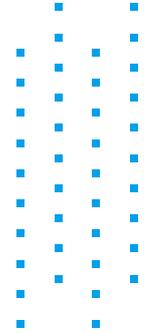
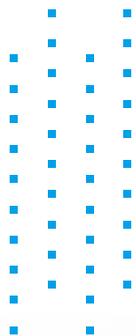


GROUP CONTROL SYSTEM



Smart & User Friendly

ΣAI-2200C



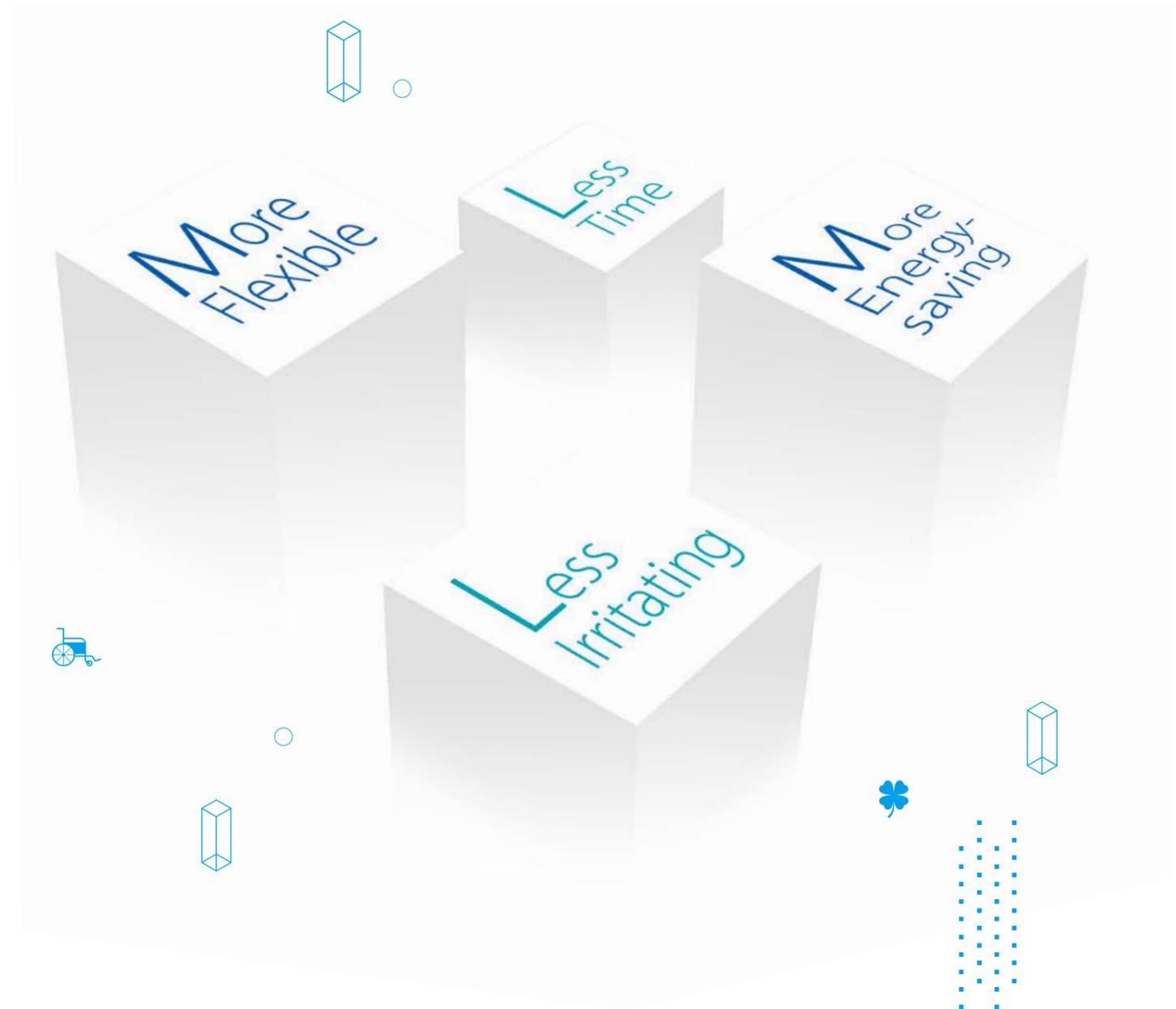
# Smart & User Friendly

# ΣAI-2200C

## Intuitive & Comfortable

Comfortable elevator operation and ride under ever-changing usage conditions – that's the concept realized with the ΣAI-2200C group control system from Mitsubishi Electric. Incorporating the latest advancements in fuzzy-logic, this system utilizes intuitive control to provide smooth operation and a stress-free ride. The moment a hall call button is pressed, the optimal car to respond to the call is selected based on factors such as waiting time, travel time, current car occupancy and energy consumption, and the Immediate Prediction Indication feature is simultaneously activated to reduce user irritation generated when waiting for the car to arrive.

Behind all this are Mitsubishi Electric's cutting-edge technologies, designed to add vitality and dynamism to building functionality.



