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Mitsubishi Globalized
New Generation of Traction Machine Technology

LEHY-Ⅲ-S

LEHY Compact Machine Room
Passenger Elevator

LEHY-III-S Series Standard Compact Machine Room Elevator

■ LEHY–III–S Series with Innovative Technology and Superior Quality

LEHY-III-S Compact Machine Room Elevator developed by Shanghai Mitsubishi inherits the superior and edge cutting technologies from Japan Mitsubishi, enjoys a noble lineage. The recently promoted compact machine room elevator is the new standardized generation designed with higher technology components and superior decoration quality especially caters for the current residential markets. The compact machine room elevator fully upgraded at the core of safety, comfort, energy-saving and advanced technologies will lead the new trend with breaking through technologies and innovations.

■ Japan Mitsubishi Globalized Traction Machine Technology

The new LEHY-III-S adopts permanent magnetic material for its PM synchronous gearless traction machine and the new traction machine technology is originally imported from Japan Mitsubishi. Comparing with traditional worm and gear traction machine, it can save more energy by about 30%. The brake adopts external brake structure, retaining the high quality and performance of the original PM traction machine. The new type of PM traction machine adopts Mitsubishi Electric's unique joint-lapped stator iron core technology, uniform winding, high-density coil and large scale of stator is characterized by low energy consumption, simple structure and easy maintenance etc.

■ A Brand New Decoration and Stronger Response Capacities

LEHY-III-S Compact Machine Room Elevator adopts brand new decoration schemes. Operational panel and hall indicator embody the human-oriented concept in all details, fully manifesting the taste and elegance of the residential elevator. Especially, the patented new LED human-computer interface incorporates more humanized elements. The car top ceiling of all new models adopts LED lighting, more environments friendly, more energy saving, brighter and longer illumination life.

LEHY-III-S Compact Machine Room Elevator provides various specifications in response to the different user demands: i.e., deep car, wide car and etc. The maximum travel height of lift can reach 36 floors with the maximum speed up to 2.5m/s. The elevator completely meets the new national standards of various countries: new GB7588, requirements of the disabled GB/T24477 (compensable configuration).

■ Ultra–thin PM Door Machine System

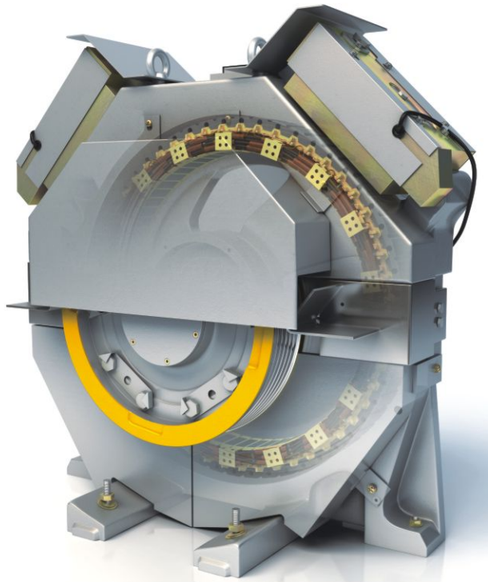
Ultra-thin PM synchronous door machine driving technology is applied to all the series. The adoption of the advanced VVVF linkage-free design without connecting rod and the integrated door motor guiderail enable the door opening/closing process more efficient, more energy-saving, and more energy saving, more stable operation, more convenient maintenance and less installation space.

LEHY-Ⅲ-S
LEHY Compact Machine Room Passenger Elevator

Pictures of computer painting may slightly differ from the actual.

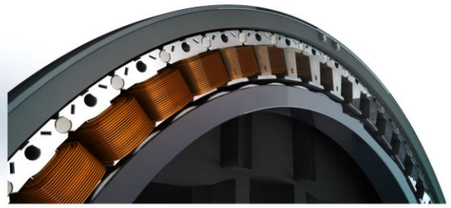
1 Globalized New Generation of PM traction Machine by Japan Mitsubishi

LEHY-III-S compact machine room elevator adopts Japan Mitsubishi Electric's advanced new generation of PM synchronous gearless traction machine. This traction machine is specially optimized for compact machine room systems. It adopts external brake structure, and retaining the high quality and performance of the original PM traction machine, is featured by low energy consumption, simple structure and easy maintenance. Brake adopts advanced current control technology which reduces the noise of brake and creates a more peaceful residential environment.



PM Gearless Traction Machine Technology

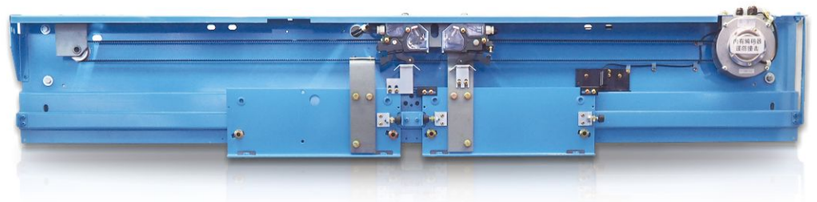
The new type of PM gearless traction machine adopts permanent magnetic materials without additional demands of excitation current and rotor consumption. In addition, due to the exemption of deceleration device, the new type of PM gearless traction machine saves around 30% of energy comparing with conventional worm and gear traction machine. Moreover, the new PM traction machine employs the articulated stator iron core technology which is proprietary for Mitsubishi Electric. The technology enables even winding, high-density of coils, and large-scale of stators. It also reduces the existence of magnetic leakage sharply, increases magnetic flux greatly, and improves torque output effectively, rendering improvement in both performance and efficiency.



2 Ultra–thin PM Door Machine System

The whole series adopts ultra-thin PM synchronous door machine driving technology. By virtue of the advanced VVVF rod-less design and integrated door machine guide rail, the door may be opened and closed in a more efficient and energy-saving manner. Enable the operation more stable; maintenance and repair more convenient; and less installation space.

The trinity of 32-digit high-speed digital signal processor, speed-current dual-closed-loop feedback control system and VVVF speed–regulating system ensures that each time of closing and opening of the door is a perfect motion pursuant strictly to the speed curves and strength. The door machine control system collects the data concerning the door weight and changes in switch resistance of different floors so as to smartly adjust the torque for opening and closing of the door, making the motions smoother and safer with improved efficiency and reliability.



Pictures of computer painting may slightly differ from the actual.

TECHNICAL FEATURES AND TECHNICAL INNOVATIONS

TECHNICAL FEATURES

3 A Real Compact Machine Room Design

LEHY-III-S is a series of real compact machine room elevator of which the size of the machine room and the size of the shaft are identical. The elevator adopts the compact 2:1 roping mode, minimizing the machine room area and greatly reducing the design difficulty and construction costs of the buildings. It not only saves the machine room space and enhances the utilization ratio, but also minimizes the impacts of the machine room on the architectural appearance. Compared with machine-room-less elevators, it is more easy and safer to do the maintenance and repair of the traction machine, control cabinet and the speed governor etc parts of this series. (Refer to the civil construction layout drawing of LEHY-III-S)

4 Compact Control Cabinet

The newly-designed control cabinet adopts 32-digit CPU and 32-digit high-speed digital signal processor (DSP) and large scale field programmable gate array (FPGA) as well as other high-performance chips to realize single-piece, modularized and thin design of the control cabinet.

