

HITACHI
Inspire the Next

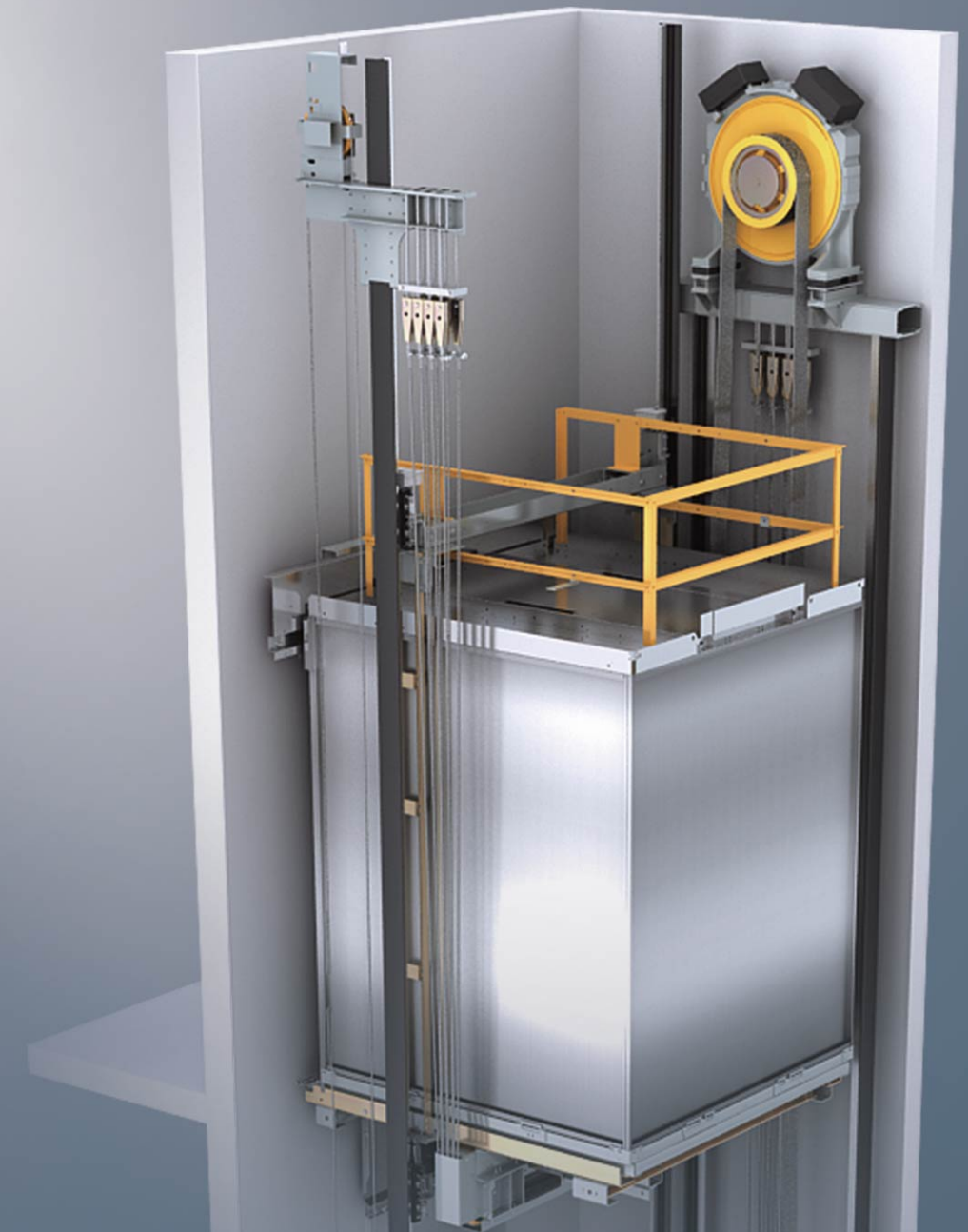
Contact Address:

The information and diagram used at this catalogue reflect the technical feature and configuration of elevator model at press time (refer to the version number). In line with the principle of continuous development of products, our company reserves the right to change the selection of product technical parameters and color at any time. The existing image technology cannot accurately reproduce the elevator component structure and decoration color. Therefore, this catalogue only provides general information, not as a contract document. The specific configuration parameters are subject to the formal agreement.

If you need detailed information, please contact Hitachi Elevator.

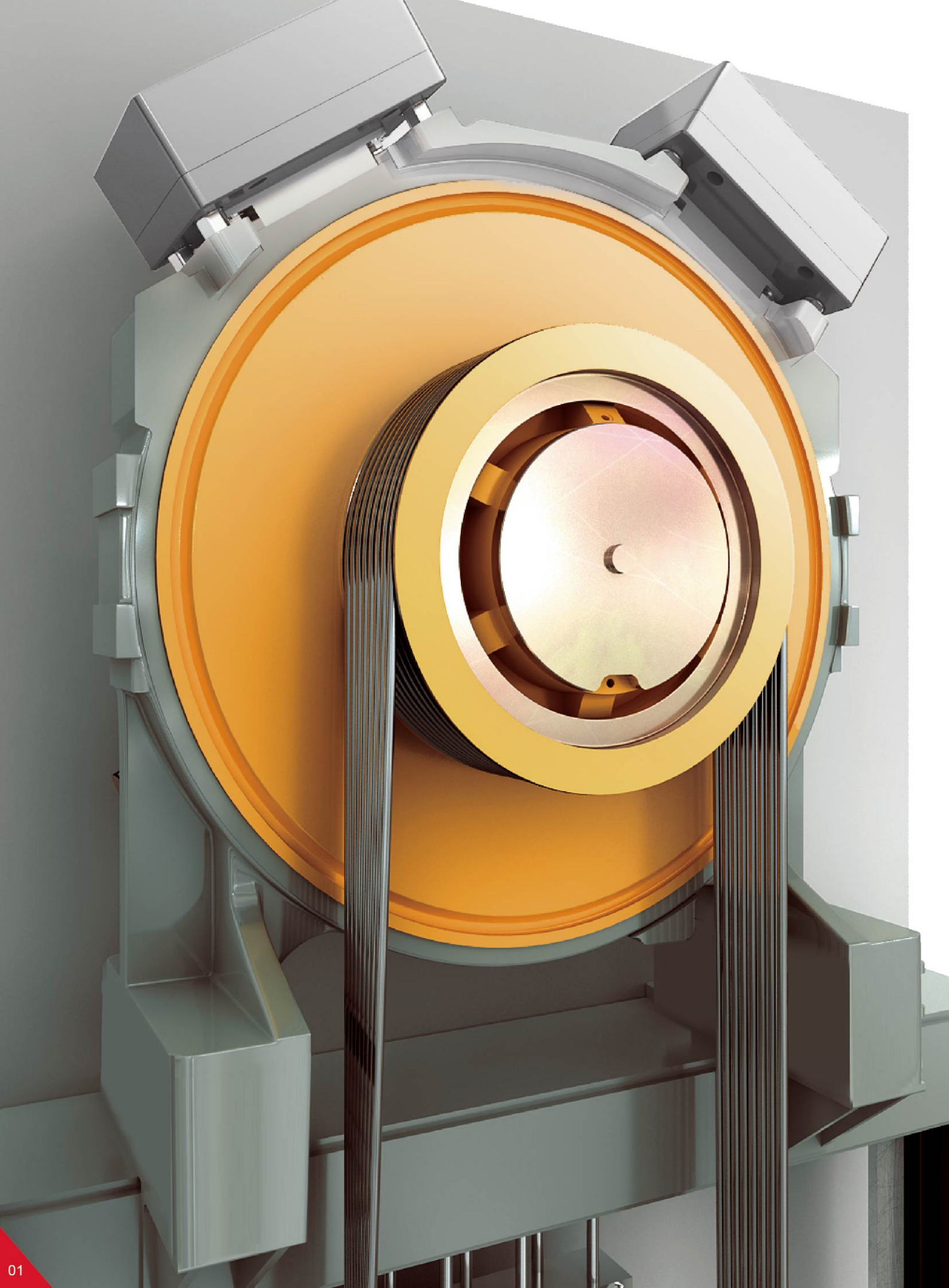
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HITACHI
Inspire the Next



Hitachi
LCA Series

Machine-roomless Elevator



Safety and Comfort

01 High Braking Torque

- ✓ The tractive capacity is designed to Hitachi standards which exceeds the industry standards to ensure the elevator runs more reliably;
- ✓ The braking torque is designed to Hitachi standards which is significantly higher than industry standards to ensure maximum safety and reliability;
- ✓ The brake has endured rigorous life testing conducted by Hitachi to ensure safety reliability and high performance for long-term periods.

