PASSENGER ELEVATOR MODERNIZATION

It's time to update your elevator by

ELEMOTION

Modernization with Smart Technology

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/

Our manufacturing sites have acquired ISO 9001 certification for quality management system and ISO 14001 certification for environmental management system from accredited certification bodies as below.

Mitsubishi Electric Corporation
Inazawa Works
Taiwan Mitsubishi Elevator Co., Ltd.
Mitsubishi Elevator Asia Co., Ltd.

at the Inazawa Works in Japan and 12 global manufacturing factories are utilized in a worldwide network that

Revised publication, effective Oct. 2018.


Specifications are subject to change without notice.

2018
Even regular maintenance cannot prevent the aging degradation of elevators.

Elevators have limited lifecycles. Just like other building equipment, elevators also require updating. They are designed for a service life of approximately 20 to 25 years.*

Machinery deteriorates despite continuous maintenance. Even periodical maintenance work cannot prevent progressive deterioration of core components such as traction machines and control equipment. Furthermore, updating to meet societal requirements is also necessary, including responding to newly introduced laws and regulations.

Now... is the time for modernization!
Mitsubishi Electric modernization of a Mitsubishi Electric elevator enables updating that utilizes the existing system!

**Reliability & Safety**

Maximum effects achieved at minimum cost by replacing only those parts necessary

Instead of replacing the entire elevator, replacing only essential components / equipment helps to maintain renewal expenses at a reasonable level. In addition, by reducing the influence on building operations as much as possible, a shorter installation period can be achieved.

**Major components replaced**

- Traction machine
- Control panel
- Door motor
- Various signal fixtures

Please refer to page 18 for details.

**State-of-the-art technologies boost reliability and safety.**

Replaceable equipment include all of the latest models, which boast cutting-edge technologies and comply with all the relevant laws and regulations. Additionally, elevator reliability will be enhanced as a result of replacement with latest machinery. The elevator can operate more safely.

**Comfortable & Energy Efficient**

More user-friendly, comfortable and with higher energy efficiency

State-of-the-art technologies transform aging elevators into a more comfortable, user-friendly moving space. Modernization also achieves substantial energy savings compared to previous systems.

So...

we recommend ELEMOTION!
Improved precision of landing alignment

Thanks to leading-edge control technology, the ability of the car to stop precisely flush with the landing has been increased. Misalignment of the car sill with the landing sill is diminished.

Door-related features, renowned for their safety and reliability, have been even further improved.

• Multi-beam Door Sensor (Optional)
If the sensor detects a person or object between closing doors, the doors immediately reverse to open to prevent anyone or anything from being caught.

• Door Load Detector [DLD] *(Standard)
If an obstacle has been caught between the doors and an abnormal door load is detected when opening or closing, the doors immediately reverse to prevent an accident or malfunction.

Note:
* The feature may be installed in the elevator which is currently in use.
Please refer to pages 15 to 17 for other features.

Protection against accidental car movement

• Unintended Car Movement Protection [UCMP] (Optional) <For EN code>
Equipped with double brakes, the car is stopped securely in the rare case of a malfunction where the car starts to move with the doors open.

• Ascending Car Overspeed Protection [ACOP] (Optional) <For EN code>
If some sort of malfunction should cause a car to ascend at an abnormally high speed, the overspeeding car stops automatically to prevent it from striking the hoistway ceiling.

• Door Load Detector [DLD] *(Standard)
If an obstacle has been caught between the doors and an abnormal door load is detected when opening or closing, the doors immediately reverse to prevent an accident or malfunction.

• Repeated Door-close [RDC] *(Standard)
If an obstacle has become lodged in a sill groove and prevents the doors from closing completely, the doors will repeatedly open and close until the obstacle is removed from the doorway.

Safe door operation ensured by refined features

Distinctive gearless traction machine with state-of-the-art PM motor
(PM: permanent magnet)

The traction machine is the most important component of an elevator. Mitsubishi Electric manufactures high-precision motors by making use of our unique motor and wire winding technologies. Moreover, the traction machine comes with double brakes as standard, which boosts braking performance significantly.

Higher reliability with fewer troubles

By replacing existing equipment with the newest equipment incorporating the latest technologies, basic functionality and durability are enhanced, and problems will be minimized. As a result, elevators can be used with a sense of security.

