

**FUJITEC**  
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# ZEXIA-D

Small-Machine-Room Elevator



“Made in Fujitec”

Fujitec is Creating and Leading the  
New Global Standard for Elevators.



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

Fujitec’s “Global Common Components” are used in the ZEXIA-D 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 supply chain under the concept of “Made in Fujitec.”



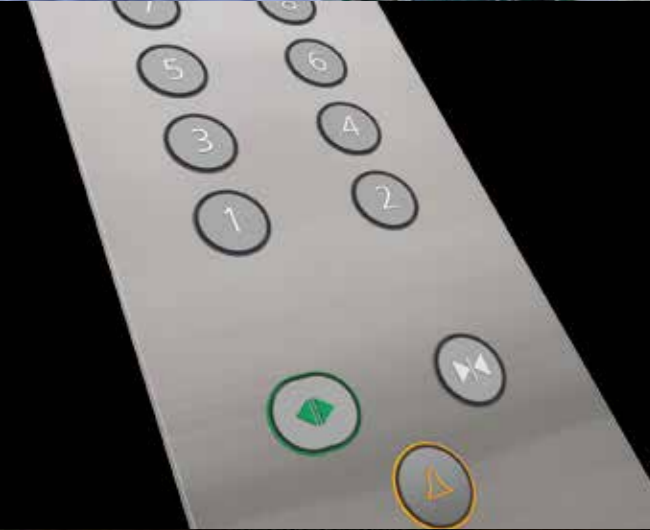
## Excellent Performance

The permanent magnetic synchronous gearless motors, which have been designed and developed by Fujitec, provide the utmost reliability and excellent driving performance. These motors reflect 73 years of accumulated know-how through our technological achievements in elevator manufacturing, which spans from product designing to fabrication.



## Reliable Operation

Since all control-related components, ranging from control circuits to inverters, were independently developed by Fujitec, highly reliable elevator operation is established. In the event of an elevator malfunction, the elevator control system assembled with our components immediately detects the malfunction and maintains efficient and stable operation.



## Universal Design

Under our universal designs, aesthetically refined buttons, displays, etc. on elevator operating fixtures are highly visible. Passengers will have a superb and comfortable riding experience.



## Styles

Various decoration styles for the elevator interior and landing floors are offered by Fujitec. Customers can select the most suitable decorative materials for car panels, car ceilings, car floorings, car operating boards, and landing fixtures.

## CONTENTS

Excellent Performance ....05	
Reliable Operation.....06	
Universal Design.....07	
Styles.....09	
Systems & Functions.....23	
Planning.....27	
Power Supply Data.....30	
Relevant Dimensions.....31	
Work Done by Others .....33	



# Excellent Performance

## Gearless Traction Machine with Permanent Magnetic Synchronous Motor

The gearless traction machines with a permanent magnet 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.

## A Small Machine Results in Space Saving

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

In addition, ZEXIA-D is 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.

- ZEXIA-D Elevator (PMGL)
- Conventional Elevator (ACGD)

Required Motor Capacity

8.5kW

9.0kW

Electrical Usage per Month\*\*

646kWh/ month<sup>2</sup> ← 22% Energy saving

827kWh/ month



\*1: The number of days in a single month is assumed as 30 days.  
\*2: Electrical usage might vary depending on site conditions.

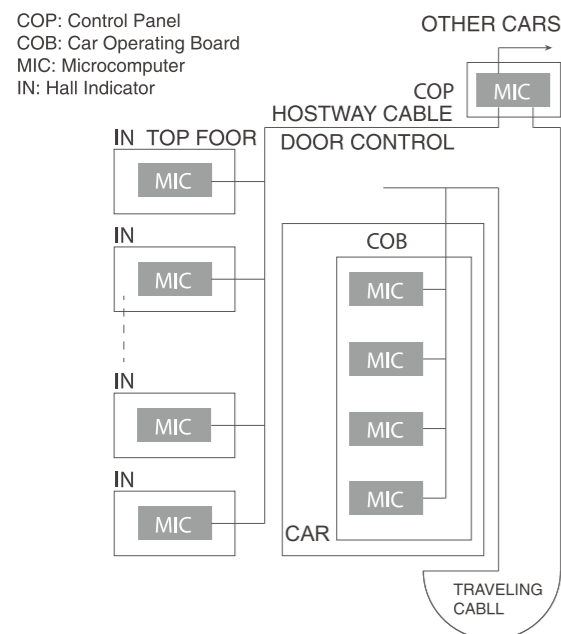
## Ultra-Slim Door Operator with Permanent Magnetic Synchronous Motor

Fujitec's new door operators have adopted a permanent magnetic synchronous motor which doesn't have any gears for door speed control. The use of this motor reduces the size of a door operator and achieves smooth and precise door operation.



These new door operators consume approximately 35 % less power than conventional ones.

## 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.

# Reliable Operation



### Car Door Anti Stripping Device

It can prevent passengers from falling into the shaft when the door is opened in the non unlocking area, and further ensure the safety of elevator passengers.



### Impact Resistant Door System

The impact resistance of the landing door system is further strengthened, and the risk of falling into the shaft caused by the impact of the landing door system is effectively prevented, further ensuring the safety of elevator related personnel.



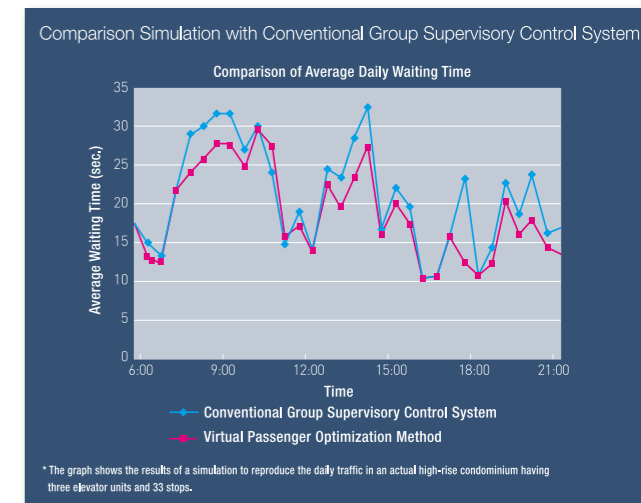
### Unintended Car Movement Protection (UCMP)

A safety-purpose control circuit independent of the elevator operating system detects unintended movement of a car and prevents the car from moving from the floor with its doors open. This function increases passenger safety.

## FLEX-NX series -Elevator Group Supervisory Control System-

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 %.





Fujitec's new global-standard operating fixtures reflect the latest in Human Engineering technology. Fixture buttons with clearly visible lettering function as the man-machine interface. Passengers can register their destination in a visually intuitive manner.

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The newly adopted lettering for the operating fixture buttons is highly visible at wider angles than the former one. The lettering is highly visible, so that passengers anywhere under any lighting conditions in the car can see and easily read the letters and the numbers. Fujitec's uniquely designed operating fixtures function as a friendly interface between the passengers and the elevators.

The eye-catching green door open button can prevent passengers from mistaking the door open button for other buttons.

The emergency call button is located about 900 mm from floor level allowing children and physically impaired persons to use in case of emergency.