02 Slow Rise Temperature Control

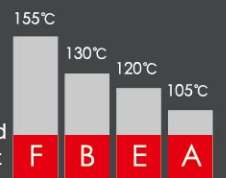
The temperature of the Hitachi motor rises at a far slower rate in comparison to other permanent magnet synchronous motors available in the market, thanks to the Hitachi temperature control technology. The lifespan of the motor can be greatly extended by reducing the common risks of malfunction caused by overheating motors.

03 Smooth and Seamless Rides

The effects of vibration from the motor and guide rail is stabilised through state of the art designs of highly efficient dampers for the traction machine to help enhance the comfort and experience for passengers.

04 Class-F Heat Resistant Technology

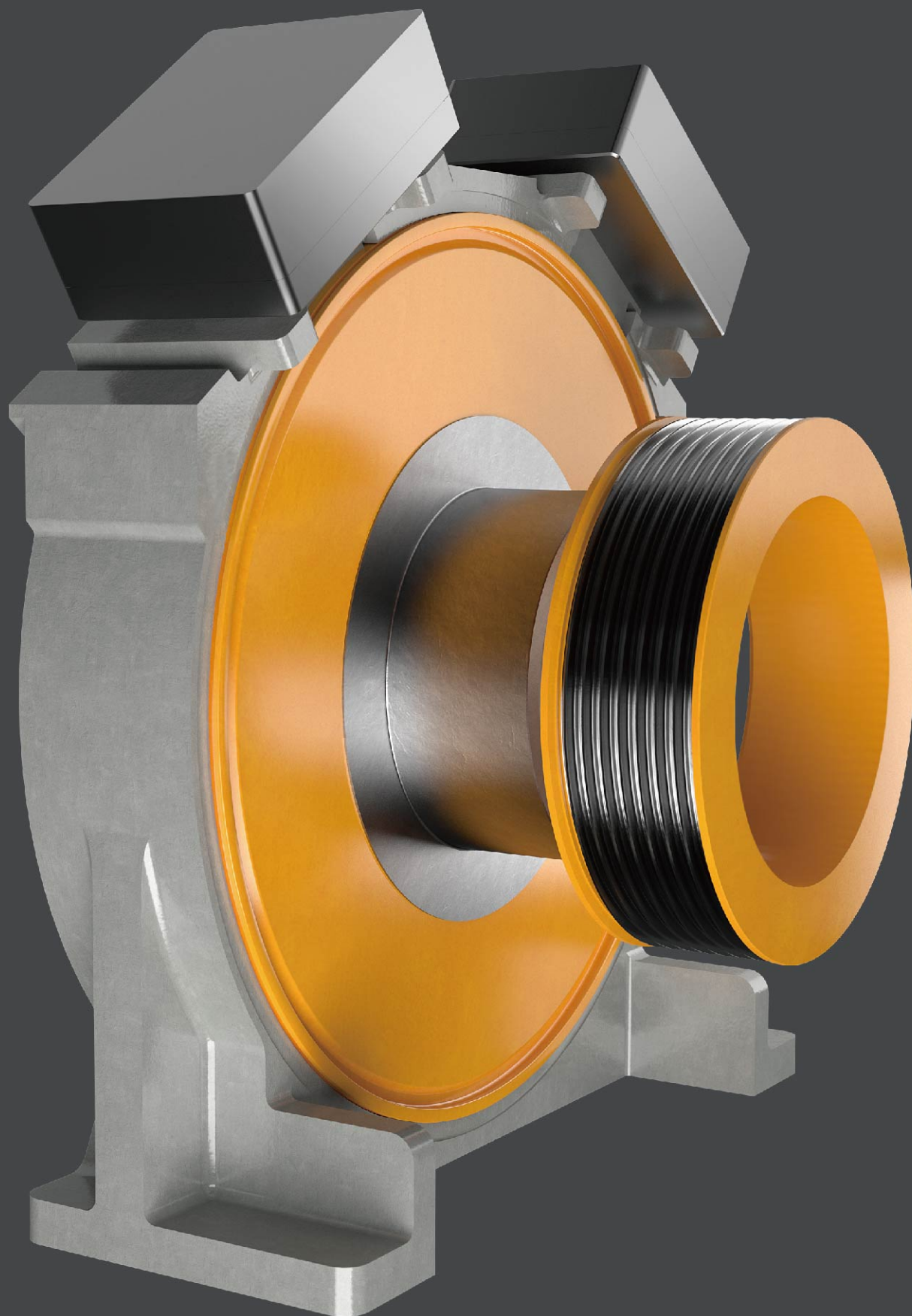
The Hitachi motor is designed with industry leading heat resistant technology which can withstand extreme high temperatures of up to 155°C. It is classified as Class-F Insulation which is the highest class of insulation the industry has to offer.



05 Minimal Motor Torque Pulsation

The torque ripple of LCA is less than 1 %.

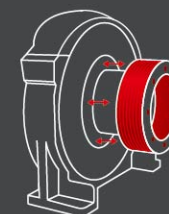
The 'Industry Standard' means GB standard.



Representative Patent Design

01 Separable Traction Sheave Design

Our unique separable rope sheave design decreases maintenance labour time and can reduce the costs of maintaining the motor.



02 Higher Rotation Accuracy

The traction machine of the LCA adopts taper roller bearings characterised by increased bearing capacity, longer lifespan and higher rotation accuracy. With the taper roller bearings, the rope-groove vibration is restricted to 1/3 of the value specified in the industry standards to ensure the comfort of the elevator is enhanced.

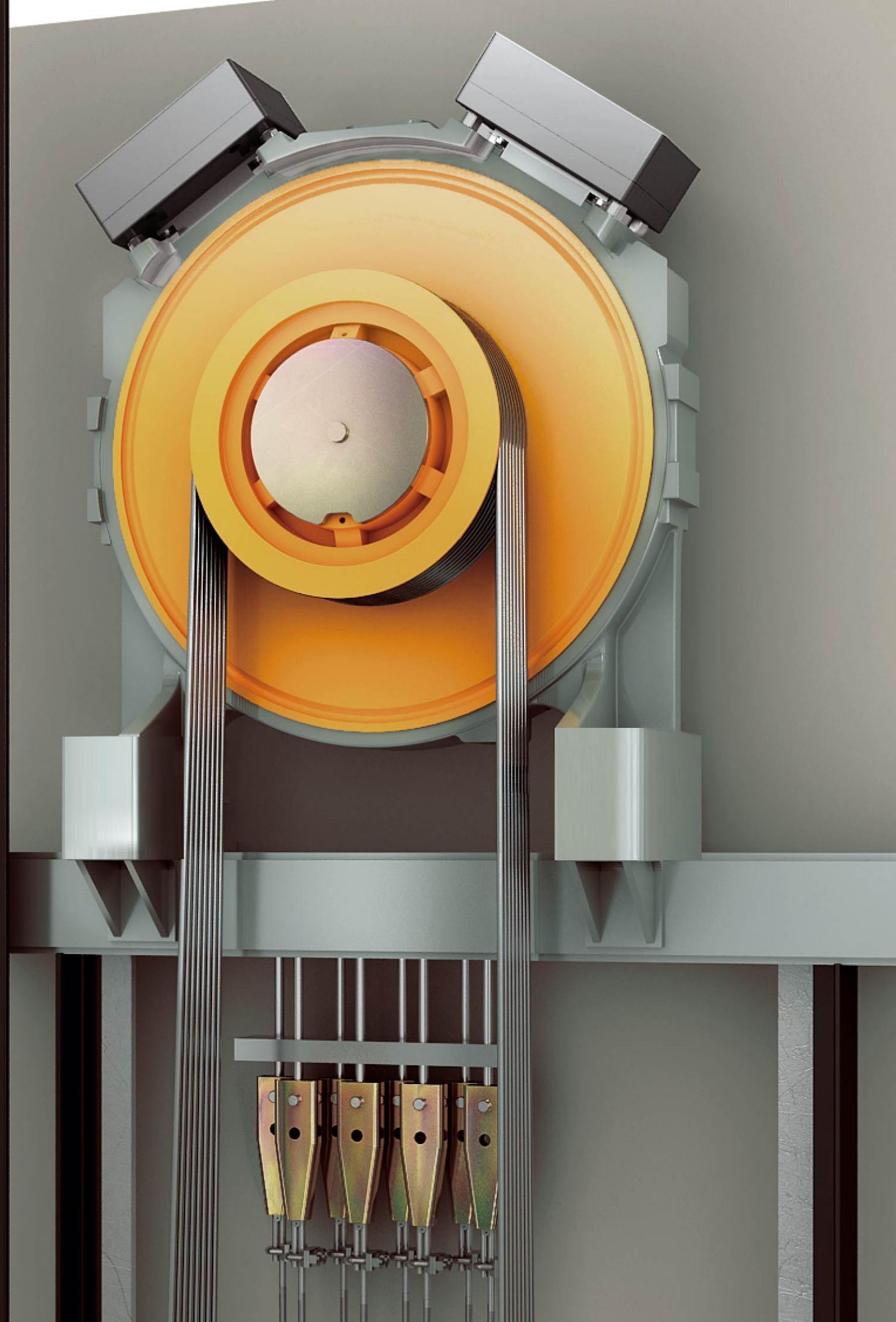
03 Magnet Steels Dropout-Proofing Patent of the Motor

