MITSUBISHI ELECTRIC
Changes for the Better

PASSENGER ELEVATORS
(COMPACT MACHINE ROOM SYSTEM)
Series-IP/AP Version 2
Series-IP

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.
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.

** Principle 

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.

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**Application**

NexWay-S

<table>
<thead>
<tr>
<th>Rated Capacity (kg)</th>
<th>(m/sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>825</td>
<td>0.75</td>
</tr>
<tr>
<td>1000</td>
<td>1.0</td>
</tr>
<tr>
<td>1250</td>
<td>1.6</td>
</tr>
<tr>
<td>1275</td>
<td>1.75</td>
</tr>
<tr>
<td>1350</td>
<td>2.0</td>
</tr>
<tr>
<td>1600</td>
<td>2.5</td>
</tr>
<tr>
<td>1800</td>
<td>3.0</td>
</tr>
<tr>
<td>2025</td>
<td>3.5</td>
</tr>
<tr>
<td>2250</td>
<td>4.0</td>
</tr>
<tr>
<td>2500</td>
<td>4.5</td>
</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.
SUSTAINABLE ENERGY USE

Mitsubishi Electric’s leading-edge technologies have made it possible for elevators to conserve energy. Our Regenerative Converter makes the most of power generated by the traction machine. Additionally, thanks to the joint-lapped core in permanent magnet (PM) motor and energy-saving features, the elevators use energy more wisely and efficiently.

**Efficient use of power**

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.

Mitsubishi Electric’s leading-edge technologies have made it possible for elevators to conserve energy. Our Regenerative Converter makes the most of power generated by the traction machine. Additionally, thanks to the joint-lapped core in permanent magnet (PM) motor and energy-saving features, the elevators use energy more wisely and efficiently.

**Curbing energy consumption**

Mitsubishi Electric offers features that help to reduce the energy consumption of elevators.

**Energy-saving Operation**

- **Number of Cars: ESO-N (Optional for ΣAI-22)**
  The number of service cars is automatically reduced to some extent without affecting passenger waiting time.

- **Allocation Control: ESO-W (ΣAI-2200C only)**
  Based on each elevator’s potential energy consumption, the system selects the elevator that best balances operational efficiency and energy consumption.

**Car Light/Fan Shut Off**

- **Automatic: CFO-A/CLO-A**
  The car lighting/ventilation fan is automatically turned off if there are no calls for a specified period.

**Joint-lapped Core in Permanent Magnet (PM) Motor**

Smaller carbon footprint

The joint-lapped core built in the PM motor of the traction machine features flexible joints. The iron core can be like a hinge, which allows coils to be wound around the core more densely, resulting in improved motor efficiency and compactness. High-density magnetic field is produced, enabling lower use of energy and resources and reduced CO₂ emissions.

**Energy-saving Features**

Curbing energy consumption

Mitsubishi Electric offers features that help to reduce the energy consumption of elevators.

**Energy-saving Operation**

- **Number of Cars: ESO-N (Optional for ΣAI-22)**
  The number of service cars is automatically reduced to some extent without affecting passenger waiting time.

- **Allocation Control: ESO-W (ΣAI-2200C only)**
  Based on each elevator’s potential energy consumption, the system selects the elevator that best balances operational efficiency and energy consumption.

- **Car Light/Fan Shut Off**
  - **Automatic: CFO-A/CLO-A**
    The car lighting/ventilation fan is automatically turned off if there are no calls for a specified period.

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

Variable Traveling Speed Elevator System: VSE (Optional)*

The Variable Traveling Speed Elevator System allows elevators to travel faster than their rated speed depending on the number of passengers in the car (rapid mode). When the weight is well-balanced between the car and the counter-weight, the traction machine does not need its full power to make the elevator travel at the rated speed. Thus, utilizing the unused power of the traction machine, the elevator can travel faster. Its efficient transport reduces frustratingly long waiting and traveling time. VSE is a solution for users seeking time-savings in elevator travel.

