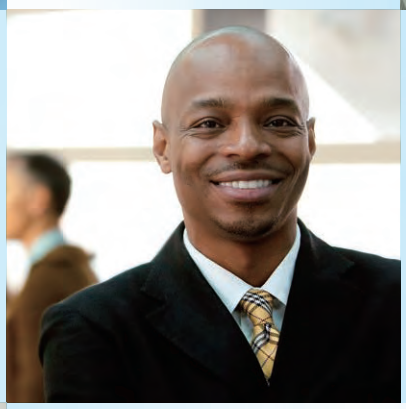
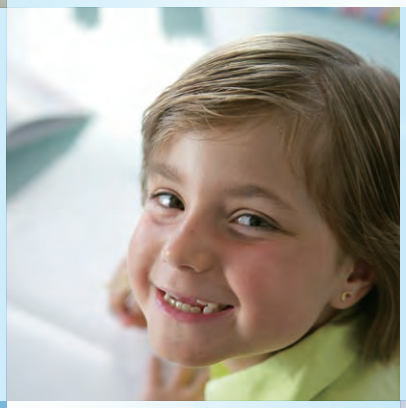

FUJITEC
ZEXIA
Passenger Elevator with Machine Room
In Compliance With the Standards of EN81-20 and EN81-50

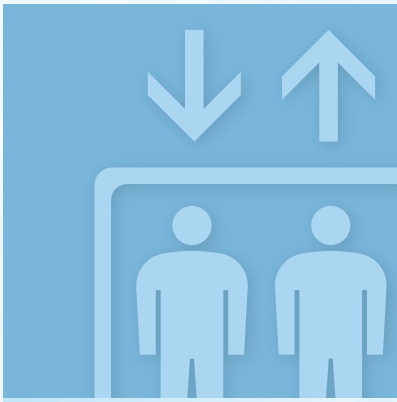
Product Concept

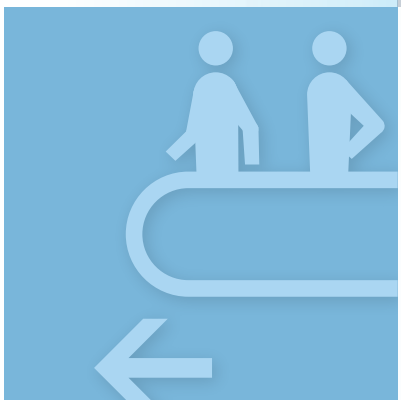


“Made in Fujitec”

By providing people with the safe and reliable elevators that Fujitec manufactures in-house, Fujitec is building trust with people around the world.







By manufacturing safe and reliable elevators, we are building trust with people around the world.

Fujitec's "Global Common Components" are used in the ZEXIA brand. The quality of components, such as traction machines, elevator controllers, and operating fixtures, is controlled through Fujitec's integrated system of global quality management. Elevators with the same high quality will be provided by Fujitec's global production base under the concept of "Made in Fujitec".

More than 70-Year History in the Business of Elevator, Escalator and Moving Walks

Since the foundation of Fujitec in 1948, seeing the market from a global perspective and having the spirit of being a top global company, Fujitec has been a global leading manufacturer of elevators, escalators, and moving walks. Fujitec has been providing the people with leading-edge technologies and global standards of product.

Product Concept

Safety & Reliability

All control-related components ranging from control circuits to inverters are independently developed by Fujitec, so that highly reliable elevator operation is established. When the elevator control system assembled with Fujitec's reliable component parts detects the possibility of the occurrence of elevator malfunction, it operates in order to maintain the elevator operation stable and efficient.

Ecology

In ZEXIA elevators, the gearless traction machines with a permanent magnetic synchronous motor assure low power consumption. Also, the electric power regenerative unit equipped between the elevator controller and the power supply saves the electrical energy consumption in the building.
Fujitec contributes to global society by providing for ecology-conscious products, reflecting on them 70 years of knowledge and technologies accumulated through the manufacturing of elevators.

Comfort Design

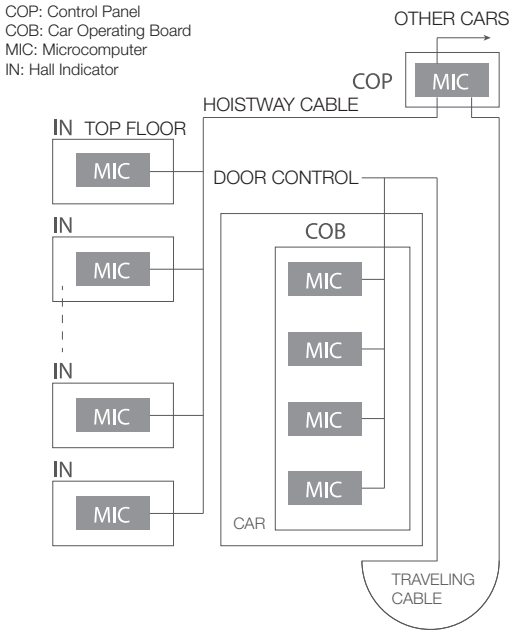
Under Fujitec's universal designs, newly adopted buttons for elevator operating fixtures are highly visible and tactually recognizable, and the numbers and letters shown on aesthetically refined displays can be easily seen and read.
Also, various styles for the decoration of elevator interior and landing floors provide the passengers with a superb and comfortable riding experience.

Capacity (kg)	SPEED (m/s)							
	1.0	1.5	1.75	2.0	2.5	3.0	3.5	4.0
450	■	■	■	■				
630	■	■	■	■	■	■		
800	■	■	■	■	■	■		
1050	■	■	■	■	■	■	■	■
1200	■	■	■	■	■	■	■	■
1275	■	■	■	■	■	■	■	■
1350	■	■	■	■	■	■	■	■
1600	■	■	■	■	■	■	■	■
1800	■	■	■	■	■	■	■	■
2000	■	■	■	■	■	■	■	■

Note: Application of capacity and speed may differ due to specification.

Contents

Distributed Control System



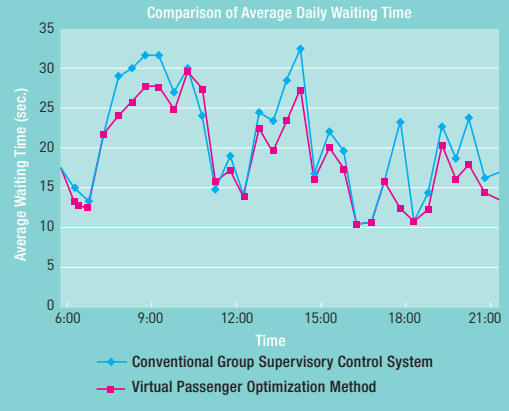
- A 32-bit data bus provides high-speed and high-precision data transmission of input-output command signals between each microprocessor located in control panels, hall-call / car-call buttons, hall indicators and hall lanterns
- High-speed data transfer with multiple protocols enables large-scale data processing at ten times the normal speed. This also improves the ability to monitor elevator running speed, landing precision and operating reliability as well as input-output command signals of car operating fixtures and operation indicators.
- The bus system is employed for data transmission between microcomputers located in every hall-call fixture, car operating board, and control panel. This bus system has strong protection against signal interference and has system-extending capability.

An elevator operation system with multiple microcomputers makes maximum use of a “Distributed Control System.” Hall indicators, car operating boards, and control panels incorporate high-performance microcomputers. These independent microcomputers analyze elevator operating conditions utilizing self-diagnostic functions and implement immediate control of elevator operations. Also, data transmission buses between microcomputers increase data processing capability.

FLEX-NX series -Elevator Group Supervisory Control System- (GSC)

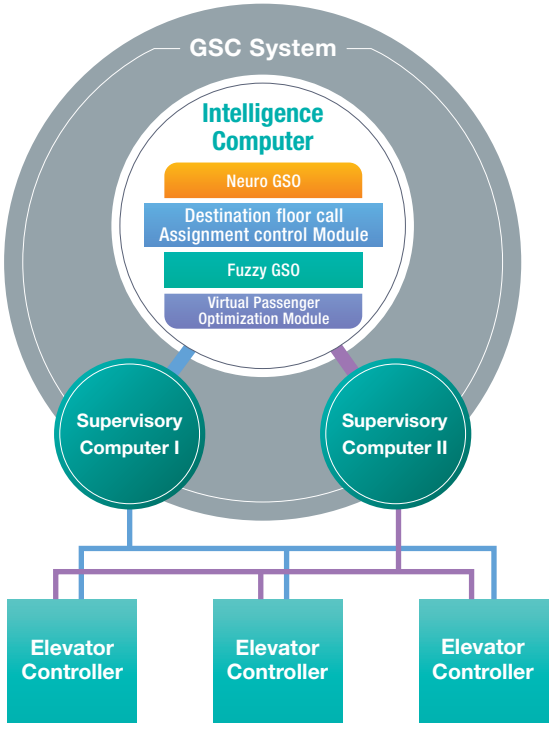
Fujitec has adopted the “Virtual Passenger Optimization Method” as a new elevator group control system.
This system controls elevator group operation by virtually calculating passenger waiting time in advance based on past accumulated data, such as passenger travel patterns and passenger volume at each floor. Also, this method comprehensively calculates passenger waiting time based on extrapolated data of probable future passengers, how many passengers will come to a certain floor when a hall call is registered and/or how many passengers will come to a certain floor when no hall call is registered. This comprehensive analysis reflects whole building traffic conditions for efficient elevator operation control as well as reducing daily passenger waiting time by up to 10 %.

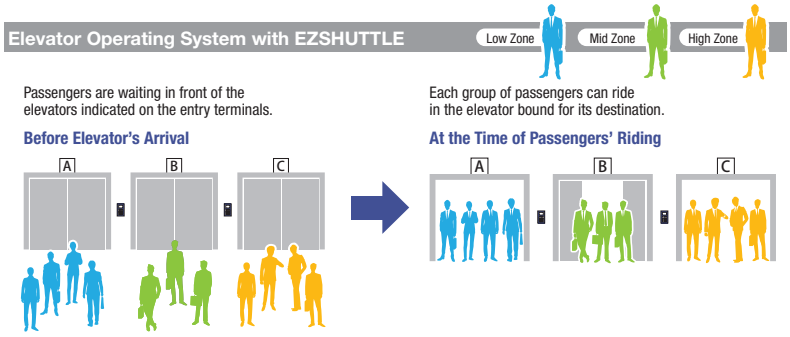
Comparison Simulation with Conventional Group Supervisory Control System



* The graph shows the results of a simulation to reproduce the daily traffic in an actual high-rise condominium having three elevator units and 33 stops.

EZSHUTTLE - Destination Floor Guidance System -





In an elevator operating system with EZSHUTTLE, passengers are required to register their destinations at the elevator floors rather than conventionally registering them inside the elevator. The EZSHUTTLE system then guides passengers to their assigned elevators, which will have been selected to minimize the number of destination stops based on the registered destinations.
This passenger guidance and elevator assignment provides passengers with uncongested elevator service and a reduction in passenger riding time by 50%* at peak travel periods.

* Based on comparisons of passenger riding time obtained under a conventional elevator operating system and that under a simulated EZSHUTTLE-equipped elevator operating system.

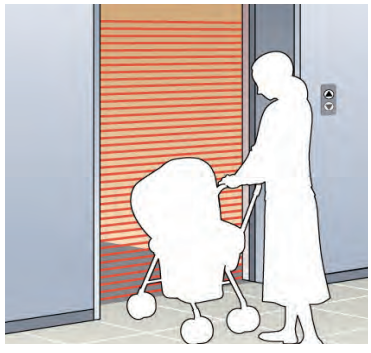
Night-Time Self-Checking Operation

- A safety enhancement for increased reliability -

Mechanical brake conditions are automatically checked by moving the elevator during the night time while not receiving any car and hall calls. This night-time self-checking operation increases passenger safety and contributes to a high after-sales product quality.

Multi-Beam Sensor

Multi-beam Sensor emits multiple infrared beams, creating an invisible curtain covering the entire doorway. If any of the beams is interrupted, the closing doors will stop and reopen.
This function results in a significantly higher detection rate of a passenger and/or an object in the doorway.



Elevators complying with EN81-20 and EN81-50

The new elevator standards of EN81-20 and EN81-50 have been released *by European Committee for Standardization*, making void the former standards of EN81-1 and EN81-2. The requirements for the production and installation of elevators are stated in EN81-20; the requirements for the inspection and test of their component parts in EN81-50. In response to this release, the specifications of Fujitec elevators have been updated. The following are several main items adopted for the arrangement of elevator specifications.

For Passengers

1 Prevention of the Occurrence of the Ascending Elevator's Overspeed

(**ACOP**: Ascending Car Overspeed Protection)

In order for the ascending elevator not to overspeed, the elevator system is equipped with ascending car overspeed protection means.

2 Protection against an Unintended Movement of Elevator

(**UCMP**: Unintended Car Movement Protection)

Unintended movement of a car is detected by an independent safety-purpose control circuit. This function increases the safety of passengers.

3 Strength of Landings and Car Doors

The strength of landing and car doors is enhanced in order for them to be retained in their given position. The safety of passengers at landing floors and inside car has been increased.

4 Provision of Enough Lighting Intensity inside the Elevator

a) the lighting intensity of ceiling light 100 lux or more 1 meter above car floor

b) the lighting intensity of emergency light 5 lux or more 1 meter above car floor (1-hour lighting period is required.)

