MITSUBISHI ELECTRIC

Changes for the Better

Quality in Motion™

PASSENGER ELEVATORS
(HIGH-SPEED CUSTOM-TYPE)

NexWay

Premium Elevators Custom-designed to Match Your Needs

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.

Our high-speed elevators are designed to keep pace with the vertical growth of cities as buildings soar to ever greater heights. Our premium elevators guarantee high levels of passenger safety and comfort, and can be customized for diverse applications including office buildings, hotels and shopping centers. We can tailor specifications to meet your exact needs and add a distinctive touch that sets your building apart from the rest.

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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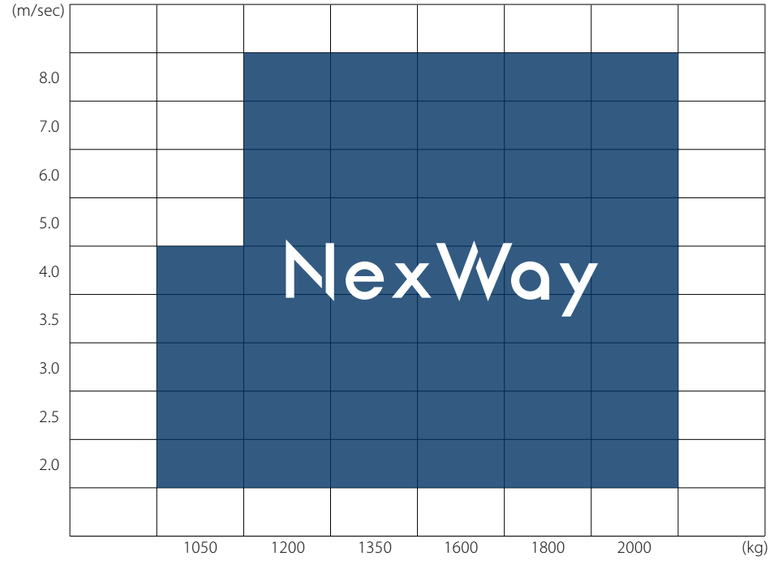
Application



Speed

Traction Machine with PM Motor

(PM motor: permanent magnet motor)

The joint-lapped core built into the PM motor of the traction machine features flexible joints. The iron core acts like a hinge, which allows coils to be wound around the core more densely, resulting in improved motor efficiency and compactness. A high-density magnetic field is produced, enabling lower use of energy and resources and reduced CO_2 emissions.

Super High-rise Rope Mechanics

Our new sfleX-rope® is comprised of bundles of high-intensity steel wire strands, each covered with plastic, offering higher intensity than conventional rope for safe operation despite the greater weight of longer ropes. Each wire has a higher density and wider cross-sectional area than conventional rope, which helps to reduce rope stretching caused when passengers step into the elevator.

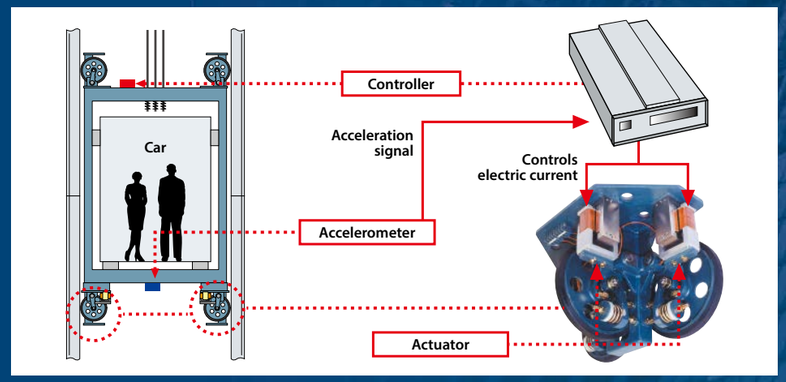
The sfleX-rope® is a registered trademark of Mitsubishi Electric Corporation.

Comfort

Active Roller Guide (Optional*)

The amount of lateral vibration generated by high-speed elevator cars can be tremendous. As a world's first innovation in the industry, our Active Roller Guide technology reduces this vibration by approximately 50%.

