

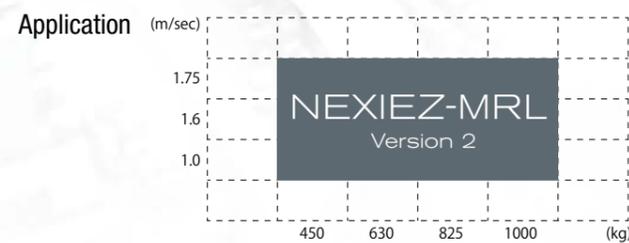
PASSENGER ELEVATORS
MACHINE-ROOM-LESS SYSTEM

NEXIEZ-MRL

Version 2

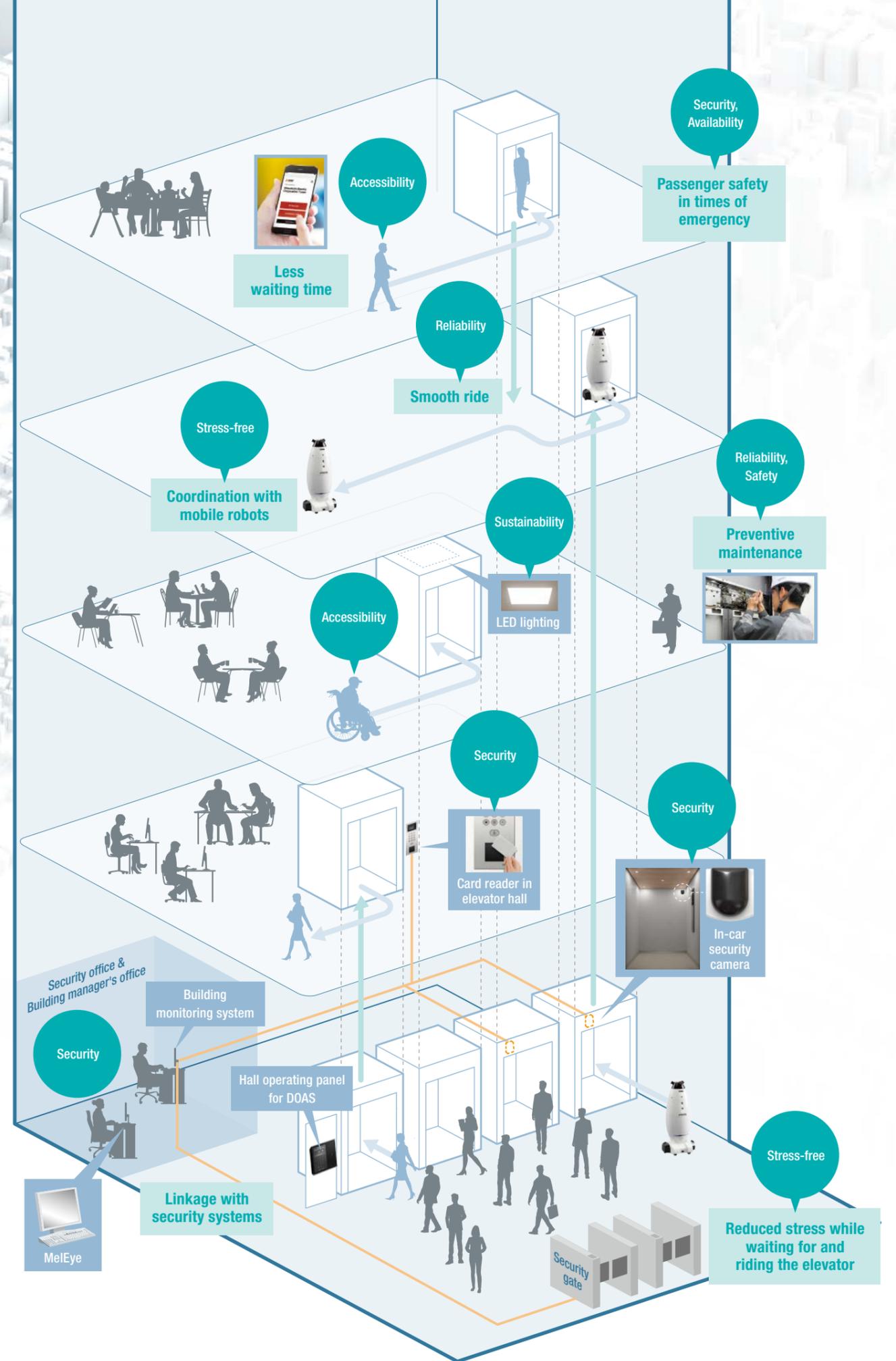
Building Mobility Services Sense for Quality

NEXIEZ-MRL Version 2 will provide advanced mobility services that are recognized by users wherever experienced through creating a better life in the building. Not only as a method of transportation, the services will enhance users' lifestyles in every way when utilized with other facilities, such as mobile phones, automated robots, and security devices.



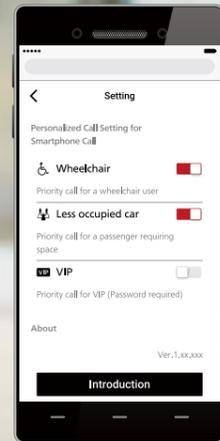
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Sense for Quality

- Stress-free
- Accessibility



Elevator Call System with Smartphone [ELCS-SP] Optional

Users can call an elevator remotely by accessing a dedicated website with a smartphone. By eliminating the need to touch a call button in the elevator lobby or car, the system provides increased convenience and comfort to users.

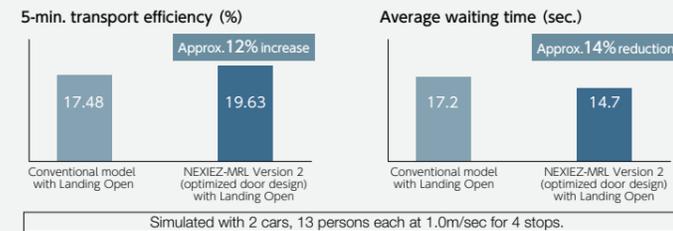
*This feature requires an ELSGW panel. Please consult our local agents for details.

Increased operational efficiency

Combining functional systems that increase operational efficiency improves transport efficiency and waiting time, and realizes a smoother and more comfortable ride.

Quick-motion Door System

An optimized door design shortens the door opening and closing time. Furthermore, by combining this feature with the Landing Open [LO] feature (Optional), the door opens at optimum timing, thereby increasing transport efficiency by approximately 12% and reducing average waiting time by approximately 14% compared to conventional models.



Quick Closing System with Sensor [SNCD] Optional

When the sensor installed above the car doors detects no passengers in the elevator hall, the doors begin closing after a shorter amount of time than usual. Thus, average waiting time can be further reduced by 10%.

*Waiting time can be reduced by approximately 24% (14% + 10%) in combination with the above Quick-motion Door System. Please consult our local agents for details.
*This feature is not applicable to the environment where the sensors are exposed to direct or reflected sunlight because false detection may occur.

*The effects on transport efficiency and waiting time differ depending on building conditions.

