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.

www.MitsubishiElectric.com/elevator

NexWay-S

2nd Edition
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.

Mitsubishi Electric elevators, 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 Electric promises to utilize the collective strength of its advanced and environmental technologies to offer its customers safe and reliable products while contributing to society.

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

Note:
The applicable range of the rated capacity may differ depending on the 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.

Regenerative Converter : PCNV (Optional)
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 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.

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.
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.

<table>
<thead>
<tr>
<th>Car load (%)</th>
<th>Maximum Speed and Car Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>1.6 m/sec (Rated speed)</td>
</tr>
<tr>
<td>10%</td>
<td>1.8 m/sec (1-2 persons)</td>
</tr>
<tr>
<td>20%</td>
<td>2.0 m/sec (2-3 persons)</td>
</tr>
<tr>
<td>30%</td>
<td>2.2 m/sec (3-4 persons)</td>
</tr>
<tr>
<td>40%</td>
<td>2.4 m/sec (4-5 persons)</td>
</tr>
<tr>
<td>50%</td>
<td>2.6 m/sec (5-6 persons)</td>
</tr>
<tr>
<td>60%</td>
<td>2.8 m/sec (6-7 persons)</td>
</tr>
<tr>
<td>70%</td>
<td>3.0 m/sec (7-8 persons)</td>
</tr>
<tr>
<td>80%</td>
<td>3.2 m/sec (8-9 persons)</td>
</tr>
<tr>
<td>90%</td>
<td>3.4 m/sec (9-10 persons)</td>
</tr>
<tr>
<td>100%</td>
<td>3.6 m/sec (10-11 persons)</td>
</tr>
</tbody>
</table>

Note: *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 750kg 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*, 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>Machine room area: 13m²</td>
<td>Machine room area: 4m²</td>
</tr>
</tbody>
</table>

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:
*1: The area of the machine room may have to be larger than that of the hoistway in case of (a), (b) and/or (c) 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.

*2: The area of the machine room can be reduced approximately 9m² when the rated capacity is 1050kg and the rated speed is 1.75m/sec. The area may differ depending on the conditions.

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.

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.

**Group control systems**

<table>
<thead>
<tr>
<th>Suitable building size</th>
<th>Number of cars in a group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small to medium</td>
<td>3 to 4 cars</td>
</tr>
<tr>
<td>Especially buildings with dynamic traffic conditions</td>
<td>3 to 8 cars</td>
</tr>
</tbody>
</table>

The features introduced on these pages are applicable to ΣAI-2200C only.

**Performance**

<table>
<thead>
<tr>
<th>Performance</th>
<th>Average Waiting Time</th>
<th>Long-Wait Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Improved: Max. 40%</td>
</tr>
</tbody>
</table>

Note: Simulated with 6 cars, 20 persons each at 2.5m/sec for 15 stops.

**Group Control**

![Group Control Diagram]

### 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.

**Examples of hall arrangement**

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

**Car**
- Ceiling: S00

**Hall Design Example**
- Jamb: Stainless-steel, hairline-finish (SUS-HL)
- Doors: Stainless-steel, hairline-finish (SUS-HL)
- Hall position indicator: PIV1-A1010N

**NexWay-S Exclusive Finish**

**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.

**Car Design Example**
- Walls: Stainless-steel, hairline-finish (SUS-HL)
- Transom panel: Stainless-steel, hairline-finish (SUS-HL)
- Doors: Stainless-steel, hairline-finish (SUS-HL)
- Front return panels: Stainless-steel, hairline-finish (SUS-HL)
- Kickplate: Aluminum
- Flooring: PR803: Gray
- Car operating panel: CBV1-C760

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

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

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**Applicable parts of car**
- Transom panel
- Walls
- Doors
- Front return panels

**Applicable parts of hall**
- Jamb
- Doors

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**Image of finish**

Actual colors may differ slightly from those shown. Please refer to the design guide for details and other designs.

Note:
* Shiny vibration finish is not applicable to parts not listed.

