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

We understand responsibilities as a good corporate citizen, and continue to implement measures for protecting the environment and ensuring a sustainable society for future generations. A number of original technologies are being introduced to ensure more efficient products, systems and manufacturing operations, thereby enhancing productivity, reducing energy consumption and providing smoother, faster and more comfortable vertical transportation systems.
Premium Elevators Custom-designed to Match Your Needs

Mitsubishi Electric high-speed elevators are designed to keep pace with the vertical growth of cities as buildings soar to ever greater heights. Our premium elevators guarantee high levels of passenger safety and comfort, and can be customized for diverse applications including office buildings, hotels and shopping centers. We can tailor specifications to meet your exact needs and add a distinctive touch that sets your building apart from the rest.
Quality in Motion

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.

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 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.

Contents

- Speed/Comfort 7 - 8
- Ecology/Safety 9 - 10
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- Hall Signal Fixtures/Button Line-up/Interior/Hall Designs 31 - 32
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- Important Information on Elevator Planning 39
The amount of lateral vibration generated by high-speed elevator cars is 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.

**Speed**

**Traction Machine with PM Motor**

(PM motor: Permanent magnet motor)

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

**Super High-rise Rope Mechanics**

Mitsubishi Electric’s new sfleX-rope™ comprising bundles of high-intensity steel wire strands, each covered with plastic, offers 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.

The sfleX-rope™ is a trademark of Mitsubishi Electric Corporation.

**Comfort**

**Active Roller Guide* (Optional)**

The amount of lateral vibration generated by high-speed elevator cars is 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.

* Please consult our local agents for details.
Ecology

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>Control circuit</th>
<th>Power consumption</th>
<th>CO2 emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>DC motor</td>
<td>Relay</td>
<td>100%</td>
<td>2000kg/year</td>
</tr>
<tr>
<td>1980</td>
<td>Gearless</td>
<td>Microcomputer</td>
<td>55%</td>
<td>1320kg/year</td>
</tr>
<tr>
<td>1990</td>
<td>Induction motor</td>
<td></td>
<td>62%</td>
<td>2550kg/year</td>
</tr>
<tr>
<td>2000</td>
<td>Gearless</td>
<td>Microcomputer</td>
<td>72%</td>
<td>32.5kg/year</td>
</tr>
<tr>
<td>2010</td>
<td>Permanent magnet motor</td>
<td>Microcomputer</td>
<td>63%</td>
<td>1990kg/year</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.

Power failure

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

Fire

Fire Emergency Return (FER) (Optional)
When the fire operation switch is activated, all cars immediately return to a specified floor and open the doors for passengers to evacuate. The car then responds only to car calls, which facilitates firefighting and rescue operations.

Earthquake

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

For Safe Boarding

Door Safety Devices

Our reliable safety devices ensure that the doors are clear to open and close. Depending on the type of sensor, the detection area differs.

Devices that Use Less Energy

LED Lighting (Optional)

Used for ceiling lights and hall lanterns, LEDs boost the overall energy performance of the building. Furthermore, a long service life eliminates the need for frequent lamp replacement.

Advantages of LEDs

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Ceiling: L210S</th>
<th>Ceiling: L210S (LED downlights, yellow-orange)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service life (hr)</td>
<td>25,000</td>
<td>2000</td>
</tr>
<tr>
<td>Power consumption (W)</td>
<td>25.5</td>
<td>13.2</td>
</tr>
</tbody>
</table>

Approximately 12.5 times longer
Approximately 75% reduction

Maximizing Operational Efficiency and Minimizing Energy Consumption

Energy-saving Operation — Allocation Control (ESO-W) (ZAI-2200C only)

This system selects the elevator in a group that best balances operational efficiency and energy consumption. Priority is given to operational efficiency during peak hours and energy efficiency during non-peak hours.

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

Group Control Systems: ΣAI-22 and ΣAI-2200C

ΣAI-22 and ΣAI-2200C control multiple elevators optimally according to the building size.

