HITACHI
Inspire the Next

UCA & HCA Catalogue 2024.04

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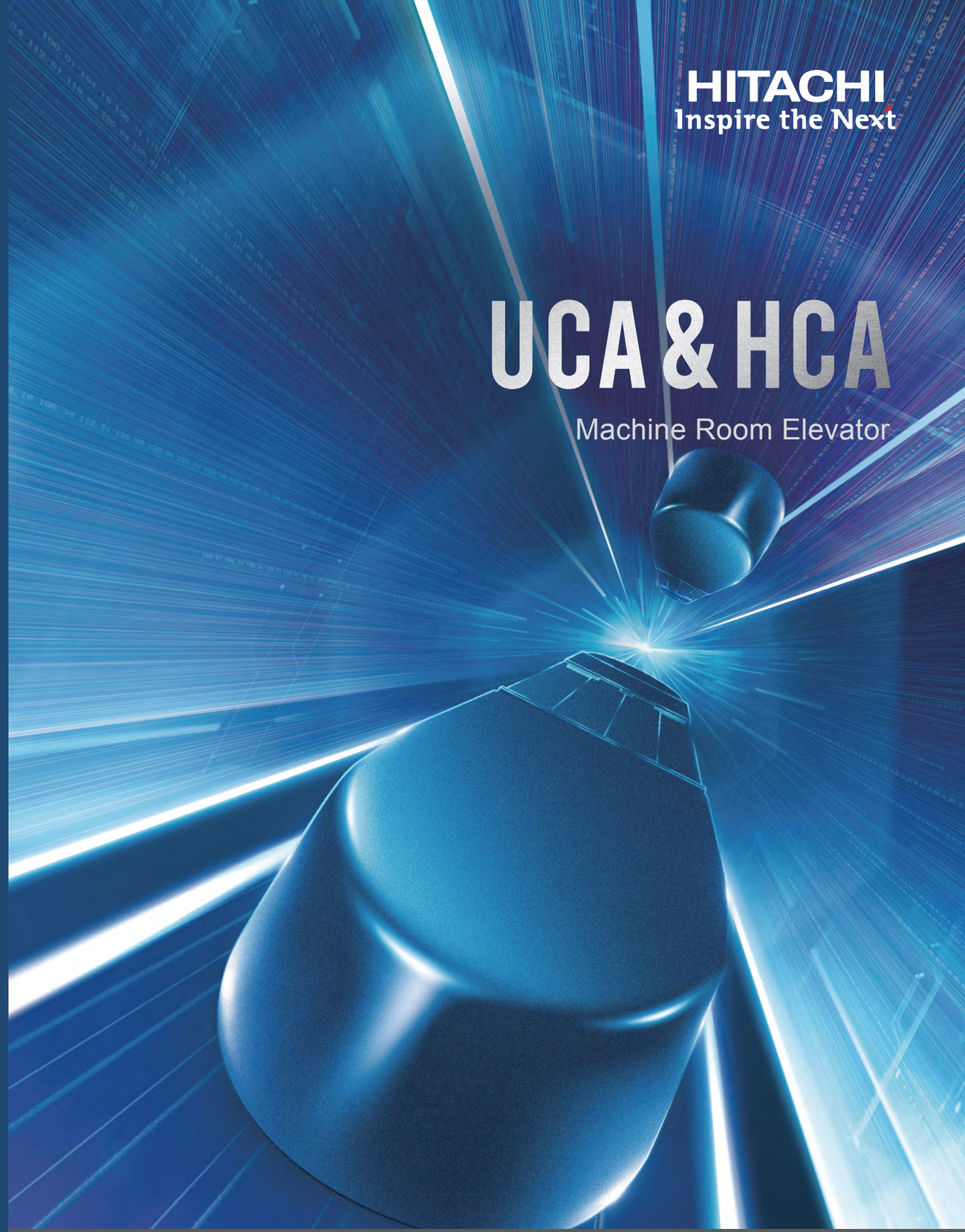
Inspire the Next

UCA&HCA

Machine Room Elevator



Guangzhou CTF Finance Centre

530M
116F

ULTRA-HIGH SPEED · WORLDWIDE ACCLAIMED

In the late 1960s, Hitachi installed an elevator with the highest speed of 300m/min in Japan at that time for Japan's first skyscraper, Kasumigaseki Building.