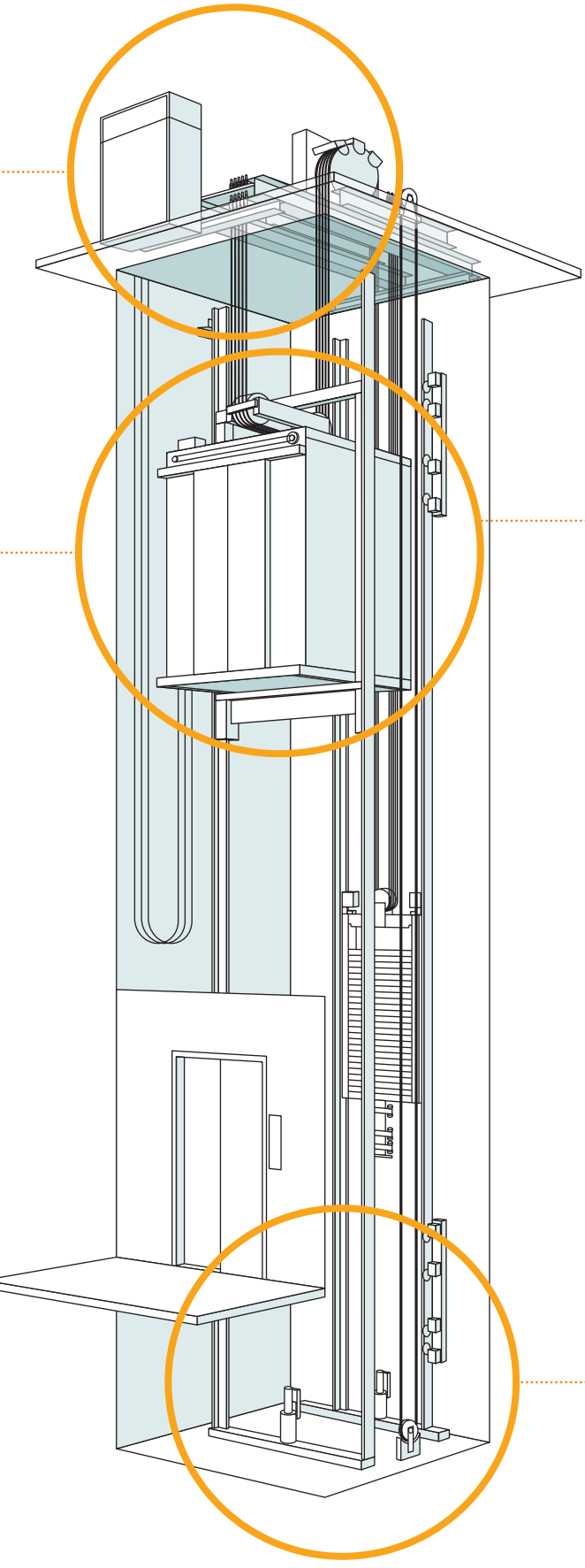
5 Multi-Beam Sensor on Elevator Door for Passenger Safety

For the enhancement of the safety of passengers entering and leaving from the elevator, multi-beam sensor is provided and installed on car door based on the following.

a) Multi-beam sensor detects an obstacle of which the diameter is 50 mm or more.

b) Multi-beam sensor must detect the obstacle within the vertical range from 25 mm to 1600 mm above door sill.

c) When detecting the obstacle, the closing door must stop and open automatically.



For Maintenance Staff

1 Refuge Space on Car Roof and Clearance in Headroom

The layout of elevator equipment on car roof and overhead space complies with the requirements of EN81-20. Due to this compliance, refuge space is increased for the safety of maintenance staff.

2 Balustrades on Car Roof

The height and strength of the balustrades on the car roof are increased based on the requirements of EN81-20. This increase contributes to the reduction of the risk that a maintenance person falls into the hoistway.

3 Provision of Inspection Control Station in Hoistway Pit

To ensure more safety for the maintenance staff working in the pit, Inspection Control Station is added in the bottom of the hoistway.

4 Refuge Space and Clearance in Hoistway Pit

Layout of elevator equipment in the hoistway pit based on the requirements of EN81-20 creates larger refuge space and ensures more safety for the maintenance staff.

5 Safe Design and Enough Strength of Pit Access Ladder

In order for the maintenance staff to safely enter the hoistway pit, strengthening of a pit access ladder with safe design is required.

For details of the full requirements, see the official document of EN81-20 and EN81-50.

Gearless Traction Machine with Permanent Magnetic Synchronous Motor

The gearless traction machines with a permanent magnetic synchronous motor assure high riding comfort quality and low power consumption.
This newly adopted technology reduces the weight and size of a traction machine, because gears are no longer required for elevator speed control.

In addition, ZEXIA's small machines require less motor capacity and power consumption compared to conventional elevators. The differences are shown below.

Given elevator operating conditions:
1) The maximum number of elevator operations per day: 600 times
2) The travel distance in a single operation: 30 meters
3) The rated speed: 1.0 meter per second
4) The rated load: 1200 kgs.

Required Motor Capacity

ZEXIA Elevator (PMGL)	8 kW
Conventional Elevator (ACGD)	11 kW

Energy-efficient Traction Machines reduce power consumption and CO_2 emission.

Saving of Building Space by the Less Occupation of Machine Room

The machine room space required by ZEXIA elevators is 60 % smaller than that of conventional elevators. This remarkable feature results in a reduction of building construction costs, and increase usable space in the building.

LED Lights on Car Ceiling

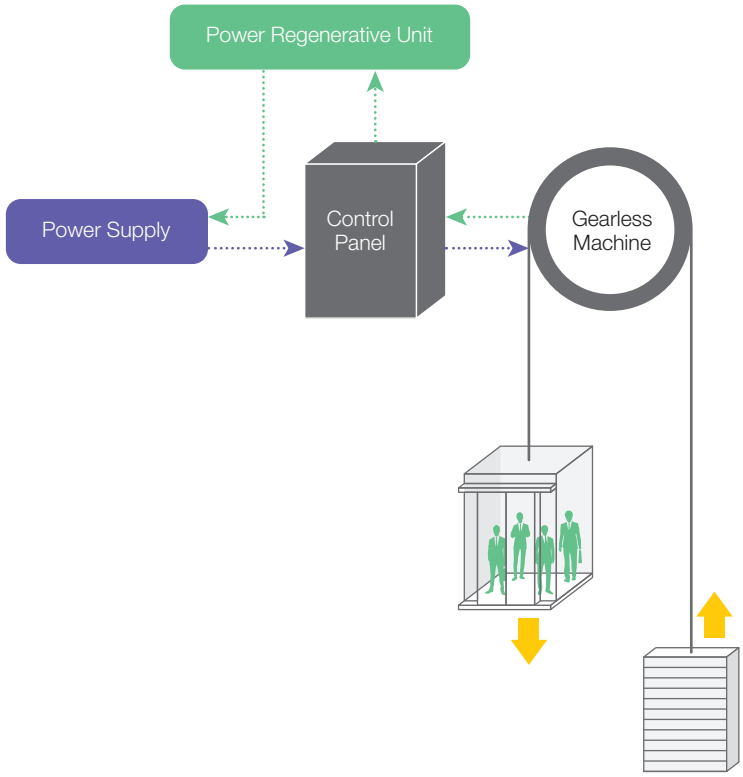
Fujitec's adoption of energy-efficient, long-lasting LED downlights for car ceiling light saves energy, and leads to the preservation of environment.

	Filament Light Bulb	LED Light Bulb	Improvement Results
Lifetime	**approx. 1,500 hours**	**approx. 20,000 hours**	**approx. 13 times**
Wattage	**90 W**	**9 W**	**1/10 (one-tenth)**

Electric Power Regenerative Unit

The adoption of electric power regenerative unit instead of conventional heat dissipation resistor allows the traction-machine-produced electricity to be fed back to the building's electrical facilities. The amount of electricity fed back to the facilities is equivalent to nearly 35 % * of the whole amount of electricity consumed by the corresponding type of elevator with heat dissipation resistor.

*: The value of this percentage differs based on the specifications of the elevator and its usage.



Comfort Design

The latest human engineering technologies are reflected on the ZEXIA elevators. As the function of man-machine interface, tactile characters and letters are adopted for the buttons on the elevator operating boards and the elevator call buttons in the hall fixtures. Also, the devices and functional systems for the creation of comfort for the elevator passengers are equipped in the elevator.

Tactile Letters and Characters for Operating Buttons

Standard

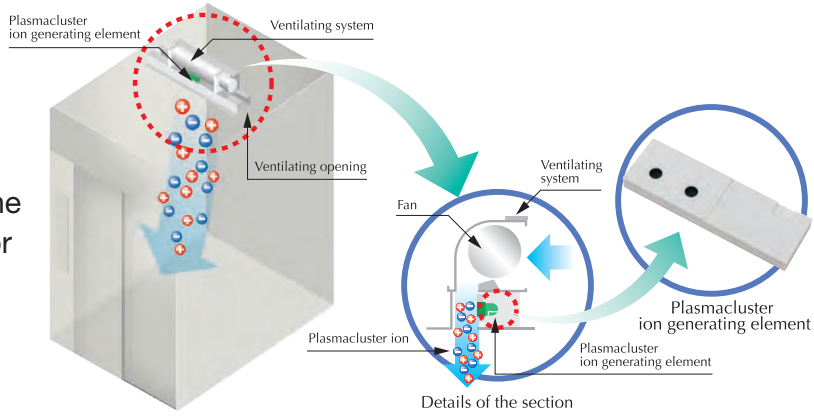
Tactile letters and characters are adopted for the elevator operating buttons. They are raised from the surface of the buttons in order for a passenger to recognize the assigned function for each button. Their unique design functions as a friendly interface between the passengers and the elevators.

IONFUL

(Plasmacluster™* ION Generating Device)

Optional

The first elevator company that installed a Plasmacluster Ion generating device in an elevator is Fujitec. The device built in an elevator's ventilation unit disinfects airborne mold, bacteria, viruses, allergens, and odor molecules as well as creating clean air in the elevator. This increases the comfort of passengers.



※Plasmacluster is a trademark of Sharp Corporation.

VONIC

(Automatic Voice Announcement System)

Optional

A computerized voice system provides passengers with timely information about car directions, car arrivals, door opening and closing, and emergencies, etc.
(Voice announcement is made in English. At the customer's request, it may be made in another language.)

Standard Car Design

Car Ceiling: CT-GS01: (Ceiling with LED Downlights)	Panel: Steel Sheet with Paint Finish Color in the image: white (5AABJ001) The other two standard colors are available.
Car Panel, Car Transom, Return Panel, Car Door	Steel Sheet with Paint Finish Color in the image: light green (5AABJ008) The other seven standard colors are available.
Car Floor: PVC Tiles with 2-mm Thickness	PVC Tiles Color in the image: white (L51) The other five standard PVC tiles are available.
Car Sill	Extruded Aluminum
Car Operating Board	Type: COB-GS01 Stainless Steel with Hairline Finish

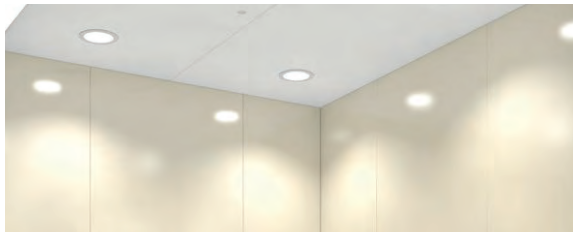
Color Variation

For Car Ceiling

5AABJ001	5AABJ002	5AABJ003
White	Ivory	Light Gray

For Car Panel


(Light Green: 5AABJ008)


(Ivory: 5AABJ004)

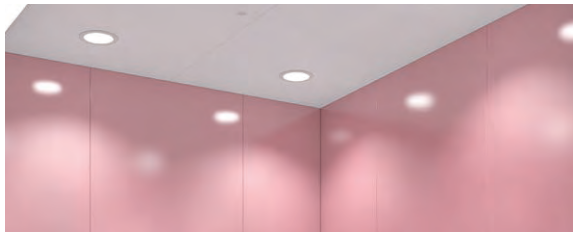

(Ocean Blue: 5AABJ009)


(Light Gray: 5AABJ005)


(Silver: 5AABJ010)


(Beige: 5AABJ006)


(Gold: 5AABJ011)


(Sakura: 5AABJ007)

For Car Floor

L51	L52	L53	L54	L55	L56
White	Light Gray	Medium Gray	Black	Light Brown	Brown

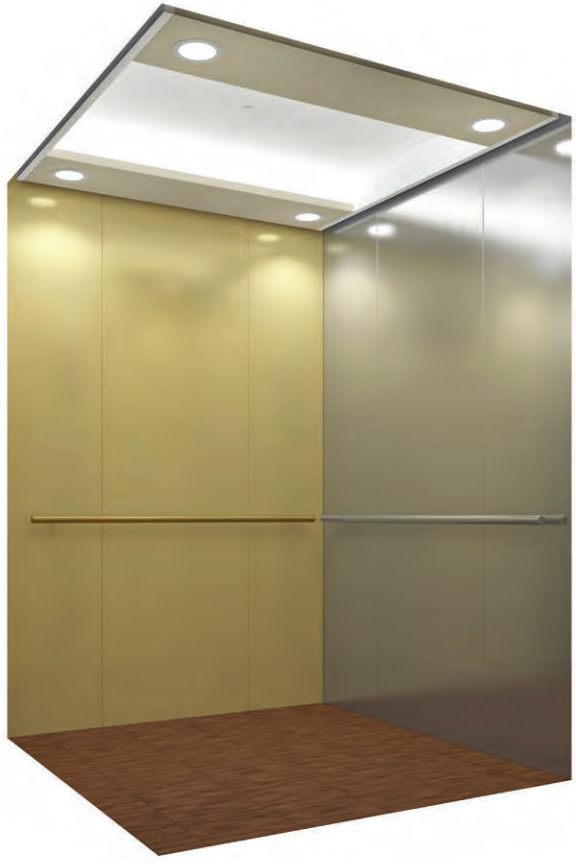
* Actual colors may differ from the image.