Group control systems | Suitable building size | Number of cars in a group
---|---|---
ΣAI-22 system | Smaller/medium | 3 to 4
ΣAI-2200C system | Large/improper buildings with dynamic traffic conditions | 3 to 8

---

Performance

| Average waiting time | Improved: Max. 40% |
| Long-wait rate (60 seconds or longer) | Improved: Max. 80% |

Forecasting Near-future Hall Calls to Reduce Long Waits (ΣAI-2200C only)

Cooperative Optimization Assignment

When a hall call is registered, the algorithm predicts 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.

With DOAS

Without DOAS

Passengers wait for cars wondering which car will arrive first. Once a car arrives, regardless of the destination, passengers rush to get into the car.

With DOAS

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.
**Displays**

**LCD Information Display**

The cutting-edge LCD display delivers elevator information with stereoscopic direction arrows and animated pictures, and entertains the passengers with DVD playback/television (NTSC/PAL).

**Colors**

Select the best color from four popular and eye-catching background colors.

- Urban black
- Stylish blue
- Fine green
- Modern white

**Example display of partial-screen animated picture**

**Language**

Standard elevator information, and date and time are available in English (US or UK), Chinese, Spanish, French or Japanese.

**MelEye** closely observes the operational status of elevators that handle continually changing passenger traffic. This allows building managers to rapidly respond to changing traffic patterns, thus optimizing the performance of elevators and maximizing the added value of the whole building. The application of the latest network technology has also greatly increased the number of controllable elevators, which minimizes the cost spent on facilities such as supervisory rooms and monitors. **MelEye** is our solution to futuristic building traffic monitoring systems.

**IT Solutions**

Elevator Monitoring and Control System: MelEye

MelEye’s user-friendly screen shows the detailed operational status of the elevators in real time.

The past fault logs of the elevators and escalators are recorded in addition to the operation logs of the computer.

**Remote control**

A computer allows remote control of special and emergency operations.

**Floor lockout**

**Scheduling of special operations**

**Statistical Information**

The past fault logs of the elevators and escalators are recorded in addition to the operation logs of the computer.

**Monitoring screens**

A computer allows remote control of special and emergency operations.

**Memory**

Recording of logs

*Please refer to the Information Display brochure for details.*

*Note:
1. Please consult our local agents for the production terms, etc.*
Ceiling Designs

Customized -1
Distinctive design using vaulted lighting and marble floor finish

Walls: Decorative wooden panels
Transom panel: SUS-M
Doors: Colored (black) SUS-HE
Front return panels: SUS-M
Kickplate: SUS-HL
Flooring: Marble
Car operating panel: CBV3-D750 (faceplate: SUS-M)
Handrails: YH-59M
Mirror: YZ-55SN

Customized -2
Indirect center lighting and downlights create a relaxing atmosphere

Walls: Painted steel sheet
Transom panel: Painted steel sheet
Doors: Painted steel sheet
Front return panels: SUS-HL
Kickplate: SUS-HL
Flooring: Marble
Car operating panel: CBN4-C710
Handrails: YH-59M
Mirror: YZ-52A

Ceiling: Painted steel sheet (Y033)
Lighting: Central indirect lighting and downlights

Actual colors may differ slightly from those shown. Please refer to page 20 for the explanations of SUS-HL, colored SUS-HE and SUS-M.
Ceiling Designs

**L210** | Sophisticated atmosphere created by downlights and shadows
---
Car Design Example
- Walls: Pattern-printed steel sheet (CP111)
- Transom panel: Pattern-printed steel sheet (CP111)
- Doors: Pattern-printed steel sheet (CP101)
- Front return panels: SUS-HL
- Kickplate: SUS-HL
- Flooring: TD06
- Car operating panel: CBV3-N730
- Handrails: YH-595

---
N300 | Terraced design with illusion of increased ceiling height
---
Car Design Example
- Walls: Colored (gold) SUS-HL
- Transom panel: Colored (gold) SUS-HL
- Doors: SUS-M
- Front return panels: SUS-M
- Kickplate: Colored (gold) SUS-HL
- Flooring: Durable rubber tiles
- Car operating panel: CBV1-C730 (faceplate: SUS-M)
- Handrails: YH-59M

---
Actual colors may differ slightly from those shown.
Please refer to page 20 for the explanations of SUS-HL, colored SUS-HE and SUS-M.
Ceiling Designs

