TOSHIBA

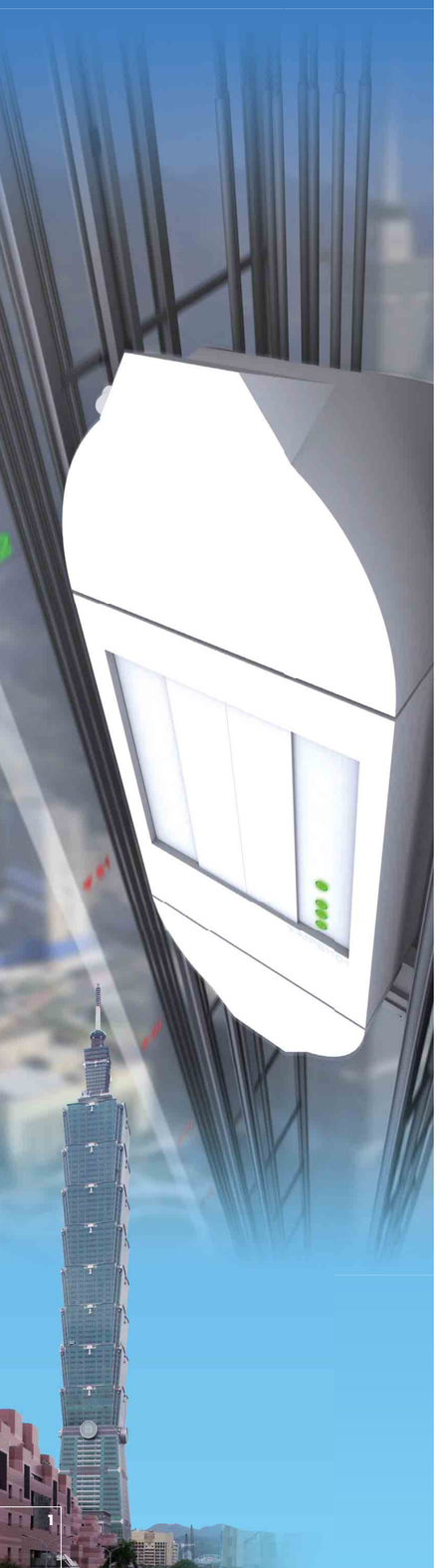
Leading Innovation

SPACEL-UNI

TOSHIBA MACHINE-ROOM-LESS ELEVATORS

STANDARD PASSENGER ELEVATOR

TOSHIBA eco style



The top class machine-room-less elevator SPACEL-UNI has been developed based on Toshiba's accumulated experience of sophisticated PMSM technology as typified by the world's fastest elevator. SPACEL-UNI offers layout flexibility, space saving, energy saving and wide line-ups.

SPACEL-UNI

TOSHIBA MACHINE-ROOM-LESS ELEVATORS

Scope of application

SPACEL-UNI is well-suited to office building and apartment by the compact designed machine-room-less elevator.

Scope of application	Range of application
Passenger (persons)	8 – 24 persons
Rated load (kg)	630 – 1800 kg
Rated speed (m/s)	1 –1.75 m/s

Usage: Passenger elevator

Rated speed (m/s)	1.75	SPACEL-UNI							
	1.6								
	1								
Rated load (kg)		630	800	1000	1150	1275	1350	1600	1800
Type		P8	P10	P13	P15	P17	P18	P21	P24

The world's fastest elevator

The "Taipei 101" in Taipei, towering 101 stories above ground and 508 meters in height, was completed as the world's tallest building in 2004.
The ultra high-speed elevator developed by Toshiba transports passengers from the 1st to 89th floor deck. It is the world's fastest elevator with a speed of 1010 meters per minute (60.6 km per hour).
The elevator has been certified by Guinness World Records Ltd., as the "World's fastest elevator".

Environmental consciousness

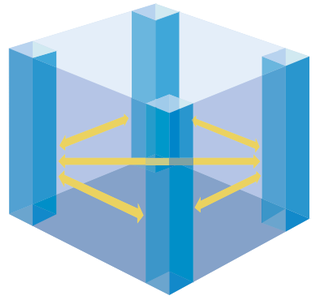
Energy and space saving

SPACEL-UNI applies a high quality and high performance small sized PMSM traction machine and precise control system. This machine realizes energy savings and smaller space for installation. At the same time, it emits less carbon dioxide.

Freedom layout plan

Increased layout flexibility

With the absence of a machine room the area normally taken up by the machine room may be effectively used for other purposes. Moreover, since there is no need for a machine room to be constructed on the roof, the system is advantageous in terms of height restrictions and the system provides for freedom in the layout of the position of the elevator. Freedom of architectural design of the roof of the structure will also increase.

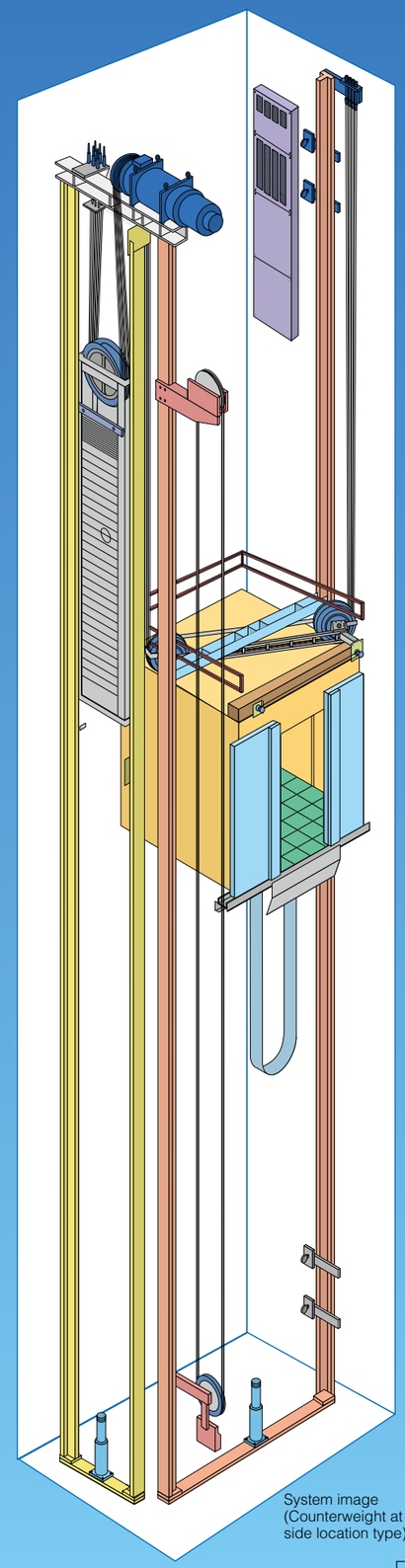


New design

New car design

New car design was developed and realizes more confortable.

「SL-1」



System image
(Counterweight at side location type)

Space and energy saving / increased layout flexibility

Item	SPACEL-UNI	Conventional elevator
Area of installation of the elevator facility (area of the elevator hoistway + area of the machine room)	◎	
Load effect of elevator facility	○	
Freedom of architectural design	◎	
Protrusion machine room on the roof	○	
Capacity of the motor	◎	○
Capacity of power supply facility	◎	○
Electric power consumption	◎	○

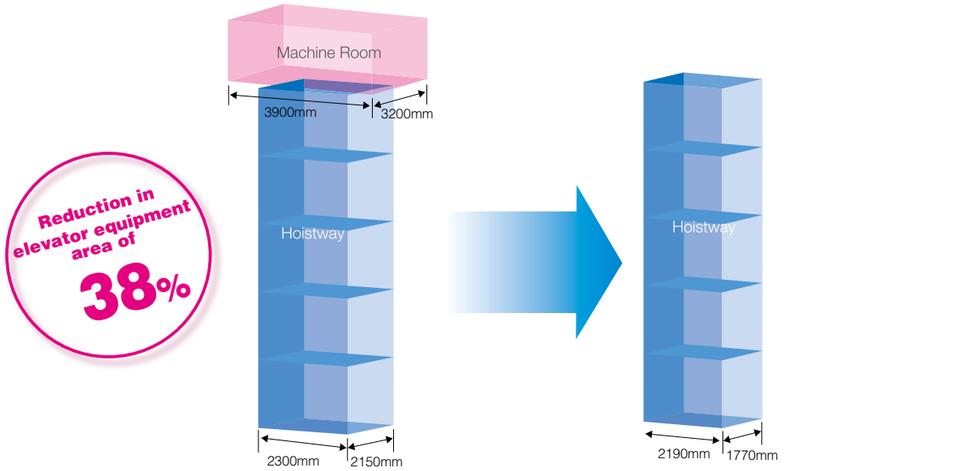
●Comparison between SPACEL-UNI and conventional elevator

◎ : Particularly superior
○ : Superior

Effective footprint and flexible utility

Since SPACEL-UNI has no machine room, the footprint of the elevator equipment has been reduced to let the architects have more freedom in design with more elegant appearance and modern style buildings.

