MITSUBISHI ELECTRIC
Changes for the Better

Quality in Motion™

PASSENGER ELEVATORS
MACHINE-ROOM-LESS SYSTEM

NEXIEZ-MRL

Utilizing its technological prowess and extensive experience, we have 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.

Our 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, we promise 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.

* Quality in Motion is a trademark of Mitsubishi Electric Corporation.

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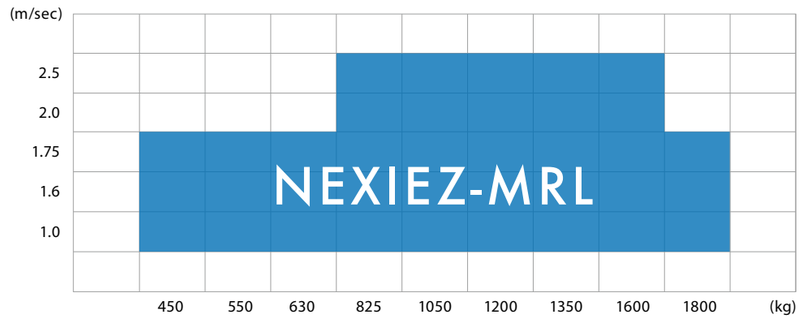
Application



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 our products. Regardless of the use or purpose, the NEXIEZ is a best match solution for virtually any elevator installation.

Ecology

Using Energy Wisely

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

Milestones of Energy-saving Technologies in Elevator Development

	1970	1980	1990	2000	2010
Motor	Induction motor			Permanent magnet motor	
Traction machine	Worm geared			Gearless	
Motor drive	AC2 control	ACVV*1 control	VVVF*2 control		
Control circuit	Relay	Microcomputer			
Power consumption / CO_2 emissions*3	100%	93%	74%	37%	30%

Approx.
–70%

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.**

Reusing Energy

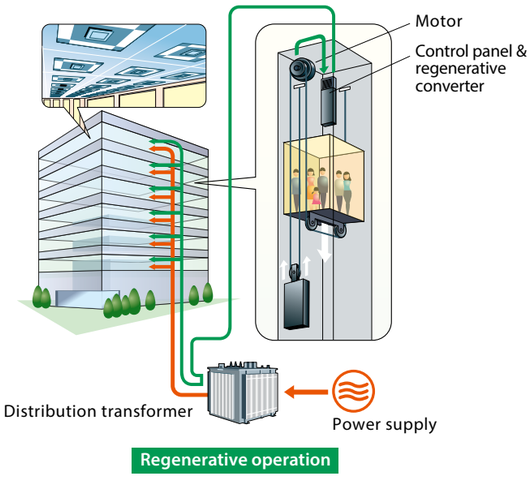
Regenerative Converter: PCNV (Optional)

Elevators usually travel using power from a power supply (powered operation); however, when they travel down with a heavy car load or up with a light car load (regenerative operation), the traction machine functions as a power generator.
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 approximately 35%.*

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

Note:
***The value is a reference datum and may increase or decrease in accordance with actual conditions of use and elevator specifications.**

Energy-saving effects: Approximately 35%.*



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: N300


Ceiling: CDM1


Ceiling: CDM2

Maximizing Operational Efficiency and Minimizing Energy Consumption

Energy-saving Operation – Allocation Control: ESO-W (ΣAI-2200C only)

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

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

Efficiency

Allocating Passengers to Cars Depending on Destination Floors

Destination Oriented Allocation System: DOAS (Optional for ΣAI-2200C)

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 time.

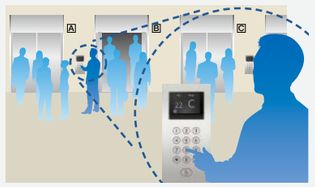
Advantages of DOAS at Hall

Without DOAS

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

With DOAS

When passengers enter a destination floor at a hall, the hall operating panel indicates which elevator to take. As passengers proceed to the assigned elevator, the car is on its way and there is no hurry when the car arrives.