By adopting international advanced SMT (surface mount technology), it actually realizes all digitalization of elevator control and dynamo driving, and further enhancing the control performance of the system as well as its reliability and anti-interference ability.

5 VVVF Speed Governing Technology and All–Digital Control Technology

Adhering to the concept of seeking breakthroughs by profound accumulation, Shanghai Mitsubishi has constantly applied the latest technologies and apparatuses into the VVVF drive of the elevator, enabling the Shanghai Mitsubishi VVVF speed regulating technology to develop speedily towards a high performance, high reliability, digitalized, and small scale direction. It utilizes SVPWM (space vector pulse width modulation) technology to realize governing of the speed of the elevator. The company has taken the lead in adopting the international newest elements such as the sixth generation big power module, 32-digit high-speed digital signal controller (DSC), large-scale integrated circuits and other advanced electrical components, and thus the elevator may adjust the rotary speed of the electromotor precisely in accordance with the best speed curve and run along the ideal speed curve optimized and designed on the basis of modern ergonomic principles. Therefore, the elevator realizes full digitalized control and motor driving in real sense and hence operates more stably, safely and efficiently.

TECHNICAL INNOVATION

1 Energy Feedback Technology (Optional)

When operating, the elevator generally receives energy from a power source (motor-driven status). However, when the car runs downwards with heavy duty and upwards with light duty, the elevator is in power generating status (energy feedback status). The power generated therefore is generally consumed in the form of resistance radiation, which both wastes energy and not environment friendly.

Energy feedback technology based on PWM control (optional) will feed the power generated by the motor in power generating status back to the grid, saving around 30% of the energy compared with that consumed by elevators without energy feedback device. At the same time, the input current on the power supply side is designed to be sine wave shape, greatly reducing harmonic wave pollution to power supply. And the controlled voltage of the direct current side is also favorable for enhancing the stability of elevator operation.

2 New Generation Big Power Module

The elevator takes the lead in applying the sixth big power module system multiple fast protection circuits provide better protection of the power modules, further enhancing the reliability of the driving system at the same time, the direct-plug connection between the driving control circuit and the power module on which the circuit is mounted further strengthens the anti-interference ability of the system.

3 All–digit Intelligent Power System

Replace three-phase power transformer by all-digit-controlled intelligent DC-DC power technol-ogy as the source of power for the elevator control system. The new power supply system is more stable and reliable and insusceptible to the fluctuation of the grid, with lower loss, higher efficiency and more complete protection.

4 High Performance and Smart CPU Control System

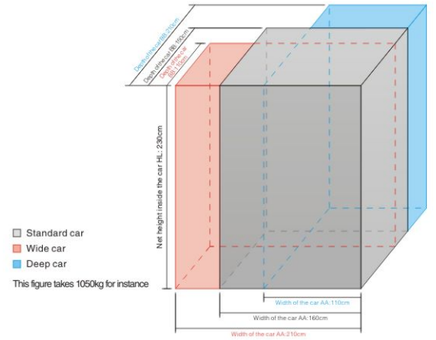
The system adopts 32-bit CPU, 32-bit high-speed digital signal controller (DSC) and large-scale field programmable array (EPGA) as well as other high performance chips. Besides, it also employs international advanced SMT technology to realize all-digit control and motor driving, further enhancing the control performance and reliability of the system and completely ensuring the comfort and safety of the elevator.

USER–FRIENDLY DECORATION COMPONENTS AND STRONGER RESPONSE CAPACITIES

LEHY-Ⅲ-S
LEHY Compact Machine Room Passenger Elevator

Stronger Response Capacities

LEHY-III-S compact machine room elevator provides various specifications in response to the different user demands in configuration: i.e., deep car, wide car and etc.
The elevator completely meets up with new standards of various countries: new GB7588, requirements of the disabled GB/T24477 (compensable configuration).



Patented liquid–crystal technology: Creative interface design, Full–view and High contrast

Exquisite interface design, vivid colorful background; clearly visible even under the sunlight with full view and high quality; graphic status indication: easily understood.

Easy to Install Wall–mounted Call

Call without bottom box does not require reservation of rectangular holes but small round holes on the wall for installation.

Energy Saving and Environment Friendly LED Lighting

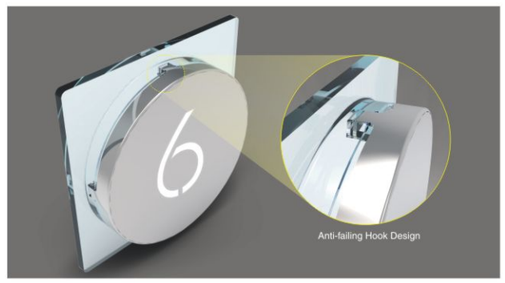
The car roofs of LEHY-III-S are all changed into LED lighting ,which has 5 times longer service life than the traditional fluorescent tubes saving at least 50% electrical cost and thus greatly reducing the maintenance and use costs.

Easily Recognizable Micro–light Buttons

Micro-light design for standby status of buttons improves the recognition of the button numbers, ensuring that the floor numbers on the buttons may be read fast under dim environment.

Durable buttons

The button life reaches up to 5 million times. The reinforced stainless steel button caps designed dedicated for residential elevators adopts anti-falling hook design, which may be resistant to sabotage.



Pictures of computer painting may slightly differ from the actual.

Car Design Example 1

Car Ceiling	ZCL–GS06
Operational Panel	ZCBA11–C510 (Hairline Panel) (Can select other models)
Wheelchair Operational Panel	ZCBA04–F110 (Hairline Panel)
Front wall	Hairline Stainless Steel
Side wall	Hairline Stainless Steel
Back wall	Two–side: Hairline stainless Steel Central: Mirror Stainless Steel
Car Door	Hairline Stainless Steel
Lintel	Hairline Stainless Steel
Handrails	Three–side Stainless Steel Round Handrail (ZYH–RH02) (Can provide none or select other models)
Floor	Parquet Floor (ZPH–023) (Can select other models)

Note: If you have any other requirements for car configuration, please contact the Business Department of our company.

Car Design Example 2

Car Ceiling	ZCL–SN03(Color code: Y033)
Operational Panel	ZCBA09–C110 (Hairline Panel) (Can select other models)
Front wall	Hairline Stainless Steel
Side wall	Painted Steel Plate (Y023)
Back wall	Two–side: Painted Steel Plate (Y023) Central: Mirror Stainless Steel
Car Door	Hairline Stainless Steel
Lintel	Hairline Stainless Steel
Handrails	Back Wall Stainless Steel Round Handrail (ZYH–RH02) (Can provide none or select other models)
Floor	PVC Real Stone Floor (ZPR–012) (Can select other models)

Note: If you have any other requirements for car configuration, please contact the Business Department of our company.

Pictures of computer painting may slightly differ from the actual.