For instance, the overall area comparison of the elevator equipment in case of 13 persons capacity, rated speed 1.75m/sec and 10-floor service is as follows;



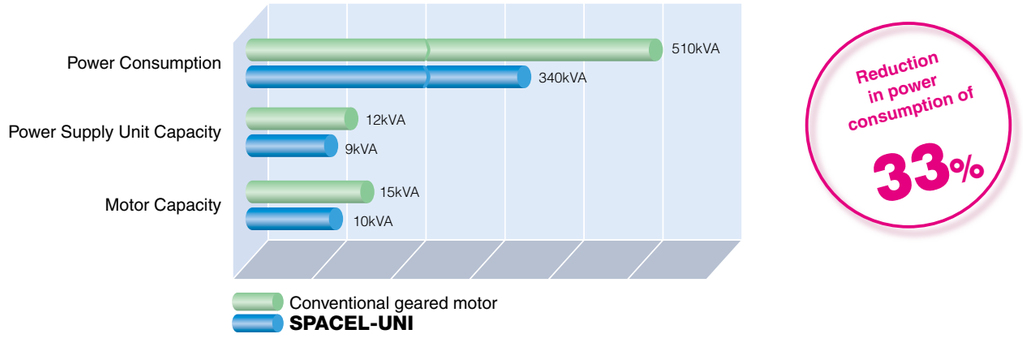
Conventional Elevator

Overall area of hoistway: 49.5 m²
Machine room area: 12.5 m²
Overall area of elevator equipment: 62 m²

SPACEL-UNI Elevator

Overall area of **SPACEL-UNI** elevator equipment is 38.8 m².
SPACEL-UNI elevator equipment therefore saved 23.2 m², which means cutting 38% of space utilization ratio.

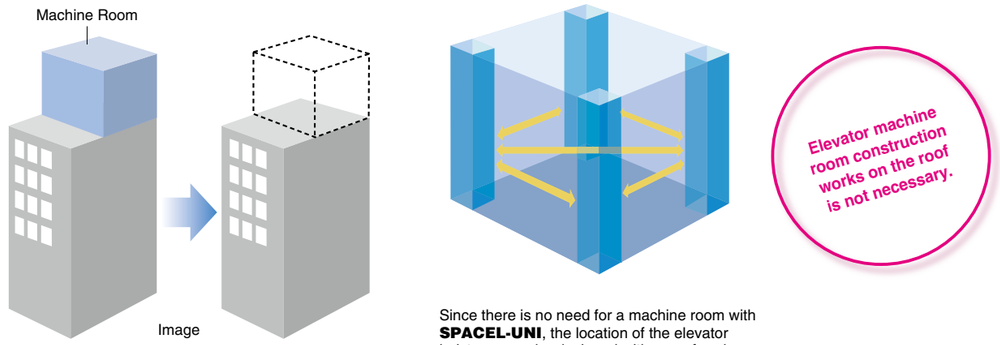
Energy saving



Based on monthly power consumption
• 1000 starts a day
• 25 days a month
The above data is based on 13 persons (1000kg) capacity elevator.

Space saving, freedom of layout

Since there is no need for a machine room with SPACEL-UNI, the location of the elevator hoistway can be designed with more freedom.



Since there is no need for a machine room with **SPACEL-UNI**, the location of the elevator hoistway may be designed with more freedom.

Environmentally conscious products

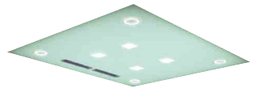
- Providing environmentally conscious products (SPACEL-UNI)
Toshiba elevator group is promoting the development of environmentally conscious products, which involves environmentally conscious product design, the assessment of environmental impact of products and disclosure of the environmental performance of products. Products are developed in compliance with the updated voluntary environmental performance standards.

- Product assessment and voluntary environmental standards for products
In developing products, we conduct a product assessment across their life cycles from manufacturing, logistics and use to disposal and recycling in order to conduct product development and reduce the environmental impacts on the global environment.
Whereas product assessment is used to confirm the minimum necessary environmentally conscious requirements for product development, Voluntary Environmental Standards for Products have been established in Toshiba elevator group to create highly environmentally friendly products and those products complying with such Standards are released as environmentally conscious products.

New car design

New car design was developed and realizes more comfortable.

Sample pictures of「SL-1」



SL-1

SL-2

SL-3

TL-1

DX-21

DX-22

New ceiling design

Wide variety of newly developed LED lightings are available. *Note1

*** Development of environmentally conscious LED lighting.**

LED lighting realizes mercury-free, energy-saving and long life.
The electric consumption fall about 85% and the product life time will be increased 20 times.
Therefore the LED lighting reduces CO_2 emission

Note1: Adopted in new car design SL-1, SL-2, SL-3, and TL-1

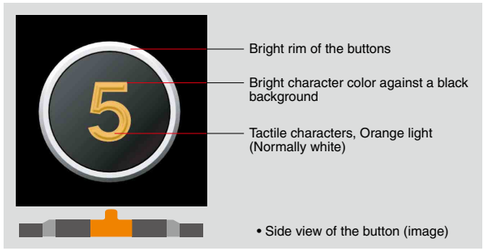
New operating interface design

Newly designed operating panel, button and indicator were adopted for easy-use.

*** Standard models:**

Univeral Design is adopted. It contributes to user-friendly accessibility and comfort riding.

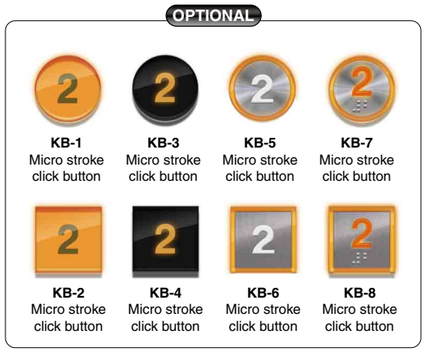
UB-1 UB-2



*** Option models:**

Increase a new design character for your choose among all 16 type available.

* For example:



COP-U1S-1

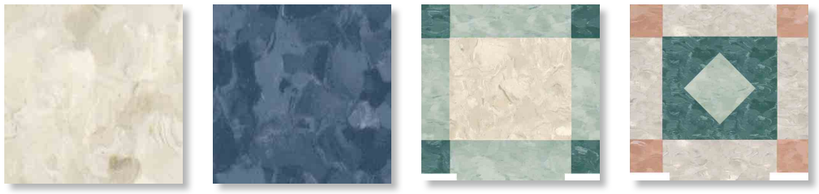
HIB-U1A-2

New floor tiles design

17 colors available

Increase a new color for your choose among all 17 colors available.

* For example:



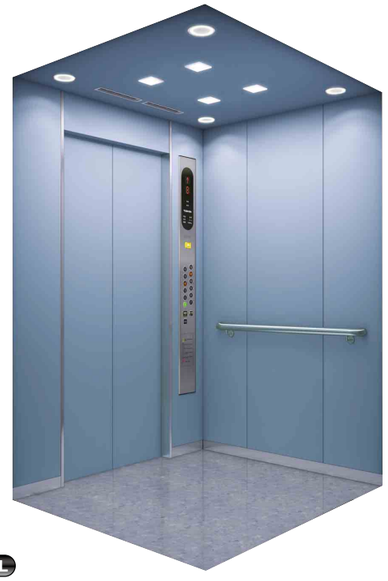
MID809 MID834 TSF-1E TSF-2C

STANDARD

SL-1

Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 77G
Side panel	Lacquer finish steel panel : 77G
Car door	Lacquer finish steel panel : 77G
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1S-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID833



OPTIONAL

SL-3

Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 37YR
Side panel	Lacquer finish steel panel : 62Y
Car door	Lacquer finish steel panel : 62Y
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1S-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID809

Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 114PB
Side panel	Lacquer finish steel panel : 114PB
Car door	Lacquer finish steel panel : 114PB
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1S-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID833
Hand rail	Hairline finish stainless steel OPTIONAL

OPTIONAL

SL-2

Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 114PB
Side panel	Lacquer finish steel panel : 52YR+62Y
Car door	Lacquer finish steel panel : 62Y
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1S-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID809
Hand rail	Hairline finish stainless steel

Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 3N
Side panel	Hairline+Mirror etching finish stainless steel
Car door	Mirror etching finish stainless steel
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1W-1
Button	Tactile button : KB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID833

* Actual product colors may vary slightly from the printed colors in this brochure.