As compared with conventional practice to fix magnet steel with an adhesion agent, the holding-down mechanism designed by Hitachi secures the magnet steels onto the rotor in order to avoid the magnet steels from dropping out which caused by failure of the adhesion agent.

04 Protection Class IP42 of the Traction Machine

The protection class of the traction machine is up to IP42. The protection against foreign materials and water can be extremely effective.

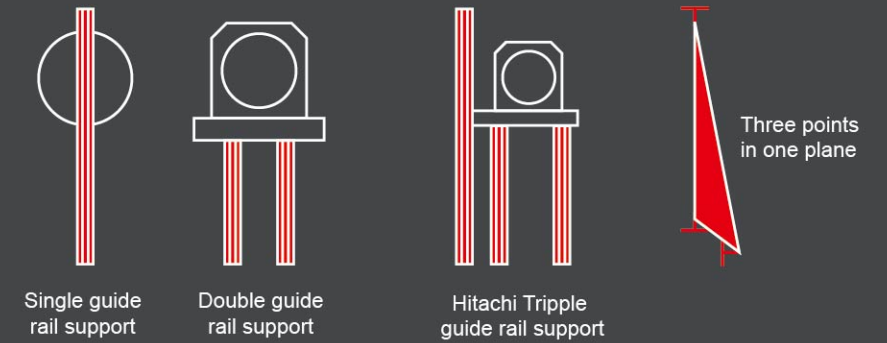




Self-Supporting Structure and Anti-Quake Design

01 Self-Supporting Traction Machine

The traction machine of the LCA is supported by three guide rails directly at the top of the hoistway. It is unnecessary to reserve support beams or installation hole in the hoistway wall for the building contractor.



02 Anti-Quake Design

The traction machine is equipped with an anti-toppling device which can prevent the machine from falling in case of an earthquake. In addition, the anti dropout design is also adopted in the counterweight and car frame. Our worldclass designs are engineered to help reduce the impact of an earthquake and most importantly keep the passengers safe.

Intelligent Door System

01 Intelligent Light Curtain Protection Technology

- Auto energy-saving
The elevator knows when it is occupied or unoccupied. If unoccupied, the light curtain will automatically turn off to reduce energy consumption and help extend the life cycle of the light curtain.
- Auto detection
The system can self diagnose any malfunctions of the light curtain to provide reference for quick repairs.
- Automatic shielding
If a single point of the light curtain is obstructed or damaged, the system will shield the damaged point, record the fault, then close the door on the premise of safety.



02 High-Performance Processor

The High Performance Processor (32-bit DSP) serves as a kernel control in the LCA. The four layer control board is provided with high interference killing features. Highly integrated module technology is adopted in the control system, these benefits completely improve the response speed and reliability of the control system.



03 The Latest IPM Module Based on SVPWM

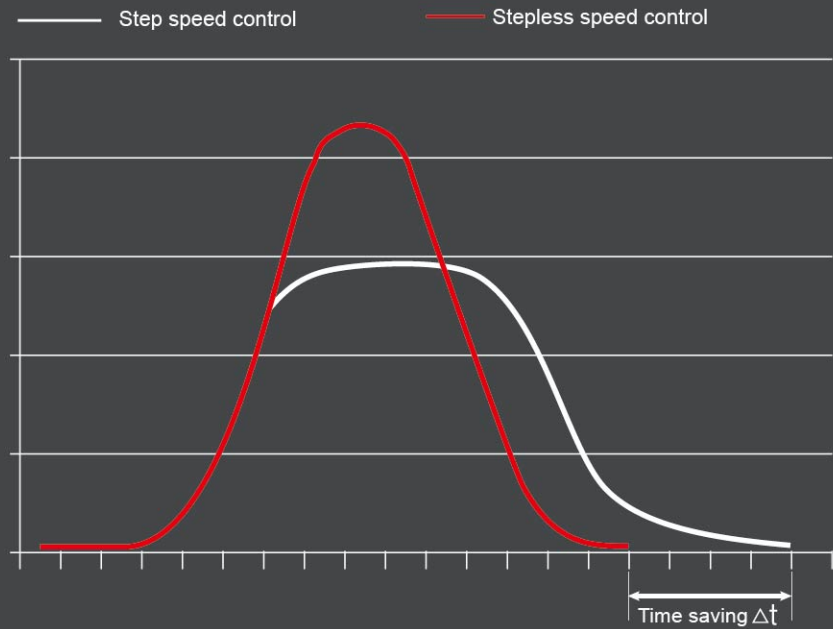
Double closed-loop vector (current and speed) control method which is based on SVPWM tuning control technology and vector control algorithm. The latest IPM module serves as the inverter power module. As a result, door opening/closing features are smoothness with low noise.



High Efficiency and Energy Saving

01 Stepless Speed Control

Hitachi elevator has been adopting step-less speed control for many years. With Hitachi's highly efficient control system, the precise optimum travelling speed curve can be directly calculated by the output according to the distance from the car location, to the destination.



02 Energy-saving and Environmental Protection Certification

The new-generation machine-roomless elevator LCA has gained the VDI 4707 energy efficiency certification Class A.



Innovative and Eco-Friendly Technology

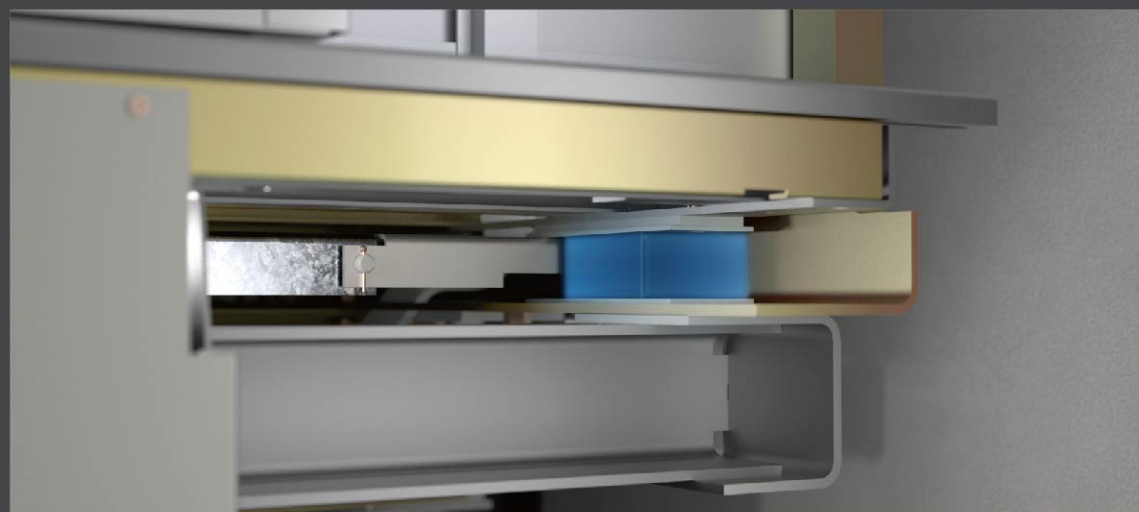
01 Non-welded Car Frame and Double-layer Car Platform

Non-welded car frame

A non-welded car frame requires no manual welding on site and helps reduce environmental pollution, improves the strength of car frame, and achieves a higher safety and reliability rating.