Actual colors may differ slightly from those shown.
## Basic Specifications

### 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>Counterweight position</th>
<th>Car internal dimensions (mm)</th>
<th>Entrance width (mm)</th>
<th>Minimum hoistway dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P11</td>
<td>11</td>
<td>825</td>
<td>CO</td>
<td>Rear</td>
<td>1400x1350</td>
<td>900</td>
<td>TR≤120 120 120 150 150</td>
</tr>
<tr>
<td>P14</td>
<td>14</td>
<td>1050</td>
<td>CO</td>
<td>Rear</td>
<td>1600x1400</td>
<td>1100</td>
<td>TR≤120 120 120 150 150</td>
</tr>
<tr>
<td>P17</td>
<td>17</td>
<td>1275</td>
<td>CO</td>
<td>Rear</td>
<td>2000x1400</td>
<td>1300</td>
<td>TR≤120 120 120 150 150</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>TR≤120 120 120 150 150</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)</th>
<th>Maximum number of stops</th>
<th>Counterweight per-pit (kg)</th>
<th>Minimum overhead (mm)</th>
<th>Maximum pit depth (mm)</th>
<th>Minimum machine room clear height (mm)</th>
<th>Minimum floor height (mm)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>60</td>
<td>36</td>
<td>Push</td>
<td>4210</td>
<td>4110</td>
<td>1390 1400</td>
<td>1400</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>80</td>
<td>36</td>
<td>Push</td>
<td>4380</td>
<td>4480</td>
<td>1130 1410</td>
<td>1410</td>
<td></td>
</tr>
<tr>
<td>1.75</td>
<td>105</td>
<td>36</td>
<td>Push</td>
<td>4410</td>
<td>4510</td>
<td>1340 1470</td>
<td>1470</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>110</td>
<td>36</td>
<td>Push</td>
<td>4620</td>
<td>4720</td>
<td>1490 1540</td>
<td>1540</td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>120</td>
<td>36</td>
<td>Push</td>
<td>4700</td>
<td>4800</td>
<td>1840 1850</td>
<td>1850</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>150</td>
<td>36</td>
<td>Push</td>
<td>5150</td>
<td>5150</td>
<td>2610 2590</td>
<td>2590</td>
<td></td>
</tr>
</tbody>
</table>

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

#### 1-Door 1-Gate & 1-Door 2-Gate

<table>
<thead>
<tr>
<th>Rated speed (m/sec)</th>
<th>Traveling speed (m/sec)</th>
<th>Minimum overhead (mm)</th>
<th>Maximum pit depth (mm)</th>
<th>Rated capacity (kg)</th>
<th>Minimum machine room floor height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>120/2.5</td>
<td>~1050</td>
<td>~1330</td>
<td>4700</td>
<td>~1050</td>
</tr>
<tr>
<td>1.6</td>
<td>120/2.5</td>
<td>~1330</td>
<td>~1050</td>
<td>4700</td>
<td>~1330</td>
</tr>
</tbody>
</table>

### Basic Code Compliance

The dimensional information shown in this page is based on the requirements of EN81-1 or GB code. For other components, please consult our local agent.
# Basic Specifications

## (1600kg to 2500kg)

### 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>Counterweight position</th>
<th>Car internal dimensions (mm) AAxBB</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>CO</td>
<td>Rear</td>
<td>2000x1700</td>
<td>1100</td>
<td>2548x2410</td>
</tr>
<tr>
<td>P24</td>
<td>24</td>
<td>1800</td>
<td>CO</td>
<td>Rear</td>
<td>2100x1800</td>
<td>1100</td>
<td>2648x2590</td>
</tr>
<tr>
<td>P27</td>
<td>27</td>
<td>2025</td>
<td>CO</td>
<td>Rear</td>
<td>2100x1950</td>
<td>1200</td>
<td>2648x2740</td>
</tr>
<tr>
<td>P30</td>
<td>30</td>
<td>2250</td>
<td>CO</td>
<td>Rear</td>
<td>2300x1950</td>
<td>1200</td>
<td>2848x2780</td>
</tr>
<tr>
<td>P33</td>
<td>33</td>
<td>2500</td>
<td>CO</td>
<td>Rear</td>
<td>2300x2100</td>
<td>1200</td>
<td>2848x2930</td>
</tr>
</tbody>
</table>

