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EAECL - CR1

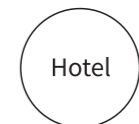
Compact Machine Room Passenger Elevator



PEOPLE-ORIENTED, CONVERGE OF EAECL INNOVATIVE TECHNOLOGY

SAFE, COMFORT AND EFFICIENT EXPERIENCE
BY HUMAN TECHNOLOGY

EAECL-CR1 is a new-generated product of the classic compact machine room of the IFE elevator, inheriting the concept of safety, comfort, energy-saving and environmental friendly. Satisfying the high-efficient operation requirements of various types of buildings such as residential buildings, office buildings and hotels for providing passengers with an efficient enjoyment.



2.5m/s					
2.0m/s					
1.75m/s					
1.0m/s					
	630kg	800kg	1050kg	1350kg	1600kg



HUMAN TECHNOLOGY FOR SAFE ARRIVAL

Diameter ratio of traction sheave and hoisting rope is 25% higher than national standard and Steel Rope service life is 2 times longer than before

For the purpose of safety and longevity, diameter ratio of traction sheave and steel rope is 50 which is 25% higher than national standard(40) and the service life of steel rope last 2 times longer than before which are able to lower elevator maintenance costs.

Higher Standard than National Standard of Landing Door Strength Test

Through the strength test by using 45kg pendulum from 1100mm (national standard requirement is 800mm) height free fall strike the landing door, effectively deal with reckless strike, to prevent passengers from falling into the shaft.

25%

Rope ratio is higher than International

2 times

Steel wire rope life extension

1100mm

Pendulum test height exceeds national standard

UCMP for Preventing Unintended Car Movement

Patent No. 201320606488.3

Unintended Car Movement Protection system(UCMP) prevents car unintended movement in the door opening area, prevents the risk of accidental movement of the car, and protects the safety of the passengers.

Anti-loosen Detection of Steel Rope for Protecting Riding Safety

Patent No. 201420470694.0

Whole-process real-time detected by anti-loosen detection of steel rope device. The elevator stops running immediately ensuring passengers safety if steel rope loose.

Alarmed for Overloading Alert by Precisely Weighing Technology

Patent No.201410337015.7

Accurately measure car load at each landing floor by using the industry-leading weighing technology to avoid potential safety hazard and accidental injuries caused by overloading.

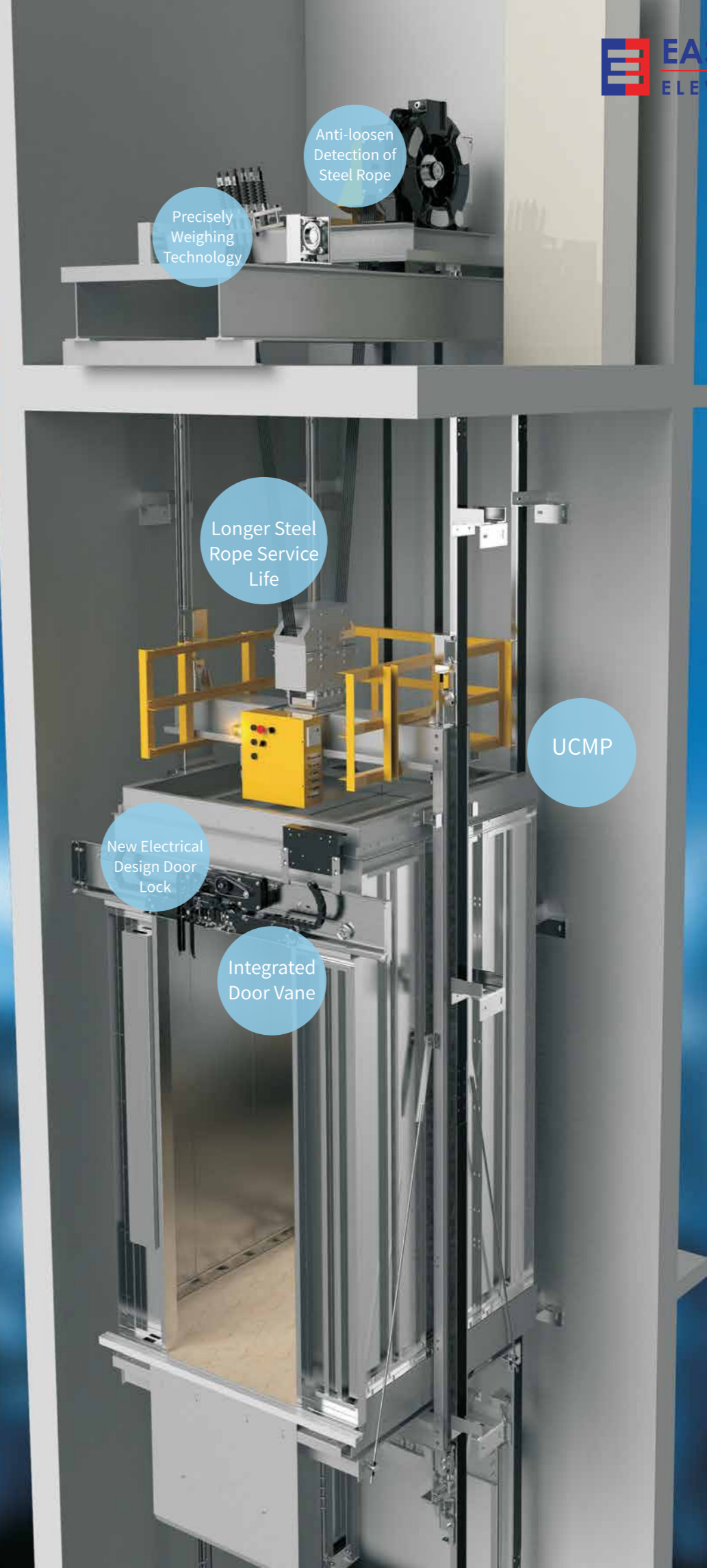
New Electrical Design Door Lock for Preventing Risk of Door Lock Short-circuited