## Night-Time Self-Checking Operation

- A safety enhancement for increased reliability -

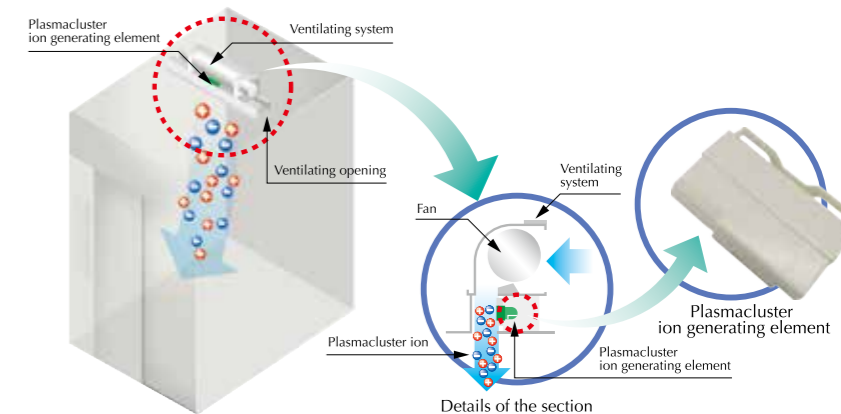
Mechanical brake conditions are automatically checked by moving the elevator during the night time while not receiving any car and hall calls. This night-time self-checking operation increases passenger safety and contributes to a high after-sales product quality.

## IONFUL

### - Plasmacluster™\* Ion Generating Device -

(Optional Specification)

Fujitec is the leading elevator company to have installed a Plasmacluster Ion generating device in an elevator. This device built in a car's ventilation unit disinfects airborne mold, bacteria, viruses, allergens, and odor molecules as well as creating clean air in the elevator which enhances passenger comfort.



Plasmacluster is a trademark of sharp Coporation

## Multi-Beam Sensor

Multi-beam Sensor emits multiple infrared beams, creating an invisible curtain covering the 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.



## LED Down lights on Car Ceiling

For car ceiling lighting, Fujitec adopts LED downlights, which are long-lasting and energy-efficient. This adoption contributes to the protection of the environment.

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



## VONIC (Automatic Voice Announcement System)

(Optional Specification)

A computerized voice system (English) 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.]





Ceiling:  
CE-g1  
Paint Finished Steel Sheet  
(TE-a7)

Walls, Transom & Door:  
Paint Finished Steel Sheet  
(TE-a7)

Fan:  
Cross-Flow Fan

Car Operating Board:  
(FX-h1) Stainless Steel with  
Hairline

Floor: BD-b2

Sill: Stainless Steel

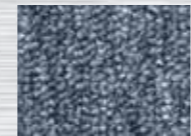
**Car Floor (Option)  
(PVC Tiles)**



BD-b1



BD-b2



BD-b3



BD-b4



BD-b5



BD-b6



BD-b7



BD-b8



Ceiling:	Stainless Steel with Hairline Finish (Frame) Stainless Steel with Mirror Finish (Central)
(CE-e4)	
Walls, Transom & Door:	Stainless Steel with Hairline Finish
Fan:	Cross-Flow Fan
COB:	FX-k11
Floor:	Designed PVC (BD-C1)
Sill:	Stainless Steel



Ceiling:	Paint Finished Steel Sheet (TE-f1)
(CE-e2)	
Walls, Transom & Door:	Stainless Steel with Hairline Finish
Mirror:	Stainless Steel with Mirror Finish
Fan:	Cross-Flow Fan
Handrail:	HR-a1
WCOB:	FX-g31
Floor:	Designed PVC (BD-C1)
Sill:	Stainless Steel

# Optional Car Design



Ceiling: (CE-c1)	Paint Finished Steel Sheet (TE-f1)
Walls,Transom &Door:	Stainless Steel with Hairline Finish
Fan:	Cross-Flow Fan
Floor:	BD-b5
Sill:	Stainless Steel



Ceiling: (CE-e4)	Stainless Steel with Hairline Finish (Frame) Stainless Steel with Mirror Finish (Central)
Walls: (CR-f2)	
Side Panel:	Steel Panel with Wooden Decorative Plate(Sides) Stainless Steel with Mirror Finish(Centre)
Rear Panel:	Steel Panel with Wooden Decorative Plate(Sides) Patterned Glass + Light Strip (Centre)
Front Panel, Transom :	Stainless Steel with Hairline Finish
Fan:	Cross-Flow Fan
Floor:	Designed PVC (BD-C2)
Sill:	Stainless Steel
Kick Plate:	Stainless Steel with Sandblast Finish



Steel Panel with Wooden Decorative Plate



Ceiling: (CE-g5)	Stainless Steel with Mirror Finish
Walls(CR-f1):	
Side & Rear Panels:	Steel Plate with Laminated Sheet(TE-g1)
Wall's Center Panels:	Stainless Steel with Mirror Finish
Front Panel,Transom:	Stainless Steel with Sandblast Finish
Door:	Stainless Steel with Sandblast Finish
Fan:	Cross-Flow Fan
Floor:	Designed PVC (BD-b8)
Sill:	Stainless Steel
Kick Plate:	Stainless Steel with Sandblast Finish



Ceiling: (CE-e2)	Stainless Steel with Mirror Finish
Walls(CR-f1):	
Side & Rear Panels:	Steel Plate with Laminated Sheet(TE-g2)
Wall's Center Panels:	Stainless Steel with Mirror Finish
Front Panel,Transom:	Stainless Steel with Sandblast Finish
Door:	Stainless Steel with Sandblast Finish
Fan:	Cross-Flow Fan
Floor:	Designed PVC (BD-b6)
Sill:	Stainless Steel
Kick Plate:	Stainless Steel with Sandblast Finish



**CE-g1**

Flat Panel:  
Steel Sheet with Color Paint  
  
Light :  
LED (White)  
Emergency Light (1W, LED)



**CE-g5**

Flat Panel:  
Steel Sheet with Color Paint  
  
Light :  
Downlight (10W, LED)  
Emergency Light(1W,LED)



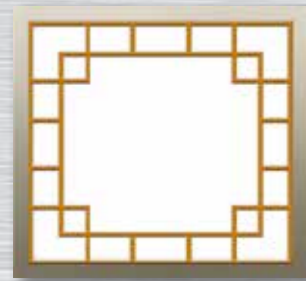
**CE-c1**

Arch-Shaped Part:  
Milky-White Acrylic Sheet  
  
Flat Part:  
Steel Sheet with Color Paint  
  
Light:  
LED+ Downlight(3W, LED)  
Emergency Light(5W,LED)



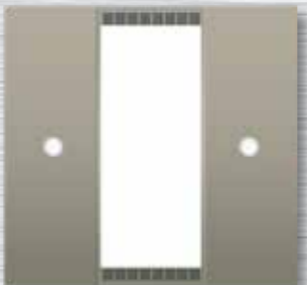
**CE-e4**

Frame Part:  
Stainless Steel with Hairline  
  
Central Part:  
Stainless Steel with Mirror  
Milky- White Acrylic Sheet  
  
Light:  
LED (White)+ Downlight( 2W, LED)  
Emergency Light( 4.5W, LED)



**CE-c7**

Flat Part:  
Milky-White Acrylic Sheet  
  
Flat Panel:  
Steel Sheet with Color Paint  
  
Light:  
LED (White)  
Emergency Light(5W,LED)



**CE-e2**

Arch-Shaped Part:  
Milky-White Acrylic Sheet  
  
Flat Panel:  
Steel Sheet with Color Paint  
  
Light:  
LED (White)+ Downlight(3W, LED)  
Emergency Light(4.5W, LED)  
  
(In case of deep car, the design of ceiling will be changed.)