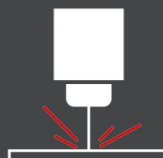
Double-layer car platform

A double-layer car platform is characterised by vibration-proof materials which are set between the car platform and the car platform frame. Elevators with a double-layer car platform will travel much more smoothly and comfortably than conventional elevators with single-layer car platforms by isolating the vibration of the car platform frame.



02 Laser Cutting Technology

Laser cutting technology is applied in Hitachi elevator. In comparison with other standard methods, laser cutting technology significantly enhances product cutting quality and accuracy. Laser cutting also benefits with lower carbon footprints.



Leading Technology

01 Reliable High-frequency Impulse Voltage Transformer Communication

Hitachi elevator adopts high-frequency impulse voltage transformer serial communication technology exclusively while others adopting RS485 or CANBUS serial communication technology. It's mainly applied in some special industries such as telecommunication and military communication due to its stronger resistance to interference and higher velocity.

Content	Hitachi standard	Others
Communication mode	High-frequency impulse voltage transformer	RS485/CANBUS
Reliability	High	Low
Resistance to interference	Strong	Ordinary
Max.Speed	125kb(increase by 25%)	100K

02 Advanced Control System

Multi-processor, Smaller size, Higher integration level
Higher running speed and outstanding processing capacity to improve the efficiency and energy conservation effect;



03 High Precision Digitised Starting Torque Compensation

The high-precision load transducer can accurately calculate the load of the car so that the traction machine is able to compensate the startup torque precisely and achieve a more comfortable start .



04 Lightning Protection

The new generation machine-roomless elevator LCA , has an enhanced lightning protection design. It can still work normally after being subjected to a 10KV simulation lightning test. As compared with 2KV required by industry standard, the value is 5 times the amount. LCA is also reliable and can withstand all weather conditions.



Humanised Design

01 Eco-Friendly LED Lighting Design

Hitachi have adopted the use of LED lighting to create a cozy atmosphere for passengers. LED is DC powered, flicker-free, energy efficient and more environmentally friendly.



02 Operation Panel for Special Needs (option)

A customised operation panel suitable for individuals with special needs is available on request. We create designs to make it easy for everyone.



03 Anti-electromagnetic Interference Design

EMI
The new generation machine room-less elevator (LCA), is integrated with anti-electromagnetic features as part of the standard configuration. This ensures the elevator is safe and reliable in the event of electromagnetic interference.
EMC(option)
In some special buildings where the equipment is hypersensitive to electromagnetic interference, we have a comprehensive electromagnetic compatibility option available for the LCA.This option assures that no interference will take place between the elevator and other electrical equipments in the building.



The EMI and EMC(option) are based on the EN standard.
*Please refer to the latest technical specifications, or consult the sales manager of Hitachi Elevator for specific configuration.

Standard (Deep Car)

Basic

Ceiling height: 2300mm

Rated load: 630-2000kg

Car ceiling: RF-018

Center: LED panel light with milky white acrylic
+ Painted steel_HP65 (matte black) with 2 ventilations
+ LED spotlight
Left & right: Painted steel_YM47 (matte champagne)

Car front return panel: Hairline stainless steel

Car transom: Hairline stainless steel

Rear & side walls: Hairline stainless steel

Car door: Hairline stainless steel

Car floor : Vinyl tile A-26

Car operating panel: GOP-693

Car position indicator: CIP-39



Standard (Square Car)

Basic

Ceiling height: 2300mm

Rated load: 630-2000kg

Car ceiling: RF-018

Center: LED panel light with milky white acrylic
+ Painted steel_HP65 (matte black) with 2 ventilations
+ LED spotlight
Left & right: Painted steel_YM47 (matte champagne)

Car front return panel: Hairline stainless steel

Car transom: Hairline stainless steel

Rear & side walls: Hairline stainless steel

Car door: Hairline stainless steel

Car floor : Vinyl tile A-26

Car operating panel: GOP-693

Car position indicator: CIP-39



Car Operating Panel

Basic



GOP-693
(Hairline stainless steel,
integrated, Full height)



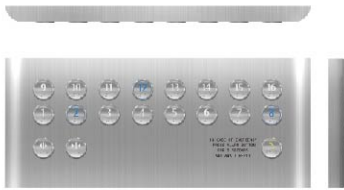
HA-2301
(Hairline stainless,Concentric
Round Hairline)

Horizontal Car Operating Panel

Option

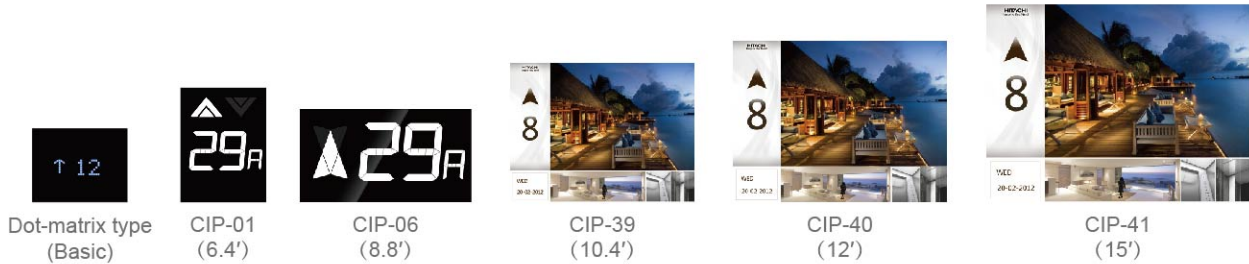


GOP-694

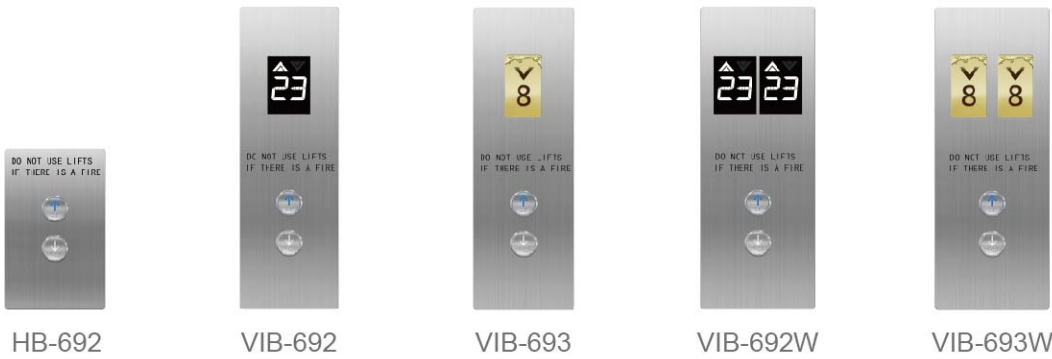


GOP-695

Car Interior Indicator

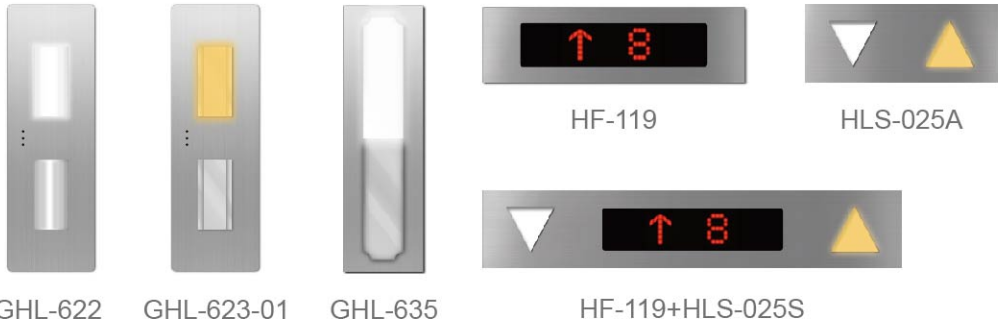


Hall Operating Panel



Hall Lantern

Option



GHL-622 GHL-623-01 GHL-635 HF-119+HLS-025S

Ceiling(Square Car)