**Note:**
- This table shows standard specifications without the fireproof landing door and counterweight safety.
- Please consult our local agent 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>Counterweight position</th>
<th>Rated capacity (kg)</th>
<th>Minimum overhead (mm) DH</th>
<th>Minimum machine room clear height (mm) HM</th>
<th>Minimum pit depth (mm) PD</th>
<th>Minimum floor to floor height (plate)</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>2500</td>
<td>2500F1</td>
</tr>
<tr>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td>4900</td>
<td>4900</td>
<td>1600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td></td>
<td></td>
<td></td>
<td>4950</td>
<td>4950</td>
<td>1600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.75</td>
<td></td>
<td></td>
<td></td>
<td>4950</td>
<td>4950</td>
<td>1600</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Some specifications require more than 2500mm as a minimum machine room height. Please consult our local agents for the appropriate machine room height.
- Some specifications require more than 2500mm 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.

### Hoistway Plan

- **Hoistway width (AH):**
- **Car internal width (AA):**
- **Entrance width (JJ):**
- **Counterweight rear drop:**

**Basic code compliance**

The dimensional information shown here in this page is based on the requirements of EN81-1 or GB code. For other components, please consult our local agent.
Features (1/2)

**EMERGENCY OPERATIONS AND FEATURES**

**Building Management System - GetWay**

- MSS - GW: Such elevators status and operation can be monitored and controlled using a building management system which manages various facilities in the building; so the newest for the elevator system.

**Earthquake Emergency Operation**

- EER: Upon activation of primary and/or secondary seismic sensors, all cars stop at the nearest floor and park there with the doors open to facilitate the safe evacuation of passengers.

**Emergency Call Lighting**

- ECL: An emergency call which, when immediately, when power fails, providing a minimum level of lighting on the floor, door, and in the car to assist passengers. (Efficiency of battery will automatically change the charge status).

**Fire Emergency Return**

- FER: In event of a fire switch or a 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.

**Firefighting Emergency Operation**

- FE: During a fire, when the fire operation switch is activated, the car calls of a specified car and all hall calls are cancelled and the car immediately returns to a predetermined floor. The car then responsibility on the car to call the fire alarm and follow the safe evacuation of passengers.

**MeDiEye - Lifts, Elevators & Escalator Monitoring and Control System**

- WP-W: The elevator's status and operation can be monitored and controlled using an advanced Web-based technology which provides an interface through personal computers. Special features such as problem traffic statistics and analysis are also available.

**Mitsubishi Emergency Landing Device**

- MELO: In the event of a power failure, predetermined car's emergency power supply to move to a specified floor, where the doors then open to facilitate the safe evacuation of passengers. After all can return, the predetermined car/maintain normal operation.

**Supervisory Panel**

- IT: Each elevator's status and operation can be monitored and controlled using a control panel located on a building's supervision room, etc.

**DOOR OPERATING FEATURES**

**Automatic Door-Open Time Adjustment**

- DOT: The time doors are open automatically adjusted depending on whether the stop was called from the hall or to the car, allowing the smooth boarding of passengers or loading of luggage.

**Automatic Door Control**

- DAC: Door lead on each floor, which can depend on the type of hall door, is monitored to adjust the door speed, thereby making the door close consistently throughout all floors.

**Door Load Detector**

- DLD: When excessive door load has been detected while opening or closing, the doors immediately reverse.

**Door Nudging Feature - With Raiser**

- NDS: A buzzer sounds and the doors chunk close when they have remained open for longer than a specified period of time. With the NVR or NAV feature, closer and greater sound control instead of the buzzer.

