

IFE ELEVATORS CO.,LTD
China Factory: Qingxi Town,Dongguan city,Guangdong
Tel:+86-769-82078888 Fax:+86-769-87732448
www.ife.cn

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JOYMORE-6 Machine Room-less Passenger Elevator



MOVING & SERVING

www.ife.cn

World's Reliable Elevators
Stock Code: 002774





THE NO.1 EXPORTER AND SUPPLIER OF ELEVATOR FROM CHINA

- A public listed elevator company in China (Stock code:002774)
- First group of elevator companies awarded class A certificate in manufacturing, installation, maintenance certified by National Quality Inspection Department
- An area of 110,000 m2 global production industrial park as well as international leading elevator test tower and escalator test tower
- Approved National Hi-tech Enterprises and provincial Elevator Research and Development Center
- With product sales to 5 continents 33 countries and area around the world
- 101 branches and service points in the globe
- More than 1000 after-sale service technicians and engineers

THE BIGGEST ELEVATOR SUPPLIER OF SINGAPORE HDB

Singapore Housing Development Board is known as HDB. HDB projects have strictest requirements towards elevators safety, reliability and energy-saving.



• Appreciation Letter from Singapore Institution of Engineers



With a long and unremitting efforts, IFE Elevators finally passed the evaluation of Singapore HDB with high-quality products and high-efficiency service. IFE has been awarded more than 6000 units in Singapore market start from 2005. IFE set up a record for the highest export volume one single project, also, IFE becomes the largest elevator supplier of Singapore HDB for last 5 years. This is the strong evidence of High quality Chinese products.



▲ Singapore Marina Residence



▲ Singapore Golden Bay Luxury Apartment



▲ Singapore West Park Business Center

▼ Singapore Bendemeer Lighthouse Residence



▲ Singapore Tampines Residence

▼ Poly Technologies. Sri Lanka Defense University (KDU) KDU is the new well known mark in Sri Lanka



Indonesia Palmerah Railway Station ▼



Malaysia IDCC Shopping Mall ▼



▲ South Africa Rond Vista Residence



▲ U.A.E Dubai Pearl Residence



Australia King Square Office Tower ▲



Philippines Kingston Tower ▲



▲ Greenland Group Bay Community



▲ South China Agricultural University

Yunan Lincang Welfare Housing, Crystal Dragon Residence ▼



▲ Lanwa International, Dongguan Star Legend

Liaoning Yingkou Grand Peace Residential Complex ▼



▲ Wanhao Real Estate, Taiyuan Shopping Mall



HARMONIOUS
IFE LIFE

MORE SAFETY



New generation patented mechanical car door locks
Compliant with Singapore HDB standard
 Patent No. 201410410864

To avoid the falling risks in non-leveling zone and to protect passengers.



New generation of landing door locks
Compliant with Singapore HDB standard
 Utility Model Patent No. 201420470670.5

To prevent landing opened manually when the landing door linkage rope is invalid.



Brake detection device
Compliant with Singapore HDB standard

To report the brake failure positively in full real-time, to eliminate the risks of brake failure and to protect passengers.



UCMP device
Compliant with EN81-20&50 +A3:2009 standard
 Patent No. ZI2011102999878
 Utility Model Patent No. 201320606488.3

To prevent unintended car movement in door opening zone UCMP control board efficiently detects and prevents the risks of unintended car movements to protect passengers.