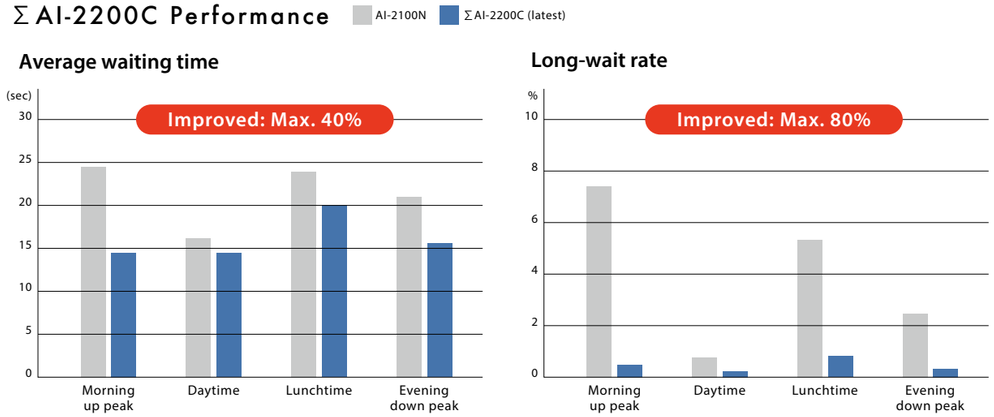


Please refer to the ΣAI-2200C brochure for details.

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.

ΣAI-2200C Performance

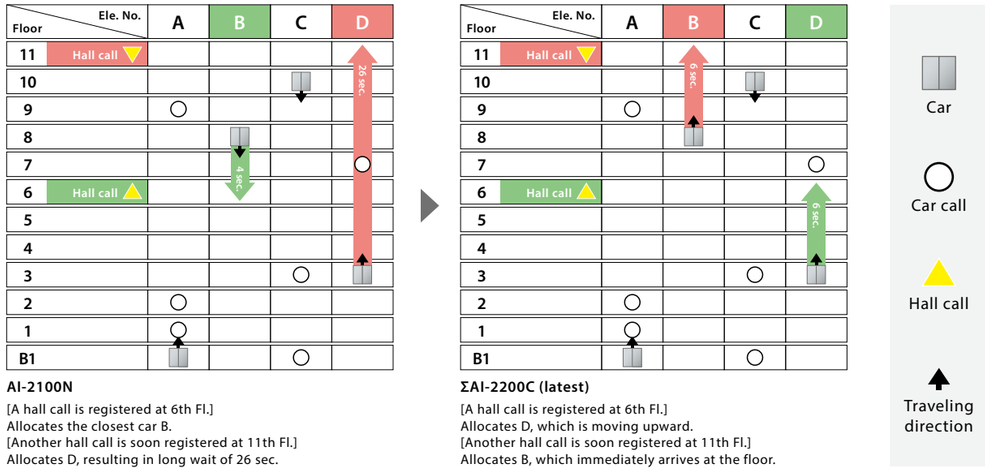


Note: Simulated with 6 cars, 20 persons each at 2.5m/sec for 15 stops.

Forecasting a Near-future Hall Call to Reduce Long Waits

Cooperative Optimization Assignment (ΣAI-2200C)

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 (latest)

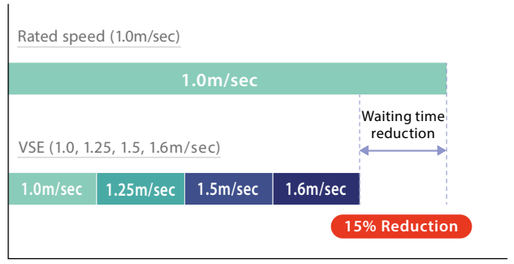
[A hall call is registered at 6th Fl.]
Allocates D, which is moving upward.
[Another hall call is soon registered at 11th Fl.]
Allocates B, which immediately arrives at the floor.

