HIGH-SPEED PASSENGER ELEVATORS
For USA

Diamond HS™

Mitsubishi Electric US, Inc. Elevator/ Escalator Division
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Specifications are subject to change without notice.
Principle
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 maintaining a sustainable society, quality must be of the highest level in all products and business activities, while priority is placed on consideration for the environment. As the times change, Mitsubishi Electric promises to utilize the collective strengths 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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Always responding to the needs of the next generation –
Premium Elevators by Mitsubishi Electric

The source of our evolutionary developments is the voice of the era. Quickly revealing and understanding urban needs, our high-speed elevators are continuously evolving. While ensuring greater comfort, safety, energy savings and original designs, our tailor-made elevators offer a new dimension of response to diverse application demands in the market. We offer premium value for the premium space in high-rise buildings, delivering elegant office and residential environments that are comfortable and safe. The Diamond HS™ passenger elevator sets the next stage for elevator design and functionality.

Custom-made high-quality elevators

Diamond HS™

Application

Contact a Mitsubishi Electric representative for over 1200fpm or over 4500lbs.
Products You Can Trust

Mitsubishi Electric is proud of the design standards it incorporates to ensure product quality. Stringent design criteria are applied throughout, from traction machines and speed governors to safety and door devices that interact closely with the user. Superior quality, realized through strict inspections and quality testing, ensures advanced safety and reliability.

Reliability & ecology

We utilize the utmost care in elevator design, even for items that are never seen. Attention to detail that leaves users assured our elevators can be used safely for many years to come. Once experienced first-hand, passengers can appreciate the quality that has led to consistently high reviews from our customers.

Uncompromised reliability

The majority of elevator accidents occur near the doors. That is why we design the area so that breakdowns and the entrapment of passengers are unlikely to happen; and even if they do, the impact of such occurrences is kept to a minimum. As a result, you can expect the number of callbacks, the burden of restoration work, and the negative impact from interrupted service to be significantly reduced. Everyone can look forward to a safe and trouble-free ride.

Sustainable performance

With the passage of time, elevator performance can become degraded, leading to slight vibration, operating noise or inaccurate landing. Our elevators are built with high standards of quality - with proper maintenance, customers can expect “like new” operation over the life of the product.

Using energy wisely

Our long-term commitment to developing energy-efficient elevators has created systems and functions that make intelligent use of power.

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>Gearless</th>
<th>Inductive motor</th>
<th>Thyristor control</th>
<th>VVVF</th>
<th>Ward Leonard system</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>DC motor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1: Variable Voltage, Variable Frequency
*2: CO2 emissions in this table are from elevator operation and do not include emissions from manufacturing, transportation and other processes.

Sustainable performance

The majority of elevator accidents occur near the doors. That is why we design the area so that breakdowns and the entrapment of passengers are unlikely to happen; and even if they do, the impact of such occurrences is kept to a minimum. As a result, you can expect the number of callbacks, the burden of restoration work, and the negative impact from interrupted service to be significantly reduced. Everyone can look forward to a safe and trouble-free ride.

Safety & comfort

Considering that elevators are part of society’s infrastructure, their safety and comfort are vital. Diamond HS™ is packed with functions and considerations to ensure an anxiety-free ride.

Smooth door operation

Smooth and quiet door operation has been achieved using a highly efficient Reduced Instruction Set Computer (RISC) and Variable Voltage, Variable Frequency (VVVF) inverters. Our intelligent door systems detect the constant variation in door load on each floor, the strength of the wind in the elevator shaft, and even the sediment in the door tracks, and the RISC automatically adjusts the door speed and motor torque via an automatic tuning function. Furthermore, our robust door operating equipment is structurally isolated from the car to prevent the transmission of noise and vibration to the car.

Safe boarding

Our primary concern is for users to safely step across the threshold. Equipped with an infrared sensor and a retractable safety door edge, the doors stop closing immediately and reopen if a passenger or object is detected.