In 2016, Hitachi delivered the ultra-high speed elevators to Guangzhou CTF Finance Centre, a skyscraper complex building in Guangzhou, China and successfully obtained the Guinness World Records certification for the fastest elevator in 2019. The elevators use multiple technologies to achieve a rated speed of 1260m/min and is able to reach the 95th floor hotel lobby located 440m from the 1st floor in approximately 42 seconds. It has become a worldwide iconic elevator product.

1260
m/min

Speed

42 s
440 m

Time

CONTENTS

Product Description

Standard Decoration

Solution Center

DIGITAL AND INTELLIGENT PLATFORM

New generation digital control system, featuring Hitachi's independently developed inverter, boasts a streamlined structure, intelligent efficiency, and incorporates multiple core technologies, comprehensively enhancing the safety and reliability of the elevator.

New generation integrating digital platform, highly intelligent and efficient

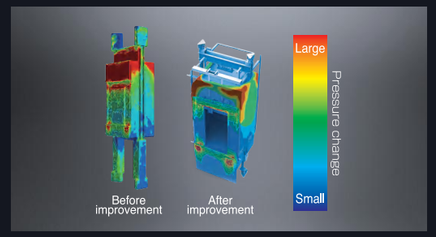
Core component pre-diagnosis technology, prevent failures

Intelligent auxiliary brake, improve reliability

New generation dual-medium communication system, provides dual protection

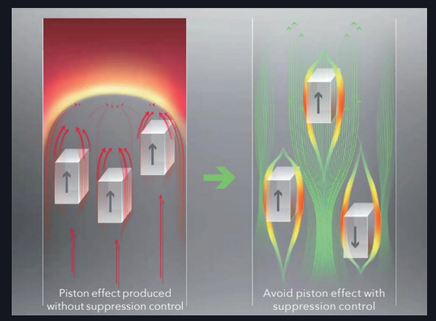
COMFORT TECHNOLOGY*

High speed elevators have the characteristics of high travel distance and fast operation speed. Achieving optimum air pressure control and operation accuracy is crucial in providing riding comfort to passengers. Hitachi has developed technologies and components specifically for high speed elevator, giving passengers in a high speed elevator a pleasant and comfortable riding experience.



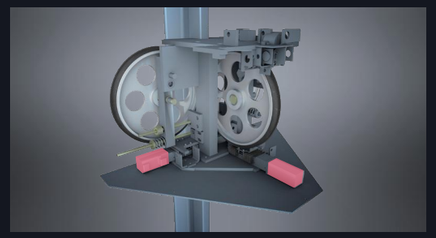
Streamlined Rectifier

- Streamlined structure
- Double layer car structure



Suppression Technology

- Real-time monitoring of elevator operating status
- Intelligent regulation of the elevator position within the control group
- Active suppression of piston effect



Active Guide Rollers

- Adopts active vibration reduction technology
- Regulate multi-directional forces

Note: Items with "*", please contact us.

VIBRATION AND NOISE REDUCTION

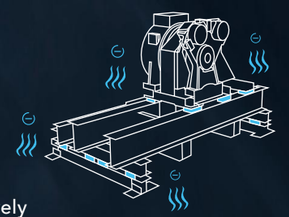
Provide passengers with a smooth, pleasant and comfort riding experience by adopting high precision guide rail, double isolation design and noise isolation car.

High Precision Guide Rail

- Apply high precision guide rail
- Suppress the lateral vibration of the car

Traction Machine With Double Isolation

- Efficient damping double isolation design
- Isolate vibration transmission to the building effectively



Double Layer Car Top Design*

- Double layer car top design
- Isolate noise effectively

Note: Items with "*", please contact us.

FI-700 HUMAN FLOW PREDICTIVE ELEVATOR OPERATION CONTROL SYSTEM*

At Hitachi, we have shifted our approach from a car-oriented conception where a conventional car provides efficient service to a human flow-oriented conception where we strive for the smooth flow of people within the building.

We adopted a Human Flow Predictive Algorithm in which AI technology is used to analyse vast amounts of past operational data for predicting the future flow of people.

Elevator service is provided by anticipating the flow of people within the building for achieving smooth movement.

Number of Waiting Passengers Recognition

- Compute number of awaiting passengers
- Intelligent dispatching operation

Human Flow Prediction Analysis

- Real-time monitoring and intelligent dispatching
- Overall prediction, dynamic adjustment
- Shortens average waiting times, improve efficiency

Future Trajectory Algorithm

- Optimise reference trajectory
- Dispatch elevator dynamically

Destination Floor Reservation System, DFRS

- Improve operational efficiency
- Self-learning system
- Optimise elevator dispatching

Note: Items with "*", please contact us.