RF-017 Painted Steel_HN39(Dark Grey)



RF-013 Painted Steel_BN18(Bluish Grey)



CE-011 Painted Steel_YM47(Matt Champagne)



DP-016 Painted Steel_YM47(Matt Champagne)



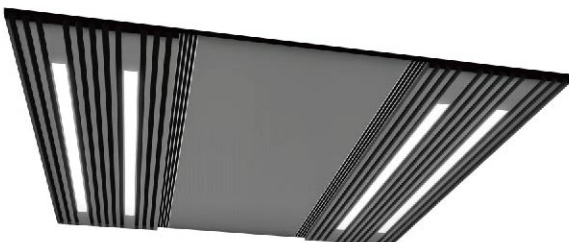
DP-045 Painted Steel_HP57(Matt Beige)



RF-012 Painted Steel_YM32(Light Gold)



RF-018 Painted Steel_YM47(Matt Champagne)
+HP65(Matt Black)



CE-015 Painted Steel_HM03(Matt Silver)

Ceiling(Deep Car)



CE-011 Painted Steel_YM32(Light Gold)



RF-012 Painted Steel_YM32(Light Gold)



RF-017 Painted Steel_BN18(Bluish Grey)



RF-018 Painted Steel_YM47(Matt Champagne)+HP65(Matt Black)



DP-063 Painted Steel_HP57(Matt Beige)



RF-013 Painted Steel_BN18(Bluish Grey)



RF-017 Painted Steel_WN01(Ivory White)

Car Decorations

Entrance

Basic



Jamb frame:AS-1X narrow type(Standard)
Hairline stainless steel
Door panel:Hairline stainless steel
Door sill:Extruded hard aluminum

Option

BM33 Light Blue	BN18 Bluish Grey	BN35 Light Blue
HM03 Matt Silver	HN17 Beige	HN31 Yellowish Brown
HN39 Dark Grey	HP57 Matt Beige	HP65 Matt Black
VP69 Violet Purple	WN01 Ivory White	YM24 Champagne Gold
YM32 Light Gold	YM47 Matt Champagne	YM62 Brown Gold
YN08 Dark Yellow	YP68 Lemon Yellow	



Laminated Steel GSD92508



Laminated Steel GSDV5



Laminated Steel GSDV7

Standard Etching Pattern

P-009	P-041	MS-104	MS-142
MS-162	MS-164	MS-168	MS-177

Floor

Vinyl Tile

S-014	S-048	S-693	S-133
D-035	A-26	S-043	

Handrail



HR-B018_Hairline stainless steel



HR-M052_Hairline stainless steel

Elevator Specification List

Specification Range				
No	Load		Speed(m/min)	Type
	No. of Passengers*	(Kg)		
1	8	630	60/90/105	LCA-630-CO60/90/105
2	11	825	60/90/105/120/150	LCA-825-CO60/90/105/120/150
3	12	900	60/90/105/120/150	LCA-900-CO60/90/105/120/150
4	14	1050	60/90/105/120/150	LCA-1050-CO60/90/105/120/150
5	15	1150	60/90/105/120/150	LCA-1150-CO60/90/105/120/150
6	17	1275	60/90/105/120/150	LCA-1275-CO60/90/105/120/150
7	18	1350	60/90/105/120/150	LCA-1350-CO60/90/105/120/150
8	21	1600	60/90/105/120/150	LCA-1600-CO60/90/105/120/150
9	24	1800	60/90/105	LCA-1800-CO60/90/105
10	26	2000	60/90/105	LCA-2000-CO60/90/105

Passenger Numbers calculated at 75 kg per person.

Load(kg)	Speed (m/s)	Maximum Travel (m)	Minimum Floor Height (mm)
630/825/900/1050	1	60	2800
630/825/900/1050	1.5	90	
630/825/900/1050	1.75	90	
1150/1275/1350/1600/1800/2000	1	60	
1150/1275/1350/1600/1800/2000	1.5	90	
1150/1275/1350/1600/1800/2000	1.75	90	
825/900/1050/1150/1275/1350/1600	2	120	
825/900/1050/1150/1275/1350/1600	2.5	120	

*If the required specification falls outside the above, please contact Hitachi.

Elevator Functions

Standard Function

Control Type					
SA1	Simplex	SA2	Floor Height Self Measurement	SA3	On-Cage (Car Top) Maintenance Operation
System Protection					
SB1	Over Speed Electrical Protection	SB2	Overspeed Mechanical Protection	SB3	Motor Idling Rotation Protection
SB4	Motor Overload (Thermal) Protection	SB5	Automatic Fault Detection	SB6	Automatic Fault Recording
SB7	Standby Regular Auto-Check	SB8	Double Brake-Safety Detection Check Operation	SB9	Synchronous Motor Magnetic Pole Static Test
SB10	Abnormal Position Automatic Correction Function	SB11	Nearest Landing Door Operation	SB12	Anti-electromagnetic Interference Function
Safe Communication					
SC1	Interphone System(4 ways)				
Safe Riding					
SD1	Out of Door-Open Zone Alarm	SD2	Alarm System	SD3	Door Overload Protection
SD4	Full Load Bypass Operation	SD5	Overload Detection System	SD6	Overload Alarm
SD7	Next Drive (Door Open Abnormity Fault)	SD8	Opening/Closing Door Abnormal Protection	SD9	Opening Time Automatic Control Functions
SD10	Automatic Door Dwell Time Adjustment	SD11	Number of Runs Indicator	SD12	Multi-Beam
Emergency Solution					
SE1	Car Emergency Lighting	SE2	Fire Emergency Operation (Automatic)	SE3	Fireman Operation①
Design for Comfort					
SF1	Parking Operation	SF2	Automatic Return Function	SF3	Starting Compensation Function
SF4	Micro-leveling Function (lift height ≥ 30 meters)	SF5	Advance Door Opening	SF6	Mischievous Call Cancellation
SF7	Opposite Car Call Cancellation	SF8	Automatic Turn-Off of Car Light	SF9	Car Ventilation Automatic Control Function
SF10	Floor "Deselect" Function (In Car)	SF11	Abnormal Duration Hall Call Detection	SF12	Voice Synthesizer
SF13	Arrival Chime				

Opintional Function

Control Type					
OA1	Duplex	OA2	Duplex Down Collective	OA3	FI-10
OA4	FI-100	OA5	FI-600 (Max: 8 Car per Group)	OA6	VIP Service
OA7	Rush Hour Schedule Operation				
Safe Communication					
OC1	Contact at Control Panel (RS485)	OC2	Twisted Pair Cable	OC3	Audio Cable
OC4	Contact at Control Panel (Dry Contacts)	OC5	3D Door Protection		
Safe Riding					
OD1	Overload Indicator (In Car)	OD2	Safety Shoe	OD3	Multi-Beam + Safety Shoe
Emergency Solution					
OE1		OE2	Automatic Rescue Device (ARD)	OE3	Emergency Power Operation (Manual)
OE4	Emergency Power Operation (Automatic)	OE5	Earthquake Emergency Operation		
Design for Comfort					
OF1	Independent Operation	OF2	Floor Lock Out Operation	OF3	Door Opening Prolong Button
OF4	Hall Call Registration (In Car)	OF5	Destination Car Floor Button Flashing	OF6	Sub OPB
OF7	Handicapped OPB	OF8	Regenerative System Function②	OF9	EMC③
OF10	Control Panel Protective Door	OF11	Micro- leveling function (lifting height < 30 m)		

FI System

FI Series implements Group Control in Response to Different Requirements of Different Buildings.

A group control system integrates multiple elevators for achieving efficient functionality and operation by accessing waiting times into account. Such a system requires flexibility so that it can be used in various types of buildings and be responsive to changing traffic demand.

(FI-600)	(FI-100)	(FI-10)
(3—8 cars)	(3—6 cars)	(3—4 cars)
Allows flexible control for elevator car allocation and the required number of cars according to the congestion state and type of building.	Elevator cars are allocated at equal time intervals according to Reference Trajectory Control. This is designed to shorten the average waiting time and reducing the risks of a long wait.	Provides a ring control to allocate the elevator car closest to the floor where a new hall call is registered.