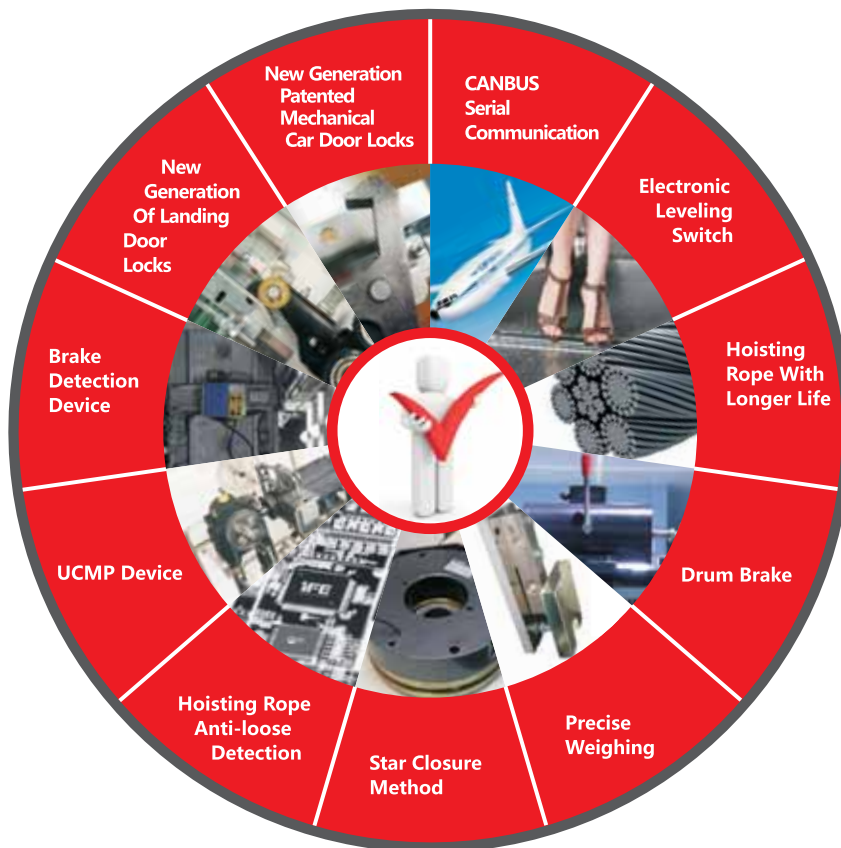
Hoisting rope anti-loose detection
Compliant with Australian As1735 standard
 Patent No. 201420470694.0

Hoisting rope anti-loose detection device detects in full real-time. When the rope is loose, the elevator will stop immediately to protect passengers.



Star closure method
Eliminating risks of high speed car slip

The star closure design optimizes the elevator control system and eliminates the risks of high speed car slip, protecting passengers.



MORE SAFETY

CANBUS serial communication
Advanced communication technology in Aerospace and Automotive industry

CANBUS communication technology is widely used in Aerospace, automotive industry. This control system is more reliable and faster.



Electronic leveling switch
Highly reliable leveling switch

Response time is less than 0.001 seconds, which is precise control out of interruption and reliable. Its service life is more than 10 million times.



Hoisting rope with longer life
1.25 times higher than EN81

The ratio of traction sheave and hoisting rope diameter is 50, which is 1.25 times higher than the EN81 standard. And the life is two times longer which can reduce maintenance costs of the elevator.



Drum brake
More mature and reliable brake in the field

Comparing to the block brake, drum brake is not affected by temperature changes. Brake detection switch gap is bigger. Meanwhile, replacing the brake pads becomes simpler.



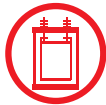
Precise Weighing
Industry-leading full-thickness weighing technology

Patent No. 201410337015.7 / Patent No. 201420391219.4

This technology accurately measures the car load of each landing, in order to avoid risks caused by the use of overloading and protect passengers.



MORE COMFORTABLE



Suspension damping system

First Suspension Damping System In Elevator Industry

Car structure innovation and optimization brings comfort and pleasure to passengers, reducing the vibration and noise generated by elevator movement.



Non-contact Limit Switch

By the non-contact magnetic induction principle, eliminating the sound of deceleration switch on the terminal station to achieve forced shifting speed without noise and vibration.



Direct Landing Technology

Efficient and smooth speed curve smoothens acceleration and deceleration of the elevator and enhances operation efficiency and passengers' comfort



MORE EFFICIENCY

Germany TÜV Elevator most energy-efficient Class A certification report

acquired VDI4707 PART1 highest grade A certification as qualified by Germany TuV energy - efficient testing assessment, becoming one of the few companies to achieve this honor in the current elevator industry.



European Union EMC

Low radiation and no electromagnetic pollution European electromagnetic compatibility standards. The effective elimination of electromagnetic radiation interference protects passengers appropriately.