STANDARD DECORATION

CAR DESIGN

E-220

Standard

Bare Ceiling Height	≥2450mm
False Ceiling Height	≥2400mm
Car Ceiling	LM-220
	Stainless Steel Mirror + Painted Steel_WP71 (White)
	LED Lighting
Car Front Return Panel	Stainless Steel Hairline
Car Transom	Stainless Steel Hairline
Car Door	Stainless Steel Hairline

Side Wall (Front Panel)	Stainless Steel Hairline
Side Wall (Center Panel)	Painted Steel_YM47 (Champagne)
Side Wall (Rear Panel)	Painted Steel_YM47 (Champagne)
Rear Wall	Painted Steel_YM47 (Champagne)
Car Skirting Illumination*	LED Recessed Lighting On Both Sides
Handrail	AA-Y138, Stainless Steel Hairline
	(Handrail At Rear Wall)
Car Floor	S-693 Vinyl Flooring

*Applicable with LM-220 ceiling.

CAR DESIGN

E-220 Stainless Steel Hairline

Optional

Bare Ceiling Height	≥2450mm
False Ceiling Height	≥2400mm
Car Ceiling	LM-220
	Stainless Steel Mirror + Stainless Steel Hairline
	LED Lighting
Car Front Return Panel	Stainless Steel Hairline
Car Transom	Stainless Steel Hairline
Car Door	Stainless Steel Hairline

Side Wall	Stainless Steel Hairline
Rear Wall	Stainless Steel Hairline
Car Skirting Illumination*	LED Recessed Lighting On Both Sides
Handrail	AA-Y138, Stainless Steel Hairline
	(Handrail At Rear Wall)
Car Floor	S-693 Vinyl Flooring

*Applicable with LM-220 ceiling.

CAR DESIGN

E-71

Optional

Bare Ceiling Height	≥2450mm
False Ceiling Height	≥2450mm
Car Ceiling	RF-056
	Painted Steel_WN01 (Ivory White)
	LED Lighting
Car Front Return Panel	Stainless Steel Hairline
Car Transom	Stainless Steel Hairline
Car Door	Stainless Steel Hairline

Side Wall	Stainless Steel Hairline
Rear Wall	Stainless Steel Hairline
Car Floor	A-26 Vinyl Flooring

UCA & HCA Machine Room Elevator

DECORATION DEVICE

Car Operating Panel (Hinge Type)

GOPR-820

- **Indicator:** Colour LCD
- **Button:** WL-MWB

Car Operating Panel (Surface-Mount Type)

GOP-199

- **Indicator:** Colour LCD
- **Button:** WL-MWB

Button

WL-MWB

- **Dimension:** Φ36mm
- **Material:** Rim: Stainless steel brushed Faceplate: Circular stainless steel hairline
- **Illumination:** Symbol and periphery lighted up in white
- **Button with braille is available as option for maximum 2 digits**

- **"Door Close" Button** (Without illumination)

- **"Door Open" Button** (Without illumination)

- **"Floor" Button** (Without illumination)

- **"Floor" Button** (With illumination)

At Other Floors

- **Landing Door**
  Painted steel_WN01 (Ivory white)
- **Landing Jamb**
  AS-1X narrow type:
  Painted steel_WN01(Ivory white)

At First Floor

- **Landing Door**
  Stainless steel hairline
- **Landing Jamb**
  AS-1X narrow type:
  Stainless steel hairline

VIB-820 VIB-820W

Hall Operating Panel

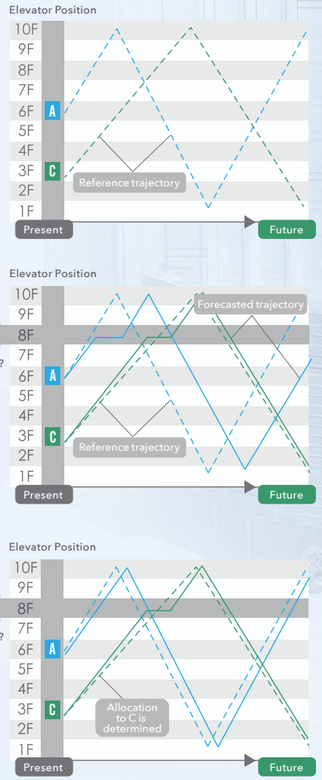
- **Indicator:**
  LCD Monochrome
- **Faceplate:**
  Stainless steel hairline
- **Button:**
  WL-MWB
- **Mounting:**
  Surface-mount type