It works via an accelerometer that detects car vibration during operation, along with actuators that cancel the vibration through a controlled electromagnetic force. Our Active Roller Guides ensure a more comfortable ride than elevators employing conventional roller guides.



* Please consult our local agents for details.

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	DC motor		Induction motor	Permanent magnet motor	
Traction machine	Gearless		Helical-geared	Gearless	
Motor drive	Ward Leonard system	Thyristor control	VVVF*1 control		
Control circuit	Relay		Microcomputer		
Power consumption / CO_2 emissions*2	100%	95%	72%	62%	57%	54%

*1: Variable Voltage, Variable Frequency

*2: CO_2 emissions in this table are from elevator operation and do not include emissions from manufacturing, transportation and other processes.

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.

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.

Safety

Emergency Situations

Emergency Operations

Enhance safety by adding emergency operation features which quickly respond to a power failure, fire or earthquake.
(Please refer to page 23 for details.)

Power failure	**Mitsubishi Emergency Landing Device: MELD (Optional)** Upon power failure, the 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 the building's emergency power supply to move to a specified floor and open the doors for passengers to evacuate. After all cars have arrived, the predetermined cars will resume normal operation.
Fire	**Fire Emergency Return: FER (Optional)** When a key switch or the building's fire sensor is activated, all cars immediately return to a specified floor and open the doors to facilitate the safe evacuation of passengers. **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 facilitates firefighting and rescue operations.
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.

For Safe Boarding

Multi-beam Door Sensor

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

Efficiency

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

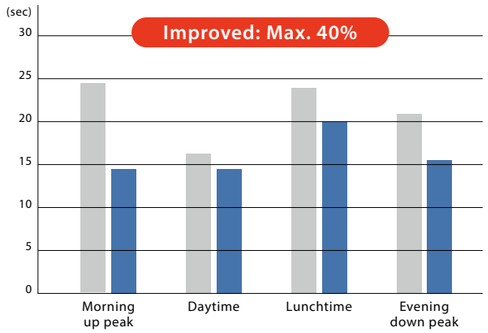
ΣAI-22 and ΣAI-2200C control multiple elevators optimally according to the building size.

Group control systems	Suitable building size	Number of cars in a group
ΣAI-22 system	Small to medium	3 to 4
ΣAI-2200C system	Large (especially buildings with dynamic traffic conditions)	3 to 8

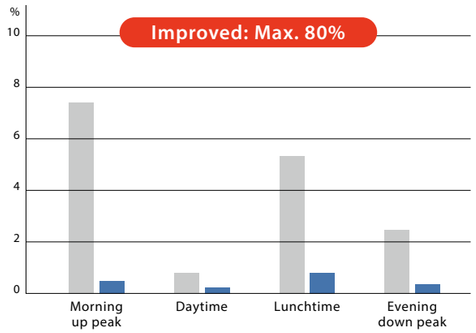
Performance

AI-2100N ΣAI-2200C (latest)

Average waiting time



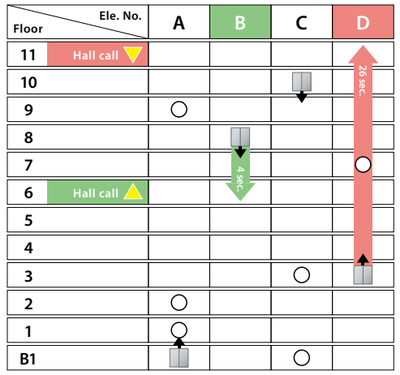
Long-wait rate (60 seconds or longer)



Cooperative Optimization Assignment (ΣAI-2200C)

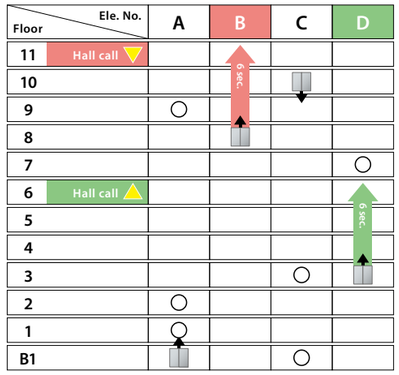
Forecasts a near-future hall call to reduce long waits

When a hall call is registered, the algorithm predicts 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)