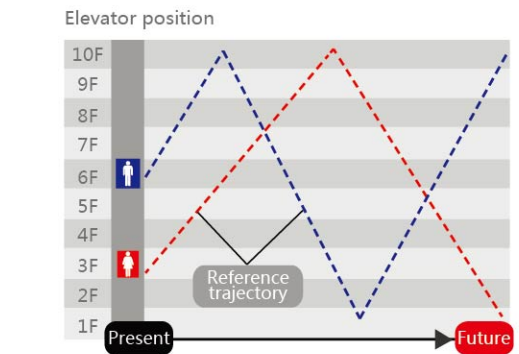
Basic Specification	Instantaneous reservation and service forecasting		
	Intelligent Function		
	Generation of new traffic flow modes		
	Generation of optimum operation programs		
	Congested floor recognition		
	Multi-beam door sensor (with a traffic responsive door control system)		
	Learning Function		
	• Collection of usage data • Recognition of traffic flow mode(40/2 mode) • Search for optimum operation program		
	Arrival notice indication (hall lantern and chimes)		
	Bunching Prevention*		
System Name	FL-600	FL-100	FL-10 (Simplified group control)
	3-8 cars	3-6 cars	3-4 cars
Recommended Number of Cars in a Group	3-8 cars	3-6 cars	3-4 cars
Type of Building	Large office building Large hotel	Small office building Department store, hotel, hospital	Buildings with small traffic demand
Optional Specification	VIP service, independent automatic operation		
	Service floor selection		
	Destination floor reservation system Centralised control for special floors Zoning express service		

*Bunching prevention: Using the "future reference-trajectory control" or the "reference-trajectory control" in the FI-600 or FI-100, elevator cars are operated at equal time intervals to prevent local bunching.v

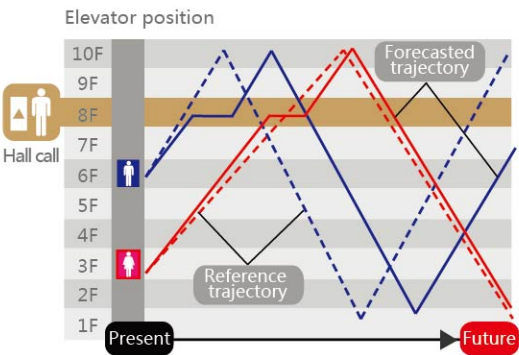
FI-600

Hitachi has evolved its elevator operation control to significantly reduce waiting times, which comprises the heart of group control performance.

The future reference trajectory control, is a group control system aiming to minimise long waiting periods by operating elevator cars at equal time intervals while forecasting future trajectory.

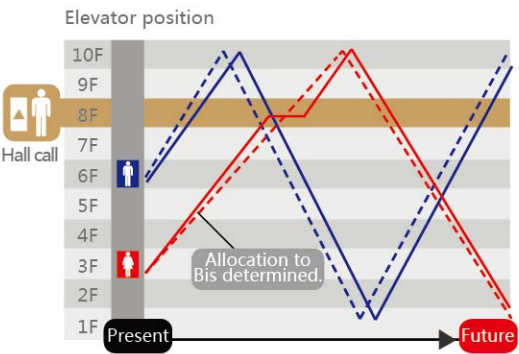


1 Create a "reference trajectory" for allocating future elevator car positions at equal time intervals.



2 Create a "forecasted trajectory" of elevator cars when a hall call is made based on the current traffic demand and results of learning.

3 Calculate the deviation between the "reference" and "forecasted trajectories".



4 Allocate the elevator car which is closest to the "reference trajectory" to the hall call.

5 As a result, the elevator car is guided according to the "reference trajectory", shortening waiting times and reducing the probability of long waits as well as preventing local bunching due to heavy traffic.

Basic Function

No.	Item		Content	FI Series		
				600	100	10
1	Instantaneous reservation and service forecasting (FI-IRF)		Upon receipt of a hall call, this function activates an elevator to serve this call, and at the same time the call is acknowledged by the hall lantern and chime.	●	—	—
2	Arrival notice indication (FI-ANI)		Four to five seconds prior to the arrival of an elevator, this function will activate the hall lantern flickering and the chime sound.	●	●	△
3	Basic call assignment Control	Future reference-trajectory control (FI-FRTC)	Controls the allocation of elevator cars to hall calls according to the future reference trajectory resulting from learning-based daily traffic flows.	●	—	—
		Reference-trajectory control (FI-RTC)	Controls the allocation of elevator cars to hall calls based on the theory used in the highest model in the FI series, FI-600, and the intelligent-based data containing our know-how accumulated over a long period of time.	—	●	—
		Ring Control (FI-RC)	Allocates an elevator car closest to the floor where a new hall call is made.	—	—	●
4	Bunching prevention (FI-BP)		This function prevents local bunching of elevators car using the "future reference-trajectory control" or the "reference trajectory control" for operating cars at equal time intervals.	●	●	—
5	Learning function	Collection of usage data (FI-CUD)	Collects the traffic status information by floor and direction for a unit time based on the elevator information such as car positions and the number of passengers getting on and off, and hall call information.	●	●	—
		Recognition of traffic flow mode (FI-RTM)	Extracts characteristics at any given moment, including congested floors, from the collected usage data, and identifies the traffic flow mode at that moment.	● 40 mode	● 20 mode	—
		Search for optimum operation program (FI-SOP)	Searches the optimum operation program of the moment based on the identified traffic mode.	●	●	—
6	Congested floor recognition (FI-CFR)		Identifies congested floors according to the usage data learned in each traffic flow mode.	●	—	—
7	Service forecasting for hall call assignment (FI-SFH)		This function assigns elevators car to hall calls more precisely by forecasting the arrival time and number of passengers in the car according to the learning-based traffic demand.	●	—	—
8	Intelligent function	Generation of new traffic flow modes (FI-GNT)	Extracts new characteristics according to the learning-based usage data, and registers them as a building-specific new traffic flow mode.	●	—	—
		Generation of optimum operation programs (FI-GOP)	Generates an optimum operation program for a building by simulating the elevator operation according to the usage data learned in each traffic mode and preferential control target.	●	—	—
9	Energy saving preference control (FI-ESC)		This system reduces the number of elevator cars in service when traffic demand is low.	●	—	—
10	Floor standby control	Forecasting dynamic allocation control (FI-FDA)	Dynamically allocates elevator cars in response to continuously changing situations in the building by determining the area assigned to each car according to the forecasted number of passengers and car usage.	●	—	—
		Zone distribution control (FI-ZD)	Distributes the waiting elevator cars to the pre-assigned zones.	—	●	—
		Fixed floor distribution control (FI-FD)	Distributes the waiting elevator cars to the pre-assigned zones.	—	—	●
11	Learning based concentrated service		Centralizes the service to the learning-based congested floors during peak times including morning, lunch time and evening peaks while taking the service for other floors into account.	●	—	—
12	Automatic door open time control (FI-ADT)		This function automatically controls the duration of the door open time according to the floor and the kind of call (hall call or car call) as well as the elevator condition.	●	●	—

Operating Functions

No.	Item		Content	FI Series		
				600	100	10
13	Centralised control for special floors (FI-CCF)		This function preferentially assigns an elevator to the special floor.	△	—	—
14	Service floor selection (FI-SFS)		Allows the operator to select the service and non-service floors using, for example, the switches on the control panel.	△	△	—
15	Independent automatic operation (FI-IAO)		This operation allows an elevator to be separated from the group supervisory control and operate independently by a separate hall button.	△	△	△
16	VIP service (FI-VIP)		When welcoming or sending off important guests, this function permits an elevator to be summoned directly to the desired car call floor by pushing a specially provided hall button.	△	△	△
17	Closest car priority service (FI-CPS)		When a hall call button is pressed, the elevator in the shaft closest to the hall call floor is preferentially dispatched.	△	△	—
18	Scheduled reservation system (FI-SRS)		Allows the operator to schedule various elevator services in the building, including the reassignment of service floors, centralized service and priority service, at a specific date and time(setting through the CRT control panel is also possible).	△	—	—
19	Zoning express service (FI-EZS)		Starts a divided express service when the park traffic demand takes place in the preset time zones.	△	—	—

Man-machine

No.	Item		Content	FI Series		
				600	100	10
20	Hall Information (FI-HI)		General and elevator operation information is indicated on the LED or LCD hall indicator.	△	△	—
21	Car Information (FI-CI)		Information useful for passengers is presented on the LED or LCD car indicator.	△	△	—
22	Multibeam door sensor (with a traffic responsive door control system) (FI-TFDC)		Detects passengers getting on and off with multiple infrared light beams that covers the full height and width of elevator doors, and adjusts the time of opening and closing of doors.	●	△	△

