near-future calls that could require long waits. Through evaluation of the registered hall call and the forecasted call, the best car is assigned. All cars work cooperatively for optimum operation.

Allocating Passengers to Cars Depending on Destination Floors

Destination Oriented Allocation System: DOAS (Optional for ΣAI-2200C)

When a passenger enters a destination floor at a hall, the hall operating panel immediately indicates which car will serve the floor. Because the destination floor is already registered, the passenger does not need to press a button in the car. Furthermore, dispersing passengers by destination prevents congestion in cars and minimizes their waiting and traveling time.

Efficiency

Note: Simulated with 6 cars, 20 persons each at 2.3m/sec for 15 stops.

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Variable Traveling Speed Elevator System: VSE (Optional)

With Mitsubishi Electric’s industry-first variable traveling speed elevator system, an elevator can travel faster than its rated speed according to the number of passengers, ultimately reducing waiting and traveling time.

Waiting Time Reduction

Traveling Time Reduction

According to Mitsubishi Electric’s simulation, waiting time can be reduced up to approximately 15% when VSE is applied.

Traveling time can be reduced by approximately 32% when the elevator travels from the bottom to the top floor directly under rapid mode in VSE.

(Conditions)
Travel: 36m, Floor height: 4.0m, 10 floors, Car load: 50%

Efficiency

Space-saving

Machine-room-less Elevators

As all equipment is installed within the hoistway, there are fewer restrictions on building design except for the actual space required for the hoistway. Architects and interior designers have more design freedom.

Maximum Speed and Car Load

<table>
<thead>
<tr>
<th>Car load (%)</th>
<th>0%</th>
<th>50%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated speed</td>
<td>1.0 m/sec</td>
<td>1.25 m/sec</td>
<td>1.5 m/sec</td>
</tr>
<tr>
<td>1.6 m/sec</td>
<td>1.0 m/sec</td>
<td>1.25 m/sec</td>
<td>1.5 m/sec</td>
</tr>
</tbody>
</table>

[Number of passengers in the car when the maximum number of passengers is 14.]

Note: The Variable Traveling Speed Elevator System is applicable to elevators with a rated speed of 1.0 m/sec.
For Safe Boarding

Door Safety Devices
Our reliable safety devices ensure that the doors are clear to open and close. Depending on the type of sensor, the detection area differs. Please refer to page 16 for details.

Emergency Situations

Emergency Operations
To ensure passenger safety, our elevators are equipped with functions for emergencies like a power failure, fire or earthquake.

Power failure
Mitsubishi Emergency Landing Device: MELD (Optional)
Upon power failure, a car automatically moves to the nearest floor using a rechargeable battery to facilitate the safe evacuation of passengers.

Operation by Emergency Power Source–Automatic/Manual: OEPS (Optional)
Upon power failure, predetermined car(s) use a building’s emergency power supply to move to a specified floor and open the doors for passengers to evacuate. After all cars have arrived, predetermined car(s) resume normal operation.

Fire
Fire Emergency Return: FER (Optional)
When a key switch or a building’s fire alarm is activated, all cars immediately return to a specified floor and open the doors to facilitate the safe evacuation of passengers.

Earthquake
Earthquake Emergency Return: EER-P/EER-S (Optional)
When a primary and/or secondary wave seismic sensor is activated, all cars stop at the nearest floor and park there with the doors open to facilitate the safe evacuation of passengers.
Car

Ceiling: S00

Car operating panel

For front return panel

Yellow-orange lighting

Tactile button with yellow-orange lighting

Hall

Narrow Jamb: E-102

Hall position indicators and buttons

With plastic case

With plastic case

PVI-A1010N  ■  PVI-A1020N  ■

Segment LED indicators
tactile button with yellow-orange lighting

Notes:
1. Maximum number of floors: 22 floors
2. Some letters of the alphabets are not available. Please consult our local agents for details.