N130 | Light transmitted through exotic ceiling patterns

Car Design Example

- **Walls**: Colored (bronze) SUS-HE (EPA-2)
- **Transom panel**: Colored (bronze) SUS-HE (EPA-2)
- **Doors**: Colored (bronze) SUS-HE (EPA-2)
- **Front return panels**: SUS-HL
- **Kickplate**: Colored (bronze) SUS-HL
- **Flooring**: Durable rubber tiles
- **Car operating panel**: CBV1-N710 (faceplate: SUS-M)
- **Mirror**: YZ-53A
- **Handrails**: YH-59M

N120 | Gorgeous ceiling with lustrous translucent panels fused using refined geometric patterns

Car Design Example

- **Walls**: SUS-HE (EPA-3)
- **Transom panel**: SUS-HE (EPA-3)
- **Doors**: SUS-HE (EPA-3)
- **Front return panels**: SUS-M
- **Kickplate**: SUS-HL
- **Flooring**: Durable rubber tiles
- **Car operating panel**: CBV5-N710
- **Handrail**: YH-59M

Car Finishes

Please refer to pages 31 and 32 for materials and colors.

<table>
<thead>
<tr>
<th>Materials/Finishes</th>
<th>Walls</th>
<th>Transom panel</th>
<th>Doors</th>
<th>Kickplate</th>
<th>Flooring</th>
<th>Sid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless steel, hairline finish (SUS-HL)</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Pattern printed steel sheet</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Colored stainless steel, hairline finish with etched pattern*1 (SUS-HL)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Colored stainless steel, hairline finish (SUS-HE)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Stainless steel, mirror-finish (SUS-304, 316L)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: * standard, ** optional

*1 Etching pattern EPA-1~3 only
*2 Etching pattern EPA-1~4 only
*3 Only available in dark gray

Ceiling: [Center] Milky white resin panel
[1300(H)×300(W)] Resin panels with mirrored surface
Lighting: Central lighting and downlights

Actual colors may differ slightly from those shown.
Notes:
*1: The symbol $\dot{\mathcal{A}}$ is replaced with a number representing the button type and illumination color (e.g., CBV1, CBV2, etc.). Please refer to page 27 for button types and illumination colors.
*2: Faceplates with stainless-steel, mirror-finish are also available (optional). Please consult our local agents for details.
*3: Maximum number of floors: 22 floors.
*4: The types in parentheses ( ) show auxiliary car operating panels (optional). The design is slightly different from the above images. Please consult our local agents for further information such as installation location.
*5: Some letters of the alphabet are not available. Please consult our local agents for details.
*6: Please consult our local agents for the production terms, etc.

Actual colors may differ slightly from those shown.
Notes:
*1: The symbol ˙ is replaced with a number representing the button type and illumination color (e.g., CBV1, CBV2, etc.). Please refer to page 27 for button types and illumination colors.
*2: Faceplates with stainless-steel, mirror-finish are also available (optional). Please consult our local agents for details.
*3: The types in parentheses ( ) show auxiliary car operating panels (optional). The design is slightly different from the above images. Please consult our local agents for further information such as installation location.
*4: Some letters of the alphabet are not available. Please consult our local agents for details.
*5: Please consult our local agents for the production terms, etc.

Actual colors may differ slightly from those shown.
Hall Signal Fixtures

HALL POSITION INDICATORS AND BUTTONS

Metal-like resin faceplates
Segment LED indicator *1

Segment LED indicator *1

Dot LED indicator PIV-C710N *2, 3, 4

Dot LED indicator PIV-C720N *2, 3, 4

Hall buttons

Metal-like resin faceplate

HBV-A710N *2, 3

HBV-A710B *2, 3

HBV-C710N *3, 4

HBV-C710B *3, 4

HBV-C710N *3, 4

No-entry indicators for EN81-73

HBV-C711N *3, 4

SN-C10

Cross-section of boxless fixtures

These hall signal fixtures can be easily mounted on the wall surface without having to cut into the wall to embed the back box.

NOTES:

*1 Some letters of the alphabet are not available. Please consult our local agents for details.

*2 Dot LED indicators are also available (optional). Please consult our local agents for details.