Patent No. 201621450975.5

Prevent electrical circuit of elevator door lock and switch contact of door lock being man-made short circuit cause elevator to operate in the door opening condition, thus avoiding the risk of accident.

Integrated Door Vane Reduces Failure of Door Opening

Prevent electrical circuit of elevator door lock and switch contact of door lock being man-made shortThe new integrated door vane is a collection of aesthetic design, easy installation, commissioning, safe and reliable operation to reduce the door opening failure.



COMFORTABLE EXPERIENCE WITH LOW ENERGY CONSUMPTION

Germany TÜV Class A Energy-efficient Certificate

EAECL-CR1 acquired VDI 4707 PART 1 highest grade A certification certified by the German TÜV energy-efficiency testing so winning a large number of high-standard customers and industry appreciation in the Chinese market.

Noise Reduction Device, Quiet Ride Enjoyment

Eliminating the collision sound of terminal station and achieving no noise, no vibration speed change experience quiet riding through the non-contact magnetic induction technology.

Direct landing technology for steady and comfortable experience

Passengers enter and leave car as if at flat floor, directly landing, accurate positioning, to achieve elevator operating efficiency and comfort experience.

Intelligent Control System for Energy-Saving

The IFE responds to the needs of green environmental protection. The intelligent control system can automatically switch the lighting and ventilation to the standby mode to create a green-driven elevator when no one is taking the elevator.

Authoritative CE Certification; EU Electromagnetic Compatibility EMC Standard

Product is CE-approved and complies with EMC and environmental standards. Giving passengers safety protection by low radiation without electromagnetic pollution.





STANDARD CONFIGURATION

Comfortable and pleasant while enjoying different space experiences which is clean, tidy and easy- maintained.



Car LED Lighting Provides Quiet and Refreshing Ride Experience
The whole LED lighting system consumes only one-fifth of the power of ordinary fluorescent lamps that creating a spacious and bright, quiet and refreshing riding space.



Caring Human Science Perceived from Smart Dim Light Button

Incorporating the humanized concept into the details of elevator buttons. Higher discrimination of smart dim light button for more clearly detect the position of car button. Lightly pressing the button of designated floor and then the button light becomes fully illuminated, with buzzer reminder.

CAR75-05

Note: C22 ceiling is not suitable for deep car

COP: COP34-00 Hairline Stainless Steel/Dark Grey Acrylic / Dot Matrix Display in White