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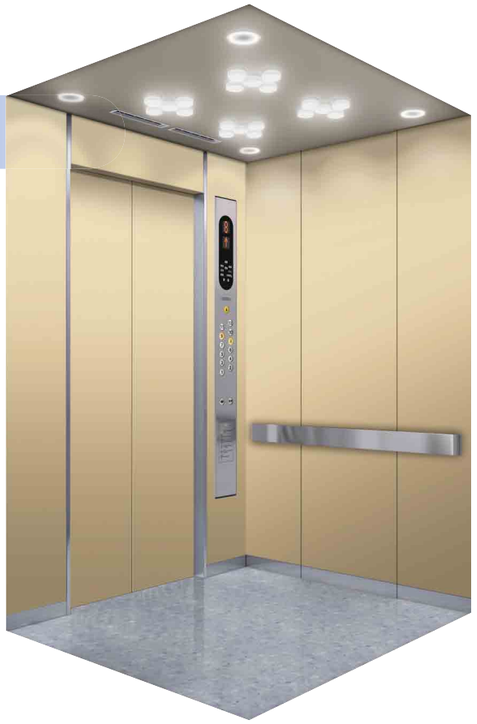
Car designs

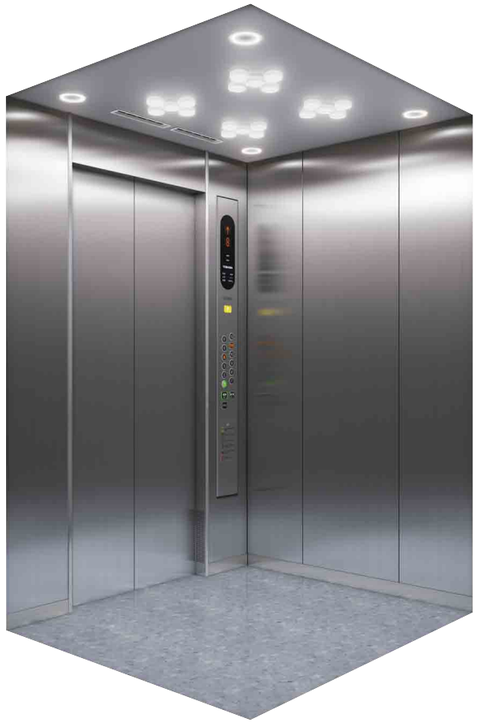
OPTIONAL

TL-1



Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 41YR
Side panel	Lacquer finish steel panel : 41YR
Car door	Lacquer finish steel panel : 41YR
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1W-1
Button	Micro stroke click button : KB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID833
Hand rail	Hairline finish stainless steel



Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 3N
Side panel	Hairline finish stainless steel
Car door	Hairline finish stainless steel
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1S-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID833

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OPTIONAL

DX-11

Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 114PB
Side panel	Lacquer finish steel panel : 114PB
Car door	Lacquer finish steel panel : 114PB
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel (Installed the side panel) : COP-U1A-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID809

OPTIONAL

DX-12

Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 3N
Side panel	Lacquer finish steel panel : 3N
Car door	Lacquer finish steel panel : 3N
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel (Installed the side panel) : COP-U1A-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID832

OPTIONAL

DX-13

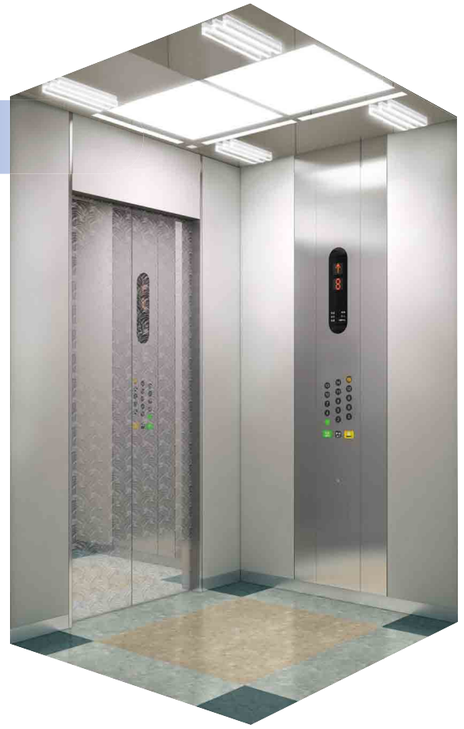
Specifications of the Car

Ceiling panel	Lacquer finish steel panel : 66Y
Side panel	Lacquer finish steel panel : 66Y
Car door	Lacquer finish steel panel : 66Y
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1D-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Vinyl tile : MID831

* Actual product colors may vary slightly from the printed colors in this brochure.

OPTIONAL

DX-21



Specifications of the Car

Ceiling panel	Mirror finish stainless steel
Side panel	Lacquer finish steel panel : 3N
Car door	Mirror etching finish stainless steel
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel (Installed the side panel) : COP-U1A-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Artificial marble : TSF1E

Specifications of the Car

Ceiling panel	Hairline finish color stainless steel
Side panel	Hairline+etching finish color stainless steel
Car door	Etching finish color stainless steel
Entrance column	Hairline finish color stainless steel
Kick plate	Hairline finish color stainless steel
Car operation panel	Hairline finish color stainless steel : COP-U1S-1
Button	Tactile button : UB-1
Sill	Hardened aluminum
Floor	Artificial marble : TSF1B
Hand rail	Hairline finish stainless steel

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OPTIONAL

DX-22

Specifications of the Car

Ceiling panel	Hairline finish stainless steel
Side panel	Hairline+etching finish stainless steel
Car door	Mirror finish stainless steel
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1W-1
Button	Micro stroke click button : KB-1
Sill	Hardened aluminum
Floor	Artificial marble : TSF1E
Hand rail	Hairline finish stainless steel

Specifications of the Car

Ceiling panel	Hairline finish stainless steel
Side panel	Hairline finish stainless steel
Car door	Mirror finish stainless steel
Entrance column	Hairline finish stainless steel
Kick plate	Hairline finish stainless steel
Car operation panel	Hairline finish stainless steel : COP-U1W-1
Button	Tactile button : KB-1
Sill	Hardened aluminum
Floor	Artificial marble : TSF1B
Hand rail	Hairline finish stainless steel

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Operation systems

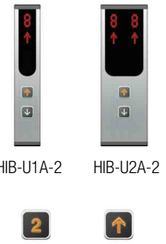
Car operating panels • Hall operating panels

STANDARD

UB-1

COP-U1S-1

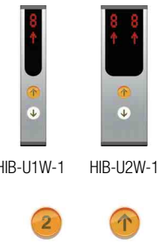
STANDARD



UB-2

COP-U1S-3

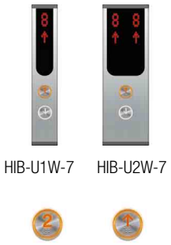
OPTIONAL



KB-1

COP-U1W-1

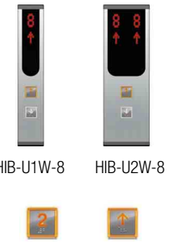
OPTIONAL



KB-7

COP-U1W-7

OPTIONAL



KB-8

COP-U1W-8

OPTIONAL

KB-2

COP-U1W-2

OPTIONAL

KB-3

KB-4 Assembled button KB-4 COP-U1W-4 HIB-U1W-4 HIB-U2W-4

COP-U1W-3

OPTIONAL

KB-5

KB-6 Assembled button KB-6 COP-U1W-6 HIB-U1W-6 HIB-U2W-6

COP-U1W-5

OPTIONAL

UB-1

UB-2 Assembled button UB-2 COP-U1J HIB-U1A-2 HIB-U2A-2

COP-U1A

OPTIONAL

UB-1

UB-2 Assembled button UB-2 COP-U1M HIB-U1A-2 HIB-U2A-2

COP-U1D

Hall buttons

STANDARD

HB-U1A
Molded plastic (laminated by hairline finish stainless steel)