**CE-c4**

Arch-Shaped Part:  
Milky-White Acrylic Sheet  
  
Flat Part:  
Steel Sheet with Color Paint  
  
Light:  
LED (White)  
Emergency Light(5W,LED)

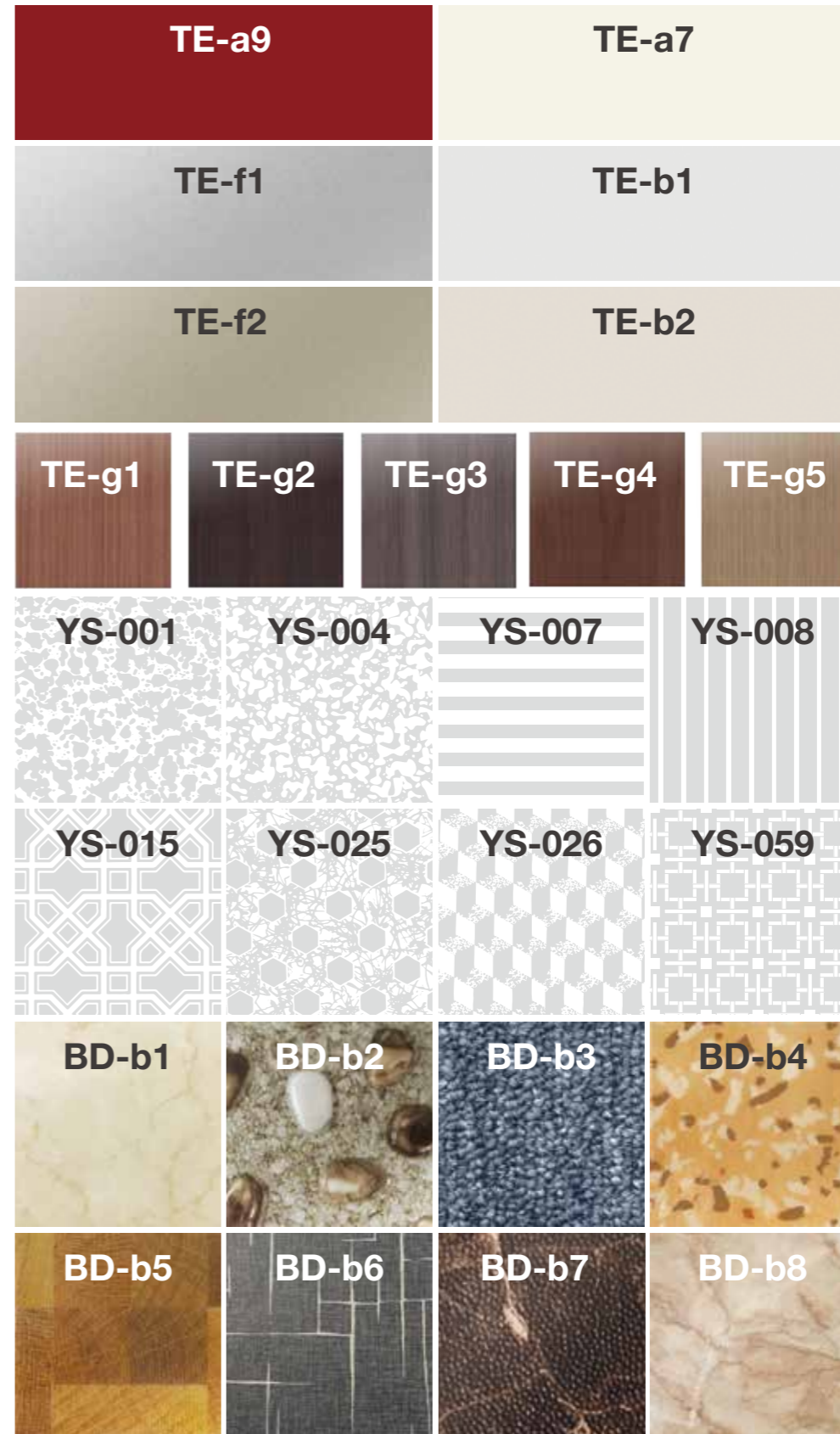
Design of CE-e2 for Deep Car:  
The layout rotate by 90°.



■ Standard

■ Optional

Note: Ceiling internal height will vary based on the ceiling types.



**Ceilings, Car Panels, Car Doors, Landing Doors, and Jamb: Paint**

Note: The colors of TE-f1 and TE-f2 are optional.  
\*Actual colors may differ from the images.

**Car Side & Rear Panels: Steel Plate with Laminated Sheet**

\*Actual colors may differ from the images.

**Car Panels, Car Doors, and Landing Doors: Stainless Steel with Etching**

\*The dimensions of an actual pattern differ from the images.

**Car Floor (Vinyl Tile)**

\*The scale and color of an actual design differs from the images.



**FX-h1**



Faceplate:  
Stainless Steel with Hairline Finish  
Indicator:  
Orange Dot-Matrix LED  
Buttons:  
Push buttons

**FX-h12**



Faceplate:  
Stainless Steel with Hairline Finish  
Indicator:  
Monochrome LCD Screen (7 inch)  
Buttons:  
Push buttons

**FX-h11**



Faceplate:  
Stainless Steel with Hairline Finish  
Indicator:  
Multicolor LCD Screen (7 inch)  
Buttons:  
Push buttons



Optional Background

Wall-mounted Type

**FX-h4**



**FX-h5**



**FX-h7**



**FX-h8**



**FX-h6**



**FX-h41**



**FX-h51**



**FX-h71**



**FX-h42**



**FX-h52**



**FX-h72**



Faceplate:  
Stainless Steel with Hairline Finish/ Acrylic Resin  
Indicator:  
Orange Dot-Matrix LED  
Multicolor LCD Screen (4.2 inch)  
Monochrome LCD (4.1 inch)  
Buttons:  
Push buttons

■ Standard

■ Optional

**FX-k1**



Faceplate: (Swing Type)  
Stainless Steel with Hairline Finish  
Indicator:  
Orange Dot-Matrix LED  
Buttons:  
Push buttons

**FX-k11**



Faceplate: (Swing Type)  
Stainless Steel with Hairline Finish  
Indicator:  
Multicolor LCD Screen (7 inch)  
Buttons:  
Push buttons

**FX-k12**



Faceplate: (Swing Type)  
Stainless Steel with Hairline Finish  
Indicator:  
Multicolor LCD Screen (10.4 inch)  
Buttons:  
Push buttons

**FX-k13**



Faceplate: (Swing Type)  
Stainless Steel with Hairline Finish  
Indicator:  
Monochrome LCD Screen (7 inch)  
Buttons:  
Push buttons

Inserted Box Type

**FX-k4**



**FX-k5**



**FX-k7**



**FX-k6**



**FX-k41**



**FX-k51**



**FX-k71**



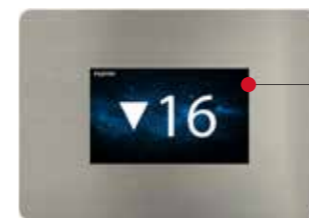
**FX-k42**



**FX-k52**



**FX-k72**



**FX-k73**

7 inch Multicolor LCD



Faceplate:  
Stainless Steel with Hairline Finish  
Indicator:  
Orange Dot-Matrix LED  
Multicolor LCD Screen (4.2 inch)  
Monochrome LCD (4.1 inch)  
Buttons:  
Push buttons

Standard

Optional

Note: FX-k1, FX-k11, FX-k12, FX-k13 might be not available depend on the car size.