Celling: C22-00 Hairline Stainless Steel/LED Ceiling Light

Car Wall: CW03-00 Hairline Stainless Steel

Car Door: L01-00 Hairline Stainless Steel

Floor: F01-00 Wear-proof PVC

OPTIONAL CONFIGURATION

Variety of car decoration style, new and stylish decoration design

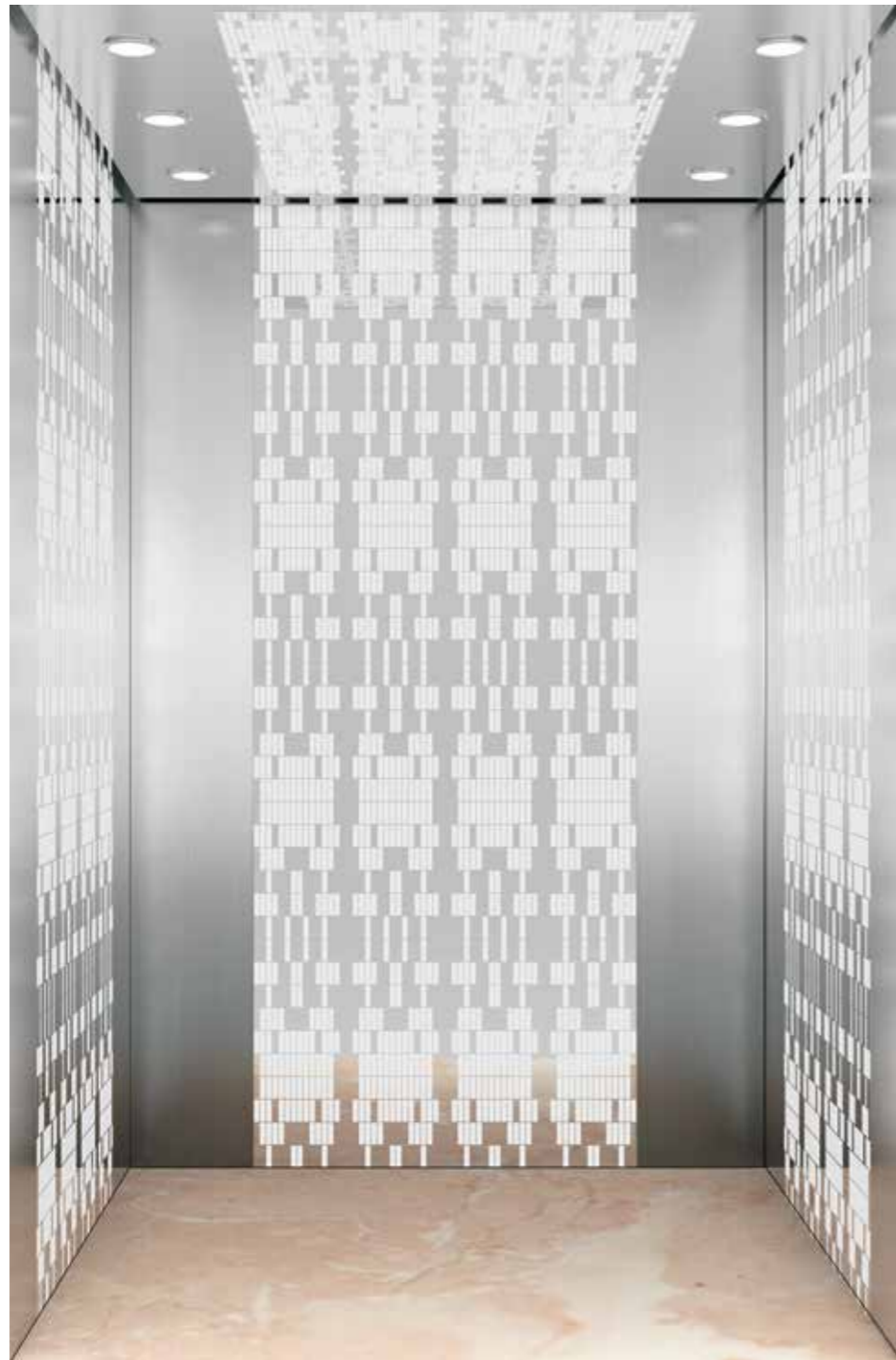


CAR80-06

COP: COP35-00 Hairline Stainless Steel/ Dark Grey Acrylic/ White Segment LCD Display
Ceiling: C17-00 Hairline Stainless Steel/ Translucent Acrylic Tube/ PC Translucent Panel
Car Wall: CW01-07 Side Wall: Hairline Stainless Steel/ Middle: Mirror ST.ST. Etching
Rear Wall: Hairline Stainless Steel/ Middle: Mirror Stainless Steel
Car Door: L01-00 Hairline Stainless Steel
Floor: F01-04 Wear-proof PVC