Comfortable ride - So smooth a coin on edge won’t fall

Leading-edge control systems and devices, along with highly skilled installation technology, assure that even when traveling at high speeds, the ride will be smooth and quiet from start to stop. And, when reaching your floor, you can count on perfect floor alignment.

Safe and quick emergency evacuation

The Occupant Evacuation Operation (OEO) enables safe and quick evacuation of occupants from multi-floor buildings at the time of an emergency, such as a fire, by shuttle operation between the evacuation block and the discharge level.

OEO is an optional function.
Permanent Magnet (PM) Traction Machine Produced by Unique Technology

Mitsubishi Electric was the first in the world to introduce the PM gearless traction machine. Thanks to the implementation of our proprietary technologies, such as unique joint-lapped cores built into the motor, we have created a high-performance traction machine with a reputation for comfortable and reliable operation.

1. High efficiency
   The world’s highest level of efficiency and power factor for traction machines have been achieved via high-density, high-precision winding of the joint-lapped cores. An intense magnetic field produced around the cores reduces the use of energy, and thereby CO2 emissions.

2. Safety
   The brake system incorporated in the traction machine employs a double-brake configuration to stop the elevator securely. Additionally, a high-resolution motor encoder maintains superb landing precision for safe boarding and maximum passenger comfort.

3. Comfort
   Through our ingenious motor design, torque ripple is reduced and a quiet, smooth ride is assured. Our traction machine also features one of the world’s quietest brakes as a result of advanced noise-reduction technology, which enables changes in electrical current to be detected during brake operation.

4. Streamlined design
   While delivering very powerful output, our traction machines are quite compact due to the high-density winding technology.

Proprietary Mechanism Underlying High-strength sfleX-rope®

Mitsubishi Electric’s new sfleX-rope® is comprised of bundles of high-intensity steel wire strands, each covered with plastic, offering higher intensity than conventional rope for safe operation despite the greater weight of longer ropes. Each wire has a higher density and wider cross-sectional area than conventional rope, which helps to reduce rope stretching caused when passengers step into the elevator.

Application of the sfleX-rope® depends on travel, speed, etc.

Ride Quality Increased by Active Roller Guide

The amount of lateral vibration generated by high-speed elevator cars can be tremendous. As a world’s first innovation in the industry, Mitsubishi Electric’s Active Roller Guide technology reduces this vibration by approximately 50%. It works via an accelerometer that detects car vibration during operation, along with actuators that cancel the vibration through a controlled electromagnetic force. Mitsubishi Electric Active Roller Guides ensure a more comfortable ride than elevators employing conventional roller guides.

Active Roller Guide is an optional device.
Ensuring Elevator Comfort

**ΣAI® Group Control System: ΣAI-22 and ΣAI-2200C**

Intuitive & comfortable

Incorporating the latest advancements in fuzzy-logic, our group control system utilizes intuitive control to provide reliable dispatching and a stress-free ride. The moment a hall call button is pressed, the optimal car to respond to the call is selected based on factors such as waiting time, travel time, current car occupancy and energy consumption.

<table>
<thead>
<tr>
<th>Group control systems</th>
<th>Suitable building size</th>
<th>Number of cars (in groups)</th>
<th>ΣAI-22 system</th>
<th>Small to medium</th>
<th>3 to 4</th>
<th>ΣAI-2200C system</th>
<th>Large buildings with dynamic traffic conditions</th>
<th>3 to 8</th>
</tr>
</thead>
</table>

**Immediate Prediction Indication (AIL)**

Easing stress of waiting at elevator hall

When a passenger has registered a hall call, the best car to respond to that call is immediately selected and the corresponding hall lantern lights up, a chime sounds, and the light starts flashing just before car arrival to indicate which doors will open.

AIL is an optional function.

**Destination Oriented Allocation System (DOAS™)**

Allocating 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.

DOAS™ is an optional function.