Car Design

Design 1

Car Ceiling	CT-GS01 Ceiling with LED downlights
	Steel Sheet with Paint Finish Color: Light Gray (5AABJ003)
Car Panel	Stainless Steel with Hairline Finish
Return Panel	Stainless Steel with Hairline Finish
Car Transom	Stainless Steel with Hairline Finish
Car Door	Stainless Steel with Hairline Finish
Car Floor	PVC Tiles with 2-mm Thickness Color in the image: Light Gray (L52)
Car Sill	Extruded Aluminum
Car Operating Board	COB-GS02 Stainless Steel with Hairline Finish
Ventilation Fan	With Two Air vents

Design 2



Car Ceiling	CT-GC03 Ceiling with indirect lighting LED downlights
	Steel Sheet with Paint Finish Color: Ivory (5AABJ002)
Car Panel	Steel Sheet with Paint Finish Color: Gold (5AABJ011) Stainless Steel with Hairline Finish
Return Panel	Stainless Steel with Hairline Finish
Car Transom	Stainless Steel with Hairline Finish
Car Door	Steel Sheet with Paint Finish Color: Gold (5AABJ011)
Car Floor	PVC Tiles with 2-mm Thickness Color: Brown (L56)
Car Sill	Extruded Aluminum
Car Operating Board	COB-GS01 Stainless Steel with Hairline Finish
Handrail	Side: Stainless Steel with Hairline Titanium-Gold-Finished (CPH-GC04) Rear: Stainless Steel with Hairline Finish (CPH-GC01)

Design 3

Car Ceiling	CT-GC02 Ceiling with indirect lighting LED tubes
	Steel Sheet with Paint Finish Color: Light Gray (5AABJ003)
Car Panel	Stainless Steel with Mirror Finish
Return Panel	Stainless Steel with Mirror Finish
Car Transom	Stainless Steel with Mirror Finish
Car Door	Stainless Steel with Mirror Finish
Car Floor	PVC Tiles with 2-mm Thickness Color: Light Gray (L52)
Car Sill	Extruded Aluminum
Car Operating Board	COB-GC01 Stainless Steel with Hairline Finish

Design 4

Car Ceiling	CT-GC02 Ceiling with indirect lighting LED tubes
	Steel Sheet with Paint Finish Color: White (5AABJ001)
Car Panel	Stainless Steel with Etching Finish Pattern: PH-103C
Return Panel	Stainless Steel with Hairline Finish
Car Transom	Stainless Steel with Hairline Finish
Car Door	Stainless Steel with Etching Finish Pattern: PH-103C
Car Floor	PVC Tiles with 2-mm Thickness Color: Medium Gray (L53)
Car Sill	Extruded Aluminum
Car Operating Board	COB-GC02 Stainless Steel with Hairline Finish
Mirror	Upper-side Full-width Mirror

Design 5

Car Ceiling	CT-GC01 Ceiling with indirect lighting LED lamps
	Steel Sheet with Paint Finish Color: Ivory (5AABJ002)
Car Panel	Steel Sheet with Paint Finish Color: Ivory (5AABJ004) & Ocean Blue (5AABJ009)
Return Panel	Steel Sheet with Paint Finish Color: Ivory (5AABJ004)
Car Transom	Steel Sheet with Paint Finish Ocean Blue (5AABJ009)
Car Door	Steel Sheet with Paint Finish Ocean Blue (5AABJ009)
Car Floor	PVC Tiles with 2-mm Thickness Color: Black (L54)
Car Sill	Extruded Aluminum
Car Operating Board	COB-GC01 Stainless Steel with Hairline Finish

Design 6

Car Ceiling	CT-GC01 with ventilation fans, Ceiling with indirect lighting LED lamps	
	Steel Sheet with Paint Finish, Color: White (5AABJ001)	
Car Panel	Side Panels:	Stainless Steel with Etching Finish Pattern: PH-313
	Rear Panels:	at the Center: Full-Height Mirrored Stainless Steel
		at the Sides: Stainless Steel with Etching Finish Pattern: PH-313
Return Panel	Stainless Steel with Hairline Finish	
Car Transom	Stainless Steel with Hairline Finish	
Car Door	Stainless Steel with Etching Finish, Pattern: PH-313	
Car Floor	PVC Tiles with 2-mm Thickness, Color: Light Brown (L55)	
Car Sill	Extruded Aluminum	
Car Operating Board	COB-GC02, Stainless Steel with Hairline Finish	
Handrail	Stainless Steel Plate with Hairline Finish (CPH-GC02)	
Mirror	Full-Height Mirror Panel flush with Car Panel	

Color and Pattern Variations

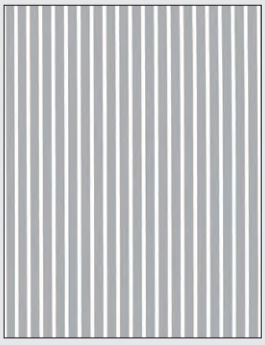
For Car Ceiling;
Paint Finish (Flat finish)

5AABJ001	5AABJ002	5AABJ003
White	Ivory	Light Gray

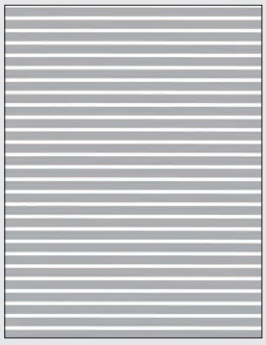
For Car Panel, car Door, Landing Door and Landing Transom;
Etching Patterns

PH-103C

PH-112B

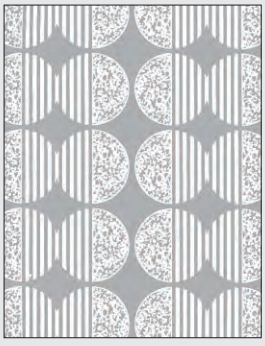


PH-113A

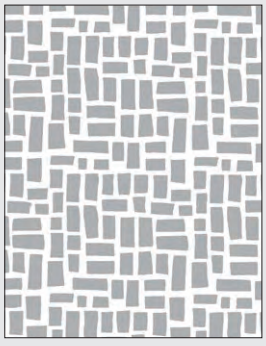


PH-206

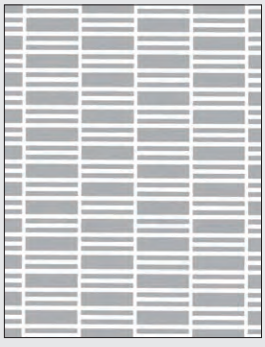
PH-130



PH-313



PH-649

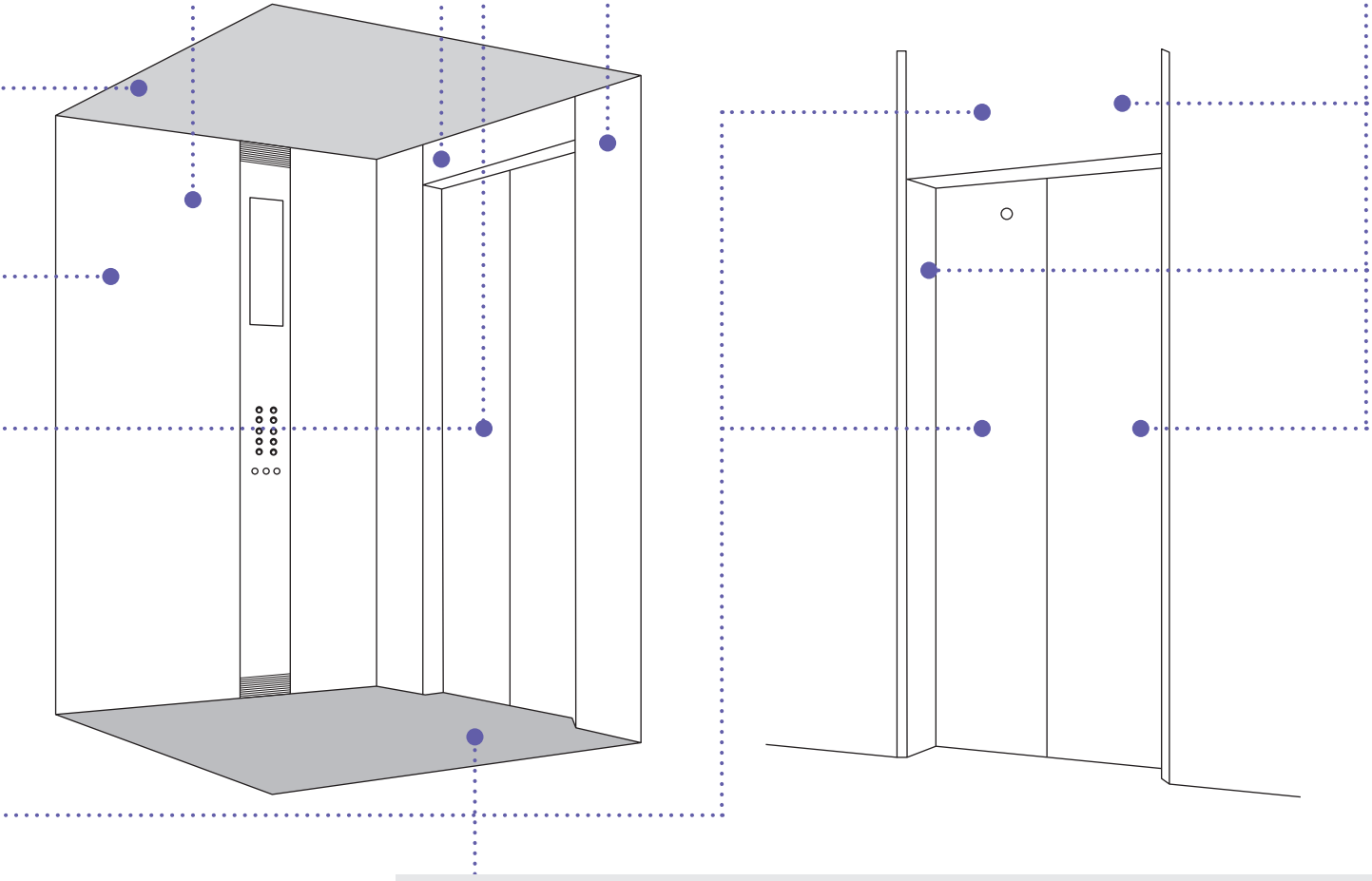


PH-703

PH-801

For Car Panel, Return Panel, Car Door, Car Transom, Jamb, Landing Door and Landing Transom;
Paint Finish (Semi-gloss finish)

5AABJ004	5AABJ005	5AABJ006	5AABJ007	5AABJ008	5AABJ009	5AABJ010	5AABJ011
Ivory	Light Gray	Beige	Sakura	Light Green	Ocean Blue	Silver	Gold



For Car Floor;
PVC Tiles (2-mm Thickness)

L51	L52	L53	L54	L55	L56
White	Light Gray	Medium Gray	Black	Light Brown	Brown

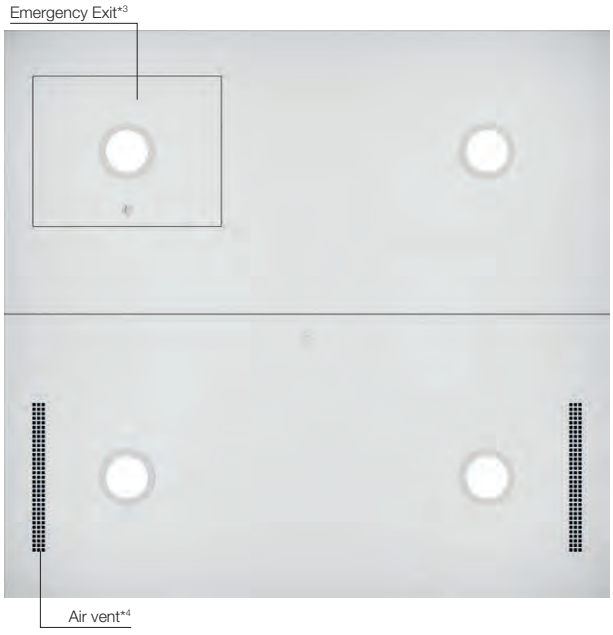
Note:
(1) Actual colors may differ from the image. (2) The dimensions of an actual pattern differ from the image. (3) The scale of an actual design differs from the image.

