MITSUBISHI ELECTRIC

Changes for the Better

Quality in Motion

PASSENGER ELEVATORS
MACHINE-ROOM-LESS SYSTEM

NEXIEZ -MRL

Product Guide

for a greener tomorrow eco Changes

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.

Principle

Based on our policy, “Quality in Motion”,
we provide elevators and escalators that will
satisfy our customers with high levels of
comfort, efficiency, ecology and safety.

Efficiency

Comfort

Quality in Motion

Ecology

Safety

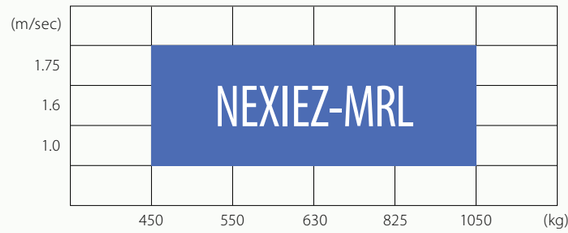
Mitsubishi Electric elevators, escalators and building management systems are always evolving, helping achieve our goal of being the No.1 brand in quality.
In order to satisfy customers in all aspects of comfort, efficiency and safety while realizing a sustainable society, quality must be of the highest level in all products and business activities, while priority is place on consideration for the environment.
As the times change, Mitsubishi Electric promises to utilize the collective strengths of its advanced and environmental technologies to offer its customers safe and reliable products while contributing to society.

We strive to be green in all of our business activities.

We take every action to reduce environmental burden during each process of our elevators’ and escalators’ lifecycle.

Contents

Application

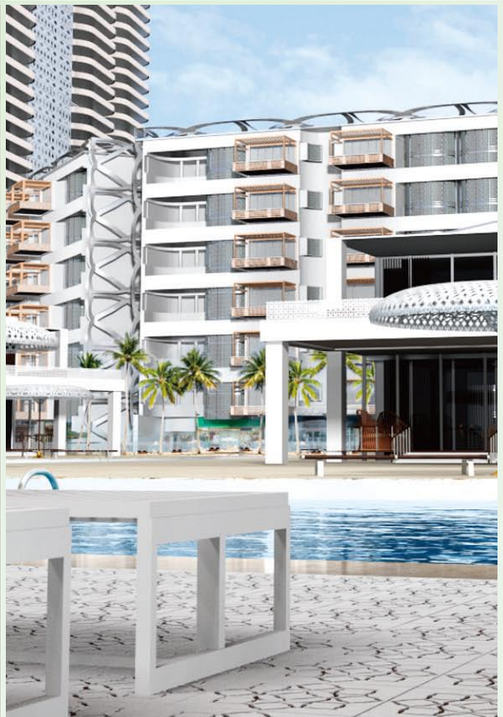


Note: The applicable range of the rated capacity may differ depending on the manufacturing factory, please consult our local agents for details.

Welcome to a New Era in Vertical Transportation

Introducing the NEXIEZ...

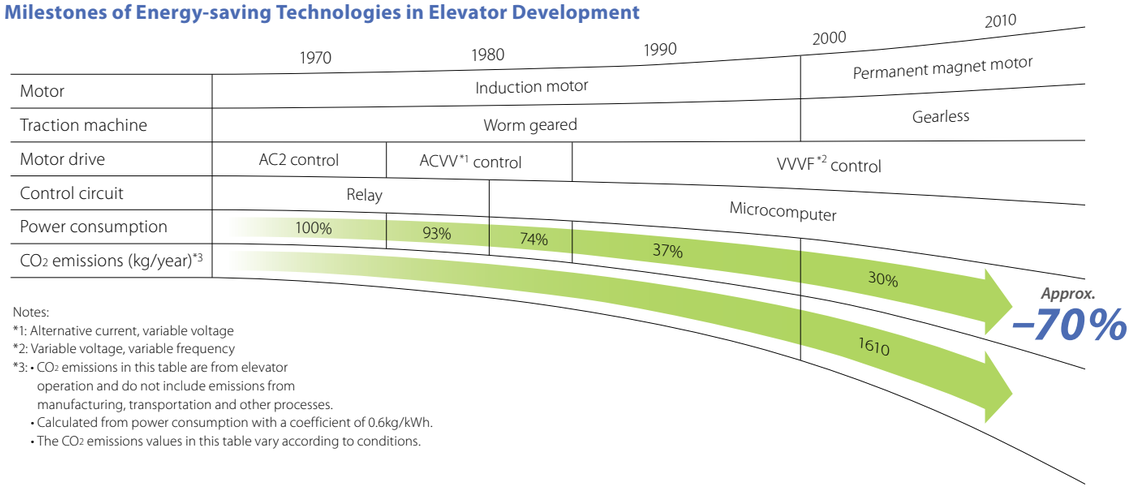
… technologically advanced elevators that consume less power, have minimal impact on the global environment and harmoniously serve people and buildings with smooth, seamless operation. The refined design produces a high-quality atmosphere that reassures passengers of the superior safety and comfort synonymous with Mitsubishi Electric products. Regardless of the use or purpose, the NEXIEZ is a best match solution for virtually any elevator installation.



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



Notes:
*1: Alternative current, variable voltage
*2: Variable voltage, variable frequency
*3: • CO_2 emissions in this table are from elevator operation and do not include emissions from manufacturing, transportation and other processes.
• Calculated from power consumption with a coefficient of 0.6kg/kWh.
• The CO_2 emissions values in this table vary according to conditions.