**Door Sensor Self-Diagnosis**

- DDSA: Feature of non-contact door sensors is checked automatically, and if a problem is diagnosed, the door close feature is delayed and the closing speed is reduced to maintain elevator service and passenger safety.

**Electronic Doorman**

- EDM: A countermeasures to prevent the Skid or Multi-beam Door Sensor feature that detects passengers boarding or exiting.

**Extended Door-Open Button**

- ENO-TB: When the button inside a car is pressed, the door will remain open longer to allow loading, unloading of baggage, etc. (Cannot be combined with NOS feature).

**Half-Motion Sensor**

- HNS: Moving light is used to call in a 3D area near the open door to detect passengers or doors. (Cannot be combined with Skid or Multi-beam Door Sensor feature).

**Multi-beam Door Sensor**

- MSS: Multiple infrared light beams cover some height of the door to detect passengers or objects on the door close. (Cannot be combined with Skid or Multi-beam Door Sensor feature).

**Reopen with Hall Button**

- RBCH: To open doors after being closed by remotely by the back button (corresponding to the traveling direction of the car).

**Repeated Door close**

- RDC: When an obstacle prevents the doors from closing, the doors will repeatedly open and close and the obstacle is cleared from the doorway.

**Safety Door Edge**

- SDE: The safety edge of the door will avoid contact with passengers, the door edge sensors objects during door closing. (Cannot be combined with other door feature).

**Safety Door Edge with Code**

- SDE-C: In event of a power failure, the safety door edge detects passengers or objects during door closing. (Can be combined with the SDE feature).

**Safety Ray**

- SR: When an obstacle inside the car is detected, the doors will remain open longer to allow passengers, i.e., loading, unloading of baggage, etc. When the button is pressed, the car will move to the nearest floor that the doors open.

**OPERATIONAL AND SERVICE FEATURES**

**Absentee Service**

- AS: A elevator operation where an elevator can be operating using the buttons and switches located in the building. In case of an emergency passenger service is automatically resumed without service interruption.

**Automatic Bypass**

- ABR: Fully loaded car bypass half car to minimize maximum operational efficiency.

**Automatic Call Registration**

- FAC: In case an elevator is out of service, because it is full, another car will automatically be assigned for the remaining passengers.

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**OPERATIONAL AND SERVICE FEATURES (Continued from the previous page)**

**Car Call Canceling**

- CCC: When a car has responded to the final call or a one direction, the system regards remaining calls to the other direction as invalid and clears them from the memory.

**Car Fan-Shut Off — Automatic**

- CFO-A: If there are no calls for a specified period, the car ventilation fan will automatically turn off to conserve energy.

**Car Fan-Shut Off — Manual**

- CFO-M: If there are no calls for a specified period, the car ventilation fan will automatically turn off to conserve energy.

**Continuity of Service**

- COS: A car which is experiencing a failure is automatically withdrawn from group control operation, and responds only to car calls.

**Chirteen and Security System Interface**

- ELS/S: The interface authorization by building's security devices, can trigger predetermine elevator operation such as permission to access private floors, registration of a hall call and car evacuation and fire escape and NF operation.

**False Call Cancelling — Automatic**

- FCC-A: If the number of registered call does not correspond to the car load at all calls are cancelled to avoid unnecessary stops.

**False Call Cancelling — Manual**

- FCC-P: If a wrong car button is pressed, it can be cancelled by quickly pressing the same button again.

**Independent Service**

- IND: To be in operation when a car is withdrawn from group control operation for independent use, such as maintenance or repair, and responds only to car calls.

**Next Landing**

- NEXT: The elevator does not open at a destinaion floor, the doors close, and the car automatically moves to the next or nearest floor where the doors open.

**Non-service to Specific Floor — Car Button Type**

- NS-CB: To enhance security, specific to specific floors can be disabled using the car opening panel. This function is automatically deactivated during emergency operation.

**Non-service to Specific Floors — Switch/Door Type**

- NS-DT: To enhance security, specific to specific floors can be disabled using demand or inner switch. This function is automatically deactivated during emergency operation.

