TOSHIBA

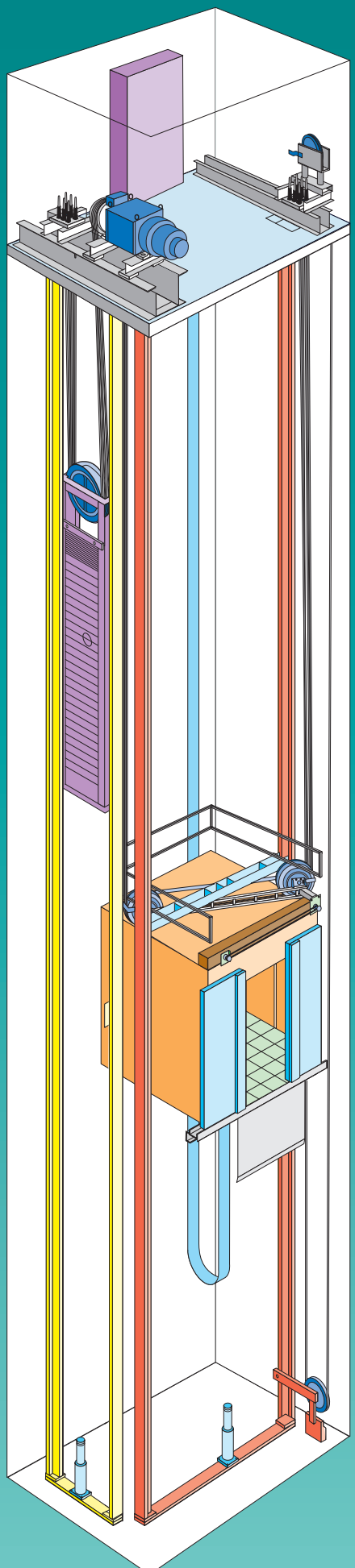
Leading Innovation



# ELCOSMO

## TOSHIBA COMPACT MACHINE ROOM ELEVATORS

STANDARD PASSENGER ELEVATOR



System image
(Counterweight at side location type)

**The top class compact machine room elevator ELCOSMO has been developed based on Toshiba's accumulated experience of sophisticated PMSM technology as typified by the world's fastest elevator. ELCOSMO offers layout flexibility, space saving, energy saving and wide line-ups.**
**ELCOSMO is well-suited to all type of buildings by the compact designed compact machine room elevator.**

# ELCOSMO

**TOSHIBA COMPACT MACHINE ROOM ELEVATORS**

## Environmental consciousness

### Energy and space saving

ELCOSMO 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.

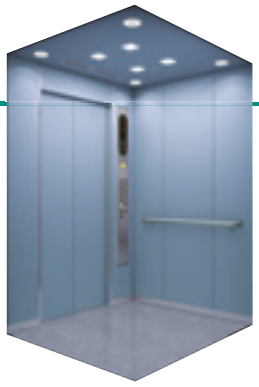


Photo: TML-10B

# New design

## New car design

New car design was developed and realizes more confortable.



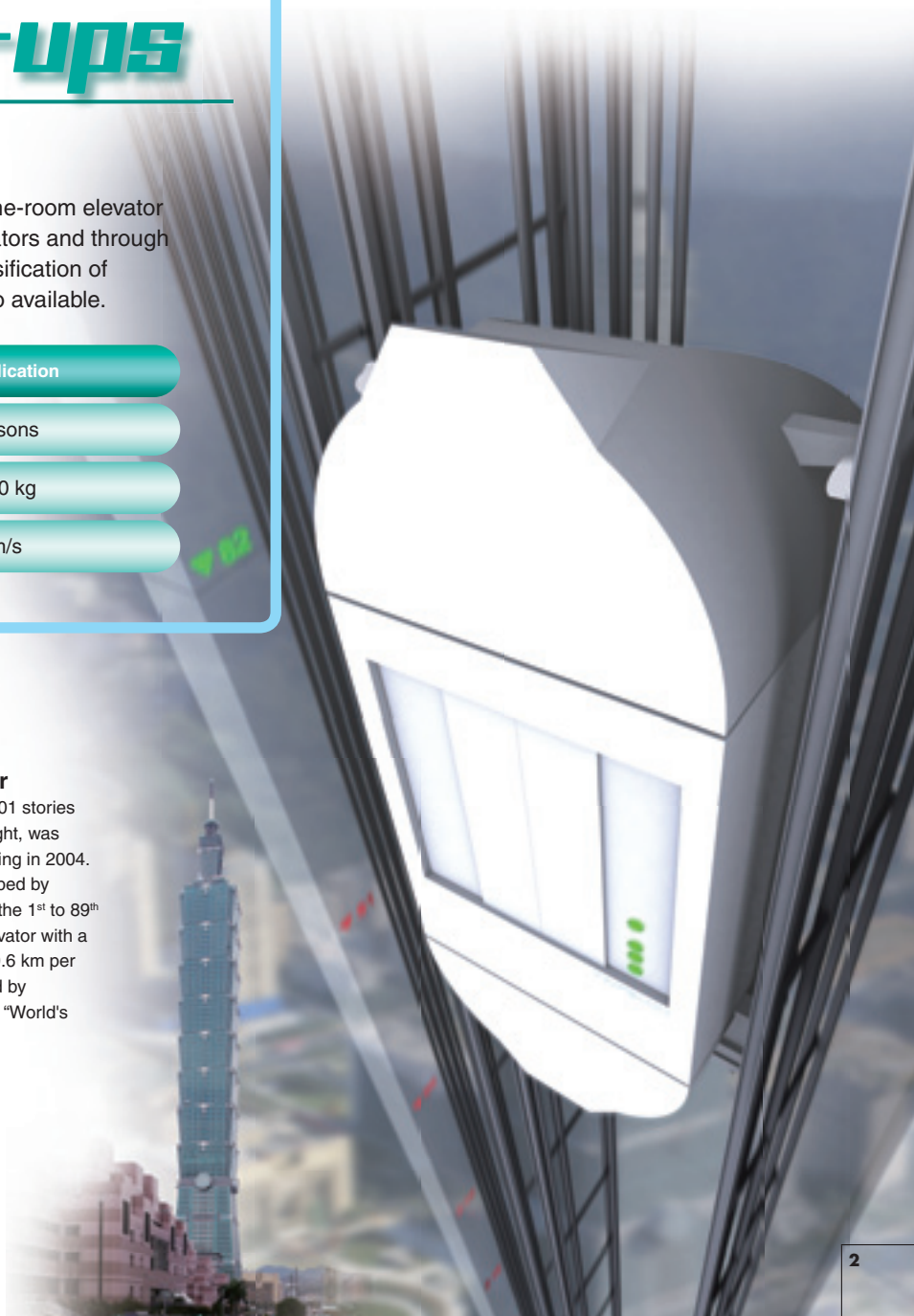
「SL-1」

# Wide line-ups

## Product line-ups

Toshiba offers wide variety of compact-machine-room elevator line-ups, which include 8-24 passengers elevators and through type double entrance elevators. To meet diversification of customer's demand, sufficient options are also available.

| Scope of application | Range of application |
|---|---|
| Passenger (persons) | 8 – 24 persons |
| Rated load (kg) | 630 – 1800 kg |
| Rated speed (m/s) | 1 – 2.5 m/s |



**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".

# Space and energy saving / Product line up

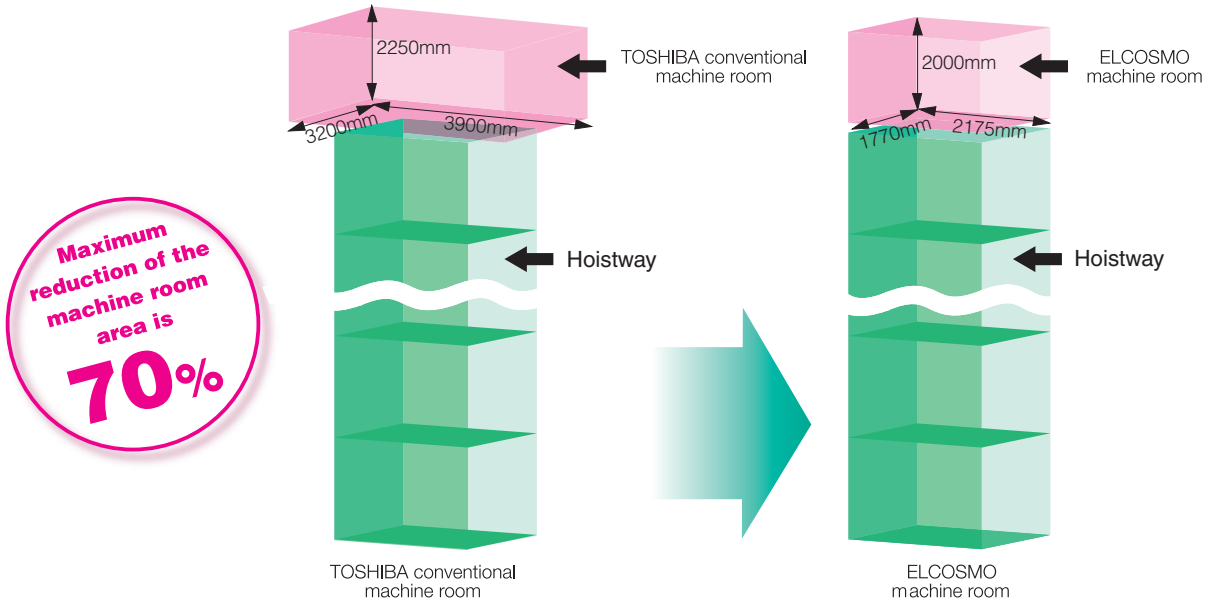
| Item | ELCOSMO | Conventional elevator |
|---|---|---|
| Area of installation of the elevator facility (area of the elevator hoistway + area of the machine room) | ◎ | |
| Load effect of elevator facility | ○ | |
| Freedom of architectural design | ◎ | |
| Protrusion machine room on the roof | ○ |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

●Comparison between ELCOSMO and conventional Elevator.