Advanced maintenance engineering

State-of-the-art maintenance with computers enables problems to be addressed quickly and reduces restoration downtime. Through replacement with the newest equipment, a continuous supply of replacement parts is ensured.

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Reliability & Safety

Designs optimized for interchangeability increase reliability and safety tremendously.

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**Comfort & Energy Conservation**

Offers great comfort for passengers while also achieving higher levels of energy conservation.

**Improve operational efficiency**

Our ingenious features minimize door open time and reduce passenger waiting time, elevating traffic performance and mitigating passenger frustration.

**• Strategic Overall Spotting [SOHS]* (Standard)**

Cars that have finished service are dispensed to stand by at floors where they can respond to predicted future hall calls as quickly as possible so as not to keep passengers waiting for long.

**• Main Floor Parking [MFP]* (Optional)**

One of the available cars in a group stands by for a hall call at the lobby (main) floor.

**• Elevator Group Control Systems [ΣAI-22 and ΣAI-2200C]**

Our group control systems use the latest artificial intelligence (AI) technologies to evaluate not only actual waiting time, but also psychological waiting time through assessment of the probability of full-load bypass, prediction errors, etc. for optimum car allocation.

**• Elevator Group Control Systems [ΣAI-2200C]**

The introduction of high-density, integrated LSI digital control circuitry resulted in a significant increase in computer processing speed, enabling precise control of the traction motor for acceleration and deceleration. This innovation delivers a quality ride with minimal noise and vibration.

**Increase usability**

A large variety of convenient features makes our elevators truly easy to use for everyone.

**• False Call Cancelling — Call Button Type [FCC-P]* (Optional)**

If a passenger has pressed a wrong button in the car, it can be cancelled by double-pressing the button.

**• Control Panel with VVVF Inverter Control**

A control panel with VVVF inverter control, using advanced power electronics, exerts remarkable effects: reduction in energy consumption and traveling time and increased riding comfort during acceleration and deceleration.

**Change of basic system configuration**

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

**Improving riding comfort and energy efficiency through modernization from an old system with relay circuits**

Modernizing an elevator, especially if it was manufactured around 1990 or before and is not equipped with a VVVF motor drive, can drastically boost its fundamental performance.

**• Control Panel with VVVF Inverter Control**

Replacing an old control panel with a new one employing VVVF inverter control realizes smoother door operation.

**• Door Motor with VVVF Inverter Control**

Replacing an old door motor with a new one employing VVVF inverter control realizes smoother door operation.

**Energy conservation through LED indicators**

Choosing a signal fixture with LED indicator to replace an incandescent light indicator is one way to reduce energy consumption.

**Conserv energy**

**• Car Fan Shut Off — Automatic [CFO-A]* (Standard)**

The car ventilation fan or lighting is automatically turned off if there are no calls for a specified period.

**• Car Light Shut Off — Automatic [CLO-A]* (Standard)**

The car ventilation fan or lighting is automatically turned off if there are no calls for a specified period.

**• Regenerative Converter [PCV]* (Optional)**

The Regenerative Converter transmits the power regenerated by the traction machine via the distribution transformer to the electrical network for use in lights, air conditioners and other building facilities.

**Smooth control using high-speed CPU**

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Other Major Features

In addition to features already described, a wide variety of convenient features is available.

Standard Features

For increasing security

• **Power-On Releveling (PORL)**
  Before the car parking at a door zone due to power failure resumes the operation and opens the doors, the level difference between the car floor and the landing is automatically adjusted to prevent the passengers from stumbling and falling.

• **Safe Landing (SFL)**
  If a car has stopped between floors due to some 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.

For safer door operation

• **Next Landing (NXL)**
  If the 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 open.

• **Door Sensor Self-diagnosis (DODA)**
  Failure of non-contact door sensors is checked automatically, and if a problem is diagnosed, the door-close timing is delayed and the closing speed is reduced to maintain elevator service and ensure passenger safety.

• **Automatic Door Speed Control (DSAC)**
  Door load on each floor, which can depend on the type of hall doors, is monitored to adjust the door speed, thereby making the door speed consistent throughout all floors. (Cannot be used with some doors.)