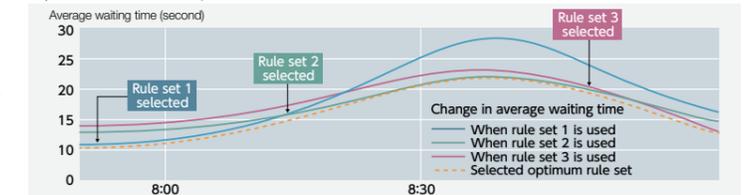


Quick Closing System with Sensor

ΣAI-2200C and Mitsubishi Electric's original AI technology Optional

The ΣAI-2200C group control system uses Mitsubishi Electric's original AI technology to predict the traffic flow in the building in few minutes' time based on current traffic information. A real-time simulator evaluates various rule-sets and selects an optimum rule-set for the predicted traffic flow to ensure smooth operation.

Dynamic Rule-set Optimizer (DRO)



Coordination with mobile robots Optional

Mobile robots are beginning to take the place of people in areas such as security, delivery, and cleaning. Sophisticated coordination between elevators and mobile robots assists robot operations and promotes coexistence with people.

*Mobile robots need to be arranged separately by each customer. This feature requires an ELSGW panel. Please consult our local agents for details.

User-friendly mobility solutions

Our easy-to-use elevator fixtures offer increased convenience and mobility.

Car location map for DOAS Optional

An operating panel in the elevator hall indicates which car to take, according to the Destination Oriented Allocation System [DOAS].



Car selection for DOAS Optional

This function enables passengers, especially those who have difficulty with mobility or require space such as wheelchair users, to select the closest or relatively uncrowded car from the hall operating panel for Destination Oriented Allocation System [DOAS].



High ceiling specifications of up to 2800mm Optional

Cars with a higher ceiling offer a more spacious feeling and greater comfort.

* - Some ceiling types have a height limitation. Please consult our local agents for details.
- For ceiling heights of more than 2800mm, please consult our local agents for details.



Sense for Quality

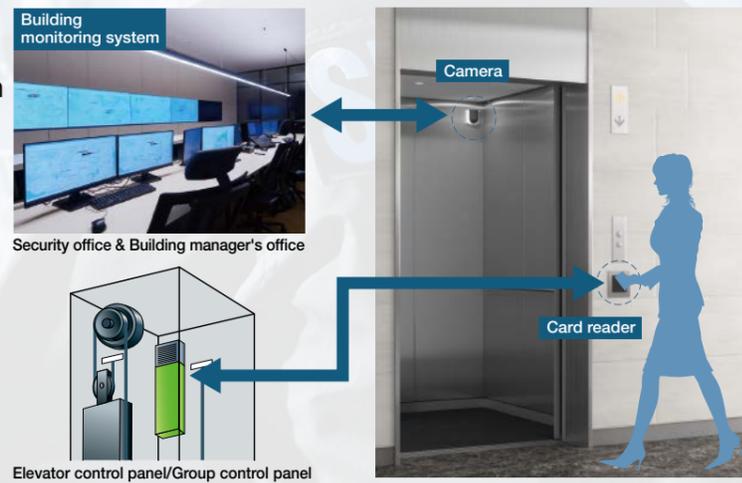
- Security
- Availability

Elevator and Security System Interface [EL-SC/EL-SCA], Building Management System - Gateway [BMS-GW], Security Camera Interface

Optional

Elevators can be easily connected to security devices and the management system in the building, to play an important role in ensuring building security.

*EL-SCA feature requires an ELSGW panel and BMS-GW feature requires a BMS-GW panel. Please consult our local agents for details.



Antiviral and antibacterial buttons Optional

Antiviral and antibacterial coating or film may be applied to car and hall buttons that passengers frequently touch, to inhibit the growth of viruses and bacteria.

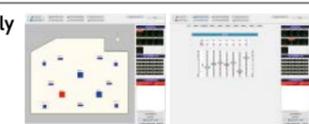
*Antiviral and antibacterial buttons may not be applicable depending on the country. They may not be applicable to some signal fixtures. Please consult our local agents for details.



Elevator Monitoring and Control System: MeEye [WP-W] Optional

Mitsubishi Electric's MeEye is a sophisticated Web-based elevator and escalator monitoring and control system that allows authorized personnel to respond rapidly to changing traffic patterns and other operational conditions. It improves passenger safety and reliability of your building management.

User-friendly screens



Operational failures and errors will be highlighted for easier recognition on the screen and to improve rapid troubleshooting.



Emergency operations Optional

Our emergency operation features ensure passenger safety in the event of a power failure, fire, or earthquake.



Power failure

■ Mitsubishi Emergency Landing Device [MELD] Optional

If passengers are trapped in a car in the event of a power failure, this feature checks the state of the car and moves it to the nearest floor using battery power.

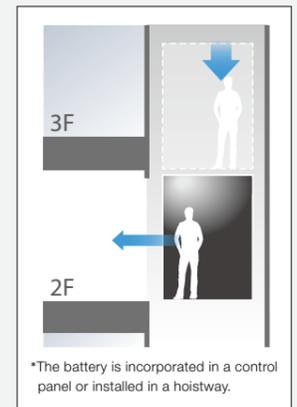
■ Mitsubishi Emergency Landing Device with High Capacity Battery [MELDH] Optional

MELDH incorporates a high capacity battery into MELD and enables the car to run approximately 40 m during a power failure. Even if a car stops in the middle of the express zone in a high-rise building, the car can move to the nearest floor.

*The maximum distance that the car can run varies depending on the rated speed and capacity. Please consult our local agents for details.

■ 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.



Mitsubishi Emergency Landing Device



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.



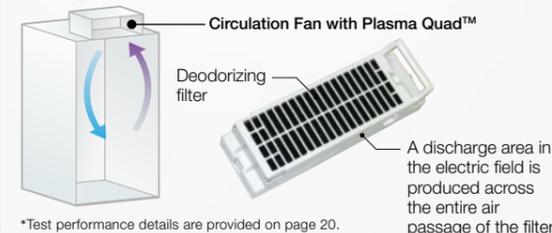
Earthquake

■ 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.

Circulation Fan with Plasma Quad™ Optional

By creating a discharge area in the electric field, the device captures airborne contaminants in the car, such as viruses, bacteria, and pollen. Microparticles (PM 2.5) and odors are also filtered out, keeping the air in the car fresh at all times.



Sense for Quality

- Sustainability

Sense for Quality

- Reliability
- Safety

Smooth and comfortable ride
- A coin on its edge will not fall -

Our sophisticated control systems and devices and advanced installation technique ensure not only a smoother and quieter ride, but also high landing accuracy.



Optimized package provides Class-A energy efficiency rating according to VDI 4707

Optional

Our energy-efficient elevator package ensures Class-A energy efficiency requirements of VDI 4707.

*VDI 4707 is a guideline established by the German Association of Engineers for evaluating the energy efficiency of installed elevators.

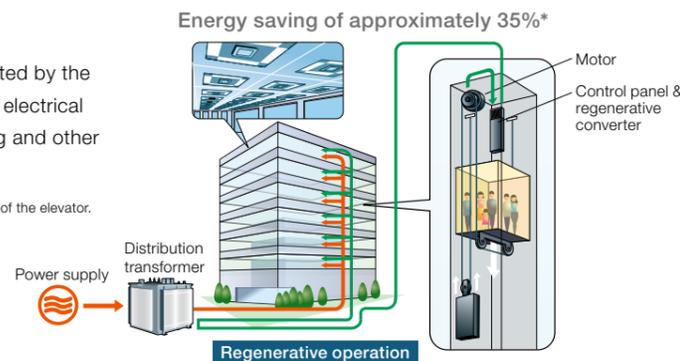
*In-house evaluation is based on the following measurement conditions: VDI 4707 usage category 3 elevator, capacity of 1000 kg, rated speed of 1.75 m/sec, 5 stops and installation of a regenerative converter.