System Backup Operation Functions

No.	Item		Content	FI Series		
				600	100	10
23	Group management A.I. microprocessor malfunction recovery system (FI-AMR)		If the A.I. micro-processor malfunctions, this system will allow hall call assignments to be carried out by choosing from standard modes of traffic flow.	●	—	—
24	Group management operation microprocessor malfunction recovery system (FI-OMR)		When the active micro-controller in the dual system fails, the standby micro-controller takes over the group control for continuing operation.	●	—	—
25	Hall call circuit malfunction recovery system (FI-HMR)		In the event that the associated hall call button is not responsive, other hall call buttons located on the same floor can be used for registering hall calls.	●	●	●
26	Group management control system malfunction recovery system (FI-GMR)		In the event that the associated hall call button is not responsive, other hall call buttons located on the same floor can be used for registering hall calls.	●	●	—
27	Individual signal or control microprocessor malfunction recovery system (FI-SMR)		When individual control microprocessor malfunctions, or when miscommunication is detected, this system isolates the elevator from the group management control immediately.	●	●	●
28	Individual control malfunction recovery system (FI-CMR)		If the hall call is not responded to for a certain period of time due to, for example, a fault in the mechanical shoe of the door, the failed section is disconnected from the group control until the normal operation is resumed.	●	●	●

●: Basic specification △: Optional specification —: Not applicable

Hoistway Design

(Suqare/Deep Car,Counterweight Location:Left)

Specifications

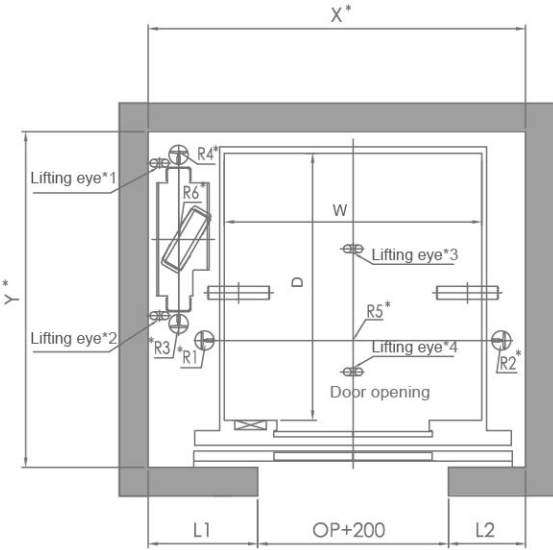
Dimensions and Reactions							
Persons/ Rated Load (kg)	Speed (m/s)	Car Interior Dimension	Door Type	Car Type	Door Width (mm)	Shaft width X(mm)	Shaft Depth Y(mm)
		W*D (mm)					
8/630	1.0/1.5/1.75	1100×1400	2P CO	Single Entrance	900	1960	1750
		1100×1400	2P CO	Through Car	900	1960	1900
	1.0/1.5/1.75	1100×1400	2P SO	Single Entrance	900	1750	1820
14/1050	1.0/1.5/1.75	1100×1400	2P SO	Through Car	900	1750	2040
		1400×1600	2P CO	Single Entrance	900	2050	1950
		1400×1600	2P CO	Through Car	900	2050	2100
	2.0/2.5	1400×1600	2P CO	Single Entrance	900	2200	2000
		1400×1600	2P CO	Through Car	900	2200	2100
	1.0/1.5/1.75	1100×2100	2P CO	Single Entrance	900	2200	2450
		1100×2100	2P CO	Through Car	900	2200	2600
		1100×2100	2P CO	Through Car	900	2200	2600
	2.0/2.5	1100×2100	2P CO	Through Car	900	2200	2600
15/1150	1.0/1.5/1.75	1400×1950	2P CO	Single Entrance	900	2150	2300
		1400×1950	2P CO	Through Car	900	2150	2450
		1400×1950	2P CO	Single Entrance	1000	2200	2300
	1.0/1.5/1.75	1400×1950	2P CO	Through Car	1000	2200	2450
		1400×1950	2P CO	Single Entrance	1000	2250	2350
		1400×1950	2P CO	Through Car	1000	2250	2450
	2.0/2.5	1400×1950	2P CO	Through Car	1000	2250	2450
		1400×1950	2P CO	Through Car	1000	2250	2450
		1400×1950	2P CO	Through Car	1000	2250	2450
17/1275	1.0/1.5/1.75	1400×2000	2P CO	Single Entrance	900	2150	2350
		1400×2000	2P CO	Through Car	900	2150	2500
		1400×2000	2P CO	Single Entrance	1000	2200	2300
	1.0/1.5/1.75	1400×2000	2P CO	Through Car	1000	2200	2450
		1400×2000	2P CO	Single Entrance	1000	2250	2400
		1400×2000	2P CO	Through Car	1000	2250	2500
	2.0/2.5	1500×2000	2P CO	Single Entrance	1000	2250	2350
		1500×2000	2P CO	Through Car	1000	2250	2500
		1500×2000	2P CO	Single Entrance	1000	2350	2400
18/1350	1.0/1.5/1.75	1500×2000	2P CO	Through Car	1000	2350	2500
		1500×2000	2P CO	Single Entrance	1000	2350	2400
		1500×2000	2P CO	Through Car	1000	2350	2500
	2.0/2.5	1600×2000	2P CO	Single Entrance	1100	2400	2350
		1600×2000	2P CO	Through Car	1100	2400	2500
		1600×2000	2P CO	Single Entrance	1100	2450	2400
	1.0/1.5/1.75	1600×2000	2P CO	Through Car	1100	2450	2500
		1600×2000	2P CO	Single Entrance	1000	2300	2650
		1600×2000	2P CO	Through Car	1000	2300	2800
21/1600	1.0/1.5/1.75	1500×2300	2P CO	Single Entrance	1000	2350	2700
		1500×2300	2P CO	Through Car	1000	2350	2800
		1500×2300	2P CO	Single Entrance	1100	2400	2650
	2.0/2.5	1600×2300	2P CO	Through Car	1100	2400	2800
		1600×2300	2P CO	Single Entrance	1100	2400	2800
		1600×2300	2P CO	Through Car	1100	2400	2800
	1.0/1.5/1.75	1850×2000	2P CO	Single Entrance	1100/1200	2650	2350
		1850×2000	2P CO	Through Car	1100/1200	2650	2500
		2000×2000	2P CO	Single Entrance	1100/1200	2800	2350
24/1800	1.0/1.5/1.75	2000×2000	2P CO	Through Car	1100/1200	2800	2500
26/2000	1.0/1.5/1.75	2000×2000	2P CO	Through Car	1100/1200	2800	2500

Rated Load (kg)	Speed (m/s)	Overhead Clearance (mm)	Pit Depth (mm)
630	1	CH+1450	1350
	1.5	CH+1650	1450
	1.75	CH+1650	1450
1050	1	CH+1450	1350
	1.5	CH+1650	1450
	1.75	CH+1650	1450
	2	CH+1900	2100
	2.5	CH+2200	2150
1150/1275/1350	1	CH+1450	1450
	1.5	CH+1650	1550
	1.75	CH+1650	1550
	2	CH+1900	2300
	2.5	CH+2200	2400

Rated Load (kg)	Speed (m/s)	Overhead Clearance (mm)	Pit Depth (mm)
1600	1	CH+1450	1450
	1.5	CH+1650	1650
	1.75	CH+1650	1650
	2	CH+1900	2350
	2.5	CH+2200	2450
1800/2000	1	CH+1450	1550
	1.5	CH+1650	1850
	1.75	CH+1650	1850

Note: *Car Height(CH) when there is ceiling height , overhead clearance value is to be added accordingly.
*All Design details are base on a single elevator in a single shaft.

