

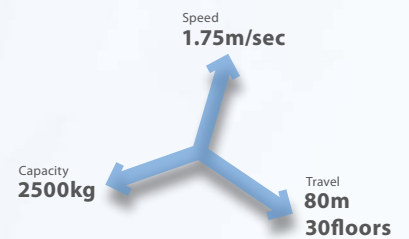


Changes for the Better

PASSENGER ELEVATOR
(MACHINE-ROOM-LESS SYSTEM)
Series-IP Version2

Quality 
in Motion

ELENESSA

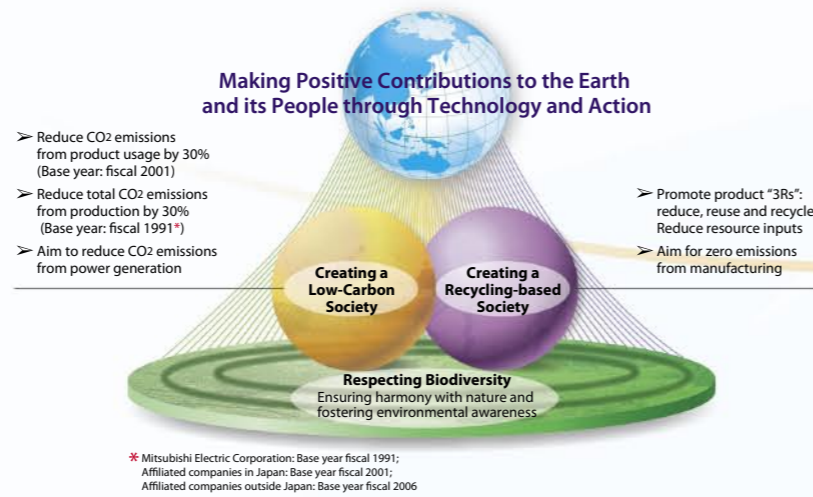


for a greener tomorrow



Environmental Vision 2021

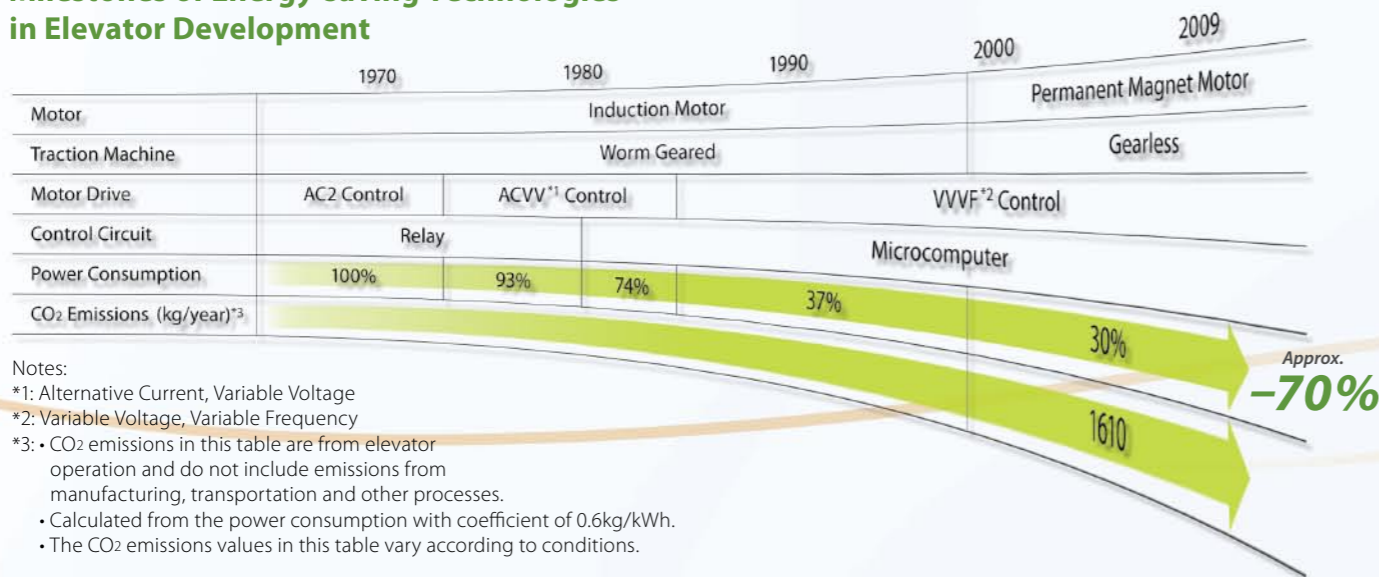
Environmental Vision 2021 is Mitsubishi Electric's long-range vision for environmental management, which looks towards the year 2021



Mitsubishi Electric's green technologies have been developed as part of its long and profound commitment to energy-saving.

- Profile
- Design
- Features
- Basic Specifications
- Important Information

Milestones of Energy-saving Technologies in Elevator Development



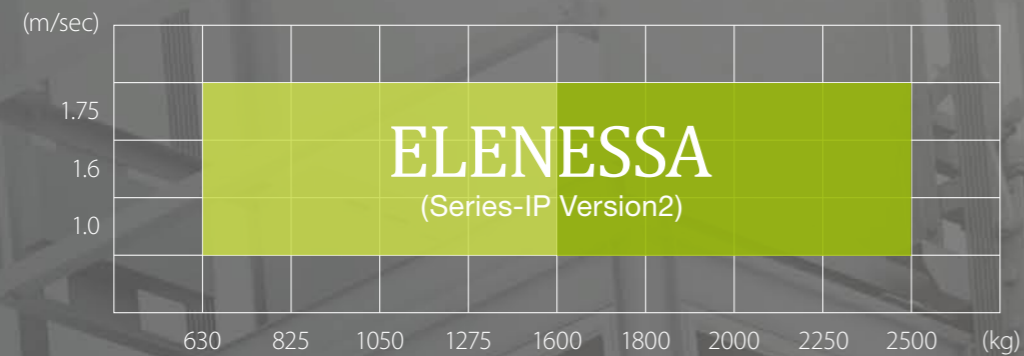
Our elevators stay a step ahead with even more advanced energy conservation technology: Introducing the Regenerative Converter (Optional)

Compared to the same type of elevator without a Regenerative Converter:
 Energy-saving effect: Up to 35%
 CO₂ emissions: -1,400 kg/year

(The elevator is operated under different conditions from those in the table, "Milestones of Energy-Saving Technologies in Elevator Development" on page 1.)
 The Regenerative Converter is applicable to the elevators with the rated capacity of 630kg to 1600kg.
 Please refer to page 5 for details.

Our Global Standards for Machine-room-less Elevators

Application



The rated capacity has been extended from 1600kg to 2500kg for the ELENESSA Series-IP Version2.

Green Technology

Efficiently using resources and minimizing environmental burden through leading-edge technologies.

Variable Traveling Speed Elevator System

An elevator that travels faster according to the number of passengers, reducing waiting and traveling time.

Machine-room-less

As all equipment is installed within the hoistway, there are far fewer restrictions on building design.

Group Control

Advanced group control systems enhance transport efficiency and reduce passenger waiting time through optimum car allocation.

Pleasant Design

Increased design options make elevators more pleasant and easier to use.

Green Technology

SUSTAINABLE ENERGY USE

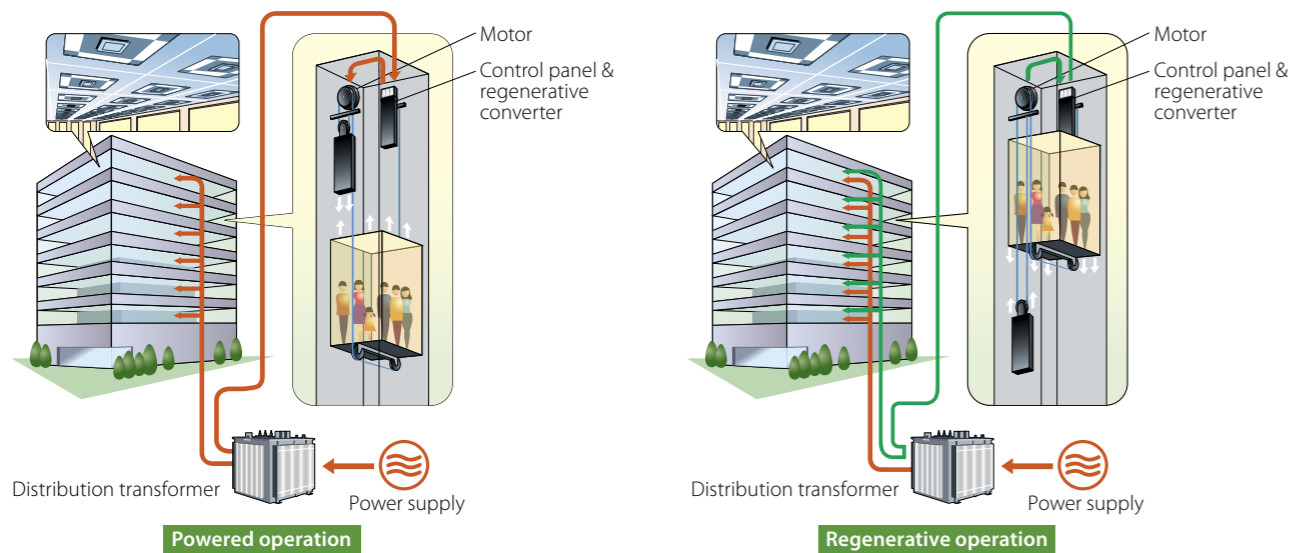
Mitsubishi Electric's leading-edge technologies have made it possible for elevators to conserve energy. Our Regenerative Converter makes the most of power generated by the traction machine. Additionally, thanks to the joint-lapped core in permanent magnet (PM) motor and energy-saving features, the elevators use energy more wisely and efficiently.

Regenerative Converter (Optional)

Efficient use of power

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 into the

electrical network in the building along with electricity from the power supply. Compared to the same type of elevator without a Regenerative Converter, this system provides an energy-saving effect of up to 35%. (Reduction in CO₂ emissions: 1400 kg/year) In addition, the Regenerative Converter has the effect of decreasing harmonic currents.



Note: *The Regenerative Converter is applicable to the elevators with the rated capacity of 630kg to 1600kg.

Joint-lapped Core in Permanent Magnet (PM) Motor

Smaller carbon footprint

The joint-lapped core built in the PM motor of the traction machine features flexible joints. The iron core can be like a hinge, which allows coils to be wound around the core more densely, resulting in improved motor efficiency and compactness. High-density magnetic field is produced, enabling lower use of energy and resources and reduced CO₂ emissions.