Regenerative Converter [PCNV] **Optional**

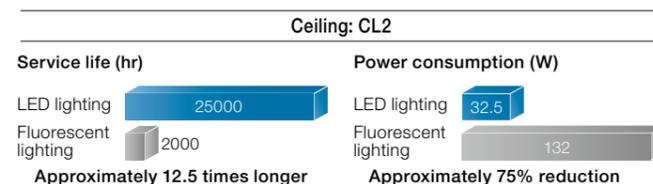
A regenerative converter transmits the power regenerated by the traction machine via the distribution transformer to the electrical network to reuse the power for lighting, air conditioning and other electrical systems in the building.

*The actual figure may vary depending on the installation and usage conditions of the elevator.



LED lighting

The LED used in ceilings and signal fixtures consumes less energy than fluorescent lighting. It also eliminates the need for frequent replacement, as it has a long service life.



Door safety devices

Our reliable safety device ensure that the doors are clear to open and close.

*The application of door safety device differs depending on the applicable standard. Please see page 17 for details.

*For Multi-beam Door Sensor, please consult our local agent to check whether it is applicable to the environment where the sensors are exposed to direct or reflected sunlight.

*Hall Motion Sensor [HMS] is not applicable to the environment where the sensors are exposed to direct or reflected sunlight because false detection may occur.

*The Hall Motion Sensor [HMS] cannot be combined with Quick Closing System with Sensor [SNCD]. Also, HMS is not applicable to 2S doors of EN81-20/50:2014-compliant elevators.



Multi-beam Door Sensor

Hall Motion Sensor [HMS]

Smooth and safety-conscious door operation

Our compact and lightweight door device employs a unique joint-lapped core technology for the door motor for highly efficient and reliable door operation. The drive motor is controlled by a variable-voltage, variable-frequency inverter so that the door opens and closes according to the condition of the landing doors, such as their weight. Furthermore, the closing door slows down right before it fully closes, to ensure passenger safety and maintain the durability of the door.



Joint-lapped core

Rigorous quality assurance in the factory

Product quality is evaluated in detail in our factory in each process from manufacturing, inspection to shipping, based on a quality control system built on our history and experience. Our factory has acquired ISO 9001 and ISO 14001 certifications and constantly strives to assure and further enhance product quality.



Maintenance and education

Mitsubishi Electric demonstrates professional competence at every step from development and manufacturing, through installation and maintenance, to modernization. Our preventive maintenance helps reduce malfunctions and ensures reliability through the entire life cycle of elevators. Since technicians are required to have highly professional skills and knowledge to provide quality maintenance service, they make ongoing efforts to further improve their skills through various training programs.





LUXURY

An air of sophistication is created not by decorative elements but by a rich surface finish. An elegant space produced by an exquisite combination of muted colors and different materials.



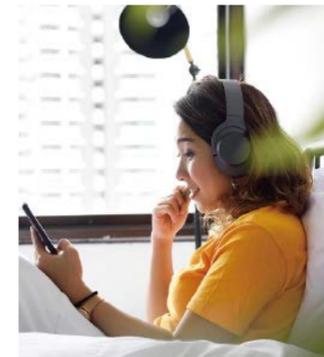
NATURAL

A natural style emphasizing the soft texture of wood. Produces a natural feeling that is unaffected by the trends of the times.



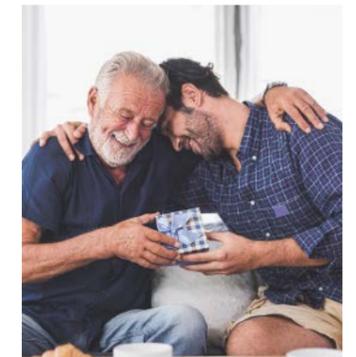
COMFORT

A minimalistic design that produces a comfortable and warm impression. A bright ceiling creates a feeling of reassuring comfort.



MODERN

A beautiful urban style created by noiseless, simple lines. The modern and solid space exudes an air of refinement.



Elevators that serve as a link between a building and people's thoughts.

Elevators are expected to provide not only riding comfort but various other comforts as well.

Designs that harmonize with a building's design, for example, are important elements.

NEXIEZ-MRL Version 2 creates a comfortable space where the building and people's thoughts are linked together, with four styles that embody the trends and styles of the times.



LUXURY An air of sophistication is created not by decorative elements but by a rich surface finish.

Car Design Example

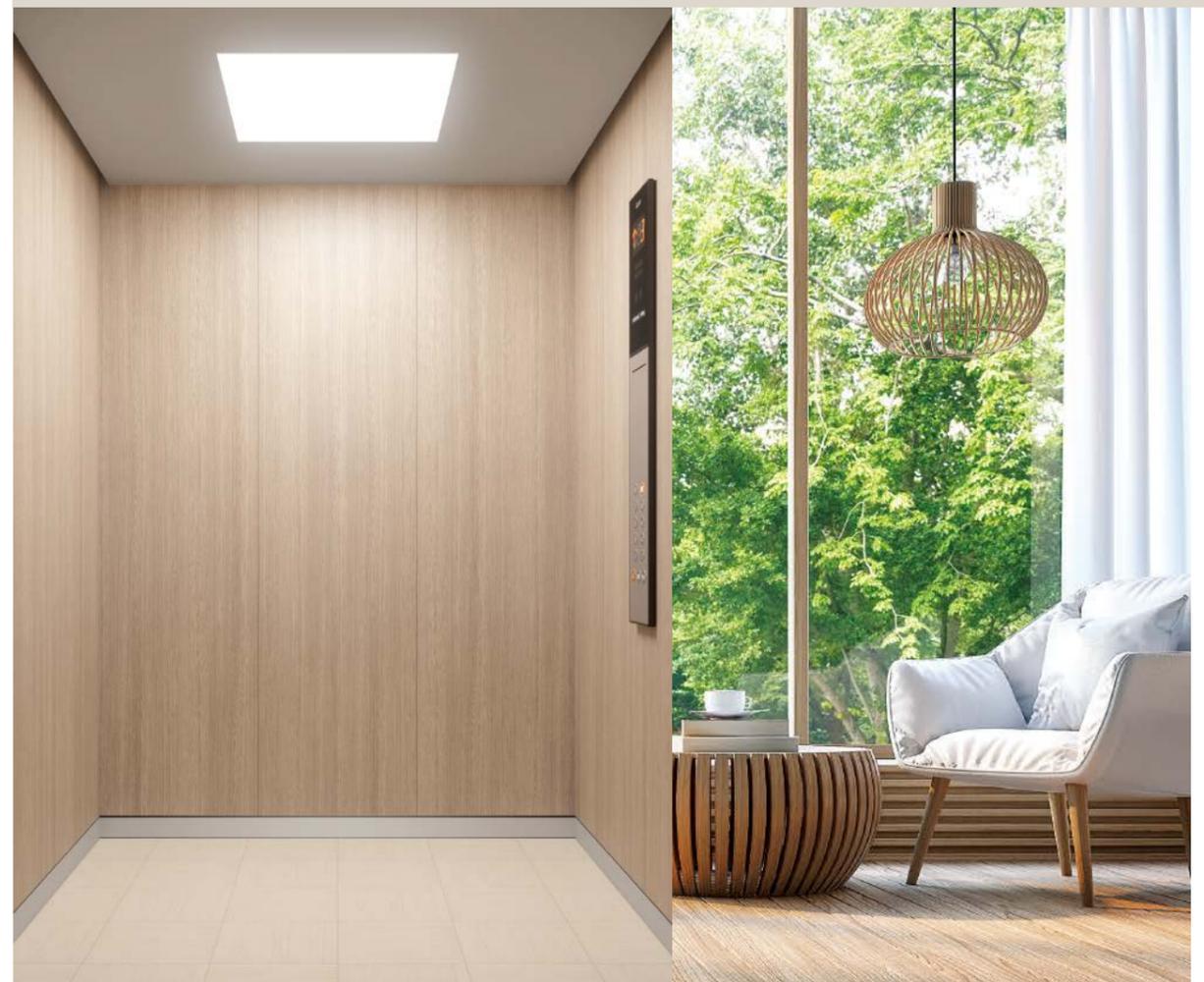
- Ceiling ————— CL2
Panel: Painted steel sheet [Y055B: Onyx black]
Lighting color: Warm white
- Walls ————— Painted steel sheet [Y002B: Dark brown]
- Transom panel — Painted steel sheet [Y002B: Dark brown]
- Doors ————— Painted steel sheet [Y002B: Dark brown]
- Front return panels — Hairline stainless-steel
- Car operating panel — CBV1-M1010
- Kickplate ————— Aluminum
- Flooring ————— PR812: Dim-gray