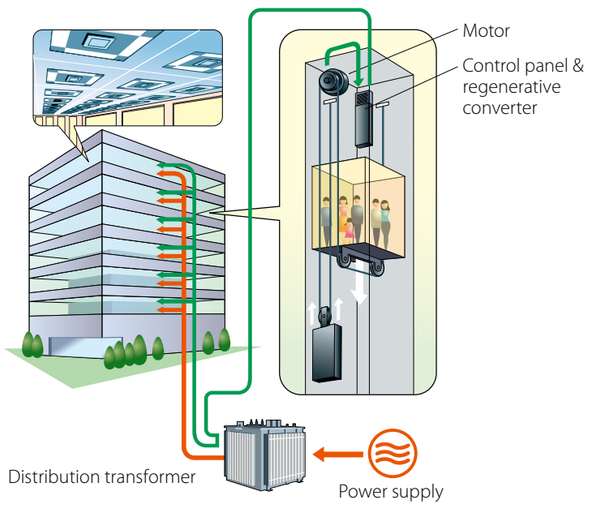
Reusing Energy

Regenerative Converter (PCNV) (Optional)

Although the power generated during traction machine operation is usually dissipated as heat, the regenerative converter transmits the power back to the distribution transformer and feeds it into the electrical network in the building along with electricity from the power supply. Compared to the same type of elevator without a regenerative converter, this system provides an energy-saving effect of up to 35%. (Reduction in CO_2 emissions: 1400kg/year)

In addition, the regenerative converter has the effect of decreasing harmonic currents.

Max. energy-saving effects: 35%



Regenerative operation

Devices that Use Less Energy

LED Lighting (Optional)

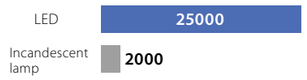
Used for ceiling lights and hall lanterns, LEDs boost the overall energy performance of the building. Furthermore, a long service life eliminates the need for frequent lamp replacement.

Ceiling: L210
LED downlights (yellow-orange)

● Advantages of LEDs

Ceiling: L210

Service life (hr)



Approximately 12.5 times longer

Power consumption (W)

Approximately 75% reduction

Maximizing Operational Efficiency and Minimizing Energy Consumption

Energy-saving Operation – Allocation Control (ESO-W)

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.

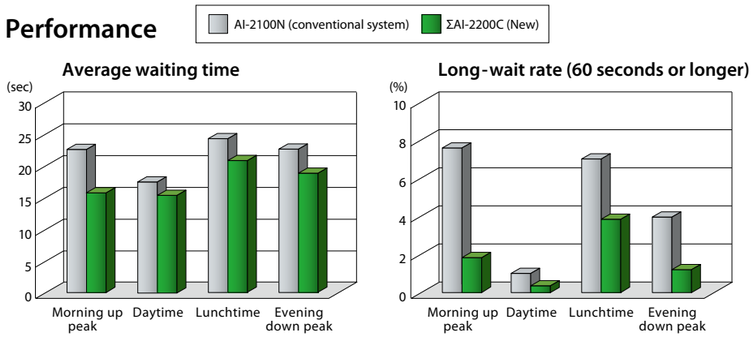
Through a maximum 10% reduction in energy consumption compared to our conventional system, this system allows building owners to cut energy costs without sacrificing passenger convenience.

Efficiency

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

When a building is expected to have heavy traffic, optimum car allocation suited for every condition makes a big difference in preventing congestion at a lobby floor and reducing long waits.

Performance

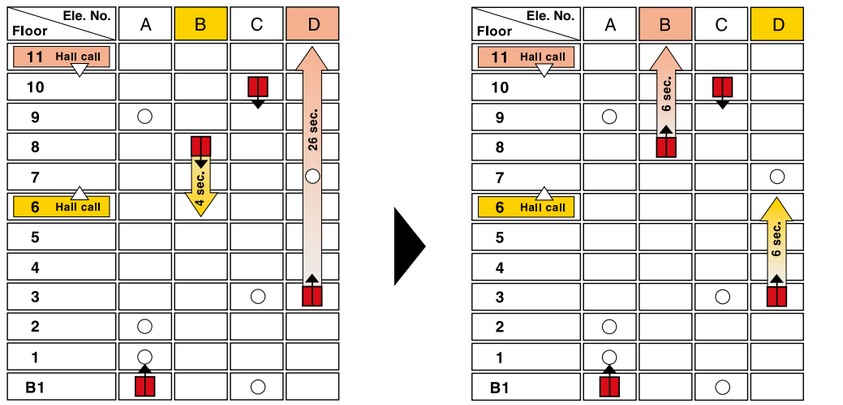


Improved: Max. 30% **Improved: Max. 60%**

Forecasting a Near-future Hall Call to Reduce Long Waits

Cooperative Optimization Assignment

When a hall call is registered, the algorithm assumes a 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.



AI-2100N
[A hall call is registered at 6th Fl.]
Allocates the closest car B.
[Another hall call is soon registered at 11th Fl.]
Allocates D, resulting in long wait of 26 sec.

ΣAI-2200C (New)
[A hall call is registered at 6th Fl.]
Allocates D, which is moving upward.
[Another hall call is soon registered at 11th Fl.]
Allocates B, which immediately arrives at the floor.