SOLUTION CENTER

ELEVATOR TRANSPORTATION SYSTEM

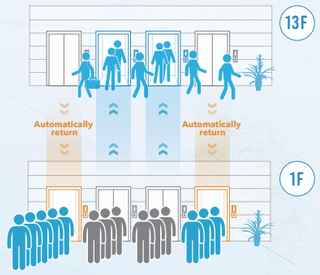
01 Human Flow Prediction Analysis

- Real-time monitoring and intelligent dispatching, evenly distribute the elevator calls
- Analyse overall human flow prediction, dynamic adjustment of future trajectory
- Shortens average waiting times, reduces rate of long waits



02 Rush Hour Schedule Operation

- During preset rush hour interval, the system automatically predicts the human flow and assign elevators to concentrate services on floors with heavy traffic.
- During up-peak rush hour interval, the system automatically predicts the flow of people taking elevators and dispatches elevators to provide centralised service at the base floor.



03 Destination Floor Reservation System, DFRS

Each passenger registers their destination floor on the registration device located at the landing hall and know in advance the designated elevator to take. System assigned one elevator for the passengers with the same destination floor. This reduces the number of stops, achieves traffic diversion, improves operational efficiency, and reduces waiting time.

04 VIP Service

Used for serving VIP passengers in the building. When a VIP signal is received, the system will assign one elevator to break away from group control and provide dedicated service for the VIP passengers, by transporting them directly to the destination floor.

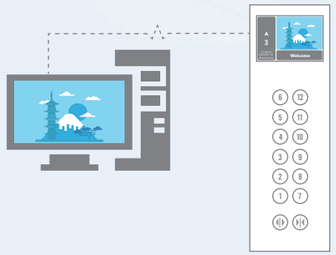
SMART MANAGEMENT SYSTEM

01 Elevator Computer Monitoring System

Elevator computer monitoring system can be installed at the locations specified by the customer (Such as fire control room, building management office etc.) to monitor the running status of multiple elevators to provide optimal services to passenger.

02 Live Feed Broadcast

Through the car multimedia LCD indicator connected to the building live feed broadcast system, information specified by customer can be displayed.



03 Nighttime Protective Operation

During specified nighttime hours, elevator will travel directly to the designated floor without responding to any hall calls to ensure the safety of the passengers.

04 Visual Intercom

Elevator authorisation for visitor access or resident visits can be achieved through a visual intercom system. Residents can also use the indoor unit to obtain basic elevator operation status information or call the elevator.

HUMAN FLOW PREDICTIVE ELEVATOR OPERATION*

(APPLICABLE WITH FI-700 GROUP CONTROL)

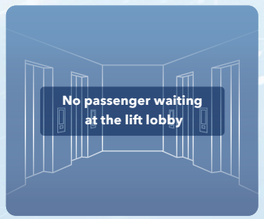
By utilising advance image acquisition and analysis technology, predicting the human flow enables more efficient elevator operation that matches passenger's behavior.

Automatic Hall Call Registration By Sensor Detection

- Automatic recognition of passenger's position for intelligent hall call operation
- Reduce waiting times, high efficiency

Passenger's Behavior Trend Prediction

- Automatic detection of passenger entering and exiting the elevator
- Intelligent control of door opening and closing

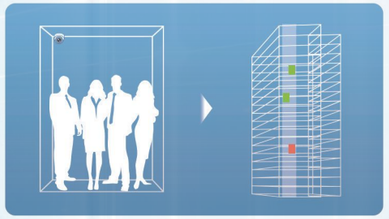


Automatic Cancellation of Hall Call Registration

- Real-time feedback of passenger situation in the lift lobby
- Hall call is cancelled when there is no passenger

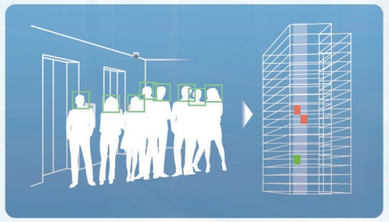
Analysis of Available Space in Car

- Car space detection analysis
- Reduce avoidable stops through full-load intelligent travel



Number of Waiting Passengers Recognition

- Compute number of awaiting passengers
- Intelligent dispatching operation



Group Control Human Flow Prediction

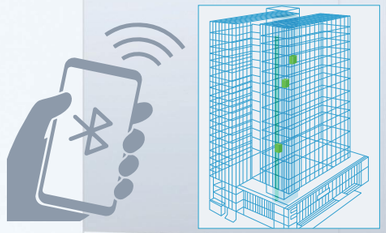
- Real-time human flow monitoring, evenly distribute the elevator calls
- Predict incoming human flow, dynamic computation of future trajectory
- Shortens waiting times, reduces rate of long waits

Note: Items with "*", please contact us.