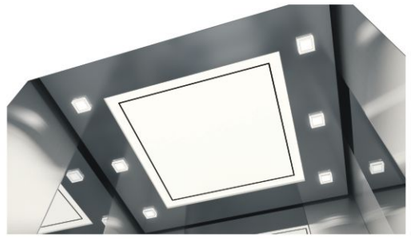
Car Design Example 3

Car Ceiling	ZCL–SS08
Operational Panel	ZCBA11–C510 (Hairline Panel) (Can select other models)
Wheelchair Operational Panel	ZCBA04–F110 (Hairline Stainless Steel)
Front wall	Hairline Stainless Steel
Side wall	Hairline Stainless Steel
Back wall	Hairline Stainless Steel
Car door	Hairline Stainless Steel
Lintel	Hairline Stainless Steel
Handrails	Three–side Stainless Steel Round Handrail (ZYH–RH02) (Can provide none or select other models)
Floor	Parquet floor (ZPH–023) (Can select other models)

Note: Deep car specification is available for all car ceiling designs, so as to meet up the transport requirement of bed lifts.

If you have any other requirements for car configuration, please contact the Business Department of our company.

ZCL–GS06 (Optional) LED



Lighting: Central direct lighting.
Material: Central milk white printed acrylic lighting board, ambient metallic painting steel sheet, two–side acrylic crystal hanging pieces.

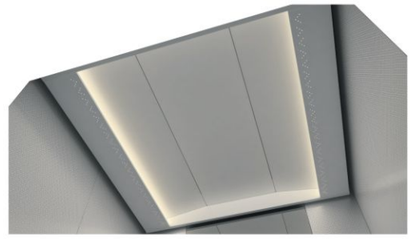
ZCL–GN02 (Optional) LED

Lighting: Central LED Spot lights, translucent indirect lighting on the two sides.
Material: Stainless Steel.

ZCL–GN05 (Optional) LED

Lighting: Central direct lighting and LED spot lights on two sides.
Material: White printed acrylic lighting panel in the center, aluminum framework and Champaign mirror panels on the two sides.

ZCL–SS06 (Standard Configuration) LED



Lighting: Diffuse lighting on two sides (warm).
Material: Painted steel plate (Color code: Y033).

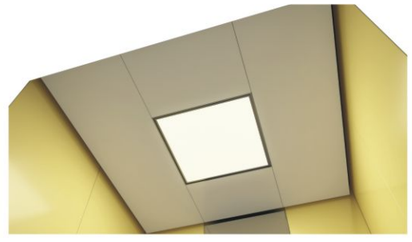
ZCL–SS08 (Standard Configuration) LED

Lighting: Central lighting panel.
Material: Painted steel plates on two sides (Color code: Y073, refer to Color Sample if other colors are in need); central white printed acrylic lighting panel.

ZCL–SS07 (Standard Configuration) LED

Lighting: Spot lights (ultra–thin car top with a thickness of 100mm).
Material: Painted steel plates (Color code: Y073, refer to Color Sample if other colors are in need).

ZCL–SN03 (Standard Configuration) LED



Lighting: Light guide plate, fully closed structure; dust–free for long–term use (ultra–thin car ceiling with a thickness of 100mm).
Material: Painted steel plates all around (Color code: Y033, refer to Color Sample if other colors are in need); central white acrylic lighting panel.

ZCL–CN01 (Empty Car Roof)

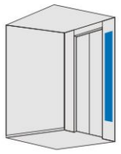
By others (Ceiling Thickness 100mm)

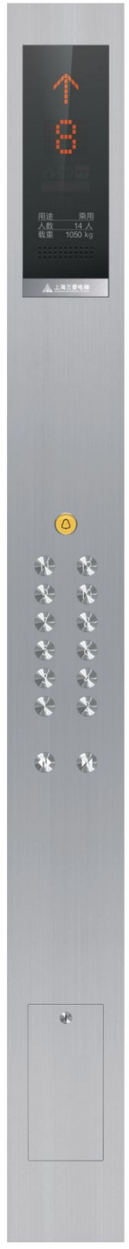
ZCL–CN08 (Empty Car Roof)

By others (Ceiling Thickness 200mm)

Note: All car roofs adopt LED lighting.
The ventilation outlet of car roof is arranged at the back of the two sides.
Car roof may be compatible with deep cars and wide cars.
Safety windows are optional for car roofs. Consult sales persons for details.

FRONT–WALL OPERATION PANEL





Amber LED, classic and durable.

Stainless steel panel.

The buttons are exchangeable. The button sample shown in *2 is A09 button.

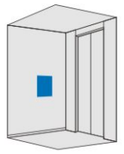
ZCB■–C110*1*2

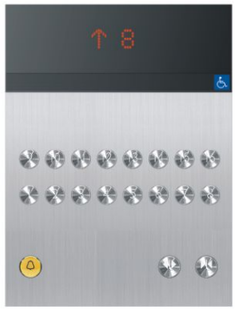
5.7" LED, delicate and colorful.

Stainless steel panel.

The buttons are exchangeable. The button sample shown in *2 is A11 button.

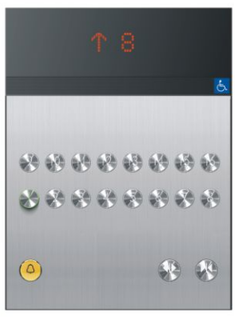
ZCB■–C510*1*2





ZCBA04–F110

Wheel chair operational panel comply with GBT24477 Standard.

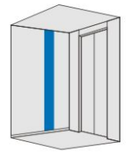


ZCBA04–F130*3

Wheel chair operational panel comply with GBT24477 Standard.

Note: *1 Configurable when centre opening door and (AA–JJ)/2≥250 or when side opening door and (AA–JJ–10)≥250.
*2 The symbol ■ represents the button model; Please select the button model from Page 14 for the operational panel and fill in the blank.
*3 The difference between the appearance of ZCBA04–F130 and of ZCBA04–F110: the buttons of the first floor are protruding and the frames of the two sides are black.

SIDE–WALL OPERATION PANEL



Amber–colored LED, classic and durable.

Stainless steel panel.

Replaceable buttons *5 The button shown in the figure is a A09 button.

ZCB■–R110*4*5

5.7" LED, delicate and colorful.

Stainless steel panel.

Replaceable buttons *5 The button shown in the figure is a A11 button.

ZCB■–R510*4*5

5.7" LED, delicate and colorful.

Stainless steel panel.

ZCBA04–R530

Operational panel for the disabled complies with GBT24477 standard

Note: *4 <1 It is configurable for central opening door if (AA–JJ)/2<250 or for two–speed sliding door if (AA–JJ–10) <25.
*5 ■ refers to the model of the button. Please choose the buttons in Page 14 for the operational panel and fill in the blank.

Pictures of computer painting may slightly differ from the actual.

Wall–mounted Dot–matrix Landing Display

Amber–colored LED, Classic and Durable.

ZPI●–G110*1*2　　ZPI●–G120*1*2

Wall–mounted LCD Landing Display

4.3"LED, delicate and colorful.

ZPI●–GB10*1*2　　ZPI●–GB20*1*2

Wall–mounted Landing Call

Barrier–free design response, complying with GB/T24477 Standard.

ZHBA14–H030　　ZHBA14–H041

Matching Diagram(Respond to the requirements to the handicapped)

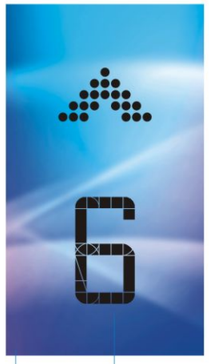
Single elevator and parallel connection calls should be corresponding one by one.