OPTIONAL

HB-U1B
Hairline finish stainless steel

Hall lantern

OPTIONAL

HL-4

Buttons

STANDARD

UB-1 Tactile button

UB-2 Tactile button

OPTIONAL

KB-1 Micro stroke click button
KB-2 Micro stroke click button
KB-3 Micro stroke click button
KB-4 Micro stroke click button
KB-5 Micro stroke click button
KB-6 Micro stroke click button
KB-7 Micro stroke click button
KB-8 Micro stroke click button

KB-1 Micro stroke click button
KB-2 Micro stroke click button
KB-3 Micro stroke click button
KB-4 Micro stroke click button
KB-5 Micro stroke click button
KB-6 Micro stroke click button
KB-7 Micro stroke click button
KB-8 Micro stroke click button

Hand rail

OPTIONAL

Stainless steel round type hand rail

Stainless steel flat type hand rail

Hall indicators

OPTIONAL

HPI-3

Hall design

STANDARD

Hall design

Hall jamb
Narrow type jamb (lacquer finish steel panel): 62Y

Hall door
Lacquer finish steel panel: 62Y

Hall position indicator
Digital indicator display (HIB-U1A-2)

Hall sill
Hardened aluminium

OPTIONAL

Proposed hall design

Hall jamb
Wide type jamb (Hairline finish stainless steel panel)

Hall door
Hairline finish stainless steel panel

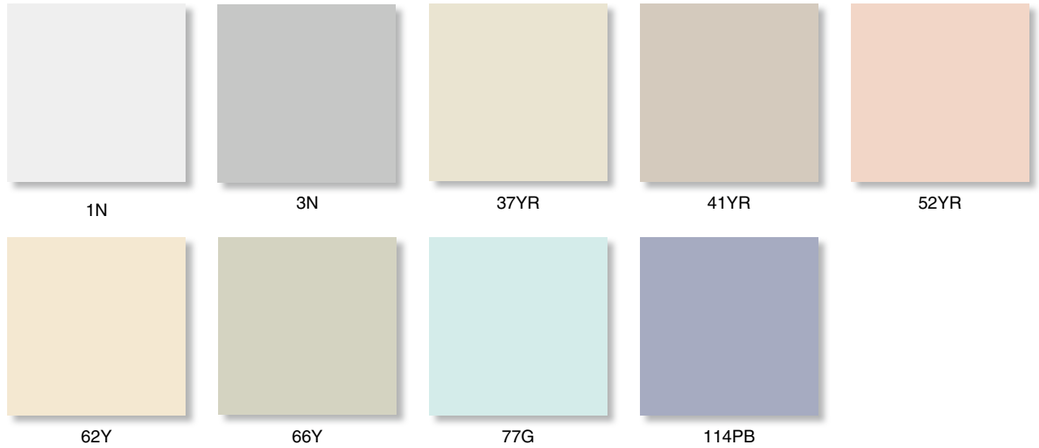
Hall position indicator
Digital indicator display (HPI-3)

Hall lantern
Translucent acrylic, Hairline finish stainless steel panel face plate (HL-4)

Hall sill
Hardened aluminium

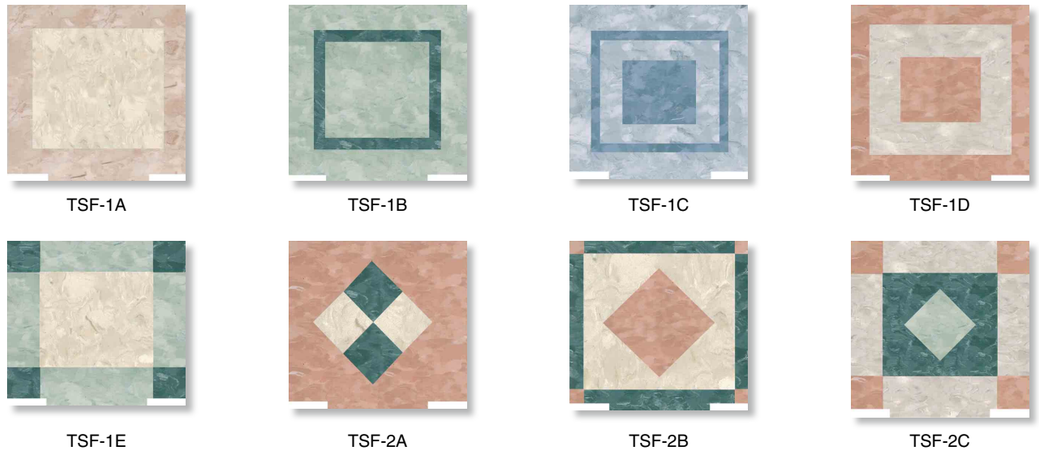
Hall button
Hairline finish stainless steel face plate (HB-U1A)

Car door, Side panel, Ceilling panel, Hall door and Jamb (Lacquer finish steel panel) STANDARD



Floor tile (Vinyl tile) STANDARD

Floor tile (Artificial marble) OPTIONAL



Description of the specifications

Safety features founded on a philosophy of total safety.

Protective features to provide reliable back-up even in case of main system failure.

Automatic Landing Function

If there are any cars that are stranded between floors in the event of a system failure, the Automatic Landing Function's microcomputer analyzes the condition and lands the cars at the nearest floors. (Note: Overridden by any similar back-up or safety systems installed in compliance with safety codes.)

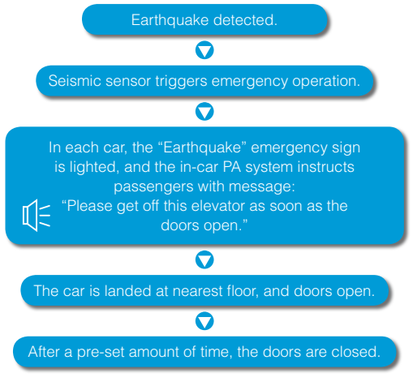
Repetitive Door Opening / Closing

This feature automatically detects any anomalies in the doorway area, such as the presence of some obstruction in the door sill, and begins to repeat door opening and closing to allow for the condition to be cleared.

Various Features in Emergency / Power Failure.

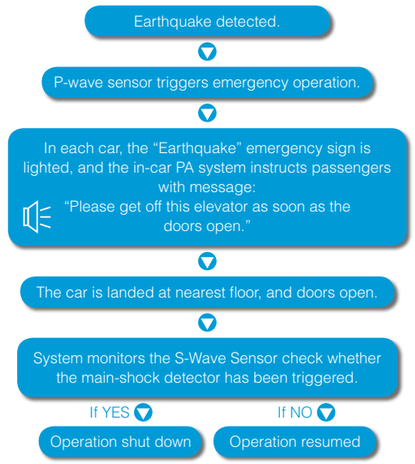
Earthquake Emergency Operation (Optional 1)

When the system's seismic sensor installed in the elevator shaft detects an S-wave (the secondary seismic wave which is the main shock of an earthquake) that is larger than the pre-set threshold, the system takes control with emergency procedures. "Earthquake" emergency signs are lighted in all cars, all cars are landed immediately at the nearest floor, doors are opened and passengers are instructed to de-board.



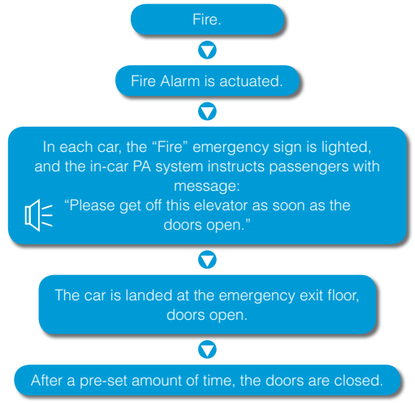
Earthquake Emergency Operation with P-Wave Sensor (Optional 2)

In an earthquake, the main shock, known as the S-wave (secondary wave), is preceded by a fore-shock, which is registered as the P-wave (primary wave). The P-wave is a smaller shock wave that travels faster from the epicenter than the larger S-wave. This emergency system uses a special sensor that detects the P-wave, triggering emergency operation procedures to land all cars at the nearest floors, and letting off the passengers before the main shock arrives. If the eventually arriving S-wave is determined small enough, normal operation is resumed automatically.