Hoistway Plan(Suqare)
(Right side counterweight is mirror to Left side)

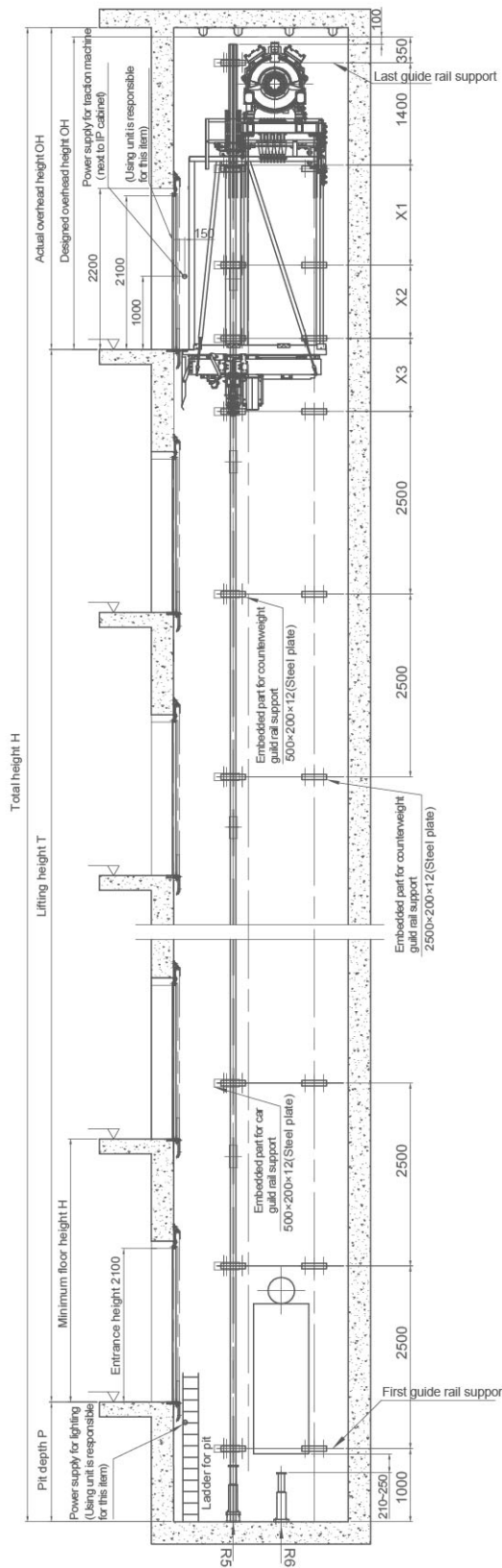
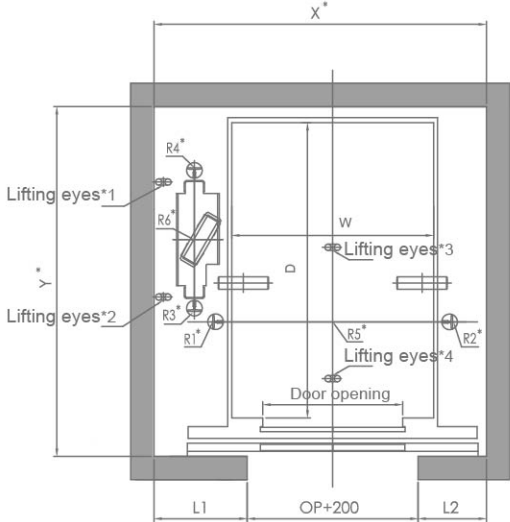


Note: 1.The lifting eyes capacity

Name	1	2	3	4	Rated load
load-bearing	2T	2T	3T	3T	≤1050kg
	2T	2T	4T	4T	>1050kg

- Notice: All the lifting eyes shall be extended to the hoistway within 80mm.
2.Items with "*" shall be furnished by building contractors;
3.For hoistway and machine room design details, please check with Hitachi.
4.Hoistway and machine room shall not set next to bedroom, classroom, ward,library or any other place where requires low noise.
5.unit of dimension in the layout shall be mm;
6.The data is only for reference.
For detailed parameters, please take the technical drawings as the criteria.

Hoistway Plan(Deep)
(Right side counterweight is mirror to Left side)



Specification Parameters

Load(kg)		Motor Power (KW)	Voltage	Running Current (A)	Starting Current (A)	Duration of Starting Current (S)
(Number of Person)						
Speed(m/min)						
1	630(8)-60	11.7	3Φ380V 1Φ220V 50Hz	14.96	23.62	3.20
	630(8)-90	11.7		14.96	23.95	4.20
	630(8)-150	11.7		14.96	23.95	4.70
2	1050(8)-105	11.7		24.46	35.80	3.20
	1050(14)-60	11.7		24.46	36.31	4.20
	1050(14)-90	11.7		24.46	36.31	4.70
	1050(14)-105	17		35.90	73.26	3.10
	1050(14)-120	17		35.90	73.30	3.725
3	1150(15)-60	18		27.52	46.67	3.20
	1150(15)-90	18		27.52	52.23	3.70
	1150(15)-105	18		27.52	52.23	4.12
	1150(15)-120	25		36.71	77.37	3.10
	1150(15)-150	25		36.71	77.43	3.725
4	1275(17)-60	18		32.31	52.57	3.20
	1275(17)-90	18		32.31	58.35	3.70
	1275(17)-105	18		32.31	58.35	4.12
	1275(17)-120	25		43.10	84.08	3.10
	1275(17)-150	25		43.10	84.14	3.725
5	1350(18)-60	18		32.31	52.57	3.20
	1350(18)-90	18		32.31	58.35	3.70
	1350(18)-105	18		32.31	58.35	4.12
	1350(18)-120	25		43.10	84.08	3.10
	1350(18)-150	25		43.10	84.14	3.725
6	1600(21)-60	18		38.30	58.72	3.20
	1600(21)-90	18	38.30	64.40	3.70	
	1600(21)-105	18	38.30	64.40	4.12	
	1600(21)-120	25	51.08	94.24	3.10	
	1600(21)-150	25	51.08	94.29	3.725	
7	1800(24)-60	22	42.06	63.73	3.20	
	1800(24)-90	22	42.06	69.64	3.70	
	1800(24)-105	22	42.06	69.64	4.12	
8	2000(26)-60	22	46.09	68.57	3.20	
	2000(26)-90	22	46.09	74.64	3.70	
	2000(26)-105	22	46.09	74.64	4.12	

Civil Works Matters

Working environment of the elevators shall be as follows:

- Ambient temperature shall be between 5°C to 40°C
- Maximum relative humidity is 90%
- Monthly mean minimum temperature should be below 25°C
- Surrounding environment shall be free from explosive & corrosive hazard, anti-insulation and conductive particles atmosphere

About Hoistway

- Hoistway walls (including perimeter beam) should be vertical, and the allowable deviation for the wall's verticality is:

Hoistway height ≤30m:0~+25mm

30m< Hoistway height≤60m:0~+35mm

Hoistway height>60m:0~+50mm
- Hoistway walls shall be 200mm concrete walls.
- Elevator hoistway is preferably not located in the space above the accessible area. If the actual situation can not meet the regulations, pleaseconsult Hitachi.
- If elevator hoistway is of steel structure, please contact Hitachi.
- Machine room and hoistway walls, floors and roofs should be able to absorb a large number of elevator operation noise. Machine room and hoistway should not be located directly adjacent to low noise bedrooms, classrooms, wards, library spaces. Where such arrangements need to be imposed, the building contractors must be responsible for taking measures of sound insulation and cushioning.

Work to be done by building contractors

- The preparatory work for elevator installation outlined below should be undertaken by building contractors in accordance with Hitachi drawing and applicable national or local codes and regulation.
- Prepare hoistway with proper framing and enclosure, suitable pit of proper depth with drains and water-proofing if required, properly lighted and ventilated machine room of adequate size with concrete floors, access doors, ladders and guards as required.
 - Provide and/or cut all necessary holes, chases, and openings and finish after equipment installation.
 - Supply and secure all supports, reinforced concrete slabs, ect. ,necessary for installation of the machinery, doors, buffers, etc.
 - Furnish all necessary cement and/or concrete for grouting-in of brackets, bolts, machine beams ect.
 - Prepare and erect suitable scaffolding and protective measures for the works in progress.
 - Furnish mains for three-phase electric power and single-phase lighting supply to machine room, following the instructions of the elevator contractors on outlet position and wire size.
 - Provide, free of charge, a suitable theft-proof storage area for materials and tools during erection work.
 - Supply electric power for lighting of work area, installation work, elevator testing and spray painting.
 - Suspension hook for loading shown in this catalogue at top of the machine room.