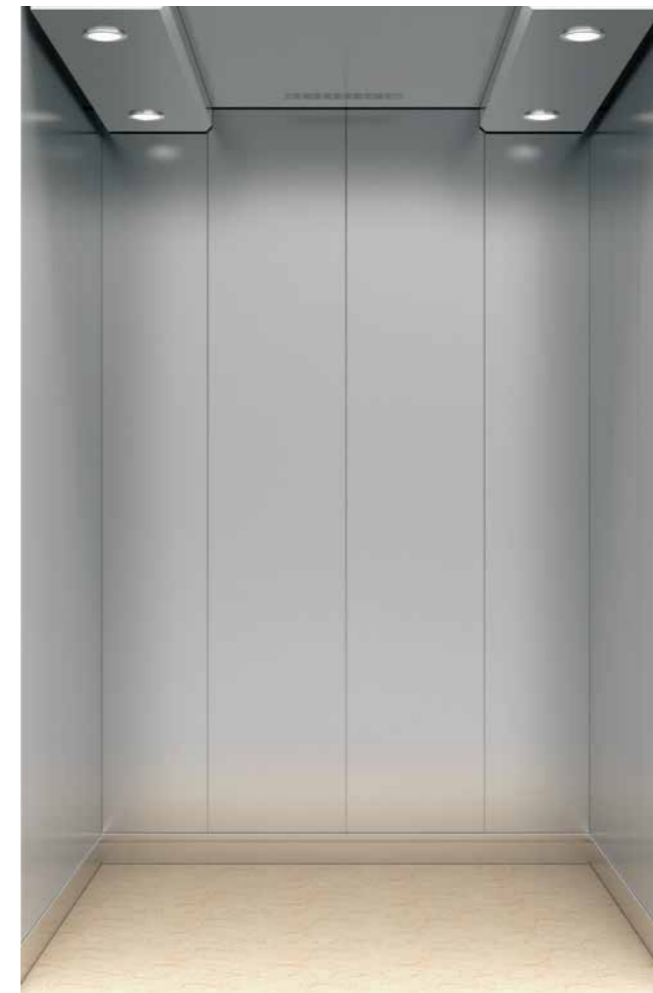
OPTIONAL CONFIGURATION

Variety of car decoration style, new and stylish decoration design.



CAR80-02

Ceiling: C99-09 Hairline Stainless Steel/LED Ceiling Light/ Mirror ST.ST. Etching
 Car Wall: CW01-05
 Side Wall: Hairline Stainless Steel/ Middle: Mirror ST.ST. Etching
 Car Door: L01-00 Hairline Stainless Steel
 Floor: F01-00 Wear-proof PVC



CAR75-07

Note: C22 ceiling is not suitable for deep car

Ceiling: C22-05 Painted Steel -Matt Grey/ LED Ceiling Light
 Car Wall: CW03-03 Painted Steel -Matt Grey
 Car Door: L01-05 Painted Steel -Matt Grey
 Floor: F01-00 Wear-proof PVC



CAR80-04

Ceiling: C08-00 Hairline Stainless Steel/LED Ceiling Light/
 Translucent Acrylic Tubes
 Side Wall: CW01-00 Hairline Stainless Steel/
 Middle: Mirror ST.ST. Etching
 Car Door: L01-00 Hairline Stainless Steel
 Floor: F01-07 Wear-proof PVC

DECORATING CONFIGURATION

COP, Display, HOP (Standard + Optional Configuration)



COP34-00(Standard)
Plate: Hairline Stainless Steel
Display: Dot Matrix in White



COP35-00(Standard)
Faceplate: Hairline Stainless Steel
Display: Segment LCD in White



LCD P070 (Optional)
LCD Display
Size: 7inch (154*86mm)



HOP37-00(Standard)
Faceplate: Hairline Stainless Steel
Dark Grey Acrylic
Display: Dot Matrix in White



HOP 38-00 (Optional)
Plate: Hairline Stainless Steel
Dark Grey Acrylic
Display: White Segment LCD



HOP 39-00 (Optional)
Plate: Hairline Stainless Steel
Dark Grey Acrylic
Display: Dot Matrix in White

Ceiling (Standard + Optional Configuration)



C22-00(Std) Hairline Stainless Steel/LED Ceiling Light
Note: C22 ceiling is not suitable for deep car



C17-00(Opt) Hairline Stainless Steel/
Translucent Acrylic Tubes/ PC Translucent Panel



C08-00(Opt) Hairline Stainless Steel/LED Ceiling Light/
Translucent Acrylic Tubes



C99-09(Opt) Hairline Stainless Steel/
LED Ceiling Light/Mirror ST.ST. Etching



C16-00(Opt) Hairline Stainless Steel/ PC Translucent Panel/
LED Ceiling Light



C21-00 (Opt) Hairline Stainless Steel/ PC Translucent Panel/
LED Ceiling Light
Note: C21 ceiling is not suitable for deep car

PVC Floor (Standard + Optional Configuration)



F01-00(Standard)



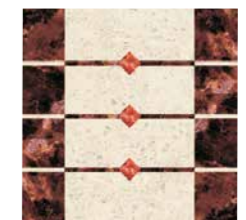
F01-03(Optional)



F01-04(Optional)