Car Design Example

Walls ——— SUS-HL
Transom panel ——— SUS-HL
Doors ——— SUS-HL
Front return panels ——— SUS-HL
Kickplate ——— Aluminum
Flooring ——— PRB03: Gray
Car operating panel ——— CBV1-C760

Hall Design Example

Jamb ——— SUS-HL
Doors ——— SUS-HL
Hall position indicator and button ——— PVI-A1010N

Hall position indicators and buttons

With plastic case

With plastic case

PVI-A1010N  ■  PVI-A1020N  ■

Segment LED indicators
Tactile button with yellow-orange lighting

Notes:
1. Maximum number of floors: 22 floors
2. Some letters of the alphabets are not available. Please consult our local agents for details.

Features (1/2)

EMERGENCY OPERATIONS AND FEATURES

<table>
<thead>
<tr>
<th>Building Management System/GateWay</th>
<th>BMS-GW</th>
<th>Each elevator's status and operation can be monitored and controlled using a building management system which manages various facilities in the building via the interface for the elevator system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake Emergency Return</td>
<td>EER-P</td>
<td>Upon activation of primary and/or secondary wave sensors, all cars stop at the nearest floor, and push them with the doors open to facilitate the safe evacuation of passengers.</td>
</tr>
<tr>
<td>Earthquake Emergency Return</td>
<td>EER-S</td>
<td>Upon activation of primary and/or secondary wave sensors, all cars stop at the nearest floor, and push them with the doors open to facilitate the safe evacuation of passengers.</td>
</tr>
<tr>
<td>Emergency Car Lighting</td>
<td>ECL</td>
<td>Car lighting which turns on immediately when power fails, providing a minimum level of light within the car. (Choice of dry-cell battery or trickle-charge battery)</td>
</tr>
<tr>
<td>Fire Emergency Return</td>
<td>FER</td>
<td>Upon activation of a stay switch or blocking fire alarm, all cars are cancelled, all cars immediately return to a specified evacuation floor and the doors open to facilitate the safe evacuation of passengers.</td>
</tr>
<tr>
<td>Mitsubishi Emergency Landing Device</td>
<td>MELD</td>
<td>Upon power failure, a car equipped with the function automatically moves and stops at the nearest floor using a rechargeable battery, and the doors open to facilitate the safe evacuation of passengers. (Maximum allowable floor-to-floor distance is 11 meters.)</td>
</tr>
</tbody>
</table>

DOOR OPERATION FEATURES

<table>
<thead>
<tr>
<th>Automatic Door-open Time Adjustment</th>
<th>DOT</th>
<th>The time doors are open is automatically adjusted depending on whether the stop was called from the hall or the car, to allow smooth boarding of passengers or loading of luggage.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Door Speed Control</td>
<td>DSAC</td>
<td>When the door load on each floor, which can depend on the type of hall doors, is monitored, to adjust the door speed, thereby making the door speed consistent throughout all floors.</td>
</tr>
<tr>
<td>Door Load Detector</td>
<td>DLD</td>
<td>When excessive door load has been detected while opening or closing, the doors immediately reverse.</td>
</tr>
<tr>
<td>Door Nudging Feature — With Buzzer</td>
<td>DND</td>
<td>A buzzer sounds and the doors slowly close when they have remained open for longer than the preset period. With the AAN-4 or AAN-6 feature, a beep and voice guidance sound instead of the buzzer.</td>
</tr>
<tr>
<td>Door Sensor Self-diagnosis</td>
<td>DDS</td>
<td>Failure of non-contact door sensors is checked automatically, and if a problem is detected, the door closing time is delayed and the closing speed is reduced to maintain safety.</td>
</tr>
<tr>
<td>Electronic Doorman</td>
<td>EDM</td>
<td>Each open time is monitored using the SR or Multi-beam Door Sensor feature, to detect passengers boarding or exiting.</td>
</tr>
<tr>
<td>Extended Door-open Button</td>
<td>DKB-T</td>
<td>When the button inside a car is pressed, the doors remain open longer to allow loading and unloading of luggage, a stretcher, etc.</td>
</tr>
<tr>
<td>Hall Motion Sensor</td>
<td>HMS</td>
<td>Infrared-light is used to scan a 3D area near the open doors to detect passengers or objects. (Cannot be combined with the MBSS feature.)</td>
</tr>
<tr>
<td>Multi-beam Door Sensor</td>
<td>MBSS</td>
<td>Multiple infrared-light beams cover some height of the doors to detect passengers or objects as the doors close. (Cannot be combined with the SR or MBSS feature.)</td>
</tr>
<tr>
<td>Multi-beam Door Sensor — Signal Type</td>
<td>MBSS</td>
<td>Multiple infrared-light beams cover some height of the doors to detect passengers or objects as the doors close. Additionally, LED lights on the door edge will indicate the door opening/closing and the presence of an obstacle between the doors. (Cannot be combined with any of the following features: 3D, 3R or Multi-beam Door Sensor.)</td>
</tr>
<tr>
<td>Reopen with Hall Button</td>
<td>ROHB</td>
<td>Closing doors can be reopened by pressing the hall button corresponding to the traveling direction of the car.</td>
</tr>
<tr>
<td>Repeated Door-close</td>
<td>RDC</td>
<td>Should an obstacle prevent the doors from closing, the doors will repeatedly open and close until the obstacle is cleared from the doorway.</td>
</tr>
<tr>
<td>Safety Door Edge</td>
<td>SDE</td>
<td>The sensitive door edge detects passengers or objects during door closing. (Cannot be combined with the SR or MBSS feature.)</td>
</tr>
<tr>
<td>Safety Ray</td>
<td>SR</td>
<td>1-beam: One or two infrared-light beams cover the full width of the doors as they close to detect passengers or objects. (Cannot be combined with the Multi-beam Sensor.) 2-beam: Two infrared-light beams which turn on immediately when power fails, providing a minimum level of light within the car. (Choice of dry-cell battery or trickle-charge battery)</td>
</tr>
</tbody>
</table>