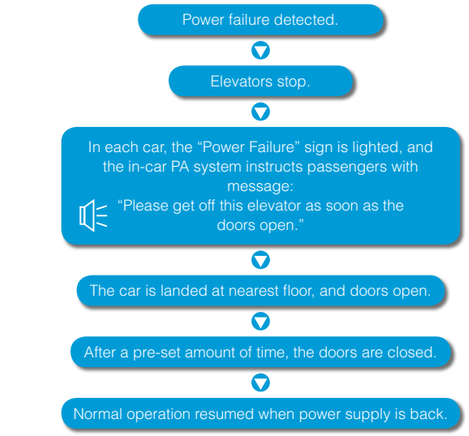
Fire Emergency Operation

This emergency operation is automatically triggered in case of a fire, when a Fire Alarm Button is actuated, or when a Fire/Smoke Detector detects an abnormality. All hall calls and floor selections are cancelled, passengers are informed of the emergency procedure with a "Fire" sign and a voice announcement, and all cars are sent directly to the emergency exit floor. Doors open at the emergency floor and passengers are guided to safety.



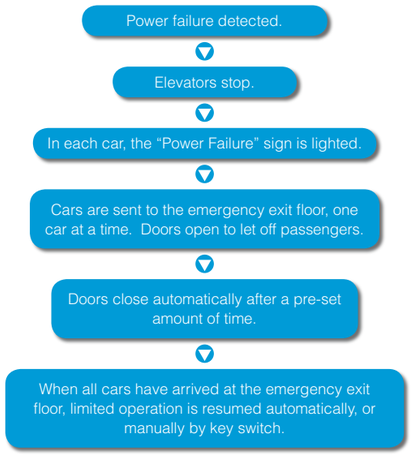
Automatic Landing in Power Failure (Optional)

In case of a power failure, backup lamps are automatically lighted in the cars, while the system's operation is switched to the elevator system's own battery powered inverter. Cars stranded between floors are landed at the nearest floor; otherwise, doors are opened and passengers are let out. The doors automatically open in case the car stops at any point that is not between floors but where the doors can be opened. (Note: Overridden by any similar back-up or safety systems installed in compliance with safety codes.)



Power Failure Emergency Operation (Optional)

In case of a power failure, the system's operation is automatically switched to emergency generator. All cars are first sent to emergency exit floor. When all cars have returned to the emergency exit floor, limited operation is resumed depending on the capacity of the generator.



In-Car Emergency Lamps

In case of power outage, car interiors are automatically lighted by emergency lamps. In most localities, emergency lamps are required by law as a necessary elevator safety feature. (self-charging)

Doorway safety features for smooth, safe boarding.

Photoelectric Cell Door Safety (Optional)

The photoelectric cell detects passengers in the doorway and reopens closing doors.

The latest technology for better, smoother ride.

Devoted Computer Network

Toshiba Standard Passenger Elevators are controlled by a devoted network of advanced microcomputers installed in the hoistway controller as well as in each hall and car. This intelligent network constantly monitors the elevator system's operation, and responds to changes in current conditions with timely and appropriate commands. In Group Control for multiple-car systems, individual cars within the group are linked in network using high-speed serial transmission lines. The Elevator System's intelligent network is a highly reliable and highly operable system that adapts to the building's actual real-time needs, and that can be readily upgraded to meet future needs.

Canceling functions to reduce inefficient elevator movement.

Selection Cancellation

When a wrong floor is selected by mistake, the selection can be cancelled simply by tapping the floor button again twice. Unnecessary stops slow the elevator's operation and is a waste of energy. This cancellation function also saves the passenger unnecessary embarrassment.

Nuisance Call Cancellation and Automatic Selection Clear Upon Direction Reversal

All calls and floor selections are cancelled when an obvious nuisance call is detected.
Any remaining floor selections are cancelled when the car reverses direction after all passengers have de-boarded. These automatic functions reduce wastes in both time and energy.

Automatic Sleep for Car Lighting and Ventilation

Lighting and ventilation in idle cars are automatically shut down to reduce wasteful power consumption.

Service features

Service-oriented features for a more efficient and amenable means of transport.
Intelligent control functions that respond to current traffic conditions.

Efficient service with special operation modes that adapt to current traffic conditions.

Service Floor Cut-Off Selection (Optional, software interface)

Adapting to changes in building usage that may occur in time, this control computer interface allows easy alterations in the elevator system's operation, selecting serviced floors and cut-off floors as needed. The selection can be executed easily by the maintenance staff without professional help.

Scheduled Service Floor Cut-Off (Optional, software interface)

Selection of serviced floors can be switched by timer. Servicing schedule may be altered easily using the software interface.

Scheduled Peak-Time Operation (Optional)

Automatically alters the main floor to adapt to changes in passenger traffic during morning and evening peak hours. Service efficiency is enhanced just by homing the cars closer to where the passengers are likely to be waiting.

Automatic Full Car Bypass (Optional)

Fully loaded cars will not respond to floor calls on the way, thereby eliminating time-wasting stops.

Stop At All Floors (Optional)

A crime-preventing special operation for night -time and holidays. Doors open at all floors to keep the elevator more open and visible.

Automatic Door Open Timing

The computer monitors the combination of the hall calls and car operation selections, and adjusts door open timing according to pre-set criteria.

Forced Car Homing (Optional, standard for multiple-car operations)

When a car has finished serving all floor selections, it is normally left to stand by at the last serviced floor. With this option, the car may be homed to a preset floor. Cars can thus be sent to stand by at the lobby or any other floor where there are most likely to be passengers.

Parking Switch

During low-traffic hours such as during night-time or holidays, the system can be set so that a car can be "parked" by simply turning the Parking Switch on a floor's Hall Panel.

Automatic Parking (Optional)

Unused cars are parked automatically, without Parking Switch operation, during prescheduled hours.

Electronic voice announcements provide passengers with operation information.

Auto Announce Function (Optional)

The Auto Announce Function provides more detailed information to the passengers compared to the standard announcement system, including floor and direction indication, door opening / closing, scheduled operations, and other information depending on the building's needs. The system features natural electronic voice synthesis.

Arrival Prediction Chime (Optional)

Informs passengers ahead of time that a car is arriving, giving passengers time to prepare for boarding. In group operations with three or four cars per bank, the arrival prediction chime and hall lanterns (basic design fixtures) are installed standard on all floors.

Optional features for even smoother operation.

Sub Car Operating Panel (Optional)

The car operation panel is designed to be simple and installed 1000 mm height for easy to use for everyone.

Car BGM System (Optional)

Speaker system for in-car BGM or for connection with the in-house PA system.

Extended Door Open Button (Optional)

Pushing this button keeps the doors open for an extended amount of time. A safe, convenient feature, for example when loading or unloading cargo.

Works by others

Works below are not included in installation works of elevator:

Hoistways

1. Hoistway construction and fire-proofing work, and opening work for jambs, indicators and push-buttons, etc. Please note that chipping or padding work is required according to the necessity, in case the error of the structure is 30 mm or over.
2. Installation work of separating beams, intermediate beam, back beam and lateral beams (If necessary).
3. Installation work of the base plate for each floor and of bed steel for furnishing the equipments related to landing entrance, in case of hoistways of steel structure of PC structure.
4. Fire-proofing work of steel frame material in steel structured hoistways, and fire-proofing work around landing entrances (If necessary).
5. Finishing works of walls and floors, etc., around entrances, after furnishing equipments related to landing entrances.
6. Furnishing work of base steel or others for furnishing rail brackets, especially in case the floor height is high (if necessary).
7. Installation work of the entrance or the gangway for pit inspection (if necessary).
8. Water-proofing work of the pit (including drainage if necessary).
9. Re-arrangement of the building body in case that there are some spaces to be used under the pit.
10. Installation work of emergency exits for rescue purposes in the event there are floors at which the elevator does not stop and installation of a fascia plate.
11. Shelter equipments from rain at landing entrances directly contacting to the air in the place like roof.
12. Installation work of hooks or beams on top of the elevator shaft.
13. Installation work of lighting in hoistway (If necessary).
14. Installation work of vent opening at the top of shaft (If necessary).
15. Installation work of a net or wall to prevent falling into the pit (in case of pit level is different.)
16. All works related to the building structure other than works above.

Works for equipments

1. Wiring work of the power supply for motors and that for lighting equipments, and of grounding to power source panels of elevators in the Elevator shaft.
2. Wiring work of the power supply to the supervisory panels.
3. Piping and wiring works of interphones outside hoistway and of others necessary for elevators.
4. Supply and installation of switching devices for emergency power supply at the power failure and two pairs of relay contacts for normal / emergency power identification, and their piping and wiring work (if necessary).
5. Piping and wiring work of supervisory panels, alarm panels and inter-communication systems, etc., outside hoistways.
6. Furnishing work of receptacles for inspection in pits.

