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.


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.

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.*

*As of October 2017. Reference number of years based on in-house research.

Air conditioners: 15 - 16 years
Fire-fighting equipment: Once every 7 - 8 years
Roofing: Once every 10 - 12 years
Ventilation systems (transformer/non-utility generation): Once every 15 - 16 years
Exterior walls: Once every 12 - 13 years
Water supply equipment: 25 to 26 years

Deterioration over a long period of use leads to increased vibration and reduced safety.

Issue 1 Safety & quality

Deteriorating equipment means more frequent breakdowns. Subsequent repair work could also mean disruption of service for a prolonged time.

Issue 3 Longer downtimes

Older equipment can lead to higher repair costs and an increase in power consumption. Urgent action is required from a cost perspective, too.

Issue 2 Running costs

Aging elevator – Deterioration becomes a concern...

As elevators age, ride quality deteriorates, running costs increase and downtime becomes longer as a result of breakdowns or maintenance work.

Is your elevator showing any of these signs?

Now... is the time for modernization!
ELEMOTION resolves these issues!

Reduce the burden on the building and update to a safer and more comfortable elevator. Instead of replacing the entire system, only replace the equipment that requires updating. That’s the modernization offered by Mitsubishi Electric ELEMOTION.

Effect 1
Improved sense of security

Devices and components that have degraded over time are updated. Safety and ride comfort will also be improved.

Effect 2
More economy & ecology

Latest devices offer greater energy efficiency and parts that last longer are retained and reused.

Effect 3
Reduced frustration

By replacing with latest equipment, failure rates will be significantly reduced. Repair time is also reduced accordingly.

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.

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!
**Reliability & Safety**

**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.

**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.

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**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.

**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.

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**Safe door operation ensured by refined features**
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.

- **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.

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  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.

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**Note:**
- The feature may be installed in the elevator which is currently in use.
- Please refer to pages 15 to 17 for other features.
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 dispersed 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** [AI-22 and AI-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.

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.

Smooth control using high-speed CPU

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.

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.

Conserve energy

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

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**
  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.

- **Door Motor with VVVF Inverter Control**
  Replacing an old door motor with a new one employing VVVF inverter control realizes smoother door operation.

<table>
<thead>
<tr>
<th>Year (Elevator Manufacturing)</th>
<th>CO2 Emissions Reduction (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>20</td>
</tr>
<tr>
<td>1980</td>
<td>40</td>
</tr>
<tr>
<td>1990</td>
<td>60</td>
</tr>
<tr>
<td>2000</td>
<td>80</td>
</tr>
<tr>
<td>2010</td>
<td>100</td>
</tr>
</tbody>
</table>

Note:

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

### 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]**
  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.
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

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.

Replacement of Signal Fixtures

Car operating panels in front return panel

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.

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 panel (optional). The design is slightly different from the above images. Please consult our local agents for further information such as installation locations.

*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.

Cross-section of surface-mount 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.

Wiring

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 in PH-D424A.
7) Segment LED indicator is available as PH-D422A.
8) Only elevators status messages are available.
9) Depending on the conditions, incandescent lights may be used instead of LED.

New Hall Design
EMERGENCY OPERATIONS AND FEATURES

Car Light Shut Off — Automatic
- If there are no calls for a specified period, the car lighting will automatically turn off to conserve energy.

Contingency of Service
- A car which is experiencing trouble is automatically withdrawn from group control operation to maintain overall group performance.

False Call Cancelling — Automatic
- If the number of registered call buttons does not correspond to the car load, all calls are canceled to avoid unnecessary stops.

False Call Cancelling — Car Button Type
- If a wrong car button is pressed, it can be canceled by quickly pressing the same button again twice.

Going-out Service
- When passengers press the down button in the hall of the floor they live on, the car that answers the call automatically travels down to a predetermined floor without any buttons in the car being pressed. (The Going-out Service is not applicable to some elevators. Please consult our local agents for details.)

Independent Service
- 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.

Next Landing
- 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.

Non-service to Specific Floors — Car Button Type
- NS-CB

Non-service Temporary Service for Call (Car Reader Type)
- NS-CR

Non-service to Specific Floors — Switch/Timer Type
- NT-S

Out-of-service remote
- RCS

Overload Holding Stop
- OLH

Power On Releveling
- PORL

Return Operation
- RET

Safe Landing
- SPL

Secret Call Service
- SCS-B

Operational Service Features (Continued from the previous page.)