**Enhanced convenience**

When passengers enter a destination floor at a hall, the hall operating panel indicates which elevator to take. As passengers proceed to the assigned elevator, the car is on its way and there is no hurry when the car arrives.

Compared to group control system without DOAS, this system reduces the average waiting time at the time of congestion and long-wait.

**Individualized car allocation based on travel time**

The individualized car allocation based on the destination floors leads to shorter travel time and fewer intermediate stops.

**Average waiting time at the time of congestion**

<table>
<thead>
<tr>
<th>Operation system without DOAS</th>
<th>Operation system with DOAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved: Approximately 30%</td>
<td></td>
</tr>
</tbody>
</table>

**Long-wait rate (60 seconds or longer)**

<table>
<thead>
<tr>
<th>Operation system without DOAS</th>
<th>Operation system with DOAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved: Approximately 40%</td>
<td></td>
</tr>
</tbody>
</table>
**CAR FIXTURES**

### Car Operating Panels

<table>
<thead>
<tr>
<th>Model</th>
<th>Material</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBF-US111</td>
<td>Plastic round-type micro stroke click button</td>
<td></td>
</tr>
<tr>
<td>CBV-US111</td>
<td>Stainless steel round-type micro stroke click button</td>
<td></td>
</tr>
</tbody>
</table>

### Car Lanterns

**Lighting color selections**

- CLV-US110: Frosted clear acrylic lens
  - Yellow orange (UP)
  - Red (DOWN)

**Notes**

1. Applicable to group control of maximum 4-car. (Not applicable to ΣAI-2200C)
2. Wall finish is not included in elevator contract.
3. The custom colors are applicable to hall lanterns regardless of their shape.

### Hall Fixtures

#### Hall Lanterns

<table>
<thead>
<tr>
<th>Model</th>
<th>Material</th>
<th>Lighting Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLV-US220</td>
<td>Frosted clear acrylic lens</td>
<td>Orange (UP &amp; DOWN)</td>
</tr>
<tr>
<td>HLV-US120</td>
<td>Frosted clear acrylic lens</td>
<td>Orange (UP &amp; DOWN)</td>
</tr>
<tr>
<td>HLVD-US20</td>
<td>Milky white acrylic lens</td>
<td>Yellow orange (UP), Red (DOWN)</td>
</tr>
</tbody>
</table>

#### Hall Buttons

<table>
<thead>
<tr>
<th>Model</th>
<th>Material</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBF-US110</td>
<td>Plastic round-type micro stroke click button</td>
<td></td>
</tr>
<tr>
<td>HBV-US110</td>
<td>Stainless steel round-type micro stroke click button</td>
<td></td>
</tr>
</tbody>
</table>

**Design and lighting color selections**

- **Full-face Illumination**
  - Yellow orange
  - White

- **Halo Illumination**
  - Yellow orange
  - White

**Notes**

- With etched pictograph
- Not applicable to ΣAI-2200C, excluding on the main floor.

**Vandal resistant**

- White (UP & DOWN)
- Green (UP), Red (DOWN)

**Design and lighting color selections**

- **Full-face Illumination**
  - Yellow orange
- **Halo Illumination**
  - Yellow orange

**Notes**

- Actual colors may differ slightly from those shown.
DOAS™ FIXTURES Application Guide

Hall Operating Panels

[DOAS requires hall operating panels instead of hall buttons for conventional group control.]