Temporary works

It is required to arrange the following matters:

1. To secure the site office for installation work, and the stock yard for materials without charge.
2. Enclosure to be used during the installation work.
3. Supply of electric power for installation work and the trial operation for adjustment.
4. Security of enough passage for carrying heavy goods.
5. On use of elevator for the construction work of the building, It is required to make contract with a separate written estimate.

Note

At equipment planning of elevators, please take the following items into consideration:

1. Provide the power facility so that the voltage regulation of power supply at the receiving terminals in the hoistway is kept within ±10% for motor, and ±2% for lighting equipments.
2. In the hoistways, please avoid allowing the temperature exceed 40 ˚C and humidity exceed 90% (monthly mean) and 95% (daily mean).
3. Please do not allow such chemically toxic gas or excess amount of dust enter into the hoistways, that makes the metal or electrical contacts corrode.

At inquiry of the estimate, please inform us of the following:

1. Building name and address.
2. Desired type and number of set.
3. Number of stops.
4. Floor height.
5. Voltage and frequency of main power supply.
6. Desired completion date.

Specifications

SPACEL-UNI
TOSHIBA MACHINE-ROOM-LESS ELEVATORS

Type	Notes	Standard	Optional
Operations	Selective-collective full automatic operation	●	
	2-car group selective collective full automatic operation (note1)		○
	3-car group supervisory operation system (note1)		○
	4-car group supervisory operation system (note1)		○
	Independent operation (IND)		○
	Attendant operation (ATT)		○
Emergency Operations	Automatic landing function in system failure	●	
	Automatic withdrawn from group operation	●	
	Inspection operation (car roof) (INS)	●	
	Overload indicator	●	
	Overspeed protection	●	
	Firemen's operation (note 2)		○
	Fire emergency operation	●	
	Force landing feedback signal in emergency	●	
	In-car emergency operation displays	●	
	Power failure emergency operation		○
	Automatic landing in power failure (TOSLANDER)		○
	Earthquake emergency operation		○
	Earthquake emergency operation with P-wave sensor		○
	In-car emergency lamp (self-charging)	●	
	Emergency electromotion succor (HRQ)	●	
	Braking security detecton	●	
	Emergency call button	●	
	Motor racing protection	●	
	Overload door reversal device	●	
	Mechanical door safety (safety edge on both sides)	●	
	Photoelectric cell door safety		○
	Infrared light curtain door safety		○
	2 in 1 door closing protection (Light-beam curtain + Mechanical shoe)		○
	Automatic leveling	●	
	Pulse position abnormity automatic correction	●	
	Car door zone position Indicator	●	
	Power resupply automatic running	●	
Service Functions	Main floor homing (2 car or more)		○
	Service cut-off selection (software interface)		○
	Service floor cut off switch (Manual)		○
	Full car bypass (note 3)		○
	Floor selection cancellation	●	
	Nuisance call cancellation	●	
	Running times record	●	
	Data automatic recording function at the time of fault	●	

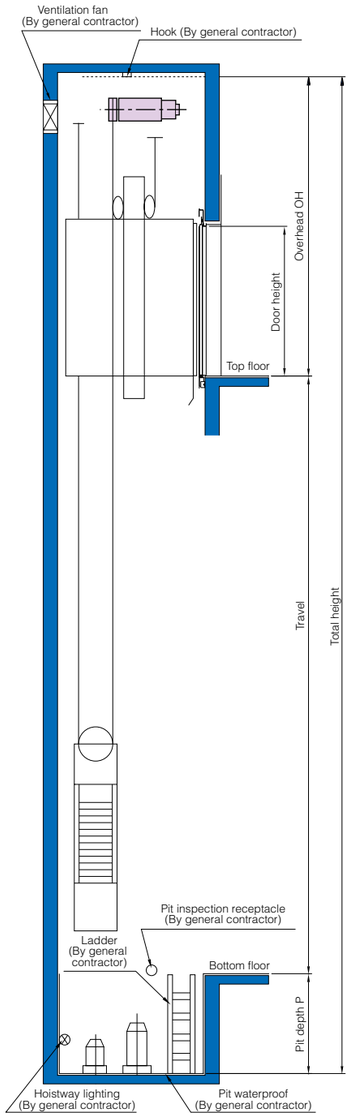
Type	Notes	Standard	Optional
Service Functions	Repetitive door opening safety	●	
	Car indicator (built in cop)	●	
	Door nudging		○
	Adjustable door open timing	●	
	Door open extension button		○
	Car chime (install at car top and bottom) (2-rings for arrival alert)		○
	Hall chime (2-rings for arrival alert)		○
	Hall full load indicator		○
	Hall lantern		○
	Staring torque compensate	●	
	Sub car operating panel		○
	Hall out of service indicator	●	
	Direction changing reopen	●	
	Parking operation	●	
	Automatic parking operation		○
	Lighting auto sleep	●	
	Ventilation auto sleep	●	
	Door open button lamp (As the car lighting has been cut off automatically)	●	
	Automatic selection clear upon direction reversal	●	
	Two-way interphone	●	
	Stop at all floors		○
	Group control in support running (Only for group control)		○
	Specific floor stop operation		○
Human Interface	Magnetic card system		○
	Announce feature		○
	Supervisory panel		○
	Interface for building automation system (note 4)		○
Expandable Functions	Cable for camera		○
	In-car BGM		○
	In-car security CCD camera		○
	Wheel-chair aid specification (for 16 stops or less) (note 5)		○

Note:

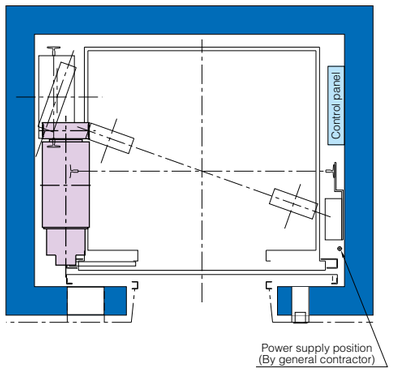
1. Not applicable to a through-type car.
2. Fire emergency operation and Fireman service cannot be applied simultaneously.
3. Standard function for 2-car operation or 3-car operation.
4. For the details of Interface for building automation system, please contact us.
5. Only for 16 stops or below, both handrails and handicap car operation panels be installed.