Ceiling Design

Standard | Optional

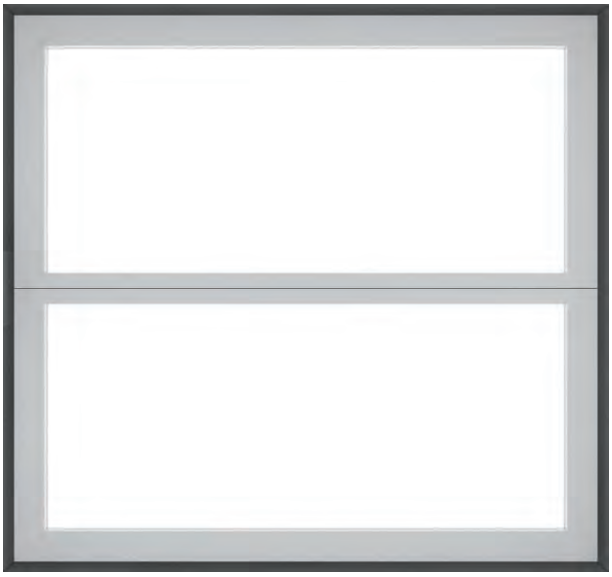
CT-GS01 *1

Lighting:	LED Downlights
Panel:	Paint Finish



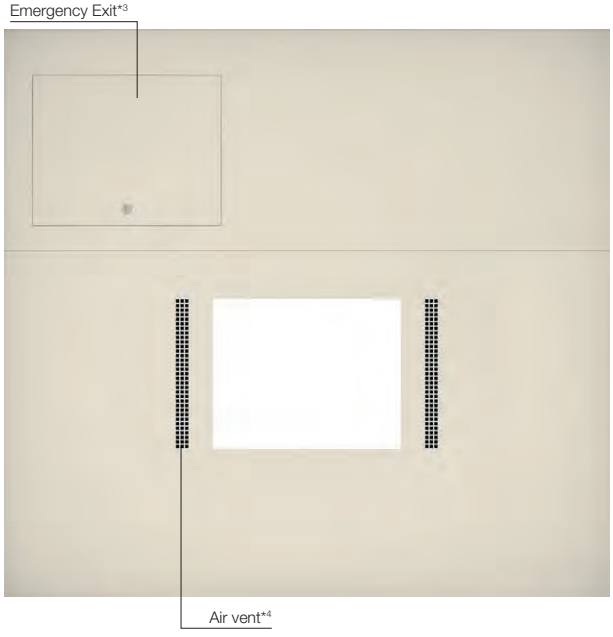
CT-GC02 *2, *5

Lighting:	Indirect Lighting LED tubes
Panel:	Paint Finish



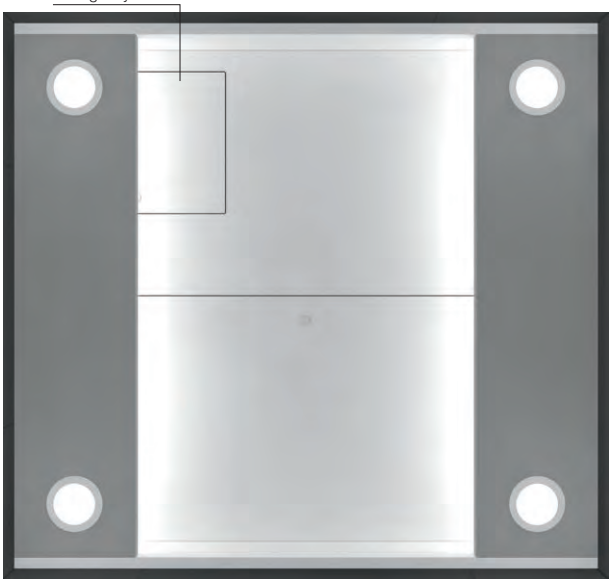
CT-GC01 *1

Lighting:	Indirect Lighting LED Lamps
Panel:	Paint Finish



CT-GC03 *2

Lighting:	Indirect Lighting LED Downlights
Panel:	Paint Finish



Note:
*1. Clear Ceiling Height: 2350mm, Top Ceiling Height: 2350mm
*2. Clear Ceiling Height: 2250mm, Top Ceiling Height: 2400mm
*3. Emergency exit (Optional Specification). Applicable for the above ceiling designs.
*4. Two Air vents added when Car Ventilation Fan is applied (Optional Specification)
*5. When the car interior width is greater than 1650mm, the acrylic ceiling will be divided into four sheets instead of two.

Handrail

Stainless Steel with Hairline Finish

CPH-GS01

Pipe Handrail with curved ends

CPH-GC01

Pipe Handrail with straight ends

CPH-GC02

Flat-plate Handrail with curved ends

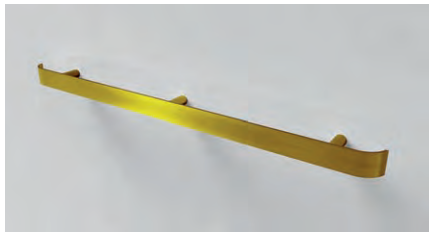
CPH-GC03

Titanium-Gold-Finished Pipe Handrail with curved ends

CPH-GC04

Titanium-Gold-Finished Pipe Handrail with straight ends

CPH-GC05



Titanium-Gold-Finished Flat-plate Handrail with curved ends

Mirror

Standard Wall-Mounted Mirror

Upper-side Full-width Mirror

Full-height Mirror Panel flush with Car Panel

Note: Material for mirror panel is required to be confirmed.

Entrance Design

Standard

Entrance with Narrow Jambs

Landing Door	Steel Sheet with Paint Finish Color: Sakura (5AABJ007)	
Jamb	Steel Sheet with Paint Finish Color: Sakura (5AABJ007)	
Sill	Extruded Aluminum	
Hall Indicator with Hall Buttons (IN-GS01)	Vertical Indicator	Orange Dot-Matrix LEDs
	Faceplate	Stainless Steel with Hairline Finish

Optional

Entrance with Wide Jambs

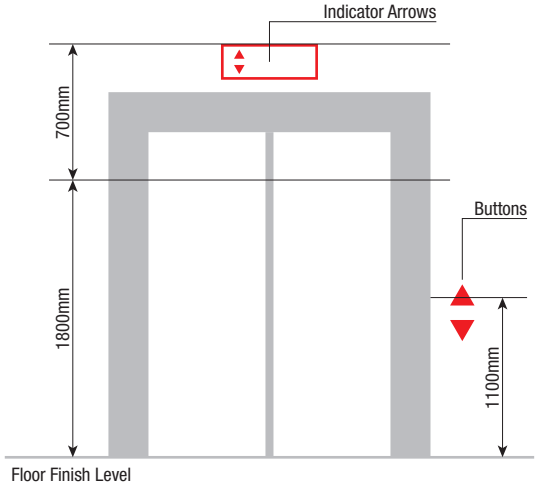
Landing Door	Stainless Steel with Hairline Finish
Jamb	Stainless Steel with Hairline Finish
Sill	Extruded Aluminum
Hall Lantern (HLL-GS01)	Round Jewel Mounted Hairline-Surface Stainless Steel with Inclined Rims at its Bottom
Hall Buttons (HB-GS01)	Tactile Button Incorporated Hairline-Surface Stainless Steel with Inclined Rims at its Top

Optional

Entrance with Wide Jambs and Transom

Landing Door	Stainless Steel with Etching Finish Pattern: PH-112B	
Jamb	Stainless Steel with Hairline Finish	
Sill	Extruded Aluminum	
Hall Indicator (IN-GS01)	Horizontal Indicator	Orange Dot-Matrix LEDs
Hall Buttons (HB-GS01)	Tactile Button Incorporated Hairline-Surface Stainless Steel with Inclined Rims at its Top	

Required Heights for Landing Fixtures

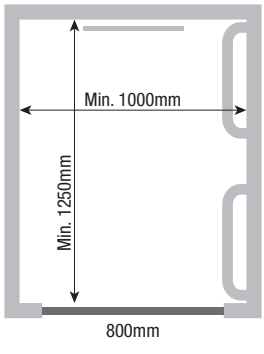


1. The indicator arrows are required to be positioned between 1800mm and 2500mm from the floor level.
2. Maximum height between the floor level and the centerline of the highest button is 1100mm.

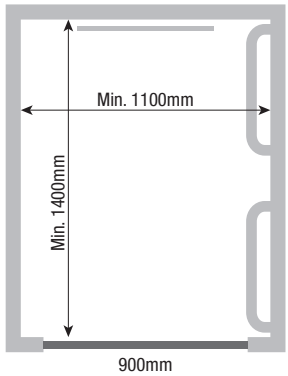
Minimum Car Size and Recommended Entrance Width:

1. **For TYPE 1,**
   the required minimum width of entrance is 800 mm.
2. **For TYPE 2,**
   900-mm width is recommended for the entrance.
3. **For TYPE 3,**
   1100-mm width is recommended for the entrance.

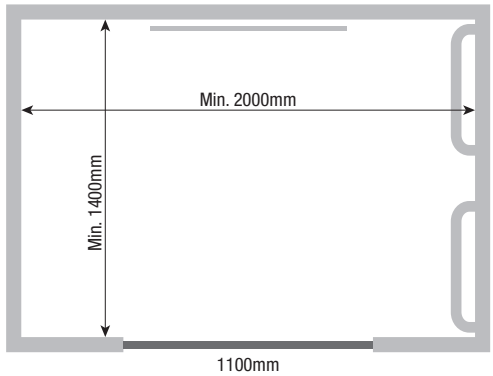
TYPE 1 (450kg)



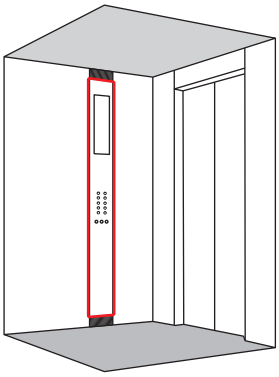
TYPE 2 (630kg)



TYPE 3 (1275kg)



Car Operating Boards



Standard | Optional

Faceplate:	Stainless Steel with Hairline Finish
Indicator:	Orange Dot-Matrix LED or LCD

Standard Types

COB-GS01

With standard car call buttons

COB-GS02

With ten-key car call buttons

Optional Types

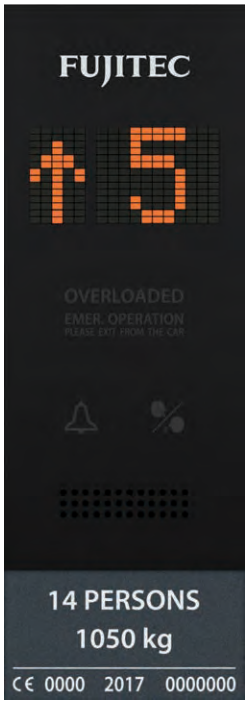
COB-GC01

With standard car call buttons

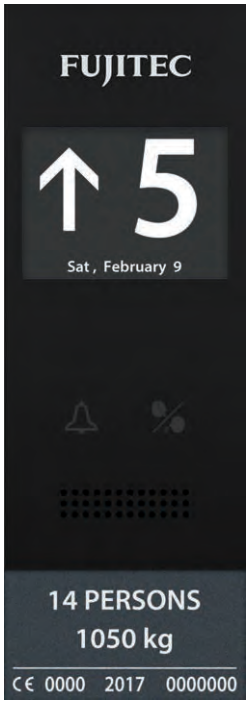
COB-GC02

With ten-key car call buttons

Car Position Indicator



Indication by LEDs



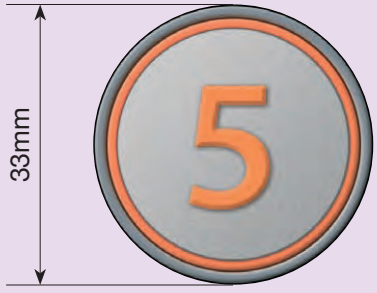
Indication on LCD

Destination Floor Indicator

Button

Tactile

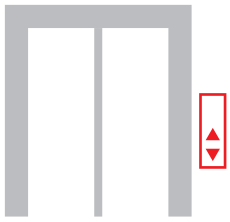
Button Head: Stainless Steel with Bead Blast Finish

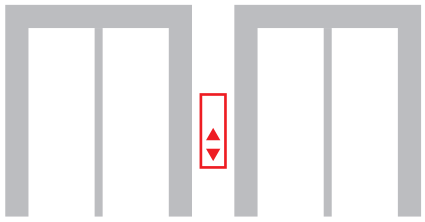


Color of Illumination: Amber

Note:
1. Car Operating Boards satisfy the requirements of EN81-70.
2. Some floor names and alphabet letters are not applicable for the indication of a destination floor.
3. The incorporation of key switch on the Car Operating board (COB) is Optional.
4. For Center-opening doors; when entering the car; Car Operating Board on the right hand side
5. For Side-opening doors; Car Operating Board on the closing jamb side.

Standard | Optional





Hall Indicator with Hall Buttons

Faceplate	Stainless Steel with Hairline Finish
Indicator	Orange Dot-Matrix LEDs
Button	Tactile Type

Standard Hall Indicator with Hall Buttons

IN-GS01 *2,*3,*4,*5

Elevator Operation	Simplex Operation
Faceplate Design	With Inclined Rim at Top End

IN-GS02 *2,*3,*4,*5

Elevator Operation	Duplex Operation
Faceplate Design	With Inclined Rim at Top End

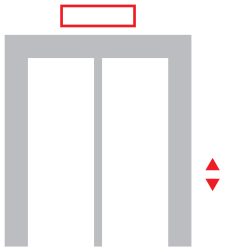
Optional Hall Indicator with Hall Buttons

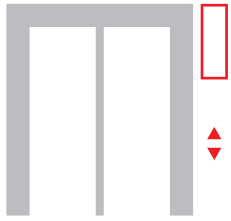
IN-GC01 *2,*3,*4

Elevator Operation	Simplex Operation
Faceplate Design	Without Inclined Rim

IN-GC02 *2,*3,*4

Elevator Operation	Duplex Operation
Faceplate Design	Without Inclined Rim





Hall indicator

Faceplate	Stainless Steel with Hairline Finish

HIN-GS01 *1,*3

Elevator Operation	Simplex Operation, Duplex Operation, and Group Operation
Faceplate Design	With Inclined Rim at Side Ends

HIN-GC01 *1,*3

Elevator Operation	Simplex Operation, Duplex Operation, and Group Operation
Faceplate Design	Without Inclined Rim

Hall Lantern

HLL-GS01

Elevator Operation	Simplex Operation, Duplex Operation, and Group Operation
Faceplate Design	With Inclined Rim at Bottom End

HLL-GC01

Elevator Operation	Simplex Operation, Duplex Operation, and Group Operation
Faceplate Design	Without Inclined Rim

Hall Button Unit

Faceplate	Stainless Steel with Hairline Finish
Button	Tactile Type

HB-GS01 *1,*4

Faceplate Design	With Inclined Rim at Top End

HB-GC01 *1,*4

Faceplate Design	Without Inclined Rim

Note:
*1. The requirements by EN81-70 are satisfied.
*2. The requirements by EN81-70 are not satisfied.
*3. Some floor names and alphabet letters are not applicable.
*4. The incorporation of key-switch is Optional
*5. The hall fixtures at the bottom floor have a box behind its faceplate.