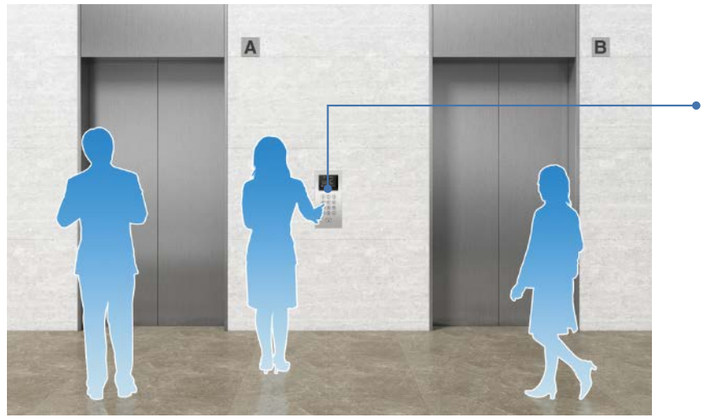
[A hall call is registered at 6th Fl.]
Allocates D, which is moving upward.
[Another hall call is soon registered at 11th Fl.]
Allocates B, which immediately arrives at the floor.

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

Allocating Passengers to Cars Depending on Destination Floors

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 waiting and traveling time.
(Car destination floor indicator can be installed on the car operating panel as an option to display which floors the car stops at.)

Example of hall arrangement



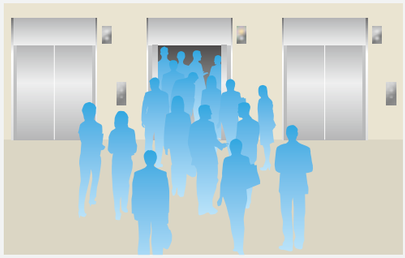
(The elevator number plates are to be supplied by customer, and hall lanterns are available as options.)

Hall operating panel
When a passenger enters a destination floor number, the elevator number assigned to the destination is displayed.

Advantages of DOAS at Hall

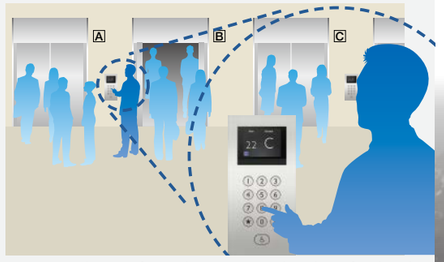
Without DOAS

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.

Car Designs LED

Ceiling	CDM1
Walls	Hairline stainless-steel [Champagne gold]
Transom panel	Mirror stainless-steel
Doors	Hairline stainless-steel
Front return panels	Mirror stainless-steel
Car operating panel	CBV56-D940
Kickplate	Hairline stainless-steel
Flooring	Marble (supplied by customer)

Ceiling	CDM2
Walls	Hairline stainless-steel [Gold]
Transom panel	Mirror stainless-steel
Doors	Hairline stainless-steel with etched pattern [Gold]
Front return panels	Mirror stainless-steel
Car operating panel	CBN12-C940
Kickplate	Aluminum
Flooring	Marble (supplied by customer)

Ceiling	CDM5
Walls	Sandblasted stainless-steel
Transom panel	Sandblasted stainless-steel
Doors	Sandblasted stainless-steel
Front return panels	Sandblasted stainless-steel
Car operating panel	CBV56-D950E
Kickplate	Aluminum
Flooring	Marble (supplied by customer)
Handrail	YH-100SL

Ceiling	CDL4
Walls	Hairline stainless-steel [Black]
Transom panel	Mirror stainless-steel
Doors	Mirror stainless-steel
Front return panels	Mirror stainless-steel
Car operating panel	CBV56-D950E
Kickplate	Aluminum
Flooring	Marble (supplied by customer)
Handrail	YH-100SL

Ceiling	CDM3
Walls	Hairline stainless-steel
Transom panel	Mirror stainless-steel
Doors	Mirror stainless-steel
Front return panels	Mirror stainless-steel
Car operating panel	CBV52-N910
Kickplate	Aluminum
Flooring	Durable vinyl tiles (TMB1)

Ceiling	CDM4
Walls	Vibration stainless-steel [Bronze]
Transom panel	Mirror stainless-steel
Doors	Mirror stainless-steel
Front return panels	Mirror stainless-steel
Car operating panel	CBV52-D910
Kickplate	Aluminum
Flooring	Durable vinyl tiles (TM02)