··· Car ··· Car call ··· Hall call ··· Traveling direction

Allocating Passengers to Cars Depending on Destination Floors

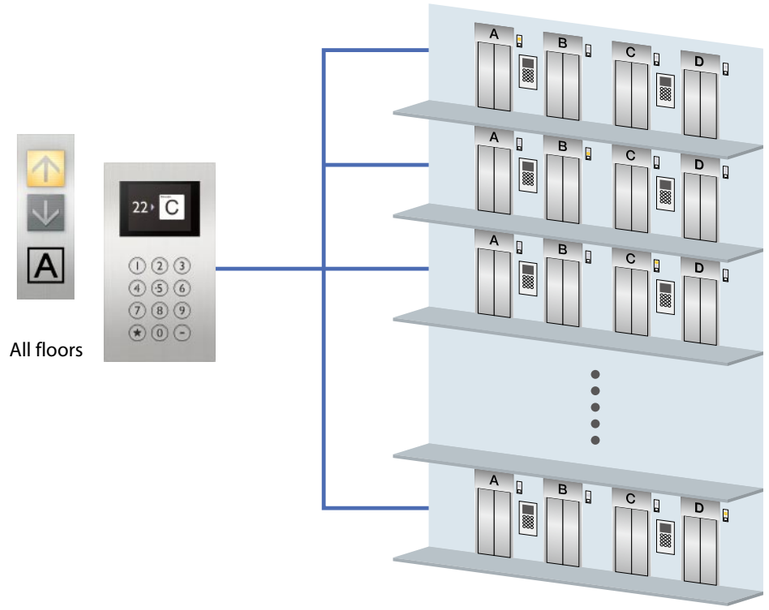
Destination Oriented Prediction System (DOAS-S) (Optional)

When a passenger enters a destination floor at a hall, the hall operating panel immediately indicates which car will serve the floor. Because the destination floor is already registered, the passenger does not need to press a button in the car. Furthermore, dispersing passengers by destination prevents congestion in cars and minimizes their waiting and traveling times.

DOAS-S (All floors*)

When DOAS-S hall operating panels are installed on all floors, cars receive destination information from all floors to provide the best service for more complex traffic conditions throughout the day.

Example of hall arrangement



Please consult our local agents for DOAS-S (all floors).
*DOAS-S hall operating panels can be installed only for certain floors. Please refer to the ΣAI-2200C brochure for details.

Efficiency

Variable Traveling Speed Elevator System (VSE) (Optional)

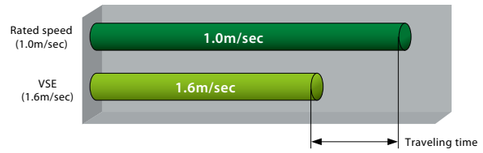
With Mitsubishi Electric's industry-first variable traveling speed elevator system, an elevator can travel faster than its rated speed according to the number of passengers, ultimately reducing waiting and traveling times.

Waiting Time Reduction

15% Reduction

According to Mitsubishi Electric's simulation, waiting time can be reduced up to approximately 15% when VSE is applied.

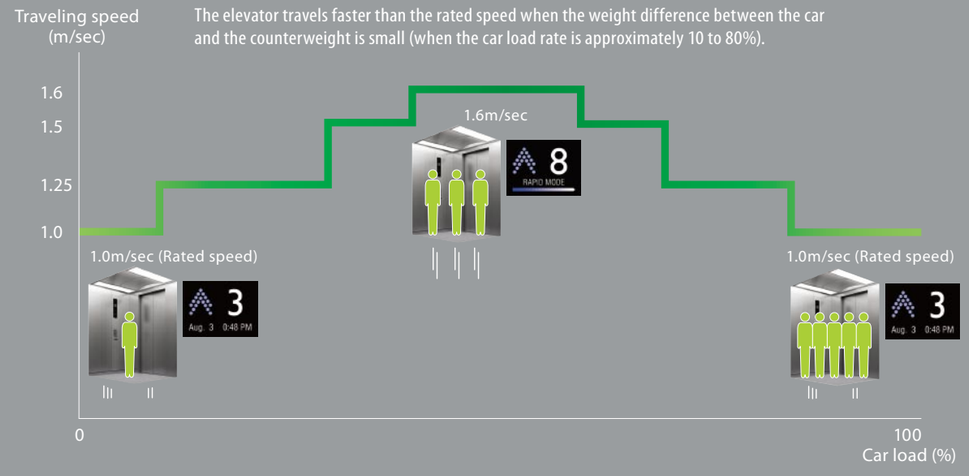
Traveling Time Reduction



32% Reduction

Traveling time can be reduced by approximately 32% when the elevator travels from the bottom to the top floor directly under rapid mode in VSE.

(Conditions)
Travel: 36m, Floor height: 4.0m, 10 floors, Car load: 50%



Maximum Speed and Car Load

Rated speed	Car load						
	0% — 50% — 100%						
1.0m/sec	1.0 m/sec [1-2 persons]	1.25m/sec [2-5 persons]	1.5 m/sec [5-6 persons]	1.6m/sec [6-9 persons]	1.5 m/sec [9-10 persons]	1.25m/sec [10-12 persons]	1.0m/sec [12-14 persons]