◎ : Particularly superior
○ : Superior

## Space saving

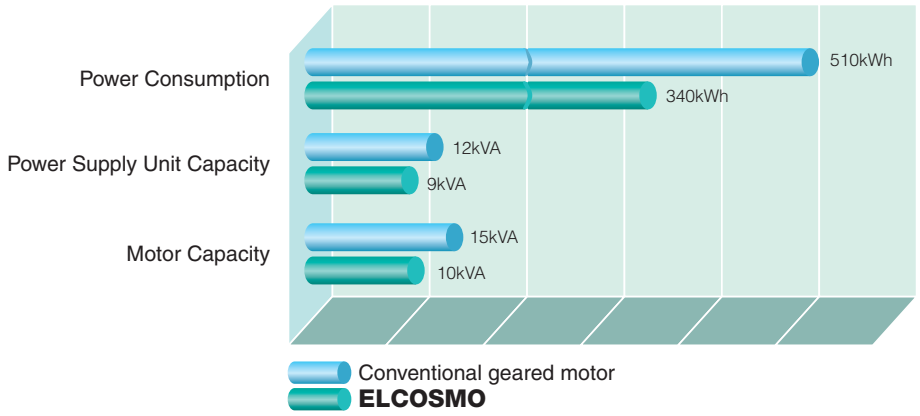
The TOSHIBA compact-machine-room elevator lives up to its names with a machine room only half size of a conventional elevator's machine room. That reduction translates into savings in space and construction materials even while meeting the preconditions of service space for maintenance. Best of all, the minimized space requirements give architects more freedom in design and in creation of imaginative buildings.




The above data are based on 13 persons (1000kg) a ride.

| | TOSHIBA conventional machine room | ELCOSMO machine room | Decrease |
|---|---|---|---|
| Machine room size | 3200×3900mm | 2175×1770mm | 70% |
| Machine room height | 2250mm | 2000mm | 250mm |
| Machine room area | 12.48m² | 3.85m² | 8.63m² |
| Overhead | 4500mm | 4300mm | 200mm |

## Energy saving




Reduction in power consumption of 33%

Based on monthly power consumption
- 1000 starts a day
- 25 days a month

The above data is based on 13 persons (1000kg) capacity elevator.

## Product line up

Toshiba offers wide variety of compact-machine-room line-ups, which include 8-24 persons elevators and through type double entrance elevators. To meet diversification of customer's demand, sufficient options are also available.

| Rated speed (m/s) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2.5 | ELCOSMO | | | | | | | |
| | 2 | | | | | | | | |
| | 1.75 | | | | | | | | |
| | 1.6 | | | | | | | | |
| | 1 | | | | | | | | |
| Rated load (kg) | | 630 | 800 | 1000 | 1150 | 1275 | 1350 | 1600 | 1800 |
| Type | | P8 | P10 | P13 | P15 | P17 | P18 | P21 | P24 |

Line-up 89 types available

## Environmentally conscious products

**- Providing environmentally conscious products (ELCOSMO)**

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.

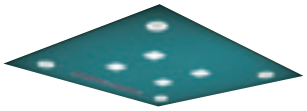
# New design

## New car design

### New car design was developed and realizes more comfortable.



Sample pictures of「SL-1」



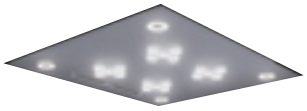
SL-1



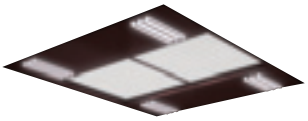
SL-2



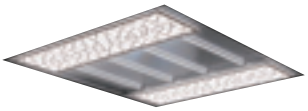
SL-3



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

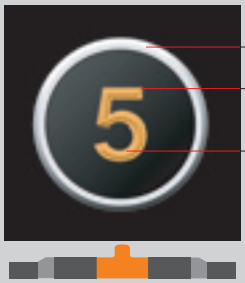
## Newly designed operating panel, button and indicator were adopted for easy-use.

### ✻ Standard models:

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



UB-1 UB-2






COP-U1S-1



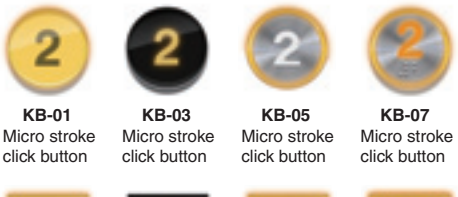
HIB-U1A-1

### ✻ Option models:

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

✻ For example:

OPTION



**KB-01** Micro stroke click button
**KB-03** Micro stroke click button
**KB-05** Micro stroke click button
**KB-07** Micro stroke click button
**KB-02** Micro stroke click button
**KB-04** Micro stroke click button
**KB-06** Micro stroke click button
**KB-08** Micro stroke click button

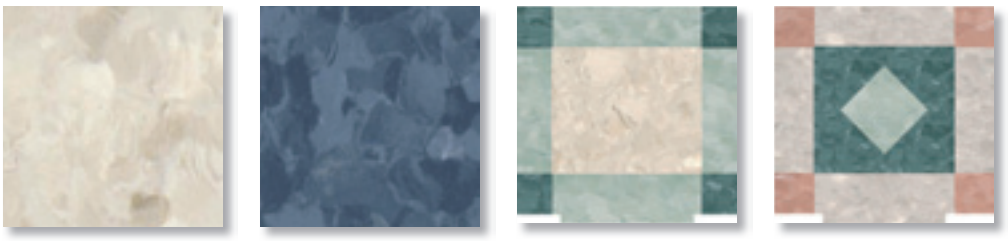
# New floor tiles design

## 17 colors available

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

✻ For example:

OPTION OPTION



MID809 MID834 TSF-1E TSF-2C

# Car designs

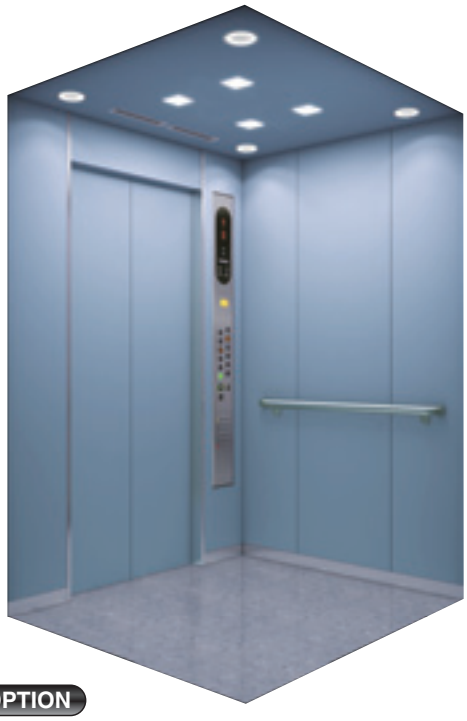
STANDARD

## SL-1



**Specifications of the Car**

| | |
|---|---|
| Ceiling panel | Lacquer finish steel panel : 105B |
| Side panel | Lacquer finish steel panel : 105B |
| Car door | Lacquer finish steel panel : 105B |
| 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 |



**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 |

OPTION

## SL-3



**Specifications of the Car**

| | |
|---|---|
| Ceiling panel | Lacquer finish steel panel : 38YR |
| 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 |

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

OPTION

# 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-01 |
| Sill | Hardened aluminum |
| Floor | Vinyl tile : MID833 |

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

# Car designs

OPTION

## 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-01 |
| 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 |

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

OPTION

# 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 |



OPTION

# 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 |

OPTION

# DX-13

**Specifications of the Car**

| | |
|---|---|
| Ceiling panel | Lacquer finish steel panel : 29R |
| Side panel | Lacquer finish steel panel : 29R |
| Car door | Lacquer finish steel panel : 29R |
| 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.