**FX-g31**



Faceplate: Stainless Steel with Hairline Finish  
Buttons: Stainless Steel Button



1 Car

**Button**



**CP-C1**  
Type: Resin Button(White)  
When Pressed: Light Emitting Parts: Ring  
Lighting Color: Orange



**CP-C3**  
Type: Resin Button(White)  
Braille Dots  
When Pressed: Light Emitting Parts: Ring  
Lighting Color: Orange



**CP-D3**  
Type: Stainless Steel Button with Braille Dots  
When Pressed: Light Emitting Parts: Ring  
Lighting Color: Orange



**CP-D1**  
Type: Stainless Steel Button  
When Pressed: Light Emitting Parts: Ring  
Lighting Color: Orange



2 Cars

**Handrail**



**HR-a1**  
Stainless Steel Hairline Plate



**HR-b1 & b2**  
Stainless Steel Hairline Tube/ Stainless Steel Mirror Tube



Group Supervisory Control



## FX-k74

**Size (mm)**  
L440x W90 x H8

**Indicator**  
LED

**Lighting Color**  
White



## FX-k75

**Size (mm)**  
L440 x W100 x H14.5

**Indicator**  
LCD ( 4.3 inch )

**Lighting Color**  
Yellow



## FX-k8

**Size (mm)**  
L60 x W200 x H46

**Lighting Color**  
Yellow



## FX-k82

**Size (mm)**  
L55 x W422 x H46.5

**Lighting Color**  
Yellow



## FX-k81

**Size (mm)**  
L55 x W422 x H26

**Lighting Color**  
Yellow

Note: Hall Button + Hall-Lantern combination without the Hall (Digital/ LCD) Indicator is recommended when 4GSO-8GSO\* is operated by the <Immediate Announcement System of a serving Car> function is applied by FLEX-NX (200 & 300).  
(\* GSO = Group Supervisory Operation)

## ZEXIA-D Main Specifications

<b>Capacity</b> 800, 1050, 1200, 1350, 1600, 1800, 2000kgs	<b>Speed</b> 1.0, 1.5, 1.75, 2.0, 2.5, 3.0 mps (3.0mps is not available for elevators of 2000kg capacity.)	<b>Number of Served Floors</b> 40 Stops or Less
<b>Travel Height</b> 140m	<b>Control Method</b> VVVF controlled by distributed 32-bit Microcomputers.	<b>Traction Machine</b> Gearless Machine with Permanent Magnetic Synchronous Motor
<b>Types of Elevator Operation</b> 1-Car or 2-Car Selective Collective Operation or Group Control Operation for 8 Cars in a Bank	<b>Door Operation System</b> Permanent Magnetic Gearless Motor controlled by VVVF	<b>Door Opening Type</b> 2-Panel Center Opening

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)	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)	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 Three to Eight Elevators in a Bank (Group Control Operation)	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		
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.	●		
Five-Way Intercom	An intercom for 5-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.	●		
Passenger-Safety Functions	Multi-Beam Sensor	A multi-beam sensor emits multiple infrared beams, which will scan at the high speed in the elevator door, forming an infrared beam barrier. If a single beam is interrupted, the sensor will stop the closing doors and reopen them.	●	
	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.	●	
	Car Door Anti Stripping Device	It can prevent passengers from falling into the shaft when the door is opened in the non unlocking area, and further ensure the safety of elevator passengers.	●	
	Impact Resistant Door System	The impact resistance of the landing door system is further strengthened, and the risk of falling into the shaft caused by the impact of the landing door system is effectively prevented, further ensuring the safety of elevator related personnel.	●	

The above functions may change without prior notice.