Specification Details

ZEXIA

Main Specifications

Capacity

450, 630, 800, 1050, 1200, 1275, 1350, 1600, and 2000 kg

Speed

1.0, 1.5, 1.75, 2.0, 2.5, 3.0, 3.5, 4.0 mps
Application of 2.5 to 4.0 mps is subject to the satisfaction of the *Standard Dimensions* table.

Number of Served Floors

40 Stops or Less

Travel Height

For the speed of 1.0 to 3.0 mps: 140 m or less

For the speed of 3.5 to 4.0 mps: 230 m or less

Control Method

VVVF controlled by distributed 32-bit Microcomputers.

Traction Machine

Gearless Machine with Permanent Magnetic Synchronous Motor

Types of Elevator Operation

1-Car or 2-Car Selective Collective Operation or Group Control Operation for 3 to 8 Cars in a Bank

Door Operation System

Permanent Magnetic Motor controlled by VVVF

Door Opening Type

2-Panel Center Opening

(The elevators of 450-kg load capacity are equipped with 2-panel side opening doors as standard.)

Note: *For application range other than the above, please contact our local office for detail.
*The above specifications may change without prior notice.

1. Elevator Operation Control System

Control Systems	Details of the Systems
For One Elevator: 1-Car Selective Collective Operation (: Simplex Collective Operation)	Landing calls in the direction in which the elevator is traveling are served sequentially. After all the landing calls are served, landing calls in the opposite direction will be served. When there are no incoming calls, the elevator stops and stays at the last served floor.
For Two Elevators in a Bank: 2-Car Selective Collective Operation (: Duplex Collective Operation)	Two selective-collective-operation elevators work together in one group. Landing calls are served by either elevator that can respond first. When there are no calls, one will be on standby at the main floor; the other will stay at the last served floor.
For Two to Eight Elevators in a Bank: Group Control Operation For 2 to 8 Elevator in a bank	The operation of more than two elevators in a bank is controlled by a group supervisory system which calculates passenger waiting time in advance based on the accumulated traffic data, such as passenger travel patterns and passenger volume at each floor, etc.

2. Functions and Specific-Purpose Operations, etc.

Functions and Specific-Purpose Operations, etc.		Details	●: Standard / ■: Optional	
Passenger-Safety Functions	Alarm Buzzer	When the emergency button is pressed, the car-top-mounted buzzer will sound an alarm.	●	
	Rescue Operation to Nearest Floor	In the event that an elevator stops between floors, a safety circuit will automatically analyze the situation and slowly move the elevator to the nearest available floor.	●	
	Automatic Releveling	In the event that an elevator floor isn't leveled with the landing floor, the Automatic Releveling function will initiate and make the elevator floor flush with the landing floor.	●	
	Emergency Car Lighting	In the event of a power failure, a self-charging-battery-equipped emergency lighting system will light up the elevator for passenger safety and relief.	●	
	Intercom System (2 way Communication System)	An intercom for 2-way communication is installed in the elevator. It allows 4 remote telephones to communicate with the elevator; one on the car top, one in the pit, one in the machine room and one in the building-system control room.	●	
	Multi-Beam Sensor	Multi-beam Sensor emits multiple infrared beams, creating an invisible curtain covering the entire doorway. If any of the beams is interrupted, the closing doors will stop and reopen.	●	
	Multi-Beam Sensor with Mechanical Safety Edge	A multiple-beam sensor can be incorporated in mechanical safety edges of elevator doors.		■
	Night-Time Self-Checking Operation	During the night time when the elevator doesn't receive any car and hall calls, the system will move the elevator and check the mechanical brake conditions automatically.	●	
	Open Door Warning	If a passenger tries to forcibly open the doors while the elevator is in operation, the warning device will sound an alarm.	●	
	Unintended Car Movement Protection (UCMP)	The Unintended Car Movement Protection system prevents elevator movement from the landing floor, while passengers are entering and getting off the elevator.	●	

Specification Details

Functions and Specific-Purpose Operations, etc.		Details	●: Standard / ■: Optional	
Efficient-Operation Functions	Anti-Nuisance Function	1) For elevators with three or more landings, when three or more car calls are registered at the same time, or when four or more car calls are registered in an extremely short period of time, the system will automatically cancel the activated car calls. 2) For elevators with five or more landings, when an elevator loaded with 100 kg or less receives four or more car call registrations, the system will cancel all the activated registrations.	●	
	Auto Adjustment of Door Open Time	This function automatically adjusts the door-hold open time (dwell time) at each floor depending on passengers' hall- and car- call registration situations.	●	
	Automatic Return to Main Floor (for Group Control Operation)	When an elevator does not receive any car- or hall- calls for a certain period of time, the Automatic Return to Main Floor function makes the elevator go to the lobby or a predetermined floor and waits in standby for passengers to board.	●	
	Door Nudging	If the car doors are held open over a given period of time, the Door Nudging function will close them slowly with an audible alarm.	●	
	Auto-Separation after Elevator Failure (for Group Control Operation)	When an elevator under group control operation fails to operate normally, it will be separated from the elevator group so as not to affect the overall group elevator performance.	●	
	Load Bypass	When a traveling car is fully loaded, it will bypass floors where hall calls are registered. Those hall calls will be assigned to another available elevator. *For Group Control Operation, Load Bypass is originally furnished		■*
	Overload Warning	When a car becomes overloaded, the warning alarm will sound. The elevator doors will not close until the overloaded state is resolved.	●	
	Reverse-Direction Car-Call Cancellation	In the event that a passenger tries to register a car call that is behind the car's current travelling direction, the elevator system will regard it as a nuisance call and ignore it in order to maintain the elevator service efficiency.	●	
	Wrong Car-Call Register Cancellation	In case a passenger presses the wrong car call button, this mistake can be cancelled by pushing the same button twice.	●	

The above functions may change without prior notice.

Functions and Specific-Purpose Operations, etc.		Details	●: Standard / ■: Optional	
Passenger-Comfort Functions	Arrival Chime(In Car)	When a car arrives at a destination floor, an arrival chime will sound softly.		■
	Attendant Operation	By using attendant-operation buttons inside a car operating board's cabinet, authorized personnel can register car calls for in-car passengers. In addition to monitoring incoming hall calls, the attendant decides the car travel direction and operates the car doors with priority service for in-car passengers.		■
	Automatic Voice Announcement System (VONIC) in English	A computerized voice system provides passengers with timely information about car directions, car arrivals, door opening and closing, and emergencies, etc. At the customer's request, announcements in other languages can be added.		■
	Car Ventilation Fan	Ventilation inside car, fan attached to the ceiling to keep car ventilated well.		■
	Plasmacluster™ Ion Generating Device (IONFUL)	The first elevator company that installed a Plasmacluster Ion generating device in an elevator is Fujitec. The device built in an elevator's ventilation unit disinfects airborne mold, bacteria, viruses, allergens, and odor molecules as well as creating clean air in the elevator. This increases the comfort of passengers. *: Plasmacluster is a trademark of Sharp Corporation.		■
	Visual Display on Car Operating Board	Informing on an elevator's current condition, a visual display on the car operating board will provide passengers with timely text messages such as "OVERLOADED", "EMER. OPERATION, PLEASE EXIT FROM THE CAR." etc,	●	
	Visual Display on Landing Fixture	Informing on an elevator's current condition, a visual display on the landing fixture will provide waiting passengers with timely text messages such as "OVERLOADED", "EMER. OPERATION", etc.		■
Energy-Saving Functions	Automatic Light Control	If an elevator receives no car- and hall- calls within a certain period of time, its lights will turn off automatically.	●	
	Automatic Fan Control	If an elevator receives no car- and hall- calls within a certain period of time, its ventilation fan will turn off automatically.		■
	Elevator Operation Period Control	The elevator operation period in a day is automatically controlled by a timer mounted on the control panel's computer board in the machine room.		■
	Parking Operation	When an elevator is shifted to Parking Operation mode, the elevator will move to the pre-assigned floor and park with its doors closed, and car lights and fan turned off.		■
	Electric Power Regenerative Unit	The adoption of electric power regenerative unit instead of conventional heat dissipation resistor allows the traction-machine-produced electricity to be fed back to the building's electrical facilities. *1. Applied when elevator Speed is over 3.0mps *2. At customer's request	●*1	■*2

Specification Details

Functions and Specific-Purpose Operations, etc.		Details	●: Standard / ■: Optional	
Specific-Purpose Operations	Battery-Powered Automatic Landing Operation (LANDIC)	In the event of a power failure, a compact battery power source will move the car to the nearest available floor.		■
	Door Opening Failure Rescue Operation	When an elevator fails to open the doors at a landing floor, it will move to the next available floor and open them.	●	
	Earthquake Rescue Operation (WAVIC)	When a seismic sensor has detected a seismic wave (the secondary seismic wave), the elevator(s) will be shifted to rescue operation mode and automatically move to the nearest available floor for passenger evacuation.		■
	Fire Operation	In the event of a fire, the Fire Operation mode will automatically take an elevator directly to an evacuation floor and immobilize it there.		■
	Firefighter Operation	The Firefighter Operation mode allows firefighters to use an elevator during a fire. Under this mode, the elevator responds only to car call registrations made by firefighters.		■
	Independent Operation	When Independent Operation is turned on, a designated elevator can operate independently for exclusive use.		■
	Standby Power Operation	In the event of a power failure, the elevator(s) will return to an evacuation floor using standby power and will be held there on standby. Note: Standby power system shall be provided and installed by third parties.		■
Equipment for Building Security, etc.	Building-Management-System (BMS) Interface	Through a purpose-built interface, a building management system can receive up-to-date elevator operation data.		■
	CCTV-Camera Cables (between a car and a machine-room elevator control panel)	For a CCTV camera, video-signal cables suitable for the hoistway and / or machine room are available.		■
	Elevator Operation Supervisory Panel (such as watching board, console panel, etc.)	Through an elevator operation supervisory panel, the statuses of elevator operation can be monitored and the elevator operation controlled.		■
	Elevator Visual Monitoring System (ELVIC)	By monitoring the current statuses of running elevators and giving necessary commands to elevators through desk-top PCs in a specific remote location, ELVIC manages and controls elevator operation. (Desk-top PCs shall be provided by the customer.)		■
	In-Car Power Receptacle	A power receptacle can be installed in an elevator. (Maximum allowable wattage: 1 kW)		■

The above functions may change without prior notice.

1. Elevator Machine-Room and Hoistway Environment

Temperature of Machine Room and Hoistway	Temperature of machine room and hoistway shall be kept from 5 ºC (41 ºF) to 40 ºC (104 ºF).
Relative Humidity	1. When a temperature reaches at 40 ºC (104 ºF), the relative humidity does not go beyond 50%.
	2. In the year's most humid month(s), relative humidity shall be kept lower than 90 % and the temperature lower than 25ºC (77 ºF).
	3. Dew condensation prevention measures shall be taken, if there are the possibilities that condensation form inside and on electrical equipment.

2. Electric Power Source

Type of Power Supply	1. Three-Phase Power Supply for Elevator Driving Machine 2. Single-Phase Power Supply for Lighting Equipment
Allowable Error of Voltage Value	The allowable error of voltage value is 7 % above and below the rated voltage.

3. Acceptable Inclination of Hoistway's Vertical Centerline

Hoistway's Total Height	Centerline's Tilt away from the Plumb Line (unit: mm)
30 meter or less	0 to 25 mm or less (Hoistway tolerance: 0 to 25mm or less on one side, 0 to 25mm or less in total)
more than 30 m up to 60 m or less	0 to 35 mm or less (Hoistway tolerance: 0 to 25mm or less on one side, 0 to 35mm or less in total)
more than 60 m	0 to 50 mm or less (Hoistway tolerance: 0 to 25mm or less on one side, 0 to 50mm or less in total)

4. Work done by Others

The following items are in the scope of other contractors' work, not covering all items done by them.

For Hoistway

1	Construct solid-state, fire-proof elevator hoistway.
2	Cut out landing walls for Fujitec's installation of elevator operating fixtures and elevator equipment.
3	Do wall finishing work by filling cement between jambs and landing walls.
4	Do wall finishing work by filling cement between landing fixtures and landing walls.
5	Give water-proofing and drainage treatment in elevator pit including the installation of pumping equipment.
6	Install space divider screens between respective elevators in a hoistway pit.
7	Install steel separator beams at regular vertical intervals in a hoistway.
8	When hoistway is constructed with bricks, put steel lintels in their walls for Fujitec's installation of rail brackets. RC lintels must be completely fixed inside the walls. The vertical height of the lintel is required to be 300 mm or more. For details, see the relevant drawings.
9	When an elevator traveling distance from a floor to the next is more than 11 m, make an opening on the hoistway wall between the floors and install emergency exit doors in the opening for passenger evacuation.
10	It is advised that there is no human access to the space below the hoistway pit.
11	When the bottom of a hoistway pit is deeper than the required level, add backfill concrete up to the required level.
12	Provide and install all of electricity supply apparatuses (inclusive of pipes, leads, wires, etc.) from the building's electricity supply system to the hoistway, landing floors and Fujitec-designated locations.
13	Provide and install electrical outlets in the hoistway.
14	Install lighting equipment inside hoistway. The lighting intensity is required to be 50 lux or more at 1 meter high above the car roof working platform and the pit bottom.
15	Provide barricades satisfying the requirements of a local safety code.
16	Provide clear working area 1800 mm in front of all landing openings.
17	Installation of pipes and equipment not related to the elevators shall be prohibited.