Notes:
1. 1C to 2C (1-car selective collective) - Standard, 2C to 6C (2-car group control system) - Optional
2. 1A to 2C (1-car group control system) - Standard, 1A to 22C (1 to 22-car group control system) - Optional
3. 1A to 22C (1-car group control system) - Standard, 1A to 22C (1 to 22-car group control system) - Optional
4. 1C to 2C (1-car selective collective) - Standard, 2C to 6C (2-car group control system) - Optional
5. 1A to 2C (1-car group control system) - Standard, 1A to 2C (1-car group control system) - Optional
OPERATIONAL AND SERVICE FEATURES

**Congested-floor Service**
- Bank-separation Operation BSO
- Secret Call Service

**Card Reader Type**
- Non-service Temporary
- Car Button Type
- Automatic

**System Interface**
- Automatic Registration
- Automatic Hall Call

**Operational and Service Features**
- EL-SCA
- FCC-A
- FCC-P
- NS-T
- CCC
- CFS
- VSE

- A car which is experiencing trouble is automatically withdrawn from group control operation to maintain normal operation performance.
- Personal authentication by building’s security devices can trigger predetermined elevator operation such as permission of access to private folders, designation of a small call and destination floor and VIP operation.
- If the elevator doors do not open fully at a destination floor, the doors close, and the car returns to the floor from which it started.
- A buzzer sounds to alert the passengers that the car is overloaded. The doors remain open until the number of passengers decreases to the prescribed level.
- A fully-loaded car bypasses hall calls in order to maintain maximum operational efficiency.
- A service car which has reached the main floor parks on that floor, and the doors will open.

**Non-service to Specific Floors**
- Automatic
- System Interface

**Non-service to Specific Floors**
- Car Button Type

**Main Floor Changeover Operation**
- TFS

**Main Floor Parking**
- MP

**Special Car Priority Service**
- SCP

**Special Floor Priority Service**
- SIPS

**Peak Service**
- UPS

**VIP Operation**
- VIP-S

**A fully-loaded car bypasses hall calls in order to maintain maximum operational efficiency.**

**SIGNAL AND DISPLAY FEATURES**

**Auxiliary Car Operating Panel**
- ACS

**Basic Announcement**
- AAN

**Car Arrival Chime**
- ACC

**Car Information Display**
- CID

**Car LCD Position Indicator**
- CID-S

**Flashing Hall Lantern**
- FLH

**Hall Information Display**
- HD

**Hall LCD Position Indicator**
- HD-S

**Intermediate Prediction Indication**
- IAL

**Intercommunication System**
- IPT

**Second Car Prediction**
- SCP

**Same Car Button**
- ACB

**Voice Guidance System**
- AAA

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**Notes:**
- 1C to 2C
- ΣAI-22 (3- to 4-car group control system) - Optional
- ΣAI-2200C (3- to 8-car group control system) - Optional
- AAN-B
- HID-S
- UCPS
- SCPS
- SFPS
- ACB
- CID
- ITP
- SCPS
- SOP
- ACB
- AAA