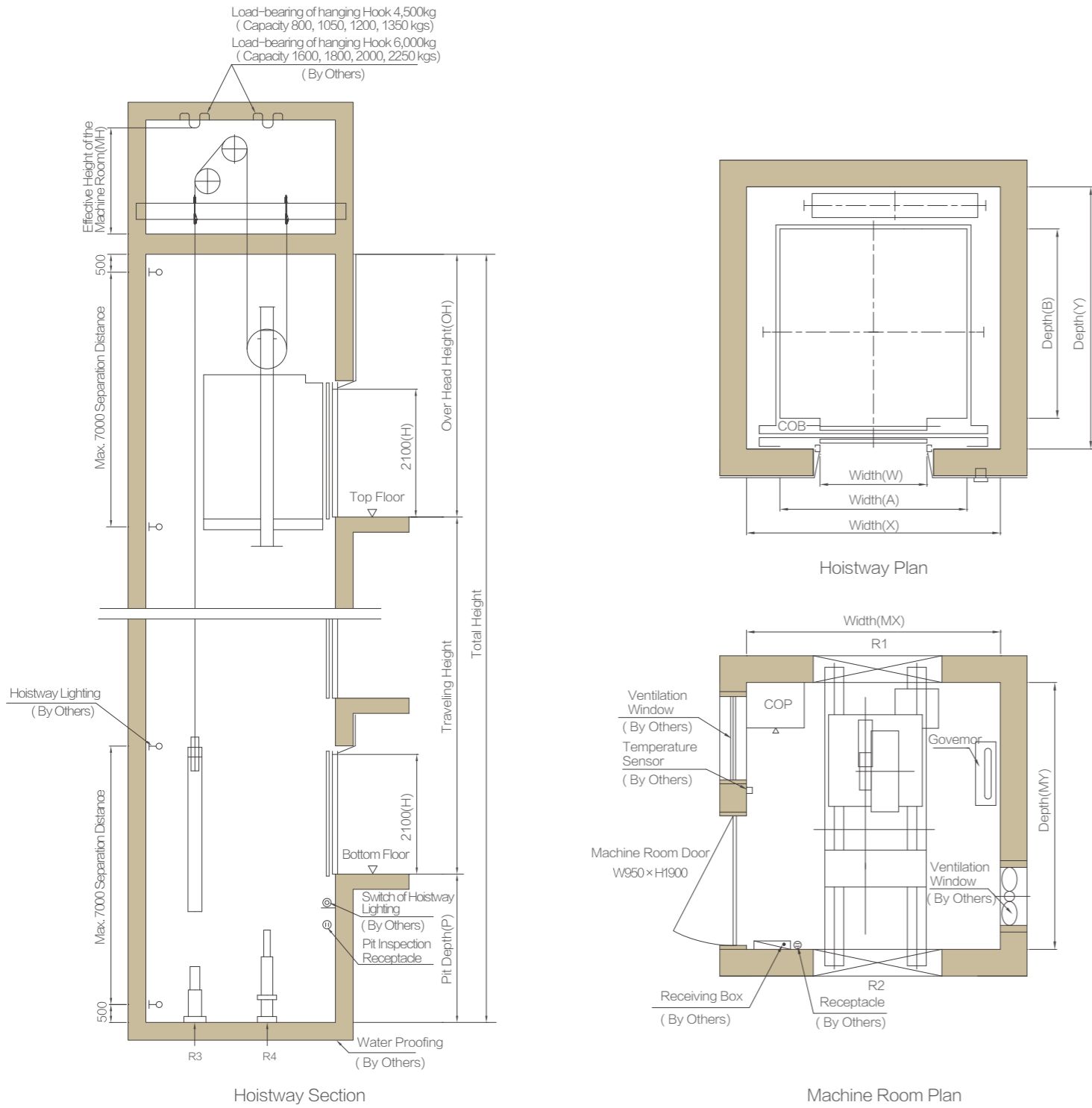
# Systems & Functions

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 1-Car & 2-Car & 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.		■
	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.	●	
	Door Open Holding Button (COB)	In order to meet the demand of loading and unloading goods, a door opening extension button is installed on the operation panel in the car. Pressing this button can keep the door opening time for 3 minutes.		■
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)	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.		■
	Plasmacluster™ Ion Generating Device (IONFUL)	Plasmacluster Ion Generating Device to be built into a car's ventilation unit creates clean air for passenger comfort by disinfecting germs, odor molecules, bacteria, viruses, and allergens in the elevator.		■
	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 THE ELEVATOR." 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.	●	

Functions and Specific-Purpose Operations, etc.		Details	● : Standard / ■ : Optional	
Energy-Saving Functions	Automatic Fan and Light Control	If an elevator receives no car- and hall- calls within a certain period of time, its ventilation fan and lights 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.		■
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. (One refuge floor at the terminal floor)	●	
	Fireman Operation	Under automatic operation, when the Fireman's switch is on, the car will immediately cancel all the calls and run to the refuge floor. The elevator responds to the call in the car only, which is used for special fire fighting operation.		■
	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. * Standby power system shall be provided and installed by third parties.		■
	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.)		■
Equipment for Building Security, etc.	CCTV-Camera Cables (Coaxial type, Network cable and Optical fiber)	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.		■
	Building-Management-System (BMS) Interface	Through a purpose-built interface, a building management system can receive up-to-date elevator operation data.		■

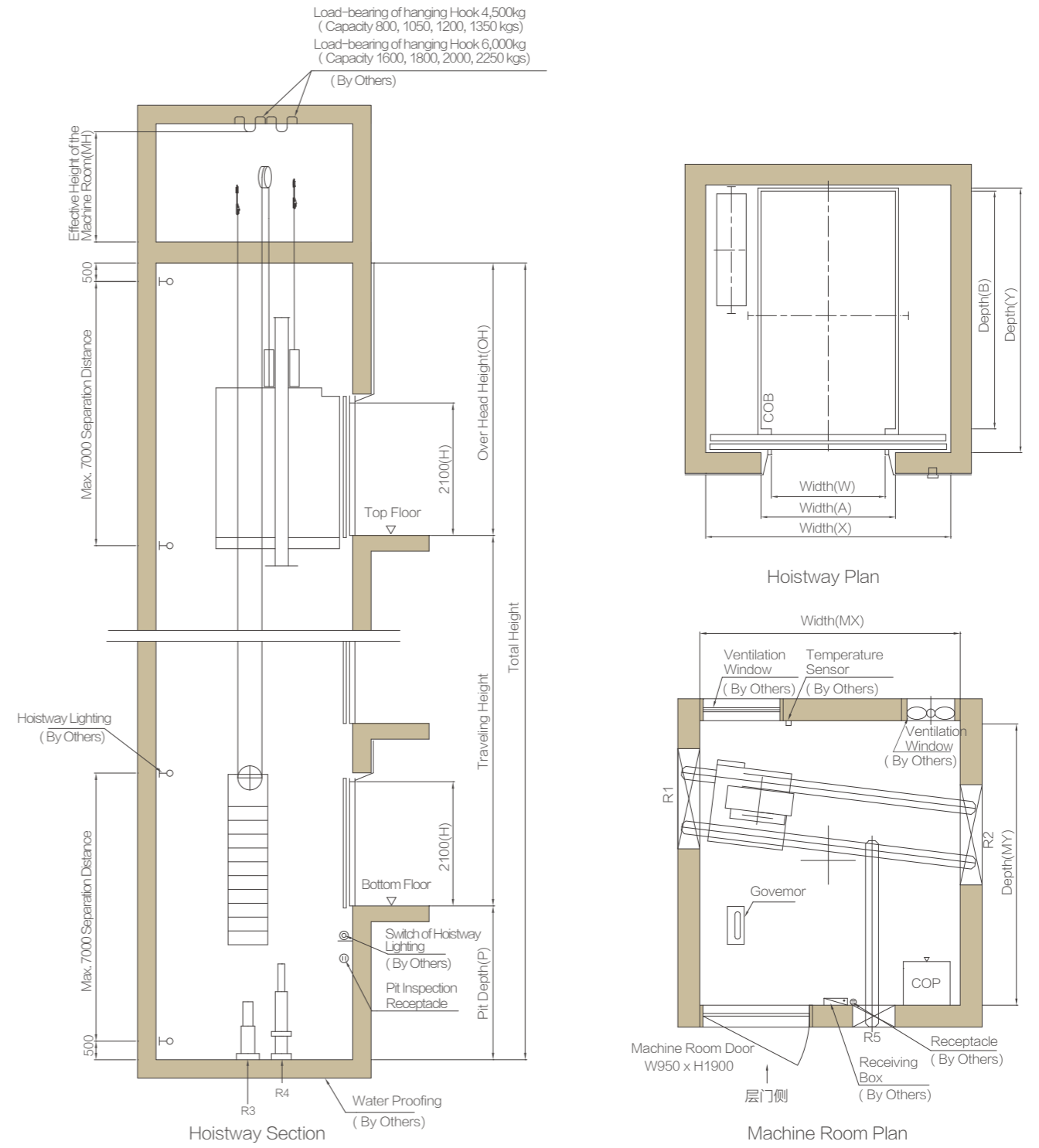
The above functions may change without prior notice.

## Machine Room Arrangement Of The Hoistway (Wide Car)



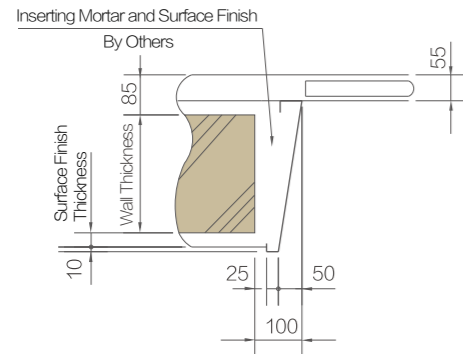
- \*1. The above dimensions are for reference only. The actual engineering design data shall be used.
- \*2. The above dimensions are based on RC-structure hoistway.
- \*3. The location of the machine-room door in the above drawing is for reference only.
- \*4. The location of the machine-room control panel in the above drawing is for reference only.
- \*5. The above hoistway's internal dimensions are based on the hoistway with waterproof finish.
- \*6. If hoistway's internal dimensions are too large, intermediate beams shall be provided and installed by others based on Fujitec-submitted drawings.
- \*7. The required thickness of the hoistway's structural walls is 150mm or more (not including the thickness of wall finish).