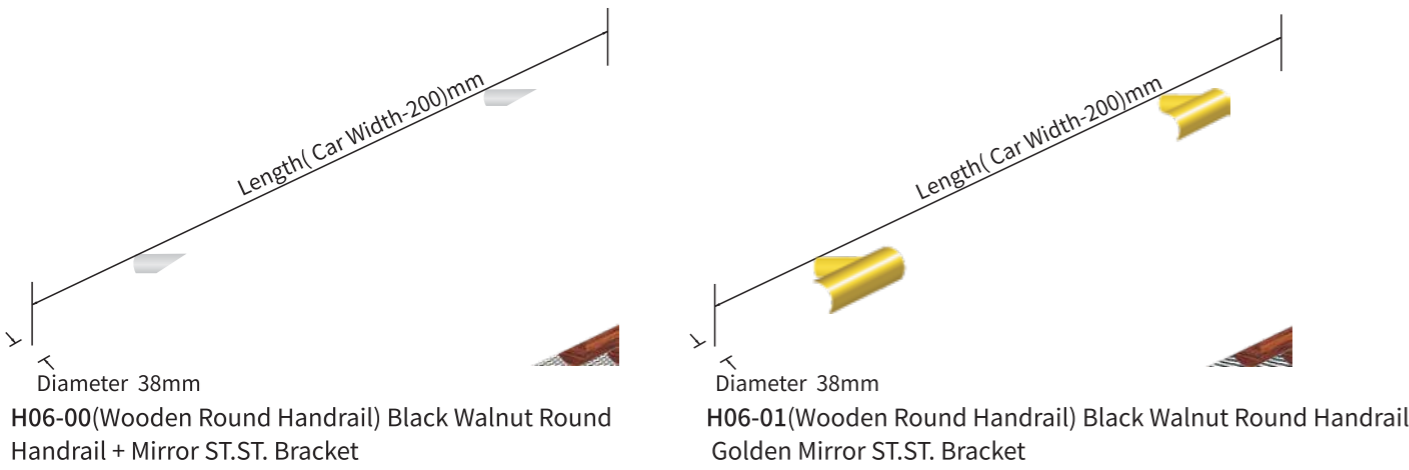
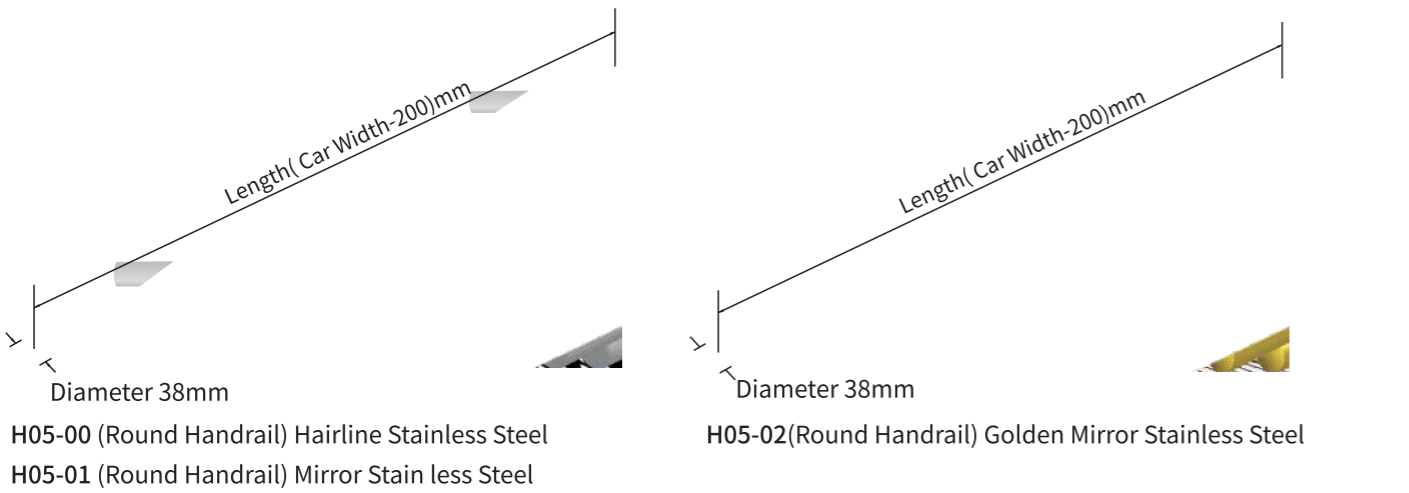
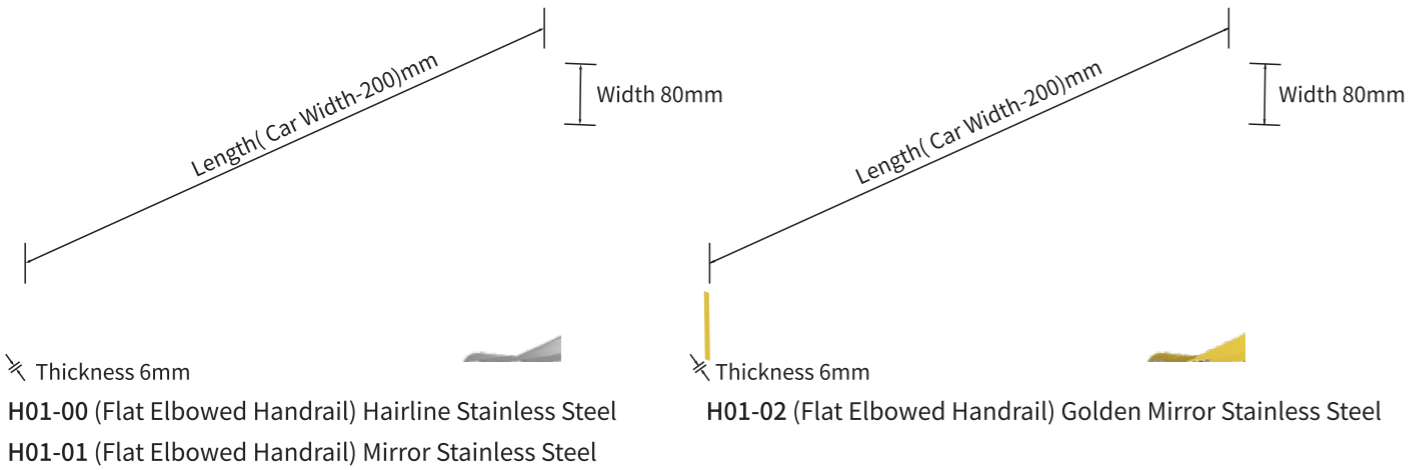