# 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.

Quality  
in Motion™

Comfort

Efficiency

Ecology

Safety

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

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

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

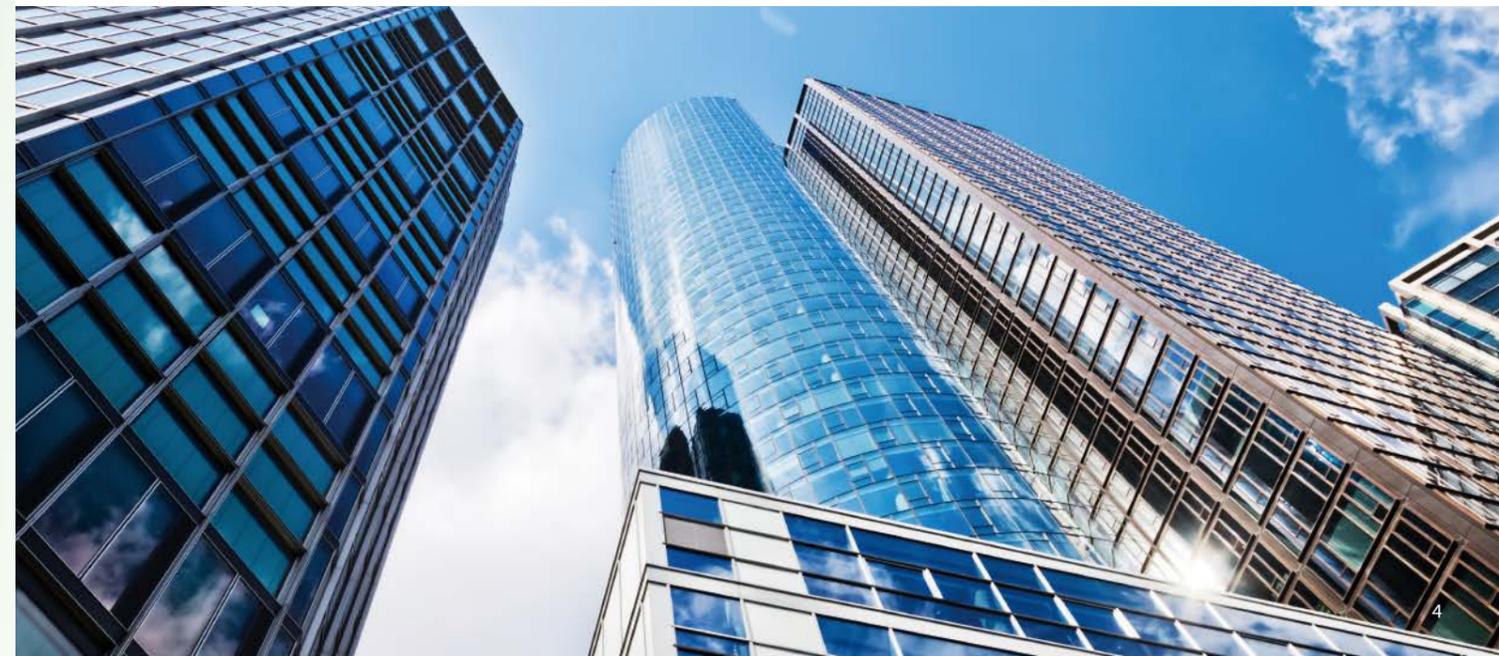


# Milestones of Group Control Technologies

ΣAI-2200C is an advanced group control system which is composed of many group control features. With these features, it improves average waiting time.

Year	1980		1990		2000	2010	2014
Group control system	OS-2100	OS-2100C	AI-2100	AI-2100N	ΣAI-2200	ΣAI-2200C	
Standard group control features						Dynamic Rule-set Optimizer	Individualized Car Allocation
						Distinction of Traffic Flow with Neural Networks	Energy-saving Operation – Allocation Control
						Car Allocation Tuning	Cooperative Optimization Assignment
						Fuzzy Logic	
						Expert System	
						Learning Function	
Average waiting time* (index)	100	85	72	58	50		45

\*The average time until the assigned car arrives at the hall after a passenger presses a hall button.



# ΣAI-2200C — A Comfortable Elevator Journey in Today's Complex Buildings

## Key Benefits of ΣAI-2200C



### Less travel time

In addition to reduction of waiting time, this group control system reduces travel time (from boarding a car to arriving at a destination floor) by individualized car allocation.

### More flexible car allocation

Traffic conditions in a building change constantly. This group control system has a function to allocate the cars flexibly in response to the traffic conditions by sending the cars to a congested floor during periods of heavy traffic.

### Making elevators more friendly for all

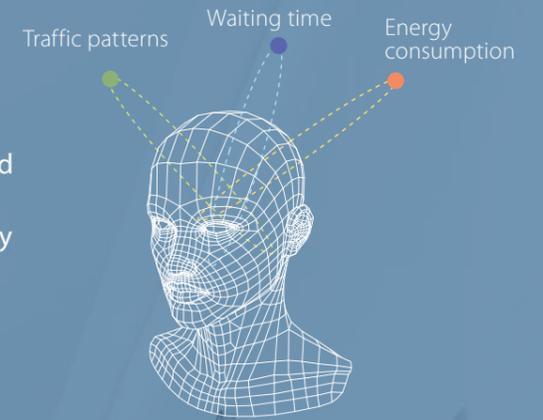


### More building space

Destination Oriented Allocation System (DOAS) increases handling capacity. Compared to the conventional control system, DOAS allows reduction in car size and hoisting area. The space saved can be used effectively for other building facilities.

## Total Evaluation Factors for Best Car Allocation

- Your waiting time or an increase in waiting time throughout the building
- Expected travel time
- The possibility of a car being bypassed due to a full load
- The possibility of long waits caused by future calls
- Energy consumption



### Determine the optimum car

Please refer to video library on our website for details.

### Less irritating

This group control system evaluates not only actual waiting time but also psychological waiting time by assessing the probability of full-load bypass and prediction error, etc. The optimal car allocation based on the evaluation minimizes irritation of all passengers.

### Less waiting time

ΣAI-2200C reduces not only passengers' waiting time but also long-wait. The longer passengers wait for a car, the more they become irritated.