Note: *1 The symbol ● represents the button model; Please select the call buttons from Page 14 to fill in the blank.
*2 If bottom box is needed, contact the sales person for non–standard installation of bottom box. The appearance of the landing indicators with or without bottom box will be consistent.

Delicate and colorful LCD

Patented liquid–crystal technology: creative interface design, full–view and high contrast.

4.3" LCD



Gorgeous color background.　Unit digital figure locate in center horizontally.

5.7" LCD Display

Patented font design realizes the displaying of numbers and letters.

Clearly visible under sunlight with full view and high quality.　Graphical status indication, easy understanding.　Exquisite interface design.

Flexible and Replaceable Button Series

Users may choose proper buttons in accordance with project needs.

■ Operation Panel Buttons

A09 (Standard Configuration)
Diameter 31mm,
Round Hairline Stainless Steel;
Numbers in Orange Light.

A01 (Optional)
Diameter 31mm,
Round Hairline Stainless Steel;
The numbers and rims give out white light and micro–light under standby status.

A11 (Optional)*3
Diameter 35mm,
Round Hairline Stainless Steel;
The numbers and rims give out white light and micro–light under standby status.

A04 (Optional)
Diameter 31mm,
Round Hairline Stainless Steel;
The numbers and rims give out white light and micro–light under standby status;
Protruded Words with Braille.

● Call buttons

A09 (Standard Configuration)
Diameter 31mm,
Round Hairline Stainless Steel;
The signs give out orange light.

A11 (Optional)
Diameter 35mm, Round Hairline Stainless Steel;
The symbol and rims give out white light and micro–light under standby status.

A14 (Optional)
Diameter 35mm,
Round Hairline Stainless Steel;
The symbol and rims give out white light and micro–light under standby status;
Protruded Words with Braille.

Note: *3 It is recommended to select A11 buttons when the car operational panel selects A01 buttons.

Hall Door and Jamb

E–102 Narrow Door Jamb

Landing Call Button: ZPIA09–G110
Landing Door Material: Painted steel panel
Door Jamb Material: Painted steel panel

E–302 Bevel (10°) Large Door Jamb

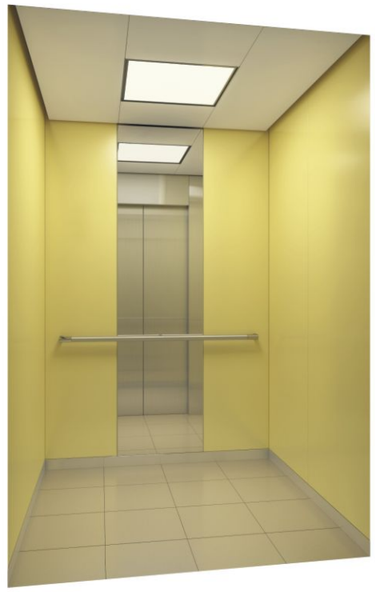
Landing Call Button: ZPIA11–GB10
Landing Door Material: Hairline stainless steel
Door Jamb Material: Hairline stainless steel

Hall Decoration Materials

Specifications	Materials	Remarks
Door Jamb Material	Painted steel plate and Hairline stainless steel	
Landing Door Mateial	Painted steel plate and Hairline stainless steel	
Fire–proof Specifications	Non–Fire–proof door: (CO / 2S)	
	Fire–proof door: GB/T 24480–2009; EN81–58；GB/T27903–2011	Need to be confirmed

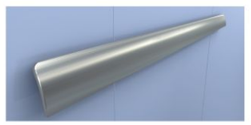
Mirror

Half height mirror

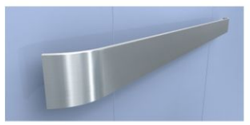


Full height mirror

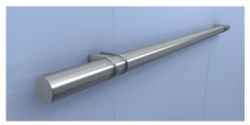
Handrail Type



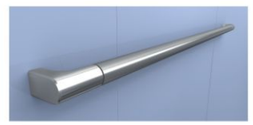
ZYH–SH01
Stainless Steel Leaning Handrail



ZYH–FH10
Stainless Steel Flat Handrail



ZYH–RH01
Stainless Steel Round Handrail



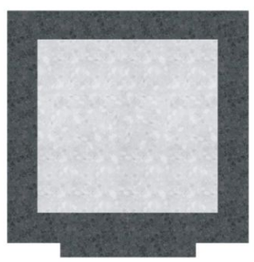
ZYH–RH02
Stainless Steel Round Handrail

Floor Material

PVC real stone floor is optional. The color code may be selected in accordance with the color sample of Shanghai Mitsubishi.