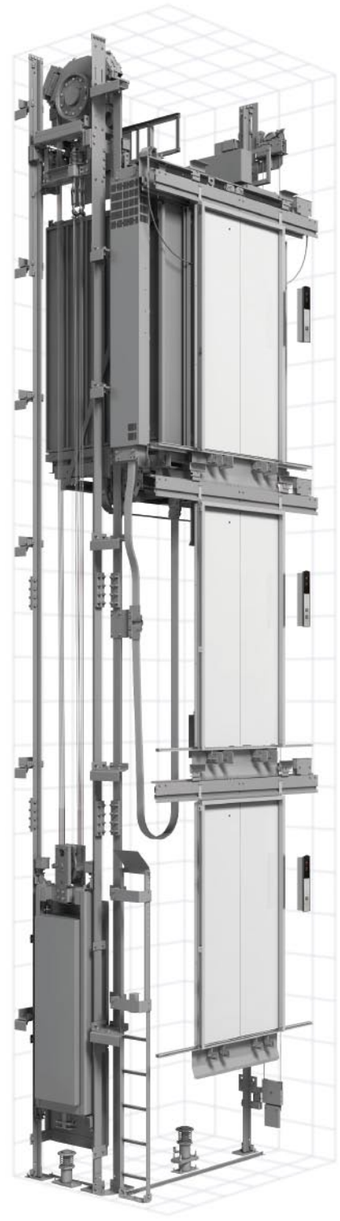
[Number of passengers in the car when the maximum number of passengers is 14.]

Note: The Variable Traveling Speed Elevator System is applicable to elevators with a rated speed of 1.0m/sec.

Space-saving

Machine-room-less Elevators

As all equipment is installed within the hoistway, there are fewer restrictions on building design except for the actual space required for the shaft. Architects and interior designers have more design freedom.



Safety

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. Please refer to page 17 for details.

Hall motion sensor (HMS)
(Optional)

Multi-beam door sensor
(Optional)

When opening

When closing

LEDs light up when doors are opening/closing.

Multi-beam door sensor – signal type (MBSS)
(Optional)

Emergency Situations

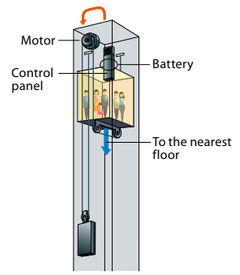
Emergency Operation

To ensure passenger safety, our elevators are equipped with functions for emergencies like a power failure, fire or earthquake.

Power failure

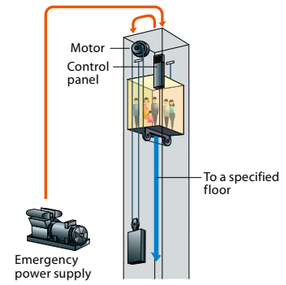
Mitsubishi Emergency Landing Device (MELD) (Optional)

Upon power failure, a car automatically moves to the nearest floor using a rechargeable battery to facilitate the safe evacuation of passengers.



Operation by Emergency Power Source–Automatic/Manual (OEPS) (Optional)

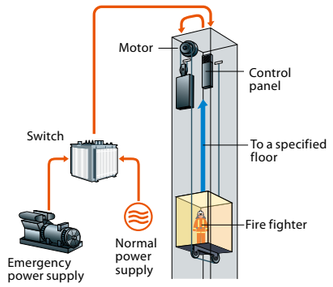
Upon power failure, predetermined car(s) use a building's emergency power supply to move to a specified floor and open the doors for passengers to evacuate. After all cars have arrived, predetermined car(s) resume normal operation.



Fire

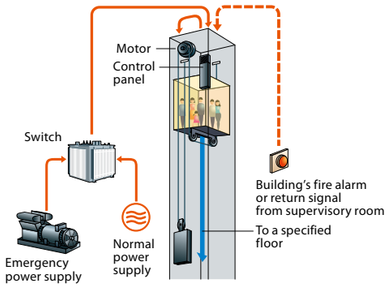
Firefighters' Emergency Operation (FE) (Optional)

When the fire operation switch is activated, the car immediately returns to a predetermined floor. The car then responds only to car calls which facilitate firefighting and rescue operations.



Fire Emergency Return (FER) (Optional)

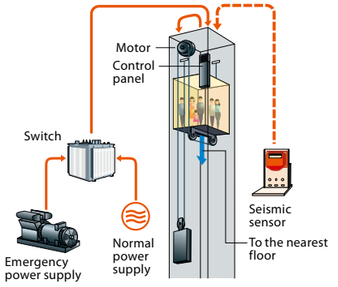
When a key switch or a building's fire alarm is activated, all cars immediately return to a specified floor and open the doors to facilitate the safe evacuation of passengers.



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.



Features (1/2)