### More energy-saving

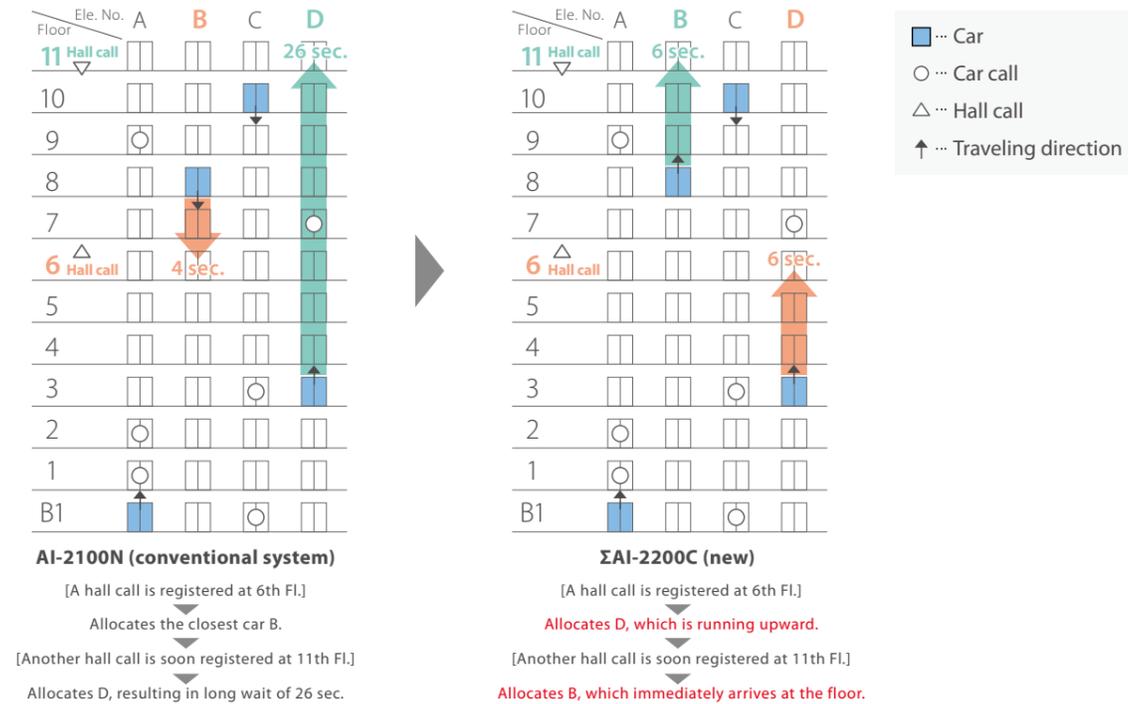
With Mitsubishi Electric's smart control technology, when a passenger presses a hall call button, the system selects the elevator that best balances operational efficiency and energy consumption. Selection is based on each elevator's potential energy consumption according to its current location and passenger load.

# Cutting-edge Technologies for Allocation Control

## Cooperative Optimization Assignment

### Forecasting a near-future hall call to reduce long waits

When a hall call is registered, the algorithm predicts 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.



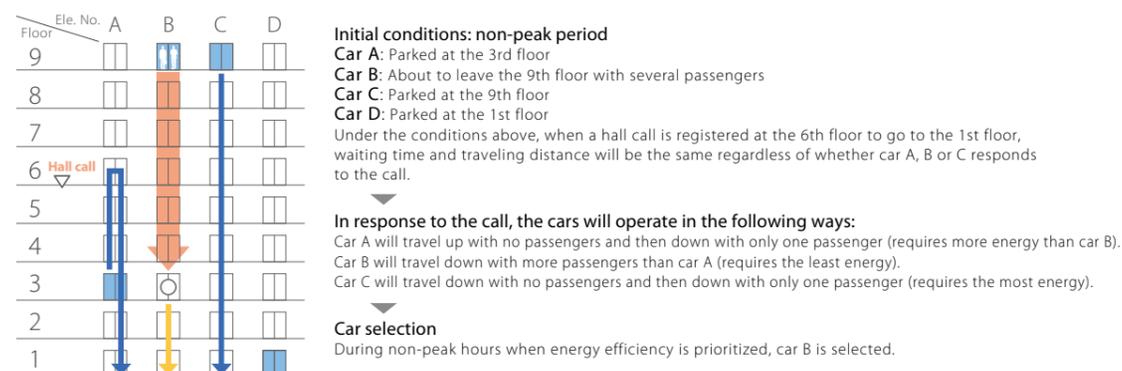
## Energy-saving Operation — Allocation Control (ESO-W)

### Maximizing operational efficiency and minimizing energy consumption

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.

Car allocation that maximizes operational efficiency does not necessarily translate to energy efficiency. A car uses energy efficiently when it travels down with a heavy load, or up with a light load. Accordingly, if multiple cars have the same traveling distance, this system chooses the car that requires the least energy.

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.