Touchscreens

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSP-C13</td>
<td>10.4-inch touchscreen</td>
</tr>
<tr>
<td>HSP-C18</td>
<td>10.4-inch touchscreen with card reader</td>
</tr>
</tbody>
</table>

Custom keypads

- 5.7-inch LCD display & vertical face button
- For California (California code compliant) 5.7-inch LCD display & slant face button

Hall Lanterns

Triangle flag

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLF-A10B</td>
<td>Lighting: Yellow orange when lit</td>
</tr>
<tr>
<td>HLF-A11B</td>
<td>Lighting: Yellow orange when lit</td>
</tr>
</tbody>
</table>

Custom rectangle flag

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLF-A10B</td>
<td>Lighting: Yellow orange when lit</td>
</tr>
</tbody>
</table>

Elevator number appended

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator number: - Stainless steel #4</td>
<td></td>
</tr>
<tr>
<td>Faceplate: Stainless steel #4 Lighting: White when lit</td>
<td></td>
</tr>
</tbody>
</table>

Elevator number illuminated

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator number: - Stainless steel #4</td>
<td></td>
</tr>
<tr>
<td>Faceplate: Stainless steel #4 Lighting: White when lit</td>
<td></td>
</tr>
</tbody>
</table>

Actual colors may differ slightly from those shown.
# Standard Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake Emergency Operation</td>
<td>E2S-OS</td>
<td>In case of earthquake detection, the elevator stops at the nearest available floor and shuts down with the door open. (Detailed operation conforms to the local code.)</td>
</tr>
<tr>
<td>Firefighting Emergency Operation</td>
<td>FD</td>
<td>In case of fire, the elevator performs firefighting emergency operation (Phase I and Phase II) conforming to the local code.</td>
</tr>
</tbody>
</table>

## OPERATIONAL FEATURES

### Automatic Door Speed Control (DSAC)
- DSCT: The amount of time that doors are open will automatically adjust depending on whether the stop was called from the hall or the car, to allow smooth boarding of passengers or loading of baggage.

### Automatic Door Control (DOC)
- DLD: When excessive door noise has been detected while opening or closing, the doors immediately close in the direction.

### Door Malfunctioning Features — With Buzzer (NDG)
- NDGT: Door slowly close when they have remained open for longer than the preset period with alarm sound.

### Door Sensor Self-Diagnosis (DODA)
- DODAA: Failure of non-contact door sensor is detected automatically, and if a problem is diagnosed, the door closing time is delayed and the closing speed is reduced to maintain elevator service and ensure passenger safety.

### Multi-Beam Door Sensor
- —: Multiple infrared light beams cover some height of the doors as they close to detect passengers or objects.

### Reopen with Hall Button (ROHB)
- ROHBA: Doors can be re-opened by pressing the hall button corresponding to the traveling direction of the car.

### Safety Door Edge (SDE)
- SDEA: The sensitive door edge detects passengers or objects during door closing.

## OPERATIONAL AND SERVICE FEATURES

### Automatic Bypass (ABP)
- ABPA: A fully loaded or oversized hall call is made after maintaining maximum operational efficiency.

### Automatic Hall Call Registration (FSAT)
- FSATA: If no car can carry all waiting passengers because it is full, another car will automatically be assigned for the remaining passengers.

### Backup Operation for Group Control (SOHS)
- SOHSB: An operation by car controllers which automatically starts to maintain elevator operations in the event that a malfunction or transmission line in the group controller has failed.

### Car Call Cancelling (CCG)
- CCGA: When a car has responded to the final car call in one direction, the system repeats calling remaining calls in the other direction for seven or nine times from the memory.

### Car Fan Shut-Off — Automatic (CFO-A)
- CFO-A: If there are no calls for a specific period, the car ventilation fan will automatically turn off to save energy.

### Car Light Shut-Off — Automatic (CLO-A)
- CLO-AC: After which a programming time is automatically turned off from group control operation to maintain overall group performance.

### Fail-Over Call Cancelling — Automatic (FOCA)
- FOCAA: If the number of registered calls does not correspond to the car load, all calls are canceled to avoid unnecessary stops.

### Car Call Erase (FCE)
- FCEA: If a car call button is pressed, it can be canceled by quickly pressing the same button again twice.

### High-Accuracy Landing Feature (HALF)
- HALFA: The car landing level is adjusted to a high level of precision in order to ensure a landing accuracy of ±30mm under any conditions.