Ceiling	N300 **Standard** , N300S
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)

Ceiling	CD0
Walls	Hairline stainless-steel
Transom panel	Hairline stainless-steel
Doors	Hairline stainless-steel
Front return panels	Hairline stainless-steel
Car operating panel	CBN14-C910
Kickplate	Painted steel sheet
Flooring	Durable vinyl tiles (TM04)

Car Operating Panels

For front return panel (Swing type)

CB■-D910 **Standard**

CB■-D940E

CB■-D950E

CB■-D960E

For front return panel

CB■-C910

CB■-C940

For side wall

CB■-N910

CB■-N940

Wheelchair type

CB■-F510

Hall Signal Fixtures

Hall position indicators and buttons

PIV■-C730

Hall buttons

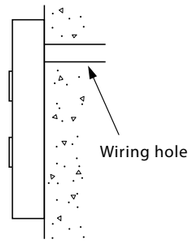
HB■-A610
Boxless

HB■-C610

Cross-section of surface-mount fixtures

Boxless

These hall signal fixtures can be easily mounted on the wall surface without cutting into the wall to embed the back box.



Hall operating panels for DOAS

HSVF-C262
Keypad type

HSP-C13
(10-inch touchscreen)
Embedded type

HSP-A21
(10-inch touchscreen)
Surface mounted type

HSVF-C282
Keypad type

HSP-C18
(10-inch touchscreen with card reader [supplied by local])
Embedded type

HSP-A26
(10-inch touchscreen with card reader [supplied by local])
Surface mounted type

Hall lanterns

HLF-SH20

HLF-SH10
Boxless

HLV-SH50
Boxless

HLV-SH60
Boxless

HLF-A10 (Flag type)
Boxless

Hall position indicators

PIH-D410
LED dot indicator

PID-D410 (built into transom panel)
LED dot indicator

LCD information displays

PIH-C130 (8.4-inch)

PIH-C213 (10-inch)

PIH-C223 (15-inch)

Buttons

Circle buttons

Type	Lighting color
V52	Orange
V54	White
V56	Blue

Standard

Type	Lighting color
V51	Orange
V53	White
V55	Blue

Type	Lighting color
N12	Orange
N14	White
N16	Blue

Square buttons

Type	Lighting color
V62	Orange
V64	White
V66	Blue

Type	Lighting color
V61	Orange
V63	White
V65	Blue

Type	Lighting color
N22	Orange
N24	White
N26	Blue

Small buttons

Type	Lighting color
V02	Orange
V04	White
V06	Blue

Type	Lighting color
V01	Orange
V03	White
V05	Blue

Button surface colors (Optional)

Button surface:
Gold

Button surface:
Bronze

Button surface:
Black

Button surface:
Rose gold

Button surface:
Champagne gold

Interior

Mirrors

YZ-52A

YZ-53A

YZ-55S

Handrails

YH-100SL Hairline stainless-steel [Silver]

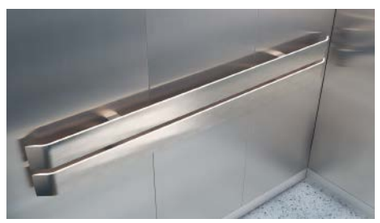
YH-100GL Hairline stainless-steel [Gold]

YH-100SV
Vibration stainless-steel [Silver]

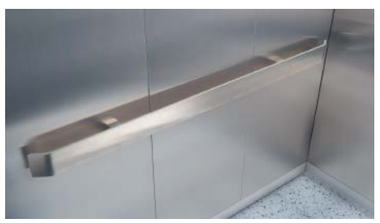
YH-100SB
Sandblasted stainless-steel [Silver]

YH-100GV
Vibration stainless-steel [Gold]

YH-100GB
Sandblasted stainless-steel [Gold]



YH-56S Hairline stainless-steel [Silver]



YH-57S Hairline stainless-steel [Silver]

Hall Designs

Jamb Type:

E-312

Jamb	Hairline stainless-steel
Doors	Hairline stainless-steel with etched pattern [EPC-2]
Hall position indicator	PIH-C130
Hall button	HBV56-C610