Energy Saving Door Operator

Permanent magnetic synchronous door operator saves 60% energy more than the non-synchronous one with Smooth transmission



Energy Saving Driving System

Permanent magnetic synchronous traction machine enhances operation efficiency with low starting current, small volume and low noise



Energy Saving Car Lighting

LED lights are used to save energy and polish the car



Car Height (Standard Configuration)

2500mm

CAR75-01 :



COP : Hairline Stainless Steel | Ceiling : Hairline Stainless Steel+LED Light | Car Wall : Hairline Stainless Steel

Car Door : Hairline Stainless Steel | Floor : PVC



**COMFORTABLE SPACE
JOYFUL RIDE**



CAR80-02 :

COP: COP30-00 (Hairline stainless steel)
 Ceiling: To be confirmed (Hairline stainless steel+ LED ceiling light+ mirror etching stainless steel)
 Car wall: CW01-05 (Hairline stainless steel+ Mirror etching stainless steel)
 Car door: L01-00 (Hairline stainless steel)
 Floor: F01-00 (PVC)



CAR80-04 :

COP: COP30-00 (Hairline stainless steel)
 Ceiling: C08-00 (Hairline stainless steel+ LED ceiling light+ acrylic glass)
 Car wall: CW01-00 (Hairline stainless steel+ Mirror etching stainless steel)
 Car door: L01-00 (Hairline stainless steel)
 Floor: F01-07 (PVC)



CAR90-01 :

COP: COP30-02 (Ti-gold Hairline stainless steel)
 Ceiling: C17-02 (Ti-gold mirror stainless steel+ milky PC translucent board+ acrylic glass)
 Car wall: CW02-03 (Ti-gold hairline stainless steel+ Mirror etching titanized stainless steel)
 Car door: L01-03 (Ti-gold hairline stainless steel)
 Floor: F01-07 (PVC)

COMFORTABLE SPACE & JOYFUL RIDE



HOP32-00
 Standard Configuration On 1st Floor
 Display: Single Color
 Button: B11H-03
 Dimension: 350mm*100mm*20mm
 Scope: Passenger Elevator



HOP28-00
 Standard Configuration
 On Other Floors
 Display: LED
 Button: B11H-03
 Dimension(mm): 290*100*20
 Scope: Passenger Elevator



HOP29-00
 Optional Configuration
 On Other Floors (Duplex)
 Display: LED
 Button: B11H-03
 Dimension(mm): 295*185*20
 Scope: Passenger Elevator

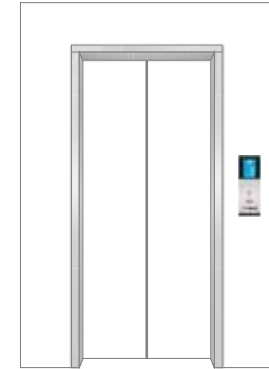
COP30-00
 Standard Configuration
 Dimension: 200mm(w) same as car ,height(h) 50mm(t)
 Display: LCD
 Button: B11C-00
 Scope: Passenger Elevator (front wall 250mm)

Landing Door



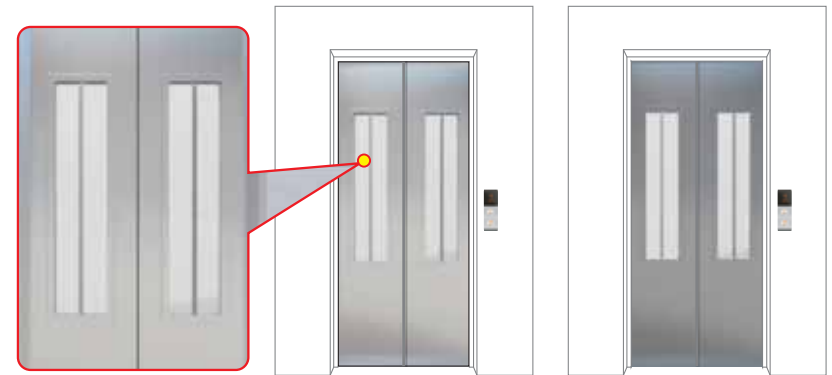
1st Floor Standard Configuration:
 L01-00 Hairline Stainless Steel
 Other Floors :
 L01-05 Matt Grey Painted Steel

Door Jamb



1st Floor Standard Configuration:
 LDJ01-00 Hairline Stainless Steel
 Other Floors :
 LDJ01-01 Matt Grey Painted Steel