### Independent Service (IND)
- INDA: Emergency operation where a car is withdrawn from group control operation for Independent use, such as maintenance or repair, and operates only to car calls.

## OPERATIONAL AND SERVICE FEATURES

### Loading Open (LO)
- LOA: Doors start opening right after the car has completely stopped at a floor.

###eed Landing (NAL)
- NALA: Elevator doors do not open fully at a destination floor, the doors close and the car automatically moves to the next or nearest floor, where the doors will open.

### Overload Holding Stop (OHL)
- OHLA: A buzzer sounds to alert the passengers that the car is overloaded; the doors remain open and the car does not leave that floor until enough passengers and the car.

### Rope Replacement Alarm (RRA)
- RRAA: The self-diagnosis function gives an alert when rope replacement timing has approached.

### Safe Landing (SEL)
- SELA: If the car has stopped between floors due to an equipment malfunction, the controller checks the cause, and if it is considered safe to move the car, the car will move to the nearest floor at a low speed and the doors will open.

## GROUP CONTROL FEATURES

### Car Allocation Timing (CAT)
- CATA: The number of cars allocated or parked on crowded floors are controlled not according to the conditions on those crowded floors, but also on the operational status of each car and traffic on each floor.

### Car Traffic Time Evaluation (CTTE)
- CTTEA: Cars are allocated to hall calls by considering the number of car calls that will reduce passenger waiting time in each hall and the total time of each car.

### Cooperative Optimization Assignment (COA)
- COAA: The system predicts a potential hall call which could cause longer waiting time. Car assignment is performed considering not only current and new calls but also near-future calls.

### Distinction of Traffic Flow with Hall Networks (PTC)
- PTCA: Traffic flows in a building are constantly monitored using neural network technology, and the optimum operational pattern, such as Load$Love Service or Up Peak Sale, is selected or canceled accordingly at the appropriate time.

### Expert System and Fuzzy Logic — Allocation Control (PES-W)
- PES-WA: A system that allows communication between passengers inside a car and the building personnel.

### Energy-saving Operation — Allocation Control (ESO-W)
- ESO-WA: The system selects the elevator that best balances operational efficiency and energy consumption according to each elevator's current location and passenger load, as well as predicted congestion surrounding the day.

### Energy-saving Operation — Power Reduction during Off-peak (ESO-O)
- ESO-OB: To save energy, some elevators are put into sleep mode if there are no calls for a specified period.

### Peak Traffic Control (PTC)
- PTCB: A floor which temporarily has the heaviest traffic will be served higher priority than other floors, but not to an extent that interferes with service to other floors.

### Psychological Waiting Time Evaluation (FPTC)
- FPTCA: Cars are allocated in a way that predicted psychological waiting time from each hall call. The rules evaluating psychological waiting time are automatically changed in response to actual traffic conditions.

### Strategic Overall Spotting (SOHS)
- SOHSA: To reduce passenger waiting time, cars which have finished service are automatically directed to positions where they can respond to predicted hall calls as quickly as possible.

## SIGNAL AND DISPLAY FEATURES

### Basic Announcement (BBS)
- BBSA: A synthetic voice (or buzzer) that alerts passengers inside a car to the fact that elevator movement has been temporarily interrupted by overloading or other causes. (Voice availability in English.)

### Car Alarm (CA)
- CAA: Electronic chime that sounds to indicate that a car will soon arrive. (The chimes are mounted on the top and bottom of the car.)

### Call Button — Tactile Indicating/Flashing (CBA)
- CBA: Call buttons that click softly when touched are fitted as standard.

### Flashing Hall Lantern (FHL)
- FHLB: A full lantern, which corresponds to a car’s service direction, flashes to indicate that the car will soon arrive.

### Intercommunication System (IP)
- IPB: A system that allows communication between passengers inside a car and the building personnel.