Jamb Type:

E-302

Jamb	Hairline stainless-steel
Doors	Painted steel sheet [C102]
Hall position indicator	PIH -D410
Hall button	HBV54-A610

Jamb Type:

E-112

Jamb	Hairline stainless-steel
Doors	Hairline stainless-steel
Hall position indicator	PIH-C213
Hall button	HBV52-A610

Jamb Type:

E-102 **Standard**

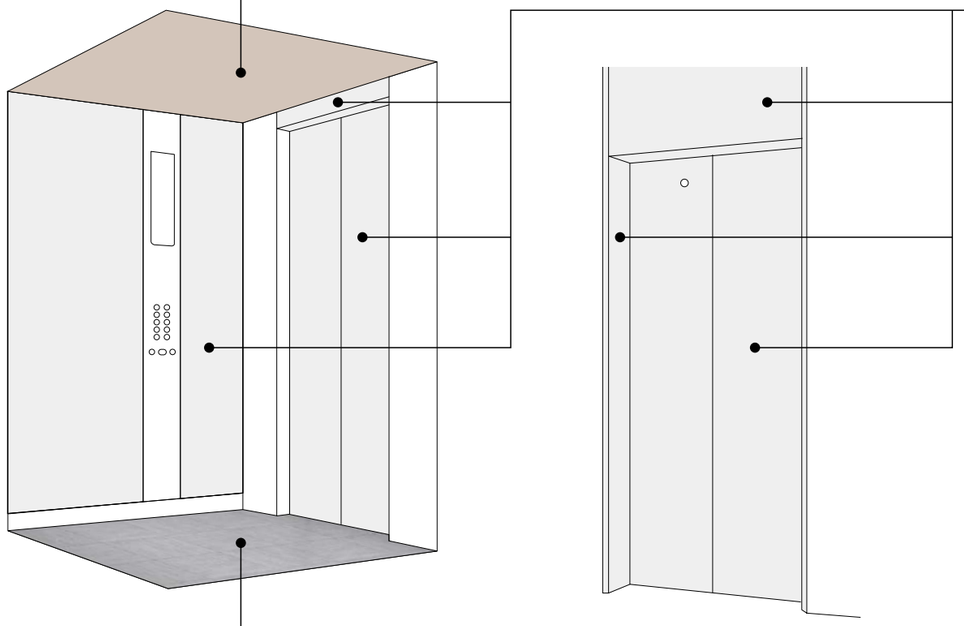
Jamb	Painted steel sheet [C101]
Doors	Painted steel sheet [C101]
Hall position indicators and buttons	PIV53-C730

Materials and Colors

Ceiling

Painted steel sheet
(Applicable to CD0 and N300 only)

C033 C102



Flooring

Standard

TM01 TM02 TM03 TM04 TM05

TMA1 TMA2 TMB1 TMB2 TMC1 TMC2

[Car] Walls, doors and transom panel
[Hall] Doors, transom panel and jamb

Stainless-steel

Hairline Mirror Vibration Sandblasted Satin Cross hairline

Colored stainless-steel (Applicable to car walls, doors and transom panel only)

Gold Bronze Black Rose gold Champagne gold

Etching patterns

EPC-1 EPC-2 EPC-3 EPC-4 EPC-5

EPC-6 EPC-7 EPC-8 EPC-9 EPC-10

EPC-11 EPC-12 EPC-13 EPC-14 EPC-31

EPC-34 EPC-35 EPC-36 EPC-38 EPC-39

EPC-32 EPC-33*1

*1: Not applicable to car doors, rear middle wall and hall door.

Painted steel sheet

C004 C049 C052 C054 C055 C100 C101 C102 C103

Features (1/2)

Feature	Abbreviation	Description	1C to 2C 2BC	2C to 4C ΣAI-22	3C to 8C ΣAI-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.	ⓞ	ⓞ	ⓞ
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.	ⓞ	ⓞ	ⓞ
■ 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.	Ⓢ	Ⓢ	Ⓢ

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: DOAS cannot be combined with some features. Please consult our local agents for details.