Feature	Description	1C-2BC	2C-2BC	3C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ OPERATIONAL AND SERVICE FEATURES					
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.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
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 will open.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Continuity of Service (COS)	A car which is experiencing trouble is automatically withdrawn from group control operation to maintain overall group performance.	—	Ⓢ	Ⓢ	Ⓢ
Automatic Bypass (ABP)	A fully-loaded car bypasses hall calls in order to maintain maximum operational efficiency.	Ⓞ	Ⓢ	Ⓢ	Ⓢ
Overload Holding Stop (OLH)	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.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Automatic Hall Call Registration (FSAT)	If one car cannot carry all waiting passengers because it is full, another car will automatically be assigned for the remaining passengers.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Car Call Canceling (CCC)	When a car has responded to the final car call in one direction, the system regards remaining calls in the other direction as mistakes and clears them from the memory.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
False Call Canceling — Automatic (FCC-A)	If the number of registered car calls does not correspond to the car load, all calls are canceled to avoid unnecessary stops.	Ⓞ	Ⓞ	Ⓞ	Ⓢ
False Call Canceling — Car Button Type (FCC-P) — Hall Button Type (FHC-P)	If the wrong car/hall button is pressed, it can be canceled by quickly pressing the same button again twice.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Car Fan Shut Off — Automatic (CFO-A)	If there are no calls for a specified period, the car ventilation fan will automatically turn off to conserve energy.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Car Light Shut Off — Automatic (CLO-A)	If there are no calls for a specified period, the car lighting will automatically turn off to conserve energy.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Backup Operation for Group Control Microprocessor (GCBK)	An operation by car controllers which automatically maintains elevator operation in the event that a microprocessor or transmission line in the group controller has failed.	—	Ⓢ	Ⓢ	Ⓢ
Out-of-service-remote (RCS)	With a key switch on the supervisory panel, etc., a car can be called to a specified floor after responding to all car calls, and then automatically be taken out of service.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Secret Call Service (SCS-B)	To enhance security, car calls for desired floors can be registered only by entering secret codes using the car buttons on the car operating panel. This function is automatically deactivated during emergency operation.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Non-service to Specific Floors — Car Button Type (NS-CB)	To enhance security, service to specific floors can be disabled using the car operating panel. This function is automatically deactivated during emergency operation.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Non-service to Specific Floors — Switch/Timer Type (NS/NS-T)	To enhance security, service to specific floors can be disabled using a manual or timer switch. This function is automatically deactivated during emergency operation.	Ⓞ	Ⓞ[#1]	Ⓞ	Ⓞ
Out-of-service by Hall Key Switch (HOS/HOS-T)	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.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Return Operation (RET)	Using a key switch on the supervisory panel, a car can be withdrawn from group control operation and called to a specified floor. The car will park on that floor with the doors open, and not accept any calls until independent operations begin.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Attendant Service (AS)	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.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Independent Service (IND)	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.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Variable Traveling Speed Elevator System (VSE)	According to the number of passengers in the car, the car travels faster than the rated speed. Please refer to page 11.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Regenerative Converter (PCNV)	For energy conservation, power regenerated by a traction machine can be used by other electrical systems in the building. Please refer to page 7.	Ⓞ	Ⓞ	Ⓞ	Ⓞ

Feature	Description	1C-2BC	2C-2BC	3C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ GROUP CONTROL FEATURES					
Expert System and Fuzzy Logic	Artificial expert knowledge, which has been programmed using "expert system" and "fuzzy logic", is applied to select the ideal operational rule which maximizes the efficiency of group control operations.	—	—	Ⓢ	Ⓢ
Psychological Waiting Time Evaluation	Cars are allocated according to the predicted psychological waiting time for each hall call. The rules evaluating psychological waiting time are automatically changed in a timely manner in response to actual service conditions.	—	—	Ⓢ	Ⓢ
Cooperative Optimization Assignment	The system predicts a potential hall call, which could cause longer waiting time. Car assignment is performed considering not only current and new calls but also near-future calls. Please refer to page 9.	—	—	—	Ⓢ
Car Travel Time Evaluation	Cars are allocated to hall calls by considering the number of car calls that will reduce passenger waiting time in each hall and the travel time of each car.	—	—	Ⓢ	Ⓢ
Distinction of Traffic Flow with Neural Networks (NN)	Traffic flows in a building are constantly monitored using neural network technology, and the optimum operational pattern, such as Lunchtime Service or Up Peak Service, is selected or canceled accordingly at the appropriate time.	—	—	—	Ⓢ
Car Allocation Tuning (CAT)	The number of cars allocated or parked on crowded floors is controlled not just according to the conditions on those crowded floors but also the operational status of each car and the traffic on each floor.	—	—	—	Ⓢ
Dynamic Rule-set Optimizer (DRO)	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.	—	—	—	Ⓢ
Destination Oriented Prediction System (DOAS-S)	When a 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. Dispersing passengers by destination prevents congestion in the cars and minimizes their waiting and traveling times. (Cannot be combined with the IUP feature.) Please refer to page 10.	—	—	—	Ⓞ[#2]
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.	—	—	Ⓢ	Ⓢ
Strategic Overall Spotting (SOHS)	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 demand for upward travel from the lobby floor during office starting time, hotel check-in time, etc., and minimize passenger waiting time.	—	—	Ⓞ	Ⓞ
Down Peak Service (DPS)	Controls the number of cars to be allocated and the timing of car allocation in order to meet increased demand for downward travel during office leaving time, hotel check-out times etc., to minimize passenger waiting time.	—	—	Ⓞ	Ⓞ
Forced Floor Stop (FFS)	All cars in a bank automatically make a stop at a predetermined floor on every trip without being called.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Main Floor Parking (MFP)	An available car always parks on the main (lobby) floor with the doors open to reduce passenger waiting time.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Energy-saving Operation — Number of Cars (ESO-N)	To save energy, the number of service cars is automatically reduced to some extent, but not so much that it adversely affects passenger waiting time.	—	—	Ⓞ	Ⓢ
Energy-saving Operation — Allocation Control (ESO-W)	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. Please refer to page 8.	—	—	—	Ⓢ
Special Floor Priority Service (SFPS)	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.)	—	—	Ⓞ[#1]	Ⓞ
Closest-car Priority Service (CNPS)	A function to give priority allocation to the car closest to the floor where a hall call button has been pressed, or to reverse the closing doors of the car closest to the pressed hall call button on that floor. (Cannot be combined with hall position indicators.)	—	—	Ⓞ[#1]	Ⓞ

Notes:
- 1C-2BC (1-car selective collective) - Standard, 2C-2BC (2-car group control system) - Optional
  ΣAI-22 (3- to 4-car group control system) - Optional, ΣAI-2200C (3- to 8-car group control system) - Optional
- Ⓢ = Standard Ⓞ = Optional — = Not applicable
- #1: Please consult our local agents for the production terms, etc.
- #2: When DOAS-S is applied, SR or Multi-beam Door Sensor should be installed.
  Please consult our local agents when DOAS-S hall operating panels are installed on all floors.