## Dynamic Rule-set Optimizer (DRO)

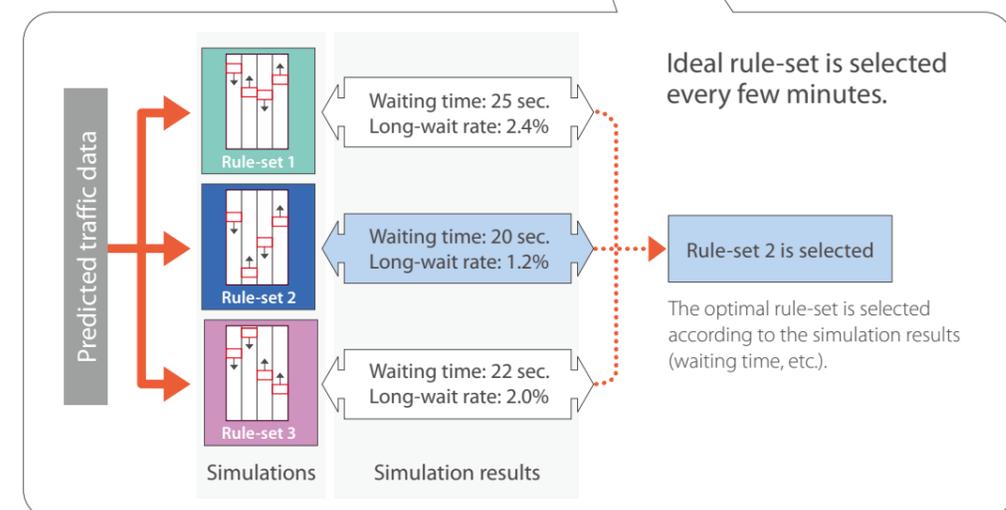
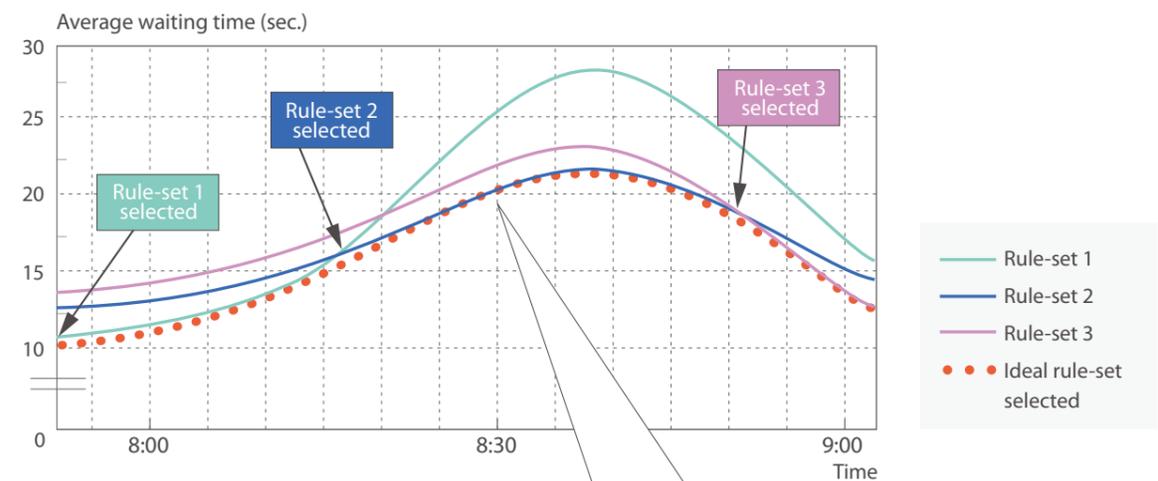
### Selects optimum car allocation through "rule-set" simulation

The neural network technology has enabled the system to continually and accurately predict the passenger traffic within intervals of several minutes. A high-speed reduced instruction set computer (RISC) runs real-time simulations using multiple rule-sets and the predicted passenger traffic to select the rule-set which optimizes transport efficiency.

### Simulation example and performance results of each rule-set

The diagram below shows an example during a morning up peak time. An ideal rule-set is selected every few minutes according to the predicted traffic conditions.

### Performance results of each rule-set (average waiting time)



# User-friendly Solutions

## Immediate Prediction Indication (AIL)

### Easing stress of waiting at elevator hall

When a passenger has registered a hall call, the designated car is selected and the corresponding hall lantern immediately lights up. To inform the passenger of the car arrival, the hall lantern flashes on and off for three seconds before the arrival.



#### Without AIL

Passengers wait for cars wondering which car will arrive first.

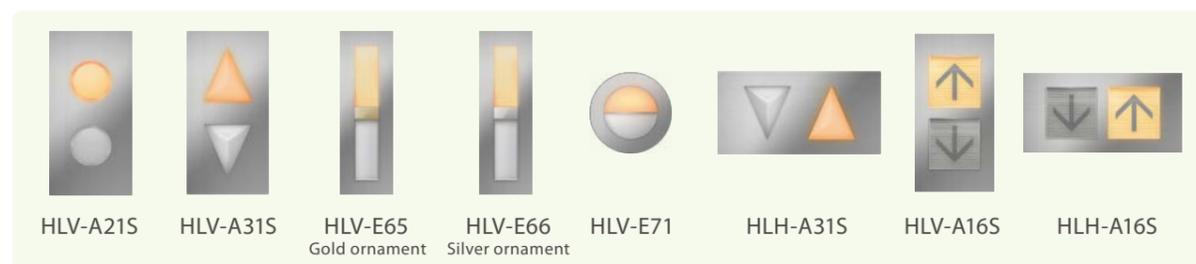


#### With AIL

As passengers can see which car arrives next, they have enough time to reach the car even when carrying large baggage.



### Hall lanterns **LED**



Notes  
\*1: This feature is also applicable to operation systems other than ΣAI-2200C.

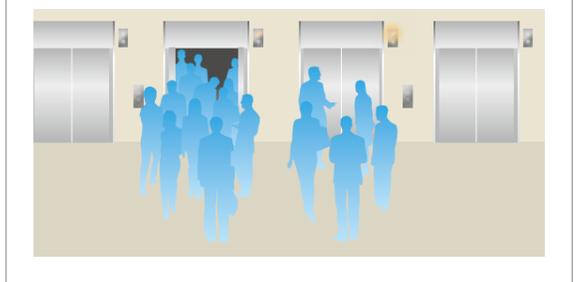
## Second Car Prediction (TCP)

### Reducing passenger congestion

Passengers tend to gather around the allocated car especially in heavy traffic like the morning time in an office building.



The hall lantern of the second service car also lights up to disperse the passengers for smooth boarding.