For Machine Room

1	Construct solid-state, fire-proof machine room.
2	Provide and install a power switching / distributing board in the machine room.
3	Install and lay electrical pipes, wires, and leads in the machine room. They shall be extended from the power switching / distributing board to the controller, machine, and other electrical equipment.
4	Provide and install all of electricity supply apparatuses (inclusive of pipes, leads, wires, etc.) on various routes from the building's electricity supply system to the machine room and Fujitec-designated locations.
5	Install lighting equipment in the machine room. The lighting intensity on the machine room's floor is 200 lux or more.
6	Install air ventilator(s) and/or air conditioner(s) in order to keep the temperature of the machine room between 5 ºC (41 ºF) and 40 ºC (104 ºF).
7	Provide and install electrical outlets in the machine room.
8	Install fire-proof entrance doors in the machine room.
9	Take a noise reduction measure, if it is required.
10	Install smoke detector, if it is required.
11	Make cutouts and holes in the machine room.
12	The strength of machine room floor must meet the requirements of the local building code.
13	Make holes in the walls of a machine room for Fujitec's installation of machine support beams and fill concrete into the gap between the walls and the fixed beams.
14	After the installation of electrical pipes, wires, and leads, etc. on the machine room floor, lay lightweight concrete and finish the floor surface with dust-resistant material.
15	Make an appropriate size of opening on the roof or the sidewall of a machine room in order for Fujitec to carry in elevator machine and other equipment.
16	Install machine lifting hooks and / or steel beams on the ceiling slabs of a machine room. The required lifting load capability is stated on the relevant installation drawings.
17	Install windows and louvers in order to let in daylight into the machine room.
18	If a person's entry into the machine room needs a ladder or stairs, the installation and fixation of it or them is required.
19	In case the machine room has two or more floors and a distance between each floor is more than 500 mm, install a ladder or stairs between the floors. Guardrails shall be provided and installed on the upper floor(s) for the prevention of a person's fall.

Others

1	Ground-fault interrupter and current leakage alarm are required to be protected against current-harmonic distortion.
2	Lay building's telecommunication lines 500 mm away from the electric feeder lines for elevator system.
3	Remove corroded metal materials from the machine room and the hoistway.
4	Protect the machine room and the hoistway against hazardous gas.
5	Prevent dust from accumulating in the hoistway and the machine room.
6	Provide a storage room in order to stock elevator parts and installation materials.
7	Do not place any tools and materials not related to elevators in the hoistway and the machine room.

Global Operations

Fujitec's Global Operations in 24 countries and Regions Delivers "Japanese Quality: Made in Fujitec" to Various Customers.

EAST ASIA

HUASHENG FUJITEC ELEVATOR CO., LTD.
SHANGHAI HUASHENG FUJITEC ESCALATOR CO., LTD.
FUJITEC SHANGHAI SOURCING CENTER CO., LTD.
FUJITEC SHANGHAI TECHNOLOGIES CO., LTD.
FUJITEC (HK) CO., LTD.
FUJITEC KOREA CO., LTD. ,
FUJITEC TAIWAN CO., LTD.

EUROPE

FUJITEC UK LTD.

JAPAN

MIDDLE EAST

FUJITEC SAUDI ARABIA CO., LTD.
FUJITEC CO.,LTD. UAE (DUBAI) OFFICE
FUJITEC EGYPT CO., LTD.

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ZEXIA

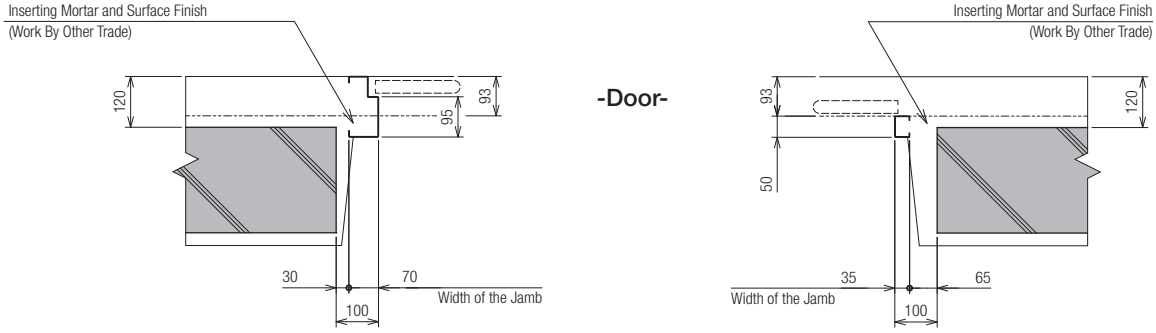
Passenger Elevator with Machine Room

- Planning
- Standard Dimensions
- Power Supply Data

In Compliance With the Standards of EN81-20 and EN81-50

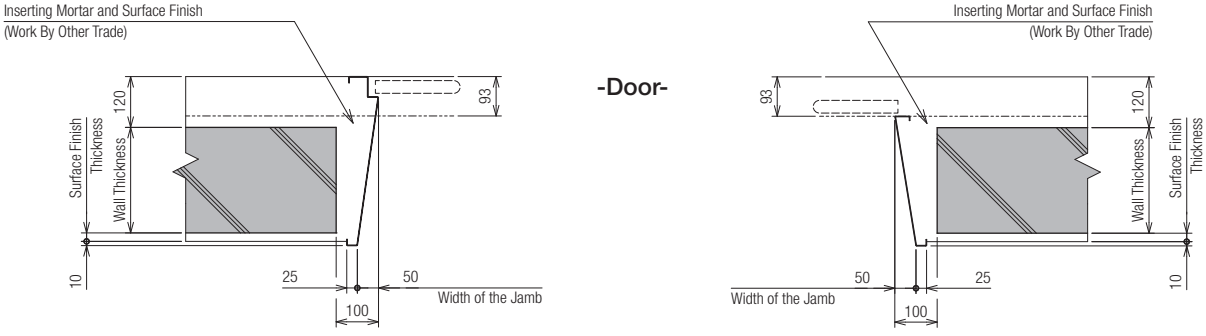
450kg 2-Panel Right–side Opening Door (2SR) (Opposite for 2SL)

Narrow Jamb



Left Side　　Right Side

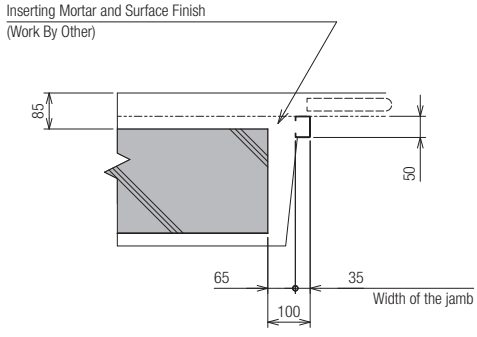
Wide Jamb



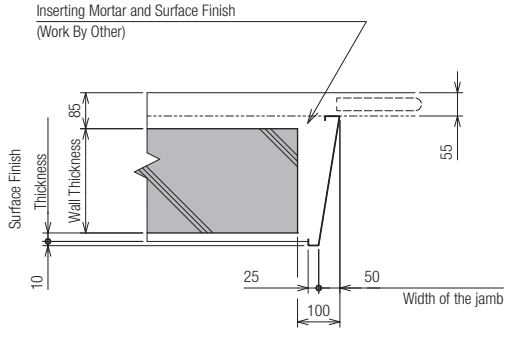
Left Side　　Right Side

630 to 2000kg 2-Panel Center-Opening Door (2CO)

Narrow Jamb



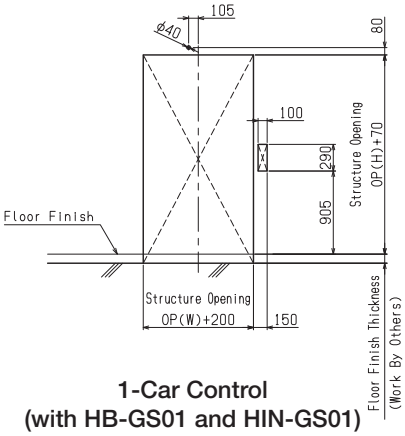
Wide Jamb



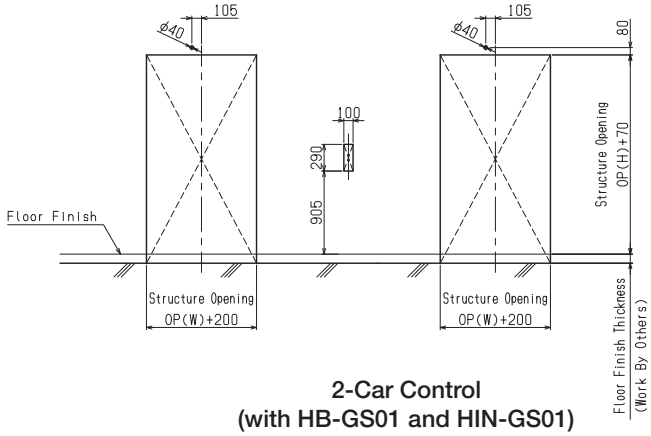
Standard Hole Plan at landing to comply with EN81-70 Requirments;

-With standard landing fixtures (Wall-Mounted type fixtures)

Bottom Terminal Floor

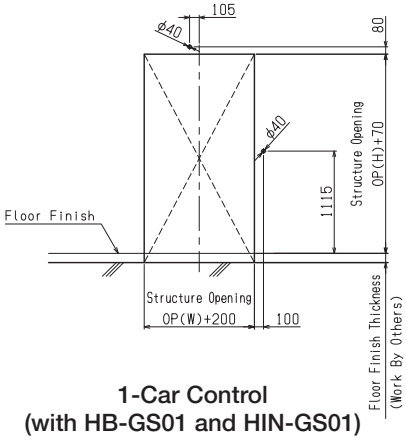


1-Car Control
(with HB-GS01 and HIN-GS01)

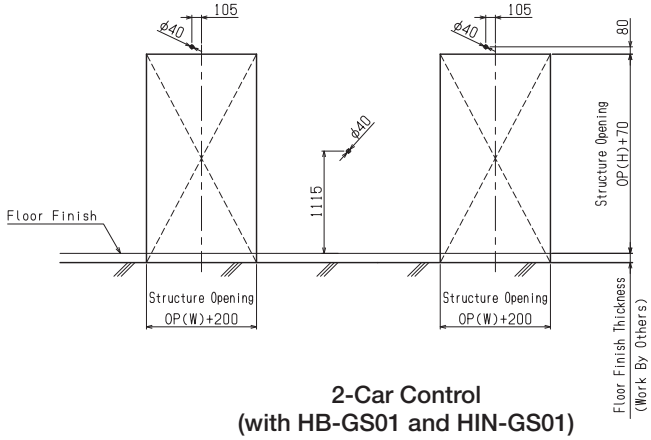


2-Car Control
(with HB-GS01 and HIN-GS01)

The Other Floors except Bottom Terminal Floor



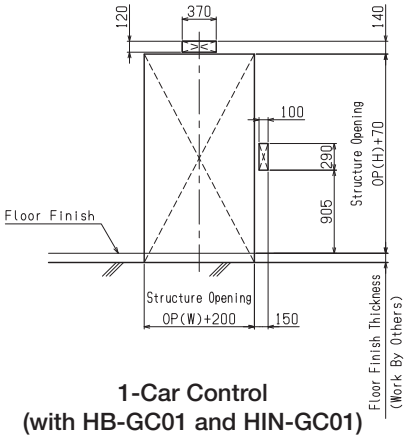
1-Car Control
(with HB-GS01 and HIN-GS01)



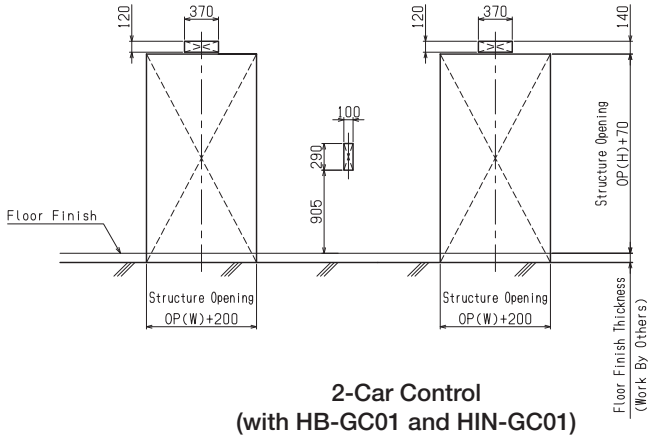
2-Car Control
(with HB-GS01 and HIN-GS01)

-With optional landing fixtures (Box type fixtures)

All Floors



1-Car Control
(with HB-GC01 and HIN-GC01)

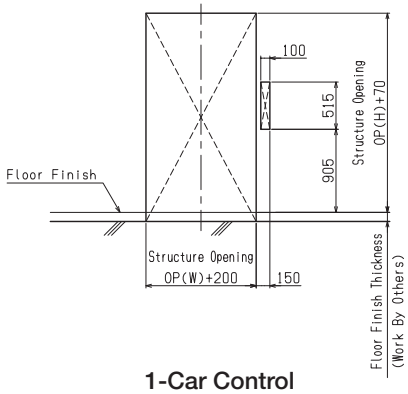


2-Car Control
(with HB-GC01 and HIN-GC01)