# Car designs

OPTION

## DX-21



**Specifications of the Car**

| | |
|---|---|
| Ceiling panel | Lacquer finish steel panel : 29R |
| 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<br>(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 |

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

OPTION

# 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-01 |
| 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-01 |
| Sill | Hardened aluminum |
| Floor | Artificial marble : TSF1B |
| Hand rail | Hairline finish stainless steel |

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

# Operation systems

## Car operating panels • Hall operating panels



COP-U1S-1

STANDARD



HIB-U1A-1 HIB-U2A-1



UB-1



COP-U1S-1

STANDARD



HIB-U1A-2 HIB-U2A-2



UB-2



COP-U1W-1

OPTION



HIB-U1W-2 HIB-U2A-3



KB-01



COP-U1W-2

OPTION



HIB-U1W-2 HIB-U2A-2



KB-02



COP-U1W-3

OPTION



HIB-U1W-3 HIB-U2A-3



KB-03

COP-U1W-4 assembled button KB-04



KB-04



COP-U1W-5

OPTION



HIB-U1W-5 HIB-U2A-5



KB-05

COP-U1W-6 assembled button KB-06



KB-06

## Buttons

STANDARD



**UB-1** Tactile button

**UB-2** Tactile button

OPTION



**KB-01** Micro stroke click button

**KB-02** Micro stroke click button

**KB-03** Micro stroke click button

**KB-04** Micro stroke click button

**KB-05** Micro stroke click button

**KB-06** Micro stroke click button

**KB-07** Micro stroke click button

**KB-08** Micro stroke click button



**KB-01** Micro stroke click button

**KB-02** Micro stroke click button

**KB-03** Micro stroke click button

**KB-04** Micro stroke click button

**KB-05** Micro stroke click button

**KB-06** Micro stroke click button

**KB-07** Micro stroke click button

**KB-08** Micro stroke click button



COP-U1W-7

OPTION



HIB-U1W-7 HIB-U2A-7



KB-07



COP-U1W-8

OPTION



HIB-U1W-8 HIB-U2A-8



KB-08



COP-U1A-1

OPTION



HIB-U1A-1 HIB-U2A-1



UB-1

COP-U1A-2 assembled button UB-2



UB-2



COP-U1D-1

OPTION



HIB-U1A-1 HIB-U2A-1



UB-1

COP-U1D-2 assembled button UB-2



UB-2

## Hall buttons

STANDARD



**HB-1**
Molded plastic (laminated by hairline finish stainless steel)

OPTION



**HS-1**
Hairline finish stainless steel

## Hall lantern

OPTION



**HL-4**

## Hand rail

OPTION



## Hall indicators

OPTION



**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



OPTION

## Proposed hall design

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

**Hall door**
Hairline finish stainless steel panel

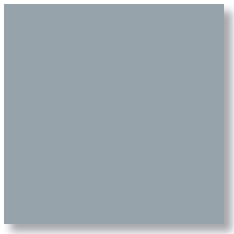
**Hall position indicator**
Digital indicator display (HPI-3)

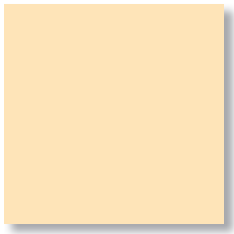
**Hall lantern**
Translucent acrylic, Hairline finish stainless steel panel face plate (HL-4)

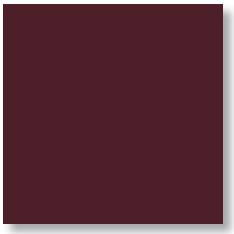
**Hall sill**
Hardened aluminium

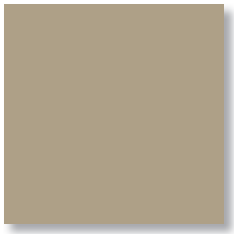
**Hall button**
Hairline finish stainless steel face plate (HB-1)

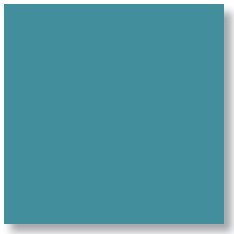
## Car door, Side panel, Ceilling panel, Hall door and Jamb (Lacquer finish steel panel) STANDARD

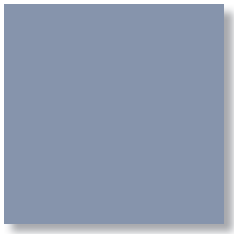

3N

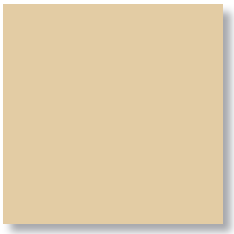

62Y

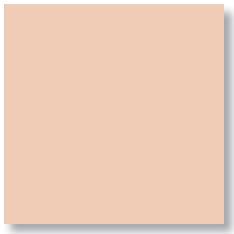

29R


41YR


105B

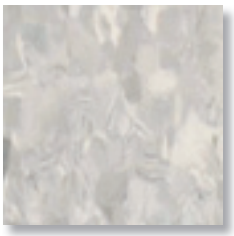

114PB


38YR


52YR

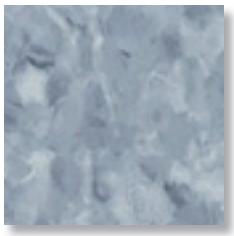
## Floor tile (Vinyl tile) STANDARD


MID809

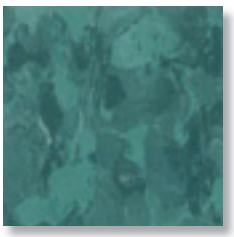

MID806

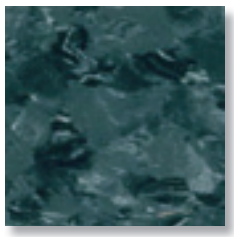

MID831

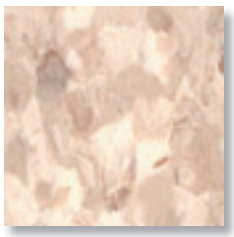

MID829


MID833


MID834

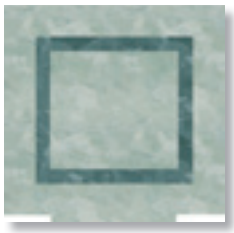

MID832

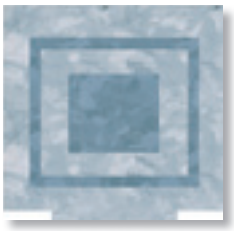

MID815


MID823

## Floor tile (Artificial marble) OPTION


TSF-1A


TSF-1B


TSF-1C


TSF-1D


TSF-1E


TSF-2A


TSF-2B


TSF-2C

# Service Features

## Descriptions of 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.)

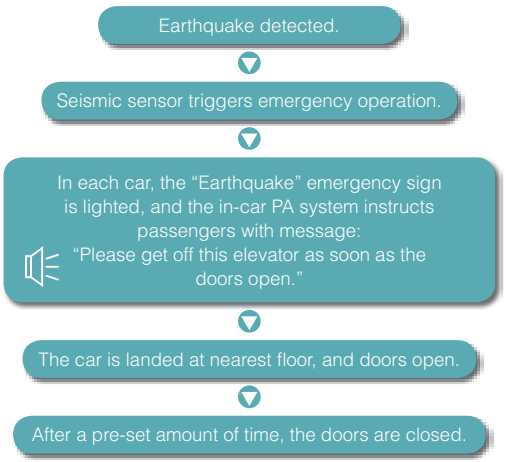
*Repetitive Door Opening / Closing*

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.

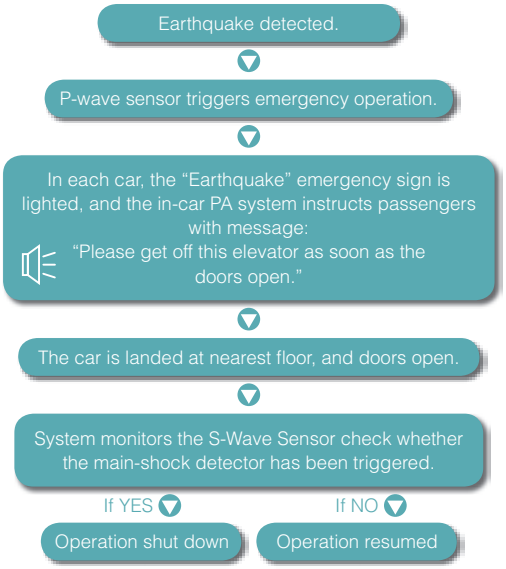
*Earthquake Emergency Operation (Option 1)*

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 (Option 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.