• **Door Nudging Feature – With Buzzer (NDG)**
  A buzzer sounds and the doors slowly close when they have remained open for longer than the preset period.

Optional Features

For safety in case of emergency

• **Mitsubishi Emergency Landing Device (MELD)**
  Upon power failure, a car equipped with this function automatically moves and stops at the nearest floor using a rechargeable battery, and the doors open to facilitate the safe evacuation of passengers.

• **Earthquake Emergency Return (EER-S/P)**
  Upon activation of primary and/or secondary wave seismic sensors, all cars stop at the nearest floor, and park there with the doors open to facilitate the safe evacuation of passengers.

• **Fire Emergency Return (FER) (FER operation Signal Lamp in Car [FERC])**
  Upon activation of a key switch or a building’s fire alarm, all calls are canceled, all cars immediately return to a specified evacuation floor and the doors open to facilitate the safe evacuation of passengers. The indicator, when incorporated in the car operating panel, illuminates to show that the car is in fire emergency operation. [FERC] (Optional)

• **Overload Holding Stop [OLH] & Overload Holding Stop Light (Car) [OLHL]**
  A buzzer sounds to alert the passengers that the car is overloaded. The doors remain open and the car will not leave that floor until enough passengers exit the car. [OLH] The indicator, when incorporated in the car operating panel, illuminates to show that the car is overloaded. [OLHL]

For further convenience

• **Mitsubishi Elevators & Escalators Monitoring and Control System – MelEye (WP-W)**
  Each elevator's status and operation can be monitored and controlled using an advanced Web-based technology which provides an interface through personal computers. Special optional features such as preparation of traffic statistics and analysis are also available.

• **Non-service Temporary Release for Car Call (Card Reader Type) (NSCR-C)**
  Non-Service to Specific Floors can be temporarily released by swiping a card through the car operating panel.

Note:

* The feature may be installed in the elevator which is currently in use.

* Please refer to pages 15 to 17 for other features.
New Car Design

Mounting operating panel on side wall

Some latest codes and regulations demand that a car operating panel be mounted on the car side wall. We offer panels for side-wall mount as well as those for front-return-panel mount. However, some conditions apply, including additional side-wall installation. Please consult our local agents.

Buttons accented with LED illumination

Tactile and flat buttons (stainless steel with non-directional hairline finish) are available in three halo illumination colors: yellow-orange, white and blue.

- **Yellow-orange**
  - Tactile button: ■
  - Flat button: ■

- **Blue**
  - Tactile button: ■

- **White**
  - Tactile button: ■

Standard

Panels with cabinet

Replacement of Signal Fixtures

Car operating panels in front return panel

- **Short panels**

- **Panels with cabinet**

Notes:
1. These car operating panels are applicable when the number of floors is 22 or less.
2. Segment LED indicators cannot display some letters of the alphabet. Please consult our local agents for details.
3. Please select a button type and enter the number in ■.
4. The types in parentheses ( ) show an 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. Applicability may vary depending on conditions.

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- **Yellow-orange**
  - Tactile button: ■
  - Flat button: ■

- **Blue**
  - Tactile button: ■

- **White**
  - Tactile button: ■

Square buttons are also available as optional for some car and hall signal fixtures. However, some conditions apply. Please consult our local agents for details.

The entire button, excluding the characters, is illuminated yellow-orange, white or blue.

Notes:
1. These car operating panels are applicable when the number of floors is 22 or less.
2. Segment LED indicators cannot display some letters of the alphabet. Please consult our local agents for details.
3. Please select a button type and enter the number in ■.
4. The types in parentheses ( ) show an 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. Applicability may vary depending on conditions.
Effectively conceals existing mounting holes

We cater to the need of replacing hall signal fixtures without leaving a trace of the previous installation, even when the fixtures are different sizes.

Replacement of Signal Fixtures

Hall position indicators and buttons

All fixtures shown, even standard type, have the faceplate made of hairline-finished stainless steel.