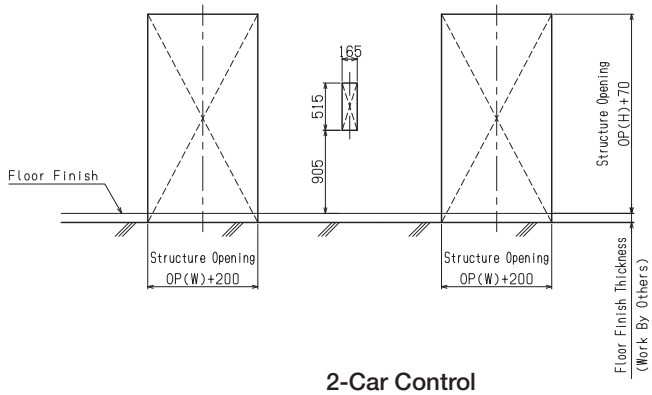
Standard Hole Plan at landing (non-EN81-70);

-With standard landing fixtures (Wall-Mounted type fixtures)

Bottom Terminal Floor

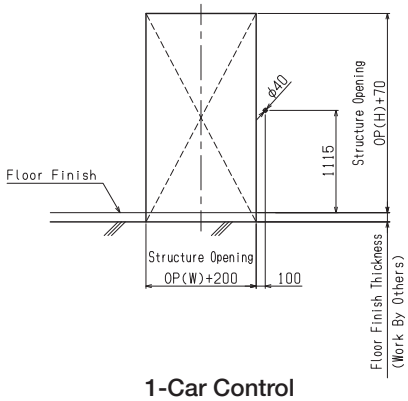


1-Car Control
(With IN-GS01)

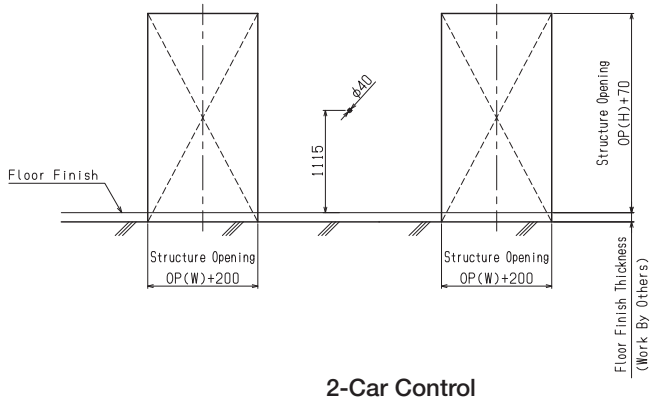


2-Car Control
(With IN-GS02)

The Other Floors except Bottom Terminal Floor



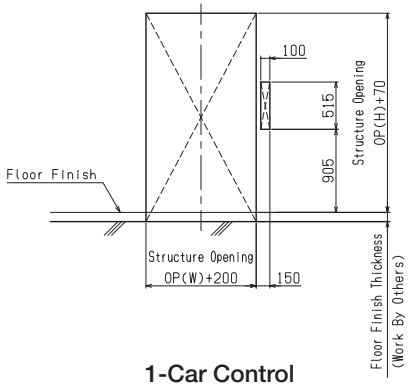
1-Car Control
(With IN-GS01)



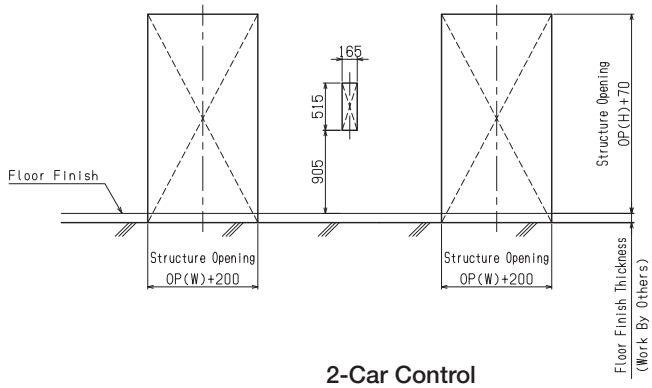
2-Car Control
(With IN-GS02)

-With optional landing fixtures (Box type fixtures)

All Floors



1-Car Control
(With IN-GS01)



2-Car Control
(With IN-GS02)

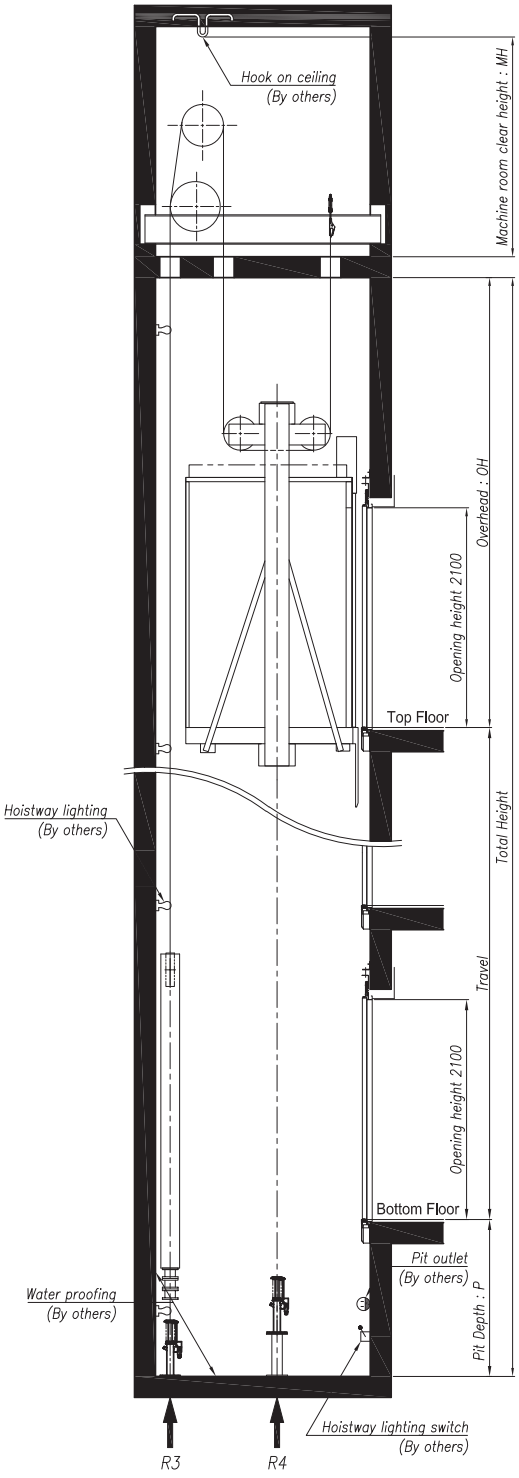
Standard Dimensions

Counterweight at the rear

Capacity (kg)	Speed (m/s)	Maximum Travel (m)	Opening Type	Car Inside A x B (mm)	Opening W x H (mm)	Hoistway X x Y (mm)	Machine Room Size MX x MY x MH (mm)	Pit Depth P (mm)	Overhead OH (mm)	Machine room reaction (kN)		Pit reaction (kN)	
										R1	R2	R3	R4
450	1	140	2S	1000x1200	800x2100	1490x1800	1660x1800x2200	1620	4200	42	48	81	90
	1.5							1710	4340				
	1.75							1750	4410				
	2							1810	4500				
450 (*4)	1	140	2S	1000x1250	800x2100	1490x1850	1660x1850x2200	1620	4200	44	46	81	90
	1.5							1710	4340				
	1.75							1750	4410				
	2							1810	4500				
630	1	140	2CO	1400x1100	800x2100	1800x1630	1800x1630x2200	1620	4580	47	59	93	106
	1.5							1710	4720				
	1.75							1750	4790				
	2							1810	4880				
	2.5							1970	5010				
630 (*4)	1	140	2CO	1100x1400	900x2100	1940x1960	1940x1960x2200	1370	4740	57	52	93	106
	1.5							1470	4880				
	1.75							1500	4950				
	2							1640	5040				
	2.5							1800	5340				
	3					1940x1980	1940x1980x2200	2400	5770	71	61	110	123
800	1	140	2CO	1400x1350	800x2100	1800x1880	1800x1880x2200	1370	4470	58	60	100	117
	1.5							1470	4610				
	1.75							1500	4670				
	2							1640	4770				
	2.5							1800	5010				
	3					1930x1930	1930x1930x2200	2400	5600	77	70	124	140
1050	1	140	2CO	1600x1500	900x2100	2000x2080	2000x2080x2200	1370	4200	70	69	114	135
	1.5							1470	4340				
	1.75							1500	4410				
	2							1640	4500				
	2.5							1800	4800				
	3					2030x2140	2030x2140x2200	2400	5170	87	85	150	172
	3.5	230				2030x2300	2570x3790x2850	3960	5570	122	107	233	255
	4							4330	5970	124	109	236	258
1200	1	140	2CO	1800x1500	1100x2100	2340x2080	2340x2080x2200	1370	4200	78	77	125	150
	1.5							1470	4340				
	1.75							1500	4410				
	2							1640	4500				
	2.5							1800	4800				
	3					2340x2140	2340x2140x2200	2400	5170	94	91	161	185
	3.5	230				2350x2300	2670x3790x2850	3960	5620	129	113	244	268
	4							4330	6020	130	114	246	271
1275 (*4)	1	140	2CO	2000x1400	1100x2100	2400x1980	2400x1980x2200	1370	4200	81	79	129	155
	1.5							1470	4340				
	1.75							1500	4410				
	2							1640	4500				
	2.5							1800	4800				
	3					2430x2040	2430x2040x2200	2400	5170	96	94	161	188
	3.5	230				2430x2200	2430x3890x2850	3960	5620	134	118	254	280
	4							4330	6020	138	121	261	288
1350	1	140	2CO	2000x1500	1100x2100	2400x2080	2400x2080x2200	1370	4200	83	81	132	160
	1.5							1470	4340				
	1.75							1500	4410				
	2							1640	4500				
	2.5							1800	4800				
	3					2430x2140	2430x2140x2200	2400	5170	98	96	162	190
	3.5	230				2430x2300	2430x3990x2850	3960	5620	139	123	264	292
	4							4330	6020	146	128	276	304
1600	1	140	2CO	2000x1750	1100x2100	2400x2350	2400x2350x2200	1550	4320	115	86	173	206
	1.5							1650	4460				
	1.75							1680	4530				
	2							1750	4620				
	2.5							1910	4920				
	3					2430x2390	2430x3950x2850	2400	5210	129	95	184	217
	3.5	230				2430x2550	2430x4240x2850	4040	5560	168	114	287	320
	4							4500	5950	169	115	290	323
2000	1	140	2CO	2200x1900	1200x2100	2600x2500	2600x2500x2200	1550	4320	137	102	203	244
	1.5							1650	4460				
	1.75							1680	4530				
	2							1750	4620				
	2.5					2600x2540	2600x4130x2850	1910	4920				
	3					2630x2540	2630x4100x2850	2400	5360	125	93	212	253
	3.5	230				2630x2700	2630x4390x2850	4040	5560	184	127	314	356
	4							4600	5950	186	128	318	359

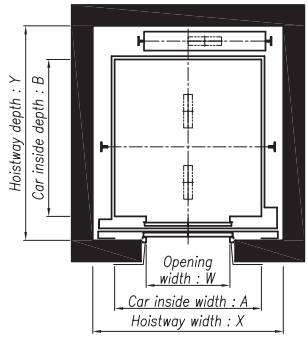
Note:
1. Refer to WORK BY OTHERS for hoistway torelance.
2. The data shown in the table above considers following elevator specificaitons;
   - Travel: Max. travel (see the table above), Non seismic, Shared hoistway shaft separated by divider beams (i.e. not single hatch).
   - 2350mm clear height car with CT-GS01, 25mm marble floor recess (by other), COB-GC01, CPH-GC02, Upper-side Full-width Mirror.
   - Without counterweight safety, without metal duct.
   Please contact our local office for details because the data may vary depending on elevator specifications, elevator shaft configuration, and also local code (for example, seismic zone).
3. EN Fire door can be provided with the enlargement of Hoistway dimensions: X+50 and Y+20. (See the table above for X and Y.)
4. The size of cars with *4 respectively corresponds with minimum car dimensions for Type 1 lift, Type 2 lift, Type 3 lift specified by EN81-70.

Plan for rear counter weight

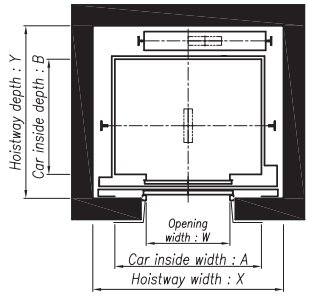


Hoistway Sectional Elevation

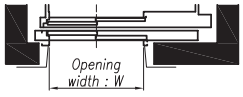
Note: Hoistway section for one car sheave arrangement is slightly different from the above figure.



Two panel center opening

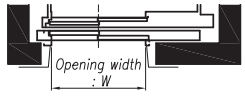


Two panel center opening



Two panel side opening

Two car sheaves arrangement

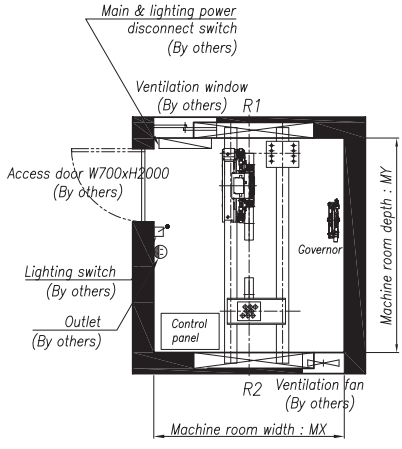


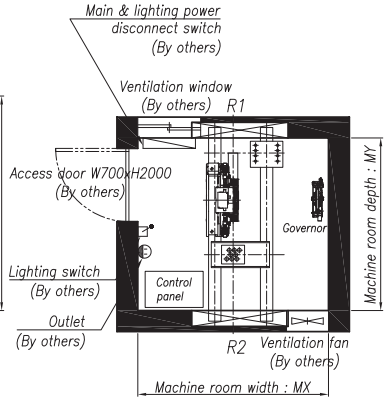
Two panel side opening

One car sheave arrangement

Hoistway Plan

450kg<= Capacity <=2000kg





Machine Room Plan

Note: When the elevator speed is 3.0m/s and the machine room width is the same as the hoistway width, it is required to cut out the machine room wall to prevent interference with governor machine.