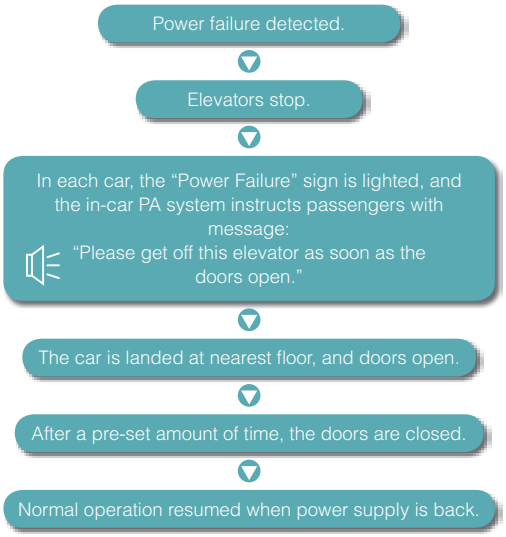

*Fire Emergency Operation*

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 (option)*

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 (option)*

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 (option)*

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 (option, 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 (option, 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 (option)*

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 (option)*

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

*Stop At All Floors (option)*

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 (option, 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 (option)*

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

## Electronic voice announcements provide passengers with operation information.

*Auto Announce Function (option)*

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 (option)*

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 (option)*

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

*Car BGM System (option)*

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

*Extended Door Open Button (option)*

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.

## Machine rooms

1. Construction work of machine-rooms and installation works of their entrances (including sound proofing work if necessary)
2. Fire-proofing work for machine rooms and opening work for machine room floors.
3. Installation work of machine beam supports and spacers.
4. Cinder concreting and its finishing work after floor piping in machine rooms.
5. Installation work of hooks or beams on ceilings in machine rooms.
6. Installation work of stairs leading to machine rooms and stairs in machine rooms (if necessary)
7. Installation work of lighting windows.
8. Dust-proof finish of the floor.

## 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

| Type | Notes | Standard | Option |
|---|---|---|---|
| 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/machine room) (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 | ● | |

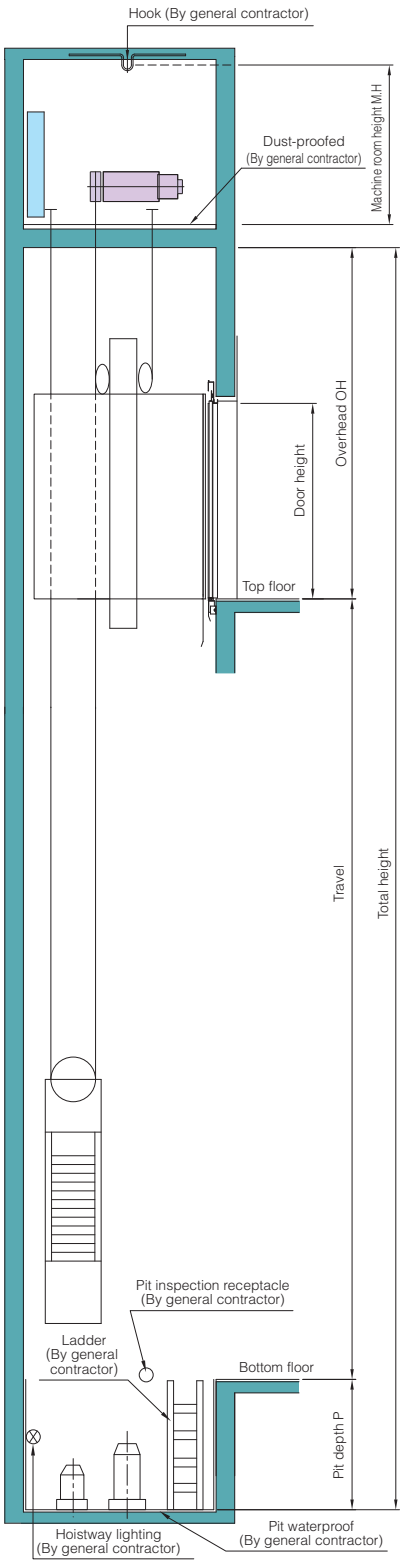
| Type | Notes | Standard | Option |
|---|---|---|---|
| Service Functions | Repetitive door opening safety | ● | |
| | Car indicator (built in cop) | ● | |
| | Door nudging | | ○ |
| | Adjustable door open timing | ● | |
| | Door open extension button | | ○ |
| | Car chime (install at car top and bottom) (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:**

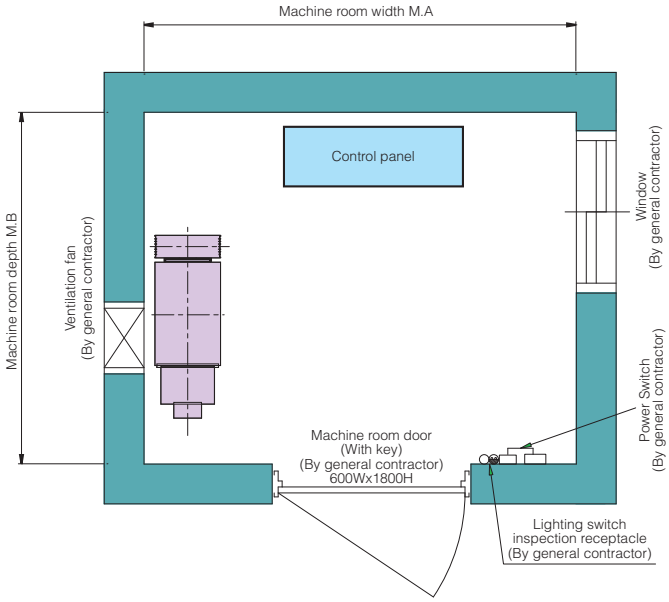
1. Not applicable to a through-type car.
2. Fire emergency operation and Fireman service cannot be applied simultaneously.
3. Standard function for 2-car operation or 3-car operation.
4. For the details of Interface for building automation system, please contact us.
5. Only for 16 stops or below, both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