Energy-saving Features

Curbing energy consumption

Mitsubishi Electric offers features that help to reduce the energy consumption of elevators.

Energy-saving Operation

- Number of Cars

The number of service cars is automatically reduced to some extent without affecting passenger waiting time.

Energy-saving Operation

- Allocation Control

Based on each elevator's potential energy consumption, the system selects the elevator that best balances operational efficiency and energy consumption.

Car Light/Fan Shut Off

- Automatic

The car lighting/ventilation fan is automatically turned off if there are no calls for a specified period.

Variable Traveling Speed Elevator System

RAPID MODE

TIME-SAVING

With Mitsubishi Electric's industry-first Variable Traveling Speed Elevator System, an elevator can travel faster than its rated speed according to the number of passengers, ultimately reducing waiting and traveling time.

Variable Traveling Speed Elevator System (VSE) (Optional)*

The Variable Traveling Speed Elevator System allows elevators to travel faster than their rated speed depending on the number of passengers in the car (rapid mode). When the weight is well-balanced between the car and the counterweight, the traction machine does not need its full power to

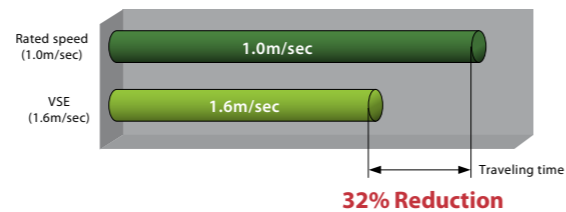
make the elevator travel at the rated speed. Thus, by utilizing the unused power of the traction machine, the elevator can travel faster. Its efficient transport reduces frustratingly long waiting and traveling time. VSE is a solution for users seeking time-savings in elevator travel.

Waiting Time Reduction



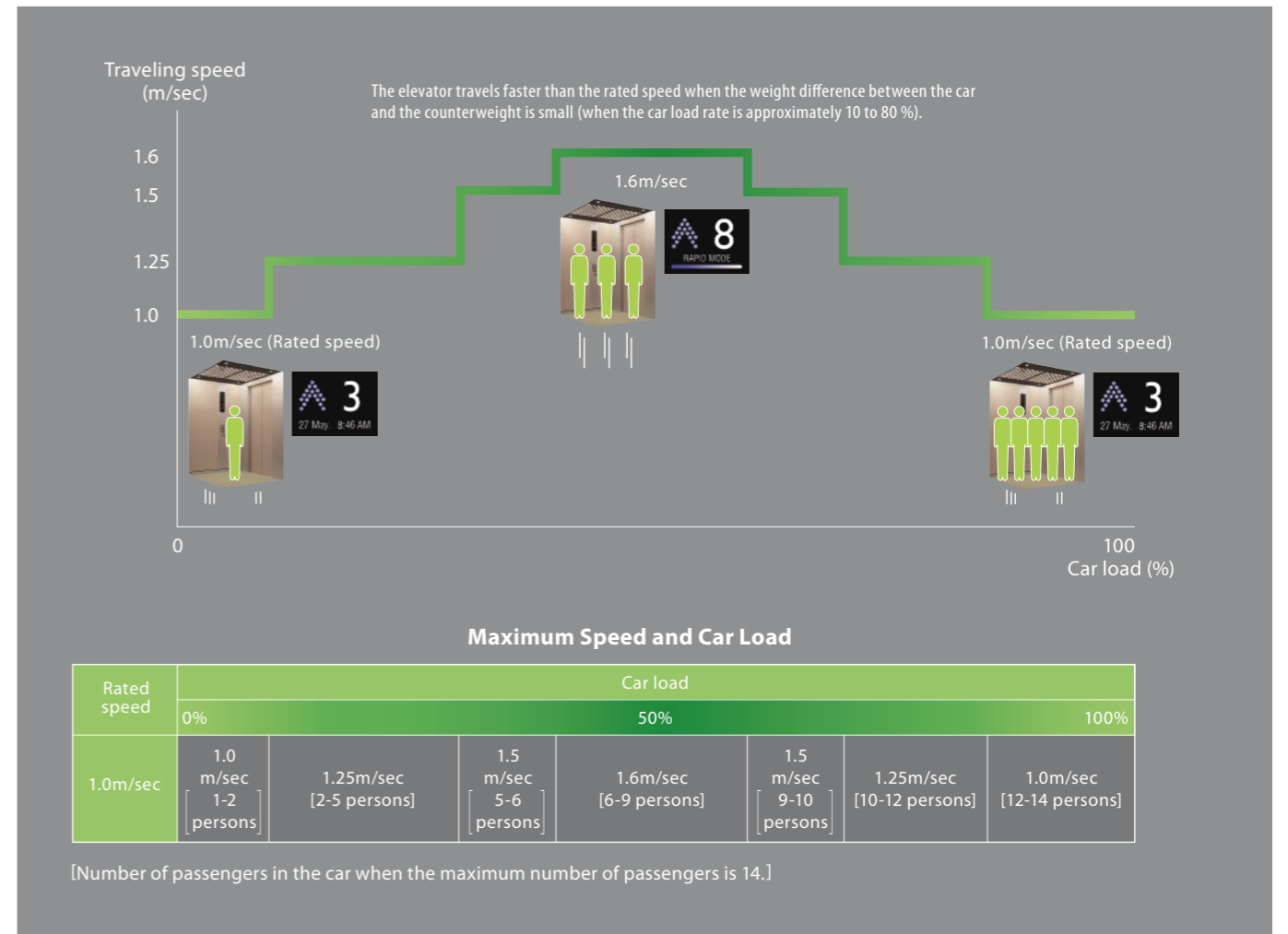
According to Mitsubishi Electric's simulation, waiting time can be reduced up to approximately 15% when VSE is applied.

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%



Note: *The Variable Traveling Speed Elevator System is applicable to the elevators with a rated speed of 1.0m/sec and the rated capacity of 630kg to 1600kg.

Machine-room-less

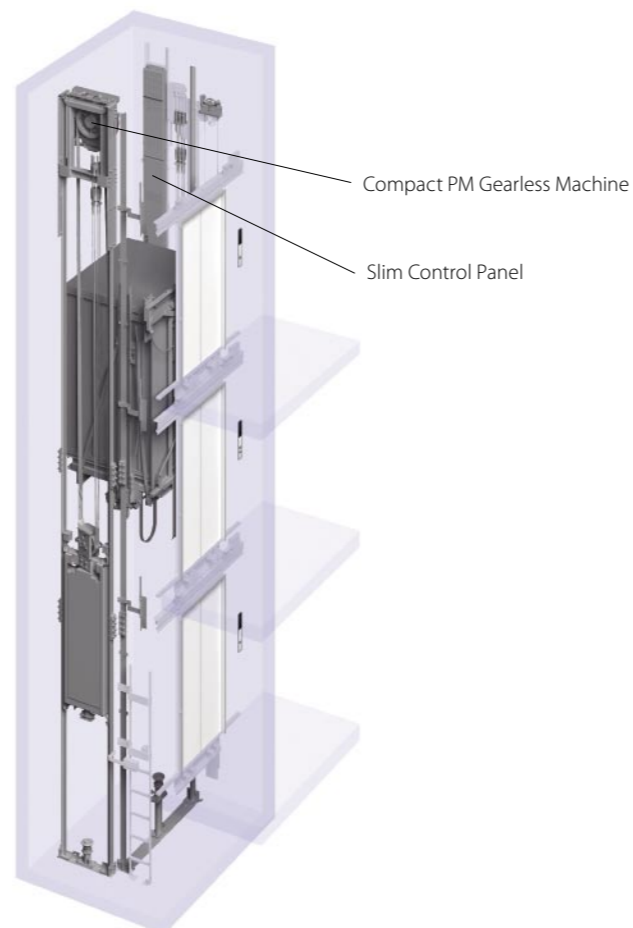
SPACE-SAVING

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

Mitsubishi Electric has succeeded in miniaturizing all key elevator equipment.

The gearless traction machine with a compact PM motor is installed within the hoistway and the slim control panel (98mm thick*) is located on the shaft side wall. This arrangement of equipment frees up space normally required for separate machine rooms such as a penthouse. The control panel and equipment are configured for easy maintenance, and the entire compact system is optimally organized for performance and service.

*In cases when the rated capacity is 630kg to 1050kg.



Compact PM Gearless Machine

The gearless traction machine with a PM (permanent magnet) motor is packed with cutting-edge technology, such as our unique stator-core structure and built-in double brakes. This optimized motor design dramatically reduces the level of torque ripple, which positively affects the quality of the ride. So even though the machinery is compact, the ride is smooth, quiet and comfortable.

Furthermore, the PM motor suppresses harmonic noise and torque ripple, providing greater riding comfort.



Slim Control Panel

More technological advances, such as the high-accumulation LSI and low-noise PWM inverter, enable the VVVF (variable voltage, variable frequency) inverter to deliver smooth, high-precision control of the traction machine. In addition, an IPU (Integrated Power Unit) acts as a high-efficiency power supply circuit for the motor drive and, along with the PM motor, delivers great energy-savings. The result is more efficient, more reliable drive control.



Group Control

EFFICIENT TRANSPORTATION

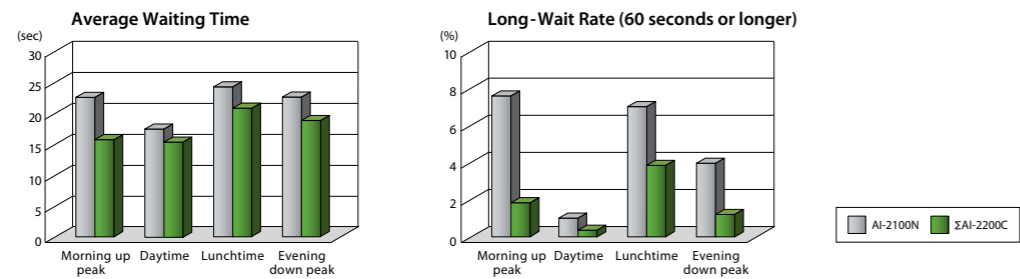
Mitsubishi Electric's breakthrough AI Neural Network* technology in elevator control enhances transport efficiency and reduces passenger waiting time through optimum car allocation, which allows elevators to use energy effectively. Two basic group control systems offer a variety of innovative group control features.

Note: *Neural Network is a mathematical model that emulates the structure of the nerves and cells of the human brain and its information processing mechanism.

Group Control Systems	Suitable Building Size	Number of Cars in a Group
ΣAI-22 System	Small to medium	3 to 4 cars
ΣAI-2200C System	Large (Especially, a building with dynamic traffic conditions)	3 to 8 cars

The features introduced on these pages are applicable to ΣAI-2200C only. Please refer to page 32 and 33, and the ΣAI-2200C brochure for other features and details.