*3 The symbol ¯ is replaced with a number representing the button type and illumination color (e.g., PIV1, PIV2, etc.). Please refer to page 27 for button types and illumination colors.

*4 Faceplates with stainless-steel, mirror-finish are also available (optional). Please consult our local agents for details.

*5 Only elevator status messages are available.

*6 Tactile buttons are applicable to EN81-73 compliant elevators. However, PIV-C710N and PIV-C710B are available for 1C-2BC only.

Notes:

*1 Some letters of the alphabet are not available. Please consult our local agents for details.

*2 Dot LED indicators are also available (optional). Please consult our local agents for details.

*3 The symbol ¯ is replaced with a number representing the button type and illumination color (e.g., PIV1, PIV2, etc.). Please refer to page 27 for button types and illumination colors.

*4 Faceplates with stainless-steel, mirror-finish are also available (optional). Please consult our local agents for details.

*5 Only elevator status messages are available.

*6 Tactile buttons are applicable to EN81-73 compliant elevators. However, PIV-C710N and PIV-C710B are available for 1C-2BC only.
**Button Line-up**

Buttons accented with LED halo illumination

Illuminated characters (CBV type), arrows (PIV and HBV types) and halos attract user’s attention. Tactile and flat buttons (stainless-steel with non-directional hairline-finish) are available in three illumination colors: yellow-orange, white and blue.

**Standard**

<table>
<thead>
<tr>
<th>Buttons accented with LED halo illumination</th>
<th>White</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBV1/PIV1/HBV1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBV3/PIV3/HBV3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBV5/PIV5/HBV5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBV2/PIV2/HBV2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBV4/PIV4/HBV4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBV6/PIV6/HBV6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Optional**

Square buttons

The entire buttons (excluding characters) are illuminated yellow-orange, white or blue.

<table>
<thead>
<tr>
<th>Buttons accented with LED halo illumination</th>
<th>White</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBN2/HBN2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBN4/HBN4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBN6/HBN6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tactile**

Note:

*1: Flat buttons are not applicable to regulation EN81-70.

**Interior**

---

**MIRRORS**

YZ-52A Half-size
YZ-53A Two-mirror set
YZ-55SN Full height

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**HANDRAILS**

YH-59S(SUS-HL)
YH-59M(SUS-M)
YH-59G(SUS-M)
YH-57S(SUS-HL)

Actual colors may differ slightly from those shown. Please refer to page 20 for the explanations of SUS-HL and SUS-M.
Hall Designs

E-312  Splayed Jamb with Transom Panel
E-212  Square Jamb with Transom Panel

Hall Design Example of E-312
Jamb                  SUS-HL
Transom panel        Colored (black) SUS-HE
Doors                Colored (black) SUS-HE
Hall lantern         HLV-E71
Hall button          HBV3-C710N

Hall Design Example of E-302
Jamb                  SUS-HL
Doors                Painted steel sheet (Y033)
Hall lantern         HLV-E66
Hall button          HBV1-C710N

Hall Design Example of E-202
Jamb                  SUS-HL
Doors                See-through doors
Hall lantern         PIH-C225
Hall button          HBV5-C710N

Entrance Finishes

<table>
<thead>
<tr>
<th>Materials/Finishes</th>
<th>Jamb</th>
<th>Transom panel</th>
<th>Doors</th>
<th>Sill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless-steel, Hairline finish (SUS-HL)</td>
<td>S</td>
<td>O</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>Painted steel sheet</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Stainless-steel, Hairline finish with etched pattern (SUS-HE)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Stainless-steel, Mirror finish (SUS-M)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Glass windows (1300(H)×200(W)/1300(H)×300(W))</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Extruded hard aluminum</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Stainless-steel</td>
<td>S</td>
<td>O</td>
<td>S</td>
<td>O</td>
</tr>
</tbody>
</table>

Note: S = Standard, O = Optional

Please refer to pages 31 and 32 for materials and colors.