Car Design Example

- Ceiling ————— CL1
Panel: Painted steel sheet [Y135D: Shadow white]
Lighting color: Cool white
- Walls ————— Laminated steel sheet [LA03: Washed oak]
- Car operating panel — CBV1-M1010
- Kickplate ————— Aluminum
- Flooring ————— PR801: Cream beige

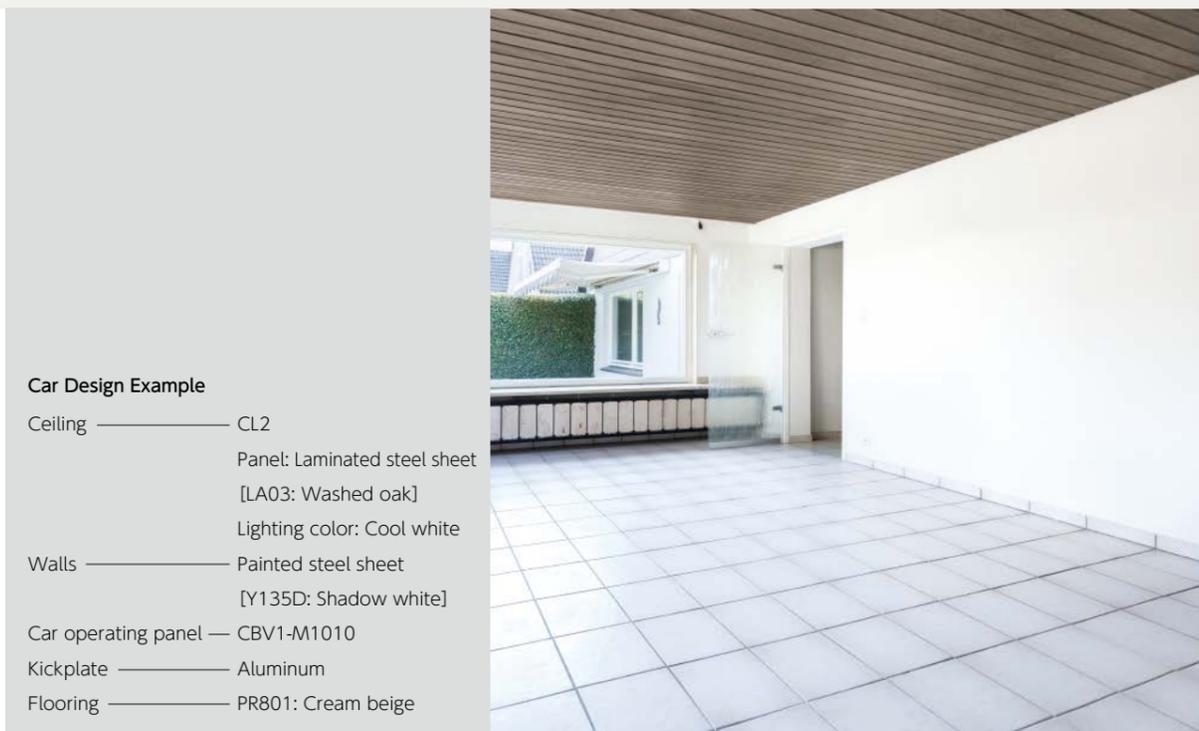
NATURAL A natural style emphasizing the soft texture of wood.



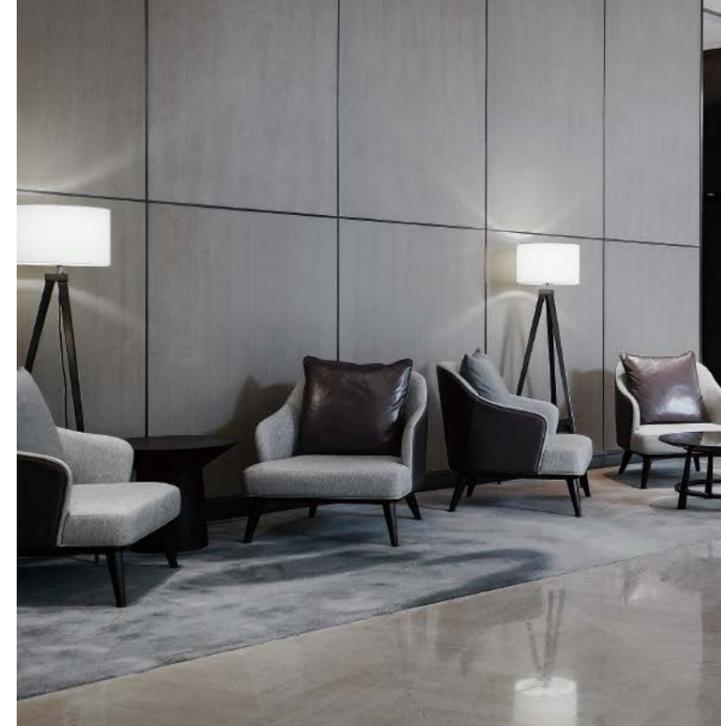
Actual colors may differ slightly from those shown. Please refer to the design guide for details and other designs.



COMFORT A minimalistic design that produces a comfortable and warm impression.