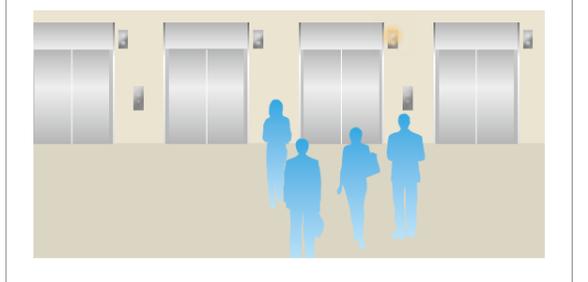
## Automatic Hall Call Registration (FSAT)\*1

### Enhancing user convenience

If a passenger cannot get into an allocated car due to a full load, he/she needs to press the hall button again.



If a fully loaded car leaves a floor, a hall call is registered automatically.



## Car Arrival Chime — Hall (AECH)\*1

### Signaling car arrival by sound

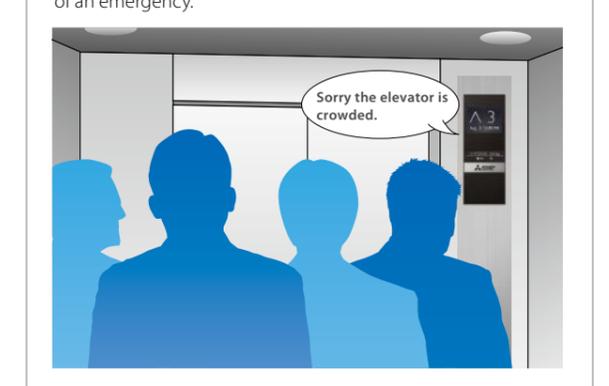
An electronic chime at the elevator hall indicates that a car will soon arrive.



## Voice Guidance System (AAN-G)\*1

### Reassuring passenger safety

Voice guidance supports passenger safety and peace of mind when entering and exiting a car, in crowded cars and at the time of an emergency.



# Efficiency Oriented Solution - DOAS

## Destination Oriented Allocation System (DOAS)

Passengers register their destination floor using a hall operating panel before entering the elevator, eliminating the need to press the button inside the car. Furthermore, dispersing passengers by destination prevents congestion in cars and minimizes waiting and travel time.



## Key Benefits of DOAS

### Enhanced Convenience

#### At elevator halls

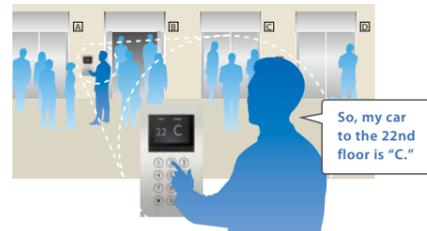
##### Without DOAS

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.



#### In Cars

##### Without DOAS

Passengers need to press the destination floor button on a car operating panel. In a busy car, they have to fight through a crowd of bodies to reach the button.



##### With DOAS

A destination floor is registered when passengers enter it on the hall operating panel. Relax and enjoy the ride in the car. The car skips unnecessary stops and quickly takes passengers to the destination floor.



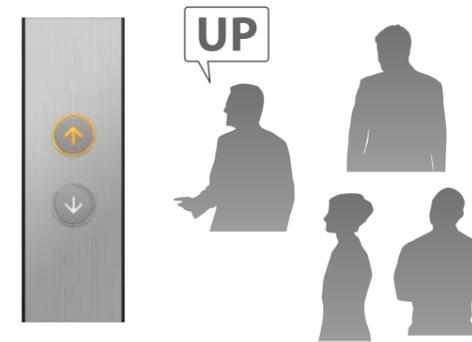
## Individualized Car Allocation Based on Travel Time

This system evaluates passengers' travel time from registration of a destination floor at a hall to arrival at the destination floor and predicts their waiting time. As this system allocates an optimum car to each passenger on the basis of the predicted waiting time, passengers' travel time can be reduced.

### Evaluating travel time

#### Without DOAS

Since not all passengers press an up or down button at the hall, the system cannot evaluate their waiting time and travel time.



#### With DOAS

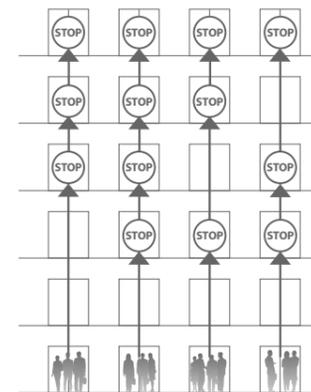
Since all passengers register the destination floor on the hall operating panel, the system can evaluate travel time of each passenger and allocate the optimum car for the passenger.



### Reducing travel time

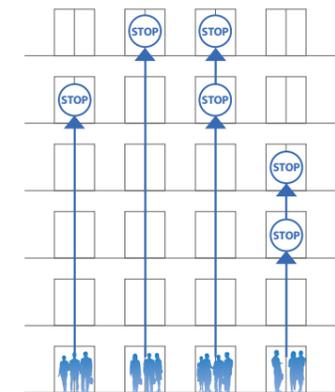
#### Without DOAS

Cars make stops at every selected floor because destination floor is not considered for car allocation.



#### With DOAS

The individualized car allocation based on the destination floors leads to shorter travel time and fewer intermediate stops.



### Improvement

Compared to conventional operation systems without DOAS, this system reduces the average waiting time at the time of congestion and long-wait.

#### Average waiting time at the time of congestion



#### Long-wait rate (60 seconds or longer)



# Efficiency Oriented Solution - DOAS

## DOAS Integrated with Security Gate\*

### Extended feature for more security

\*Please consult our local agents for details.

The destination floor can be registered automatically after passing a card over a card reader at the security gate entrance. DOAS integrated with security gates provides a seamless journey and enhances security in the building.



### 1. Reducing congestion at elevator halls

Our elevator group control system is linked to an access control system, enabling congestion during peak use hours to be reduced through efficient authorization at security gates and optimum car allocation.