F01-05(Optional)



F01-07(Optional)

Handrail (Optional Configuration)



Door Panel (Standard + Optional Configuration)



Landing Door: L01-00(Std) Hairline Stainless Steel (Home Floor)
L01-05 (Std) Painted Steel -Matt Grey(Other Floor)
Door Jamb: LDJ01-00(Std) Hairline Stainless Steel (Home Floor)
LDJ01-01(Std) Painted Steel -Matt Grey(Other Floor)



Landing Door: L02-02(Opt) Mirror ST.ST. Etching
Door Jamb: LDJ01-00(Std) Hairline Stainless Steel



Landing Door: L02-06(Opt) Mirror ST.ST. Etching
Door Jamb: LDJ01-00(Std) Hairline Stainless Steel



Landing Door: L02-08(Opt) Mirror ST.ST. Etching
Door Jamb: LDJ01-00(Std) Hairline Stainless Steel

EAECL-CR1 Passenger Elevator

BASIC FUNCTION

Operation Functions

01	Full Selective Collection	Collect at 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 at full load in automatic mode, but 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 re-position 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 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 falls, elevator microcomputer control system will report the fault code based on the preset 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 elevators 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 response sharply in order to protect 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 status, the elevator will operates 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 guide-rail
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 action 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 states is inconsistent with the specified command, the system will stop the elevator operating
23	Contractor Non-releasing Protection	No matter 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

BASIC FUNCTION

Safety Functions

24	Speed Limited Switching in Terminator	When the elevator passes over the terminal nation and the operating state, the system will output the contractor condition. Once, the contractor is in abnormal state, the system will stop the elevator operating
25	Buffer Safety Protection	When the elevator passes over the terminal floor for some reason, car buffer and counterweight buffer will star 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 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 stops the elevator operating
28	Fault Storage	The computer stores the accidental record of elevator. It can be supplied to elevator manufacturers and maintenance staff 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 0.1m/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 stack relaxation, the elevator stops immediately
31	Electronic Weighting	Electronic weighing accurately measures the weight of each landing of the car and suppliers and 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	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 unintended moving t 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
34	Landing Door & Car Door Bypass Devices	In order to maintain the contact of the landing door and the car door (including the door lock contact), a bypass device is provided on the control cabinet. When by passing the device, the contacts of the landing door and the car door cannot be bypassed at the same time. In the bypass state, only the operation or emergency electric operation can be repaired, and the sounding device and the car bottom setting flashing light are set on the car to give an alarm promptly
35	Door Circuit Detection	When the car is in the unlocking area, the car door is opened and the door lock is released, the electrical safety device for checking the closed position of the car door, for checking the position of the door locking device and the correct operation of monitoring signal can be monitored. If the fault is detected, the elevator will not operate normally

Special Operation

36	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
37	By-pass Switch	After entering the driver operation state, pressing by-pass button before the start, the elevator does not respond external call in the next course of operation, and goes straight to the floor with the registration by drivers operating instructions in the car
38	Buzzer	When the elevator is the drive operation state, buzzer will sound to alert the drives that someone is calling if it is registered by external call
39	Independent Service	The dedicated operation function, when the elevator no longer responds to the call signal outside the hall, but can only be manually controlled to open and close the door
40	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
41	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 fireman service signal
42	Inspection Operation	Pressing direction buttons on the junction box at car top to control the elevator to go forwards the direction selected or opening、 closing buttons to control the operation of doors makes the maintenance faster and more convenient
43	Flexible Car Park Set	Clients can decide the elevator stops or not on a specified floor