## Machine Room Arrangement of The Hoistway (Deep Car)

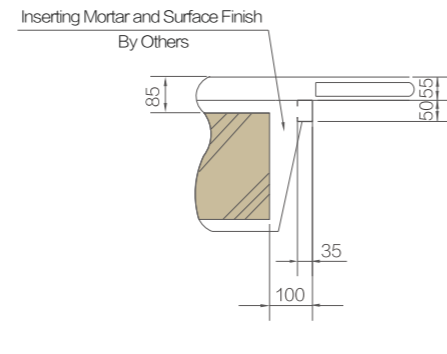


- \*1. The above dimensions are for reference only. The actual engineering design data shall be used.
- \*2. The above dimensions are based on RC-structure hoistway.
- \*3. The location of the machine-room door in the above drawing is for reference only.
- \*4. The location of the machine-room control panel in the above drawing is for reference only.
- \*5. The above hoistway's internal dimensions are based on the hoistway with waterproof finish.
- \*6. If hoistway's internal dimensions are too large, intermediate beams shall be provided and installed by others based on Fujitec-submitted drawings.
- \*7. The required thickness of the hoistway's structural walls is 150mm or more (not including the thickness of wall finish).

## 800-2000Kg 2-Panel Center Opening(2CO)

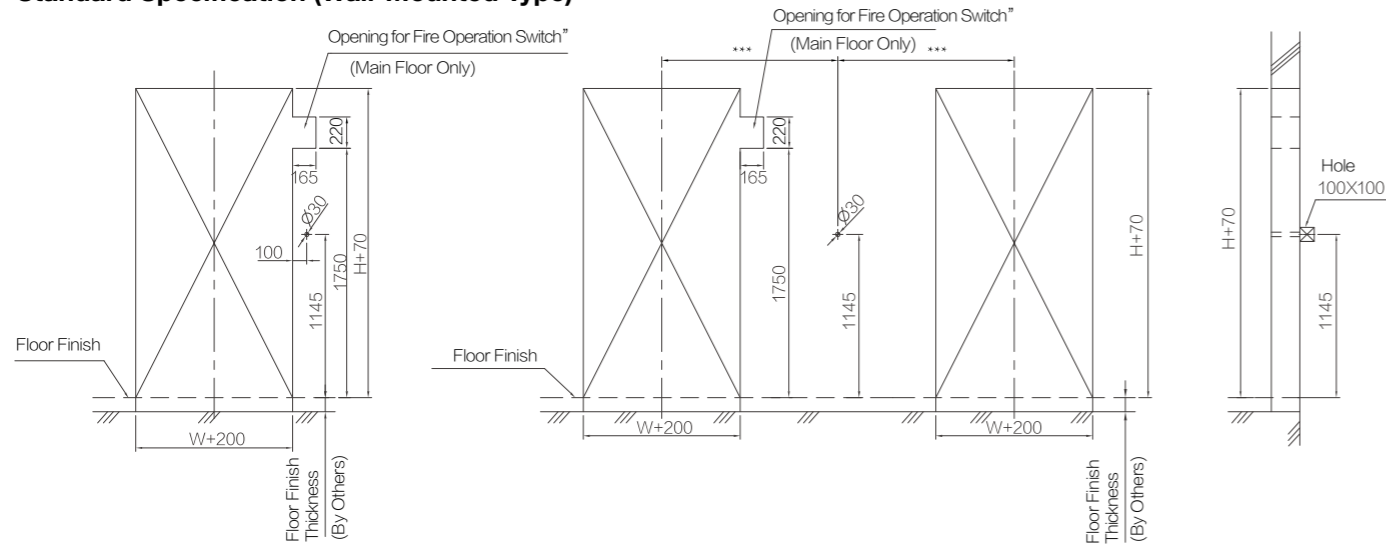


Wide Jamb



Narrow Jamb

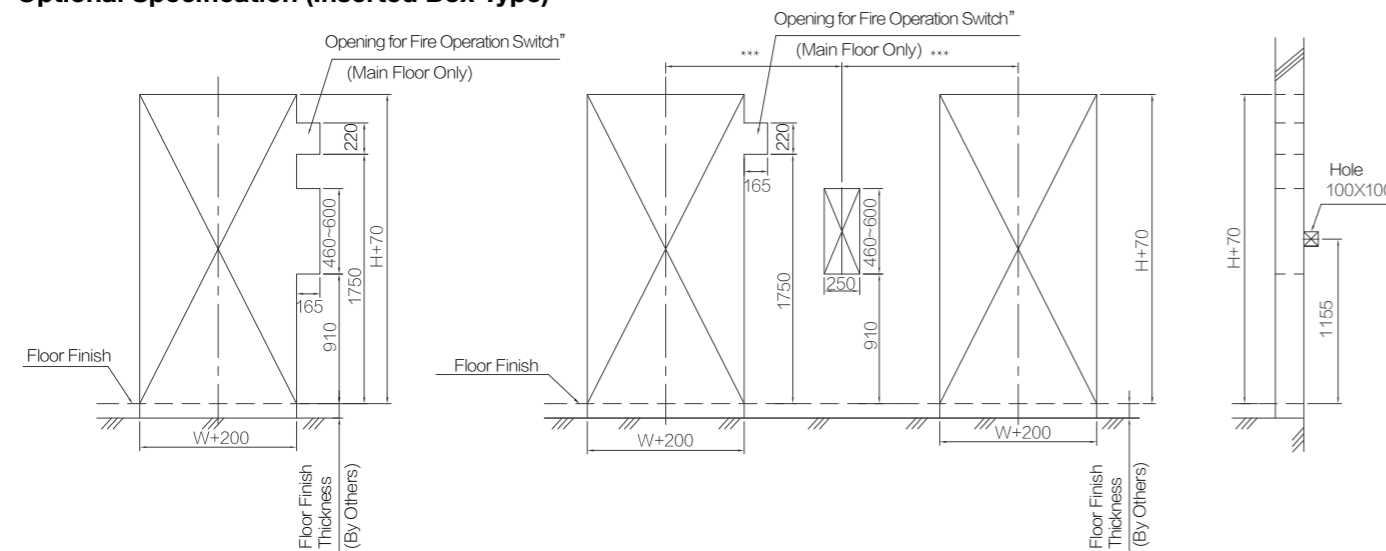
## Standard Specification (Wall-Mounted Type)



1 Car Control

2- Car Control

## Optional Specification (Inserted Box Type)



1 Car Control

2- Car Control

Note: The above dimensions are for reference only. The actual engineering design data shall be used.  
The wide jamb for fire rated door is different from above, which should be confirmed job by job.