Feature	Abbreviation	Description	1C to 2C 2BC	2C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ OPERATIONAL AND SERVICE FEATURES (Continued from the previous page.)					
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.	Ⓢ	Ⓢ	Ⓢ
High Accuracy Landing Feature	HARL	The car landing level is adjusted to a high level of precision in order to ensure a landing accuracy of ±5mm under any conditions.	Ⓢ	Ⓢ	Ⓢ
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.	Ⓢ	Ⓢ	Ⓢ
Motor Drive Mix	MDX	The rate of car acceleration and deceleration is automatically increased according to the car load to reduce passenger waiting and travel time.	—	ⓞ	ⓞ
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.	ⓞ	ⓞ	ⓞ
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.	Ⓢ	Ⓢ	Ⓢ
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					
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.	—	ⓞ	ⓞ
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.)	—	ⓞ#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.	—	ⓞ	ⓞ
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

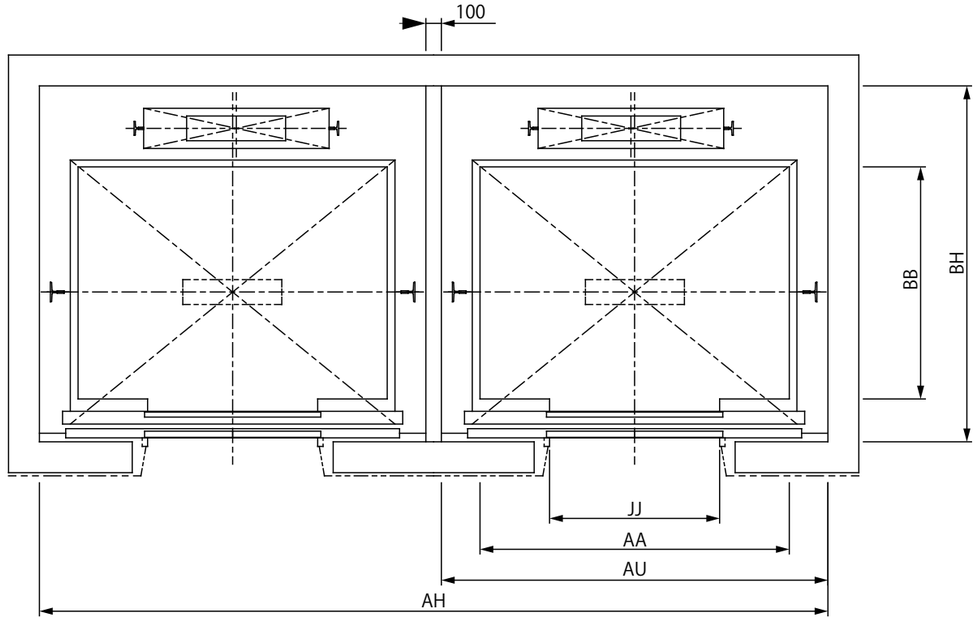
Features (2/2)

Feature	Abbreviation	Description	1C to 2C 2BC	2C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ GROUP CONTROL FEATURES (Continued from the previous page.)					
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 Smartphone	ELCS-SP	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.	Ⓞ#1	Ⓞ#1	Ⓞ#1
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 — Power Reduction during Off-peak	ESO-A	To save energy, some elevators are automatically put into sleep mode if there are no calls for a specified period.	—	Ⓞ	Ⓢ
Energy-saving Operation — Speed Control	ESO-V	To save energy, the car speed 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.	Ⓞ	Ⓞ	Ⓞ
Intense Up Peak	IUP	To maximize transport efficiency, an elevator bank is divided into two groups of cars to serve upper and lower floors separately during up peak. In addition, the number of cars to be allocated, the timing of car allocation to the lobby floor, the timing of door closing, etc. are controlled based on predicted traffic data.	—	—	Ⓞ
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.	Ⓞ	Ⓞ	Ⓞ
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.)	—	Ⓞ#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	Ⓞ
Strategic Overall Spotting	SOHS	To reduce passenger waiting time, cars which have finished service are automatically directed to positions where they can respond to predicted hall calls as quickly as possible.	Ⓢ†	Ⓢ	Ⓢ
Up Peak Service	UPS	Controls the number of cars to be allocated to the lobby floor, as well as the car allocation timing, in order to meet increased 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.	—	Ⓞ	Ⓞ