---

**Information on elevator service such as the current floor or service direction is given to the passengers inside a car.**

**Passenger service and information systems**
- Basic functions
  - Display of the current floor and the number of passengers inside the car
- Remote control functions
  - Passengers can remotely operate the car from outside the car

**GCPS**
- Indoor unit (OUD)
- Outdoor unit (ODU)

**Operational and Service Features**
- CSB
- CSF
- DAS

**Operation**
- Automatic

**Peak Operation**
- Automatic

**Special Floor**
- VIP-S
## Basic Specifications

### Horizontal Dimensions <1-Door 1-Gate>

<table>
<thead>
<tr>
<th>Code number</th>
<th>Number of persons</th>
<th>Rated speed (m/sec)</th>
<th>Rated capacity (kg)</th>
<th>Door type</th>
<th>Entrance width (mm)/J</th>
<th>Counter-weight position</th>
<th>Car internal dimensions (mm)/ABB</th>
<th>Minimum hoistway dimensions (mm)</th>
<th>Rated speed (m/sec)</th>
<th>Rated speed (m/sec)</th>
<th>Rated speed (m/sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P6 6</td>
<td></td>
<td>450</td>
<td>25</td>
<td>800</td>
<td>950</td>
<td></td>
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<td>1.75</td>
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<td>P7 7</td>
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<td>800</td>
<td>1100</td>
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<td>1650</td>
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<td>2.00</td>
<td>2.50</td>
<td>2.00</td>
</tr>
<tr>
<td>P8 8</td>
<td></td>
<td>630</td>
<td>CD</td>
<td>800</td>
<td>1100</td>
<td></td>
<td>1650</td>
<td>1100</td>
<td>2.00</td>
<td>2.50</td>
<td>2.00</td>
</tr>
<tr>
<td>P11 11</td>
<td></td>
<td>825</td>
<td>CD</td>
<td>800</td>
<td>1350</td>
<td></td>
<td>1650</td>
<td>1100</td>
<td>2.00</td>
<td>2.50</td>
<td>2.00</td>
</tr>
<tr>
<td>P14 14</td>
<td></td>
<td>1050</td>
<td>CD</td>
<td>800</td>
<td>1600</td>
<td></td>
<td>1650</td>
<td>1100</td>
<td>2.00</td>
<td>2.50</td>
<td>2.00</td>
</tr>
<tr>
<td>P17 17</td>
<td></td>
<td>1275</td>
<td>CD</td>
<td>800</td>
<td>1900</td>
<td>Rear</td>
<td>2000</td>
<td>1200</td>
<td>2.00</td>
<td>2.50</td>
<td>2.00</td>
</tr>
<tr>
<td>P18 18</td>
<td></td>
<td>1350</td>
<td>CD</td>
<td>800</td>
<td>2200</td>
<td>Rear</td>
<td>2000</td>
<td>1200</td>
<td>2.00</td>
<td>2.50</td>
<td>2.00</td>
</tr>
<tr>
<td>P21 21</td>
<td></td>
<td>1600</td>
<td>CD</td>
<td>800</td>
<td>2500</td>
<td>Rear</td>
<td>2100</td>
<td>1600</td>
<td>2.00</td>
<td>2.50</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Terms of the table:
- The code number applies to the elevator system.
- The number of persons applies to the elevator system.
- Rated speed (m/sec) is the rated speed of the elevator system.
- Rated capacity (kg) is the rated capacity of the elevator system.
- Door type is the type of door on the elevator system.
- Entrance width (mm)/J is the entrance width of the elevator system.
- Counter-weight position is the position of the counter-weight.
- Car internal dimensions (mm)/ABB is the car internal dimensions of the elevator system.
- Minimum hoistway dimensions (mm) is the minimum hoistway dimensions of the elevator system.
- Rated speed (m/sec) is the rated speed of the elevator system.