Features (2/2)

Feature		Description	1C-2BC	2C-2BC	3C to 4C ΣAI-22	3C to 8C ΣAI-2200C
Light-load Car Priority Service (UCPS)		When traffic is light, empty 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.)	—	—	Ⓞ#1	Ⓞ
Special Car Priority Service (SCPS)		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.)	—	—	Ⓞ#1	Ⓞ
Congested-floor Service (CFS)		The timing of car allocation and the number of cars to be allocated to floors where meeting rooms or ballrooms exist and the traffic intensifies for short periods of time are controlled according to the detected traffic density data for those floors.	—	—	Ⓞ	Ⓞ
Bank-separation Operation (BSO)		Hall 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.	—	Ⓞ#1	Ⓞ	Ⓞ
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 will then respond only to car calls.	—	Ⓞ#1	Ⓞ	Ⓞ
Lunchtime Service (LTS)		During the first half of lunchtime, calls for a restaurant floor are served with higher priority, and during the latter half, the number of cars allocated to the restaurant floor, the allocation timing for each car and the door opening and closing timing are all controlled based on predicted data.	—	—	Ⓞ	Ⓞ
Main Floor Changeover Operation (TFS)		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.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
■ DOOR OPERATION FEATURES						
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 door, is monitored to adjust the door speed, thereby making the door speed consistent throughout all floors.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Automatic Door-open Time Adjustment (DOT)		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.	—	—	—	Ⓢ
Reopen with Hall Button (ROHB)		Closing doors can be reopened by pressing the hall button corresponding to the traveling direction of the car.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Repeated Door-close (RDC)		Should an obstacle prevent the doors from closing, the doors will repeatedly open and close until the obstacle is cleared from the doorway.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Extended Door-open Button (DKO-TB)		When the button inside a car is pressed, the doors will remain open longer to allow loading and unloading of baggage, a stretcher, etc.	Ⓞ	Ⓞ	Ⓞ	—
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. With AAN-B or AAN-G, a beep and voice guidance sound instead of the buzzer.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Door Load Detector (DLD)		When excessive door load has been detected while opening or closing, the doors immediately reverse.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Safety Door Edge (SDE)	One side (CO, 2S doors)	Sensitive door edge(s) detects passengers or objects during door closing. (Cannot be combined with the MBSS feature.)	Ⓞ	Ⓞ	Ⓞ	Ⓞ
	Both sides (CO doors only)		Ⓞ	Ⓞ	Ⓞ	Ⓞ
Safety Ray (SR)	1-beam	One or two infrared-light beams cover the full width of the doors as they close to detect passengers or objects. (Cannot be combined with the multi-beam door sensor or MBSS feature.)	Ⓢ	Ⓢ	Ⓢ	Ⓢ
	2-beam		Ⓞ	Ⓞ	Ⓞ	Ⓞ
Electronic Doorman (EDM)		Door open time is minimized using safety ray(s) or multi-beam door sensors that detect passengers boarding or exiting.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Multi-beam Door Sensor		Multiple infrared-light beams cover a door height of approximately 1800mm to detect passengers or objects as the doors close. (Cannot be combined with the SR or MBSS feature.)	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Multi-beam Door Sensor — Signal Type (MBSS)		Multiple infrared-light beams cover a door height of approximately 1800mm to detect passengers or objects as the doors close. Additionally, LED lights on the door edge indicate the door opening/closing and the presence of an obstacle between the doors. (Cannot be combined with any of the following features: SDE, SR or multi-beam door sensor.)	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Hall Motion Sensor (HMS)		Infrared-light is used to scan a 3D area near open doors to detect passengers or objects.	Ⓞ	Ⓞ	Ⓞ	Ⓞ