According to Mitsubishi Electric’s simulation, waiting time can be reduced up to approximately 12% when VSE is applied.

Waiting Time Reduction

Traveling Time Reduction

Traveling time can be reduced by approximately 25% 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%

According to Mitsubishi Electric’s simulation, traveling time can be reduced by up to approximately 12% when VSE is applied.

Maximum Speed and Car Load

The above diagram shows VSE system of elevator with the rated speed 1.6m/sec.

*The Variable Traveling Speed Elevator System is applicable to elevators with rated speeds of 1.6m/sec, 1.75m/sec and 2.0m/sec and the rated capacity of 825kg to 1350kg.
SPACE-SAVING

Through the development of the Compact Gearless Traction Machine and Compact Control Panel, Mitsubishi Electric has successfully reduced the machine room area to that of hoistway\(^1\), where the machine room used to require an area twice as large as that of hoistway. It offers the most advanced elevator features without requiring a large machine room, thus maximizing the use of building space.

**Example of Space-saving**

<table>
<thead>
<tr>
<th>Conventional Machine Room</th>
<th>Compact Machine Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact Control Panel</td>
<td>Compact PM Gearless Traction Machine</td>
</tr>
</tbody>
</table>

Compact Machine Room

Mitsubishi Electric was the first company to replace induction motors with its highly sophisticated PM (permanent magnet) motors for high-speed and super high-speed elevators.

The extremely thin PM motor manufactured using Mitsubishi Electric’s unique stator core technology – Joint-lapped Core\(^*\) in Permanent Magnet (PM) Motor – has dramatically reduced not only the size of traction machines but also energy consumption.

Furthermore, the PM motor suppresses harmonic noise and torque ripple, providing greater riding comfort.

Notes:
\(^*\) The area of the machine room may have to be larger than that of the hoistway in case of (a), (b), (c) and/or (d) below:
(a) An optional feature that requires a panel(s), in addition to the control panel, is requested.
(b) The car interior width (AA) is less than 1600mm, and the entrance width (JJ) is less than 900mm for 2-panel center opening (CO) or 1100mm for 2-panel side opening (2S).
(c) The counterweight is installed in a side drop position.
(d) Regenerative converter (PCNV) is NOT required (Attachment panel for resistor is provided into machine room in addition to the control panel).

\(^\text{1}\) The area of the machine room can be reduced approximately 9m\(^2\) when the rated capacity is 1000kg and the rated speed is 1.75m/sec. The area may differ depending on the conditions.

\(^\text{2}\) The control panel that drives the PM motor has also been reduced in size. Incorporating the most advanced, low-loss IGBT (Insulated Gate Bipolar Transistor) into an optimal design, the power unit has decreased in size significantly, making the control panel itself smaller than previous models. The functions and performance of this Compact Control Panel remain unchanged.

The VVVF Inverter Control delivers smooth, high-precision control of the traction machine. A combination of these state-of-the-art components contributes to significant power savings, while achieving the desired functions and performance of the control panel.

Note:
\(^*\) Please refer to page 4 for details.
EFFICIENT TRANSPORTATION

Mitsubishi Electric’s breakthrough AI Neural Network* technology in elevator control enhances transport efficiency and reduces passenger waiting time through optimum car allocation, which allows elevators to use energy effectively. Two basic group control systems offer a variety of innovative group control features.

<table>
<thead>
<tr>
<th>Group control systems</th>
<th>Suitable building size</th>
<th>Number of cars in a group</th>
</tr>
</thead>
<tbody>
<tr>
<td>ΣAI-22 system</td>
<td>Small to medium</td>
<td>3 to 4 cars</td>
</tr>
<tr>
<td>ΣAI-2200C system</td>
<td>Especially buildings with dynamic traffic conditions</td>
<td>3 to 8 cars</td>
</tr>
</tbody>
</table>

*Neural Network is a mathematical model that emulates the structure of the nerves and cells of the human brain and its information processing mechanism.