Hoistway layout

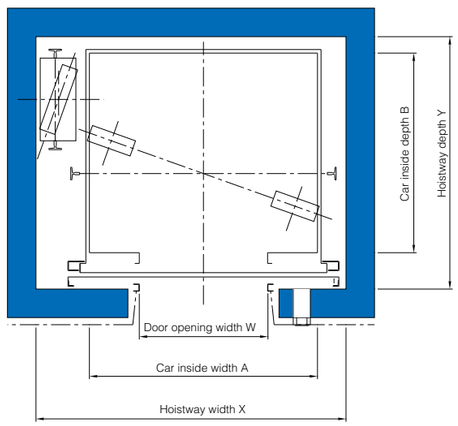
Counterweight at side



Hoistway section



Topmost floor hoistway plan



Typical floor hoistway plan

Specifications

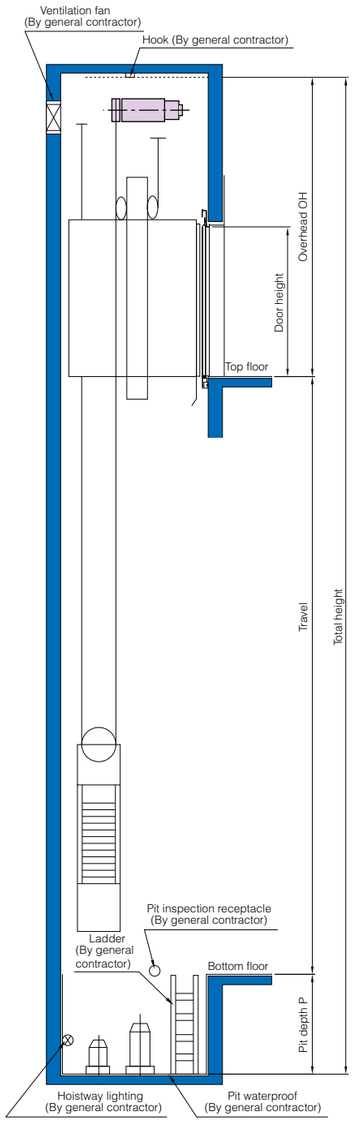
Type		Nos.of Person	Capacity (kg)	Speed (m/s)	Cage size (mm) Internal (A x B)	Door width W (mm)	Hoistway size (mm) X x Y	Hoistway size (mm) OH	Hoistway size (mm) P	Motor capacity (kw)	Max. service stops (s)	Max. travel (m)
P8-CO60	D	8	630	1	1100x1400	800	1820x1770	3900	1300	3.6	24	60
	D					900	2000x1770					
P8-CO96	D			1.6		800	1820x1770	4050	1400	5.8	32	80
	D					900	2000x1770					
P8-CO105	D			1.75		800	1820x1770	4150	1450	6.3	32	80
	D					900	2000x1770					
P10-CO60	W	10	800	1	1350x1400	800	1945x1770	3900	1300	4.6	24	60
	W					900	2050x1770					
P10-CO96	W			1.6		800	1945x1770	4050	1400	7.3	32	80
	W					900	2050x1770					
P10-CO105	W			1.75		800	1945x1770	4150	1450	8.0	32	80
	W					900	2050x1770					
P10-CO60	D	10	800	1	1100x1700	800	1820x2070	3900	1300	4.6	24	60
	D					900	2000x2070					
P10-CO96	D			1.6		800	1820x2070	4050	1400	7.3	32	80
	D					900	2000x2070					
P10-CO105	D			1.75		800	1820x2070	4150	1450	8.0	32	80
	D					900	2000x2070					
P13-CO60	W	13	1000	1	1600x1400	900	2190x1770	3900	1300	5.7	24	60
	W					1000	2275x1770					
	W					1100	2400x1770					
P13-CO96	W			1.6		900	2190x1770	4050	1400	9.2	32	80
	W					1000	2275x1770					
	W					1100	2400x1770					
P13-CO105	W			1.75		900	2190x1770	4150	1450	10.0	32	80
	W					1000	2275x1770					
	W					1100	2400x1770					
P13-CO60	D	13	1000	1	1100x2100	800	1820x2470	3900	1300	5.7	24	60
	D					900	2000x2470					
P13-CO96	D			1.6		800	1820x2470	4050	1400	9.2	32	80
	D					900	2000x2470					
P13-CO105	D			1.75		800	1820x2470	4150	1450	10.0	32	80
	D					900	2000x2470					

Note:

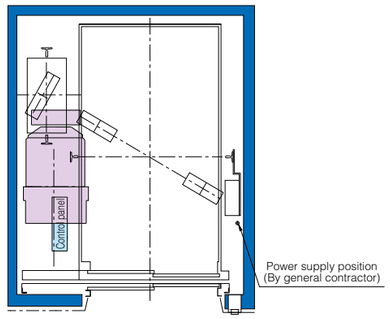
- The above table compliance with EN81-1:1998 code or GB7588:2003 standards.
- Please contact to our local agency to check whether non-EN81-1:1998 code or non-GB7588:2003 standards is applied.
- Hoistway dimensions are the minimum dimension after the building work.
- Hoistway dimensions are the minimum requirement.
- The hoistway structure wall must be 150mm thick or more.
- Piping, wiring and cables not related to elevator are prohibited inside the hoistway.
- OH value in the chart is not related the elevator for standard cars, As for the non-standard cars, additional consultation should be carried out.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- If the location of Power source panel, Control panel and Electric power supply are changed, please contact us.
- When travel is 40m or more, and 150mm to above mentioned dimension at the OH dimension and TC dimension.
- Example: P13W W: Wide car D: Deep car

Hoistway layout

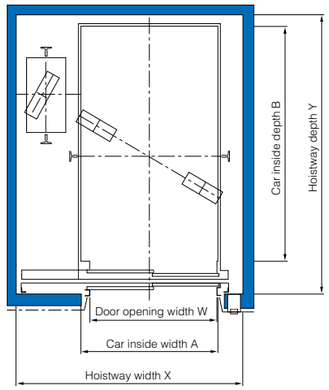
Counterweight at side



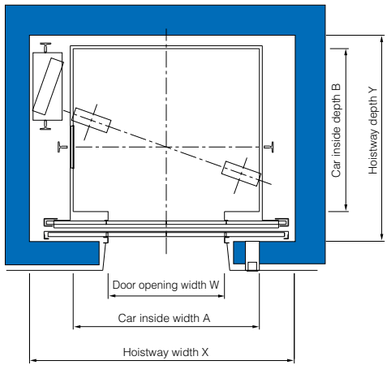
Hoistway section



Top floor hoistway plan



Two panel slide opening door
hoistway plan
(Type P17D, P21D)



Center opening door
hoistway plan
(Type P15W)

Specifications

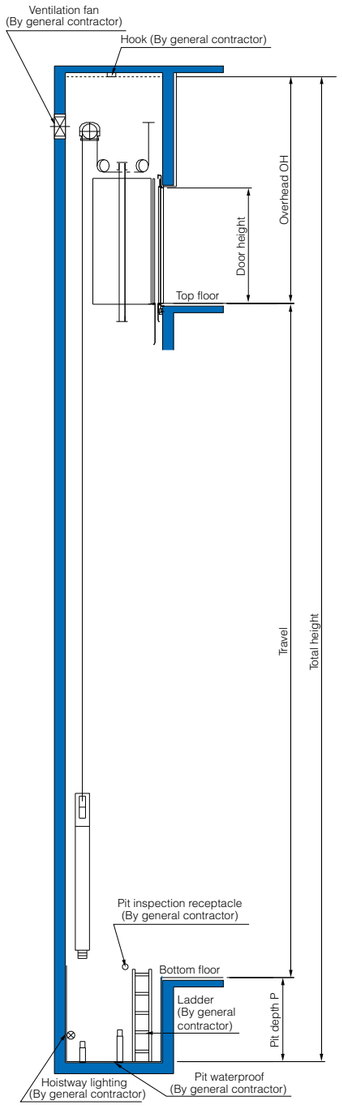
Type		Nos.of Person	Capacity (kg)	Speed (m/s)	Cage size (mm) Internal (A x B)	Door width W (mm)	Hoistway size (mm) X x Y	Hoistway size (mm) OH	Hoistway size (mm) P	Motor capacity (kw)	Max. service stops (s)	Max. travel (m)
P15-CO60	W	15	1150	1	1800x1500	1000	2450x2080	4000	1400	7.3	32	80
	W					1100	2550x2080					
P15-CO96	W			1.6		1000	2450x2080	4150	1550	11.6		
	W					1100	2550x2080					
P15-CO105	W			1.75		1000	2450x2080	4250	1650	12.6		
	W					1100	2550x2080					
P17-2S60	D	17	1275	1	1200x2300	1100	2100x2850	4300	1400	8.7	32	80
P17-2S96	D			1.6				4500	1550	14.0		
P17-2S105	D			1.75				4500	1650	16.0		
P21-2S60	D	21	1600	1	1400x2400	1200	2400x2950	4300	1400	10.0	32	80
P21-2S96	D			1.6				4500	1550	16.0		
P21-2S105	D			1.75				4500	1650	18.0		

Note:

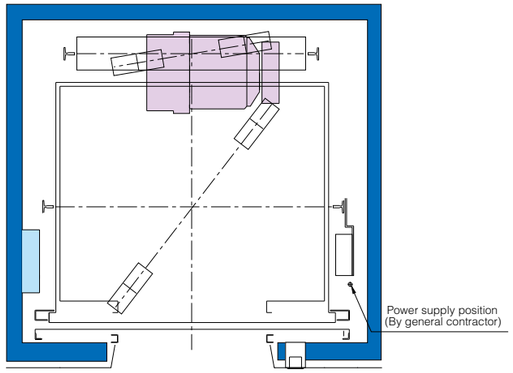
- The above table compliance with EN81-1:1998 code or GB7588:2003 standards.
- Please contact to our local agency to check whether non-EN81-1:1998 code or non-GB7588:2003 standards is applied.
- Hoistway dimensions are the minimum dimension after the building work.
- Hoistway dimensions are the minimum requirement.
- The hoistway structure wall must be 150mm thick or more.
- Piping, wiring and cables not related to elevator are prohibited inside the hoistway.
- OH value in the chart is not related the elevator for standard cars, As for the non-standard cars, additional consultation should be carried out.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- If the location of Power source panel, Control panel and Electric power supply are changed, please contact us.
- When travel is 40m or more, and 150mm to above mentioned dimension at the OH dimension and TC dimension.
- Example: P15W W: Wide car D: Deep car