ZPH–014
Parquet Floor

ZPH–022
Parquet Floor



ZPH–023
Parquet Floor

Feature	Descirption	Code	1C-2BC	2C-SM21
■ Control and Security Features				
Automatic Landing with Rheostatic Leveling	When the car parks at a station, if the vertical difference between the upper plane of the car sill and that of the landing door sill exceeds predetermined value, the elevator will level automatically.	ARL*1	Ⓢ	Ⓢ
Anti-Stall Timer	When the traction rope slips or motor stall reaches predetermined time, the elevator will stop.	AST	Ⓢ	Ⓢ
Brake Redundancy Protection	When a group of brakes fails, the remaining brakes still can realize effective braking of the elevator.	BTUP	Ⓢ	Ⓢ
Energy Feed Back	Feedback the energy during the elevator operation to the power supply network for the purpose of energy saving.	EFDBK	Ⓞ	Ⓞ
Electrical SafeCircuit Protection	Prevent the elevator from operating once the electrical safety devices connected together in series act.	ESC	Ⓢ	Ⓢ
Floor Height Auto Measurement	Automatically measure and save the floor height.	FMR	Ⓢ	Ⓢ
Hand Operation	Inspection operation mode for maintenance personnel.	HAND	Ⓢ	Ⓢ
Over-current Protection	Stop elevator when the current through the rectifier or inverter is detected too high.	OCP	Ⓢ	Ⓢ
Over-speed Protection	Stop elevator when the running speed is detected over allowable value.	OSP	Ⓢ	Ⓢ
Over-temperature Protection	Stop elevator when over temperature of motor is detected.	OTP	Ⓢ	Ⓢ
Over-voltage Protection	Stop elevator when the voltage across the rectifier or inverter is detected too high.	OVP	Ⓢ	Ⓢ
Power Failure Protection	If there is loss of phase, under-voltage or other faults found with the power, the elevator stops running.	PFP	Ⓢ	Ⓢ
Power-On Releveling	If the car stops in the range of door area due to power failure, it will re-level to the leveling position after the power is recovered.	PORL	Ⓢ	Ⓢ
Reverse Run Protection	Stop elevator when it is detected running in reversed direction.	RSP	Ⓢ	Ⓢ
Selector Correction	The elevator corrects the selector during operation.	SC	Ⓢ	Ⓢ
Safe Landing	If a car has stopped between floors for some reason, the controller checks the cause, and if it is considered safe to move the car, the car will move to the nearest floor and doors will open.	SFL	Ⓢ	Ⓢ
Stop Open	The car doors open automatically after the car stops at a floor.	SO	Ⓢ	Ⓢ
Inverter High-temperature Detect	Stop elevator when inverter high-temperature is detected.	THMF	Ⓢ	Ⓢ
Terminal Forced Deceleration	If the car runs to the terminal but the speed has not been reduced to specified value, the system will force it to decelerate and thus enable it to level normally.	TSD	Ⓢ	Ⓢ
Under Speed Protection	Stop elevator when the running speed is detected under allowable value.	USP	Ⓢ	Ⓢ
■ Operational and Service Features				
Automatic Bypass	When the car load exceeds 80% (adjustable) rated capacity, the elevator does not response hall calls from other floors along its travel.	ABP	Ⓞ	Ⓞ
Attendant Service	Normal operation of the elevator is conducted by an attendant.	AS	Ⓞ	Ⓞ
Bypass	In attendant service , by pressing the bypass button incorporated on the service cabinet of the car operation panel, all the hall calls along the service direction will be bypassed.	BP*2	Ⓞ	Ⓞ
Car Computer Back Up Operation	When an abnormity occurs on the car computer, the car stops at nearest floor and the elevator cannot restart.	CCBK	Ⓢ	Ⓢ
Reverse Car Call Cancelling	In automatic operation, when a car has responded to the final car call or landing call in one direction, the system automatically checks and clears remaining car calls from the memory.	CCC	Ⓢ	Ⓢ
Car Fan Shut Off - Automatic	If there are no calls for a specified period, the car ventilation fan will automatically be turned off to conserve energy.	CFO-A	Ⓞ	Ⓞ
Car Fan Shut Off - Manual (Button Type)	The car ventilation fan is turned off by combination buttons on the operation panel.	CFO-B*3	Ⓢ	Ⓢ
Car Light Shut Off - Automatic	If there are no calls for a specified period, the car light will automatically be turned off to conserve energy.	CLO-A	Ⓞ	Ⓞ
Car Light Shut Off - Manual (Button Type)	The car light is turned off by combination buttons on the operation panel.	CLO-B*3	Ⓢ	Ⓢ
Continuity of Service	To ensure normal operation of elevators in a whole group, when a certain elevator cannot respond registered landing calls, it will be excluded from landing call service, and service is provided by other elevators.	COS	——	Ⓢ
Fault Auto Diagnosis	Diagnose abnormities and faults occurred during elevator operation.	EFD	Ⓢ	Ⓢ
Emergency Exit Switch	Switch for detecting state of exit.	EXIT SW	Ⓞ	Ⓞ
False Call Cancelling - Manual (Car Button Type)	If the wrong car button is pressed, it can be canceled by quickly pressing the same button again twice.	FCC-P*4	Ⓞ	Ⓞ
Automatic Hall Call Registration	When one elevator cannot take all passengers, the landing button remains registered state, and the system will assign another elevator to provide service.	FSAT	Ⓢ	Ⓢ
Hall Computer Back UP Operation	When an abnormity occurs on the hall computer, the car stops at nearest floor and the elevator cannot restart.	HCBK	Ⓢ	Ⓢ
Hall Out-of-service Operation	Turn on or shut off the elevator by operating the "RUN/STOP" switch installed on specified floor.	HOS	Ⓢ	Ⓢ
Independent Service	Using the Independent switch in the operation panel, the car can respond only to car calls without interrupting service.	IND	Ⓢ	Ⓢ
No Start Alarm	When landing call or car call is registered but the car cannot start within predetermined time, it will clear the assigned landing call, reserve the car call, light up the Abnormal lamp, and sound the Abnormal bell.	NST	Ⓢ	Ⓢ
Next Landing	After the car has arrived at the destination floor, if the car doors cannot open fully, it will close the doors and continue to run to the next floor until the doors can open fully and then restore normal operation.	NXL	Ⓢ	Ⓢ
Overload Holding Stop	When the car is overloaded, the doors remain open and a buzzer sounds.	OLH	Ⓢ	Ⓢ
Secret Call Service (IC card type)	The buttons of certain specified floors can only be registered via IC card.	SCS-IC*15	Ⓞ	Ⓞ
■ Emergency Operation Features				
Emergency Car Lighting	Immediately provide car lighting when normal lighting power supply breaks.	ECL	Ⓢ	Ⓢ
Power Failure Emergency Landing Device	When normal power supply breaks, this device will supply power to move the car to the nearest floor, level and open the doors, and allow the passengers to leave safely.	ELD*6	Ⓞ	Ⓞ
Alarm bell	Press this alarm bell in emergency. The bell and interphone will sound.	EMB	Ⓢ	Ⓢ
Fire Emergency Return	When the Fire Emergency Return switch acts, all landing calls and car calls are cancelled, and the car immediately returns to predetermined floor and parks with door opened.	FER*16	Ⓞ	Ⓞ
Monitoring System	This system uses computer to monitor the elevator' s operation and position state, and provide operation commands as necessary.	SMOS-II	Ⓞ	Ⓞ

Ⓢ Blue refers to standard features; Ⓞ Pink refers to optional features.