EAECL-CR1 Passenger Elevator

BASIC FUNCTION

Human Machine Interface

44	LCD Display Inside the Car	LCD simply on the COP shows the information about floors and directions
45	Hall LCD Display on the First Floor	Hall LCD display shows the information about floors and directions
46	Floor Mark Flexible Set	The type of words special floors can be customized regarding to the requirements
47	Arrival Chime	Arrival chime will sound when the elevator is arriving at a certain floor
48	Hall Call button dim light reminder function	When in the standby state, the button is in a slightly bright state, which is convenient for a passenger with poor eyesight to observe the position of the call button, and when the call button is pressed, the button light becomes fully illuminated
49	COP button dim bright buzzer reminder function	When in the standby state, the button is in a slightly bright state, which is convenient for the passenger with poor vision to observe the position of the car button. When the car command button is pressed, the button light becomes fully illuminated with a buzzer reminder
50	Open the door to maintain the delay function	After the elevator opens the door, press the delay button and then automatically close the door after the delay time

Emergency Functions

51	Car Alert Button	Passengers can inform the outside in time by pressing the car alert button under special circumstance
52	Emergency Lighting inside the Car	Emergency light inside the car can be used during power outage
53	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 form monitoring center to the first floor. Specifications:4x0.75mm2(distance no more than 1800 meters)
54	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
55	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
56	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 Function

57	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
58	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 FUNCTION

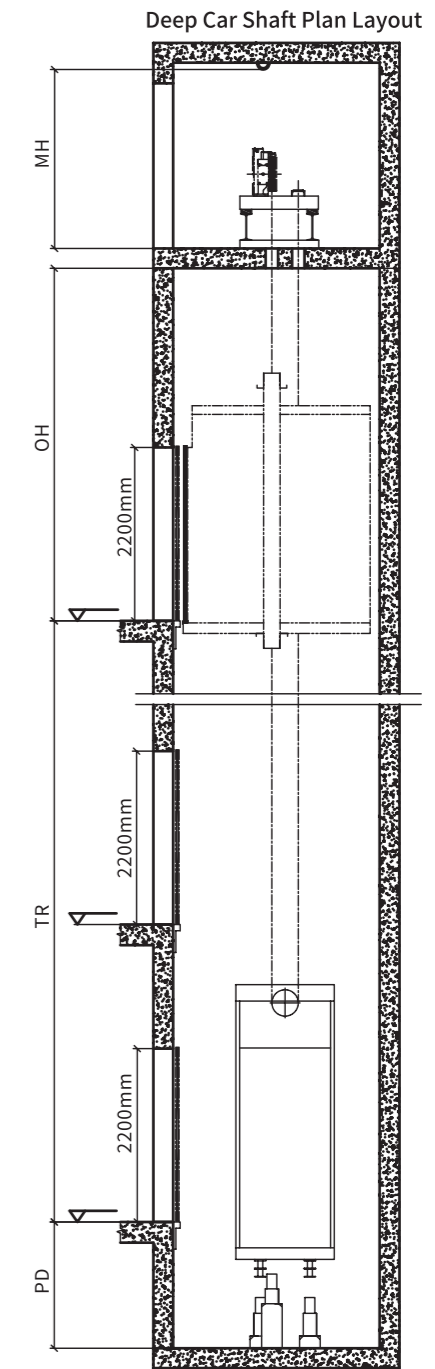
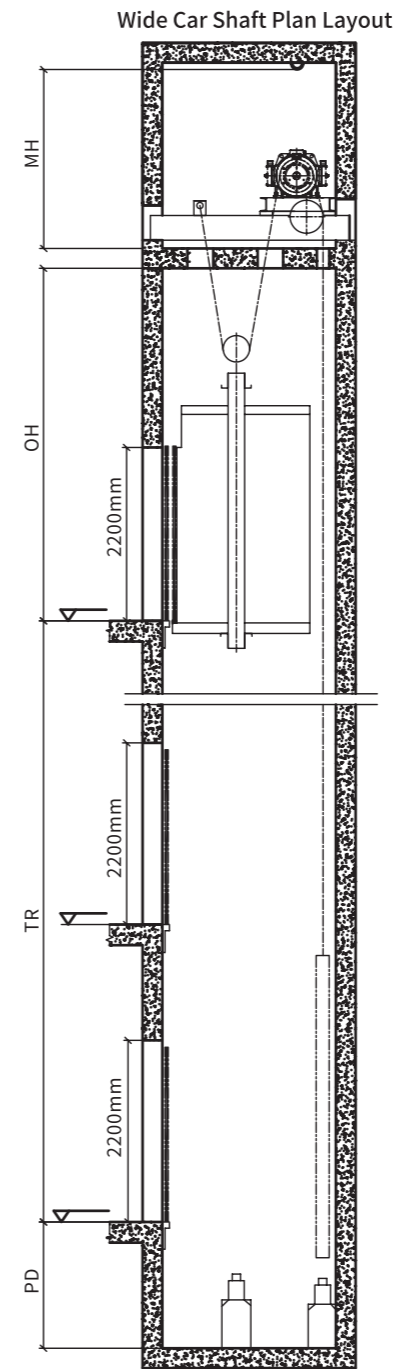
01	Voice Announcement	Voice announcement will sound when the elevator arriving at station
02	Braille Button	All the buttons with braille for disable person consideration
03	Auto Rescue Device	When the elevator suddenly stop during normal operation, the device immediately work and drive elevator slowly operate to the nearest floor, then elevator open door to rescue passenger
04	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 or 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 purpose
05	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
06	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
07	Community Monitoring System	a microcomputer intelligent management system that can comprehensively monitor the elevator in community and provide the data to building functional management
08	IC Card Management	passengers can only call the elevator by swiping the card (authorized by the elevator owner)
09	Sub-COP	It is convenient for passengers to choose floor in the cabin