Decoration(optional) Glass Window



Hairline Stainless Steel+Glass Window

Matt Grey Painted Steel+Glass Window

JOYMORE-6 Function Table

Basic functions

Operation Functions

01	Full Selective Collection	Collect all the calling signals to answer selectively based on the signal control system
02	Full Load By-pass	No response to the hall calling signal when the lift is in automatic mode at full load, but the elevator only answers the car calling signal
03	Car Call Reset	Double click the cop button to cancel the wrong command to achieve car call reset
04	Door Open/close Button	Micro buttons on the cop to control the door open/close so that passengers could handle the open/close timing flexibly
05	Door Open /close Button Light	Door open/close button light lights up to indicate the successful answer
06	Resume Operation In Power Supply	When the position signal is failed to retain or not sure about the elevator position after a power failure, the elevator would go to the end floor to reposition and be back to normal running
07	Automatic Home Landing	The elevator would be back to base floor to stand by under automatic condition if there is no calling command within the setting time
08	Anti- nuisance Car Call Protection	The computer detects the load and number of car calling registration then judges the command by logic. All signals will cancel if the command is not quite normal
09	Door Reopening By Landing Call	Push the HOP button same as the elevator going direction when the door is closing, then the door will reopen
10	Torque Compensation In Start	The system will calculate as per the load in elevator and optimize the torque compensation to give more comfort when the elevator just starts
11	Direct landing technology	Micro Computer controller automatically calculates the optimum speed profile according to the target floor distance and directly lands without crawling

Safety Functions

12	Safety Loop Protection	When the elevator fails, elevator microcomputer control system will report the fault code based on the pre-set fault code to bring convenience to maintenance staff
13	Absent or Mistaken Epsilon Phase Device	When the power supply is off phase or phase sequence is wrong, system safety circuit will be disconnected and the elevator will stop running
14	Overload Protection	When the car is loaded beyond the rated load, overloading buzzer will sound to alert. At this moment, the door is not closing and the elevator is not working
15	Safety Curtain With Multiple Light Beams	System forms dense infrared across the door. When a person or object enters the detection area, the system will respond sharply in order to protect the passengers from the risk of door
16	Door Reverse	The door is subjected to a reverse resistance exceeding the preset torque value when it is closing, the elevator will reopen
17	Door Interlock Protection	When the landing door and car door are both in normally closed state, the elevator will operate normally only when the control system judges the elevator is normal
18	Landing Zone Guard	For safety reason, the car door cannot open in the non-leveling area
19	Downward Over Speed Protection	When the downward speed of elevator exceeds a specified speed, the governor will take action and the safety circuit will be cut off while safety gear brakes, then the car stops on the guiderail
20	Upward Over Speed Protection	When the upward speed of elevator exceeds a specified speed, the governor will take action and the safety circuit will be cut off while the traction machine brakes, then the car stops
21	Reversal Movement Guard	When the system detects the actual running direction is inconsistent with the specified direction, the car stops immediately, and alarms
22	Brake guard	Brake relay signals are being monitored in the entire process, when the brake relay finds the actual state is inconsistent with the specified command, the system will stop the elevator operating
23	Contactor Non-releasing Protection	No matter the elevator is under standby state or operating state, the system will output the contactor condition. Once the contactor is in abnormal state, the system will stop the elevator operating
24	Speed Limited Switching In Terminator	When the elevator is running to the terminal station and the operating speed is not reduced to a preset value, the system will be forced to slow down to ensure the safe operation of elevator
25	Buffer Safety Protection	When the elevator passes over the terminal floor for some reason, car buffer and counterweight buffer will start the protection and the safety circuit will be cut off in the meantime
26	Microcomputer self-check protection	The system scans the input and output points of controller before the start of elevator. The elevator will stop starting using if the data is abnormal
27	Anti-locked-rotor Feature Of Motor	If the traction machine does not run due to mechanical jamming when the elevator is starting operating and it exceeds the preset timing, the system will stop the elevator operating
28	Fault Storage	The computer stores the accidental record of elevator. It can be supplied to elevator manufacturers and maintenance staffs for statistical analysis
29	Star Closure Method	When the brake fails and leads to an unintended movement of elevator, the three-phase winding of the permanent magnetic synchronous motor will be in short circuit and turn to power generation state. It drives the elevator running at the speed of 0.1 m/s and eliminates the risk of high-speed slip to ensure the safety of passengers
30	Hoisting Rope Anti-loose Detection	The hoisting rope is under real-time detection during the elevator operation and when single or multiple hoisting Ropes are detected to be slack relaxation, the elevator stops immediately
31	Electronic Weighing	Electronic weighing accurately measures the weight of each landing of the car and supplies the signal to the control system in order to achieve the anti- nuisance, full load by-pass and overload protection
32	Brake Monitoring Device	Brake monitoring device detects if the left and right sides of the brake action are consistent or reliable. If they are inconsistent or unreliable, the control system will automatically report to the brake fault detection, so that the motor stops running to prevent the traction machine brake failure
33	Remote Service Management	When the elevator fails, the system will send messages and emails to alert the maintenance staffs to go repair quickly and 400 service center staffs to manage the supervision
34	UCMP	When the elevator is stopping at the leveling floor and the landing door or the car door is not totally closed, the car is unintentionally moving and leaves the lock open area, then the elevator is forced to stop if the UCMP dashboard detects danger signals so that it protects the passengers