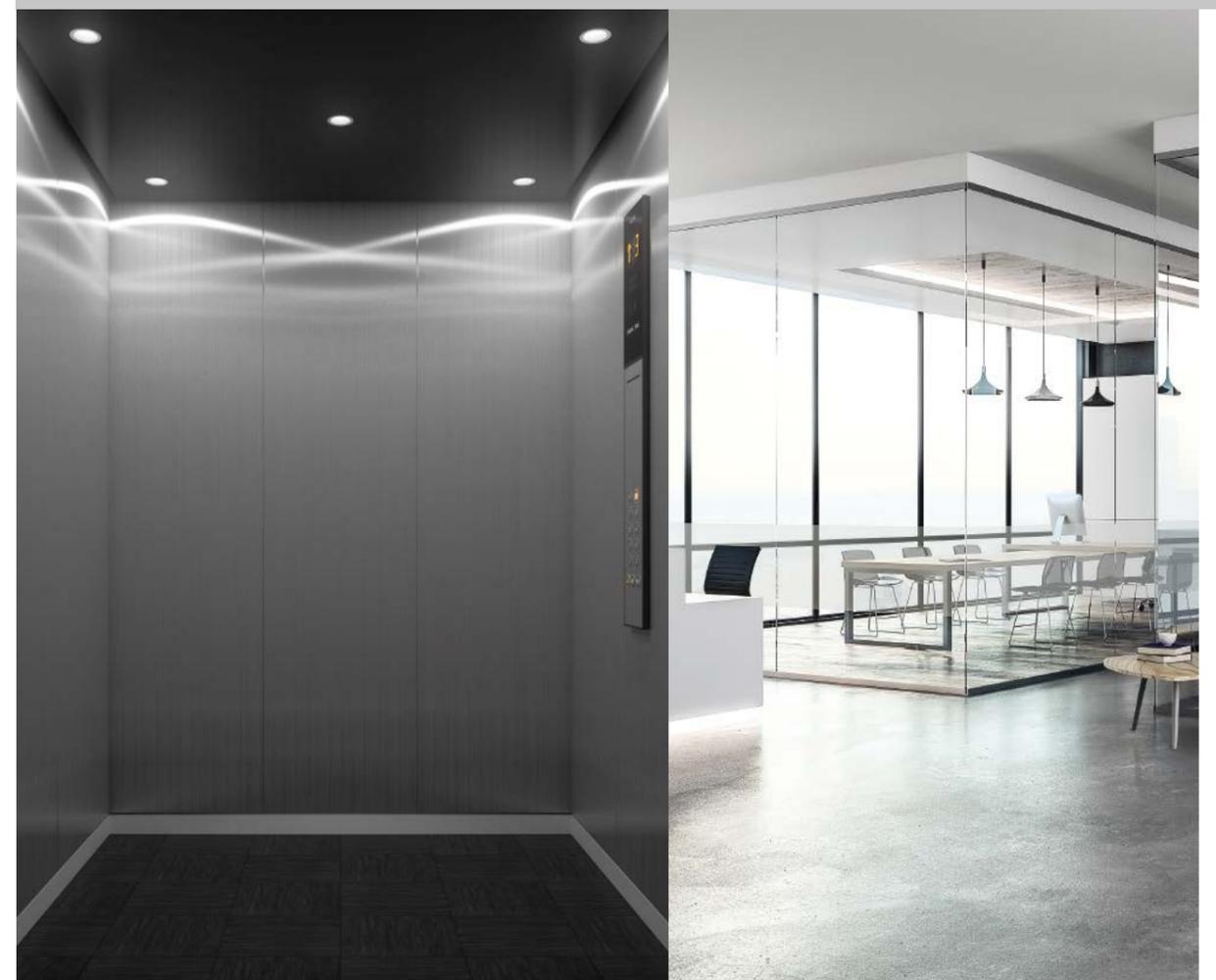


- Car Design Example**
- Ceiling — CL2
Panel: Laminated steel sheet [LA03: Washed oak]
Lighting color: Cool white
 - Walls — Painted steel sheet [Y135D: Shadow white]
 - Car operating panel — CBV1-M1010
 - Kickplate — Aluminum
 - Flooring — PR801: Cream beige



- Car Design Example**
- Ceiling — CL2
Panel: Painted steel sheet [Y055B: Onyx black]
Lighting color: Cool white
 - Walls — Hairline stainless-steel
 - Car operating panel — CBV1-M1010
 - Kickplate — Aluminum
 - Flooring — PR812: Dim-gray

MODERN A beautiful urban style created by noiseless, simple lines.



Actual colors may differ slightly from those shown. Please refer to the design guide for details and other designs.

CAR

Ceiling: CL2



Car Design Example

- Ceiling ———— CL2
- Panel: Painted steel sheet
[Y135D: Shadow white]
- Lighting color: Cool white
- Walls ———— Hairline stainless-steel
- Transom panel ———— Hairline stainless-steel
- Doors ———— Hairline stainless-steel
- Front return panels ———— Hairline stainless-steel
- Car operating panel — CBV1-M1010
- Kickplate ———— Aluminum
- Flooring ———— PR803: Gray

Car operating panel

Wall mounted, short panel (without service cabinet)



With
EN81-20/50:2014-compliant
indicator



Buttons

Surface
Tactile

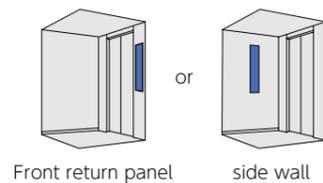
Illumination color
Yellow-orange

Size/Material
Ø33mm/Stainless-steel,
non-directional hairline

CBV1-M1010

- Segment LED indicator*1
- Hairline stainless-steel faceplate
- Maximum 22 stops

Position



Front return panel

side wall

HALL

Narrow jamb: E-102



Hall Design Example

- Jamb ———— Narrow jamb: E-102
- Hairline stainless-steel
- Doors ———— Hairline stainless-steel
- Hall position indicators and buttons ———— PIV1-A1010N Boxless

Hall position indicators and buttons



PIV1-A1010
Boxless

PIV1-A1020
Boxless

- Segment LED indicator*1
- Hairline stainless-steel faceplate with plastic case



Buttons

Surface
Tactile

Illumination color
Yellow-orange

Size/Material
Ø33mm/Stainless-steel,
non-directional hairline

Antiviral and antibacterial buttons Optional

Antiviral and antibacterial coating or film may be applied to car and hall buttons that passengers frequently touch, to inhibit the growth of viruses and bacteria.

*Antiviral and antibacterial buttons may not be applicable depending on the country. They may not be applicable to some signal fixtures. Please consult our local agents for details.



Note:
*1: Segment LED indicators cannot display some letters of alphabet. Please consult our local agents for details.

Actual colors may differ slightly from those shown.
Please refer to the design guide for details and other designs.

Ⓢ = Standard, Ⓞ = Optional

Features	Abbreviation	Description	1C to 2C 2BC	3C to 8C ZAI-2200C
EMERGENCY OPERATIONS AND FEATURES				
Building Management System — GateWay	BMS-GW	Each elevator's status and operation can be monitored and controlled using a building management system which manages various facilities in the building via the interface for the elevator system.	Ⓞ	Ⓞ
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.	Ⓞ	Ⓞ
Emergency Car Lighting	ECL	Car lighting which turns on immediately when power fails, providing a minimum level of lighting within the car.	Ⓞ	Ⓞ
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 operation.	Ⓞ	Ⓞ
MelEye Mitsubishi Elevators & Escalators Monitoring and Control System	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.	Ⓞ	Ⓞ
Mitsubishi Emergency Landing Device	MELD/ MELDH	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. (Maximum allowable floor-to-floor distance is 11 meters for MELD and 40 meters for MELDH.)	Ⓞ	Ⓞ
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, the predetermined car(s) resume normal operation.	Ⓞ	Ⓞ
Supervisory Panel — Serial communication	WP-S	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