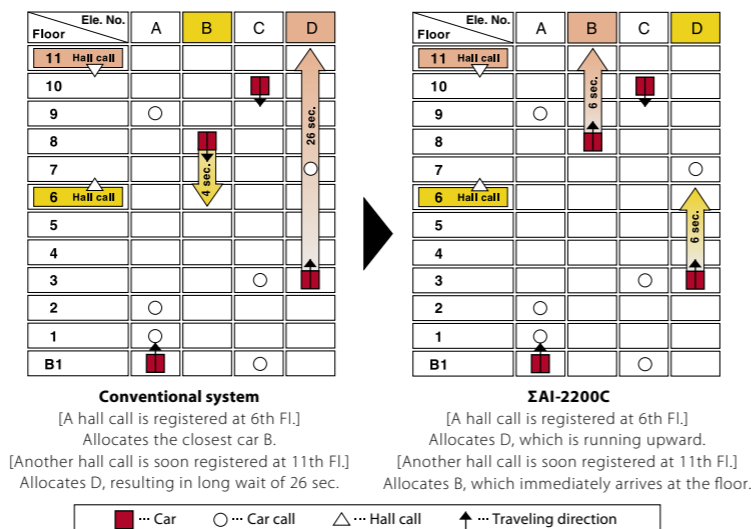
Performance



Cooperative Optimization Assignment

Forecasts a near future hall call to reduce long waits

When a hall call is registered, the algorithm assumes a near-future call 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.



Dynamic Rule-set Optimizer

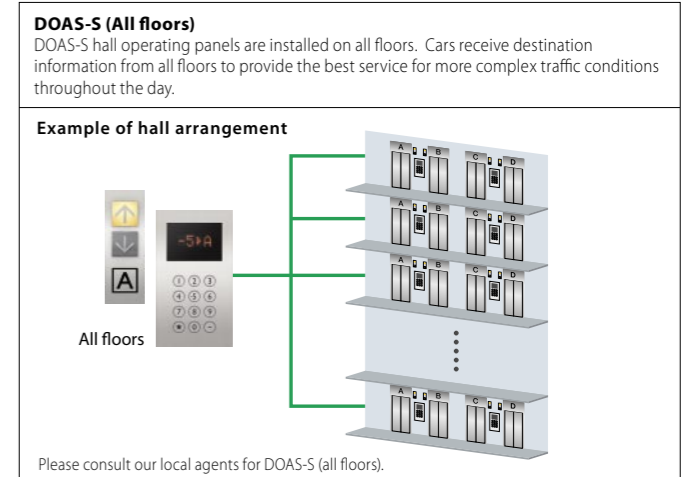
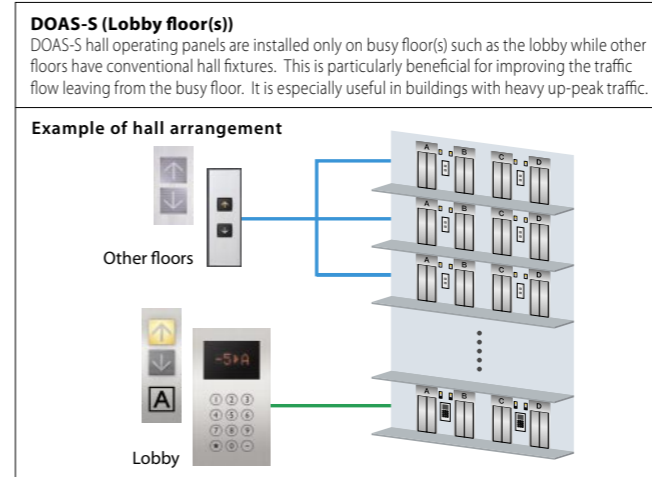
Selecting optimum car allocation through rule-set simulations

Based on real traffic data, passenger traffic is predicted every few minutes. According to the prediction, real-time simulation selects the best rule-set (multiple rules have been set as car allocation patterns), which optimizes transport efficiency.

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

Allocates 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 their waiting and traveling time.



Pleasant Design

PASSENGER-FRIENDLY

Mitsubishi Electric designs elevators with not only safety and a comfortable ride, but also passenger-friendliness in mind. Its design makes elevators more pleasant and easier to use.

Increased Design Options

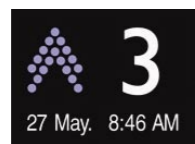
A sophisticated car design that suits various uses creates a pleasant and comfortable impression.

LCD Position Indicator

Various graphic indication patterns increase visibility.



<Indication examples>



Normal operation



Rapid mode in Variable Traveling Speed Elevator System



Emergency operation



Tactile Button

Popular stainless-steel buttons are available.



Swing-type Car Operating Panel

Incorporated in the front return panel, the car operating panel adds stylish accents.

Higher Ceiling

A higher ceiling provides a spacious atmosphere in the car. The ceiling can be as high as 2700mm depending on the ceiling type.

Universal Design

Our elevators are designed to meet universal design concepts. Features such as the indicators, tactile buttons, handrails and mirrors are safe and easy to use for everyone, including the elderly and people with special needs.

(Universal Design: Copyright 1997 N.C. State University, The Center for Universal Design.)



See-through Doors

Large glass windows increase visibility at the hall area, which can enhance security.



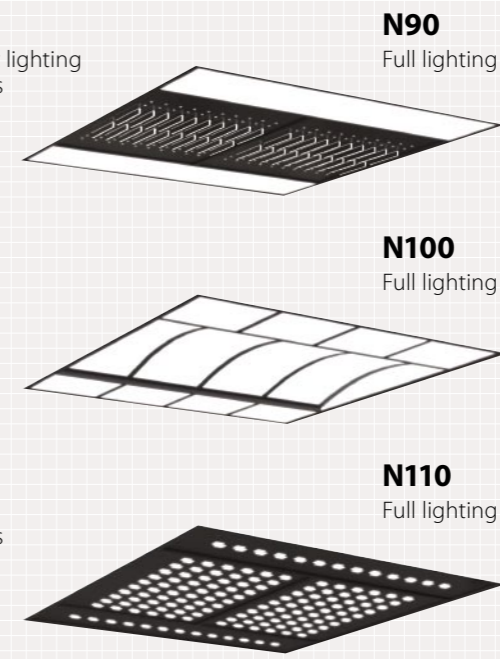
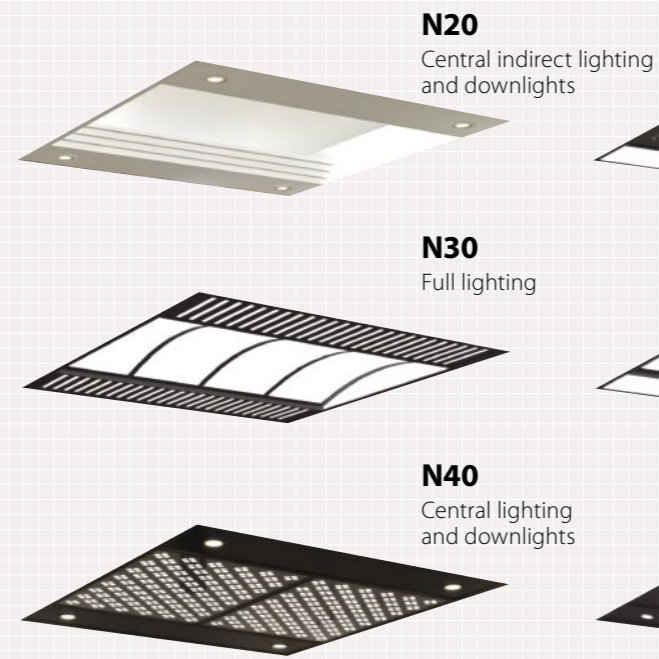
Items introduced on this page may be available as options.

Car Design

S00 Standard
Central lighting



Ceiling



Painted Steel Sheet
(Only S00, N10, N20, N40, N90 and N110)

- Y031
- Y033
- Y055
- Y073
- Y074

Standard Design Image

- Ceiling** - Painted steel sheet (Y033) with a milky white resin lighting cover (Ceiling height: 2200mm*)
- Walls** - SUS-HL
- Transom panel** - SUS-HL
- Doors** - SUS-HL
- Front return panels** - SUS-HL
- Kickplate** - Aluminum
- Flooring** - PR18
- Car operating panel** - CBE-N211

Note: *The higher ceiling type is available up to 2700mm as an option.

Car Finishes

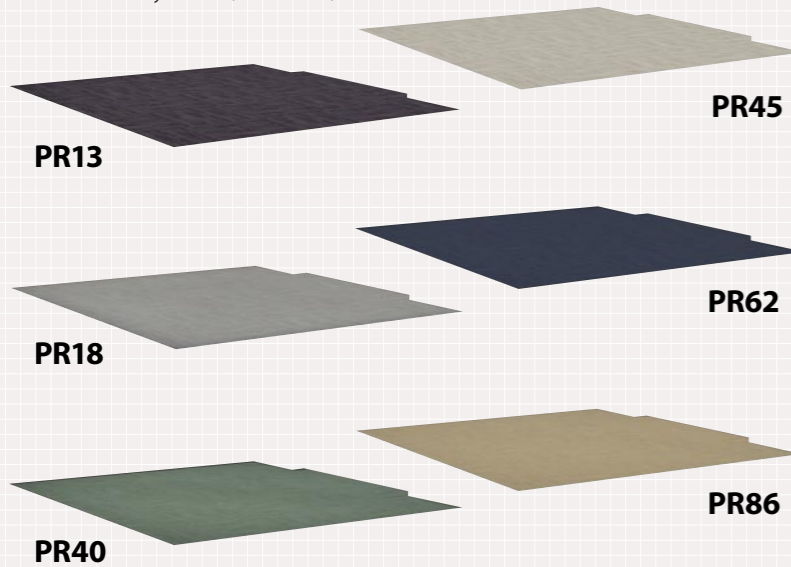
Walls	Standard	Stainless-steel, hairline-finish (SUS-HL)
	Optional	Pattern-printed steel sheet Painted steel sheet
Transom panel	Standard	Stainless-steel, hairline-finish (SUS-HL)
	Optional	Pattern-printed steel sheet
		Painted steel sheet Stainless-steel, mirror-finish (SUS-M)
Doors	Standard	Stainless-steel, hairline-finish (SUS-HL)
	Optional	Pattern-printed steel sheet
		Painted steel sheet
		Stainless-steel, mirror-finish (SUS-M)
		Glass windows See-through doors
Front return panel	Standard	Stainless-steel, hairline-finish (SUS-HL)
	Optional	Stainless-steel, mirror-finish (SUS-M)
Entrance columns	Standard	CO doors: Integrated with front return panel 2S doors: Stainless-steel, hairline-finish (SUS-HL)
	Optional	Stainless-steel, mirror-finish (SUS-M)

Kickplate	Standard	Aluminum
	Optional	Painted steel sheet Stainless-steel, hairline-finish (SUS-HL)
Flooring	Standard	Durable vinyl tile (2mm thick)
	Optional	Durable rubber tile (3mm or 6mm thick)
		Carpet (Supplied by customer) Marble/granite (Supplied by customer)
Sill	Standard	Extruded hard aluminum
	Optional	Stainless-steel
Handrail	Optional	YH-515 (1 flat bar)
		YH-535 (1 cylindrical bar)
Mirror	Optional	YZ-525 (Half size)
		YZ-535 (2-mirror set)
		YZ-555N (Full height)

This table may not be applicable to the elevators with the rated capacity of over 1600kg; please consult our local agents.