Efficiency

Variable Traveling Speed Elevator System: VSE (Optional)

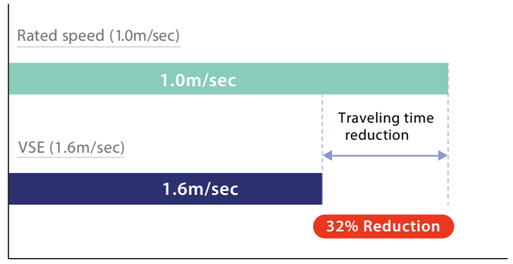
With our industry-first variable traveling speed elevator system, an elevator can travel faster than its rated speed according to the number of passengers, ultimately reducing waiting and traveling time.

Waiting Time Reduction



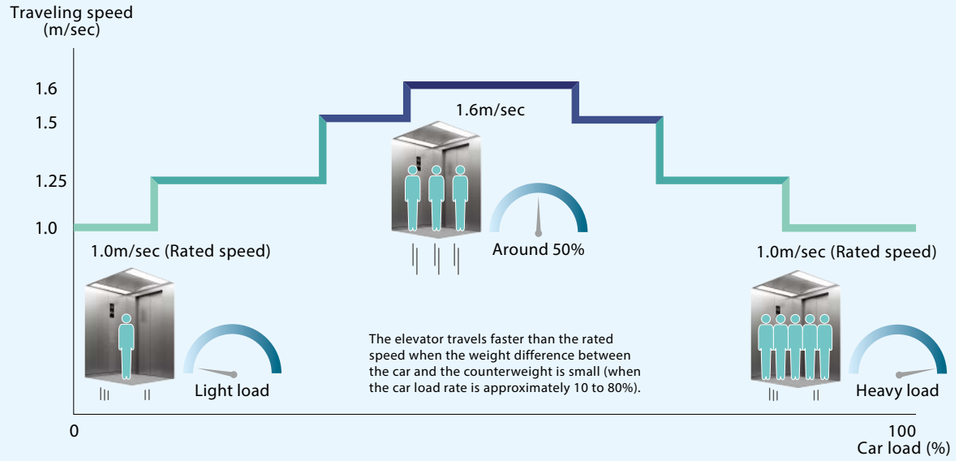