# Hoistway layout

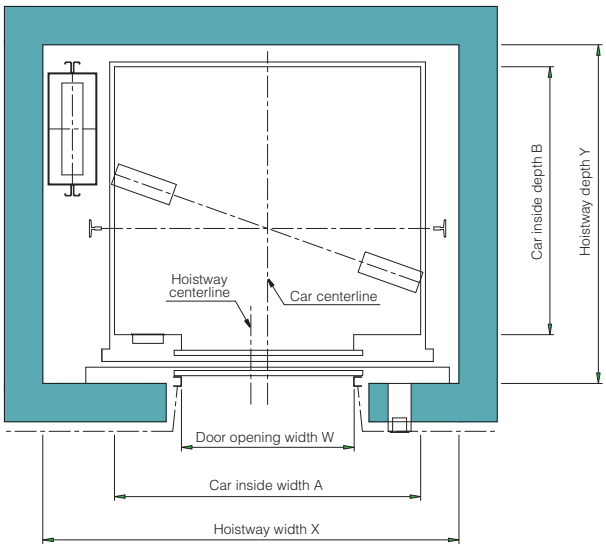
## Counterweight at side




Hoistway section




Machine room plan




Hoistway plan

## Specifications

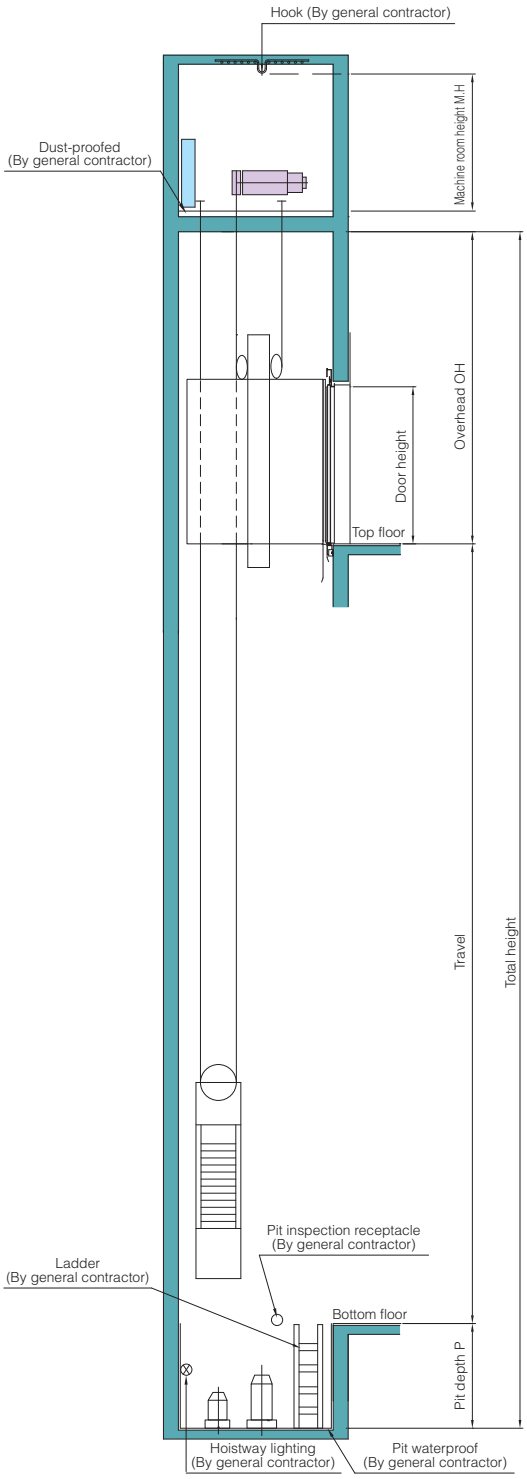
| Type | | Nos.of Person | Capacity (kg) | Speed (m/s) | Cage size (mm) Internal (A x B) | Door width W (mm) | Hoistway size (mm) X x Y | Hoistway size (mm) OH | Hoistway size (mm) P | Machine room dimensoins (mm) M.A x M.B | Machine room dimensoins (mm) M.H | Motor capacity (kw) | Max. service stops (s) | Max. travel (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P8-CO60 | W | 8 | 630 | 1 | 1100x1400 | 800 | 1820x1770 | 4050 | 1300 | 1820x1770 | 2000 | 3.6 | 24 | 60 |
| | W | | | | | 900 | 2000x1770 | | | 2000x1770 | | | | |
| P8-CO96 | W | | | 1.6 | | 800 | 1820x1770 | 4300 | 1400 | 1820x1770 | | 5.8 | 32 | 100 |
| | W | | | | | 900 | 2000x1770 | | | 2000x1770 | | | | |
| P8-CO105 | W | | | 1.75 | | 800 | 1820x1770 | 4300 | 1450 | 1820x1770 | | 6.3 | 32 | 100 |
| | W | | | | | 900 | 2000x1770 | | | 2000x1770 | | | | |
| P8-CO120 | W | | | 2 | | 800 | 1820x1770 | 4350 | 1650 | 1820x1770 | | 7.2 | 40 | 125 |
| | W | | | | | 900 | 2000x1770 | | | 2000x1770 | | | | |
| P8-CO150 | W | | | 2.5 | | 800 | 1820x1770 | 4350 | 2100 | 1820x1770 | | 9.0 | 40 | 125 |
| | W | | | | | 900 | 2000x1770 | | | 2000x1770 | | | | |
| P10-CO60 | W | 10 | 800 | 1 | 1350x1400 | 800 | 1945x1770 | 4050 | 1300 | 1945x1770 | 2000 | 4.6 | 24 | 60 |
| | W | | | | | 900 | 2050x1770 | | | 2050x1770 | | | | |
| P10-CO96 | W | | | 1.6 | | 800 | 1945x1770 | 4300 | 1400 | 1945x1770 | | 7.3 | 32 | 100 |
| | W | | | | | 900 | 2050x1770 | | | 2050x1770 | | | | |
| P10-CO105 | W | | | 1.75 | | 800 | 1945x1770 | 4300 | 1450 | 1945x1770 | | 8.0 | 32 | 100 |
| | W | | | | | 900 | 2050x1770 | | | 2050x1770 | | | | |
| P10-CO120 | W | | | 2 | | 800 | 1945x1770 | 4350 | 1650 | 1945x1770 | | 9.2 | 40 | 125 |
| | W | | | | | 900 | 2050x1770 | | | 2050x1770 | | | | |
| P10-CO150 | W | | | 2.5 | | 800 | 1945x1770 | 4350 | 2100 | 1945x1770 | | 11.4 | 40 | 125 |
| | W | | | | | 900 | 2050x1770 | | | 2050x1770 | | | | |
| P10-CO60 | D | 10 | 800 | 1 | 1100x1700 | 800 | 1820x2070 | 4050 | 1300 | 1820x2070 | 2000 | 4.6 | 24 | 60 |
| | D | | | | | 900 | 2000x2070 | | | 2000x2070 | | | | |
| P10-CO96 | D | | | 1.6 | | 800 | 1820x2070 | 4300 | 1400 | 1820x2070 | | 7.3 | 32 | 100 |
| | D | | | | | 900 | 2000x2070 | | | 2000x2070 | | | | |
| P10-CO105 | D | | | 1.75 | | 800 | 1820x2070 | 4300 | 1450 | 1820x2070 | | 8.0 | 32 | 100 |
| | D | | | | | 900 | 2000x2070 | | | 2000x2070 | | | | |
| P10-CO120 | D | | | 2 | | 800 | 1820x2070 | 4350 | 1650 | 1820x2070 | | 9.2 | 40 | 125 |
| | D | | | | | 900 | 2000x2070 | | | 2000x2070 | | | | |
| P10-CO150 | D | | | 2.5 | | 800 | 1820x2070 | 4350 | 2100 | 1820x2070 | | 11.4 | 40 | 125 |
| | D | | | | | 900 | 2000x2070 | | | 2000x2070 | | | | |
| P13-CO60 | W | 13 | 1000 | 1 | 1600x1400 | 900 | 2175x1770 | 4050 | 1300 | 2175x1770 | 2000 | 5.7 | 24 | 60 |
| | W | | | | | 1000 | 2275x1770 | | | 2275x1770 | | | | |
| P13-CO96 | W | | | 1.6 | | 900 | 2175x1770 | 4300 | 1400 | 2175x1770 | | 9.2 | 32 | 100 |
| | W | | | | | 1000 | 2275x1770 | | | 2275x1770 | | | | |
| P13-CO105 | W | | | 1.75 | | 900 | 2175x1770 | 4300 | 1450 | 2175x1770 | | 10.0 | 32 | 100 |
| | W | | | | | 1000 | 2275x1770 | | | 2275x1770 | | | | |
| P13-CO120 | W | | | 2 | | 900 | 2175x1770 | 4350 | 1650 | 2175x1770 | | 11.4 | 40 | 125 |
| | W | | | | | 1000 | 2275x1770 | | | 2275x1770 | | | | |
| P13-CO150 | W | | | 2.5 | | 900 | 2175x1770 | 4350 | 2100 | 2175x1770 | | 14.3 | 40 | 125 |
| | W | | | | | 1000 | 2275x1770 | | | 2275x1770 | | | | |
| P13-CO60 | D | 13 | 1000 | 1 | 1100x2100 | 800 | 1820x2470 | 4050 | 1300 | 1820x2470 | 2000 | 5.7 | 24 | 60 |
| | D | | | | | 900 | 2000x2470 | | | 2000x2470 | | | | |
| P13-CO96 | D | | | 1.6 | | 800 | 1820x2470 | 4300 | 1400 | 1820x2470 | | 9.2 | 32 | 100 |
| | D | | | | | 900 | 2000x2470 | | | 2000x2470 | | | | |
| P13-CO105 | D | | | 1.75 | | 800 | 1820x2470 | 4300 | 1450 | 1820x2470 | | 10.0 | 32 | 100 |
| | D | | | | | 900 | 2000x2470 | | | 2000x2470 | | | | |
| P13-CO120 | D | | | 2 | | 800 | 1820x2470 | 4350 | 1650 | 1820x2470 | | 11.4 | 40 | 125 |
| | D | | | | | 900 | 2000x2470 | | | 2000x2470 | | | | |
| P13-CO150 | D | | | 2.5 | | 800 | 1820x2470 | 4350 | 2100 | 1820x2470 | | 14.3 | 40 | 125 |
| | D | | | | | 900 | 2000x2470 | | | 2000x2470 | | | | |

**Note:**

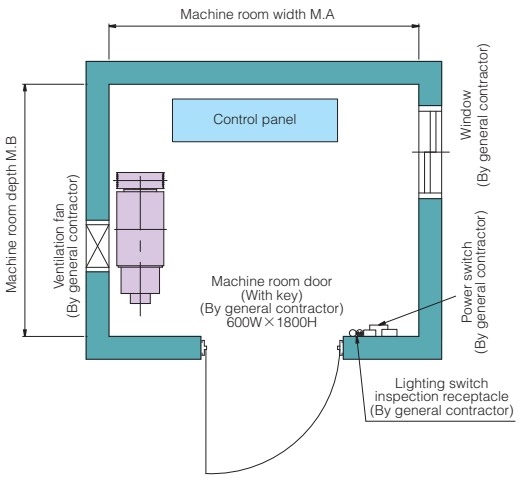
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- Hoistway dimensions are the minimum requirement.
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- In case that more than one (simplex) elevator is required, please contact us.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- Example: P13W W: Wide car D: Deep car