---

### Notes (1C-2BC) - (1: car sensitive collective) - Standard, 2C-2BC (2-car group control system) - Optional, 3A-2/3 (3- to 4-car group control system) - Optional, 2A-2/3/2200C (3- to 8-car group control system) - Optional

- V: Applicable
- †: Not applicable
### Optional Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>LC to 2C-2BC</th>
<th>LC to 4C-2BC</th>
<th>LC to 6C-4BD</th>
<th>LC to 8C-4BD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building Management System</strong></td>
<td>BMS-SW</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Emergency Car Lighting</strong></td>
<td>ECL</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Multiple Elevators &amp; Escalators Monitoring</strong></td>
<td>WP-W</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Occupant Evacuation Operation</strong></td>
<td>DEO</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Operation by Emergency Power Source — Automatic</strong></td>
<td>DEPS-AC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Supervisory Panel</strong></td>
<td>WP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### DOOR OPERATION FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>LC to 2C-2BC</th>
<th>LC to 4C-2BC</th>
<th>LC to 6C-4BD</th>
<th>LC to 8C-4BD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electronic Doorways</strong></td>
<td>MDM</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Door Open-Door Hold Button</strong></td>
<td>DKO-TC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>3D Multi-beam Door Sensor</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### OPERATIONAL AND SERVICE FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>LC to 2C-2BC</th>
<th>LC to 4C-2BC</th>
<th>LC to 6C-4BD</th>
<th>LC to 8C-4BD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attendant Service</strong></td>
<td>AS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Elevator and Security System Interface</strong></td>
<td>EL-SLC / EL-SC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Motor Drive Mix</strong></td>
<td>MX</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>Non-Security Temporary Reserve for Car Cell - Cord Reader Type</strong></td>
<td>NS-T</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Non-service to Specific Floors — Car Button Type</strong></td>
<td>NS-C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Non-service to Specific Floors — Switch/Timer Type</strong></td>
<td>NS-T</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>Out-of-service-remote</strong></td>
<td>RCS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Return Operation</strong></td>
<td>NET</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Secret Call Service</strong></td>
<td>SCS-B</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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### GROUP CONTROL FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>LC to 2C-2BC</th>
<th>LC to 4C-2BC</th>
<th>LC to 6C-4BD</th>
<th>LC to 8C-4BD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bank-termination Operation</strong></td>
<td>BISO</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>Closest-elevator Priority Service</strong></td>
<td>DNP-S</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Congested Floor Service</strong></td>
<td>DPS</td>
<td>✓</td>
<td>✓</td>
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### SIGNAL AND DISPLAY FEATURES

<table>
<thead>
<tr>
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<th>Description</th>
<th>LC to 2C-2BC</th>
<th>LC to 4C-2BC</th>
<th>LC to 6C-4BD</th>
<th>LC to 8C-4BD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Auxiliary Car Operating Panel</strong></td>
<td>AGS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Car Amuse-mirror-mirror</strong></td>
<td>AEM</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Immediate Prediction Indicator</strong></td>
<td>AL</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Second Car Prediction</strong></td>
<td>TCP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>

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<th>LC to 8C-4BD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Destination Directed Allocation System</strong></td>
<td>DDS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Door Peak Service</strong></td>
<td>DPS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Energy-saving Operation — Power Reduction</strong></td>
<td>ESRO-V</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>Forced Floor Stop</strong></td>
<td>FFS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Light-load Car Priority Service</strong></td>
<td>UCPS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>Lightweight Service</strong></td>
<td>LTS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Main Floor Changeover Operation</strong></td>
<td>TFS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Special Car Priority Service</strong></td>
<td>SCPS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Special Floor Priority Service</strong></td>
<td>SPS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Swing Service</strong></td>
<td>SWV</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
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<td>DDS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Door Peak Service</strong></td>
<td>DPS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Energy-saving Operation — Speed control</strong></td>
<td>ESRO-V</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Notes: 1**-2BCC (1-car exclusive collective) - Standard, 2C-2BCC (2-car group control system) - Optional 1A-2AII (2 to 4-car group control system) - Optional 2A-2AII (2 to 4-car group control system) - Optional Y / Y (Applicable T / Not applicable to 1C-2BCC) — Not applicable 1) Contact a Mitsubishi Electric representative for lead times and details. 2) When 2C-2BCC, contact a Mitsubishi Electric representative. 3) DOCS cannot be combined with BSO, IUP, UPS, TFS, FTS, KCC-A, DKO-TCB or TCP function. 4) Standard when the operation system is 3C to 2C 1A-2BC2000.
BASIC SPECIFICATIONS