Flooring

Durable vinyl tiles (Standard)



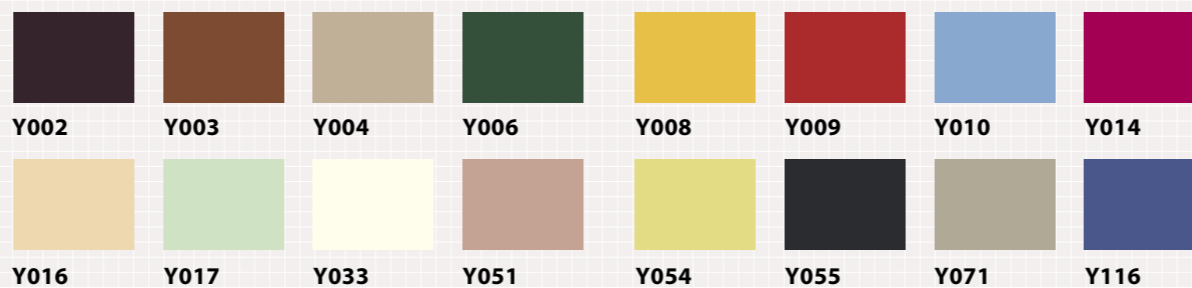
Walls, Doors, Transom Panel and Front Return Panel

Stainless-steel Hairline (Standard)



Painted Steel Sheet (Optional)

Not applicable to front return panel



Pattern-printed Steel Sheet (Optional)

Not applicable to front return panel



Actual elevator color may differ slightly from those shown.

Design Images

N10

- Ceiling** - Painted steel sheet (Y055)
- Walls** - SUS-HL
- Transom panel** - SUS-HL
- Doors** - SUS-HL
- Front return panels** - SUS-HL



N20

- Lighting** - Central indirect lighting and downlights
- Ceiling** - Painted steel sheet (Y033)
- Walls** - SUS-HL
- Transom panel** - SUS-HL
- Doors** - SUS-HL
- Front return panels** - SUS-HL
- Kickplate** - SUS-HL
- Flooring** - PR45
- Car operating panel** - CBE-D221



N10S

- Ceiling** - SUS-HL
- Walls** - Pattern-printed steel sheet (CP141)
- Transom panel** - Pattern-printed steel sheet (CP141)
- Doors** - Pattern-printed steel sheet (CP141)
- Front return panels** - SUS-HL



N10W

- Lighting** - Downlights
- Ceiling** - Painted steel sheet (Y033)
- Walls** - Pattern-printed steel sheet (CP101)
- Transom panel** - Pattern-printed steel sheet (CP101)
- Doors** - Pattern-printed steel sheet (CP101)
- Front return panels** - SUS-HL
- Kickplate** - SUS-HL
- Flooring** - PR45
- Car operating panel** - CBE-N211



N30

- Lighting** - Full lighting
- Ceiling** - Arched milky white resin panels
- Ceiling trim** - Black alumite
- Walls** - Pattern-printed steel sheet (CP111)
- Transom panel** - Pattern-printed steel sheet (CP111)
- Doors** - Pattern-printed steel sheet (CP111)
- Front return panels** - SUS-HL
- Kickplate** - SUS-HL
- Flooring** - PR18
- Car operating panel** - CBE-N221

Note: Please refer to page 15 and 16 for specifications of car finishes.

Actual elevator color may differ slightly from those shown.

Design Images

N40

- Lighting** - Central lighting and downlights
- Ceiling** - [Center] Resin panels with a half-mirrored surface
[Sides] Painted steel sheet (Y055)
- Ceiling trim** - Black alumite
- Walls** - Pattern-printed steel sheet (CP53)
- Transom panel** - Pattern-printed steel sheet (CP53)
- Doors** - Pattern-printed steel sheet (CP53)
- Front return panels** - SUS-HL
- Kickplate** - SUS-HL
- Flooring** - PR86
- Car operating panel** - CBE-N221



N100

- Lighting** - Full lighting
- Ceiling** - Arched milky white resin panels
- Ceiling trim** - Black alumite
- Walls** - Pattern-printed steel sheet (CP23)
- Transom panel** - Pattern-printed steel sheet (CP23)
- Doors** - Pattern-printed steel sheet (CP23)
- Front return panels** - SUS-HL
- Kickplate** - Painted steel sheet (Y055)
- Flooring** - PR40
- Car operating panel** - CBE-C251



N90

- Lighting** - Full lighting
- Ceiling** - [Center] Painted steel sheet (Y055) with white acrylic blocks
[Sides] Milky white resin panels
- Ceiling trim** - Black alumite
- Walls** - Pattern-printed steel sheet (CP141)
- Transom panel** - Pattern-printed steel sheet (CP141)
- Doors** - Pattern-printed steel sheet (CP141)
- Front return panels** - SUS-HL
- Kickplate** - SUS-HL
- Flooring** - PR45
- Car operating panel** - CBV-N211



N110

- Lighting** - Full lighting
- Ceiling** - Painted steel sheet (Y055)
- Ceiling trim** - Black alumite
- Walls** - Pattern-printed steel sheet (CP101)
- Transom panel** - Pattern-printed steel sheet (CP101)
- Doors** - Pattern-printed steel sheet (CP101)
- Front return panels** - SUS-HL
- Kickplate** - Painted steel sheet (Y055)
- Flooring** - PR13
- Car operating panel** - CBE-C240

Note: Please refer to page 15 and 16 for specifications of car finishes.

Actual elevator color may differ slightly from those shown.

Observation Car (NY-30)

Natural light gives the car a spacious atmosphere.

Glass can be arranged in various positions and there are different ceiling types to choose from (S10, N10 to N40 and N90 to N110) to suit to the elevator usage.



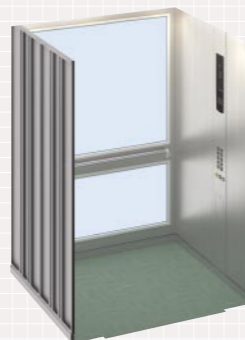
Design Image

- | | | | |
|------------------------|-------------------------------|----------------------------|-------------------------------------|
| Ceiling type | - N10 | Doors | - SUS-HL with glass window |
| Lighting | - Downlights | Front return panel | - SUS-HL |
| Walls (inside) | - SUS-HL | Kickplate | - SUS-HL |
| Walls (outside) | - Painted finish (N5.5: Gray) | Flooring | - PR62 |
| Windows | - Transparent flat glass | Handrail | - SUS-HL (YH-55S: Cylindrical type) |
| Glass frame | - Aluminum | Car operating panel | - CBE-N211 |
| Transom panel | - SUS-HL | | |

Glass Arrangement



NY-30A
Rear & both sides



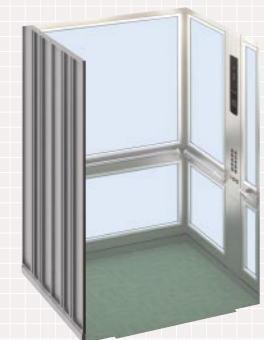
NY-30B
Rear



NY-30C
Both sides



NY-30D
Rear & one side



NY-30E
Rear & one side

Actual elevator color may differ slightly from those shown.

Hall Design

Jambs

E-102 Narrow Jamb
(Standard)



- Jamb** - Painted steel sheet (Y051)
- Doors** - Painted steel sheet (Y051)
- Hall position indicator and call button** - PIE-A210N **Boxless***

Note: *Please refer to page 30 for the sectional image of the boxless type.

E-302 Splayed Jamb
E-202 Square Jamb



- Jamb** - Painted steel sheet (Y116)
- Doors** - Painted steel sheet (Y116)
- Hall button** - HBE-C260N **Boxless***
- Hall position indicator** - PIH-D421 **Boxless***

E-312 Splayed Jamb with Transom Panel
E-212 Square Jamb with Transom Panel



- Jamb** - SUS-HL
- Transom panel** - SUS-HL
- Doors** - SUS-HE (EP-B-009)
- Hall position indicator** - PID-D410
- Hall button** - HBE-C210N

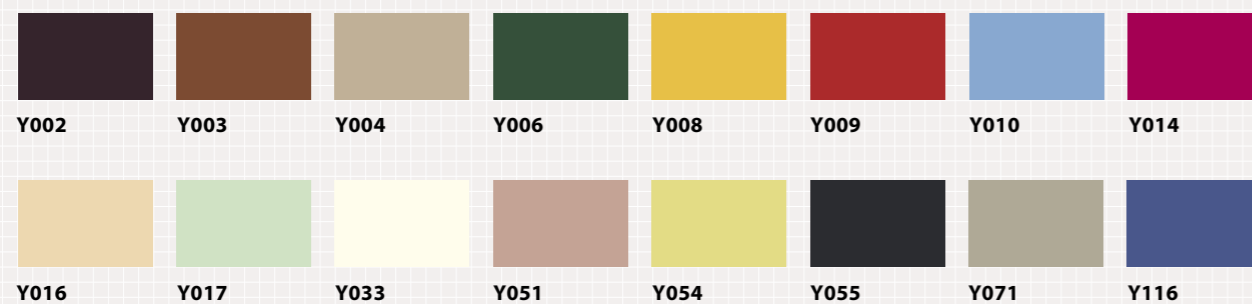
See-through Doors



- Jamb** - SUS-HL
- Transom panel** - SUS-HL
- Doors** - See-through doors
- Hall position indicator** - PID-D410
- Hall button** - HBE-C210N