According to our simulation, waiting time can be reduced up to approximately 15% when VSE is applied.

Traveling Time 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

		Car load						
		0%			50%			100%
Rated speed	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.]

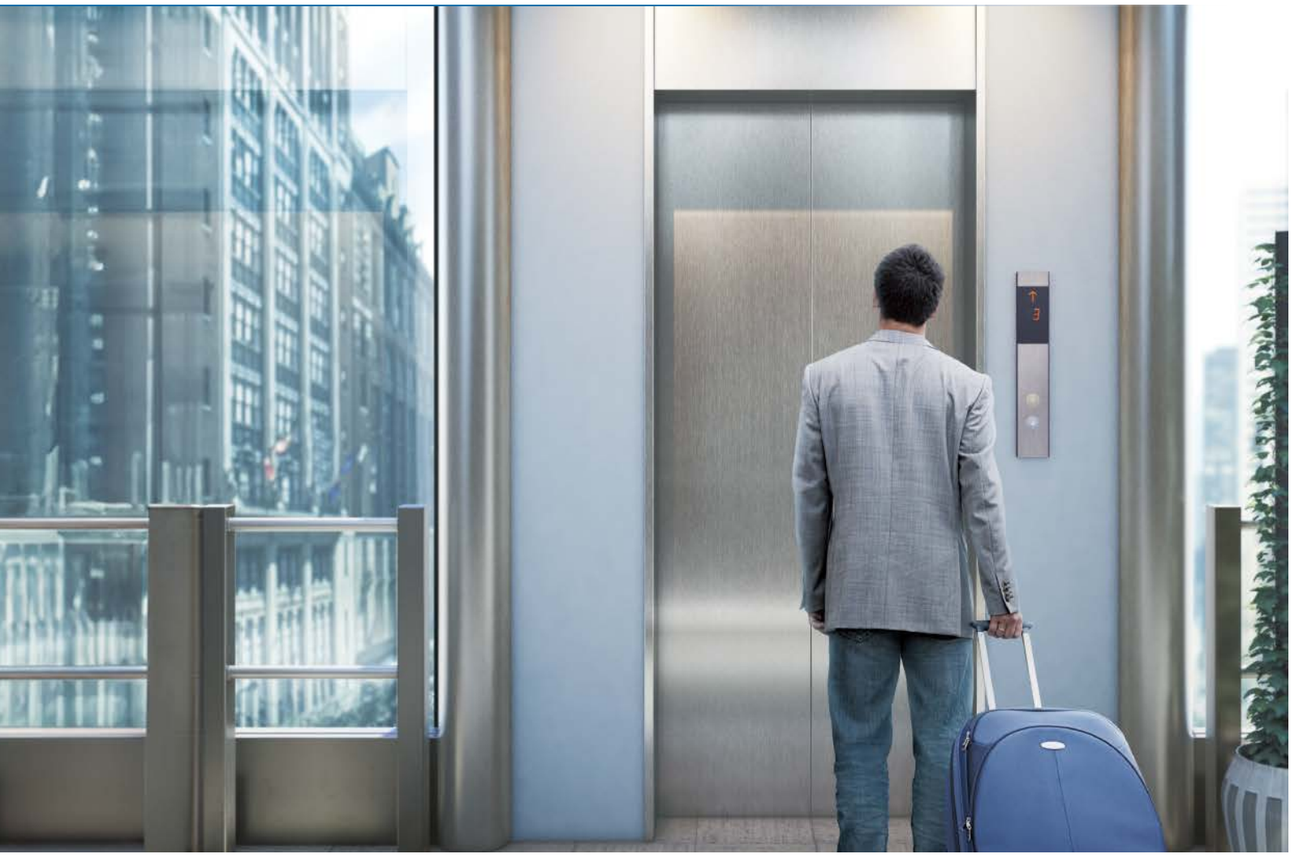
Note: The Variable Traveling Speed Elevator System is applicable to elevators with a rated speed of 1.0m/sec.