For passenger
CAPACITY: 3000 ~ 4000 lbs
SPEED: 500, 700, 800, 1000 & 1200 fpm

Horizontal dimensions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>3000</td>
<td>500</td>
<td>CO</td>
<td>6'-6&quot;</td>
<td>3-4'-8&quot;</td>
<td>2'-7&quot;</td>
<td>19'-3&quot; × 14'-7&quot;</td>
<td>9'-10 1/2&quot;</td>
<td>6'-8&quot;</td>
</tr>
<tr>
<td></td>
<td>700</td>
<td>CO or SS</td>
<td>6'-6&quot;</td>
<td>3-4'-8&quot;</td>
<td>2'-7&quot;</td>
<td>22'-5&quot; × 14'-7&quot;</td>
<td>9'-10 1/2&quot;</td>
<td>6'-8&quot;</td>
</tr>
<tr>
<td>3500</td>
<td>700</td>
<td>CO or SS</td>
<td>6'-6&quot;</td>
<td>3-4'-8&quot;</td>
<td>2'-7&quot;</td>
<td>22'-4&quot; × 8'-10 1/2&quot;</td>
<td>10'-0&quot;</td>
<td>5'-4 3/4&quot;</td>
</tr>
<tr>
<td></td>
<td>1000</td>
<td>CO or SS</td>
<td>6'-6&quot;</td>
<td>3-4'-8&quot;</td>
<td>2'-7&quot;</td>
<td>23'-5&quot; × 13'-1&quot;</td>
<td>10'-0&quot;</td>
<td>5'-4 3/4&quot;</td>
</tr>
<tr>
<td>4000</td>
<td>700</td>
<td>CO</td>
<td>7'-8&quot;</td>
<td>4'-5&quot;</td>
<td>2'-10&quot;</td>
<td>22'-1&quot; × 8'-0 1/2&quot;</td>
<td>9'-10 1/2&quot;</td>
<td>5'-4 3/4&quot;</td>
</tr>
<tr>
<td></td>
<td>1000</td>
<td>CO</td>
<td>7'-8&quot;</td>
<td>4'-5&quot;</td>
<td>2'-10&quot;</td>
<td>23'-1&quot; × 8'-0 1/2&quot;</td>
<td>9'-10 1/2&quot;</td>
<td>5'-4 3/4&quot;</td>
</tr>
</tbody>
</table>

Vertical dimensions

<table>
<thead>
<tr>
<th>Rated capacity (lbs)</th>
<th>Minimum hoistway dimensions</th>
<th>Maximum hoistway dimensions</th>
<th>Rated capacity (lbs)</th>
<th>Minimum hoistway dimensions</th>
<th>Maximum hoistway dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>10'-2&quot; × 7'-0&quot;</td>
<td>18'-3&quot; × 13'-1&quot;</td>
<td>700</td>
<td>10'-2&quot; × 7'-0&quot;</td>
<td>18'-3&quot; × 13'-1&quot;</td>
</tr>
<tr>
<td>700</td>
<td>12'-9&quot; × 6'-8&quot;</td>
<td>20'-1&quot; × 8'-0 1/2&quot;</td>
<td>800</td>
<td>12'-9&quot; × 6'-8&quot;</td>
<td>20'-1&quot; × 8'-0 1/2&quot;</td>
</tr>
<tr>
<td>1000</td>
<td>13'-5&quot; × 8'-8&quot;</td>
<td>19'-3&quot; × 13'-1&quot;</td>
<td>1200</td>
<td>13'-5&quot; × 8'-8&quot;</td>
<td>19'-3&quot; × 13'-1&quot;</td>
</tr>
</tbody>
</table>