### Vertical Dimensions <1-Door 1-Gate & 1-Door 2-Gate>

<table>
<thead>
<tr>
<th>Rated speed (m/sec)</th>
<th>Rated Capacity (kg)</th>
<th>Travel (m)</th>
<th>Minimum overhead (mm)</th>
<th>Minimum pit depth (mm)</th>
<th>Minimum floor to floor height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>450/2-Q1050</td>
<td>1850</td>
<td>25</td>
<td>1400</td>
<td>2500</td>
</tr>
<tr>
<td></td>
<td>1050/2-Q1600</td>
<td>1650</td>
<td>25</td>
<td>1400</td>
<td></td>
</tr>
</tbody>
</table>

Terms of the table:
- Rated speed (m/sec) is the rated speed of the elevator system.
- Rated Capacity (kg) is the rated capacity of the elevator system.
- Travel (m) is the travel of the elevator system.
- Minimum overhead (mm) is the minimum overhead of the elevator system.
- Minimum pit depth (mm) is the minimum pit depth of the elevator system.
- Minimum floor to floor height (mm) is the minimum floor to floor height of the elevator system.

### Specifications for Variable Traveling Speed Elevator System (Optional)

- The variable traveling speed elevator system (VTES) is applicable for elevators with a rated speed of 1.0 m/sec.
- Except minimum overhead and pit depth dimensions (OH and PD), specifications shown in tables, “Horizontal Dimensions” and “Vertical Dimensions”, on the pages 19 and 21, are applicable to the variable traveling speed elevator system.

### Hoistway Plan <1-Door 1-Gate>

- Minimum overhead (OH): 1050 mm
- Minimum pit depth (PD): 1500 mm
- Minimum floor to floor height: 2500 mm

### Elevator <1-Door 1-Gate>

- Note: The layout (position of traction machine, etc.) differs depending on capacity.

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Basic code compliance

The dimensional information shown here in this page is based on the requirements of GB7588.
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**Basic code compliance**

The dimensional information shown here in this page is based on the requirements of GB7588.

**Important Information on Elevator Planning**

**Elevator Site Requirements**

- The temperature of the elevator hoistway shall be below 40°C.
- The following conditions are required for maintaining elevator performance.
  a. The relative humidity shall be below 90% on a monthly average and below 95% on a daily average.
  b. Prevention shall be provided against icing and condensation occurring due to a rapid drop in the temperature in the elevator hoistway.
  c. The elevator hoistway shall be finished with mortar or other materials so as to prevent concrete dust.
  d. Voltage fluctuation shall be within a range of +5% to –10%.

**Ordering Information**

Please include the following information when ordering or requesting estimates:

- The desired number of units, speed and loading capacity.
- The number of stops or number of floors to be served.
- The total elevator travel and each floor-to-floor height.
- Operation system.
- Selected design and size of car.
- Entrance design.
- Signal equipment.
- A sketch of the part of the building where the elevators are to be installed.
- The voltage, number of phases, and frequency of the power source for the motor and lighting.