For maintenance or energy-saving measures, a car can be taken out of service temporarily with a key switch (with or without a timer) mounted in a specified hall.

To enhance security, service to specific floors can be disabled using a manual or timer switch. This function is automatically deactivated during emergency operation.

To enhance security, cars for desired floors can be registered only by placing a card on a card reader. This function is automatically deactivated during emergency operation.

To enhance security, service to specific floors can be disabled by a manual or timer switch. This function is automatically deactivated during emergency operation.

When 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. The indicator, when incorporated in the car operating panel, illuminates to show that the car is overloaded. (OLHL) [Optional]

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

In case the car stops in the door zone after stopping suddenly due to power failure, when power is in supply again, the car automatically returns to the floor where it stopped. The car floor will be activated to be located in the same level as landing floor to prevent passengers from tumbling.

Using a key switch on the supervisory panel, a car can be withdrawn from group control operation and called to a specified floor. (Cannot be used with any button.)

Using a key switch on the supervisory panel, etc., a car can be called to a specified floor after responding to all car strings, and then automatically taken out of service.

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

When a car is travelling up to the floor where it is called, the car controller checks the traffic density data for those floors. The timing of car allocation and the number of cars to be allocated to floors where meeting rooms or ballrooms exist and the traffic intensifies for short periods of time are controlled according to the specified floor number.

The system predicts a potential hall call which could cause longer waiting time. Car assignment is performed considering not only current and near future calls but also the traffic density data for those floors.

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. The indicator, when incorporated in the car operating panel, illuminates to show that the car is overloaded. (OLHL) [Optional]

To enhance security, cars for desired floors can be registered only by placing a card on a card reader. This function is automatically deactivated during emergency operation.

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During a fire, when the fire operation switch is activated, the car calls of a specified car and all hall calls are cancelled and the car immediately returns to a predetermined floor. The car then responds only to car calls which facilitate firefighting and rescue operation.

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Using a key switch on the supervisory panel, etc., a car can be called to a specified floor after responding to all car strings, and then automatically taken out of service.

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### Features 2/2

**GROUP CONTROL FEATURES** (Continued from the previous page.)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Ident No.</th>
<th>Description</th>
<th>2013-14</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downen Peak Service</td>
<td>DPS</td>
<td>Controls 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>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Dynamic Rule-set Optimizer</td>
<td>DRO</td>
<td>Traffic flows in a building are constantly predicted using neural network technology, and an optimum rule-set for group control operations is selected through real-time simulations based on prediction results.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Energy-saving Operation – Allocation Control</td>
<td>ESO-W</td>
<td>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 levels throughout the day.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Esgt System and Fuzzy Logic</td>
<td>—</td>
<td>Artificial expert knowledge, which has been programmed using &quot;expert system&quot; and &quot;fuzzy logic&quot;, is applied to select the ideal operational rule which maximizes the efficiency of group control operations.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Forced Floor Stop</td>
<td>FPS</td>
<td>Allows a floor in a bank to automatically make a stop at a predetermined floor on every trip without being called.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Intermx-Up Peak Level</td>
<td>LIL</td>
<td>To maximize transportation 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 all controlled based on predicted traffic data.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Light Load Car Priority Service</td>
<td>LCS</td>
<td>When traffic is light, empty or lightly-loaded cars given higher priority to respond to hall calls in order to minimize passenger travel time. (Cannot be combined with hall position indicators.)</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Lunchtime Service</td>
<td>LTS</td>
<td>When traffic is light, empty or lightly-loaded cars given higher priority to respond to hall calls in order to minimize passenger travel time. (Cannot be combined with hall position indicators.)</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Main Floor Changeover Operation</td>
<td>MFO</td>
<td>This feature is effective for buildings with two main (lobby) floors. The floor designated as the &quot;main floor&quot; in a group control operation can be changed as necessary using a manual switch.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Main Floor Parking</td>
<td>MFP</td>
<td>An available car always parks on the main (lobby) floor with the doors open.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Peak Traffic Control</td>
<td>PTC</td>
<td>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.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Psychological Waiting Time Evaluation</td>
<td>—</td>
<td>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 in response to actual service conditions.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Special Car Priority Service</td>
<td>SCPS</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>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Special Floor Priority Service</td>
<td>SFP</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>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Strategic Overall Spotting</td>
<td>SOFS</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>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Up Peak Service</td>
<td>UPS</td>
<td>Controls the number of cars to be allocated to the lobby floor, as well as the car allocation timing, in order to meet increased demands for upward travel from the lobby during office starting time, hotel check-in time, etc., and minimize passenger waiting time.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>VIP Operation</td>
<td>VIP-S</td>
<td>A VIP 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.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