Jambs, Doors and Transom Panel

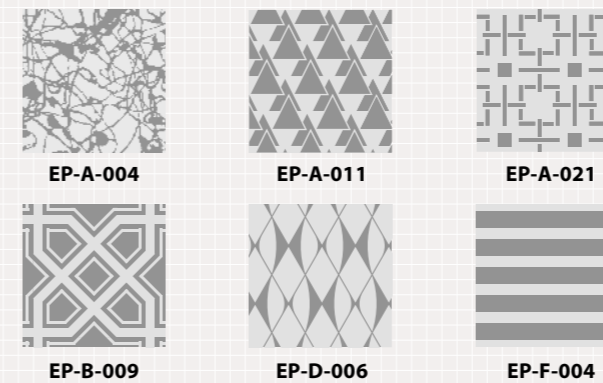
Painted Steel Sheet (Standard)



Etching Patterns

Not applicable to jambs

▣ Non-etched surface
▣ Etched surface



Entrance Finishes

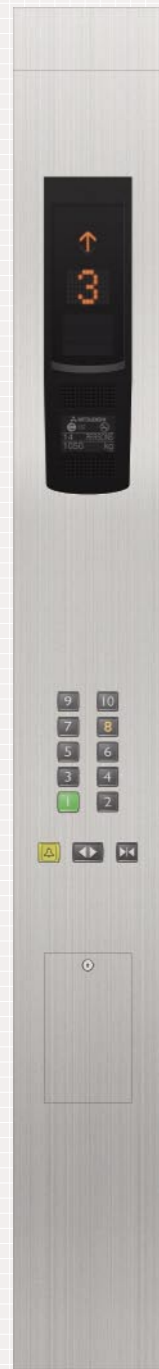
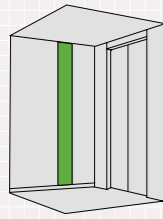
Jamb	Standard	Painted steel sheet
	Optional	Stainless-steel, hairline-finish (SUS-HL)
Doors	Standard	Painted steel sheet
	Optional	Stainless-steel, hairline-finish (SUS-HL)
		Stainless-steel, hairline-finish with etched pattern (SUS-HE)
		Stainless-steel, mirror-finish (SUS-M)
		Glass windows
See-through doors		
Transom panel	Optional	Painted steel sheet
		Stainless-steel, hairline-finish (SUS-HL) Stainless-steel, hairline-finish with etched pattern (SUS-HE)
Sill	Standard	Extruded hard aluminum
	Optional	Stainless-steel

This table may not be applicable to the elevators with the capacity of over 1600kg; please consult our local agents.

Actual elevator color may differ slightly from those shown.

Car Signal Fixtures

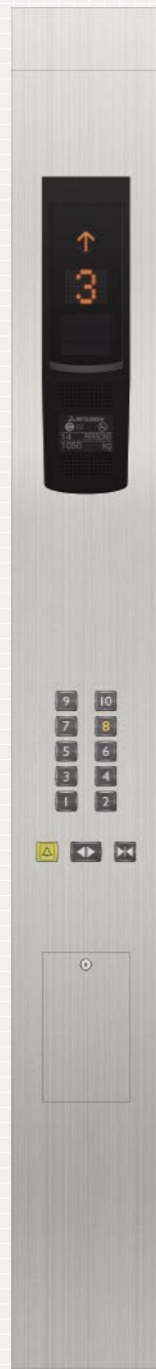
Car Operating Panels (For side wall)



CBE-N211
(Standard for 2 to 30 floors)



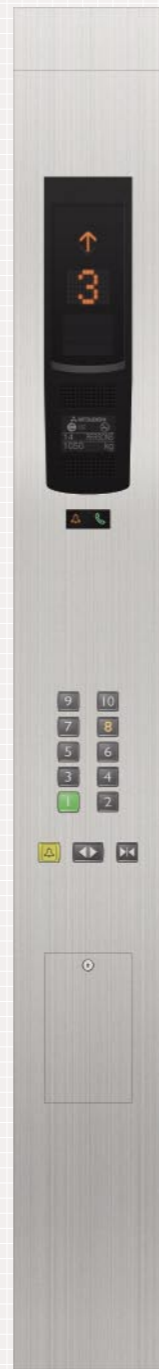
Tactile button
(Plastic)



CBF-N211



Flat button *2
(Plastic)



CBE-N217
(With alarm indication for EN81-70) *1



Tactile button
(Plastic)



CBE-N218
(With alarm indication for EN81-70) *1



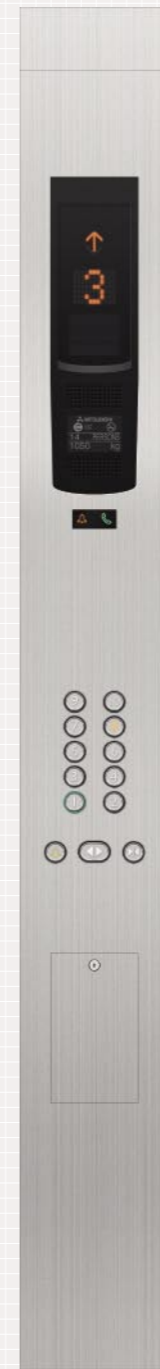
Tactile button
(Plastic)



CBV-N211



Tactile button *2
(Stainless-steel matte)



CBV-N217
(With alarm indication for EN81-70) *1



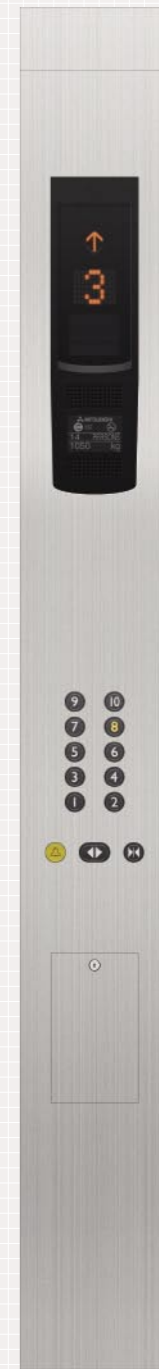
Tactile button
(Stainless-steel matte)



CBV-N218
(With alarm indication for EN81-70) *1



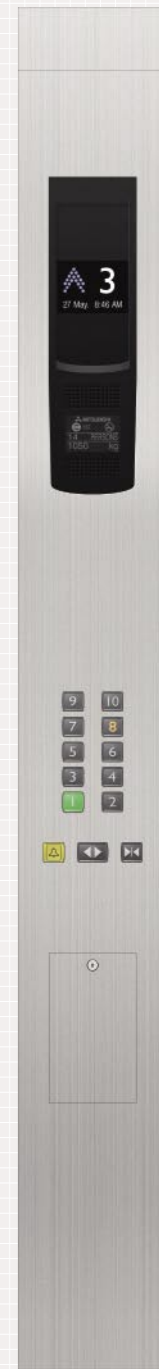
Tactile button
(Stainless-steel matte)



CBJ-N211



Flat button *2
(Plastic)



CBE-N221
(LCD indicator)



Tactile button *3
(Plastic)

Notes:

*1: Interphone which complies with EN81-28 is required.

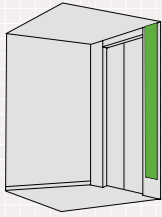
*2: Please note that flat (non-tactile) buttons and buttons without color contrast cannot be used in countries where regulations such as EN81-70 mandate specific measures for physically disabled passengers.

*3: Flat buttons are also available as CBF-N221.

Actual elevator colors may differ slightly from those shown.

Car Signal Fixtures

Car Operating Panels (For front return panel)



CBE-C240



Tactile button
(Plastic)



CBF-C240



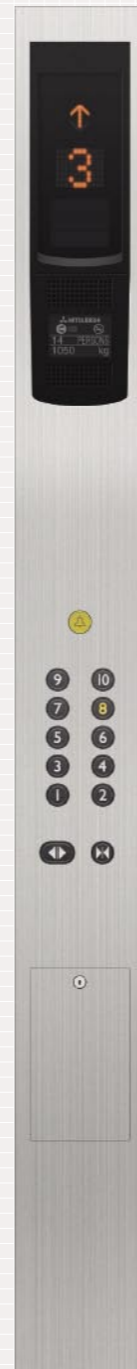
Flat button *1
(Plastic)



CBV-C240



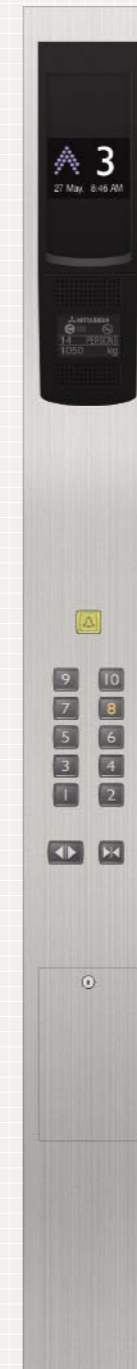
Tactile button *1
(Stainless-steel matte)



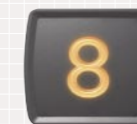
CBJ-C240



Flat button *1
(Plastic)



CBE-C251
(LCD indicator)



Tactile button *2
(Plastic)



CBE-D221
(Swing type)



Tactile button *2
(Plastic)

Notes:

*1: Please note that flat (non-tactile) buttons and buttons without color contrast cannot be used in countries where regulations such as EN81-70 mandate specific measures for physically disabled passengers.

*2: Flat buttons are also available as CBF-C251 / CBF-D221.

Actual elevator colors may differ slightly from those shown.

Hall Signal Fixtures

Hall Position Indicators and Call Buttons



PIE-A210N Boxless
(Standard)
PIE-A210B
Tactile button *1
(Plastic)

PIE-A220N Boxless
(Standard)
PIE-A220B
Tactile button *1
(Plastic)

PIE-C210N
Tactile button *1
(Plastic)

PIE-C220N
Tactile button *1
(Plastic)



PIV-C210N
Tactile button *2
(Stainless-steel matte)

PIV-C220N
Tactile button *2
(Stainless-steel matte)

PIJ-C210N
Flat button *2
(Plastic)

PIJ-C220N
Flat button *2
(Plastic)

Hall Buttons



HBE-A210N Boxless
HBE-A210B
Tactile button *1
(Plastic)

HBE-C210N
Tactile button *1
(Plastic)

HBE-C260N Boxless
Tactile button *1
(Plastic)

HBV-C210N
Tactile button *2
(Stainless-steel matte)

HBV-C215N
Tactile button
(Stainless-steel matte)

HBJ-C210N
Flat button *2
(Plastic)

Hall Position Indicators



PIH-D410



PIH-D421 Boxless



PID-D410
(Built into transom panel)

Hall Lanterns



HLH-A10



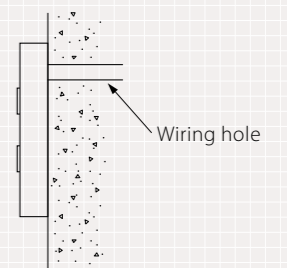
HLV-A10

Cross-section of boxless fixtures

Boxless

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

HBE-A210 and HBE-C260 are not applicable to the top floor. Please consult our local agents for details.