Basic functions

Special Operation

34	Attendant Operation	By opening the switch in COP, the elevator will be turned into the attendant operation state so the driver may manage the number of passengers in the car, hall call response and opening /closing doors
35	By-pass Switch	After entering the driver operation state, pressing by-pass button before the start, the elevator does not respond to external call in the next course of operation, and goes straight to the floor with the registration by drivers operating instructions in the car
36	Buzzer	When the elevator is in the driver operation state, buzzer will sound to alert the drivers that someone is calling if it is registered by external call
37	Main Floor Setting	According to site requirements by setting the main station based on basic parameters, the elevator will return to the preset floor when it exceeds a specified timing without any operations
38	Firefighting Floor Settings	According to site requirements by setting fire man service floor based on the basic parameters, the elevator will land to the preset floor when inputting the fire man service signal
39	Inspection Operation	Pressing direction buttons on the junction box at car top to control the elevator to go towards the direction selected or opening/closing buttons to control the operation of doors makes the maintenance faster and more convenient
40	Flexible Car Park Set	Clients can decide the elevator stops or not on a specified floor

Human Machine Interface

41	Lcd Display Inside The Car	LCD display on the COP shows the information about floors and directions
42	Hall Lcd Display on The First Floor	Hall LCD display shows the information about floors and directions
43	Floor Mark Flexible Set	The type of words of special floors can be customized regarding to the requirements
44	Arrival Chime	Arrival chime will sound when the elevator is arriving at a certain floor
45	Braille Buttons	Braille buttons are adopted on the COP to bring convenience to the blind and the seniors with bad eyesight

Emergency Functions

46	Car Alert Button	Passengers can inform the outside in time by pressing the car alert button under special circumstance
47	Emergency Lighting Inside The Car	Emergency lighting inside the car can be used during power outage
48	Intercom Device	Intercom device can give realization of 5 party conversations among car, pit, car top, machine room and monitoring center. Clients are supposed to supply a wire from monitoring center to the first floor. Specification: 4x0.75mm ² (distance no more than 1800 meters)
49	Fire Emergency Landing	Elevator will cancel all calling signals and go straight to the fire man service floor after receiving the fire signal. It will also keep the door opening and wait for the operation of fire man. It will return to normal use when the fire signal is canceled
50	Fire Emergency Landing Feedback	The system will give a signal to the management center to indicate the elevator has received the fire signal and is waiting for the operation of firemen after the elevator receiving the fire signal and being back to the fire man service floor
51	Emergency Rescue	When the safety gear, oil buffer, upper limit switch, lower limit switch and governor take action, operating the emergency rescue function in the control panel makes the elevator run slowly in order to swiftly save people

Energy Saving Functions

52	Parking Service	When the key switch on the preset floor takes action the elevator will return to the locking floor and then close the door and turn in sleeping state after answering all the callings
53	Automatic Turn On/off	Under the circumstance without any operation instructions, the elevator will enter automatic turn on/off mode within the preset timing and closing door, turning off the lights and fans inside the car