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 hoistway. Architects and interior designers have more design freedom.

Safety



For Safe Boarding

Multi-beam Door Sensor

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

Emergency Situations

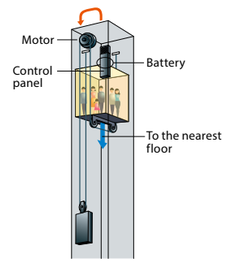
Emergency Operations

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

Power failure

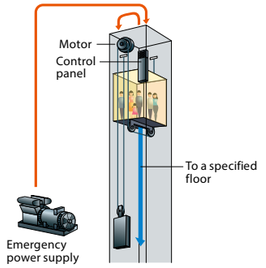
Mitsubishi Emergency Landing Device: MELD (Optional)

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: OEPS (Optional)

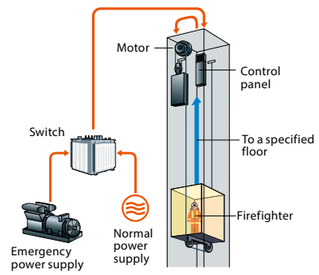
Upon power failure, predetermined cars use a building's emergency power supply to move to a specified floor and open the doors for passengers to evacuate. After all cars have arrived, predetermined cars resume normal operation.



Fire

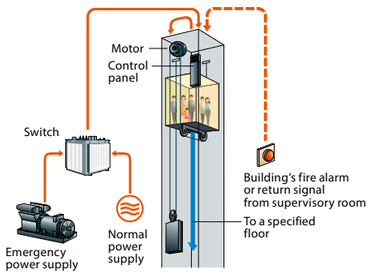
Firefighters' Emergency Operation: FE (Optional)

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)

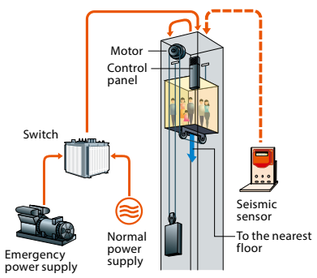
When a key switch or a building's fire alarm is activated, all cars immediately return to a specified floor and open the doors to facilitate the safe evacuation of passengers.



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.