DOOR OPERATION FEATURES

Features	Abbreviation	Description	1C to 2C 2BC	3C to 8C ZAI-2200C		
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.	Ⓢ	Ⓢ		
Door Load Detector	DLD	When excessive door load has been detected while opening or closing, the doors immediately reverse.	Ⓢ	Ⓢ		
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 the AAN-B or AAN-G feature, a beep and voice guidance sound instead of the buzzer.	Ⓢ	Ⓢ		
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.	Ⓢ	Ⓢ		
Electronic Doorman	EDM	Door open time is minimized using the SR or Multi-beam Door Sensor feature that detects passengers boarding or exiting.	Ⓞ	Ⓞ		
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.	Ⓞ	Ⓞ*1		
Hall Motion Sensor ²	HMS	Infrared light is used to scan a 3D area near the open doors to detect passengers or objects. (Cannot be combined with the SNCD feature.) (HMS is not applicable to elevators complying with EN81-20/50:2014 when the door type is 2S.)	Ⓞ	Ⓞ		
Multi-beam Door Sensor ³	-	Multiple infrared-light beams cover some height of the doors to detect passengers or objects as the doors close. (Cannot be combined with the SR feature.)	MITSUBISHI ELECTRIC Standard ⁴ EN81-20/50:2014	Ⓞ	Ⓞ	
				Ⓢ	Ⓢ	
Quick Closing System with Sensor ²	SNCD	When there is no passenger in the elevator hall, the elevator starts closing the doors more quickly to increase operational efficiency. (Cannot be combined with the HMS feature.)	Ⓞ	Ⓞ		
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.	Ⓢ	Ⓢ		
Safety Door Edge	SDE	The sensitive door edge detects passengers or objects during door closing.	Ⓞ	Ⓞ		
Safety Ray ³	1-beam 2-beam	SR	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 feature.)	MITSUBISHI ELECTRIC Standard ⁴ EN81-20/50:2014	Ⓢ	Ⓢ
					-	-
					Ⓞ	Ⓞ

OPERATIONAL AND SERVICE FEATURES

Features	Abbreviation	Description	1C to 2C 2BC	3C to 8C ZAI-2200C
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.	Ⓞ	Ⓞ
Automatic Bypass	ABP	A fully loaded car bypasses hall calls in order to maintain maximum operational efficiency.	1C: Ⓞ 2C: Ⓢ	Ⓢ
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.	Ⓢ	Ⓢ
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.	1C: - 2C: Ⓢ	Ⓢ
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.	Ⓢ	Ⓢ

Ⓢ = Standard, Ⓞ = Optional

Features	Abbreviation	Description	1C to 2C 2BC	3C to 8C ZAI-2200C
OPERATIONAL AND SERVICE FEATURES (Continued from the previous page.)				
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.	Ⓢ	Ⓢ
Continuity of Service	COS	A car which is experiencing trouble is automatically withdrawn from group control operation to maintain overall group performance.	1C: - 2C: Ⓢ	Ⓢ
Elevator and Security System Interface	EL-SCA/ EL-SC	Personal authentication by building's security devices can trigger predetermined elevator operation such as permission of access to private floors, automatic registration of a hall call and a destination floor, and priority service.	Ⓞ*1	Ⓞ*1
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	If a wrong car button is pressed, it can be canceled by quickly pressing the same button again twice.	Ⓢ	Ⓢ
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.	Ⓢ	Ⓢ
Landing Open	LO	Doors start opening right before the car has completely stopped at a floor.	Ⓞ	Ⓞ
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.	Ⓢ	Ⓢ
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 — Manual Switch/Timer	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.	Ⓞ	Ⓞ
Non-service Temporary Release for Car Call — Card Reader Type	NSCR-C	To enhance security, car calls for desired floors can be registered only by placing a card over a card reader. This function is automatically deactivated during emergency operation.	Ⓞ	Ⓞ
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.	Ⓞ	Ⓞ
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.	Ⓞ	Ⓞ
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.	Ⓢ	Ⓢ
Regenerative Converter	PCNV	For energy conservation, power regenerated by a traction machine can be used by other electrical systems in the building.	Ⓞ	Ⓞ
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.	Ⓞ	Ⓞ
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.	Ⓢ	Ⓢ
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.	Ⓞ	Ⓞ

GROUP CONTROL FEATURES

Features	Abbreviation	Description	1C to 2C 2BC	3C to 8C ZAI-2200C
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.	1C: - 2C: Ⓞ*1	Ⓞ
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.	-	Ⓢ
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.)	-	Ⓞ
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.	-	Ⓢ
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.	-	Ⓢ
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.	-	Ⓢ
Destination Oriented Allocation System	DOAS	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 waiting and traveling time.	-	Ⓞ*5
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 for the LTS, UPS feature, etc. is selected or canceled accordingly at the appropriate time.	-	Ⓢ
Down Peak Service	DPS	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.	-	Ⓢ
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.	-	Ⓢ
Elevator Call System with Robot	-	Linking a robot to the sophisticated elevator system allows the robot to call, enter and exit an elevator so as to move freely between floors. (A robot needs to be prepared by customer.) (EL-SCA feature is required for this feature.)	Ⓞ*1	Ⓞ*1
Elevator Call System with Smartphone	ELCS-SP	By accessing a dedicated website with a smartphone, users can change the call setting for their elevator and check the status of the elevator assigned to them. Once inside the secure area, users can call an elevator remotely from anywhere.	-	Ⓞ*1

Ⓢ = Standard, Ⓞ = Optional

Features	Abbreviation	Description	1C to 2C 2BC	3C to 8C ZAI-2200C
GROUP CONTROL FEATURES (Continued from the previous page.)				
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.	-	Ⓢ
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.	-	Ⓞ
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.	-	Ⓢ
Forced Floor Stop	FFS	All cars in a bank automatically make a stop at a predetermined floor on every trip without being called.	Ⓞ	Ⓞ
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.)	-	Ⓞ
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.	Ⓞ	Ⓞ
Main Floor Parking	MFP	An available car always parks on the main (lobby) floor with the doors open (or closed only in China).	Ⓞ	Ⓞ
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 hall call. The rules evaluating psychological waiting time are automatically changed in a timely manner in response to actual service conditions.	-	Ⓢ
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.)	-	Ⓞ
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.)	-	Ⓞ
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.	1C: - 2C: Ⓢ	Ⓢ
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 floor during office 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.	1C: - 2C: Ⓞ*1	Ⓞ