The features introduced on these pages are applicable to ΣAI-2200C only. Please refer to page 13 and 14, and the ΣAI-2200C brochure for other features and details.

Dynamic Rule-set Optimizer

Selects optimum car allocation through rule-set simulations
Based on real traffic data, passenger traffic is predicted every few minutes. According to the prediction, real-time simulation selects the best rule-set (multiple rules have been set as car allocation patterns), which optimizes transport efficiency.

Destination Oriented Allocation System: DOAS (Optional)

Allocates passengers to cars depending on destination floors
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 waiting and traveling time.

Cooperative Optimization Assignment

Forecasts a near-future hall call to reduce long waits
When a hall call is registered, the algorithm assumes 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.

Performance

Average Waiting Time

<table>
<thead>
<tr>
<th></th>
<th>Morning up peak</th>
<th>Lunchtime</th>
<th>Evening down peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI-2100N</td>
<td>Improved: Max. 40%</td>
<td>Improved: Max. 80%</td>
<td>Daytime</td>
</tr>
<tr>
<td>ΣAI-2200C (latest)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Morning up peak</th>
<th>Lunchtime</th>
<th>Evening down peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved: Max. 40%</td>
<td>Improved: Max. 80%</td>
<td>Daytime</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Performance</th>
<th>Average Waiting Time</th>
<th>Long-Wait Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Morning up peak</td>
<td>Lunchtime</td>
</tr>
<tr>
<td>Improved: Max. 40%</td>
<td>Improved: Max. 80%</td>
<td>Daytime</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Average Waiting Time</th>
<th>Long-Wait Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning up peak</td>
<td>Lunchtime</td>
<td>Evening down peak</td>
</tr>
<tr>
<td>Improved: Max. 40%</td>
<td>Improved: Max. 80%</td>
<td>Daytime</td>
</tr>
</tbody>
</table>

Standard arrangement of hall fixtures (No hall lantern* is provided.)
Can receive destination information from all floors to provide the best service for more complex traffic conditions throughout the day.

Example of hall arrangement

Note:
*Hall lanterns are available as optional.
**Standard Design**

**Car**
- Ceiling: S00
- Car Design Example:
  - Walls: Stainless-steel, hairline-finish
  - Transom panel: Stainless-steel, hairline-finish
  - Doors: Stainless-steel, hairline-finish
  - Front return panels: Stainless-steel, hairline-finish
  - Kickplate: Aluminum
  - Flooring: PR803: Gray
  - Car operating panel: CBV1-N712

**Hall**
- Narrow Jamb: E-102
- Hall Design Example:
  - Jamb: Stainless-steel, hairline-finish
  - Doors: Stainless-steel, hairline-finish
  - Hall position indicator and button: PIV1-A1010N

**Shiny Vibration Finish for Stainless-steel (Optional)**

Shiny Vibration, a highly durable lustrous finish, has been added exclusively for the NexWay-S lineup. The stainless-steel finish presents a soft natural texture that impresses in appearance while protecting the surface from showing scratches.

**NexWay-S Exclusive Finish**

(750kg to 1350kg only)

**Car**
- Car Design Example:
  - CBV1-N712
  - Segment LED indicators*2
  - Tactile button with yellow-orange lighting

**Hall**
- Hall Design Example:
  - Jamb: Stainless-steel, shiny vibration
  - Doors: Stainless-steel, shiny vibration
  - Hall position indicator: PHV-D417
  - Hall button: HBV1-A1010N

**Notes:**
- *1: Maximum number of floors: 30 floors
- *2: Some letters of the alphabets are not available. Please consult our local agents for details.
- *3: These types are not applicable to elevators complying with EN81-70.