Feature	Descirption	Code	1C-2BC	2C-SM21
■ Door Operating Features				
Multi-Beam Protection	Protection device for multiple-beam light curtain door	AMS*7	Ⓞ	Ⓞ
Door Close Limit Switch on Start	When car door cannot be closed completely, open the door again.	CLTS	Ⓢ	Ⓢ
Double Door Operation	When the door of an elevator is opened; there is no in-car instruction and landing call along the running direction, and; a landing call of the opposite direction of this landing station is registered, the elevator will be opened again immediately after the door is closed.	DDOP	Ⓢ	Ⓢ
Extended Door-open Button	3-second retaining door opening button may extend the time of door opening.	DKO-T	Ⓞ	Ⓞ
Door Load Detect	If the car doors cannot fully open or close due to overload, the doors will act in reverse direction.	DLD	Ⓢ	Ⓢ
Door Open Blocking Control	If car doors are blocked while opening, they will close immediately.	DONG	Ⓢ	Ⓢ
Automatic Door-open Time Adjustment	Automatically adjust door-open time according to landing calls or car calls.	DOT	Ⓢ	Ⓢ
Door Close Torque Up Control	When car doors encounter extra resistance while closing, the door system will automatically increase the torque.	DTC	Ⓢ	Ⓢ
Expediting of DoorClose	After the car has stopped at a station and the doors has opened, pressing Close button can make the doors to close immediately.	EDC	Ⓢ	Ⓢ
Door Nudging Feature	If the door-open time exceeds the predetermined value, the car will temporarily ignore the action of non-contact door sensor and close the door forcibly.	KNDG	Ⓢ	Ⓢ
Multi-beam Protection with Safety Edge	Safety edge with multi-beam. Provide double protection by multi-beam and safety edge. During door closing, when a passenger or object is detected, the doors will open again.	MBS*7	Ⓞ	Ⓞ
Door Nudging Feature - with buzzer	If the door-open time exceeds the predetermined value, it will give alarm sound to alert the passenger and try to close the doors.	NDG*8	Ⓞ	Ⓞ
Repeated Door-Close	If car doors are blocked while closing, the elevator will repeat the closing action until the debris is removed.	RDC	Ⓢ	Ⓢ
Reopen with Hall Button	During door closing, when the safety edge detects a passenger or object, the doors will reopen.	ROHB	Ⓢ	Ⓢ
■ Information and Display Features				
Voice Announce Device (Chinese)	Voice announce device (Chinese) informs the passengers of related elevator information.	AAN-S01*9	Ⓞ	Ⓞ
Voice Announcement Device (Chinese and English in Turn)	Voice announce device (Chinese and English in turn) informs the passengers of related elevator information.	AAN-S02*9	Ⓞ	Ⓞ
Voice Announcement Device (English)	Voice announce device (English) informs the passengers of related elevator information.	AAN-S03*9	Ⓞ	Ⓞ
Car Arrival Chime	The chime prompts the passengers the car has arrived at the destination floor. (The chime is installed on the car roof and floor)	AECC	Ⓞ	Ⓞ
Signal Interface Device	Outputs basic operation state signal of the elevator via this device.	BA*10	Ⓞ	Ⓞ
Direction Arrows in Car	Indicates running direction with arrows in the car.	DAC	Ⓢ	Ⓢ
Direction Arrows on Hall	Indicates running direction with arrows on the hall.	DAH	Ⓢ	Ⓢ
Door-Close Button Response Light	The Door-Close button light illuminates at the same time when this button is pressed.	DCR	Ⓢ	Ⓢ
Door-Open Button Response Light	The Door-Open button light illuminates at the same time when this button is pressed.	DOL	Ⓢ	Ⓢ
Statistics of operating time and frequency of the elevator	Record number of runs and running time of the elevator.	ECT	Ⓢ	Ⓢ
Fire Emergency Return - Completed	A CP signal is outputted after the FER running is completed.	FER-CP*11	Ⓞ	Ⓞ
Flickering Hall Lantern	When an elevator arrives at the landing station, parks and starts opening the door, the light of landing call button indicating the same direction blinks to notify the passengers that there is an elevator arriving,When an elevator completes the action of door closing, the button light goes out.	FHBL	Ⓢ	Ⓢ
Power-saving Feature of Hall Display	The dot-matrix indicatorof a landing station without registered call dims and resumes displaying with normal lightness only when the landing call of this landing station is pressed, so as to save power and extend the service life of the indicator display in normal brightness for saving energy and prolonging lifetime of indicator.	HIES	Ⓞ	Ⓞ
Interphone	In emergencies, people inside the car or on the car top or in the pit may communicate with people inside the machine room or monitoring room through this device.	ITP*12	Ⓢ	Ⓢ
ITV cable	Cable dedicated for the in-car video device of the user.	ITV*13	Ⓞ	Ⓞ
Camera Monitoring Feature	Camera monitoring function is equipped for SMOS-II system configured by the elevator	ITV-S*14	Ⓞ	Ⓞ
Overload Notification in Car	When an elevator is overloaded, overload indicator lights up.	OLHL	Ⓞ	Ⓞ
■ Group control				
Main Floor Parking	When there is no landing call or car call, the car returns to main floor and parks there.	MFP	Ⓞ	——
Strategic Overall Assignment	For group control elevators, the cars park dispersedly at the main station and middle floor.	OHS	——	Ⓢ

Ⓢ Blue refers to standard features; Ⓞ Pink refers to optional features.

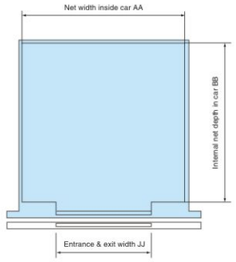
Note:

*1 Standard configuration for height lift ⩾60m and optional configuration for height lift <60m.
*2 Optional for AS.
*3 Operational mode for key combinations.
*4 Optional when SCS-IC feature is not configured.
*5 Abnormal signals are output through SMOS-II.
*6 Optional when the spacing between adjacent landings does not exceed 12m.
*7 Either AMS or MBS.
*8 Optional for AAN.
*9 Choose one from AAN-S01, AAN-SO2 and AAN-S-03.
*10 Output signals are upward operation, downward operation, comprehensive failure and landing encoding signal. The output signal terminal is placed in the control cabinet inside the machine room.
*11 Standard configuration when FER is configured.
*12 Cable from the machine room and the monitoring room and the installation of the cable are arranged by the users.
*13 Choose only one from IVV and ITV-S.
*14 Choose only one from ITV and ITV-S; optional when SMOS-II is configured. Not optionl for oversea market.
*15 Non-standard.
*16 It is to be considered that the elevator should be able to run from the terminal landing at the top floor to the evacuation floor in 60 seconds. (This feature is optional for general elevators. Elevators with such feature do not guarantee satisfying with relevant requirements specified in standard GB26465-2011 for fire-fighting elevators. Since fire-fighting elevators complying with GV26465-2011 impose special requirements in terms of environment, buildings, power supply and water-proofing. Any client wants to order such elevator please consult the sales department of this company.)

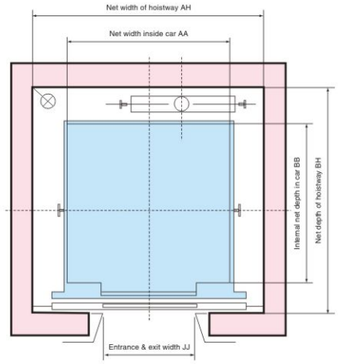
Pictures of computer painting may slightly differ from the actual.

Standard car

Civil construction drawings for standard car when it is for P08W, P11W, P11G, P12G, P14G