SIGNAL AND DISPLAY FEATURES

Auxiliary Car Operating Panel	ACS	An additional car control panel which can be installed for large-capacity elevators, heavy-traffic elevators, etc.	Ⓞ	Ⓞ	
Basic Announcement	AAN-B	A synthetic voice (and/or buzzer) alerts passengers inside a car that elevator operation has been temporarily interrupted by overloading or a similar cause. (Available in limited languages.)	Ⓞ	Ⓢ	
Car Arrival Chime	AECC (car)	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.)	Ⓞ	-*6	
	AECH (hall)		Ⓞ	Ⓢ	
Car Information Display	CID	This 10.4- or 15-inch LCD for car front return panels shows the date and time, car position, travel direction and elevator status messages. In addition, customized video images can be displayed in full-screen or partial-screen formats.	Ⓞ	Ⓞ	
Car LCD Position Indicator	CID-S	This 5.7-inch LCD for car operating panels shows the date and time, car position, travel direction and elevator status messages.	Ⓞ	Ⓞ	
Flashing Hall Lantern	FHL	A hall lantern, which corresponds to a car's service direction, flashes to indicate that the car will soon arrive.	Ⓞ	Ⓢ	
Hall Information Display	HID	This 10.4- or 15-inch LCD for elevator halls shows the date and time, car position, travel direction and elevator status messages. In addition, customized video images can be displayed in full-screen or partial-screen formats.	Ⓞ	-	
Hall LCD Position Indicator	HID-S	This 5.7-inch LCD for elevator halls shows the date and time, car position, travel direction and elevator status messages.	Ⓞ	-	
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. (Hall lanterns are required for this feature.)	-	Ⓢ	
Intercommunication System	ITP	A system which allows communication between passengers inside a car and the building personnel.	MITSUBISHI ELECTRIC Standard*4	Ⓞ	Ⓞ
			EN81-20/50:2014	Ⓢ	Ⓢ
ITV Camera in Car	ITV	When you install a security camera in a car to improve the building security, we will provide support for installation. (A security camera, video system and recorder need to be prepared by customer.)	Ⓞ	Ⓞ	
Second Car Prediction	TCP	When a hall is crowded to the extent that one car cannot accommodate all waiting passengers, the hall lantern of the next car to serve the hall will light up. (Hall lanterns are required for this feature.)	-	Ⓞ	
Sonic Car Button — Click Type	ACB	A click-type car button which emits electronic beep sounds when pressed to indicate that the call has been registered.	Ⓞ	Ⓞ	
Sonic Hall Button — Click Type	AHC	A click-type hall button which emits electronic beep sounds when pressed to indicate that the call has been registered.	Ⓞ	Ⓞ	
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.	Ⓞ	Ⓞ	

Notes:

- *1: Please consult our local agents for the production terms, etc.
- *2: This feature is not applicable to the environment where the sensors are exposed to direct or reflected sunlight because false detection may occur.
- *3: Please consult our local agent to check whether the feature is applicable to the environment where the sensors are exposed to direct or reflected sunlight.
- *4: MITSUBISHI ELECTRIC Standard is a specification that has been designed according to Mitsubishi Electric's design criteria.
- *5: When the DOAS is applied, AECC is "S" and the Safety Ray (SR) or Multi-beam Door Sensor feature is required.
- *6: The DOAS cannot be combined with some features. Please refer to the ΣAI-2200C brochure for those features.

*6: Standard when DOAS is requested.

Test Performance of Circulation Fan with Plasma Quad™ Optional

Virus reduction

*The same effects or results have not been demonstrated in an actual usage environment or under actual usage conditions.
 Test laboratory: Virus Research Center at National Hospital Organization Sendai Medical Center
 Test method: A virus was sprayed inside a closed 25 m³ space, the air in the test space was collected after a certain amount of time, and the virus concentration in the air was measured using the plaque assay.
 Reduction method: Airborne virus was reduced by passing the air through Circulation Fan with Plasma Quad™.
 Target: Airborne virus
 Test result: Tested with one type of virus. Operating Circulation Fan with Plasma Quad™ reduced the virus by 99% in 408 minutes (Sendai Medical Center No. R1-001).

Deodorization

*The deodorization effect varies depending on the environmental conditions and the intensity of odors. Harmful substances contained in cigarette smoke such as carbon monoxide cannot be removed. Not all constant odors such as odors of building materials and pets can be removed. (Based on in-house research)
 Test method: A 4.4 m³ elevator car was filled with acetaldehyde, the concentration in the air was measured after a certain amount of time, and the time taken to eliminate the odor was calculated.
 Deodorization method: Operating Circulation Fan with Plasma Quad™
 Deodorization substance: Catalyst
 Target: Acetaldehyde (*Measured by photoacoustic gas monitor)
 Test result: Tested with acetaldehyde. Operating Circulation Fan with Plasma Quad™ reduced the odor by 99% in 44 minutes.

Bacteria reduction

*The same effects or results have not been demonstrated in an actual usage environment or under actual usage conditions.
 Test laboratory: Kitasato Research Center for Environmental Science
 Test method: Bacteria was sprayed in a closed 25 m³ space, the air in the test space was collected after a certain amount of time, and the bacteria contamination in the air was measured.
 Reduction method: Airborne bacteria was reduced by passing the air through Circulation Fan with Plasma Quad™.
 Target: Airborne bacteria
 Test result: Tested with one type of bacteria. Operating Circulation Fan with Plasma Quad™ (at high fan speed) equipped with Plasma Quad™ reduced the bacteria by 99% in 388 minutes (Kitasato report 2015 No. 0046).

Pollen reduction

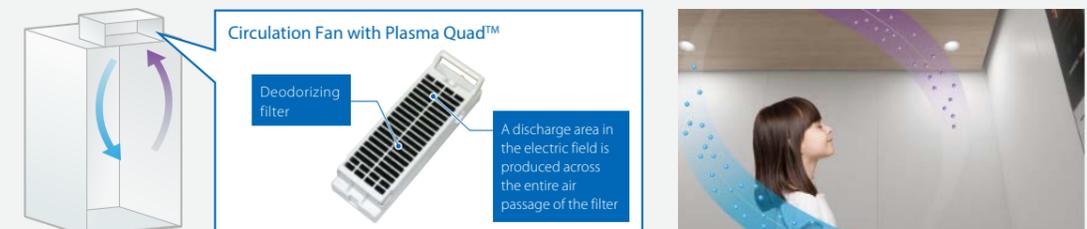
*This is not a result of a test performed in an actual usage environment.
 Test laboratory: Institute of Tokyo Environmental Allergy (ITEA)
 Test method: Allergen contamination in the air was measured using the sandwich enzyme-linked immunosorbent assay.
 Reduction method: Airborne allergens were reduced by passing the air through Circulation Fan with Plasma Quad™.
 Target: Airborne pollen
 Test result: Tested with one type of pollen. Operating Circulation Fan with Plasma Quad™ reduced pollen concentration by 88% (15M-RPTMAY021).

PM 2.5 removal

*This is not an effect obtained in an actual usage environment. It does not take into account additional particles entering from the outside when using a ventilation system. PM 2.5 is a general term for microparticles that are 2.5 μm or smaller. The removal of microparticles less than 0.1 μm by the Circulation Fan has not yet been confirmed. Not all harmful substances in the air can be removed.
 Test method: The test was performed in a closed 27.5 m³ space in accordance with the JEM 1467 standard for household and similar air cleaners (a standard of the Japan Electrical Manufacturers' Association), while operating Circulation Fan with Plasma Quad™ (at high fan speed).
 Removal method: The particles were reduced by passing the air through Circulation Fan with Plasma Quad™.
 Target: PM 2.5
 Test result: Operating Circulation Fan with Plasma Quad™ (air flow: 40 m³/h) removed 99% of the particles in 370 minutes.

Principle of Circulation Fan with Plasma Quad™

A discharge area like an electrical curtain in the electric field is produced across the entire air passage of the filter by applying DC voltage to the ribbon-shaped discharge electrode and counter electrode. When air passes through the discharge area, airborne viruses, bacteria and particles are inactivated and captured.