Actual colors may differ slightly from those shown. Please refer to the design guide for details and other designs.
## Basic Specifications (825kg to 1350kg)

### Horizontal Dimensions

<table>
<thead>
<tr>
<th>Code number</th>
<th>Number of persons</th>
<th>Rated capacity (kg)</th>
<th>Door type</th>
<th>Counter-weight position</th>
<th>Car internal dimensions (mm)</th>
<th>Entrance width (mm)</th>
<th>Minimum hoistway dimensions (mm)</th>
<th>Rated speed (m/sec)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P11</td>
<td>11</td>
<td>825</td>
<td>CO</td>
<td>Rear</td>
<td>1400x1350</td>
<td>900</td>
<td>2010x1805</td>
<td>1.0/1.75/2</td>
<td></td>
</tr>
<tr>
<td>P13</td>
<td>13</td>
<td>1000</td>
<td>CO</td>
<td>Rear</td>
<td>1600x1400</td>
<td>1100</td>
<td>2175x1715</td>
<td>1.75/2.0</td>
<td></td>
</tr>
<tr>
<td>P14</td>
<td>14</td>
<td>1050</td>
<td>CO</td>
<td>Rear</td>
<td>1100x1200</td>
<td>900</td>
<td>2000x165</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>P17</td>
<td>17</td>
<td>1250</td>
<td>CO</td>
<td>Rear</td>
<td>2000x1400</td>
<td>1100</td>
<td>2460x185</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>P18</td>
<td>18</td>
<td>1350</td>
<td>CO</td>
<td>Rear</td>
<td>2000x1500</td>
<td>1100</td>
<td>2690x185</td>
<td>2.0</td>
<td></td>
</tr>
</tbody>
</table>

### Vertical Dimensions

**1-Door 1-Gate & 1-Door 2-Gate**

<table>
<thead>
<tr>
<th>Rated speed (m/sec)</th>
<th>Maximum travel (m) TR</th>
<th>Maximum number of stops</th>
<th>Counter-weight position</th>
<th>Minimum overhead (mm) OH</th>
<th>Minimum pit depth (mm) PD</th>
<th>Minimum machine room depth (mm)</th>
<th>Minimum floor to floor height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>TR=60</td>
<td>50</td>
<td>Rear</td>
<td>4240</td>
<td>4410</td>
<td>1360</td>
<td>1410</td>
</tr>
<tr>
<td>1.6</td>
<td>TR=110</td>
<td>50</td>
<td>Rear</td>
<td>4410</td>
<td>4570</td>
<td>1440</td>
<td>1450</td>
</tr>
<tr>
<td>1.75</td>
<td>TR=130</td>
<td>50</td>
<td>Rear</td>
<td>4490</td>
<td>4650</td>
<td>1500</td>
<td>1550</td>
</tr>
<tr>
<td>2.0</td>
<td>TR=130</td>
<td>50</td>
<td>Rear</td>
<td>4730</td>
<td>4900</td>
<td>1740</td>
<td>1790</td>
</tr>
<tr>
<td>2.5</td>
<td>TR=160</td>
<td>40</td>
<td>Rear</td>
<td>4690</td>
<td>4870</td>
<td>1900</td>
<td>2050</td>
</tr>
<tr>
<td>2.0</td>
<td>TR=150</td>
<td>40</td>
<td>Rear</td>
<td>4900</td>
<td>5100</td>
<td>2160</td>
<td>2310</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Rated speed (m/sec)</th>
<th>Traveling speeds (m/sec)</th>
<th>1-Door 1-Gate &amp; 1-Door 2-Gate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>1.0/1.2/1.5</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>1.0/1.5/1.75</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>1.6/2.0/2.5</td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>1.75/2.2/2.5</td>
<td></td>
</tr>
</tbody>
</table>