**Non-service to Specific Floors — Car Call Button type**

- NS-CB: To enhance security, specific to specific floors can be disabled using demand or inner switch. This function is automatically deactivated during emergency operation.

**Out-of-service remote**

- OCS: To allow switch on the supervision panel, etc., a car can be called to a specified floor after respondents call on all car calls, and that automatically taken out of service.

**Overhead Stand-Stop**

- OLS: A buzzer sounds to alert the passengers that the car is unloaded. The doors remain open and the car will not leave the floor until enough passengers exit the car.

**Regenerative Converter**

- PCN: For energy conservation, power regenerated by a traction machine can be used by other systems in the building.

**Return Operation**

- REL: Using a switch on the control panel, a car can be withdrawn from control operation and called to a specified floor. The car will park on the floor with the doors open, and not accept any calls until independent operations begin.

**Safe-Landing**

- SPL: A car which is experiencing a failure, the controller checks the cause, and if it is considered safe to move the car, the car moves to the destination floor and the doors open.

**Variable Traveling Speed**

- VTS: According to the number of passengers in the car, the car travels faster than the speed manual.

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**GROUP CONTROL FEATURES**

**Building Management System**

- BMS: Elevators and the cars called by each function can divided into several groups for independent group control operation to serve special needs or different floors.

**Close Call-Priority Service**

- CNS: A function to give priority allocation to the car closest to the floor where a call button is pressed, or to reverse the closing doors of the car closest to the provisional call button on that floor. (Cannot be combined with hall position indicators).

**Compressed-Door Service**

- CSF: The timing of car allocation and the number of cars to be allocated to floors where meeting rooms or ballrooms exist and the traffic intensifies for short periods of time are controlled according to the detected traffic density data for those floors.

**Destination Oriented Allocation System**

- DOAS: When a passenger enters a destination floor, the hall operating panel indicates the nearest destination floor. The car does not move to the next floor, but will stop at the nearest floor. Operating passengers by destination prevents congestion in the car and minimizes waiting time.

**Down Peak Service**

- DPS: Controls the number of cars to allow and the timing of car allocation in order to meet increased demands for downtown travel during office leaving hours, hotel check-out time, etc., by preventing smooth boarding passengers and/or smooth exit passengers.
Features (2/2)

### Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forced Floor Stop</td>
<td>FFS</td>
<td>All cars in a bank automatically make a stop at a designated floor on every trip without being called.</td>
</tr>
<tr>
<td>Intense Up Peak</td>
<td>IUP</td>
<td>When the operation system is 1C - 2BC, cars in the upper and lower floors are automatically called.</td>
</tr>
<tr>
<td>Light-load Car Priority Service</td>
<td>UCPS</td>
<td>During the time when traffic is light, empty or lightly-loaded cars are given higher priority to respond to hall calls in order to minimize passenger load on these cars.</td>
</tr>
<tr>
<td>Lunchtime Service</td>
<td>LTS</td>
<td>During the time when traffic is light, cars for a restaurant floor are given higher priority, and during this time, the number of cars allocated to the restaurant floor, the allocation time for each car and the door opening and closing time are all controlled based on predicted data.</td>
</tr>
<tr>
<td>Main Floor Changeover Operation</td>
<td>TFS</td>
<td>This feature is effective for buildings with two main (lobby) floors. The floor designated as the “entrance” in group control operation can be changed as necessary using a manual switch.</td>
</tr>
<tr>
<td>Main Floor Parking</td>
<td>MFP</td>
<td>The elevator can always park on the main floor (lobby floor) in the lobby. In China, the car parks with the doors closed.</td>
</tr>
<tr>
<td>Special Car Priority Service</td>
<td>SCPS</td>
<td>Special cars, such as observation elevators and elevators with specific 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 VIP floors or executive floors, are given higher priority for car allocation when a call is made on 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 to be allocated to the lobby floor, as well as the floor allocation priority, in order to meet increased demands for upward travel from the lobby floor during peak travel times.</td>
</tr>
<tr>
<td>VIP Operation</td>
<td>VIP-S</td>
<td>A specialization that allows the group control operation to serve only VIP floor elevators. When a request is received, the car responds only to existing car calls, moves to a specified floor and parks there with the doors open. The car then responds only to car calls.</td>
</tr>
</tbody>
</table>