Important Information on Elevator Planning

Horizontal Dimensions <1-Door 1-Gate & 1-Door 2-Gate>

Code number	Number of persons	Rated speed (m/sec)	Rated Capacity (kg)	Door type	Entrance width (mm) JJ	Counterweight position	dimensions (mm) AAxBB	Minimum hoistway dimensions (mm) AHxBH/car			
								1-Door 1-Gate		1-Door 2-Gate	
								Without fireproof landing door	With fireproof landing door	Without fireproof landing door	With fireproof landing door
P6	6	1.0 1.6 1.75	450	2S	800	Side	1000x1300	1550x1740	1550x1740	Not applicable	Not applicable
P8	8		630	CO	900: Standard		1100x1400	1950x1720	2000x1735	1965x1860	2000x1890
					800: Optional			1800x1720	1820x1735	1865x1860	1885x1890
P11	11		825	CO	900: Standard		1350x1400	2025x1720	2050x1735	2090x1860	2115x1890
					800: Optional			1925x1720	1945x1735	1925x1860	1945x1890
P13	13		1000	CO	900: Standard		1600x1400	1900x1800	1900x1800	1900x2002	1900x2002
					800: Optional			1950x1800	1950x1800	1965x2002	1965x2002
					1100: Optional			2350x1720	2400x1735	2415x1860	2440x1890
					1100: Standard			2150x1720	2175x1735	2150x1860	2175x1890
					900: Optional			2150x1800	2150x1800	2150x2002	2150x2002
					1100			1950x2420	2000x2435	1950x2560	2000x2590
P13	13		1000	CO	900: Standard		1100x2100	1800x2420	1820x2435	1800x2560	1820x2590
		800: Optional			1650x2500	1650x2500		1650x2702	1650x2702		

[Terms of the table]

- This table shows standard specifications without counterweight safety. Please consult our local agents for other specifications.
- CO: 2-panel center opening doors, 2S: 2-panel side opening doors.
- Minimum hoistway dimensions (AH and BH) shown in the table are after waterproofing of the pit and do not include plumb tolerance.

Vertical Dimensions <1-Door 1-Gate & 1-Door 2-Gate>

Rated speed (m/sec)	Travel (m) TR	Maximum number of floors	Minimum overhead (mm) OH ¹⁾		Minimum pit depth (mm) PD ¹⁾	Minimum floor to floor height (mm)
			MITSUBISHI ELECTRIC Standard ²⁾	EN81-20/50:2014		
1.0	TR ≤ 30	22	3650	3750	1300	MITSUBISHI ELECTRIC Standard: 2500 EN81-20/50:2014: 2600
	30 < TR ≤ 60		3700	3800	1300	
1.6	TR ≤ 30	30	3800 [3650]	3850 [3700]	1400 [1300]	
	30 < TR ≤ 60		3850 [3700]	3900 [3750]	1500 [1300]	
	60 < TR ≤ 80		3850 [3700]	3900 [3750]	1550 [1300]	
	80 < TR ≤ 105 ³⁾		3900 [3750]	3950 [3800]	1550 [1300]	
1.75	TR ≤ 30	30	3850 [3650]	3950 [3700]	1450 [1300]	
	30 < TR ≤ 60		3900 [3700]	4000 [3750]	1550 [1300]	
	60 < TR ≤ 80		3900 [3700]	4000 [3750]	1600 [1300]	
	80 < TR ≤ 105 ³⁾		3950 [3750]	4050 [3800]	1600 [1300]	

[Terms of the table]

- This table shows standard specifications without counterweight safety. Please consult our local agents for other specifications.
- Some specifications require a minimum floor height of more than 2500mm (MITSUBISHI ELECTRIC Standard) or 2600mm (EN81-20/50:2014). Please consult our local agents if the floor height is less than entrance height HH + 700mm, and the elevator is 1-Door 2-Gate.

Notes:

*1: Overhead dimensions of elevators equipped with the Smooth Emergency Terminal Slowdown (SETS) feature [Optional] are given in parentheses. Please consult our local agents for details.

*2: MITSUBISHI ELECTRIC Standard is a specification that has been designed according to Mitsubishi Electric's design criteria. The car size is designed to comply with ISO 8100-30: 2019.

*3: P11 and P13 only.

Work Not Included in Elevator Contract

The following items are excluded from Mitsubishi Electric's elevator installation work. Their conditions and other details are to be conformed to the statement of EN81-20/50:2014, local laws or Mitsubishi Electric elevator's requirements on the responsibility of the building owner or general contractor.

- Architectural finishing of walls and floors in the vicinity of the entrance hall after installation has been completed.
- Construction of an illuminated, ventilated and waterproofed hoistway.
- The provision of openings and supporting members as required for equipment installation.
- The provision of separate beams when the hoistway dimensions markedly exceed the specifications, and intermediate beams and separator partitions when two or more elevators are installed.
- The provision of an emergency exit door, inspection door and pit access door, when required, and access to the doors.
- All other work related to building construction.
- The provision of the main power and power for illumination in the hoistway by laying of the feeder wiring from the electrical switch boxes in electrical room into the hoistway.
- The provision of outlets and laying of the wiring in the hoistway, plus the power from the electrical switch box.
- The laying of conduits and wiring between the elevator pit and the terminating point for the devices installed outside the hoistway, such as the emergency bell, intercom, monitoring and security devices.
- 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.

Note: Work responsibilities in installation and construction shall be determined according to local laws.

Elevator Site Requirements

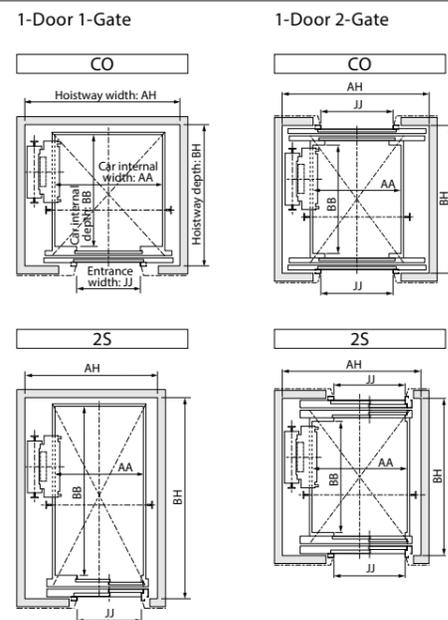
- The temperature of the elevator hoistway shall be below 40°C.
- The following conditions are required for maintaining elevator performance.
 - The relative humidity shall be below 90% on a monthly average and below 95% on a daily average.
 - Prevention against icing and condensation occurring due to a rapid drop in the temperature shall be provided in the elevator hoistway.
 - 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

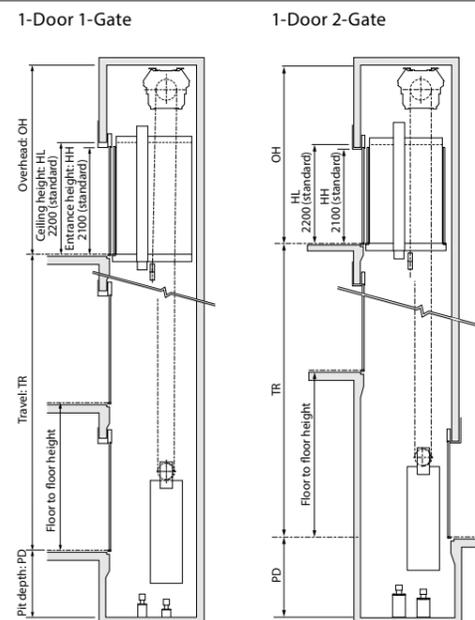
Please include the following information when ordering or requesting estimates:

- 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.

Hoistway Plan



Elevation





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.

ISO9001/14001 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 plant has also acquired environmental management system standard ISO 14001 certification.



MITSUBISHI ELECTRIC CORPORATION

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www.MitsubishiElectric.com/elevator

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



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Specifications are subject to change without notice.

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