Actual elevator color may differ slightly from those shown.

Notes:
*1: Flat buttons are also available as PIF-A210N / PIF-A220N / PIF-C210N / PIF-C220N / HBF-A210N / HBF-C210N / HBF-C260N.
*2: Please note that flat (non-tactile) buttons and buttons without color contrast cannot be used in countries where regulations such as EN81-70 mandate specific measures for physically disabled passengers.

Features (1/2)

Feature	Description	1C-2BC	2C-2BC	3C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ OPERATIONAL AND SERVICE FEATURES					
Safe Landing (SFL)	If a car has stopped between floors due to some equipment malfunction, the controller checks the cause, and if it is considered safe to move the car, the car will move to the nearest floor at a low speed and the doors will open.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Next Landing (NLX)	If the elevator doors do not open fully at a destination floor, the doors close, and the car automatically moves to the next or nearest floor where the doors will open.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Continuity of Service (COS)	A car which is experiencing trouble is automatically withdrawn from group control operation to maintain overall group performance.	—	Ⓢ	Ⓢ	Ⓢ
Automatic Bypass (ABP)	A fully-loaded car bypasses hall calls in order to maintain maximum operational efficiency.	⓪	Ⓢ	Ⓢ	Ⓢ
Overload Holding Stop (OLH)	A buzzer sounds to alert the passengers that the car is overloaded. The doors remain open and the car will not leave that floor until enough passengers exit the car.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Automatic Hall Call Registration (FSAT)	If one car cannot carry all waiting passengers because it is full, another car will automatically be assigned for the remaining passengers.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Car Call Canceling (CCC)	When a car has responded to the final car call in one direction, the system regards remaining calls in the other direction as mistakes and clears them from the memory.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
False Call Canceling — Automatic (FCC-A)	If the number of registered car calls does not correspond to the car load, all calls are canceled to avoid unnecessary stops.	⓪ ^{#1}	⓪ ^{#1}	⓪ ^{#1}	Ⓢ
False Call Canceling — Car Button Type (FCC-P)	If the wrong car button is pressed, it can be canceled by quickly pressing the same button again twice.	⓪ ^{#1}	⓪ ^{#1}	⓪ ^{#1}	⓪ ^{#1}
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. Please refer to page 6.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Car Light Shut Off — Automatic (CLO-A)	If there are no calls for a specified period, the car lighting will automatically be turned off to conserve energy. Please refer to page 6.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Backup Operation for Group Control Microprocessor (GCBK)	An operation by car controllers which automatically maintains elevator operation in the event that a microprocessor or transmission line in the group controller has failed.	—	Ⓢ	Ⓢ	Ⓢ
Out-of-service-Remote (RCS)	With a key switch on the supervisory panel, etc., a car can be called to a specified floor after responding to all car calls, and then automatically be taken out of service.	⓪	⓪	⓪	⓪
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.	⓪	⓪	⓪	⓪
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.	⓪	⓪	⓪	⓪
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.	⓪	⓪ ^{#2}	⓪	⓪
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.	⓪	⓪	⓪	⓪
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.	⓪	⓪	⓪	⓪
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.	⓪	⓪	⓪	⓪
Independent Service (IND)	Exclusive operation where a car is withdrawn from group control operation for independent use, such as maintenance or repair, and responds only to car calls.	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Variable Traveling Speed Elevator System (VSE) NEW	According to the number of passengers in the car, the car travels faster than the rated speed. Please refer to page 7 and 8.	⓪ ^{#3}	⓪ ^{#3}	⓪ ^{#3}	⓪ ^{#3}
Regenerative Converter (PCNV) NEW	For energy conservation, power regenerated by a traction machine can be used by other electrical systems in the building. Please refer to page 5.	⓪ ^{#4}	⓪ ^{#4}	⓪ ^{#4}	⓪ ^{#4}

Feature	Description	1C-2BC	2C-2BC	3C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ GROUP CONTROL FEATURES					
Expert System and Fuzzy Logic	Artificial expert knowledge, which has been programmed using "expert system" and "fuzzy logic", is applied to select the ideal operational rule which maximizes the efficiency of group control operations.	—	—	Ⓢ	Ⓢ
Psychological Waiting Time Evaluation	Cars are allocated according to the predicted psychological waiting time for each hall call. The rules evaluating psychological waiting time are automatically changed in a timely manner in response to actual service conditions.	—	—	Ⓢ	Ⓢ
Cooperative Optimization Assignment	The system predicts a potential hall call, which could cause longer waiting time. Car assignment is performed considering not only current and new calls but also near-future calls. Please refer to page 11.	—	—	—	Ⓢ
Car Travel Time Evaluation	Cars are allocated to hall calls by considering the number of car calls that will reduce passenger waiting time in each hall and the travel time of each car.	—	—	Ⓢ	Ⓢ
Distinction of Traffic Flow with Neural Networks (NN)	Traffic flows in a building are constantly monitored using neural network technology, and the optimum operational pattern, such as Lunchtime Service or Up Peak Service, is selected or canceled accordingly at the appropriate time.	—	—	—	Ⓢ
Car Allocation Tuning (CAT)	The number of cars allocated or parked on crowded floors are controlled not just according to the conditions on those crowded floors but also the operational status of each car and the traffic on each floor.	—	—	—	Ⓢ
Dynamic Rule-set Optimizer (DRO)	Traffic flows in a building are constantly predicted using neural network technology, and an optimum rule-set for group control operations is selected through real-time simulations based on prediction results. Please refer to page 12.	—	—	—	Ⓢ
Destination Oriented Prediction System (DOAS-S)	When a passenger enters a destination floor at a hall, the hall operating panel indicates which car will serve the floor. The passenger does not need to press a button in the car. Dispersing passengers by destination prevents congestion in the cars and minimizes their waiting and traveling time. (Cannot be combined with the IUP feature.) Please refer to page 12.	—	—	—	⓪ ^{#5}
Peak Traffic Control (PTC)	A floor which temporarily has the heaviest traffic is served with higher priority over other floors, but not to the extent that it interferes with the service to other floors.	—	—	Ⓢ	Ⓢ
Strategic Overall Spotting (SOHS)	To reduce passenger waiting time, cars which have finished service are automatically directed to positions where they can respond to predicted hall calls as quickly as possible.	—	Ⓢ	Ⓢ	Ⓢ
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.	—	—	—	⓪
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.	—	—	⓪	⓪
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.	—	—	⓪	⓪
Forced Floor Stop (FFS)	All cars in a bank automatically make a stop at a predetermined floor on every trip without being called.	⓪	⓪	⓪	⓪
Main Floor Parking (MFP)	An available car always parks on the main (lobby) floor with the doors open to reduce passenger waiting time.	⓪	⓪	⓪	⓪
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. Please refer to page 6.	—	—	⓪	Ⓢ
Energy-saving Operation — Allocation Control (ESO-W)	The system selects the elevator that best balances operational efficiency and energy consumption according to each elevator's current location and passenger load as well as predicted congestion levels throughout the day. Please refer to page 6.	—	—	—	Ⓢ
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.)	—	—	⓪ ^{#2}	⓪

Notes: • 1C-2BC (1-car selective collective) - Standard, 2C-2BC (2-car selective collective) - Optional
 ΣAI-22 (3 to 4-car group control system) - Optional, ΣAI-2200C (3 to 8-car group control system) - Optional
 • Ⓢ = Standard ⓪ = Optional — = Not applicable
 • #1: Standard feature when the rated capacity is from 1600kg to 2500kg.
 • #2: Please consult our local agents for the production terms, etc.
 • #3: The Variable Traveling Speed Elevator System (VSE) is applicable to the elevators with a rated speed of 1.0m/sec and the rated capacity of 630kg to 1600kg.
 • #4: The Regenerative Converter (PCNV) is applicable to the elevators with the capacity of 630kg to 1600kg.
 • #5: When DOAS-S is applied, SR or Multi-Beam Door Sensor should be installed.
 Please consult our local agents when DOAS-S hall operating panels are installed on all floors.

Features (2/2)

Feature	Description	1C-2BC	2C-2BC	3C to 4C ΣAI-22	3C to 8C ΣAI-2200C
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	⊙
Light-load Car Priority Service (UCPS)	When traffic is light, empty or lightly-loaded cars are given higher priority to respond to hall calls in order to minimize passenger travel time. (Cannot be combined with hall position indicators.)	—	—	⊙ #1	⊙
Special Car Priority Service (SCPS)	Special cars, such as observation elevators and elevators with basement service, are given higher priority to respond to hall calls. (Cannot be combined with hall position indicators.)	—	—	⊙ #1	⊙
Congested-floor Service (CFS)	The timing of car allocation and the number of cars to be allocated to floors where meeting rooms or ballrooms exist and the traffic intensifies for short periods of time are controlled according to the detected traffic density data for those floors.	—	—	⊙	⊙
Bank-separation Operation (BSO)	Hall buttons and the cars called by each button can be divided into several groups for independent group control operation to serve special needs or different floors.	—	⊙ #1	⊙	⊙
VIP Operation (VIP-S)	A specified car is withdrawn from group control operation for VIP service operation. When activated, the car responds only to existing car calls, moves to a specified floor and parks there with the doors open. The car will then respond only to car calls.	—	⊙ #1	⊙	⊙
Lunchtime Service (LTS)	During the first half of lunchtime, calls for a restaurant floor are served with higher priority, and during the latter half, the number of cars allocated to the restaurant floor, the allocation timing for each car and the door opening and closing timing are all controlled based on predicted data.	—	—	⊙	⊙
Main Floor Changeover Operation (TFS)	This feature is effective for buildings with two main (lobby) floors. The floor designated as the "main floor" in a group control operation can be changed as necessary using a manual switch.	⊙	⊙	⊙	⊙