Optional Functions

54	Voice Announcement	Voice announcement will sound when the elevator arriving at station
55	UPS	When the elevator is operating normally but suddenly the power is cut off. The UPS device will take action swiftly, driving the elevator to the nearest floor and open the car door for evacuation
56	Power Regeneration Device	Elevators' reciprocating lifting and repeated braking respectively result in an elevator potential energy and kinetic energy released. When using power regeneration device, the release of potential energy and kinetic energy from elevator are converted to electrical energy in phase with the same frequency, then they feedback to the grid so as to achieve energy-saving purposes
57	Multiple Operation	When two elevators are using together, achieving co-ordination of hall call instructions to improve operational efficiency via serial communication to transfer data
58	Group Control Operation	Group control system is capable of 3 to 8 elevators for centralized control, so the elevator group can automatically select the most appropriate response, to avoid repeating the stops of elevator and to shorten the waiting time of passengers, improving operational efficiency, saving energy
59	Peak traffic Service	Allocate the number and the timing of elevators to wait at the designated floor as per the actual traffic flow during office hours or peak time, in order to minimize the passenger waiting time and ease the people flow.

JOYMORE-6 Technical Specification

NO.	Specification	630		800		1050		1350		1600		
01	Capacity (kg)	630		800		1050		1350		1600		
02	Speed (m/s)	1.0	1.75	1.0	1.75	1.0	1.75	1.0	1.75	1.0	1.75	
03	Operation System	full collective selection operation										
04	Driving System	VVVF										
05	Door Operator System	Permanent Magnet Synchronous type										
06	Traction Machine	Permanent Magnet Synchronous Gearless type										
07	Control System	CTRL 80/CTRL 70A										
08	Communication	canbus serial/CTRL communication										
09	Parallel Elevators	2 units(Optional)										
10	Group Control Elevators	3-8 units(Optional)										
11	Car Size (width*depth*height)	one Opening	wide car	1100*1400*2500	1350*1400*2500	1500*1600*2500	1750*1700*2500	1750*1950*2500				
			deep car1	---	1100*1750*2500	1100*2100*2500	1200*2400*2500	1400*2400*2500				
		Dual Opening	1150*1400*2500	1350*1400*2500	1500*1600*2500	1750*1700*2500	1750*1950*2500					
12	Opening Size (width*height)	one Opening	wide car	CO 800*2100	CO 800*2100	CO 900*2100	CO 1100*2100	CO 1100*2100				
			deep car1	---	CO 800*2100	CO 900*2100	CO 900*2100	CO 900*2100				
		Dual Opening	DUAL CO 800*2100	DUAL CO 800*2100	DUAL CO 900*2100	DUAL CO 1100*2100	DUAL CO 1100*2100					
13	Shaft Size Width*depth	one Opening	wide car	1850*1850	2100*1850	2250*2000	2750*2200	2750*2500				
			deep car1	---	1850*2150	2050*2500	2300*2800	2400*2800				
		Dual Opening	2150*1950	2100*1960	2300*2110	2750*2210	2750*2460					
14	Travel Height	≤45m	≤75m	≤45m	≤75m	≤45m	≤75m	≤45m	≤75m	≤45m	≤75m	
15	Traction Machine Position	Inside the top of the Shaft										
16	Overhead Height	Standard	4000	4200	4000	4200	4000	4200	4300	4500	4300	4500
17	Pit Depth		1500	1600	1500	1600	1500	1600	1700	1800	1700	1800
18	Rated Power (kW)		4.2	7.3	5.3	9.3	6.6	11.6	9	15.7	10.6	18.6
19	Rated Current (A)		10	17	12	21	15	27	21	36	25	43
20	Starting Current (A)		15	25.5	18	31.5	22.5	40.5	31.5	54	37.5	64.5
21	Brake Voltage (V)	start at DC 110V maintain at DC 68V										
22	Power Supply & Min. Wiring Requirement	380V, 50Hz, 3-phase 5-wire, zero wire and ground wire separated, see requirements on the shaft plan drawing										
		3*6mm ² +2*6mm ²	3*6mm ² +2*6mm ²	3*10mm ² +2*6mm ²	3*6mm ² +2*6mm ²	3*10mm ² +2*6mm ²	3*10mm ² +2*6mm ²	3*10mm ² +2*6mm ²	3*10mm ² +2*6mm ²	3*10mm ² +2*6mm ²	3*10mm ² +2*6mm ²	3*10mm ² +2*6mm ²

注：1. “深轿厢”适用于有预定用途的电梯，如疏散的场所为了运送担架等。
 2. 选不同吊顶可能导致轿厢净高有所变化。
 3. 门洞高度=开门净高+100mm。
 4. 门洞宽度=开门净宽+200mm。