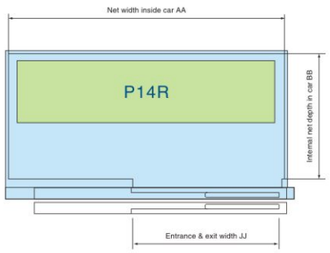
Plain drawing of standard car



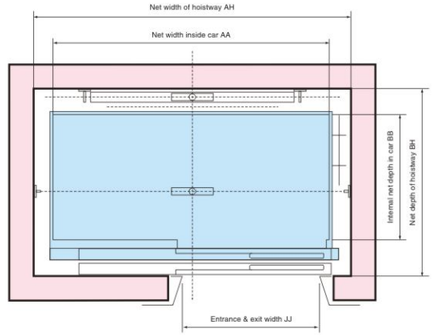
Plain drawing of hoistway

Wide car

Civil construction drawings for stretcher car for P14R



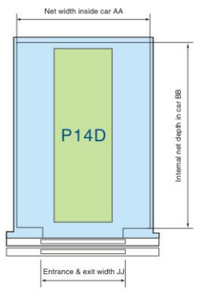
Plain drawing of a stretcher car



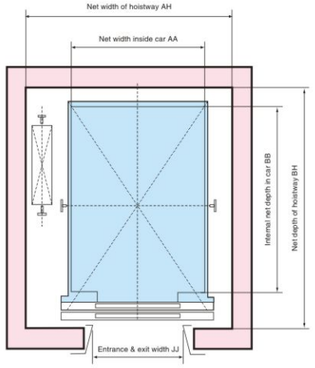
Plain drawing of hoistway

Deep car

Civil engineering drawings for stretcher car for P08D, P11D, P14D



Plain drawing of a stretcher car



Plain drawing of hoistway

Item	Specifications									Remarks
Specification Code	P08W	P11W	P11G	P12G	P14G	P14R	P08D	P11D	P14D	
Inner Width of Car AA	1400	1400	1400	1500	1600	2100	1100	1100	1100	
Inner Depth of Car BB	1100	1350	1400	1400	1500	1100	1400	1700	2100	
Door Open Width JJ	800	800(900)	800(900)	900(1000)*	900(1000)*	1200(1300)	800	800(900)	800(900)	
Door Open Height HH	2100	2100	2100	2100	2100	2100	2100	2100	2100	
Top Landing Height OH	⩾4050	⩾4050	⩾4050	⩾4050	⩾4050	⩾4050	⩾4050	⩾4050	⩾4050	Applicable when the speed is 1.0m/s and the height of balustradeis 700.
	⩾4390	⩾4390	⩾4390	⩾4390	⩾4390	⩾4390	⩾4390	⩾4390	⩾4390	Applicable when the speed is 1.0m/s and the height of balustrade is 1100.
	⩾4130	⩾4130	⩾4130	⩾4130	⩾4130	⩾4130	⩾4130	⩾4130	⩾4130	Applicable when the speed is 1.6m/s and the height of balustrade is 700.
	⩾4470	⩾4470	⩾4470	⩾4470	⩾4470	⩾4470	⩾4470	⩾4470	⩾4470	Applicable when the speed is 1.6m/s and the height of balustrade is 1100.
	⩾4180	⩾4180	⩾4180	⩾4180	⩾4180	⩾4180	⩾4180	⩾4180	⩾4180	Applicable when the speed is 1.75m/s and the height of balustrade is 700.
	⩾4520	⩾4520	⩾4520	⩾4520	⩾4520	⩾4520	⩾4520	⩾4520	⩾4520	Applicable when the speed is 1.75m/s and the height of balustrade is 1100.
		⩾4360	⩾4360	⩾4360	⩾4360	⩾4360		⩾4360	⩾4360	Applicable when the speed is 2.0m/s and the height of balustrade is 700.
		⩾4620	⩾4620	⩾4620	⩾4620	⩾4620		⩾4620	⩾4620	Applicable when the speed is 2.0m/s and the height of balustrade is 1100.
		⩾4590	⩾4590	⩾4590	⩾4590	⩾4590		⩾4590	⩾4590	Applicable when the speed is 2.5m/s and the height of balustrade is 700.
		⩾4850	⩾4850	⩾4850	⩾4850	⩾4850		⩾4850	⩾4850	Applicable when the speed is 2.5m/s and the height of balustrade is 1100.
Pit Depth PD	⩾1450	⩾1300	⩾1300	⩾1300	⩾1300	⩾1300	⩾1300	⩾1300	⩾1300	Applicable when the speed is 1.0m/s.
	⩾1450	⩾1330	⩾1330	⩾1330	⩾1330	⩾1330	⩾1330	⩾1330	⩾1330	Applicable when the speed is 1.6m/s.
	⩾1450	⩾1360	⩾1360	⩾1360	⩾1360	⩾1360	⩾1360	⩾1360	⩾1360	Applicable when the speed is 1.75m/s.
		⩾1590	⩾1590	⩾1590	⩾1590	⩾1590		⩾1590	⩾1590	Applicable when the speed is 2.0m/s.
		⩾1850	⩾1850	⩾1850	⩾1850	⩾1850		⩾1850	⩾1850	Applicable when the speed is 2.5m/s.
Inner Width of Hoistway AH	⩾1950	⩾1950	⩾1950	⩾1960(2150)*	⩾2050(2150)*	⩾2500				Applicable when the speed ⩽1.75m/s without counterweight safety gear.
	⩾1950	⩾1950	⩾1950	⩾1960(2150)*	⩾2050(2150)*	⩾2500				Applicable when the speed ⩽1.75m/s with counterweight safety gear.
		⩾1950	⩾1950	⩾1980(2150)*	⩾2050(2150)*	⩾2500				Applicable when the speed =2.0m/s or speed=2.5m/s with pass hoistway, without counterweight safety gear.
		⩾1950	⩾1950	⩾2050(2150)*	⩾2150(2150)*	⩾2650				Applicable when the speed =2.5m/s with single hoistway, without counterweight safety gear.
		⩾1950	⩾1950	⩾1980(2150)*	⩾2050(2150)*	⩾2500				Applicable when the speed =2.0m/s or speed=2.5m/s with pass hoistway, with counterweight safety gear.
		⩾1950	⩾1950	⩾2050(2150)*	⩾2150(2150)*	⩾2650				Applicable when the speed =2.5m/s single hoistway, with counterweight safety gear.
							⩾1840	⩾1840(1950)	⩾1840(1950)	Applicable when there is no counterweight safety gear and the door opening type is center opening.
							⩾1950	⩾1950(2050)	⩾1950(2050)	Applicable when there is counterweight safety gear and the door opening type is center opening.
							⩾1720	⩾1725	⩾1725	Applicable when the speed ⩾2.5m/s or speed=2.5m/s with pass hoistway, without counterweight safety gear, and door opening type is side opening.
								⩾1735	⩾1750	Applicable when the speed=2.5m/s single hoistway without counterweight safety gear,and door opening type is side opening.
							⩾1830	⩾1835	⩾1835	Applicable when the speed ⩾2.5m/s or speed=2.5m/s with pass hoistway, with counterweight safety gear, and door openingtype is side opening.
								⩾1845	⩾1860	Applicable when the speed =2.5m/s single hoistway, with counterweight safety gear, and door opening type is side opening.
Inner Depth of Hoistway BH	⩾1650	⩾1900	⩾1950	⩾1950	⩾2050	⩾1720				Applicable when the speed ⩽1.75m/s without counterweight safety gear.
	⩾1755	⩾1990	⩾2040	⩾2040	⩾2140	⩾1810				Applicable when the speed ⩽1.75m/s with counterweight safety gear.
		⩾1930	⩾1980	⩾1980	⩾2080	⩾1750				Applicable when the speed ⩾2.0m/s without counterweight safety gear.
		⩾2035	⩾2085	⩾2085	⩾2185	⩾1855				Applicable when the speed ⩾2.0m/s with counterweight safety gear.
							⩾1740	⩾2040	⩾2440	Applicable when speed ⩽1.75m/s, and the door opening type is center opening.
							⩾1810	⩾2110	⩾2510	Applicable when speed ⩽1.75m/s, and the door opening type is side opening.
								⩾2040	⩾2440	When the speed ⩾2.0m/s, applicable when there is no counterweight safety gear and the door opening type is center opening.
								⩾2100	⩾2440	When the speed ⩾2.0m/s, with counterweight safety gear and the door opening type is center opening.
								⩾2110	⩾2510	Applicable when the speed ⩾2.0m/s single hoistway without counterweight safety gearand the door opening type isside opening.
								⩾2155	⩾2510	Applicable when the speed ⩾ 2.0m/s single hoistway with counterweight safety gearand the door opening type isside opening.
Inner Width of Machine Room AM	⩾1950	⩾1950	⩾1950	⩾1960(2150)*	⩾2050(2150)*	⩾2500				Applicable when the speed ⩽1.75m/s without counterweight safety gear.
	⩾1950	⩾1950	⩾1950	⩾1960(2150)*	⩾2050(2150)*	⩾2500				Applicable when the speed ⩽1.75m/s with counterweight safety gear.
		⩾1950	⩾1950	⩾1980(2150)*	⩾2050(2150)*	⩾2500				Applicable when the speed =2.0m/s or 2.5m/s pass hoistway without counterweight safety gear.
		⩾1950	⩾1950	⩾2050(2150)*	⩾2150(2150)*	⩾2650				Applicable when the speed =2.5m/s single hoistway without counterweight safety gear.
		⩾1950	⩾1950	⩾1980(2150)*	⩾2050(2150)*	⩾2500				Applicable when the speed =2.0m/s or speed=2.5m/s with pass hoistway, with counterweight safety gear.
		⩾1950	⩾1950	⩾2050(2150)*	⩾2150(2150)*	⩾2650				Applicable when the speed =2.5m/s single hoistway, with counterweight safety gear.
							⩾1840	⩾1840(1950)	⩾1840(1950)	Applicable when there is no counterweight safety gear and the door open type is center opening.
							⩾1950	⩾1950(2055)	⩾1950(2050)	Applicable when there is counterweight safety gear and the door open type is center opening.
							⩾1720	⩾1725	⩾1725	Applicable when the speed ⩾2.5m/s or speed=2.5m/s with pass hoistway, without counterweight safety gear, and door opening type is side opening .
								⩾1735	⩾1750	Applicable when the speed =2.5m/s single hoistway without counterweight safety gear,and door opening type is side opening .
							⩾1830	⩾1835	⩾1835	Applicable when the speed , ⩾2.5m/s or speed= 2.5m/s pass hoistway, with counterweight safety gear,and door opening type is side opening.
								⩾1845	⩾1860	Applicable when the speed =2.5m/s single hoistway, with counterweight safety gear, and door opening type is side opening .
Inner Depth of Machine Room BM	⩾1650	⩾1900	⩾1950	⩾1950	⩾2050	⩾1720				Applicable when the speed ⩽1.75m/s without counterweight safety gear.
		⩾2250	⩾2280	⩾2280	⩾2315	⩾1925				Applicable when the speed ⩽1.75m/s with counterweight safety gear.
		⩾1930	⩾1980	⩾1980	⩾2080	⩾1750				Applicable when the speed ⩾2.0m/s without counterweight safety gear.
		⩾2320	⩾2345	⩾2345	⩾2355	⩾1855				Applicable when the speed ⩾2.0m/s with counterweight safety gear.
							⩾1820	⩾2040	⩾2440	speed ⩽1.75m/s, applicable when there is no counterweight safety gear and and door opening type is side opening .
							⩾2100	⩾2220(2165)	⩾2440	speed ⩽1.75m/s, applicable when there is counterweight safety gear and and door opening type is center opening.
							⩾1835	⩾2110	⩾2510	speed ⩽1.75m/s ,applicable when there is no counterweight safety gear, and door opening type is side opening .
							⩾2115	⩾2265	⩾2510	speed ⩽1.75m/s, Applicable when there is counterweight safety gearand door opening type is center opening .
								⩾2040	⩾2440	speed ⩾2.0m/s, Applicable when there is no counterweight safety gearand and door opening type is center opening.
								⩾2290(2110)	⩾2440	speed ⩾2.0m/s, applicable when there is counterweight safety gear and and door opening type is center opening.
								⩾2110	⩾2510	speed ⩾2.0m/s ,Applicable when there is no counterweight safety gearand door opening type is side opening.
								⩾2390	⩾2510	speed ⩾ 2.0m/s Applicable when there is counterweight safety gearand door opening type is side opening.