Segment LED indicator*1,2 with plastic case

Dot LED indicator

LCD indicator

Hall buttons (Optional)

with plastic case

Hall position indicators (Optional)

with plastic case

Hall lanterns (Optional)

with plastic case

LCD position indicator (Optional)

with plastic case

LCD information displays (Optional)

with plastic case

Notes:
*1 Segment LED indicators cannot display some letters of the alphabet. Please consult our local agents for details.
*2 Dot LED indicators are available (optional). Please consult our local agents for details.
*3 Please select a button type on page 12, and enter the number in ■.
*4 Faceplates with stainless-steel, mirror-finish are also available (optional). Please consult our local agents for details.
*5 Please consult our local agents for the production terms, etc.
*6 Dot LED indicator is available as PH-0421A.
*7 Segment LED indicator is available as PH-0420A.
*8 Only elevators status messages are available.
*9 Depending on the conditions, incandescent lights may be used instead of LED.

Cross-section of surface-mounted 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.
**Emergency Operations and Features**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake Emergency Return</td>
<td>Upon activation of primary and/or secondary wave sensors, all cars stop at the nearest floor, and park there with the doors open to facilitate the safe evacuation of passengers.</td>
</tr>
<tr>
<td>Emergency Car Lighting</td>
<td>Car lighting turns on immediately when power fails, providing a minimum level of lighting within the car. (Choice of dry cell battery or trickle-charge battery).</td>
</tr>
<tr>
<td>Fire Emergency Return</td>
<td>Upon activation of a key switch or a building’s fire alarm, all cars are cancelled, and all cars immediately return to a specified evacuation floor and the doors open to facilitate the safe evacuation of passengers.</td>
</tr>
</tbody>
</table>

**Firefighting’s Emergency Features**

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Automatic Bypass</td>
<td>During a fire, if the fire operation switch is activated, the car calls of a specified car and all hall calls received thereafter and the car immediately returns to a predetermined floor. The car then responds only to cars which call for firefighting and rescue operation.</td>
</tr>
<tr>
<td>Apartment Service MES</td>
<td>The indicator, when incorporated in the car operating panel, illuminates to show that the car is in firefighting’s emergency operation. (FELC, FELH, FELM)</td>
</tr>
</tbody>
</table>

**Multi-beam Elevators (Escalators and Elevators Monitoring and Control System)**

<table>
<thead>
<tr>
<th>Feature</th>
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</thead>
<tbody>
<tr>
<td>Multi-beam Elevator Liquidation Device</td>
<td>Upon power failure, a car equipped with this function automatically moves and stops at the nearest floor using a rechargeable battery, and the doors open to facilitate the safe evacuation of passengers. (May not be applicable if there are consecutively non-service floors. Please consult our local agent for details.)</td>
</tr>
</tbody>
</table>

**Operation by Emergency Power Source — Automatic/Manual**

<table>
<thead>
<tr>
<th>Feature</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Supervisory Panel WP</td>
<td>Each elevator’s status and operation can be remotely monitored and controlled through a panel installed in a building’s supervisory room, etc.</td>
</tr>
</tbody>
</table>

**Door Operation Features**

<table>
<thead>
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</tr>
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<tbody>
<tr>
<td>Automatic Car Door Time Adjustment</td>
<td>The time-doors are open will automatically be adjusted depending on whether the stop was called from the hall or the car, to allow smooth boarding of passengers or loading of baggage.</td>
</tr>
<tr>
<td>Automatic Car Door Speed Control</td>
<td>Door load on each floor, which can depend on the type of hall door, is monitored to adjust the door closing speed. The closing speed is lower than the normal closing speed when the load exceeds a predetermined value.</td>
</tr>
<tr>
<td>Door Load Detector</td>
<td>When excessive door load has been detected while opening or closing, the doors immediately reverse.</td>
</tr>
<tr>
<td>Door Nudging Feature — With BuZZer</td>
<td>A buzzer sounds and the doors slowly close when they have remained open for longer than the preset period. With the AAN-B or AAN-G feature, a beep and voice guidance sound instead of the buzzer.</td>
</tr>
<tr>
<td>Door Sensor Self-diagnosis</td>
<td>Failure of non-contact door sensors is checked automatically, and if a problem is diagnosed, the period. With the AAN-B or AAN-G feature, a beep and voice guidance sound instead of the buzzer.</td>
</tr>
<tr>
<td>Electronic Doorman</td>
<td>Each elevator’s status and operation can be remotely monitored and controlled through a panel installed in a building’s supervisory room, etc.</td>
</tr>
<tr>
<td>Extended Door-open Time Adjustment</td>
<td>The time-done in open will automatically be adjusted depending on whether the stop was called from the hall or the car, to allow smooth boarding of passengers or loading of baggage.</td>
</tr>
<tr>
<td>Multi-beam Door Sensor</td>
<td>Multiple infrared light beams cover a specific height in order to detect objects or passengers as the doors close.</td>
</tr>
<tr>
<td>Reopen with Hall Button</td>
<td>Closing doors can be reopened by pressing the hall button corresponding to the traveling direction of the car.</td>
</tr>
<tr>
<td>Repeated Door-closing</td>
<td>The doors will repeatedly open and close until the obstacle is cleared from the door zone.</td>
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**Operational and Service Features**