Design Example

Car

Car design example

Ceiling —— N300 **Standard**
Walls —— Hairline stainless-steel [Rose gold]
Transom panel —— Mirror stainless-steel
Doors —— Mirror stainless-steel
Front return panels —— Mirror stainless-steel
Car operating panel —— CBV56-D940
Kickplate —— Hairline stainless-steel
Flooring —— Marble (supplied by customer)

Car operating panel

CB■-D910

Hall

Hall design example

Jamb —— Painted steel sheet [C101]
Doors —— Painted steel sheet [C101]
Hall position indicators and buttons — PIV53-C730

Narrow jamb:
E-102 **Standard**

Hall buttons

HB■-A610
Boxless

HB■-C610

Features (1/2)

Feature	Abbreviation	Description	1C to 2C 2BC	2C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ EMERGENCY OPERATIONS AND FEATURES					
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.	Ⓞ	Ⓞ	Ⓞ
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 fire-fighting 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	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.)	Ⓞ	Ⓞ	Ⓞ
Operation by Emergency Power Source	OEPS	Upon power failure, predetermined cars 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 cars resume normal operation.	Ⓞ	Ⓞ	Ⓞ
■ DOOR OPERATION FEATURES					
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.	—	—	Ⓢ
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.	Ⓞ	Ⓞ	—
Multi-beam Door Sensor	—	Multiple infrared-light beams cover some height of the doors to detect passengers or objects as the doors close.	Ⓢ	Ⓢ	Ⓢ
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.	Ⓞ	Ⓞ	Ⓞ

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

Features (2/2)

Feature	Abbreviation	Description	1C to 2C 2BC	2C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ OPERATIONAL AND SERVICE FEATURES					
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.	Ⓢ#2	Ⓢ	Ⓢ
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.	Ⓢ†	Ⓢ	Ⓢ
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.	Ⓢ	Ⓢ	Ⓢ
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.	Ⓢ†	Ⓢ	Ⓢ
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.	ⓞ	ⓞ	ⓞ
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.	Ⓢ	Ⓢ	Ⓢ
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 — 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	For maintenance or energy-saving measures, a car can be taken out of service temporarily with a key switch 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.	ⓞ	ⓞ	ⓞ
Variable Traveling Speed Elevator System	VSE	According to the number of passengers in the car, the car travels faster than the rated speed.	ⓞ	ⓞ	ⓞ
■ GROUP CONTROL FEATURES					
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.	—	ⓞ	ⓞ
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	ⓞ
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.	—	ⓞ	ⓞ

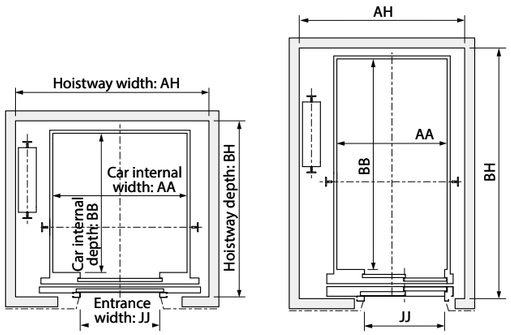
Feature	Abbreviation	Description	1C to 2C 2BC	2C to 4C ΣAI-22	3C to 8C ΣAI-2200C
Destination Oriented Allocation System	DOAS	When a passenger enters a destination floor at a hall, the hall operating panel indicates which car will serve the floor. The passenger does not need to press a button in the car. Dispersing passengers by destination prevents congestion in the cars and minimizes waiting and traveling time.	—	—	ⓞ#3
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.	—	ⓞ	Ⓢ
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.	—	—	Ⓢ
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.)	—	ⓞ#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.	ⓞ	ⓞ	ⓞ
Main Floor Parking	MFP	An available car always parks on the main (lobby) floor with the doors open.	ⓞ	ⓞ	ⓞ
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	ⓞ
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	ⓞ
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.	—	ⓞ	ⓞ
■ 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.)	ⓞ	ⓞ	Ⓢ#4
	AECH (hall)		ⓞ	ⓞ	ⓞ
Car Information Display	CID	This 10- or 15-inch LCD for car front return panels shows the date and time, car position, travel direction and elevator status messages. * Please consult our local agents if you would like to display a video or a slideshow of still images on the screen.	ⓞ	ⓞ	ⓞ
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- or 15-inch LCD for elevator halls shows the date and time, car position, travel direction and elevator status messages. * Please consult our local agents if you would like to display a video or a slideshow of still images on the screen.	ⓞ	ⓞ	ⓞ#1
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.	ⓞ	ⓞ	ⓞ#1
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.	—	ⓞ	ⓞ
Intercommunication System	ITP	A system which allows communication between passengers inside a car and the building personnel.	Ⓢ	Ⓢ	Ⓢ
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.	—	—	ⓞ
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.	ⓞ	ⓞ	ⓞ
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: 1C-2BC (1-car selective collective) - Standard, 2C-2BC (2-car group control system) - Optional
ΣAI-22 (2- to 4-car group control system) - Optional, ΣAI-2200C (3- to 8-car group control system) - Optional
Ⓢ= Standard ⓞ= Optional †= Not applicable to 1C-2BC —= Not applicable
#1: Please consult our local agents for the production terms, etc. #2: Optional when the operation system is 1C-2BC.
#3: The DOAS cannot be combined with some features. Please consult our local agents for details.
#4: When DOAS is applied, AECC is ⓞ. (No chime is the standard)