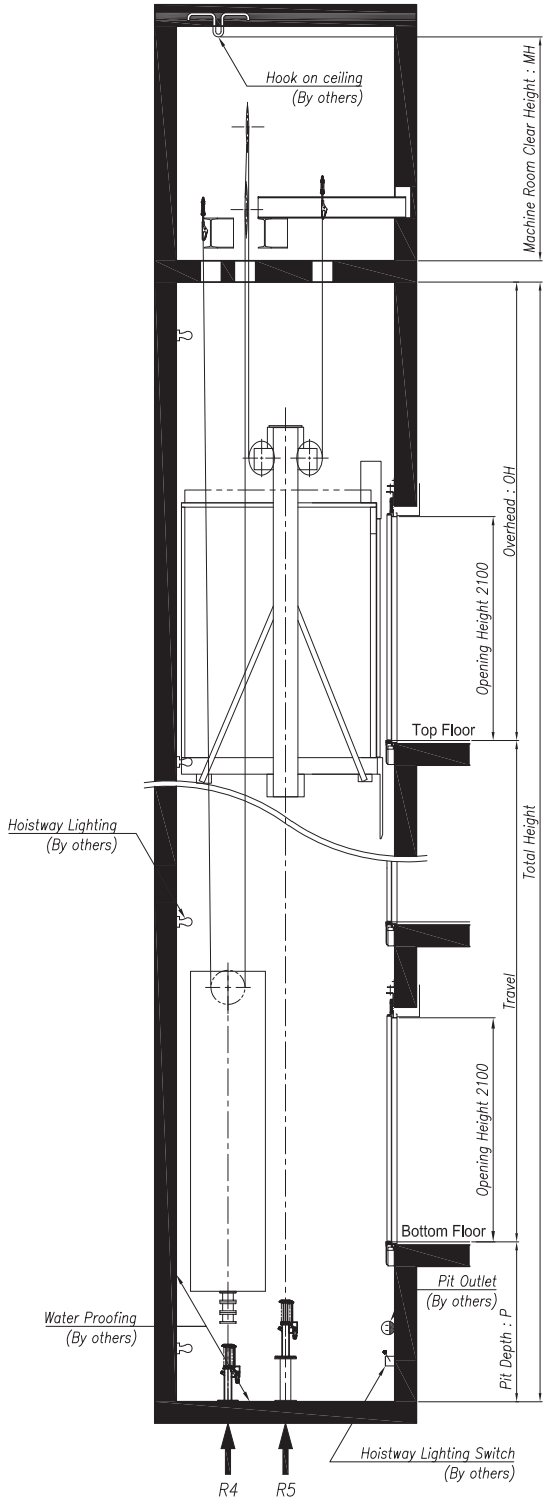
Standard Dimensions

Counterweight at the side

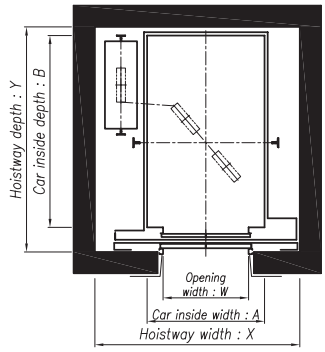
Capacity (kg)	Speed (m/s)	Maximum Travel (m)	Opening Type	Car Inside A x B (mm)	Opening W x H (mm)	Hoistway X x Y (mm)	Machine Room Size MX x MY x MH (mm)	Pit Depth P (mm)	Overhead OH (mm)	Machine room reaction (kN)			Pit reaction (kN)	
										R1	R2	R3	R4	R5
800	1	140	2CO	1100x1800	800x2100	1860x2110	1860x2110x2200	1370	4170	74	39	11	103	120
	1.5							1470	4310					
	1.75							1500	4370					
	2							1640	4470					
	2.5							1800	4710					
	3							2400	5470	93	48	10	131	147
1050	1	140	2CO	1100x2100	900x2100	1960x2410	1960x2410x2200	1370	4170	81	46	11	112	133
	1.5							1470	4310					
	1.75							1500	4370					
	2							1640	4470					
	2.5							1800	4710					
	3							2400	5000	97	56	13	140	162
	3.5	230				2340x2450	2340x3400x2850	4420	5520	164	82		214	236
	4							4690	5920					
1200	1	140	2CO	1300x2100	1100x2100	2340x2410	2340x2410x2200	1370	4170	90	45	11	120	143
	1.5							1470	4310					
	1.75							1500	4370					
	2							1640	4470					
	2.5							1800	4710					
	3							2400	5000	110	53	11	152	175
	3.5	230				2640x2450	2640x3400x2850	4420	5520	194	89		252	277
	4							4690	5920					
1350	1	140	2CO	1300x2300	1100x2100	2340x2610	2340x2610x2200	1370	4170	97	52	11	129	156
	1.5							1470	4310					
	1.75							1500	4370					
	2							1640	4470					
	2.5							1800	4710					
	3							2400	5470	114	61	13	162	190
	3.5	230				2640x2610	2640x3700x2850	4460	5560	195	113		266	294
	4							5070	5950					
1600	1	140	2CO	1400x2400	1100x2100	2340x2750	2340x2750x2200	1550	4170	121	58	21	170	203
	1.5							1650	4310					
	1.75							1680	4370					
	2							1750	4470					
	2.5							1910	4710					
	3					2380x2750	2380x3310x2850	2400	5510	136	66	20	186	219
	3.5	230				2700x2710	2700x3730x2850	4510	5560	196	110		260	293
	4							5120	5950					
2000	1	140	2CO	1500x2700	1200x2100	2540x3010	2540x3010x2200	1550	4170	130	69	18	186	227
	1.5							1650	4310					
	1.75							1680	4370					
	2							1750	4470					
	2.5							1910	5140					
	3						2540x3460x2850	2400	5510	132	70	18	198	239
	3.5	230				2850x3010	2850x3880x2850	4860	5560	218	119		295	337
	4							5120	5950					

Note:
1. Refer to WORK BY OTHERS for hoistway torelance.
2. The data shown in the table above considers following elevator specificaitons;
   - Travel: Max. travel (see the table above), Non seismic, Shared hoistway shaft separated by divider beams (i.e. not single hatch).
   - 2350mm clear height car with CT-GS01, 25mm marble floor recess (by other), COB-GC01, CPH-GC02, Upper-side Full-width Mirror.
   - Without counterweight safety, without metal duct.
   Please contact our local office for details because the data may vary depending on elevator specifications, elevator shaft configuration, and also local code (for example, seismic zone).
3. EN Fire door can be provided with the enlargement of Hoistway dimensions: X+50 and Y+20. (See the table above for X and Y.)

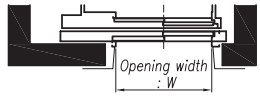
Plan for side counter weight



Hoistway Sectional Elevation



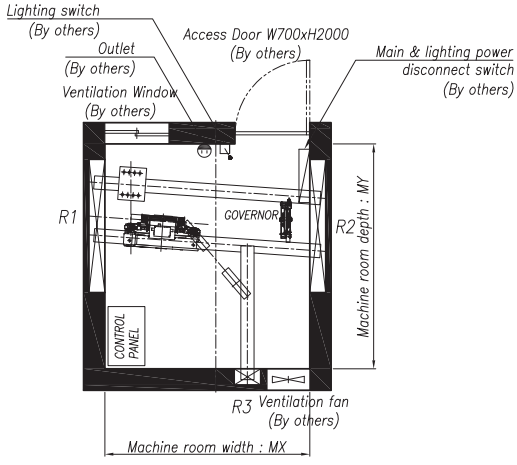
Two panel center opening



Two panel side opening

Hoistway Plan

800kg<= Capacity <=2000kg



Machine Room Plan

Power Supply Data

Capacity (kg)	Speed (m/s)	Motor Power (kW)	Rated Current (A)	Acceleration Current (A)	Equivalent Current (A)	Power Capacity (kVA)	Fuse Current (A)	Allowable Maximum Length of Main Power Feeder Line (m)									Heat Generation Rate in Machine Room (kJ/h)	Air Ventilation Rate in Machine Room(m^3/h)
								4 mm^2	6 mm^2	10 mm^2	16 mm^2	25 mm^2	35 mm^2	50 mm^2	70 mm^2	95 mm^2		
450	1.0	3.0	8	13	5	4	16	135	201	337	543	-	-	-	-	-	2550	300
	1.5	4.0	10	21	7	5	16	103	153	257	414	-	-	-	-	-	3800	450
	1.75	5.0	12	24	8	6	20	90	134	225	362	-	-	-	-	-	4400	520
	2.0	6.0	13	28	9	7	20	-	115	193	310	476	-	-	-	-	5050	600
630	1.0	4.0	10	17	6	5	16	108	161	270	434	-	-	-	-	-	3550	420
	1.5	6.0	14	26	8	6	20	-	115	193	310	476	-	-	-	-	5300	630
	1.75	7.0	16	30	10	7	20	-	100	168	271	416	-	-	-	-	6200	730
	2.0	8.0	17	37	11	8	20	-	-	146	235	360	491	-	-	-	7050	830
	2.5	10.0	23	51	15	11	25	-	-	-	170	261	356	466	-	-	8800	1040
800	1.0	5.0	13	24	7	5	16	83	124	207	334	-	-	-	-	-	4500	530
	1.5	7.0	18	34	10	7	20	-	89	150	241	370	-	-	-	-	6700	790
	1.75	9.0	20	40	11	8	20	-	80	135	217	333	-	-	-	-	7850	920
	2	10.0	22	48	13	10	25	-	-	112	181	277	378	-	-	-	8950	1060
	2.5	13.0	30	72	20	14	40	-	-	-	120	185	252	330	-	-	11200	1320
	3.0	15.0	29	62	19	14	32	-	-	-	140	215	293	384	-	-	13400	1580
1050	1.0	7.0	15	25	8	6	16	72	107	180	289	-	-	-	-	-	5900	690
	1.5	10.0	21	36	11	8	20	-	-	128	207	317	432	-	-	-	8800	1040
	1.75	11.0	24	42	13	10	25	-	-	112	181	277	378	-	-	-	10300	1210
	2.0	13.0	26	49	15	11	25	-	-	103	167	256	349	-	-	-	11750	1380
	2.5	17.0	36	72	22	16	40	-	-	-	120	185	252	330	-	-	14700	1730
	3.0	20.0	38	79	24	17	40	-	-	-	-	168	230	301	408	-	17600	2070
1200	1.0	7.0	17	28	9	7	20	63	94	158	255	-	-	-	-	-	6700	790
	1.5	11.0	24	40	13	10	25	-	-	112	181	277	378	-	-	-	10050	1190
	1.75	13.0	27	47	15	11	32	-	-	100	161	246	336	-	-	-	11750	1380
	2.0	14.0	30	57	17	12	32	-	-	-	144	222	303	396	-	-	13400	1580
	2.5	19.0	37	64	21	15	40	-	-	-	117	180	245	321	-	-	16750	1980
	3.0	23.0	43	88	27	19	50	-	-	-	-	151	206	270	366	-	20100	2370
1350	1.0	8.0	19	30	10	7	20	-	84	142	228	350	-	-	-	-	7550	890
	1.5	12.0	27	44	14	10	32	-	-	100	161	246	336	-	-	-	11350	1340
	1.75	14.0	31	52	17	12	32	-	-	87	140	215	293	-	-	-	13200	1560
	2.0	16.0	35	62	19	14	40	-	-	-	124	190	259	340	-	-	15100	1780
	2.5	21.0	41	74	24	17	50	-	-	-	-	162	221	290	393	-	18850	2220
	3.0	25.0	48	101	30	21	50	-	-	-	-	132	180	235	319	-	22650	2670
1600	1.0	10.0	23	39	12	9	25	-	70	117	189	289	-	-	-	-	8950	1060
	1.5	14.0	33	56	17	12	40	-	-	81	131	202	275	-	-	-	13400	1580
	1.75	17.0	38	66	20	14	40	-	-	-	114	175	239	313	-	-	15650	1840
	2.0	19.0	42	79	24	17	50	-	-	-	103	158	216	283	-	-	17900	2110
	2.5	25.0	50	90	29	21	50	-	-	-	-	133	181	238	322	-	22350	2630
	3.0	30.0	58	120	36	25	63	-	-	-	-	-	151	198	268	347	26800	3160
2000	1.0	12.0	27	42	13	10	32	-	-	100	161	246	336	-	-	-	11200	1320
	1.5	18.0	38	60	19	14	40	-	-	-	114	175	239	313	-	-	16750	1980
	1.75	21.0	44	71	23	16	50	-	-	-	98	151	206	270	-	-	19550	2300
	2.0	24.0	49	85	27	19	50	-	-	-	-	136	185	242	329	-	22350	2630
	2.5	31.0	60	103	34	24	63	-	-	-	-	111	151	198	268	-	27950	3290
	3.0	37.0	73	142	43	30	100	-	-	-	-	-	124	163	220	285	33500	3950

Note:
1. The data shown above may vary based on elevator specification arrangement.
2. Earthling wires shall be arranged and installed based on local elevator code requirement.
3. The data shown above is when power supply is 400Vac, 50Hz.
4. Please contact us for over 3.0m/s.

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