**SIGNAL AND DISPLAY FEATURES**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>2013-14</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Announcement</td>
<td>AAN-B</td>
<td>A synthetic voice (and for limited areas passengers inside a car that elevator operation has been temporarily interrupted by overload or a similar reason. (Available in limited languages.)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Car Arrival Chime</td>
<td>NCCN-CH</td>
<td>Electronic chimes sound to indicate that a car will soon arrive. (The chimes are mounted either on the top and bottom of the car or inside.)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Car LED Position Indicator</td>
<td>CDI</td>
<td>The 7.5-inch LCD for car operating panels shows the date and time, car position, travel direction and elevator status messages.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Flashing Hall Lanterns</td>
<td>PLL</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>
<td>—</td>
</tr>
<tr>
<td>Immediate Predictive Indication</td>
<td>API</td>
<td>When a passenger who has registered shall 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>
<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 system.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Second Car Priority</td>
<td>TCP</td>
<td>When a call is placed on the floor that cannot accommodate all waiting passengers, the highest floor of the remaining cars to serve the hall will respond.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Sonic Car Button — Click Type</td>
<td>ADB</td>
<td>A click-type car button which emits electronic beep sounds when pressed to indicate that the car has been registered.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Voice Guidance System</td>
<td>AAG</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>
<td>—</td>
</tr>
</tbody>
</table>

**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.

### Components Replaced

**ELEMOTION** offers replacement of major components (page 4) and their subsidiary components as shown in the right table.

**Components Replaced**

<table>
<thead>
<tr>
<th>Major components replaced</th>
<th>[CMQ] Replacing the entire traction machine</th>
<th>[CM1] Replacing electrical components (motor, encoder, etc.) of the traction machine</th>
<th>[CM0] Retaining the traction machine (replacing only some components (encoder, etc.)*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical</td>
<td>[P] Permanent magnet</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Hoisting rope</td>
<td>—</td>
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<tr>
<td>Electrical</td>
<td>[P] Control panel</td>
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<td>—</td>
<td>[V] Voice signal box</td>
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<tr>
<td>Traveling cable, Landing device, Car station, Intercom</td>
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</tbody>
</table>

**Most recommended proposal**

[CMQ] Replacing the entire traction machine

**Other proposals**

[CM1] Replacing electrical components (motor, encoder, etc.) of the traction machine

[CM0] Retaining the traction machine (replacing only some components (encoder, etc.))

**Application**

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

**Work Not Included in Basic Elevator Contract**

The following items are excluded from Mitsubishi Electric's elevator modernization work, and are therefore the responsibility of the building owner or general contractor.

**Elevator Halls and Hoistways**

1. Finishing of walls and floors of elevator halls after installation of elevator hall fittings.
2. Hoistway repair work.
3. Installing intermediate beams (where existing ones cannot be used).
4. Drilling holes for jams and transom panels, hall indicators, hall buttons, etc., in the entrance halls on each floor (where existing ones cannot be used).
5. Installing steel backing plates for the jams 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).
6. Installing fasteners for the mounting of all brackets on floors where steel-frame construction is used (where existing ones cannot be used).

**Machine Rooms**

1. Removing the machine-room floor (breaking up cinder concrete).
2. Laying conduits in the machine-room floor before laying and finishing cinder concrete.
3. Drilling holes in the machine-room floor.
4. Providing a temporary opening to bring in machinery and perform restoration work.
5. Access to the elevator machine room sufficient to allow passage for transporting machinery from outside the building.

**Temporary Installation Work**

1. Disposing of removed parts, cleaning up and disposing of broken glass and scrap.
2. Providing a suitable, locked space for storage of removed or to-be-installed elevator parts and tools.
3. Supplying electric power for the work and lighting.

**Cautions Regarding Installation Work**

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.

* Work responsibilities in installations and constructions shall be determined according to the local law. Please consult our 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

ISO 14001
BUREAU VERITAS
Certification

Taiwan Mitsubishi Elevator Co., Ltd.

ISO 9001
BUREAU VERITAS
Certification

ISO 14001
BUREAU VERITAS
Certification

Mitsubishi Elevator Asia Co., Ltd.

ISO 9001
BUREAU VERITAS
Certification

ISO 14001
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.

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

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Specifications are subject to change without notice.


Eco Changes
for a greener tomorrow

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