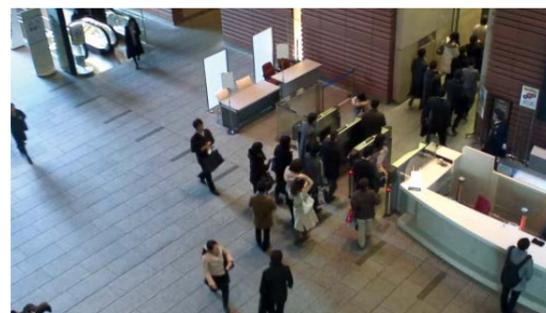
Robust security



Improve operation efficiency



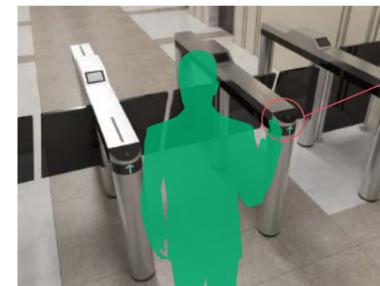
Without DOAS



With DOAS integrated with security gate

### 2. Smooth operation

#### 1. Pass a card over the card reader at the security gate.

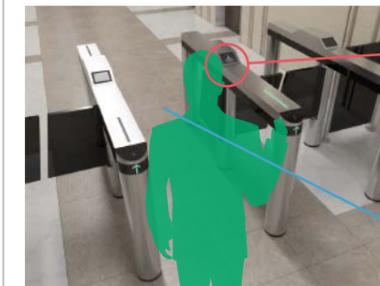


Card reader



Security gates screen out suspicious persons and block unauthorized access to the elevator hall.

#### 2. Check the elevator number displayed on the indicator.



LCD indicator

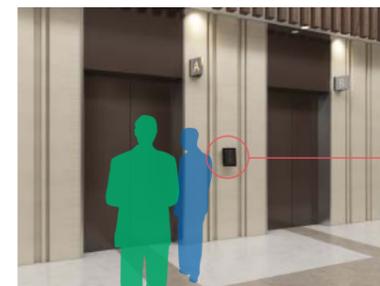


An assigned elevator number appears.

The gate opens after card authentication.

The assigned car is dispatched almost simultaneously with completion of card authentication, reducing passenger waiting time at the elevator hall.

#### 3. Proceed to the entrance of the assigned car.

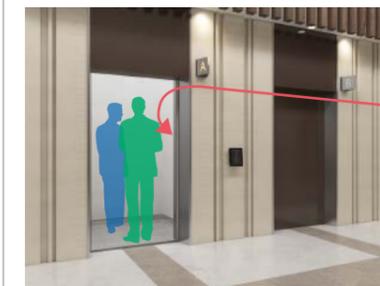


Hall operating panel



A hall call has already been registered. The passenger does not need to press a hall button. If the passenger forgets or misses the assigned car, a call can be registered again using the hall operating panel.

#### 4. Enter the car when the doors open.



Car operating panel



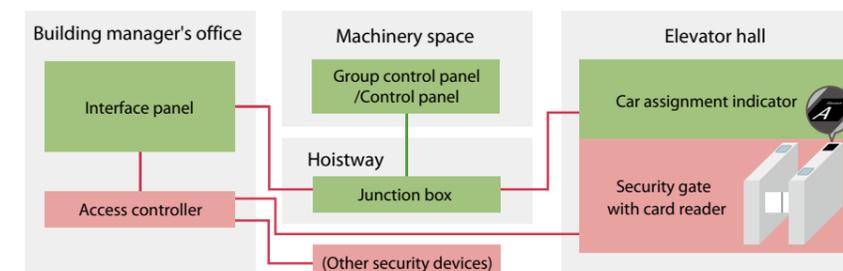
The destination floor has already been registered. The passenger does not need to press a floor button in the car.

### 3. Integrating security cards

The ID card for the elevator can be combined with a building security pass, such as an employee ID card, to allow movement in the building using a single card. This integration creates a more convenient building security environment.



### System configuration



Device	Supplier
	Mitsubishi Electric
	Security system supplier

Cable	Supplier
	Mitsubishi Electric
	Security system supplier

Please refer to our brochure regarding elevator security solutions for details. Close collaboration with the security system supplier is required.

# Efficiency Oriented Solution - DOAS

## DOAS with user support features\*

### Extended features for more supportive operation

\*Please consult our local agents for details.

Universally designed signal fixtures in elevator halls make elevators more accessible by all people, regardless of their age or ability.



### 1. Recommended equipment

#### Touchscreen hall operating panel



The intuitive LCD touchscreen is highly visible to all, including those who have color vision impairment.

#### Triangular prism hall lantern



The distinctive protruding shape enables excellent visibility from the side.

#### Elevator number plate with braille



The plate is mounted at an optimum height for braille readers and can be recognized easily by children and wheelchair users.

#### Car entrance destination floor indicator

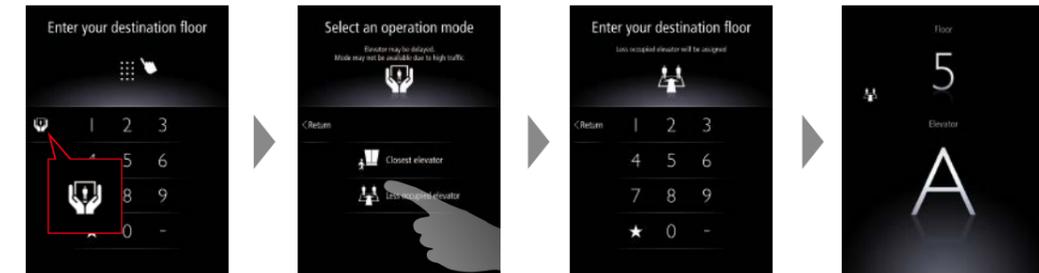


Passengers can check the destination floors when getting into a car.