# Hoistway layout

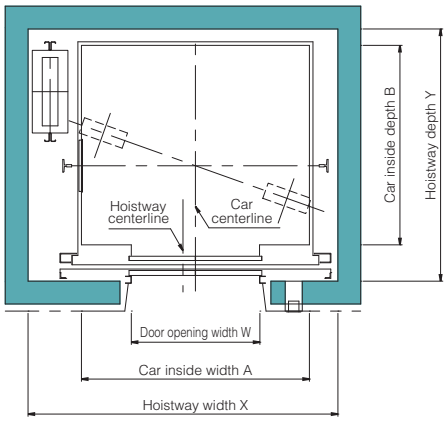
## Counterweight at side



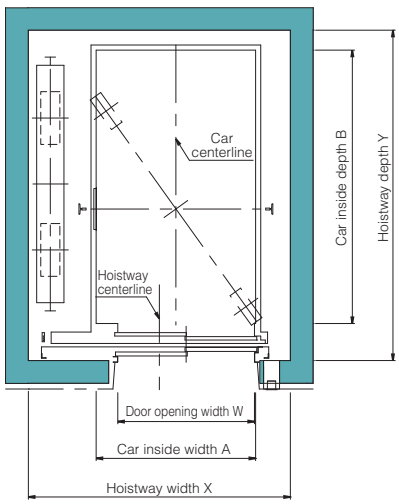

Hoistway section




Machine room plan




Center opening door
hoistway plan
(Type: P15W)




Two panel slide door
Hoistway plan
(Type: P17D, P21D)

## Specifications

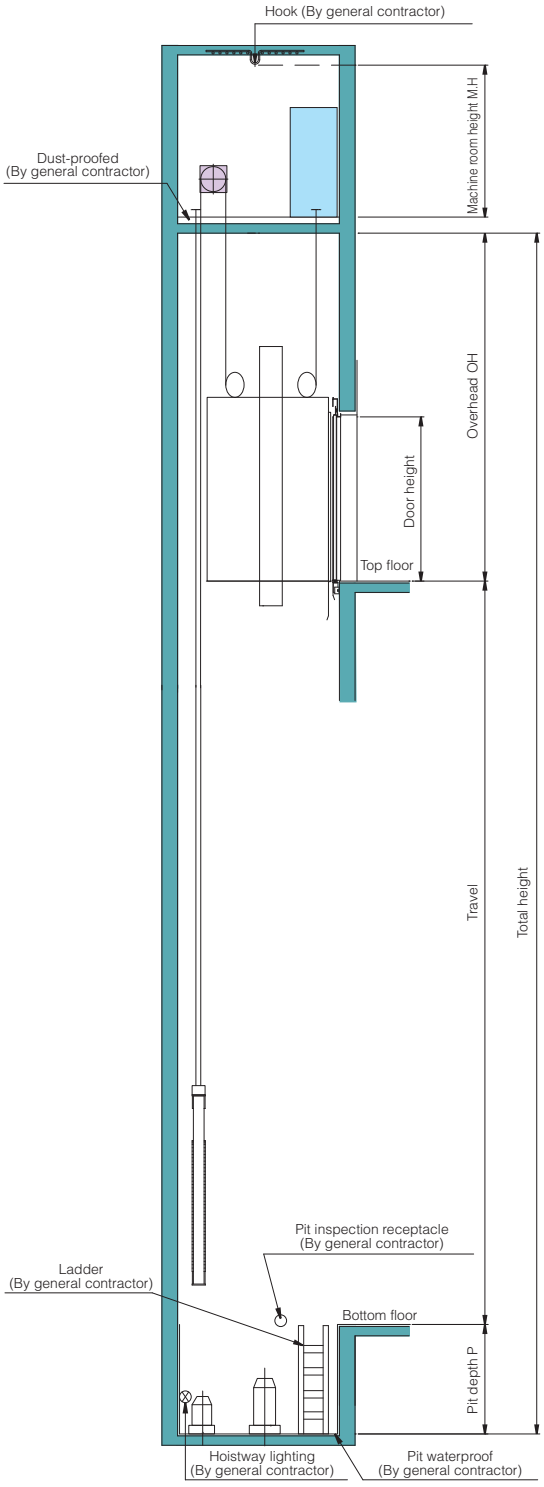
| Type | | Nos.of Person | Capacity (kg) | Speed (m/s) | Cage size (mm) Internal (A x B) | Door width W (mm) | Hoistway size (mm) X x Y | OH | P | Machine room dimensoins (mm) M.A x M.B | M.H | Motor capacity (kw) | Max. service stops (s) | Max. travel (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P15-CO60 | W | 15 | 1150 | 1 | 1800x1500 | 1000 | 2500x1980 | 4050 | 1300 | 2500x1980 | 2000 | 7.3 | 24 | 60 |
| | W | | | | | 1100 | 2600x1980 | | | 2600x1980 | | | | |
| P15-CO96 | W | | | 1.6 | | 1000 | 2500x1980 | 4300 | 1400 | 2500x1980 | | 11.6 | 32 | 100 |
| | W | | | | | 1100 | 2600x1980 | | | 2600x1980 | | | | |
| P15-CO105 | W | | | 1.75 | | 1000 | 2500x1980 | 4300 | 1450 | 2500x1980 | | 12.6 | 32 | 100 |
| | W | | | | | 1100 | 2600x1980 | | | 2600x1980 | | | | |
| P15-CO120 | W | | | 2 | | 1000 | 2500x1980 | 4350 | 1650 | 2500x1980 | | 14.4 | 40 | 125 |
| | W | | | | | 1100 | 2600x1980 | | | 2600x1980 | | | | |
| P15-CO150 | W | | | 2.5 | | 1000 | 2500x1980 | 4700 | 2100 | 2500x1980 | | 18.0 | 40 | 125 |
| | W | | | | | 1100 | 2600x1980 | | | 2600x1980 | | | | |
| P17-2S60 | D | 17 | 1275 | 1 | 1200x2300 | 1100 | 2100x2850 | 4050 | 1300 | 2100x2850 | 2200 | 8.7 | 24 | 60 |
| P17-2S96 | D | | | 1.6 | | | | 4300 | 1400 | | | 14.0 | 32 | 100 |
| P17-2S105 | D | | | 1.75 | | | | 4300 | 1450 | | | 16.0 | 32 | 100 |
| P17-2S120 | D | | | 2 | | | | 4350 | 1650 | | | 18.0 | 40 | 125 |
| P17-2S150 | D | | | 2.5 | | | | 4700 | 2100 | | | 20.0 | 40 | 125 |
| P21-2S60 | D | 21 | 1600 | 1 | 1400x2400 | 1200 | 2300x2950 | 4050 | 1300 | 2300x2950 | 2200 | 10.0 | 24 | 60 |
| P21-2S96 | D | | | 1.6 | | | | 4300 | 1400 | | | 16.0 | 32 | 100 |
| P21-2S105 | D | | | 1.75 | | | | 4300 | 1450 | | | 18.0 | 32 | 100 |
| P21-2S120 | D | | | 2 | | | | 4350 | 1650 | | | 20.0 | 40 | 125 |
| P21-2S150 | D | | | 2.5 | | | | 4700 | 2100 | | | 24.0 | 40 | 125 |

### Note:

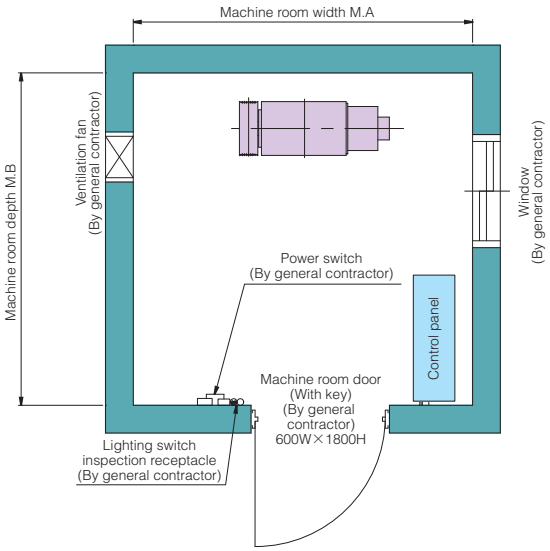
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- Hoistway dimensions are the minimum dimension after the building work.
- Hoistway dimensions are the minimum requirement.
- The hoistway structure wall must be 150mm thick or more.
- Piping, wiring and cables not related to elevator are prohibited inside the hoistway.
- In case that more than one (simplex) elevator is required, please contact us.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- Example: P15W W: Wide car D: Deep car