Capacity (kg)	Speed (m/s)	Motor Power (kW)	Rated Current (A)	Acceleration Current (A)	Equivalent Current (A)	Power Capacity (KVA)	Open- Circuit 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(m³/h)
								25mm²	35mm²	50mm²	70mm²	95mm²	120mm²	150mm²	185mm²	240mm²	300mm²		
800	1.0	6.0	20	33	5	8	20	324	442	578	784	1013	1421	1706	2001	2431	2559	5050	600
	1.5	8.7	29	50	8	11	32	224	305	400	542	701	983	1180	1384	1682	1771	7550	890
	1.75	9.6	33	60	10	12	40	194	265	347	470	607	852	1023	1199	1457	1534	8800	1040
	2.0	11.0	35	61	11	13	40	183	249	327	443	572	803	964	1131	1374	1446	10050	1190
	2.5	14.0	42	86	14	18	50	148	202	265	359	463	651	781	916	1113	1172	12600	1480
1050	1.0	7.0	26	40	9	10	32	247	337	441	598	773	1085	1302	1527	1856	1953	6600	780
	1.5	10.9	35	57	11	14	40	181	247	323	438	566	795	954	1119	1360	1432	9900	1170
	1.75	12.0	40	62	11	16	40	160	219	287	388	502	705	846	992	1205	1269	11550	1360
	2.0	14.0	43	71	12	18	50	147	201	263	357	461	648	777	912	1108	1166	13200	1560
	2.5	18.0	56	97	16	23	63	115	156	205	278	359	504	605	710	863	908	16500	1940
1200	1.0	8.5	26	41	7	11	32	244	333	436	592	764	1073	1287	1510	1835	1931	7550	890
	1.5	13.6	39	60	10	17	40	164	224	293	397	513	720	864	1014	1232	1297	11350	1340
	1.75	14.9	42	66	11	18	50	152	207	272	368	476	668	802	941	1143	1203	13200	1560
	2.0	17.0	45	74	12	20	50	144	196	257	348	450	632	758	889	1081	1138	15100	1780
	2.5	21.8	58	99	16	26	63	110	150	197	267	346	485	582	683	830	874	18850	2220
1350	1.0	9.2	31	44	7	12	32	207	283	370	502	648	910	1092	1281	1557	1639	8500	1000
	1.5	14.7	42	63	10	18	50	152	207	271	367	475	666	800	938	1140	1200	12750	1500
	1.75	16.0	46	71	12	19	50	139	190	248	337	435	611	733	860	1045	1100	14850	1750
	2.0	18.4	51	85	14	22	63	126	172	225	305	394	554	665	780	947	997	17000	2000
	2.5	23.0	63	106	17	28	80	101	138	181	245	317	445	534	626	761	801	21200	2500
1600	1.0	10.9	36	56	9	14	40	178	243	319	432	558	783	940	1103	1340	1411	10050	1190
	1.5	17.4	49	82	13	21	50	129	176	231	313	405	568	682	800	972	1023	15100	1780
	1.75	19.0	56	94	16	23	63	114	155	203	276	356	500	601	705	856	901	17600	2070
	2.0	21.8	64	113	19	26	80	99	136	178	241	312	438	525	616	749	788	20100	2370
	2.5	27.2	75	138	22	33	100	85	116	152	206	266	373	448	525	638	672	25150	2960
1800	1.0	12.2	40	61	10	15	40	161	219	287	390	503	707	848	995	1209	1273	11350	1340
	1.5	19.5	56	97	15	23	63	113	154	202	273	353	496	595	698	849	893	17000	2000
	1.75	21.3	59	98	16	25	63	107	146	192	260	336	472	566	664	807	850	19800	2330
	2.0	24.5	65	112	18	29	80	97	132	174	235	304	427	513	601	731	769	22650	2670
	2.5	30.6	84	156	25	37	100	—	103	135	183	237	333	399	469	569	599	28300	3330
2000	1.0	13.6	44	67	11	17	50	145	197	259	351	453	636	763	895	1088	1145	12600	1480
	1.5	21.7	62	105	16	26	80	102	139	183	247	320	449	539	632	768	809	18850	2220
	1.75	23.7	66	107	17	28	80	96	131	172	233	302	424	508	596	725	763	22000	2590
	2.0	27.2	73	121	20	32	100	86	118	155	210	271	381	457	536	652	686	25150	2960
	2.5	34.0	94	173	27	41	100	—	91	120	163	210	295	355	416	505	532	31400	3700

Notes: 1. The data shown above may vary based on elevator specification arrangement.  
2. Earthing wires shall be arranged and installed based on local elevator code requirement.



# Relevant Dimensions

## Counterweight at the rear

Capacity (kg)	Speed (m/s)	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
800	1.0	2CO	1400x1350	800x2100	1800x1900	1800x1900x2200	1350	4050	75.6	44.5	89.3	105.0
	1.5						1450	4150				
	1.75						1500	4250				
	2.0						1550	4350				
	2.5						1880	4550				
	3.0						1850x1950	1850x1950x2200				
1050	1.0	2CO	1600x1500	900x2100	2000x2100	2000x2100x2200	1350	4050	85.9	52.3	103.6	124.2
	1.5						1450	4150				
	1.75						1500	4250				
	2.0						1550	4350				
	2.5						1880	4550				
	3.0						2050x2200	2050x2200x2200				
1200	1.0	2CO	1800x1500	1100x2100	2400x2100	2400x2100x2200	1350	4050	99.4	60.4	121.5	145.0
	1.5						1450	4150				
	1.75						1500	4250				
	2.0						1550	4350				
	2.5						1880	4550				
	3.0						2400x2200	2400x2200x2200				
1350	1.0	2CO	2000x1500	1100x2100	2450x2150	2450x2150x2200	1350	4050	101.9	66.2	127.2	153.7
	1.5						1450	4150				
	1.75						1500	4250				
	2.0						1550	4350				
	2.5						1880	4550				
	3.0						2450	4850				
1600	1.0	2CO	2000x1750	1100x2100	2450x2450	2450x2450x2400	1350	4050	123.7	79.4	158.5	189.9
	1.5						1450	4150				
	1.75						1500	4250				
	2.0						1550	4350				
	2.5						1880	4550				
	3.0						2450	4850				
1800	1.0	2CO	2100x1800	1100x2100	2550x2500	2550x2500x2400	1350	4050	131.7	84.4	168.8	182.9
	1.5						1450	4150				
	1.75						1500	4250				
	2.0						1550	4350				
	2.5						1880	4550				
	3.0						2450	4850				
2000	1.0	2CO	2200x1900	1200x2100	2650x2600	2650x2600x2400	1350	4050	144.4	85.6	179.8	219.0
	1.5						1450	4150				
	1.75						1500	4250				
	2.0						1550	4350				
	2.5						1880	4550				

## Counterweight at the side

Capacity (kg)	Speed (m/s)	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	R5	R3	R4
800	1.0	2CO	1100x1800	800x2100	1900x2100	1900x2100x2200	1350	4050	78.0	44.3	10.1	91.2	106.9
	1.5						1450	4150					
	1.75						1500	4250					
	2.0						1550	4350					
	2.5						1880	4550					
	3.0						1950x2150	1950x2150x2200					
1050	1.0	2CO	1100x2100	900x2100	2000x2450	2000x2450x2200	1350	4050	88.0	48.1	12.0	102.0	122.6
	1.5						1450	4150					
	1.75						1500	4250					
	2.0						1550	4350					
	2.5						1880	4550					
	3.0						2200x2450	2200x2450x2200					
1200	1.0	2CO	1300x2100	1100x2100	2400x2450	2400x2450x2200	1350	4050	100.2	56.6	13.3	119.1	142.7
	1.5						1450	4150					
	1.75						1500	4250					
	2.0						1550	4350					
	2.5						1880	4550					
	3.0						2450x2450	2450x2450x2200					
1350	1.0	2CO	1300x2300	1100x2100	2400x2650	2400x2650x2200	1350	4050	105.9	59.2	13.1	123.6	150.1
	1.5						1450	4150					
	1.75						1500	4250					
	2.0						1550	4350					
	2.5						1880	4550					
	3.0						2450x2650	2450x2650x2200					
1600	1.0	2CO	1400x2400	1100x2100	2450x2800	2450x2800x2400	1350	4050	134.2	71.7	20.7	161.6	193.0
	1.5						1450	4150					
	1.75						1500	4250					
	2.0						1550	4350					
	2.5						1880	4550					
	3.0						2450	4850					
1800	1.0	2CO	1500x2400	1200x2100	2600x2800	2600x2800x2400	1350	4050	142.3	77.0	22.0	172.7	186.8
	1.5						1450	4150					
	1.75						1500	4250					
	2.0						1550	4350					
	2.5						1880	4550					
	3.0						2450	4850					
2000	1.0	2CO	1500x2700	1200x2100	2600x3050	2600x3050x2400	1350	4050	148.8	80.8	21.1	179.8	219.0
	1.5						1450	4150					
	1.75						1500	4250					
	2.0						1550	4350					
	2.5						1880	4550					

Notes: 1. The data shown above may vary based on elevator specification arrangement.  
2. Refer to the Work Done by Others for the Acceptable Inclination of Hoistway's Vertical Centerline.