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<tbody>
<tr>
<td>Apartment Service MES</td>
<td>In residential buildings, to reduce passenger waiting time, the floor where elevators wait on standby can be set according to the time zone, for instance, an intermediate floor during morning pick-up and a lobby floor during evening pick-up peak hours. (The Apartment Service is not applicable to some elevators. Please consult our local agents for details.)</td>
</tr>
<tr>
<td>Attendant Service A5</td>
<td>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.</td>
</tr>
<tr>
<td>Automatic Bypass</td>
<td>A fully loaded car bypasses hall calls in order to maintain maximum operational efficiency.</td>
</tr>
<tr>
<td>Automatic Hall Call Registration</td>
<td>If the car cannot carry all waiting passengers because it is full, another car will automatically be assigned for the remaining passengers.</td>
</tr>
<tr>
<td>Backup Operation for Free and Micromanipulator</td>
<td>An operation by car controllers which automatically maintains elevator operation in the event that a Group Control or micromanipulator has failed.</td>
</tr>
<tr>
<td>Car Call Cancelling</td>
<td>When a car has responded to the final car call on one direction, the system regards remaining calls in the other direction as mistaken and clears them from the memory.</td>
</tr>
<tr>
<td>Car Fan Shut-off — Automatic</td>
<td>If there are no calls for a specified period, the car ventilation fan will automatically turn off to conserve energy.</td>
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**Operational and Service Features (Continued from the previous page.)**

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<td>Car Light Shut-off — Automatic</td>
<td>If there are no calls for a specified period, the car lighting will automatically turn off to conserve energy.</td>
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<tr>
<td>Continuity of Service COS</td>
<td>A car which is experiencing trouble is automatically withdrawn from group control operation to maintain normal operation.</td>
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<tr>
<td>False Call Cancelling — Automatic</td>
<td>If the number of registered call cars does not correspond to the car load, all calls are cancelled to avoid unnecessary stops.</td>
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<tr>
<td>False Call Cancelling — Car Button Type</td>
<td>If a wrong car button is pressed, it can be cancelled by quickly pressing the same button again twice.</td>
</tr>
<tr>
<td>Going-out Service GOS</td>
<td>When passengers press down the button in the hall of the floor they live on, the car that answers the call automatically travels down to a predetermined floor with any buttons in the car being pressed. (The Going-out Service is not applicable to some elevators. Please consult our local agents for details.)</td>
</tr>
<tr>
<td>Independent Service IND</td>
<td>Exclusive operation where a car is withdrawn from group control operation for independent use, such as maintenance or repair, and responds only to car calls.</td>
</tr>
<tr>
<td>Next Landing NLL</td>
<td>If the elevator doors do not open fully at a destination floor, the doors close, and the car automatically moves to the next nearest floor where the doors open.</td>
</tr>
<tr>
<td>Non-service to Car — Non-service to Car Button Type</td>
<td>To enhance security, service to specific floors can be disabled using the car operating panel. The function is automatically deactivated during emergency operation.</td>
</tr>
<tr>
<td>Non-service Temporary Release for Call — (Card Reader Type)</td>
<td>To enhance security, car calls for desired floors can be restricted only by placing a card over a card reader. The function is automatically deactivated during emergency operation.</td>
</tr>
<tr>
<td>Return Operation RET</td>
<td>Using a key switch on the supervisory panel, a car can be withdrawn from group control operation and called by a specified destination. A key switch on that floor with the open doors, and not accept any calls until independent operations begin.</td>
</tr>
<tr>
<td>Safe Landing SFL</td>
<td>If a car has stepped between floors due to some 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 slow speed and the doors will open.</td>
</tr>
<tr>
<td>Secret Call Service SCS-B</td>
<td>To enhance security, car calls for desired floors can be restricted only by entering secret codes using the car buttons on the car operating panel. The function is automatically deactivated during emergency operation.</td>
</tr>
</tbody>
</table>