### Notes:

- When the counterweight is installed in a side drop position and the door type is CO, a larger machine room depth (BH) is required. Please consult our local agents.
- The minimum hoistway dimensions (AH x BH) shown in the table above is a space for a car when two or more cars are located in the same hoistway.
- Minimum hoistway dimensions (BH) shown in the table are after waterproofing of the pit and do not include plumb tolerance.
- CO: 2-panel center opening doors, 2S: 2-panel side sliding doors.
- This table shows standard specifications without counterweight safety. Please consult our local agents for other specifications.
- Special specifications for Variable Traveling Speed Elevator System (VSE) are applicable to the elevators with rated speeds of 1.6m/sec, 1.75m/sec and 2.0m/sec.
- The Variable Traveling Speed Elevator System (VSE) is applicable to the elevators with rated speeds of 1.6m/sec, 1.75m/sec and 2.0m/sec.

### Terms of the table:

- The table shows standard specifications without counterweight safety. Please consult our local agents for other specifications.
- Some specifications require more than 2600mm as a minimum machine room height. Please consult our local agents for the appropriate machine room height.
- Some specifications require more than 2200mm as a minimum floor height. Please consult our local agents if the floor height is less than entrance height HH + 700mm.
- Some specifications require more than 2600mm as a minimum floor height. Please consult our local agents if the floor height is less than entrance height HH + 700mm.
- Some specifications require more than 2200mm as a minimum floor height. Please consult our local agents if the floor height is less than entrance height HH + 700mm.
- Some specifications require more than 2600mm as a minimum floor height. Please consult our local agents if the floor height is less than entrance height HH + 700mm.

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**Dimensional information shown here conforms to EN81-20/50 2014.**
Basic Specifications (825kg to 1350kg)

1-Door 1-Gate

**Hoistway Plan**

- Hoistway width: AH
- Entrance width: JJ
- Car internal width: AA

Shown for CD doors
Counterweight rear drop

**Hoistway Section**

- Machine room
- Overhead height: HM
- Entrance height: HH
- Ceiling height: 2100 (Standard)
- Travel: TR
- Floor to floor height
- Pit depth: PD

**Hoistway Plan**

- Hoistway width: AH
- Entrance width: JJ
- Car internal width: AA

Shown for 2S doors
Counterweight side drop

**Hoistway Section**

- Machine room
- Overhead height: HM
- Entrance height: HH
- Ceiling height: 2100 (Standard)
- Travel: TR
- Floor to floor height
- Pit depth: PD

1-Door 2-Gate

**Hoistway Plan**

- Hoistway width: AH
- Entrance width: JJ
- Car internal width: AA

Shown for CD doors
Counterweight side drop

**Hoistway Section**

- Machine room
- Overhead height: HM
- Entrance height: HH
- Ceiling height: 2100 (Standard)
- Travel: TR
- Floor to floor height
- Pit depth: PD

**Hoistway Plan**

- Hoistway width: AH
- Entrance width: JJ
- Car internal width: AA

Shown for 2S doors
Counterweight side drop

**Hoistway Section**

- Machine room
- Overhead height: HM
- Entrance height: HH
- Ceiling height: 2100 (Standard)
- Travel: TR
- Floor to floor height
- Pit depth: PD
### Horizontal Dimensions

**1-Door 1-Gate**

<table>
<thead>
<tr>
<th>Code number</th>
<th>Number of persons</th>
<th>Rated capacity (kg)</th>
<th>Door Type</th>
<th>Counter-weight position</th>
<th>Car internal dimensions (mm) AA xBB</th>
<th>Entrance width (mm) JJ</th>
<th>Minimum hoistway dimensions (mm) AHxBH</th>
</tr>
</thead>
<tbody>
<tr>
<td>P21</td>
<td>21</td>
<td>1600</td>
<td>CD</td>
<td>Rear</td>
<td>2000x1700</td>
<td>2540x2425</td>
<td>1100</td>
</tr>
<tr>
<td>P24</td>
<td>24</td>
<td>1800</td>
<td>CD</td>
<td>Rear</td>
<td>2100x1800</td>
<td>2640x2605</td>
<td></td>
</tr>
<tr>
<td>P27</td>
<td>27</td>
<td>2025</td>
<td>CD</td>
<td>Rear</td>
<td>2100x1950</td>
<td>2640x2755</td>
<td></td>
</tr>
<tr>
<td>P30</td>
<td>30</td>
<td>2250</td>
<td>CD</td>
<td>1200</td>
<td>2300x1950</td>
<td>2840x2750</td>
<td></td>
</tr>
<tr>
<td>P33</td>
<td>33</td>
<td>2550</td>
<td>CD</td>
<td>1200</td>
<td>2300x2100</td>
<td>2840x2900</td>
<td></td>
</tr>
</tbody>
</table>