Feature	Abbreviation	Description	1C to 2C 2BC	2C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ 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.)	Ⓞ	Ⓞ	Ⓢ#2
	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.	Ⓞ#1	Ⓞ#1	Ⓞ#1
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	Ⓞ#1	Ⓞ#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: When DOAS is applied, AECC is Ⓞ. (No chime is the standard)

Hoistway Plan



■ **Horizontal Dimensions**

Rated speed (m/sec)	Code number	Rated capacity (kg)	Number of persons	Entrance width JJ (mm)	Car internal dimensions AA x BB (mm)	Minimum hoistway dimensions/unit (mm) AU x BH	Minimum hoistway dimensions (mm) AH x BH [2-unit in-line arrangement]
2.0 - 4.0	P14	1050	14	900	1600 x 1500	2150 x 2300	4400 x 2300
	P16	1200	16	1000	1800 x 1500	2350 x 2300	4800 x 2300
	P18	1350	18	1100	2000 x 1500	2550 x 2300	5200 x 2300
	P21	1600	21	1100	2000 x 1700	2550 x 2500	5200 x 2500
	P24	1800	24	1100	2100 x 1800	2650 x 2600	5400 x 2600
	P26	2000	26	1100	2100 x 1950	2650 x 2750	5400 x 2750
5.0 - 6.0	P16	1200	16	1000	1800 x 1500	2500 x 2300	5100 x 2300
	P18	1350	18	1100	2000 x 1500	2700 x 2300	5500 x 2300
	P21	1600	21	1100	2000 x 1700	2700 x 2550	5500 x 2550
	P24	1800	24	1100	2100 x 1800	2800 x 2650	5700 x 2650
	P26	2000	26	1100	2100 x 1950	2800 x 2800	5700 x 2800
7.0 - 8.0	P16	1200	16	1000	1800 x 1500	**Please consult our local agents for details.**	**Please consult our local agents for details.**
	P18	1350	18	1100	2000 x 1500		
	P21	1600	21	1100	2000 x 1700		
	P24	1800	24	1100	2100 x 1800		
	P26	2000	26	1100	2100 x 1950		

[Terms of the table]

- This table shows standard specifications without the fireproof landing door and counterweight safety for the 2-unit in-line arrangement. Please consult our local agents for other specifications.
- Minimum hoistway dimensions (AH and BH) shown in the table are after waterproofing of the pit and do not include plumb tolerance.