**Group Control Features**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Separation Operation</td>
<td>BSO</td>
</tr>
<tr>
<td>Car Allocation Tuning</td>
<td>CAT</td>
</tr>
<tr>
<td>Car Travel Time Evaluation</td>
<td>CTE</td>
</tr>
<tr>
<td>Closed-car Priority Service</td>
<td>CPSN</td>
</tr>
<tr>
<td>CongestedFloor Operation</td>
<td>CFS</td>
</tr>
<tr>
<td>Cooperative Optimization Assignment</td>
<td>COA</td>
</tr>
<tr>
<td>Destination Oriented Allocation System</td>
<td>DOAS</td>
</tr>
<tr>
<td>Distinction of Traffic Flows with Neural Networks</td>
<td>NR</td>
</tr>
</tbody>
</table>
**Group Control Features (Continued from the previous page)**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Abbreviation</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor Stop</td>
<td>FPS</td>
<td>All cars in banks automatically make a stop at a predetermined floor on every trip without being called.</td>
<td>—</td>
</tr>
<tr>
<td>Intake-Up Peak</td>
<td>ILP</td>
<td>To maximize transport efficiency, an elevator bank is divided into two groups of cars to serve upper and lower floors separately during peak. In addition, 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>
<td>—</td>
</tr>
</tbody>
</table>
| Light Load Car Priority | UCP | When traffic, a light, empty or lightly loaded car goes higher priority to respond to hall calls in order to minimize passenger travel time. (Cannot be combined with hall position indicators.) | — ?
| Lunchtime Service | LTS | When a floor of a restaurant floor is served with higher priority, and during the latter half, the number of cars allocated to the restaurant floors, the allocation timing for each car and the door opening and closing timing are all controlled based on predicted data. | — |
| Main Floor Changeover Operation | YFS | 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. | — |
| Main Floor Parking | MF | An available car always parks on the main (lobby) floor with the doors open. | — |
| Peak Traffic Control | PTC | A floor which temporarily has the heaviest traffic is served with higher priority over other floors, but not to the extent that it interferes with the service to other floors. | — ?
| Psychological Waiting Time Evaluation | — | Cars are allocated according to the predicted psychological waiting time for each call. The rules evaluating psychological waiting time are automatically changed in a timely manner to response to actual service conditions. | — |
| Special Car Priority Service | SCPS | Special cars, such as observations elevators and elevators with basement service, are given higher priority to respond to hall calls. Cannot be combined with hall position indicators. | — |
| Special Floor Priority Service | SPS | Special floors, such as floors with VIP rooms or executive rooms, are given higher priority for car allocation when a call made on those floors. (Cannot be combined with hall position indicators.) | — |
| Strategic Overall Spotting | SOPS | 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. | — |
| Up/Peak Service | UPS | Controls 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 during starting time, hotel check-in time, etc., and minimize passenger waiting time. | — |
| VIP Operation | VIP-S | A specified car is withdrawn from group control operation for VIP service operation. When activated, 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. | — |