[Terms of the table]
- This table shows standard specifications with the fireproof landing door and without counterweight safety. Please consult our local agents for other specifications.
- CO: 2-panel center opening doors
- Minimum hoistway dimensions (AH and BH) shown in the table are after waterproofing of the pit and do not include plumb tolerance.

### Vertical Dimensions

**1-Door 1-Gate**

<table>
<thead>
<tr>
<th>Rated speed (m/sec)</th>
<th>Maximum travel (m)</th>
<th>Maximum number of stops</th>
<th>Counter-weight position</th>
<th>Minimum overhead (mm) OH</th>
<th>Minimum pit depth (mm) PD</th>
<th>Minimum machine room clear height (mm) HM</th>
<th>Minimum floor to floor height (mm) FF</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>80</td>
<td>32</td>
<td>Rear</td>
<td>4750</td>
<td>4750</td>
<td>1550</td>
<td>FF</td>
</tr>
<tr>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td>4850</td>
<td>4750</td>
<td>1600</td>
<td>2600</td>
</tr>
<tr>
<td>1.6</td>
<td></td>
<td></td>
<td>Rear</td>
<td>4900</td>
<td>4900</td>
<td>1600</td>
<td></td>
</tr>
<tr>
<td>1.75</td>
<td></td>
<td></td>
<td>4950</td>
<td>4950</td>
<td>1600</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Terms of the table]
- This table shows standard specifications without counterweight safety. Please consult our local agents for other specifications.
- *1: Some specifications require more than 2500mm as a minimum machine room height. Please consult our local agents for the appropriate machine room height.
- *2: Some specifications require more than 2600mm as a minimum floor height. Please consult our local agents if the floor height is less than entrance height HH + 700mm, and the elevator is 1-Door 2-Gate.

Dimensional information shown here conforms to EN81-20/50 2014.
**Features (1/2)**

**DOOR OPERATION FEATURES**

- **DOR-T:** The doors are open and automatically adjusted depending on the traffic at the location of the building.
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**OPERATIONAL AND SERVICE FEATURES**

- **Automobile Access:** A fully loaded car bypasses hall calls in order to maintain maximum operational efficiency.
- **Automatic Car Fan Shut Off:** Automatic car fan shut off is performed to ensure energy conservation.
- **Automatic Hall Call Registration:** Automatic car call will be registered when the car is stopped at the floor.
- **Back-up Operation for Group Control Microcomputer:** Automatic car call will be registered when the car is stopped at the floor.