### 2. Passenger support features

#### Car selection

This function enables passengers, especially those who have difficulty with mobility or require space such as wheelchair users, to specify the closest or relatively uncrowded car using the panel screen.



1. Press the function icon.

2. Choose a car selection method (closest or less occupied car).

3. Register the destination floor.

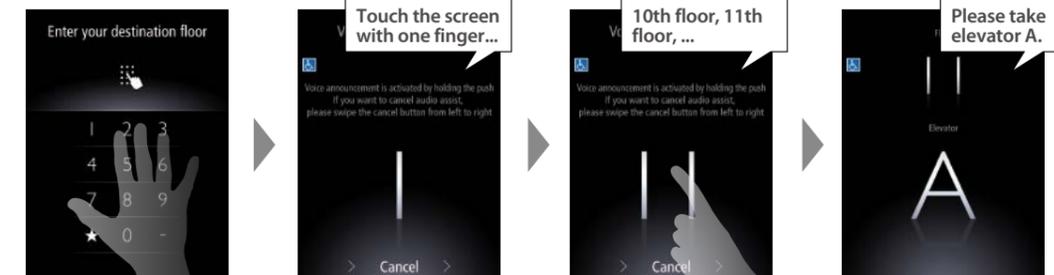
4. The desired car is assigned.

#### Audio guidance

Audio guidance assists visually impaired passengers to use the operating panel without difficulty.

#### 1. Voice guidance mode

Voice guidance through the hall operating panel gives step-by-step instructions on how to register a destination floor.



1. Continuously press down on the touchscreen or press the accessibility button.

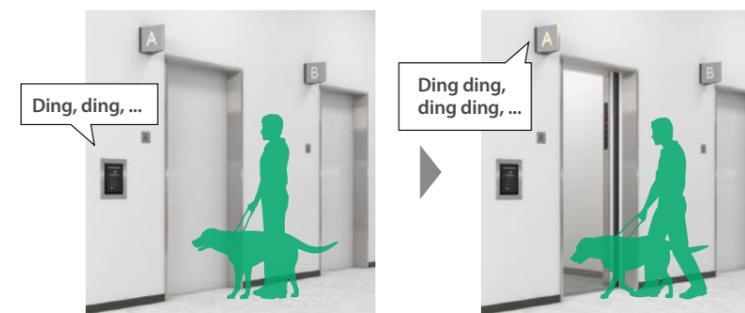
2. Voice guidance starts. Move the finger slowly on the screen to start announcement of service floors.

3. When you hear the desired floor, touch the screen to register the floor.

4. The assigned car is announced.

#### 2. Navigating sound

Audible signals are emitted from the hall operating panel and the hall lantern to guide passengers to the proper elevator car.



1. Hall operating panel continuously emits chime to lead passengers to the panel.

2. After a destination floor is registered, the hall lantern is activated and emits a chime to guide passengers to the proper car entrance.

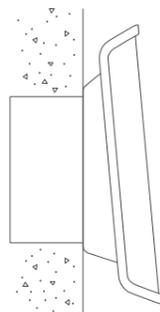
In addition to the navigating chime, providing a tactile guide board and tactile blocks (to be both supplied by owner) in the elevator hall, and handrails and mirror in the car are recommended. Please consult our local agents for details.

# Efficiency Oriented Solution - DOAS

Signal fixtures for DOAS\*1

Hall operating panels — 10.4-inch touchscreen

## ■ Surface mounted type



HSP-A11<sup>2</sup>

With card reader<sup>3</sup>



HSP-A16<sup>2</sup>

## ■ Embedded type



HSP-C11

With Audio guidance



HSP-C12

With accessibility button  
+ Audio guidance



HSP-C13

With card reader<sup>3</sup>



HSP-C17<sup>2</sup>

With card reader<sup>3</sup>  
+ accessibility button  
+ Audio guidance



HSP-C18

## ■ Display colors

Urban Black (Basic)



Modern White<sup>4</sup>



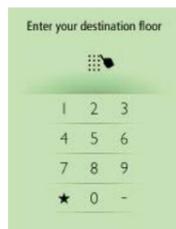
Stylish Blue<sup>4</sup>



Elegance Brown<sup>4</sup>



Fine Green<sup>4</sup>



## ■ Example of display

Destination entry

Keypad type



Floor button type



Assigned-car indication

Basic



Car location map<sup>4</sup>

Landscape layout



Portrait layout



Direction to car<sup>4</sup>

Arrow



Triangle



### Notes

\*1: If you require design complying with EN regulations, such as EN81-70 and EN81-73, please consult our local agents for details.

\*2: Audio guidance is applicable as optional.

\*3: Card reader is to be supplied by customer. Please consult our local agents for details.

\*4: Please consult our local agents for the production terms, etc.

# Efficiency Oriented Solution - DOAS

## Signal fixtures for DOAS\*1

Hall operating panels — Keypad

### ■ Dot LED display (orange when illuminated)



HSVF-C212      HSVF-C222      HSVF-C232  
(with accessibility button)

(with speaker for audio guidance)

### ■ LCD display (5.7-inch TFT color LCD)



HSVF-C264      HSVF-C274      HSVF-C284  
(with accessibility button)

(with speaker for audio guidance)

Star: Tactile button    Others: Flat buttons (stainless-steel matte)

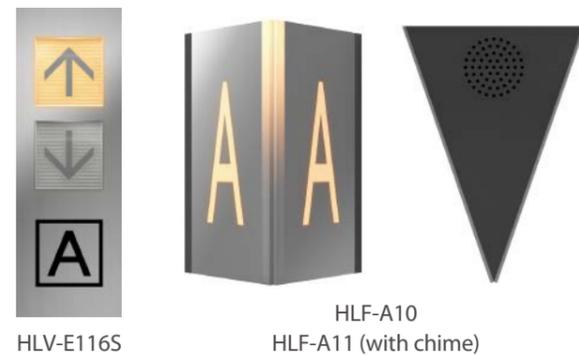
### ■ Card reader mount option\*2

Card reader mount option is available for all left fixtures.