Actual colors may differ slightly from those shown.
Materials and Colors

[Car] Walls, doors and transom panel

- Colored stainless-steel, hairline-finish
  - Gold
  - Bronze
- Pattern-printed steel sheet
  - CP23
  - CP101
  - CP111
  - CP121
  - CP141

Ceiling

- Painted steel sheet
  - (210, N300, customized 1, customized 2 only)
- Etching patterns
  - EPA-1
  - EPA-2
  - EPA-3

[Car] Walls, doors and transom panel

- Etching patterns (gold or bronze)
- *Please refer to the etching finish pattern book, EFA1, for details.

Flooring

- Durable vinyl tiles
  - TD01
  - TD02
  - TD03
  - TD04
  - TD05
  - TD06
  - TD07

[Hall] Doors, transom panel and jamb

- Stainless-steel
- Hairline-finish
- Mirror-finish (not applicable to the hall transom panel and jamb)

Etching patterns (stainless-steel)

- EPA-1
- EPA-2
- EPA-3
- EPA-4
- EPA-5
- EPA-6

Painted finish

- Y002
- Y004
- Y006
- Y014
- Y016
- Y033
- Y051
- Y054
- Y055
- Y071
- Y116

*Not applicable to the jamb; please refer to the etching finish pattern book, EFA1, for details.

*Please refer to the etching finish pattern book, EF4, for details.

[Hall] Doors, transom panel

Etching patterns

- EPA-A-004
- EPA-A-011
- EPA-A-021
- EPA-B-009
- EPA-D-006
- EPA-F-004

*Please refer to the etching finish pattern book, EPA, for details.

Actual colors may differ slightly from those shown.
### OPERATIONAL AND SERVICE FEATURES

- **Door Operation Features**
  - **Door Nudging Feature** — Repeated Door-close (RDC)
  - **Emergency Car Lighting (ECL)**
  - **MelEye (WP-W)**
  - **Operation by Emergency Power**
  - **Safe Landing (SFL)**
  - **Fire Emergency Return (FER)**
  - **Firefighting Emergency Operation (PDF)**
  - **Continuity of Service (COS)**
  - **Emergency Car Calling (ECC)**

- **Peak Traffic Control (PTC)**
  - **Dynamic Rule-set Optimizer (DRO)**
  - **Neural Networks (NN)**
  - **Expert System and Fuzzy Logic**
  - **Car Allocation Tuning (CAT)**
  - **Car Button Type (FCC-P)**
  - **Car Light Shut Off — Automatic (CLO-A)**
  - **Infrared-light is used to scan a 3D area near the open doors to detect passengers or objects.**
  - **Exclusive operation where an elevator can be operated using the buttons and switches located in the car operating panel, allowing smooth boarding of passengers or loading of baggage.**

- **Switchover Control (SWC)**
  - **Automatic Bypass (ABP)**
  - **Independent Service (IND)**
  - **Automatic (CLO-A)**
  - **Car Light Shut Off — Automatic (CL-S)**

- **Emergency Return (ER)**
  - **Firefighting Emergency Operation (PDF)**
  - **Safe Landing (SFL)**

- **Features**
  - **1C to 2C**
  - **2BC**
  - **3C & 4C**
  - **3C to 8C**

### GROUP CONTROL FEATURES

- **Car Light Shut Off — Automatic (CL-S)**
  - **Automated Call Registration (PCR)**
  - **Car Light Shut Off — Automatic (CL-S)**
  - **Car Call Canceling (CCC)**
  - **Car Call Canceling — Automatic (CCC-A)**
  - **Car Call Canceling — Automatic (CCCA)**
  - **Call Arm/Leg**
  - **Fuzzy Logic**
  - **Control Microprocessor (GCR)**

- **Automatic Bypass (ABP)**
  - **Peak Traffic Control (PTC)**
  - **Dynamic Rule-set Optimizer (DRO)**
  - **Neural Networks (NN)**
  - **Expert System and Fuzzy Logic**
  - **Car Allocation Tuning (CAT)**
  - **Car Button Type (FCC-P)**
  - **Car Light Shut Off — Automatic (CLO-A)**

- **Emergency Return (ER)**
  - **Firefighting Emergency Operation (PDF)**
  - **Safe Landing (SFL)**