# Work Done by Others

## 1. Elevator Machine-Room and Hoistway Environment

<b>Temperature of Machine Room and Hoistway</b>	Temperature of machine room and hoistway shall be kept from 5 °C (41 °F) to 40 °C (104 °F).
<b>Relative Humidity</b>	1. When a temperature reaches at 40 °C (104 °F), 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 25°C (77 °F).
	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

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

## 3. Acceptable Inclination of Hoistway's Vertical Centerline

Hoistway's Vertical Length	Centerline's Tilt away from the Plumb Line (unit: mm)
30 meter or less	0 to 25 mm or less
More than 30 meters to 60 meters or less	0 to 35 mm or less
more than 60 m	0 to 50 mm or less

## 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. The steel 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 a pit ladder based on the layout drawings.
13.	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.
14.	Provide and install electrical outlets in the hoistway.
15.	Install lighting equipment of 30 watt or more at 7-meter intervals inside the hoistway with 0.5-meter clearance at the top and bottom of the hoistway. The lighting intensity is required to be 50 lux or more at the car-top working platform and at the 1-meter high position above the pit bottom.

### 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 °C (41 °F) and 40 °C (104 °F).
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.	Construct machine room floor of which 1-square-meter area can bear the load of 700 kgs.
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.



**FUJITEC**

# Shuttle Elevators Reaching Impossible Travelling Distance



**SNOWLAND**  
Travel Distance **638** m

\* The above mentioned travel distance is design data, which is during construction.

# Fujitec Global Operations



Ohaio Plant(U.S.A)



Langfang Plant(China)



Shanghai Plant(China)



Korea Plant



Taiwan Plant



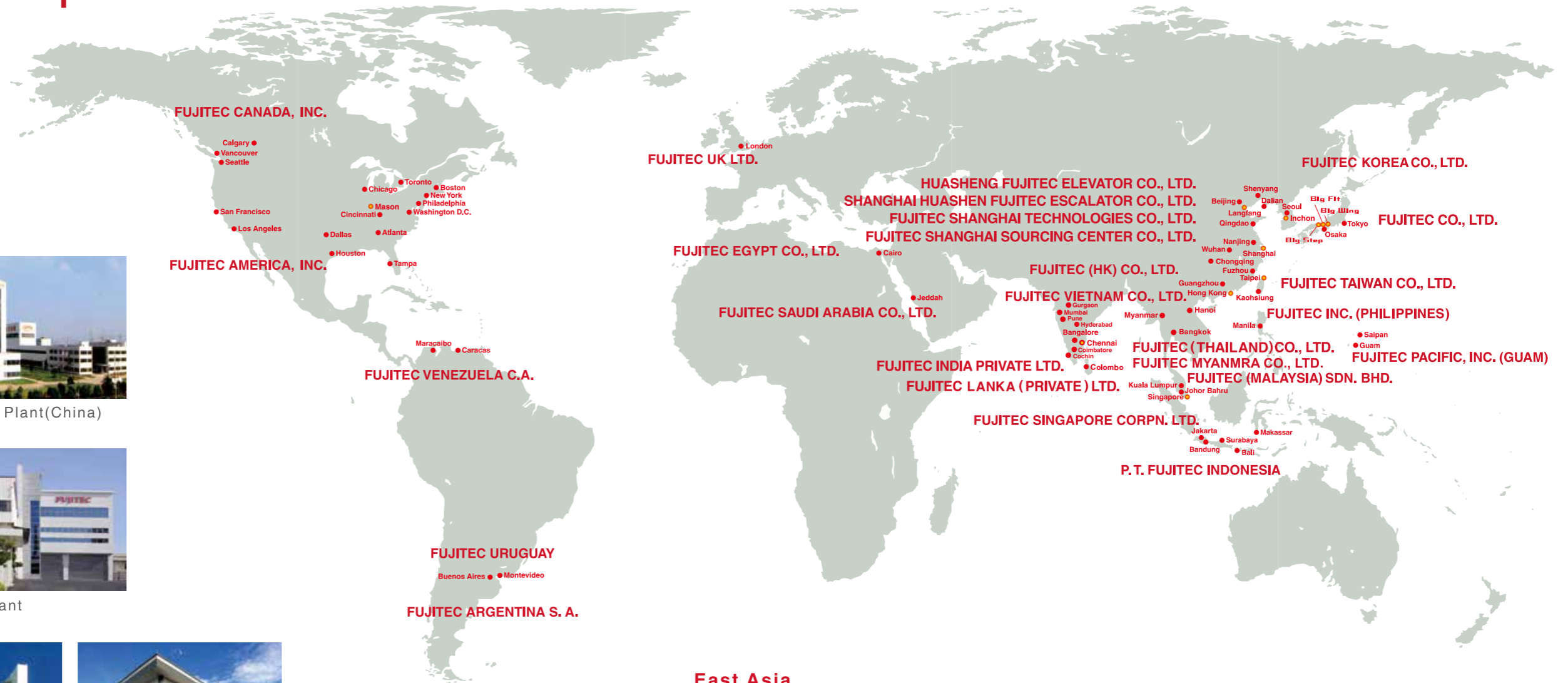
Big Wing (Group Headquarters in Japan, Elevator Plant)



Shingapore Plant



India Plant



### North & South America

FUJITEC AMERICA.,INC.  
 FUJITEC CANADA.,INC.  
 FUJITEC VENEZUELA C.A.  
 FUJITEC ARGENTINA S.A.  
 FUJITEC URUGUAY S.A.

### Japan

FUJITEC CO.,LTD.

### East Asia

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

### Europe & Middle East

FUJITEC UK LTD.  
 FUJITEC SAUDI ARABIA CO.,LTD.  
 FUJITEC EGYPT CO.,LTD.

### South Asia

FUJITEC SINGAPORE CORPN. LTD.  
 FUJITEC INC.(PHILIPPINES)  
 FUJITEC (MALAYSIA) SDN, BOD.  
 P.T. FUJITEC INDONESIA  
 FUJITEC VIETNAM CO., LTD.  
 FUJITEC INDIA PRIVATE LTD.  
 FUJITEC (THAILAND) CO., LTD.  
 FUJITEC LANKA(PRIVATE) LTD.  
 FUJITEC PACIFIC, INC.(GUAM)  
 FUJITEC MYANMAR CO., LTD.