Design Image

## Hall Lantern with Elevator Number Plate LED



HLV-E1165      HLF-A10      HLF-A11 (with chime)

Notes

- \*1: If you require design complying with EN regulations, such as EN81-70 and EN81-73, please consult our local agents for details.
- \*2: Card reader is to be supplied by customer. Please consult our local agents for details.
- \*3: Keypad type can also be installed in a side wall.
- \*4: Please consult our local agents for the application, production terms, etc.
- \*5: Provided only in elevator halls on DOAS floors.

## Elevator Number Plate with Braille — Low-mount type



## Car Operating Panels with Destination Floor Indicator

Concealed floor button type    Keypad type    For front return panel



CBU2-C739      CBVF-C258\*3

## Car Entrance Destination Floor Indicator

On car door jamb



CDI-A100\*4

## Application

Location	Signal fixtures	Quantity	Specification
Hall*5	Hall operating panel	Minimum one per group at each floor	- Keypad type (see pg 19.) - 10.4 inch touchscreen type (see pg 17.)
	Elevator number plate	Each car on each floor	- To be supplied by customer - With braille and low-mount type (see pg 19.) - With hall lantern (see pg 19.)
	Hall lantern (optional)	Each car on each floor	- Regular type (see pg 9.) - With elevator number plate (See page 19.)
	Navigating sound (optional)	Each hall operating panel and hall lantern	The following devices are required. - 10.4-inch touchscreen hall operating panel with audio guidance, or keypad-type hall operating panel with accessibility button and audio guidance; and - Hall lantern with elevator number plate (HLF-A11)
Car	Car Arrival Chime – Hall (AECH)	Each car on each floor	This function is applicable if hall lanterns are installed.
	Car Arrival Chime – Car (AECC)	Each car	This function is necessary if hall lanterns are not installed.
	Car operating panel	Each car	- Regular type (please refer to the brochure of each model.) - With destination floor indicator (see above.)
	Car entrance destination floor indicator (optional)	Maximum two per car	Mounted on car door jamb

# Group Control Features

● = Standard ○ = Optional — = Not applicable

Feature	Description	Appl.*1
<b>Main Features</b>		
Car Travel Time Evaluation	Cars are allocated to hall calls by considering the number of car calls which will reduce passenger waiting time in each hall and the travel time of each car.	●
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.	●
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.	●
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 the Lunchtime Service (LTS) or Up Peak Service (UPS) feature, is selected or canceled accordingly at the appropriate 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.	●
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.	●
Group Control Self-diagnosis (GCS)	Passenger waiting times, frequency of prediction errors, etc., are automatically detected and recorded as elevator operational data for service personnel.	●
Individualized Car Allocation	The system allocates an optimum car to each passenger on the basis of the predicted waiting time and passengers' travel time (applicable to DOAS).	●
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 travel time. (Cannot be combined with some features.)	○
Elevator and Security System Interface (EL-SCA)	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.	○
Elevator Call System with Smartphone (ELCS-SP)	Using a smartphone equipped with the application, users can change the call setting for their elevator and check the status of the elevator assigned to them. Once inside the secure area, users can call an elevator remotely from anywhere.	○
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.	○

## Traffic Features

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.	●
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 (applicable to NexWay only).	●
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.	○
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.	○
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.	○
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.	○
Main Floor Parking (MFP)	An available car always parks on the main (lobby) floor with the doors open (or closed only in China).	○
Forced Floor Stop (FFS)	All cars in a bank automatically make a stop at a predetermined floor on every trip without being called.	○
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.)	○
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.)	○
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.)	○
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.)	○
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.	○
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.	○
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.	○

Feature	Description	Appl.*1	
<b>Signal and Display Features</b>			
Car Arrival Chime	Car (AECC)	ΣAI-2200C without DOAS	—
		ΣAI-2200C with DOAS	●*2
	Hall (AECH)	ΣAI-2200C without DOAS	●
		ΣAI-2200C with DOAS	○*3
Flashing Hall Lantern (FHL)	ΣAI-2200C without DOAS	●	
	ΣAI-2200C with DOAS	○*3	
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.	○*3	
Second Car Prediction (TCP)	When a hall is crowded to the extent that one car cannot accommodate all waiting passengers, a hall lantern will light up to indicate the next car to serve the hall.	○	
Voice Guidance System (AAN-G)	Information on elevator service such as the current floor or service direction is given to the passengers inside a car.	○	

### Notes

\*1: Application of features in this table applies to operation system ΣAI-2200C. Applicability of features differs depending on the elevator models or operation system. Please consult our local agents for details.

\*2: AECC feature is standard when hall lanterns are not installed.

\*3: These features cannot be combined with DOAS when hall lanterns are not installed.

## Features that cannot be combined with DOAS

### Group Control Features

- Intense Up Peak (IUP)
- Up Peak Service (UPS)
- Main Floor Changeover Operation (TFS)

### Operation and Service Features

- Automatic Hall Call Registration (FSAT)
- See-through Elevator Operation (STH)
- Attendant Service (AS)
- False Call Canceling – Automatic (FCC-A)
- False Hall Call Canceling – Hall Button Type (FHC-P)
- Hospital Emergency Operation – Block Sign (HE-B)
- Automatic Bypass (ABP)

### Door Operation Features

- Extended Door-open Time Adjustment (DKO-TB)

### Signal and Display Features

- Hall Information Display (HID)
- Hall LCD Position Indicator (HID-S)
- Immediate Prediction Indication with Indicator (AILI)
- Second Car Prediction (TCP)

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

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