Basic Specifications

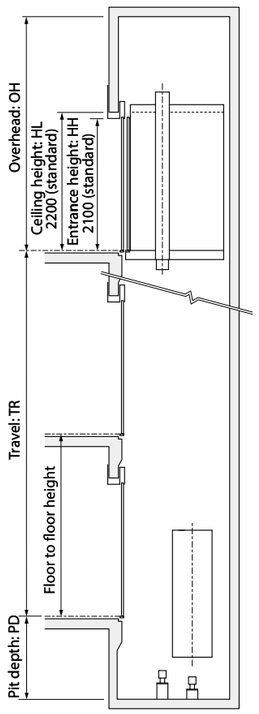
1-Door 1-Gate

Hoistway Plan



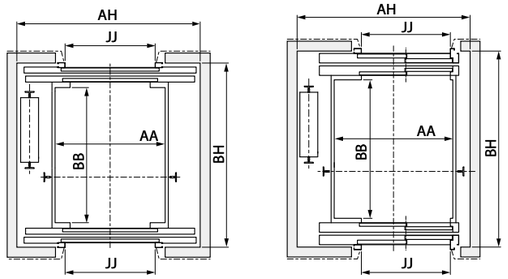
CO 2S

Elevation



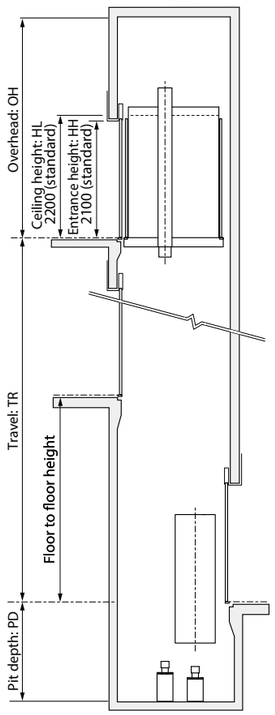
1-Door 2-Gate

Hoistway Plan



CO 2S

Elevation



Horizontal Dimensions <1-Gate>

Code number	Number of persons	Rated speed (m/sec)	Rated capacity (kg)	Door type	Entrance width (mm) JJ	Counter-weight position	Car internal dimensions (mm) AA x BB	Minimum hoistway dimensions (mm) AH x BH/car	
								Rated speed (m/sec)	
								1.0 , 1.6 , 1.75	2.0 , 2.5
P6W	6	1.0 1.6 1.75	450	CO	800	Side	1000 x 1200	1750 x 1655	
				2S	800		1000 x 1200	1550 x 1690	
P6D	6		450	2S	800		950 x 1300	1500 x 1690	
P7	7		550	CO	800		1100 x 1300	1800 x 1655	
				2S	800/900		1100 x 1300	1650 x 1690	
P8	8		630	CO	800		1100 x 1400	1800 x 1720	
					900		1100 x 1400	1950 x 1720	
P11	11	1.0 1.6 1.75 2.0 2.5	825	CO	800		1350 x 1400	1925 x 1720	2010 x 1720
					900		1350 x 1400	2025 x 1720	2050 x 1720
P13	13		1000	CO	900		1600 x 1400	2150 x 1720	2260 x 1720
					1100		1600 x 1400	2350 x 1720	2400 x 1720
P14D	14		1050	CO	800		1100 x 2100	1800 x 2420	1825 x 2420
					900		1100 x 2100	1950 x 2420	2000 x 2420
				2S	800/900		1100 x 2100	1650 x 2500	1760 x 2500
P16W	16		1200	CO	1100		1800 x 1500	2605 x 1980	2735 x 1980
P18W	18		1350	CO	1100		2000 x 1500	2805 x 1980	2935 x 1980
P21W	21		1600	CO	1100		2000 x 1700	2805 x 2035	2935 x 2035
P21D	21		1600	CO	1100		1400 x 2400	2400 x 2735	2400 x 2735
				2S	1200		1400 x 2400	2215 x 2772	2345 x 2772
P24W	24	1.0 1.6 1.75	1800	CO	1100		2100 x 1800	3035 x 2135	
P24D	24		1800	CO	1100		1500 x 2500	2450 x 2835	
				2S	1200		1500 x 2500	2435 x 2872	

Horizontal Dimensions <2-Gate>

Code number	Number of persons	Rated speed (m/sec)	Rated capacity (kg)	Door type	Entrance width (mm) JJ	Counter-weight position	Car internal dimensions (mm) AA x BB	Minimum hoistway dimensions (mm) AH x BH/car	
								Rated speed (m/sec)	
								1.0 , 1.6 , 1.75	2.0 , 2.5
P8	8	1.0, 1.6, 1.75	630	CO	800	Side	1100 x 1400	1865 x 1860	
					900		1100 x 1400	1965 x 1860	
P11	11	1.0 1.6 1.75 2.0 2.5	825	CO	800		1350 x 1400	1925 x 1860	2010 x 1860
					900		1350 x 1400	2090 x 1860	2115 x 1860
P13	13		1000	CO	900		1600 x 1400	2150 x 1860	2260 x 1860
					1100		1600 x 1400	2415 x 1860	2440 x 1860
P14D	14		1050	CO	800		1100 x 2100	1800 x 2560	1825 x 2560
					900		1100 x 2100	1950 x 2560	2000 x 2560
				2S	800/900		1100 x 2100	1650 x 2684	1760 x 2684
P21D	21		1600	CO	1100		1400 x 2400	2400 x 2910	2400 x 2910
				2S	1200		1400 x 2400	2215 x 2984	2345 x 2984
P24D	24	1.0, 1.6, 1.75	1800	CO	1100		1500 x 2500	2450 x 3010	
				2S	1200		1500 x 2500	2435 x 3084	

[Terms of the table]

- This table shows standard specifications without the counterweight safety and fireproof landing door. 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-Gate & 2-Gate>