■ DOOR OPERATION FEATURES

Door Sensor Self-diagnosis (DODA)	Failure of non-contact door sensors is checked automatically, and if a problem is diagnosed, the door close timing is delayed and the closing speed is reduced to maintain elevator service and ensure passenger safety.	⊙	⊙	⊙	⊙
Automatic Door Speed Control (DSAC)	Door load on each floor, which can depend on the type of hall door, is monitored to adjust the door speed, thereby making the door speed consistent throughout all floors.	⊙	⊙	⊙	⊙
Automatic Door-open Time Adjustment (DOT)	The time doors are open will automatically be adjusted, depending on whether the stop was called from the hall or the car, to allow smooth boarding of passengers or loading of baggage.	—	—	—	⊙
Reopen with Hall Button (ROHB)	Closing doors can be reopened by pressing the hall button corresponding to the traveling direction of the car.	⊙	⊙	⊙	⊙
Repeated Door-close (RDC)	Should an obstacle prevent the doors from closing, the doors will repeatedly open and close until the obstacle is cleared from the doorway.	⊙	⊙	⊙	⊙
Extended Door-open Button (DKO-TB)	When the button inside a car is pressed, the doors will remain open longer to allow loading and unloading of baggage, a stretcher, etc.	⊙	⊙	⊙	—
Door Nudging Feature — With Buzzer (NDG)	A buzzer sounds and the doors slowly close when they have remained open for longer than the preset period. With AAN-B or AAN-G, a beep and voice guidance sound instead of the buzzer.	⊙	⊙	⊙	⊙
Door Load Detector (DLD)	When excessive door load has been detected while opening or closing, the doors immediately reverse.	⊙	⊙	⊙	⊙
Safety Door Edge (SDE)	One side (CO, 2S doors)	⊙ #2	⊙ #2	⊙ #2	⊙ #2
	Both sides (CO doors only)	⊙ #2	⊙ #2	⊙ #2	⊙ #2
Safety Ray (SR)	1-beam	⊙ #3	⊙ #3	⊙ #3	⊙ #3
	2-beam	⊙	⊙	⊙	⊙
Electronic Doorman (EDM)	Door open time is minimized using safety ray(s) or multi-beam door sensors that detect passengers boarding or exiting.	⊙	⊙	⊙	⊙
Multi-Beam Door Sensor	Multiple infrared-light beams cover a door height of approximately 1800mm to detect passengers or objects as the doors close. (Cannot be combined with the SR or MBSS feature.)	⊙	⊙	⊙	⊙
Multi-Beam Door Sensor — Signal Type (MBSS)	Multiple infrared-light beams cover a door height of approximately 1800mm to detect passengers or objects as the doors close. Additionally, LED lights on the door edge will indicate the door opening/closing and the presence of an obstacle between the doors. (Cannot be combined with any of the following features: SDE, SR or multi-beam door sensor.)	⊙ #4	⊙ #4	⊙ #4	⊙ #4
Hall Motion Sensor (HMS)	Infrared-light is used to scan a 3D area near the open doors to detect passengers or objects.	⊙	⊙	⊙	⊙

Feature	Description	1C-2BC	2C-2BC	3C to 4C ΣAI-22	3C to 8C ΣAI-2200C
■ SIGNAL AND DISPLAY FEATURES					
Sonic Car Button — Click Type (ACB)	A click-type car button which emits electronic beep sounds when pressed to indicate that the call has been registered.	⊙	⊙	⊙	⊙
Car Arrival Chime — Car or Hall (AECC/AECH)	Electronic chimes sound to indicate that a car will soon arrive. (The chimes are mounted either on the top and bottom of the car, or in each hall.)	⊙	⊙	⊙	⊙ (Each floor)
Flashing Hall Lantern (FHL)	A hall lantern, which corresponds to a car's service direction, flashes to indicate that the car will soon arrive.	⊙	⊙	⊙	⊙
Immediate Prediction Indication (AIL)	When a passenger has registered a hall call, the best car to respond to that call is immediately selected, the corresponding hall lantern lights up and a chime sounds once to indicate which doors will open.	—	—	⊙	⊙
Second Car Prediction (TCP)	When a hall is crowded to the extent that one car cannot accommodate all waiting passengers, the hall lantern will light up to indicate the next car to serve the hall.	—	—	—	⊙
Basic Announcement (AAN-B)	A synthetic voice (and/or buzzer) alerts passengers inside a car that elevator operation has been temporarily interrupted by overloading or a similar cause. (Voice available only in English.)	⊙ #2	⊙ #2	⊙ #2	⊙
Voice Guidance System (AAN-G)	Information on elevator service such as the current floor or service direction is given to the passengers inside a car. (Voice guidance available only in English.)	⊙	⊙	⊙	⊙
Auxiliary Car Operating Panel (ACS)	An additional car control panel which can be installed for large-capacity elevators, heavy-traffic elevators, etc.	⊙	⊙	⊙	⊙
Inter-communication System (ITP)	A system which allows communication between passengers inside a car and the building personnel.	⊙	⊙	⊙	⊙
LCD Position Indicator (CID-S)	This 5.7-inch LCD for car operating panels shows the date and time, car positions, travel direction and elevator status messages.	⊙	⊙	⊙	⊙

■ EMERGENCY OPERATIONS AND FEATURES

Mitsubishi Emergency Landing Device (MELD)	Upon power failure, a car equipped with this function automatically moves and stops at the nearest floor using a rechargeable battery, and the doors open to facilitate the safe evacuation of passengers. (Maximum allowable floor-to-floor distance is 10 meters.)	⊙	⊙	⊙	⊙
Operation by Emergency Power Source — Automatic/Manual (OEPS)	Upon power failure, predetermined car(s) uses the building's emergency power supply to move to a specified floor, where the doors then open to facilitate the safe evacuation of passengers. After all cars have arrived, predetermined car(s) will resume normal operation.	⊙	⊙	⊙	⊙
Fire Emergency Return (FER)	Upon activation of a key switch or a building's fire sensors, 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 operations.	⊙	⊙	⊙	⊙
Earthquake Emergency Return (EER-P/EER-S)	Upon activation of primary and/or secondary wave seismic sensors, all cars stop at the nearest floor, and park there with the doors open to facilitate the safe evacuation of passengers.	⊙	⊙	⊙	⊙
Supervisory Panel (WP)	Each elevator's status and operation can be remotely monitored and controlled through a panel installed in a building's supervisory room, etc.	⊙	⊙ #1	⊙	⊙ #1
MeEye (WP-W) Mitsubishi Elevators & Escalators Monitoring and Control System	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.	⊙	⊙	⊙	⊙
Emergency Car Lighting (ECL)	Car lighting which turns on immediately when power fails, providing a minimum level of lighting within the car. (Choice of dry-cell battery or trickle-charge battery.)	⊙	⊙	⊙	⊙

- Notes: • 1C-2BC (1-car selective collective) - Standard, 2C-2BC (2-car selective collective) - Optional
 • ΣAI-22 (3 to 4-car group control system) - Optional, ΣAI-2200C (3 to 8-car group control system) - Optional
 • ⊙ = Standard ⊙ = Optional — = Not applicable
 • #1: Please consult our local agents for the production terms, etc.
 • #2: Standard feature when the rated capacity is from 1600kg to 2500kg.
 • #3: Optional feature when the rated capacity is from 1600kg to 2500kg.
 • #4: Not available when the rated capacity is from 1600kg to 2500kg.

Basic Specifications

Horizontal Dimensions <1-Door 1-Gate (1D1G)> Please refer to page 37 for the horizontal dimensions for 1-Door 2-Gate.

Code number	Number of persons	Rated capacity (kg)	Door type	Counterweight position	Car internal dimensions (mm) AAxBB	Entrance width (mm) JJ	Minimum hoistway dimensions (mm) XxY
P8	8	630	CO	Side	1100x1400	900: Standard	1950x1720
			2S			800: Optional	1800x1720
P11	11	825	CO		1350x1400	900: Standard	2025x1720
			2S			800: Optional	1925x1720
P14 Wide type	14	1050	CO		1600x1400	900: Standard	1900x1800
			2S			1100: Optional	1950x1800
P14 Deep type	14	1050	CO	1100x2100	1100: Standard	2415x1720	
			2S		900: Optional	2215x1720	
P17	17	1275	CO	Rear	2000x1400	1100	2490x1975
			2S	Side	1200x2300		2065x2670
P21	21	1600	CO	Rear	2100x1600	1200	2590x2175
			2S	Side	1400x2400		2215x2770
P24	24	1800	CO	Rear	2350x1600	1100	2900x2290
			2S		2350x1700		2900x2390
P27	27	2025	CO	Side	1500x2700	1300	2570x3080
			2S		1300		2520x3150
P30	30	2250	CO	Rear	2350x1900	1200	2900x2590
			2S		1100		2820x3080
P33	33	2500	CO	Side	1800x2700	1300	2820x3150
			2S		1300		2820x3150

- [Terms of the table]
- The contents of this table are applied to standard specification only. Please consult our local agents for other specifications.
 - Rated capacity is calculated at 75kg per person, as required by the EN81-1.
 - CO: 2-panel center opening doors, 2S: 2-panel side sliding doors.
 - Minimum hoistway dimensions (X and Y) are after waterproofing of pit and do not include plumb tolerance.
 - Minimum hoistway dimensions (X and Y) should be increased if fireproof landing door is required.

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

Rated speed (m/sec)	Rated capacity (kg)	Maximum travel (m)	Maximum number of floors	Minimum overhead (mm) OH		Minimum pit depth (mm) PD	Minimum floor height (mm)
				1D1G	1D2G		
1.0	~1050	60	22	3600	1300	2500	
	~1600						4100
	~1800			4220	—		
	~2025				4450		1630
	~2250				—		1730
~2500	4450						
1.6	~1050	80	30	3750	1400		
	~1600	70	26	4250	1650		
	~1800	60	22	4380	—		
	~2025				4610		1730
	~2250				—		
~2500	4610						
1.75	~1050	80	30	3850	1450		
	~1600	70	26	4350	1700		
	~1800	60	22	4440	—		
	~2025				4670	1770	
	~2250				—		
~2500	4670						

- [Terms of the table]
- The contents of this table are applied to standard specification only. Please consult our local agents for other specifications.
 - Minimum overhead (OH) and minimum pit depth (PD) should be increased when the travel is over 30m.
 - Some specifications require more than 2500mm as a minimum floor height. Please consult our local agents if the floor height is less than entrance height HH + 700mm, and the elevator is 1-Door 2-Gate.