- **Features**
  - **1C to 2C**
  - **2BC**
  - **3C & 4C**
  - **3C to 8C**

---

Notes:
- 1C-2BC (1 car selectivc collective) — Standard, 3C-8BC (2-car group control system) — Optional 1C-2BC (1 to 4-car group control system) — Optional 2C-12BC (1 to 5-car group control system) — Optional
- Standard — Optional 1st floor applicable to 1-Car system — Not applicable
- 1 — Please consult our local agents for the production terms, etc.
- 2 — When the DOAS is applied, the Safety Ray (SR) or Multi-beam Door Sensor feature should be installed.
### Features (2/2)

#### GROUP CONTROL FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>1C-2BC</th>
<th>3C &amp; 4C</th>
<th>ΣAI-22</th>
<th>ΣAI-2200C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation</td>
<td>psychological waiting time for each hall call.</td>
<td>—</td>
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<tr>
<td>Strategic Overall Splitting (SOHS)</td>
<td>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.</td>
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<tr>
<td>Energy-saving Operation - Allocation Control (B5D-W)</td>
<td>The system controls an elevator that best balances operational consumption according to each elevator’s current location and passenger load as well as predicted congestion levels throughout the day.</td>
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<tr>
<td>Energy-saving Operation - Peak Reduction during Off-peak (B5S-A)</td>
<td>To save energy, some elevators are automatically put into sleep mode if there are no calls for a specified period.</td>
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<tr>
<td>Energy-saving Operation - Special Car Priority Service</td>
<td>To save energy, the car speed is automatically reduced to some extent, but not so much that it adversely affects passenger waiting time.</td>
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<tr>
<td>Destination Oriented Allocation System (DGAS)</td>
<td>When passenger enters a destination floor at a hall, the hall operating panel indicates which car will serve the floor. The passenger does not need to press a button in the car.</td>
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<tr>
<td>Intensive-Up Peak (IUP)</td>
<td>To maximize transport efficiency, an elevator bank is divided into two groups of cars to serve upper and lower floors separately during up peak. If the number of cars to be allocated, the timing of car allocation to the lobby floor, the timing of door closing, etc., are controlled based on predicted traffic data.</td>
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<tr>
<td>Tip Peak Service (UPS)</td>
<td>The number of cars to be 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 office leaving time, hotel check-out time, etc., and minimize passenger waiting time.</td>
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<tr>
<td>Down Peak Service (DPS)</td>
<td>The number of cars to be allocated and the timing of car allocation in order to meet increased demands for downward travel during office leaving time, hotel check-out time, etc., to minimize passenger waiting time.</td>
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<tr>
<td>Main Floor Parking (MFP)</td>
<td>An available car always parks on the main (lobby) floor with the doors open (or closed only in China).</td>
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<tr>
<td>Forced Floor Stop (FFS)</td>
<td>Elevators in a bank automatically make a stop at a predetermined floor on every trip without being called.</td>
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<tr>
<td>Special Car Priority Service (SCP)</td>
<td>Special floors such as floors with VIP rooms or executive rooms, are given higher priority for car allocation when a call is made on those floors. (Cannot be combined with hall position indicators.)</td>
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<tr>
<td>Special Elevator Priority Service (SIPS)</td>
<td>When traffic is light and/or lightly loaded cars are given higher priority to respond to hall calls in order to minimize passenger travel time. (Cannot be combined with hall position indicators.)</td>
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<tr>
<td>Light Load Car Priority Service (LLCP)</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>
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<tr>
<td>Compressed-floor Service (CFS)</td>
<td>The timing of car allocation and the number of cars to be allocated to floors where meeting rooms or balconies exist and the traffic interval for short periods of time are controlled according to the detected traffic density data for those floors.</td>
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<tr>
<td>Bank Separation Operation (BSO)</td>
<td>All buttons and the cars called by each button can be divided into several groups for independent group control operation to serve special needs or different floors.</td>
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<tr>
<td>VIP Operation (VIP)</td>
<td>A specified car is withdrawn from group control operation for VIP service operation. When activated, the car responds only to special car calls, moves to a specified floor and parks there with the doors open. The car then responds only to car calls.</td>
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<tr>
<td>Main Floor Changeover Operation (MFO)</td>
<td>This feature is effective for buildings with two main (lobby) floors. The floor designated as the “main floor” in a group control operation can be changed as necessary using a manual switch.</td>
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</tbody>
</table>