Hoistway Section

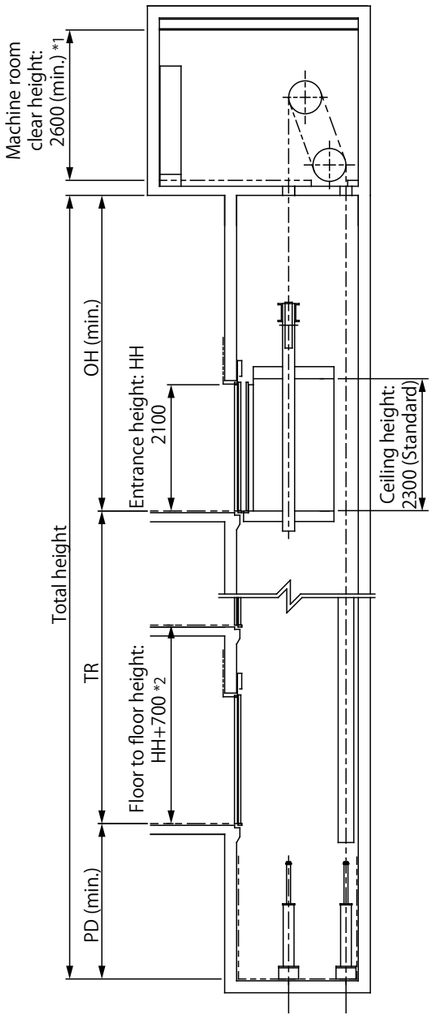
■ **Vertical Dimensions**

Rated speed (m/sec)	Travel (m) TR	Minimum overhead (mm) OH		Minimum pit depth (mm) PD	
		Rated capacity 1350 kg or less	Rated capacity 1600 to 2000 kg	Rated capacity 1350 kg or less	Rated capacity 1600 to 2000 kg
2.0	TR≤100m	5260		2080	2800
	100<TR≤150m	5410		2800	2950
	150<TR≤200m	5410		3050	
2.5	TR≤100m	5340		2080	2950
	100<TR≤150m	5490		2840	3100
	150<TR≤200m	5490		3200	
3.0	TR≤100m	5690		2650	3200
	100<TR≤150m	5840		3330	3350
	150<TR≤200m	5840		3500	
	200<TR≤250m	5840		3600	
3.5	TR≤100m	6020		3020	3660
	100<TR≤150m	6170		3370	3660
	150<TR≤200m	6170		3660	
	200<TR≤250m	6170		3760	
4.0	TR≤150m	6350		3850	
	150<TR≤200m	6500	6550	3900	
	200<TR≤250m	6600		3900	
5.0 6.0	TR≤150m	6450		3850	
	150<TR≤200m	6600		3900	
	200<TR≤250m	6700		3900	
7.0 8.0	TR≤150m	**Please consult our local agents for details.**		**Please consult our local agents for details.**	
	150<TR≤200m				
	200<TR≤250m				

[Terms of the table]

- This table shows standard specifications without the fireproof landing door and couterweight safety. Please consult our local agents for other specifications.

Notes : *1: If the minimum machine room height is insufficient, please consult our local agents.
*2: If the minimum floor height is insufficient, please consult our local agents.



Capacity and Speed [*1]

Rated capacity (kg)	Numbre of persons	Rated speed (m/sec)								
		2.0	2.5	3.0	3.5	4.0	5.0	6.0	7.0	8.0
1050	14	●	●	●	●	●	○	○	○	○
1200	16	●	●	●	●	●	●	●	○	○
1350	18	●	●	●	●	●	●	●	○	○
1600	21	●	●	●	●	●	●	●	○	○
1800	24	●	●	●	●	●	●	●	○	○
2000	26	●	●	●	●	●	●	●	○	○

Notes : *1: The symbol ○ shown in the table indicates that a technical inquiry is required.
The symbol ● shown in the table indicates that a technical inquiry is required depending on conditions.

Specifications [*2]

Rated speed (m/sec)	2.0	2.5	3.0	3.5	4.0	5.0	6.0	7.0	8.0
Maximum number of stops	64							Please consult our local agents.	
Maximum travel (m)	250 [*3]							Please consult our local agents.	
Minimum floor to floor height (mm)	2500 [*4]								

Notes : *2: Please consult our local agents if the maximum travel exceeds the values specified in the above table.
*3: Excluding the rated capacity 2250kg to 3000kg. Please consult our local agents for maximum travel.
*4: For some elevator specifications, the floor height (distance between floors) must be a minimum of 2500mm.
Please consult our local agents if the floor height is less than "Entrance height HH + 700mm".

Door System

Standard	2-panel center opening (CO)
Optional	2-panel side sliding opening (2S) or 4-panel center opening (2CO)

Operation System

Standard	1-car selective collective (1C-2BC)
Optional	2-car group control system (2C-2BC), 3- or 4-car group control EAI-22 system, or 3- to 8-car group control ΣAI-2200C system

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.

- Construction of the elevator machine room with proper beams and slabs, equipped with a lock, complete with illumination, ventilation and waterproofing.
- Access to the elevator machine room sufficient to allow passage of the control panel and traction machine.
- Architectural finishing of the machine room floor, and the walls and floors in the vicinity of the entrance hall after installation has been completed.
- Construction of an illuminated, ventilated and waterproofed 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, and their electrical switch boxes in the machine room, and laying of the wiring from the electrical room.
- The provision of outlets and laying of the wiring in the machine room and 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 machine room and elevator hoistway shall be below 40˚C.
- The following conditions are required for maintaining elevator performance.
  a. The relative humidity shall be below 90% on a monthly average and below 95% on a daily average.
  b. Prevention shall be provided against icing and condensation occurring due to a rapid drop in the temperature in the machine room and elevator hoistway.
  c. The machine room and the elevator hoistway shall be finished with mortar or other materials so as to prevent concrete dust.
- Voltage fluctuation shall be within a range of +5% to -10%.

Ordering Information

Please include the following information when ordering or requesting estimates:

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

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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https://www.MEBS.com/

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

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