**Horizontal Dimensions**

<table>
<thead>
<tr>
<th>Code number</th>
<th>Number of persons</th>
<th>Rated speed (m/sec)</th>
<th>Rated capacity (kg)</th>
<th>Door type</th>
<th>Entrance width (mm)</th>
<th>Car internal dimensions (mm)</th>
<th>Minimum hoistway dimensions (mm)</th>
<th>Rated speed (m/sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P8</td>
<td>8</td>
<td>1.0</td>
<td>17</td>
<td>CO</td>
<td>1100x1200</td>
<td>1755x2400</td>
<td>1830x1980</td>
<td>20, 25, 30</td>
</tr>
<tr>
<td>P11</td>
<td>11</td>
<td>1.0</td>
<td>14</td>
<td>CO</td>
<td>1350x1400</td>
<td>2000x2400</td>
<td>2115x1890</td>
<td>20, 25, 30</td>
</tr>
<tr>
<td>P14</td>
<td>14</td>
<td>2.0</td>
<td>8</td>
<td>CO</td>
<td>1600x1400</td>
<td>2160x2400</td>
<td>2200x1890</td>
<td>20, 25, 30</td>
</tr>
<tr>
<td>P17</td>
<td>17</td>
<td>2.0</td>
<td>8</td>
<td>CO</td>
<td>2400x2400</td>
<td>2500x2400</td>
<td>2550x1980</td>
<td>20, 25, 30</td>
</tr>
<tr>
<td>P21</td>
<td>21</td>
<td>2.0</td>
<td>8</td>
<td>CO</td>
<td>1600x2400</td>
<td>2500x2400</td>
<td>2550x1980</td>
<td>20, 25, 30</td>
</tr>
</tbody>
</table>

Note: The layout (position of traction machine, etc.) differs depending on capacity.

**Work Not Included in Elevator Contract**

The following items are excluded from Mitsubishi Electric’s elevator installation work. Their details or conditions are to be confirmed to the statement of local laws or Mitsubishi Electric’s elevator requirements, are therefore the responsibility of the building owner or general contractor.

- Architectural finishing of walls and floors in the vicinity of the entrance hall after installation has been completed.
- Construction of an illuminated, ventilated and waterproofed hoistway.
- The provision of a ladder to the elevator pit.
- The provision of openings and supporting members as required for equipment installation.
- Separate beams, when the hoistway dimensions markedly exceed the specifications, intermediate beams and separator partitions when two or more elevators are installed.
- The provision of an emergency exit door, inspection door and pit access door, when required, and access to the doors.
- All other work related to building construction.
- The provision of the main power and power for illumination in the hoistway by laying of the feeder wiring from the electrical switch boxes in electrical room into the hoistway.
- The provision of outlets and laying of the wiring in the hoistway, plus the power from the electrical switch box.
- The laying of conduits and wiring between the elevator pit and the terminating point for the devices installed outside the hoistway, such as the emergency bell, intercom, monitoring and security devices.
- The power consumed in installation work and test operations.
- All necessary building materials for grouting in of brackets, bolts, etc.
- The test provision and subsequent alteration as required, and eventual removal of the scaffolding as required by the elevator contractor, and any other protection of the works as may be required during the process.
- The provision of a suitable, locked space for the storage of elevator equipment and tools during elevator installation.
- The security system, such as a card reader, connected to Mitsubishi Electric’s elevator controller, when supplied by the building owner or general contractor.

Note: Work responsibilities in installation and construction shall be determined according to local laws.

**Important Information on Elevator Planning**

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- The following conditions are required for maintaining elevator performance.
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- The voltage, number of phases, and frequency of the power source for the motor and lighting.
State-of-the-Art Factories…
For the Environment. For Product Quality.

Mitsubishi Electric elevators and escalators are currently operating in approximately 90 countries around the globe. Built placing priority on safety, our elevators, escalators and building system products are renowned for their excellent efficiency, energy savings and comfort. The technologies and skills cultivated at the Inazawa Works in Japan and 12 global manufacturing factories are utilized in a worldwide network that provides sales, installation and maintenance in support of maintaining and improving product quality. As a means of contributing to the realization of a sustainable society, we consciously consider the environment in business operations, proactively work to realize a low-carbon, recycling-based society, and promote the preservation of biodiversity.

ISO9001/14001 certification

Mitsubishi Electric Corporation Inazawa Works has acquired ISO 9001 certification from the International Organization for Standardization based on a review of quality management. The plant has also acquired environmental management system standard ISO 14001 certification.

Mitsubishi Elevator Asia Co., Ltd. has acquired ISO 9001 certification from the International Organization for Standardization based on a review of quality management. The plant has also acquired environmental management system standard ISO 14001 certification.

Eco Changes is the Mitsubishi Electric Group’s environmental statement, and expresses the Group’s stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

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MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE: TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN


Safety Tips: Be sure to read the instruction manual fully before using this product.