Specifications

<table>
<thead>
<tr>
<th>Rated speed (fpm)</th>
<th>Minimum floor height (ft/in.)</th>
<th>Maximum number of stops</th>
<th>Maximum number of stories</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>9'-3&quot;</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>700</td>
<td>9'-3&quot;</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>800</td>
<td>10'-0&quot;</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>1000</td>
<td>10'-0&quot;</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>1200</td>
<td>10'-0&quot;</td>
<td>15</td>
<td>13</td>
</tr>
</tbody>
</table>

Terms of these specifications and layouts
- The contents herein are standard specifications and layouts without counterweight safety. For a special request such as addition of car decoration, contact a Mitsubishi Electric representative as increase in some dimensions may be required.
- These specifications and layouts are based on ASME A17.1 and applicable to a non-seismic zone and seismic zone up to 4, or the equivalent. Consult a Mitsubishi Electric representative for installation in a higher seismic area.

Notes:
1. SS: Single-slide door, CO: Center-open doors
2. The maximum canopy height for SS is 9'-6". (The maximum canopy height for CO is 10'-0".)
3. These hoistway dimensions are on condition that the width of a separator beam is 4'-0".
4. This hoistway width per car is for reference. A single hoistway is not recommended.
5. If travel exceeds 492’, contact a Mitsubishi Electric representative.
6. This minimum floor height is on condition that the door height is 7'-0".

BASIC LAYOUTS

Example of 3-car Layout

Hoistway Section

Example of 6-car Machine Room Plan

Machine room width: AM

Machine room depth: BM

Machine room height: HM

Ventilation window & outlets

Light switches

Ventilator & outlets

Machine room floor

Elevation

Attach-ment panel

Machine room

Control panel

Distri-bution panel

※ The access door dimensions depend on capacity, speed and other factors.

※ The minimum thickness of the machine room floor is 1'-2".
Work Not Included in Elevator Contract

The following items are excluded from the elevator installation work conducted by Mitsubishi Electric. Details and conditions must conform to local laws and regulations and the elevator requirements stipulated by Mitsubishi Electric, and 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 enable passage to the control panel and traction machine for maintenance.
- 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.
- Guide rail support, including separator and intermediate support beams.
- 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.
- Three-phase, horsepower-rated, lockout-type, fused disconnect or circuit breaker, including provision of 3-phase electrical service to elevators.
- Elevator group control disconnect switch, if applicable.
- Power source for seizure switch, if applicable.
- The provision of the main power and power for illumination, electrical switch boxes for the power in the machine room, and laying of the wiring from the electrical room.
- The provision of outlets, laying of wiring in the machine room and hoistway, and providing 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, and monitoring and security devices.
- The power consumed during installation work and test operations.
- All of the necessary building materials for grouting in of brackets, bolts, etc.
- Testing and subsequent alterations as required, eventual removal of scaffolding as required by the elevator contractor, and any other protection required during the installation process.
- The provision of a suitable, locked space for the storage of elevator equipment and tools during elevator installation.
- A security system, such as a card reader, connected to Mitsubishi Electric’s elevator controller, when supplied by the building owner or general contractor.
- Smoke detectors in the hoistway near the machines, as required by code.

Elevator Site Requirements

- The temperature of the machine room and elevator hoistway shall be above 22°F (-5°C) and below 104°F (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 machine room and elevator hoistway.
  c. 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

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

Contact a Mitsubishi Electric representative for more information such as coordination of related work items, site requirements, and ordering.

Trademark Rights

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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.

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 US, Inc. Elevator/Escalator Division
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Website: http://www.mitsubishielevator.com
Email: EEDSALES@meus.mea.com

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.