Hoistway layout

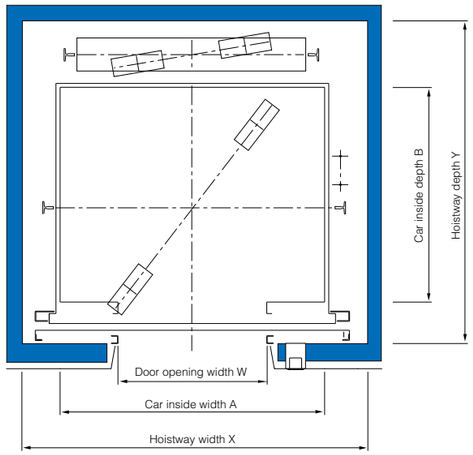
Counterweight at rear



Hoistway section



Top floor hoistway plan



Typical floor hoistway plan

Specifications

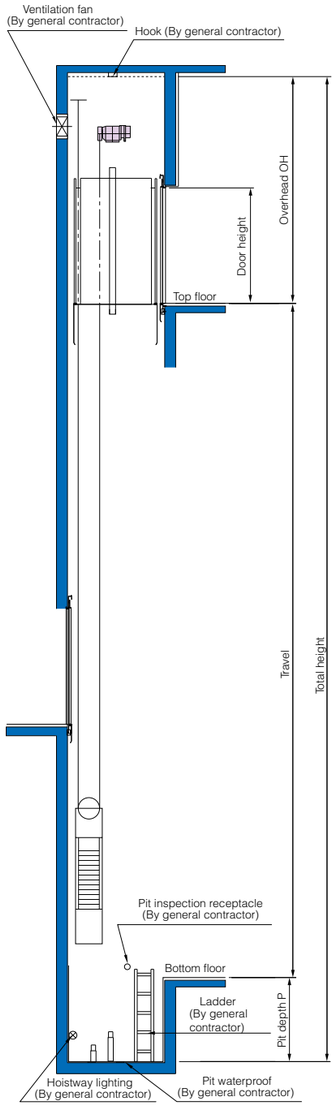
Type		Nos.of Person	Capacity (kg)	Speed (m/s)	Cage size (mm) Internal (A x B)	Door width W (mm)	Hoistway size (mm) X x Y	OH	P	Motor capacity (kw)	Max. service stops (s)	Max. travel (m)
P17-CO60	W	17	1275	1	2000x1400	1100	2700x2290	4150	1400	8.7	32	80
P17-CO96	W			1.6				4300	1550	14.0		
P17-CO105	W			1.75				4350	1650	16.0		
P18-CO60	W	18	1350	1	2000x1500	1100	2700x2390	4150	1400	8.7	32	80
P18-CO96	W			1.6				4350	1550	14.0		
P18-CO105	W			1.75				4350	1650	16.0		
P21-CO60	W	21	1600	1	2000x1700	1100	2700x2590	4100	1400	10.0	32	80
	W					1200	2740x2590	4300				
P21-CO96	W			1.6		1100	2700x2590	4300	1550	16.0		
	W					1200	2740x2590	4450				
P21-CO105	W			1.75		1100	2700x2590	4350	1650	18.0		
	W					1200	2740x2590	4550				
P24-CO60	W	24	1800	1	2100x1750	1200	2840x2640	4300	1400	12.0	32	80
P24-CO96	W			1.6				4450	1550	18.0		
P24-CO105	W			1.75				4550	1650	20.0		

Note:

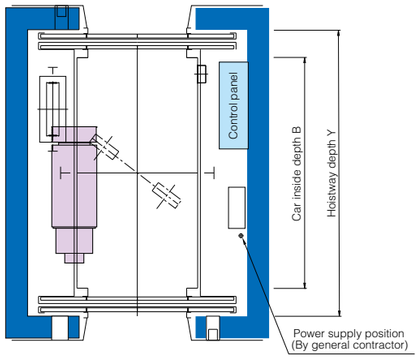
- The above table compliance with EN81-1:1998 code or GB7588:2003 standards.
- Please contact to our local agency to check whether non-EN81-1:1998 code or non-GB7588:2003 standards is applied.
- Hoistway dimensions are the minimum dimension after the building work.
- Hoistway dimensions are the minimum requirement.
- The hoistway structure wall must be 150mm thick or more.
- Piping, wiring and cables not related to elevator are prohibited inside the hoistway.
- OH value in the chart is not related the elevator for standard cars, As for the non-standard cars, additional consultation should be carried out.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- If the location of Power source panel, Control panel and Electric power supply are changed, please contact us.
- It is necessary for this type of elevator to install RC structure or steel beam structure for supporting the machine beam in the top of the hoistway by building work. For the details, please contact us.
- When travel is 40m or more, and 150mm to above mentioned dimension at the OH dimension and TC dimension.
- Example: P17W W: Wide car

Hoistway layout

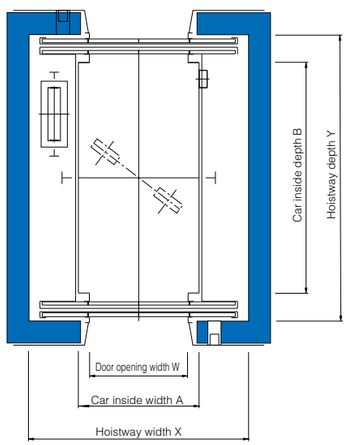
Front and rear opening door (Counterweight at side)



Hoistway section



Top floor hoistway plan



Typical floor hoistway plan

Front and rear opening
hoistway plan
(Type: P13D2)

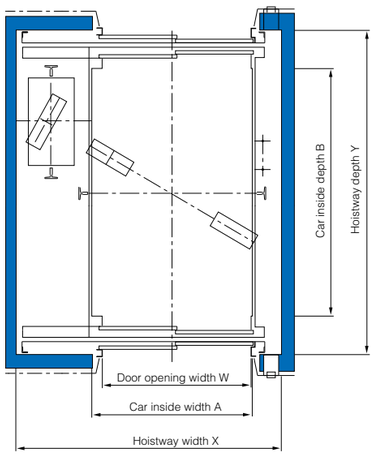
Specifications

Type		Nos.of Person	Capacity (kg)	Speed (m/s)	Cage size (mm) Internal (A x B)	Door width W (mm)	Hoistway size (mm) X x Y	Hoistway size (mm) OH	Hoistway size (mm) P	Motor capacity (kw)	Max. service stops (s)	Max. travel (m)
P13-CO60	D2	13	1000	1	1100x2100	800	1820x2610	3900	1300	5.7	※1	
P13-CO96	D2			1.6				4050	1400	9.2		
P13-CO105	D2			1.75				4150	1450	10.0		
P21-2S60	D2	21	1600	1	1400x2300	1200	2400x3070	4300	1400	10.0	※1	
P21-2S96	D2			1.6				4500	1550	16.0		
P21-2S105	D2			1.75				4500	1650	18.0		

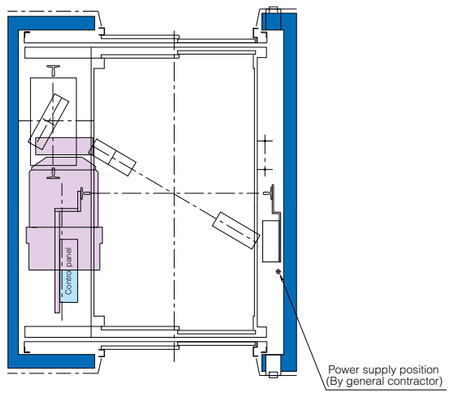
※1: Please contact us.

Note:

- The above table compliance with EN81-1:1998 code or GB7588:2003 standards.
- Please contact to our local agency to check whether non-EN81-1:1998 code or non-GB7588:2003 standards is applied.
- Hoistway dimensions are the minimum dimension after the building work.
- Hoistway dimensions are the minimum requirement.
- The hoistway structure wall must be 150mm thick or more.
- Piping, wiring and cables not related to elevator are prohibited inside the hoistway.
- OH value in the chart is not related the elevator for standard cars, As for the non-standard cars, additional consultation should be carried out.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- If the location of Power source panel, Control panel and Electric power supply are changed, please contact us.
- When travel is 40m or more, and 150mm to above mentioned dimension at the OH dimension and TC dimension.
- Example: P13D2 D2：Front and rear opening door deep car



Typical floor hoistway plan



Top floor hoistway plan

Front and rear opening
hoistway plan
(Type: P21D2)

Safety Cautions

- Observance of relevant laws / regulations are required.
- Read the entire “Instruction Manual” carefully before use, for important information about safety, handling and operation.

TOSHIBA

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- The data given in this catalog are subject to change without notice.

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