note: * Figure in () means the dimension for different door opening width; If there is no () then it means the dimension is the same for different door opening width.

Basic specification table

Item	Specification contents					Remarks
Rated speed (m/s)	1.0	1.6	1.75	2.0	2.5	
Rated load (kg)	630	630	630			
	825	825	825	825	825	
	900	900	900	900	900	Only for rear arrangement of counterweight.
	1050	1050	1050	1050	1050	
Number of landing (stations)	18	32	32	36	36	
Height of lift TR (M)	3.4–55	7.3–90	7.3–90	9.1–120	13.3–120	
Start frequency (times/hour)	120	180				
Operation mode	1C~2BC、2C~SM21					
Control mode	VFH–L					
Winding mode	2:1 single winding					
Traction machine	PM synchronous gearless traction machine (PM)					
Traction wire rope	Φ8、Φ10					
Machine room	Compact machine room					
Balance compensation device	Chain type and compensating chain type					
Door-opening mode	Center opening door					Determined in accordance with car specifications.
	Two–speed sliding					Determined in accordance with car specifications.
Door-driving mode	VVVF various voltage various frequency (PM door machine)					
Door-opening type	Standard: single opening (D101G)					
Power supply	380V50Hz three–phase–five–wire system					The fluctuation of the voltage of power supply against the rated voltage should be within ±7%.
Lighting power supply	220V50Hz single phase					
Counterweight location	Rear arrangement					
	Side arrangement					
Safety gear on the car side	Progressive type					
Safety gear on the counterweight side	Progressive type					Non–standard.
Minimum height (mm)	2600: steel nosing shall be configured (provided by SMEC)*1					
	2800: concrete nosing (provided by the client)*2					
Landing display range	B1, B2, B3, B4, B5, B, G, M, –1, –2, –3, –4, –5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48;					
	3A, 5A, 12A, 12B, 13A, 15A, 17A, 23A					

Note: *1 Under general conditions, the minimum floor height =HH+700 mm (concrete nosing is configured).
*2 Minimum floor height is effective only when HH=2100 mm; otherwise, technical confirmation is required; when floor height is smaller than 2800mm, steel nosing should be equipped.
Please contact the business department of our company if the height exceeds the above range.

Standard car size

Specifications and code	Rated capacity CAP(kg)	Rated number of passengers (person)	Internal width of car AA	Internal depth of car BB	Dooropening mode	Dooropening width JJ	Net height inside the car *1 HL	Door opening height HH	Remarks
P08W	630	8	1400	1100	CO	800	2300, 2400	2100	
P08D (deep car)	630	8	1100	1400	CO/2S	800/900	2300, 2400	2100	
P11W	825	11	1400	1350	CO	800/900	2300, 2400	2100	
P11G	825	11	1400	1400	CO	800/900	2300, 2400	2100	
P11D (deep car)	825	11	1100	1700	CO/2S	800/900	2300, 2400	2100	
P12G	900	12	1500	1400	CO	900/1000	2300, 2400	2100	
P14G	1050	14	1600	1500	CO	900/1000	2300, 2400	2100	
P14R	1050	14	2100	1100	2S	1200/1300	2300, 2400	2100	
P14D (deep car)	1050	14	1100	2100	CO/2S	800/900	2300, 2400	2100	

Note: *1 Net height inside the car and door opening size will affect the civil works.