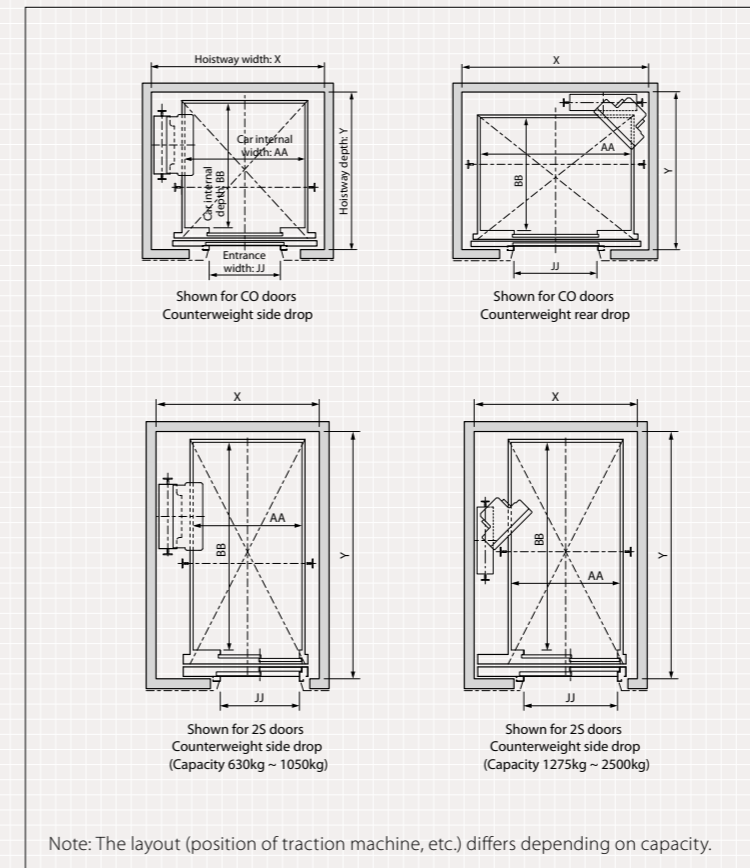
Specifications for Variable Traveling Speed Elevator System (Optional)

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

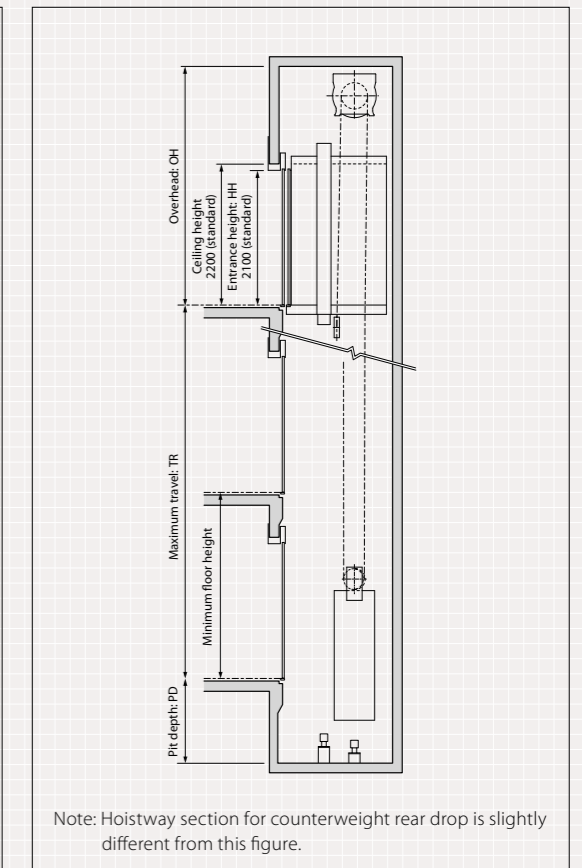
Rated speed (m/sec)	Speeds (m/sec)	Rated capacity (kg)	Minimum overhead (mm) OH	Minimum pit depth (mm) PD
1.0	1.0/1.25/1.5/1.6	~1050 ~1600	3750 4250	1400 1650

- [Terms of the table]
- The Variable Traveling Speed Elevator System (VSE) is applicable to the elevators with a rated speed of 1.0m/sec and the rated capacity of 630kg to 1600kg.
 - Except minimum overhead and pit depth dimensions (OH and PD), specifications shown in tables, "Horizontal Dimensions" and "Vertical Dimensions", on the page 35 and 37 are applicable to the Variable Traveling Speed System.

Hoistway Plan



Hoistway Section



Applicable Standards

The ELENESSA complies with the EN81-1 code. For details of compliance with other national regulations, please consult our local agents.

Basic Specifications

Important Information on Elevator Planning

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

Code number	Number of persons	Rated capacity (kg)	Door type	Counterweight position	Car internal dimensions (mm) AAxBB	Entrance width (mm) JJ	Minimum hoistway dimensions (mm) XxY	
P8	8	630	CO	Side	1100x1400	900: Standard	1965x1860	
			2S			800: Optional	1865x1860	
P11	11	825	CO			1350x1400	900: Standard	1715x1982
			2S				800: Optional	1650x1982
P14 Wide type	14	1050	CO		1600x1400	900: Standard	2090x1860	
			2S			800: Optional	1925x1860	
CO						900: Standard	1900x1982	
P14 Deep type			1100: Optional			1965x1982		
	2S	1100: Standard	2415x1860					
P17		17	1275		CO	1100x2100	900: Standard	2215x1860
	800: Optional						1965x2560	
P21	21	1600	CO		1200x2300	900: Standard	1865x2560	
						800: Optional	1715x2682	
P27	27	2025	CO		1500x2600	1100	2065x2882	
			2S	1200		2215x2982		
P33	33	2500	CO	1800x2600	1100	2570x3154		
			2S		1300	2520x3298		
						1100	2820x3154	
						1300	2820x3298	

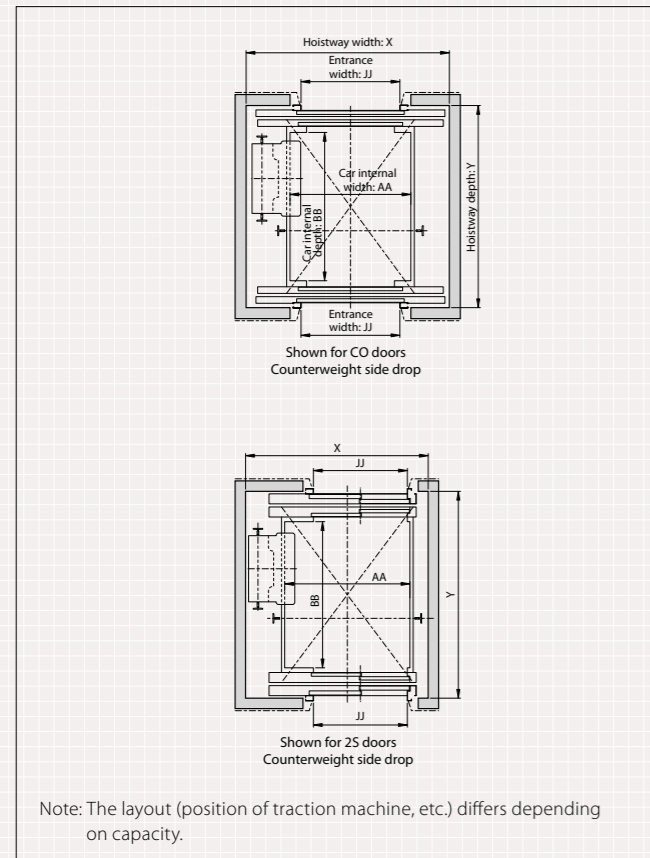
[Terms of the table]
 • The contents of this table are applied to standard specification only. Please consult our local agents for other specifications.
 • Rated capacity is calculated at 75kg per person, as required by the EN81-1.
 • CO: 2-panel center opening doors, 2S: 2-panel side sliding doors.
 • Minimum hoistway dimensions (X and Y) are after waterproofing of pit and do not include plumb tolerance.
 • Minimum hoistway dimensions (X and Y) should be increased if fireproof landing door is required.

Work Not Included in Elevator Contract

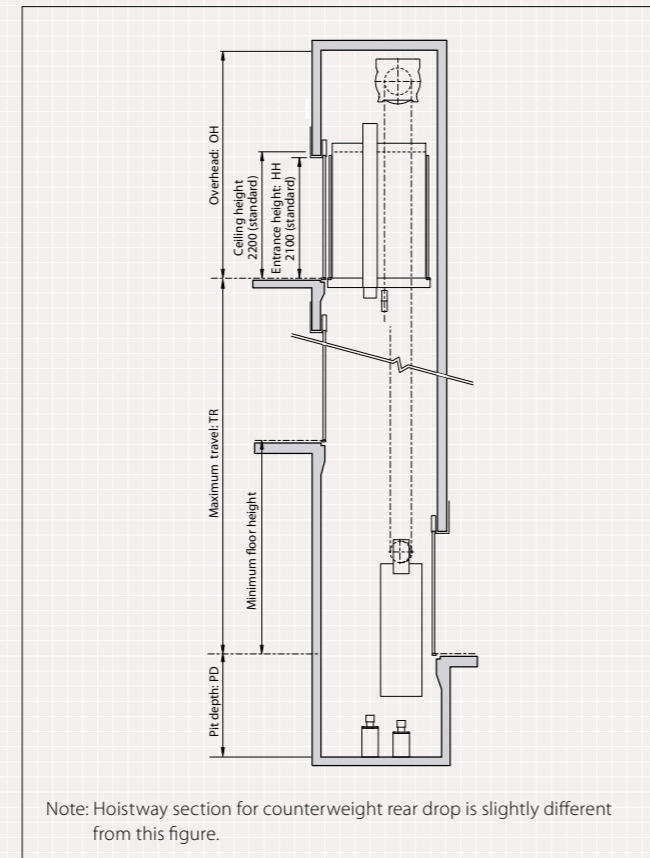
- The following items are excluded from Mitsubishi Electric's elevator installation work, and are therefore the responsibility of the building owner or general contractor:
- Architectural finishing of the walls and floors in the vicinity of the entrance hall after installation has been completed.
 - Construction of an illuminated, ventilated and waterproofed elevator hoistway.
 - A ladder to the elevator pit.
 - Provision for cutting the necessary openings and joists.
 - Separate beams, when the hoistway dimensions markedly exceed the specifications, and intermediate beams when two or more elevators are installed.
 - All other work related to building construction.
 - The power-receiving panel and the electrical wiring for illumination, plus the power from them to the electrical room.
 - The laying of conduits and wiring between the elevator pit and the terminating point for the devices installed outside the hoistway, such as the emergency bell, intercom, monitoring and security devices, etc.
 - The power consumed in installation work and test operations.
 - The test provision and subsequent alteration as required, and eventual removal of the scaffolding as required by the elevator contractor, and any other protection of the work as may be required during the process.
 - The provision of a suitable, locked space for the storage of elevator equipment and tools during elevator installation.
 - The security system, such as a card reader, connected to Mitsubishi Electric's elevator controller, when supplied by the building owner or general contractor.

* Work responsibilities in installation and construction shall be determined according to local laws. Please consult our local agents for details.

Hoistway Plan



Hoistway Section



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. 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.

Applicable Standards

The ELENESSA complies with the EN81-1 code. For details of compliance with other national regulations, please consult our local agents.

Please refer to page 36 for the vertical dimensions and the specifications for the Variable Traveling Speed System Elevator.



Mitsubishi Elevator Inazawa Works has acquired ISO 9001 certification by the International Standards Organization (ISO) based on a review of quality management. The company has also acquired environmental management system standard ISO 14001 certification.