### Signal and Display Features

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<thead>
<tr>
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<tr>
<td>Auxiliary Car Operating Panel</td>
<td>ACP</td>
<td>An additional car panel which can be installed for large-capacity elevators, heavy traffic elevators, etc.</td>
</tr>
<tr>
<td>Basic Announcement</td>
<td>AAN-B</td>
<td>Electronic messages should indicate when the car will soon stop. (The messages are mounted on the top and bottom of the car, or in each hall.</td>
</tr>
<tr>
<td>Car Arrival Chime</td>
<td>AEC (car)</td>
<td>This 10.4- or 15-inch LED for elevator is displayed on each car that elevator operation has been temporarily interrupted by overloading or a similar cause. (Available in limited countries.)</td>
</tr>
<tr>
<td>Car Information Display</td>
<td>CID</td>
<td>This 4-inch or 7-inch LED for elevator is displays the date and time, car position, travel direction and elevator status messages. In addition, customized video images can be displayed in full-screen or partial screen format.</td>
</tr>
<tr>
<td>Car LCD Position Indicator</td>
<td>CD-S</td>
<td>This 7-inch LED (240 × 240) or operation panel shows the date and time, car position, travel direction and elevator status messages.</td>
</tr>
<tr>
<td>Fusing Hall Lantern</td>
<td>FHL</td>
<td>A full screen, which corresponds to the car's service direction, flashes to indicate that the car has arrived at the floor.</td>
</tr>
<tr>
<td>Hall Information Display</td>
<td>HID</td>
<td>This 10.4- or 15-inch LED for elevator is displays the date and time, car position, travel direction and elevator status messages. In addition, customized video images can be displayed in full-screen or partial screen format.</td>
</tr>
<tr>
<td>Hall LCD Position Indicator</td>
<td>HID-S</td>
<td>This 7-inch LED (240 × 240) elevator shows the date and time, car position, travel direction and elevator status messages.</td>
</tr>
<tr>
<td>Immediate Prediction Indicators</td>
<td>AL</td>
<td>When a passenger has entered a hall and the car is ready to operate, the corresponding hall lantern lights up and a sound issues twice.</td>
</tr>
<tr>
<td>Intercommunication System</td>
<td>ITP</td>
<td>A system which allows communication between passengers inside a car and the building personnel.</td>
</tr>
<tr>
<td>Second Car Prediction</td>
<td>TCP</td>
<td>When a car is ready to operate at the entrance hall, the hall lantern of the next car to serve the hall will light up.</td>
</tr>
<tr>
<td>Sonic Car Button — Click Type</td>
<td>ACR</td>
<td>A short beep that imitates electromagnetic sound when a passenger presses the car button.</td>
</tr>
<tr>
<td>Voice Guidance System</td>
<td>AAN-G</td>
<td>A pronunciation familiarity service such as the current floor or service direction is given to the passengers inside a car.</td>
</tr>
</tbody>
</table>

### 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, 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 hoistway.**
- **The provision of a ladder to the elevator pit.**
- **The provision of openings and supporting members as required for equipment installation.**
- **Separate cars, where the hallway dimensions markedly exceed the specifications, intermediate bearers and separator partitions when two or more elevators are installed.**
- **The provision of an emergency exit, inspection pit, and exit door pit, 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 wiring in the machine room and 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 the 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 work as may be required during the process.**
- **The provision of a suitable, locked storage for the equipment of elevator control 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.

### 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 fire 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 mastic or other materials so as to prevent concrete dust.**
- **Voltage fluctuation shall be within a range of ±4% 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.”
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
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www.MitsubishiElectric.com/elevator

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