Feature	Description	1C-2BC	2C-2BC	3C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ SIGNAL AND DISPLAY FEATURES					
Sonic Car Button — Click Type (ACB)	A click-type car button which emits an electronic beep sound when pressed to indicate that the call has been registered.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Car Arrival Chime — Car or Hall (AECC/AECH)	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 in each hall.)	Ⓞ	Ⓞ	Ⓞ	Ⓢ (Each floor)
Flashing Hall Lantern (FHL)	A hall lantern, which corresponds to a car's service direction, flashes to indicate that the car will soon arrive.	Ⓞ	Ⓞ	Ⓞ	Ⓢ
Immediate Prediction Indication (AIL)	When a passenger has registered a hall 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.	—	—	Ⓞ	Ⓞ
Second Car Prediction (TCP)	When a hall is crowded to the extent that one car cannot accommodate all waiting passengers, a hall lantern will light up to indicate the next car to serve the hall.	—	—	—	Ⓞ
Basic Announcement (AAN-B)	A synthetic voice (and/or buzzer) alerts passengers inside a car that elevator operation has been temporarily interrupted due to overloading or a similar cause. (Voice available only in English.)	Ⓞ	Ⓞ	Ⓞ	Ⓢ
Voice Guidance System (AAN-G)	Information on elevator service such as the current floor or service direction is given to the passengers inside a car. (Voice guidance available only in English.)	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Auxiliary Car Operating Panel (ACS)	An additional car operating panel which can be installed for large-capacity elevators, heavy-traffic elevators, etc.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Inter-communication System (ITP)	A system which allows communication between passengers inside a car and the building personnel.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
LCD Position Indicator (CID-S)	This 5.7-inch LCD for car operating panels shows the date and time, car positions, travel direction and elevator status messages.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
■ EMERGENCY OPERATIONS AND FEATURES					
Mitsubishi Emergency Landing Device (MELD)	Upon power failure, a car equipped with this function automatically moves to and stops at the nearest floor using a rechargeable battery, and the doors open to facilitate the safe evacuation of passengers. (Maximum allowable floor-to-floor distance is 10 meters.)	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Operation by Emergency Power Source — Automatic/Manual (OEPS)	Upon power failure, predetermined car(s) uses the building's emergency power supply to move to a specified floor, where the doors then open to facilitate the safe evacuation of passengers. After all cars have arrived, predetermined car(s) resume normal operation.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
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.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Firefighters' Emergency Operation (FE)	During a fire, when the fire operation switch is activated, the car calls of a specified car and all hall calls are canceled and the car immediately returns to a predetermined floor. The car then responds only to car calls which facilitate firefighting and rescue operations.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Earthquake Emergency Return (EER-P/EER-S)	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.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Supervisory Panel (WP)	Each elevator's status and operation can be remotely monitored and controlled through a panel installed in a building's supervisory room, etc.	Ⓞ	Ⓞ#1	Ⓞ	Ⓞ#1
MelEye (WP-W) Mitsubishi Elevators & Escalators Monitoring and Control System	Each elevator's status and operation can be monitored and controlled using 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.	Ⓞ	Ⓞ	Ⓞ	Ⓞ
Emergency Car Lighting (ECL)	Car lighting which turns on immediately when power fails, providing a minimum level of lighting within the car. (Choice of dry-cell battery or trickle-charge battery.)	Ⓞ	Ⓞ	Ⓞ	Ⓞ

Notes: • 1C-2BC (1-car selective collective) - Standard, 2C-2BC (2-car group control system) - Optional
ΣAI-22 (3- to 4-car group control system) - Optional, ΣAI-2200C (3- to 8-car group control system) - Optional
• Ⓢ = Standard Ⓞ = Optional — = Not applicable
• #1: Please consult our local agents for the production terms, etc.

Basic Specifications

Horizontal Dimensions <1-Door 1-Gate (1D1G)>

Code number	Number of persons	Rated capacity (kg)	Rated speed (m/sec)	Door type	Entrance width (mm) JJ	Car internal dimensions (mm) AA x BB	Counter-weight position	Minimum hoistway dimensions (mm) AH x BH/car
P6	6	450	1.0 1.6 1.75	2S	800	950x1300	Side	1500x1740
						1000x1200		1550x1740
P7	7	550			800: Standard	1100x1300		1650x1740
					900: Optional			
P8	8	630		CO	900: Standard	1100x1400		1950x1720
					800: Optional			1800x1720
				2S	900: Standard			1650x1800
					800: Optional			
P11	11	825		CO	900: Standard	1350x1400		2025x1720
					800: Optional			1925x1720
				2S	900: Standard			1900x1800
					1100: Optional			1950x1800
P14	14	1050		CO	1100: Standard	1600x1400		2415x1720
					900: Optional			2215x1720
				2S	1100			2215x1800
				CO	900: Standard	1100x2100		1965x2420
					800: Optional			1865x2420
				2S	900: Standard			1715x2500
					800: Optional			

[Terms of the table]
- The contents of this table are applied to standard specifications only. Please consult our local agents for other specifications.
- Rated capacity is calculated at 75kg per person, as required by EN81-1.
- CO: 2-panel center opening doors, 2S: 2-panel side sliding doors.
- Minimum hoistway dimensions (AH and BH) shown in the table are after waterproofing of the pit and do not include plumb tolerance.
- This table shows specifications without the fireproof landing door and counterweight safety.
- The applicable range of the rated capacity may differ depending on the manufacturing factory. Please consult our local agents for details.

Vertical Dimensions <1-Door 1-Gate (1D1G) & 1-Door 2-Gate (1D2G)>

Rated speed (m/sec)	Travel (m) TR	Maximum number of floors	Minimum overhead (mm) OH	Minimum pit depth (mm) PD	Minimum floor to floor height (mm)
1.0	TR≦30	22	3650 *1	1300	2500
	30<TR≦60		3650		
1.6	TR≦30	30	3750	1400	
	30<TR≦60		3800		
	60<TR≦80		3850		
1.75	TR≦30	30	3850	1450	
	30<TR≦60		3900		
	60<TR≦80		3950		

[Terms of the table]
- The contents of this table are applied to standard specifications only. Please consult our local agents for other specifications.
- Some specifications require more than 2500mm as a minimum floor height. Please consult our local agents if the floor height is less than entrance height HH + 700mm, and the elevator is 1-Door 2-Gate.
- This table shows specifications without counterweight safety.

[Note]
*1 Minimum overhead (OH) may vary depending on conditions.