CONTACTLESS ELEVATOR SYSTEM

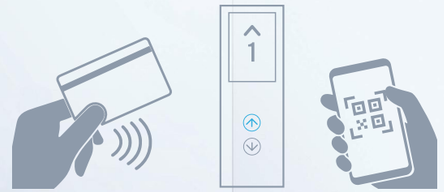
01 Elevator Registration via Bluetooth

Passengers connect to the elevator via smartphone Bluetooth signals for verification. The elevator will be registered according to the authorised preset floor.



02 Elevator Registration via Medium Devices

Passengers use an IC card or a QR code generated through WeChat to call the elevator, without any contact with the elevator buttons. This effectively prevents the elevator buttons from becoming a virus transmission source.



ELEVATOR "CLEAN" FEATURES

01 Antibacterial Button

By adding highly efficient antibacterial ions to the button surface, residual bacteria on the buttons can be effectively suppressed, ensuring passenger safety. Hitachi antibacterial buttons have been certified by SGS, with an antibacterial rate of over 99% against Escherichia coli and Staphylococcus aureus.

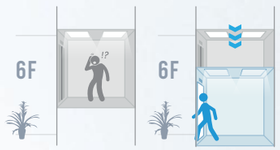
02 Ultraviolet, UV Sterilisation

This function automatically detects and controls the ultraviolet sterilisation and disinfection lamp inside the car when the elevator is at idle (With no passenger) state, to achieve all-round sterilisation in the car.

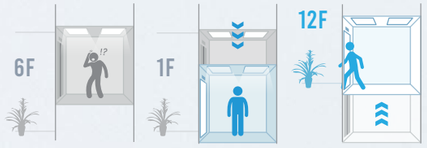
EMERGENCY RESCUE SYSTEM

01 Power Failure Emergency

- **Car Emergency Lighting**
  In the event of power failure, the car emergency lighting will be lighted up automatically.
- **Automatic Rescue Device (ARD)**
  In the event of power failure, elevator powered by the automatic rescue device (ARD) will run to the nearest service floor at slow speed, levelled and stop at the landing with door open to prevent passengers from being trapped.
- **Building Generator Operation**
  During power failure, the power supply system of the elevator will switch to building generator power automatically to maintain continuous operation of elevators.



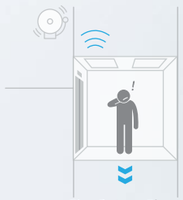
Automatic Rescue Device (ARD)



Building Generator Operation

02 Fire Emergency

- **Fire Emergency Operation**
  Upon receiving the fire signal, the elevator will automatically home to the fire return floor with its door open to let the passengers out. This ensure the safety of the passengers in the elevator.
- **Fireman Operation**
  After the elevator reaches the fire return floor with its door open, the fireman can use the elevator to perform rescue.



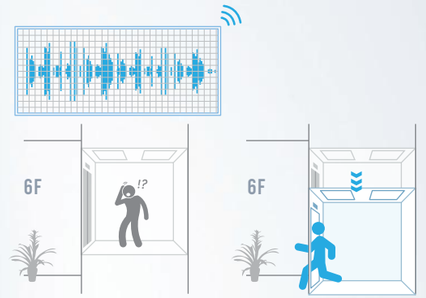
Fire Return Floor

03 Interphone System

When passenger presses the emergency call button on the car operating panel, they can communicate with the management in the machine room or monitoring center.

04 Earthquake Emergency Operation

When an earthquake is detected, the elevator system controls the running elevator to stop and levelled at the nearest service floor with its door open, to ensure the safety of passengers.



05 Pit Flood Operation

When there is water ingress in the pit and float switch is activated, the elevator will operate under pit flood control mode. The elevator will travel up to the evacuation floor and open the door for the passengers to leave. The elevator can only resume normal operation after the float switch is manually reset.