#### SIGNAL AND DISPLAY FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>1C-2BC</th>
<th>3C &amp; 4C</th>
<th>ΣAI-22</th>
<th>ΣAI-2200C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hallsoft / AECH</td>
<td>A synthetic voice unlike buttons allows passengers inside a car that elevator operation has been temporarily interrupted by overloading or a similar cause. (Voice available only in English.)</td>
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<tr>
<td>Flashing Hall Lanterns (FHL)</td>
<td>A hall lantern which corresponds to a car’s service direction flashes to indicate that the car will soon arrive. (The chimes are mounted either on the top and bottom of the car, or in each hall.)</td>
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<tr>
<td>Car Annunciation</td>
<td>Car (ANCE)</td>
<td>Electronic chimes sound to indicate that a car will soon arrive.</td>
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<tr>
<td>Auxiliary Car Operating Panel (ACP)</td>
<td>An additional car control panel which can be installed for large-capacity elevators, busy traffic elevators, etc.</td>
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<tr>
<td>Intercommunication System (IPS)</td>
<td>A system which allows communication between passengers inside a car and the building personnel.</td>
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<tr>
<td>Car LED Position Indicator (CD-2)</td>
<td>This 5.7-inch LCD for car operating panels shows the date and time, car position, travel direction and elevator status messages.</td>
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<tr>
<td>Hall LED Position Indicator (HID-S)</td>
<td>This 5.7-inch LCD for elevator halls shows the date and time, car position, travel direction and elevator status messages.</td>
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<tr>
<td>Car Information Display (CDE)</td>
<td>This 15.4- or 15.6-inch full-color screen display shows 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 formats.</td>
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<tr>
<td>Hall Information Display (HID)</td>
<td>This 15.4- or 15.6-inch full-color screen display shows 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 formats.</td>
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</table>

Notes: 1C-2BC (1-car selective collective) - Standard, 2C-2BC (2-car group control system) - Optional
3C & 4C (3 to 4-car group control system) - Optional, ΣAI-2200C (3 to 8-car group control system) - Optional
+ = Standard, — = Optional, T = T-shaped applicable to 1-car 2BC system. — = Not applicable
† = When the DGAS is applied, the Safety Ray (SR) or Multi-beam Door Sensor feature should be installed.
DDA cannot be combined with B5S, B5D, SLP, LUPS, LUPS, SFST, ST, AS, FCCA, PHC-A, PHC-B, DDD, DDD, HEL, TO, TEP, 1D-2G, 2D-2G or HID-5 feature.
Specifications

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<th>Rated capacity (kg)</th>
<th>Number of persons</th>
<th>Rated speed (m/sec)</th>
<th>Mitsubishi Electric Standard</th>
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</table>

Important Information on Elevator Planning

### Work Not Included in Elevator Contract

The following items are excluded from Mitsubishi Electric’s elevator installation work, 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 allow passage of the control panel and traction machine.
- Architectural finishing of the machine room floor, and the walls and floors in the vicinity of the entrance hall after installation has been completed.
- Construction of an illuminated, ventilated and waterproofed elevator hoistway.
- A ladder to the elevator pit.
- The provision of cutting the necessary openings and joints.
- Separate beams, when the hoistway dimensions markedly exceed the specifications, and intermediate beams when two or more elevators are installed.
- All other work related to building construction.
- The machine room power-receiving panel and the electrical wiring for illumination, plus the electrical wiring from the electrical room to the power-receiving panel.
- 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, etc.
- 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 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.

* Work responsibilities in installation and construction shall be determined according to local laws. Please consult our local agents for details.

### 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:
  - The relative humidity shall be below 90% on a monthly average and below 95% on a daily average.
  - Prevention shall be provided against icing and condensation occurring due to a rapid drop in the temperature 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

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.
- Emergency bell.
- 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.

Mitsubishi Elevator Inazawa Works has acquired ISO 9001 certification from the International Organization for Standardization based on a review of quality management. The company 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.

Visit our website at: 
http://www.mitsubishielectric.com/elevator/

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