# Hoistway layout

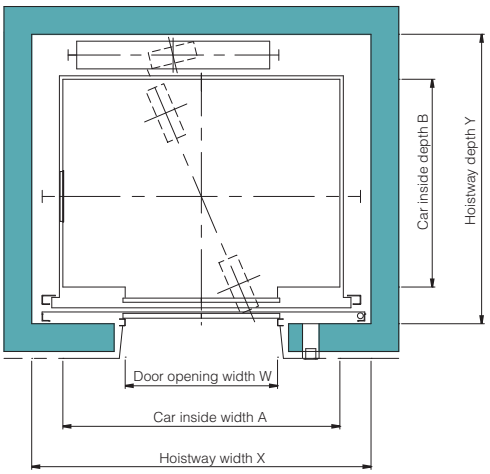
## Counterweight at rear




Hoistway section




Machine room plan




Hoistway plan

## Specifications

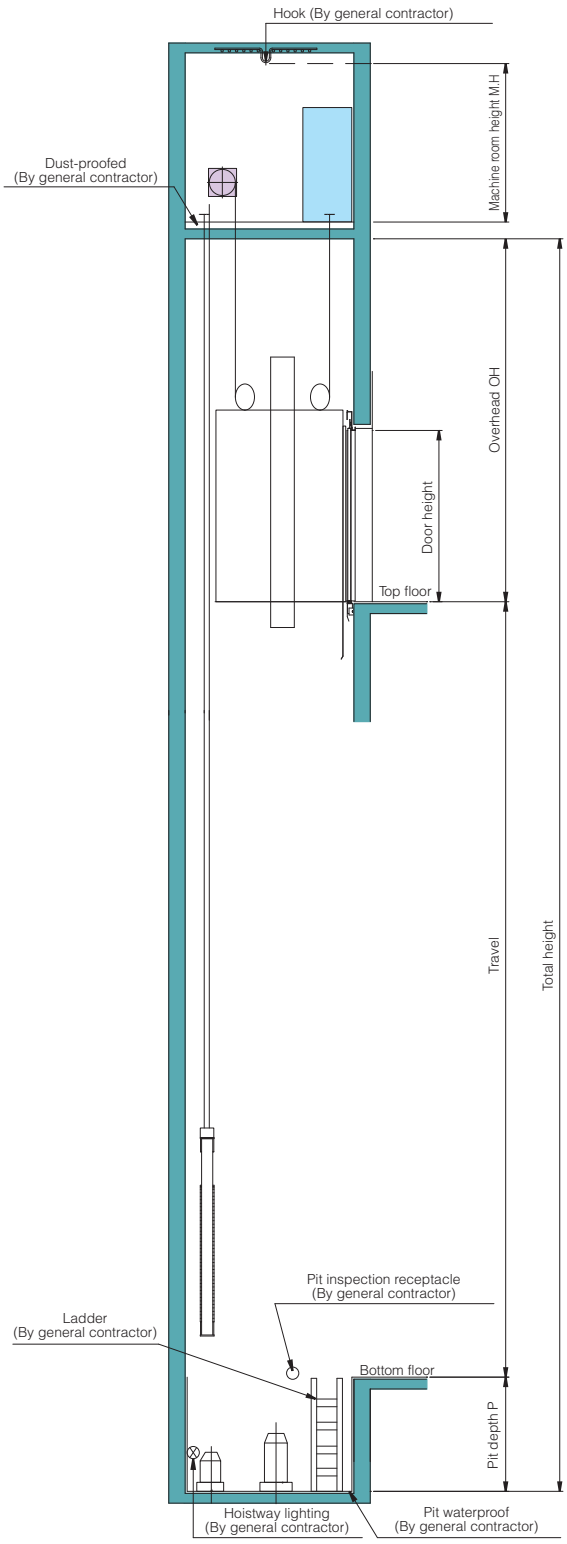
| Type | | Nos.of Person | Capacity (kg) | Speed (m/s) | Cage size (mm) Internal (A x B) | Door width W (mm) | Hoistway size (mm) X x Y | Hoistway size (mm) OH | Hoistway size (mm) P | Machine room dimensoins (mm) M.A x M.B | Machine room dimensoins (mm) M.H | Motor capacity (kw) | Max. service stops (s) | Max. travel (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P8-CO60 | W | 8 | 630 | 1 | 1400x1100 | 800 | 1850x1680 | 4050 | 1300 | 1850x1680 | 2000 | 3.6 | 24 | 60 |
| | W | | | | | 900 | 1950x1680 | | | 1950x1680 | | | | |
| P8-CO96 | W | | | 1.6 | | 800 | 1850x1680 | 4300 | 1400 | 1850x1680 | | 5.8 | 32 | 100 |
| | W | | | | | 900 | 1950x1680 | | | 1950x1680 | | | | |
| P8-CO105 | W | | | 1.75 | | 800 | 1850x1680 | 4300 | 1450 | 1850x1680 | | 6.3 | 32 | 100 |
| | W | | | | | 900 | 1950x1680 | | | 1950x1680 | | | | |
| P8-CO120 | W | | | 2 | | 800 | 1950x1780 | 4350 | 1650 | 1950x1780 | | 7.2 | 40 | 125 |
| | W | | | | | 900 | 2050x1780 | | | 2050x1780 | | | | |
| P8-CO150 | W | | | 2.5 | | 800 | 1950x1780 | 4350 | 2100 | 1950x1780 | | 9.0 | 40 | 125 |
| | W | | | | | 900 | 2050x1780 | | | 2050x1780 | | | | |
| P10-CO60 | W | 10 | 800 | 1 | 1400x1350 | 800 | 1850x2000 | 4050 | 1300 | 1850x2000 | 2000 | 4.6 | 24 | 60 |
| | W | | | | | 900 | 1950x2000 | | | 1950x2000 | | | | |
| P10-CO96 | W | | | 1.6 | | 800 | 1850x2000 | 4300 | 1400 | 1850x2000 | | 7.3 | 32 | 100 |
| | W | | | | | 900 | 1950x2000 | | | 1950x2000 | | | | |
| P10-CO105 | W | | | 1.75 | | 800 | 1850x2000 | 4300 | 1450 | 1850x2000 | | 8.0 | 32 | 100 |
| | W | | | | | 900 | 1950x2000 | | | 1950x2000 | | | | |
| P10-CO120 | W | | | 2 | | 800 | 1950x2100 | 4350 | 1650 | 1950x2100 | | 9.2 | 40 | 125 |
| | W | | | | | 900 | 2050x2100 | | | 2050x2100 | | | | |
| P10-CO150 | W | | | 2.5 | | 800 | 1950x2100 | 4350 | 2100 | 1950x2100 | | 11.4 | 40 | 125 |
| | W | | | | | 900 | 2050x2100 | | | 2050x2100 | | | | |
| P13-CO60 | W | 13 | 1000 | 1 | 1600x1400 | 900 | 2100x2050 | 4050 | 1300 | 2100x2050 | 2000 | 5.7 | 24 | 60 |
| | W | | | | | 1000 | 2200x2050 | | | 2200x2050 | | | | |
| P13-CO96 | W | | | 1.6 | | 900 | 2100x2050 | 4300 | 1400 | 2100x2050 | | 9.2 | 32 | 100 |
| | W | | | | | 1000 | 2200x2050 | | | 2200x2050 | | | | |
| P13-CO105 | W | | | 1.75 | | 900 | 2100x2050 | 4300 | 1450 | 2100x2050 | | 10.0 | 32 | 100 |
| | W | | | | | 1000 | 2200x2050 | | | 2200x2050 | | | | |
| P13-CO120 | W | | | 2 | | 900 | 2200x2150 | 4350 | 1650 | 2200x2150 | | 11.4 | 40 | 125 |
| | W | | | | | 1000 | 2300x2150 | | | 2300x2150 | | | | |
| P13-CO150 | W | | | 2.5 | | 900 | 2200x2150 | 4350 | 2100 | 2200x2150 | | 14.3 | 40 | 125 |
| | W | | | | | 1000 | 2300x2150 | | | 2300x2150 | | | | |

### Note:

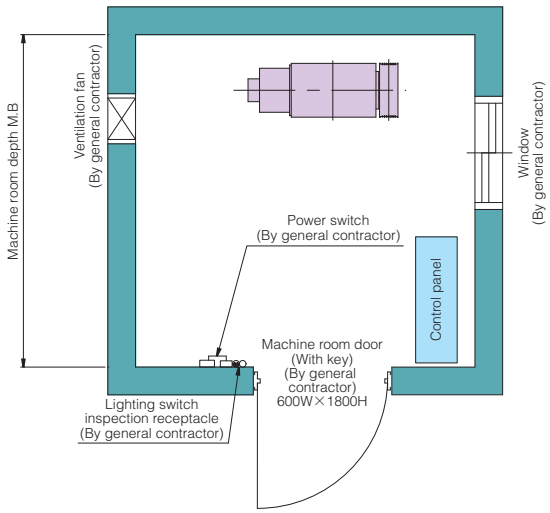
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- Hoistway dimensions are the minimum dimension after the building work.
- Hoistway dimensions are the minimum requirement.
- The hoistway structure wall must be 150mm thick or more.
- Piping, wiring and cables not related to elevator are prohibited inside the hoistway.
- In case that more than one (simplex) elevator is required, please contact us.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- Example: P13W W: Wide car