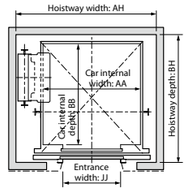
Specifications for Variable Traveling Speed Elevator System (Optional)

<1-Door 1-Gate (1D1G) & 1-Door 2-Gate (1D2G)>

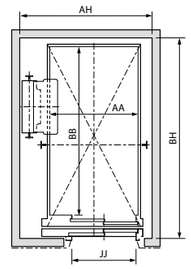
Rated speed (m/sec)	Speeds (m/sec)	Travel (m) TR	Rated capacity (kg)	Minimum overhead (mm) OH	Minimum pit depth (mm) PD
1.0	1.0/1.25/1.5/1.6	TR≦30	~1050	3750	1400
		30<TR≦60		3800	

[Terms of the table]
- The Variable Traveling Speed Elevator System (VSE) is applicable for elevators with a rated speed of 1.0m/sec.
- Except minimum overhead and pit depth dimensions (OH and PD), specifications shown in tables, "Horizontal Dimensions" and "Vertical Dimensions", on the pages 19 and 21 are applicable to the Variable Traveling Speed Elevator System.

Hoistway Plan

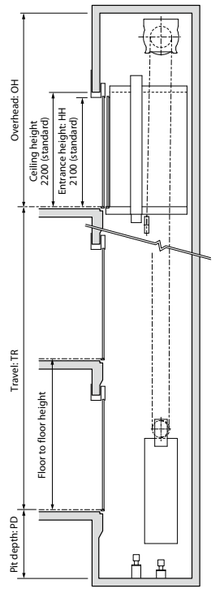


Shown for CO doors
Counterweight side drop
(Capacity 630kg ~ 1050kg)



Shown for 2S doors
Counterweight side drop
(Capacity 450kg ~ 1050kg)

Hoistway Section



Applicable Standards

NEXIEZ-MRL complies with EN81-1. For details of compliance with other national regulations, please consult our local agents.

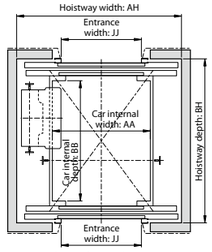
Basic Specifications

Horizontal Dimensions <1-Door 2-Gate (1D2G)>

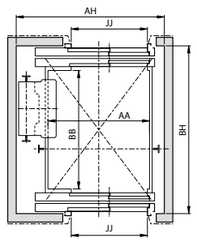
Code number	Number of persons	Rated capacity (kg)	Rated speed (m/sec)	Door type	Entrance width (mm) JJ	Car internal dimensions (mm) AAxBB	Counter-weight position	Minimum hoistway dimensions (mm) AHxBH/car
P8	8	630	1.0 1.6 1.75	CO	900: Standard	1100x1400	Side	1965x1860
					800: Optional			1865x1860
				2S	900: Standard			1715x1982
					800: Optional			1650x1982
P11	11	825		CO	900: Standard	1350x1400		2090x1860
					800: Optional			1925x1860
				2S	900: Standard			1900x1982
					1100: Optional			1965x1982
P14	14	1050		CO	1100: Standard	1600x1400		2415x1860
					900: Optional			2215x1860
				2S	1100			2215x1982
				CO	900: Standard	1100x2100		1965x2560
					800: Optional			1865x2560
				2S	900: Standard			1715x2682
					800: Optional			

[Terms of the table]
- The contents of this table are applied to standard specifications only. Please consult our local agents for other specifications.
- Rated capacity is calculated at 75kg per person, as required by EN81-1.
- CO: 2-panel center opening doors, 2S: 2-panel side sliding doors.
- Minimum hoistway dimensions (AH and BH) shown in the table are after waterproofing of the pit and do not include plumb tolerance.
- This table shows specifications without the fireproof landing door and counterweight safety.

Hoistway Plan

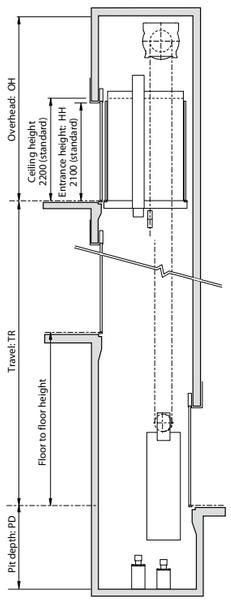


Shown for CO doors
Counterweight side drop



Shown for 2S doors
Counterweight side drop

Hoistway Section



Applicable Standards

NEXIEZ-MRL complies with EN81-1. For details of compliance with other national regulations, please consult our local agents.

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 joists.
- 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.
  a. The relative humidity shall be below 90% on a monthly average and below 95% on a daily average.
  b. The machine room and the elevator hoistway shall be finished with mortar or other materials so as to prevent concrete dust.
- Voltage fluctuation shall be within a range of +5% to −10%.

Ordering Information

Please include the following information when ordering or requesting estimates:
- The desired number of units, speed and loading capacity.
- The number of stops or number of floors to be served.
- The total elevator travel and each floor-to-floor height.
- Operation system.
- Selected design and size of car.
- Entrance design.
- Signal equipment.
- A sketch of the part of the building where the elevators are to be installed.
- The voltage, number of phases, and frequency of the power source for the motor and lighting.

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.

Mitsubishi Elevator Asia Co., Ltd. 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.

for a greener tomorrow

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

MITSUBISHI ELECTRIC CORPORATION
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Visit our website at:
http://www.mitsubishi-elevator.com/

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

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