Rated speed (m/sec)	Travel (m) TR	Minimum overhead (mm) OH*1				Minimum pit depth (mm) PD*1		Minimum floor to floor height (mm)*3
		Mitsubishi Electric standard*2		EN81-20/50		Mitsubishi Electric standard*2 EN81-20/50		
		Cap. ≤ 1050 kg	Cap. > 1050 kg	Cap. ≤ 1050 kg	Cap. > 1050 kg	Cap. ≤ 1050 kg	Cap. > 1050 kg	
1.0	TR≤30	3750	3850	3750	4150	1300	1450	HH+700
	TR≤60	3750	3950	3750	4250	1350		
1.6	TR≤30	3900 (3750)	4050 (3850)	3900 (3750)	4350 (4150)	1500 (1300)	1560 (1450)	
	TR≤60	3950 (3750)	4100 (3950)	3950 (3750)	4400 (4250)	1550 (1350)		
	TR≤80	4000 (3800)	4150 (4000)	4000 (3800)	4450 (4300)	1600 (1400)		
	TR≤105	4050 (3900)	4170 (4000)	4050 (3900)	4470 (4300)	1650 (1400)		
1.75	TR≤30	3950 (3750)	4100 (3850)	3950 (3750)	4400 (4150)	1550 (1300)	1590 (1450)	
	TR≤60	4000 (3750)	4150 (3950)	4000 (3750)	4450 (4250)	1600 (1350)		
	TR≤80	4050 (3800)	4200 (4000)	4050 (3800)	4500 (4300)	1650 (1400)		
	TR≤105	4100 (3900)	4220 (4000)	4100 (3900)	4520 (4300)	1750 (1400)		
2.0	TR≤30	4050 (3900)	4200 (4050)	4450 (4300)	4500 (4350)	1700 (1450)	1750 (1560)	
	TR≤60	4100 (3950)	4250 (4100)	4500 (4350)	4550 (4400)	1800 (1550)		
	TR≤80	4150 (4000)	4300 (4150)	4550 (4400)	4600 (4450)	1850 (1600)		
	TR≤105	4200 (4050)	4320 (4170)	4600 (4450)	4620 (4470)	1900 (1650)		
2.5	TR≤30	4250 (3950)	4400 (4100)	4650 (4350)	4700 (4400)	2050 (1500)	2100 (1590)	
	TR≤60	4300 (4000)	4470 (4150)	4700 (4400)	4770 (4450)	2150 (1600)		
	TR≤80	4350 (4050)	4510 (4200)	4750 (4450)	4810 (4500)	2200 (1650)		
	TR≤105	4450 (4100)	4550 (4220)	4850 (4500)	4850 (4520)	2250 (1750)		

Vertical Dimensions <1-Gate & 2-Gate>
(for Variable Traveling Speed Elevator System) [Optional]

Rated speed (m/sec)	Speeds (m/sec)	Travel (m) TR	Minimum overhead (mm) OH*1				Minimum pit depth (mm) PD*1		Minimum floor to floor height (mm)*3
			Mitsubishi Electric standard*2		EN81-20/50		Mitsubishi Electric standard*2 EN81-20/50		
			Cap. ≤ 1050 kg	Cap. > 1050 kg	Cap. ≤ 1050 kg	Cap. > 1050 kg	Cap. ≤ 1050 kg	Cap. > 1050 kg	
1.0	1.0/1.25/ 1.5/1.6	TR≤30	3900 (3750)	4050 (3850)	3900 (3750)	4350 (4150)	1500 (1300)	1560 (1450)	HH+700
		TR≤60	3950 (3750)	4100 (3950)	3950 (3750)	4400 (4250)	1550 (1350)		

[Terms of the table]

- This table shows standard specifications without the counterweight safety and fireproof landing door. 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.

*1 : The 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 our design criteria.
*3 : If the minimum floor height is insufficient, please consult our local agents.

Work Not Included in Elevator Contract

The following items are excluded from our elevator installation work. Their conditions and other details are to be conformed to the statement of local laws or our 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 a ladder to the elevator pit.**
- **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 our 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.**
  - **a. The relative humidity shall be below 90% on a monthly average and below 95% on a daily average.**
  - **b. Prevention shall be provided against icing and condensation occurring due to a rapid drop in the temperature in the elevator hoistway.**
  - **c. 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.**

State-of-the-Art Factories…
For the Environment. For Product Quality.

Our elevators and escalators are currently operating in approximately 90 countries around the globe. Built placing priority on safety, our elevators, escalators and building system products are renowned for their excellent efficiency, energy savings and comfort.
The technologies and skills cultivated at the Inazawa Building Systems Works in Japan and 12 global manufacturing factories are utilized in a worldwide network that provides sales, installation and maintenance in support of maintaining and improving product quality.
As a means of contributing to the realization of a sustainable society, we consciously consider the environment in business operations, proactively work to realize a low-carbon, recycling-based society, and promote the preservation of biodiversity.

Certification

> This product is manufactured by Mitsubishi Electric Shanghai Elevator Co., Ltd. The plant 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 and occupational health and safety management system standard ISO 45001 certification.

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ISO 45001
UKAS MANAGEMENT SYSTEMS
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https://www.MEBS.com/

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

EN MS

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Specifications are subject to change without notice.

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