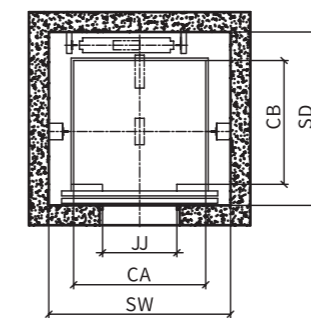
EAECL-CR1 Technical Specification

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	2.0	1.0	1.75	2.0	2.5	1.0	1.75	2.0	2.5	1.0	1.75	2.0	2.5								
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 communication																								
09	Parallel Elevators	2 units(Optional)																								
10	Group Control Elevators	3-8 units(Optional)																								
11	Wide Car	Car Size mm W*D*H	1400*1100*2420			1400*1350*2420			1600*1500*2420				1950*1500*2420				1950*1750*2420									
		Opening mm W*D	800*2100			800*2100			900*2100				1100*2100				1100*2100									
		Shaft Size mm W*D*H	2000*1750			2000*2000			2200*2100				2600*2200				2600*2500									
12	Deep Car1	Car Size mm W*D*H	---			1200*1600*2420			1300*1750*2420				1700*1750*2420				1700*2000*2420									
		Opening mm W*D	---			800*2100			900*2100				1100*2100				1100*2100									
		Shaft Size mm W*D*H	---			2000*2000			2200*2100				2600*2200				2600*2500									
13	Deep Car2	Car Size mm W*D*H	---			---			1100*2100*2420				1200*2400*2420				1400*2400*2420									
		Opening mm W*D	---			---			900*2100				900*2100				900*2100									
		Shaft Size mm W*D*H	---			---			2050*2500				2150*2750				2400*2800									
14	Travel Height	≤45	≤75	≤45	≤75	≤110	≤45	≤75	≤110	≤120	≤45	≤75	≤110	≤120	≤45	≤75	≤110	≤120								
15	Traction Machine Position	In the Machine Room																								
16	Overhead Height	4250	4450	4250	4450	4550	4250	4450	4550	4800	4350	4550	4650	4900	4350	4550	4650	4900								
17	Pit Depth	1500	1600	1500	1600	1700	1500	1600	2000	2150	1800	1950	2000	2150	1800	1950	2000	2150								
18	Rated Power (kW)	5	10.1	6.2	9.6	11.1	8.0	13.3	15.6	19.5	9.3	16.5	19.2	23.8	11.4	20.6	24.5	30.7								
19	Rated Current (A)	14	22	15	22	25	20	29	34	46	22	38	44	54	27	46	55	64								
20	Starting Current (A)	21	33	22.5	33	37.5	30	43.5	51	69	33	57	66	81	40.5	69	82.5	96								
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*10mm ² +2*6mm ²			3*6mm ² +2*6mm ²			3*10mm ² +2*6mm ²				3*10mm ² +2*6mm ²				3*16mm ² +2*10mm ²			3*10mm ² +2*6mm ²				3*25mm ² +2*16mm ²

Note:
 1. Deep car is used for specified application, such as for stretcher delivery in evacuation occasions.
 Car height is 2420mm when select standard C22 series ceiling (height 80mm). Car height may vary due to different type of ceilings.



Wide Car Shaft Section Drawing



Deep Car Shaft Section Drawing