**Signal and Display Features**

<table>
<thead>
<tr>
<th>Feature</th>
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<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Announcement</td>
<td>AAN-B</td>
<td>A synthetic voice (and/or) illuminated signs, which gives passenger information, has been temporarily interrupted by overloading or a similar cause. (Available in limited languages.)</td>
<td>— ?</td>
</tr>
<tr>
<td>Car Arrival Chime</td>
<td>CAR-CH</td>
<td>Electronic chime sound to indicate that a car will soon arrive. (The chimes are mounted on the top and bottom of the car or on overhead.)</td>
<td>—</td>
</tr>
<tr>
<td>Car LCD Position Indicator</td>
<td>CDI-S</td>
<td>The 5.7-inch LCD for car operating panels shows the date and time, car position, travel direction and elevator status message.</td>
<td>—</td>
</tr>
<tr>
<td>Flashing Hall Lanterns</td>
<td>FHL</td>
<td>A full lantern, which corresponds to a car’s service direction, flashes to indicate that the car will soon arrive.</td>
<td>—</td>
</tr>
<tr>
<td>Immediate Predictive Indication</td>
<td>API</td>
<td>When a passenger has registered a call, the best car to respond to that call is immediately selected, the corresponding hall lantern lights up and a chime sounds once to indicate which doors will open.</td>
<td>—</td>
</tr>
<tr>
<td>Intercommunication System</td>
<td>IFS</td>
<td>A system which allows communication between passengers inside a car and the building personnel.</td>
<td>—</td>
</tr>
<tr>
<td>Second Car Prediction</td>
<td>TCP</td>
<td>When a hall is closed to the extent that one car cannot accommodate all waiting passengers, the hall lamp of the nearest car to serve the hall will light up.</td>
<td>—</td>
</tr>
<tr>
<td>Sonic Car Button — Click Type</td>
<td>ACO</td>
<td>A drip-type car button which emits electronic beep sounds when pressed to indicate that the call has been registered.</td>
<td>—</td>
</tr>
<tr>
<td>Voice Guidance System</td>
<td>AAN-G</td>
<td>Information on elevator service such as the current floor or service direction is given to the passengers inside a car. (Available in limited languages.)</td>
<td>—</td>
</tr>
</tbody>
</table>

**Work Not Included in Basic Elevator Contract**

- Removing the machine-room floor (breaking up cinder concrete).
- Laying conduits in the machine-room floor before laying and finishing cinder concrete.
- Drilling holes for jacks and transom panels, hall indicators, hall buttons, etc., in the entrance halls on each floor (where existing ones cannot be used).
- Installing steel backings for the jacks and transom panels, hall buttons, hall indicators, etc., in the entrance halls on each floor where steel-frame construction is used (where existing ones cannot be used).
- Installing fans for the mounting of all backings on floors where steel-frame construction is used (where existing ones cannot be used).

**Modernization Menu**

Regarding traction machine, in particular, replacement components within budget can be chosen from the three options in the modernization menu shown in the table below.

<table>
<thead>
<tr>
<th>Components Replaced</th>
<th>Elevator Traction Machine</th>
<th>Elevator Mechanical Components</th>
<th>Elevator Electrical Components</th>
<th>Elevator Other Components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Most Recommended Proposal</strong></td>
<td>[CM2] Replacing the entire traction machine</td>
<td>[CM1] Replacing electrical system (motor, encoder, etc.) of the traction machine</td>
<td>[CM0] Retaining the traction machine (replacing only some components (encoder, etc.) *</td>
<td></td>
</tr>
<tr>
<td><strong>Other Proposals</strong></td>
<td>[CM2] Replacing the entire traction machine</td>
<td>[CM1] Replacing electrical system (motor, encoder, etc.) of the traction machine</td>
<td>[CM0] Retaining the traction machine (replacing only some components (encoder, etc.) *</td>
<td></td>
</tr>
</tbody>
</table>

| Modernization Effects | *Work responsibilities in energy saving and other aspects introduced in this brochure vary depending on components replaced. Please consult your local agent for details. |

**Application**

(The scope of application varies depending on the specifications of the elevator currently in use.)

**Work Cautions**

1. Temporary hall enclosures should be provided.
2. A certain amount of vibration and noise is inevitable during the installation period.
3. Flammable materials are used during the installation period.
4. Security guards should be deployed throughout the installation period.

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*All references and data are subject to change. Please consult your local agent for details.*
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
Our manufacturing sites have acquired ISO 9001 certification for quality management system and ISO 14001 certification for environmental management system from accredited certification bodies as below.

Mitsubishi Electric Corporation Inazawa Works

ISO 9001 BUREAU VERITAS Certification

Taiwan Mitsubishi Elevator Co., Ltd.

ISO 9001 BUREAU VERITAS Certification

Mitsubishi Elevator Asia Co., Ltd.

ISO 9001 BUREAU VERITAS Certification

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

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


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