**GROUP CONTROL FEATURES**

- **DOR-T:** The doors are open and automatically adjusted depending on the traffic at the location of the building.
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- **DOR-T:** The doors are open and automatically adjusted depending on the traffic at the location of the building.
- **DOR-T:** The doors are open and automatically adjusted depending on the traffic at the location of the building.
### Features (2/2)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lunchtime Service</td>
<td>LTS</td>
<td>During the first half of lunchtime, each car for a restaurant floor is served with higher priority, and during the latter half of the number of cars assigned to the restaurant floor, the allocation timing for each car and the door opening and closing timing are all controlled based on the number of cars.</td>
</tr>
<tr>
<td>Main Floor Changeover Operation</td>
<td>MFS</td>
<td>Available on cars on the main (lobby) floor with the doors open.</td>
</tr>
<tr>
<td>Special Car Priority Service</td>
<td>SCPSS</td>
<td>Special cars, such as observation elevators and elevators with basement service, are given higher priority to respond to hall calls. (Cannot be combined with hall position indicators.)</td>
</tr>
<tr>
<td>Special Floor Priority Service</td>
<td>SFPS</td>
<td>Special floors, such as shops with VIP rooms or executive rooms, are given higher priority for allocation when a call is made in those floors. (Cannot be combined with hall position indicators.)</td>
</tr>
<tr>
<td>Up-Peak Service</td>
<td>UPS</td>
<td>Controls the number of cars allocated to the lobby floor, as well as the car allocation timing, in order to meet increased demands for upward travel from the lobby floor during lunchtime, work timing, holiday check-in, etc., and to make passenger waiting time or ride time shorter.</td>
</tr>
</tbody>
</table>

### SIGNAL AND DISPLAY FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary Car Operating Panel</td>
<td>ACS</td>
</tr>
<tr>
<td>Basic Announcement</td>
<td>AABN</td>
</tr>
<tr>
<td>Car Animal Chime</td>
<td>AEC (car)</td>
</tr>
<tr>
<td>Car Information Display</td>
<td>CID</td>
</tr>
<tr>
<td>Car LCD Position Indicator</td>
<td>CID-S</td>
</tr>
<tr>
<td>Flashing Hall Lantern</td>
<td>FHL</td>
</tr>
<tr>
<td>Hall Information Display</td>
<td>HHD</td>
</tr>
<tr>
<td>Hall LCD Position Indicator</td>
<td>HDL-S</td>
</tr>
<tr>
<td>Immediate Prediction Indication</td>
<td>IL</td>
</tr>
<tr>
<td>Intercommunication System</td>
<td>ITI</td>
</tr>
<tr>
<td>Second Car Prediction</td>
<td>TCP</td>
</tr>
<tr>
<td>Sonic Car Button — ELIS-1 type</td>
<td>ACB</td>
</tr>
<tr>
<td>Voice Guidance System</td>
<td>AAG-G</td>
</tr>
</tbody>
</table>

### Important Information on Elevator Planning

**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 conformed to the statement of ENER-G 2010. 2014, local laws or Mitsubishi Electric elevator’s requirements, are therefore the responsibility of the building owner or general contractor.

- Construction of the elevator machine room with proper beams and slabs, equipped with a lock, complete with illumination, ventilation and waterproofing.
- Access to the elevator machine room sufficient to allow passage of the control panel and traction machine.
- Architectural finishing of the machine room floor, and walls and floors in the vicinity of the entrance hall after installation has been completed.
- Construction of an illuminated, ventilated and waterproofed hoiestay.
- The provision of openings and supporting members as required for equipment installation.
- Separate basins, when the hoistway dimensions markedly exceed the specifications; intermediate basins 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, and their electrical switch boxes in the machine room, and laying of the wiring from the electrical room.
- The provision of outlets and laying of the wiring in the machine room and the hoistway; plus the power from the electrical switch box.
- The laying of conductors 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 the necessary building materials for grounding in, 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 work 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: Floor responsibilities in installation and construction shall be determined according to local laws.

**Elevator Site Requirements**

- The temperature of the machine room and 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 against xing and condensation occurring due to a rapid drop in the temperature shall be provided in the machine room and elevator hoistway.
- The machine room and the elevator hoistway shall be finished with mortar or other materials so as to prevent concrete dust.
- Voltage fluctuation shall be within a range of ±5% to ±10%.

**Ordering Information**

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.
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.

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE: TOKYO BLDG., 2-7-3, MARRINOUCHI, CHIYODA-KU, TOKYO 100-8910, JAPAN


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

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