# Hoistway layout

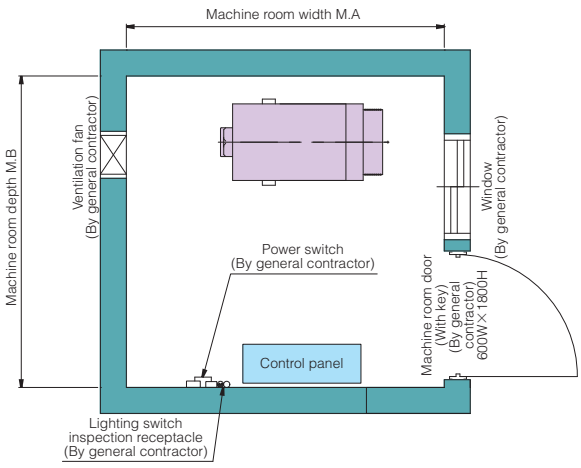
## Counterweight at rear



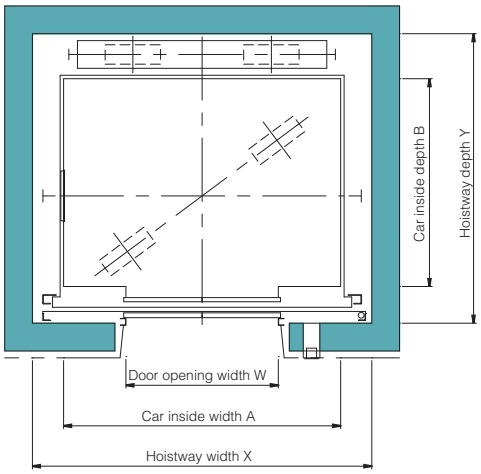

Hoistway section




Machine room plan(P15W)




Machine room plan(P17W～P24W)




Hoistway plan

## Specifications

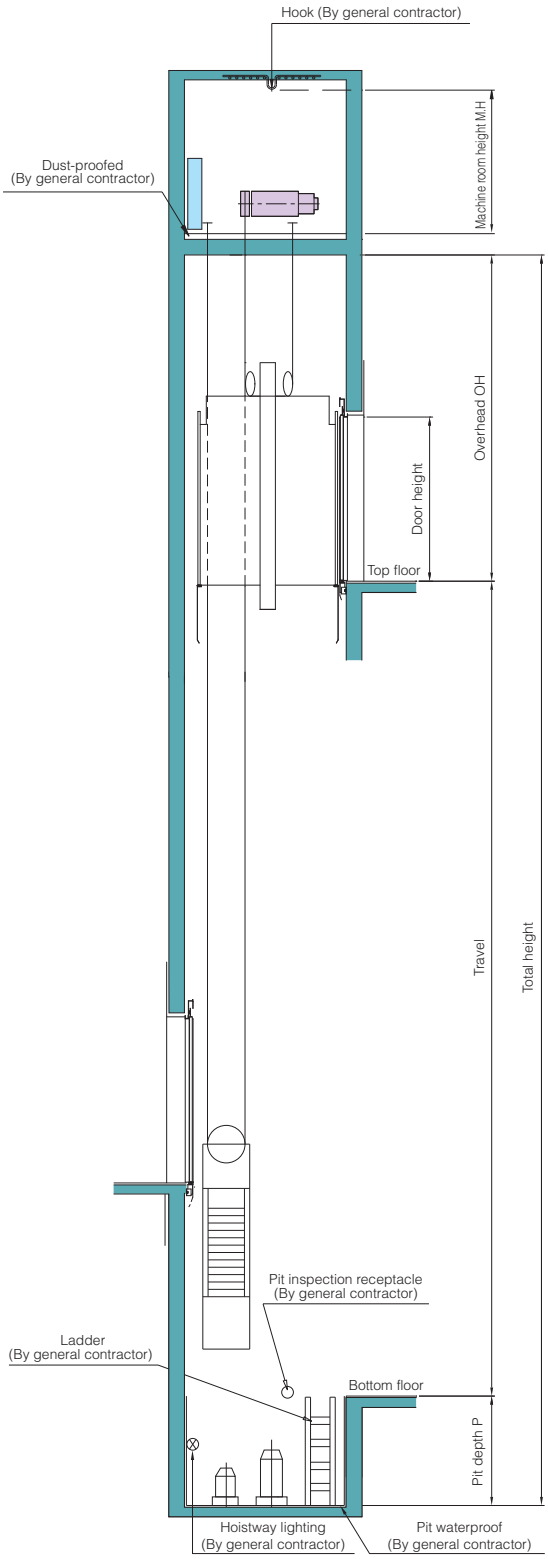
| Type | | Nos.of Person | Capacity (kg) | Speed (m/s) | Cage size (mm) Internal (A x B) | Door width W (mm) | Hoistway size (mm) X x Y | OH | P | Machine room dimensoins (mm) M.A x M.B | M.H | Motor capacity (kw) | Max. service stops (s) | Max. travel (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P15-CO60 | W | 15 | 1150 | 1 | 1800x1500 | 1000 | 2300x2190 | 4050 | 1300 | 2300x2190 | 2200 | 7.3 | 24 | 60 |
| | W | | | | | 1100 | 2450x2190 | | | 2450x2190 | | | | |
| P15-CO96 | W | | | 1.6 | | 1000 | 2300x2190 | 4300 | 1400 | 2300x2190 | | 11.6 | 32 | 100 |
| | W | | | | | 1100 | 2450x2190 | | | 2450x2190 | | | | |
| P15-CO105 | W | | | 1.75 | | 1000 | 2300x2190 | 4300 | 1450 | 2300x2190 | | 12.6 | 32 | 100 |
| | W | | | | | 1100 | 2450x2190 | | | 2450x2190 | | | | |
| P15-CO120 | W | | | 2 | | 1000 | 2300x2190 | 4350 | 1650 | 2300x2190 | | 14.4 | 40 | 125 |
| | W | | | | | 1100 | 2450x2190 | | | 2450x2190 | | | | |
| P15-CO150 | W | | | 2.5 | | 1000 | 2300x2190 | 4700 | 2100 | 2300x2190 | | 18.0 | 40 | 125 |
| | W | | | | | 1100 | 2450x2190 | | | 2450x2190 | | | | |
| P17-CO60 | W | 17 | 1275 | 1 | 2000x1400 | 1100 | 2550x2100 | 4050 | 1300 | 2550x2100 | 2200 | 8.7 | 24 | 60 |
| P17-CO96 | W | | | 1.6 | | | | 4300 | 1400 | | | 14.0 | 32 | 100 |
| P17-CO105 | W | | | 1.75 | | | | 4300 | 1450 | | | 16.0 | 32 | 100 |
| P17-CO120 | W | | | 2 | | | | 4350 | 1650 | | | 18.0 | 40 | 125 |
| P17-CO150 | W | | | 2.5 | | | | 4700 | 2100 | | | 20.0 | 40 | 125 |
| P18-CO60 | W | 18 | 1350 | 1 | 2000x1500 | 1100 | 2550x2200 | 4050 | 1300 | 2550x2200 | 2200 | 8.7 | 24 | 60 |
| P18-CO96 | W | | | 1.6 | | | | 4300 | 1400 | | | 14.0 | 32 | 100 |
| P18-CO105 | W | | | 1.75 | | | | 4300 | 1450 | | | 16.0 | 32 | 100 |
| P18-CO120 | W | | | 2 | | | | 4350 | 1650 | | | 18.0 | 40 | 125 |
| P18-CO150 | W | | | 2.5 | | | | 4700 | 2100 | | | 20.0 | 40 | 125 |
| P21-CO60 | W | 21 | 1600 | 1 | 2000x1700 | 1100 | 2550x2400 | 4050 | 1300 | 2550x2400 | 2200 | 10.0 | 24 | 60 |
| | W | | | | | 1200 | 2700x2400 | | | 2700x2400 | | | | |
| P21-CO96 | W | | | 1.6 | | 1100 | 2550x2400 | 4300 | 1400 | 2550x2400 | | 16.0 | 32 | 100 |
| | W | | | | | 1200 | 2700x2400 | | | 2700x2400 | | | | |
| P21-CO105 | W | | | 1.75 | | 1100 | 2550x2400 | 4300 | 1450 | 2550x2400 | | 18.0 | 32 | 100 |
| | W | | | | | 1200 | 2700x2400 | | | 2700x2400 | | | | |
| P21-CO120 | W | | | 2 | | 1100 | 2550x2400 | 4350 | 1650 | 2550x2400 | | 20.0 | 40 | 125 |
| | W | | | | | 1200 | 2700x2400 | | | 2700x2400 | | | | |
| P21-CO150 | W | | | 2.5 | | 1100 | 2550x2400 | 4700 | 2100 | 2550x2400 | | 24.0 | 40 | 125 |
| | W | | | | | 1200 | 2700x2400 | | | 2700x2400 | | | | |
| P24-CO60 | W | 24 | 1800 | 1 | 2100x1750 | 1200 | 2700x2450 | 4050 | 1400 | 2700x2450 | 2200 | 12.0 | 24 | 60 |
| P24-CO96 | W | | | 1.6 | | | | 4300 | 1550 | | | 18.0 | 32 | 100 |
| P24-CO105 | W | | | 1.75 | | | | 4300 | 1650 | | | 20.0 | 32 | 100 |
| P24-CO120 | W | | | 2 | | | | 4350 | 1900 | | | 22.0 | 40 | 125 |

### Note:

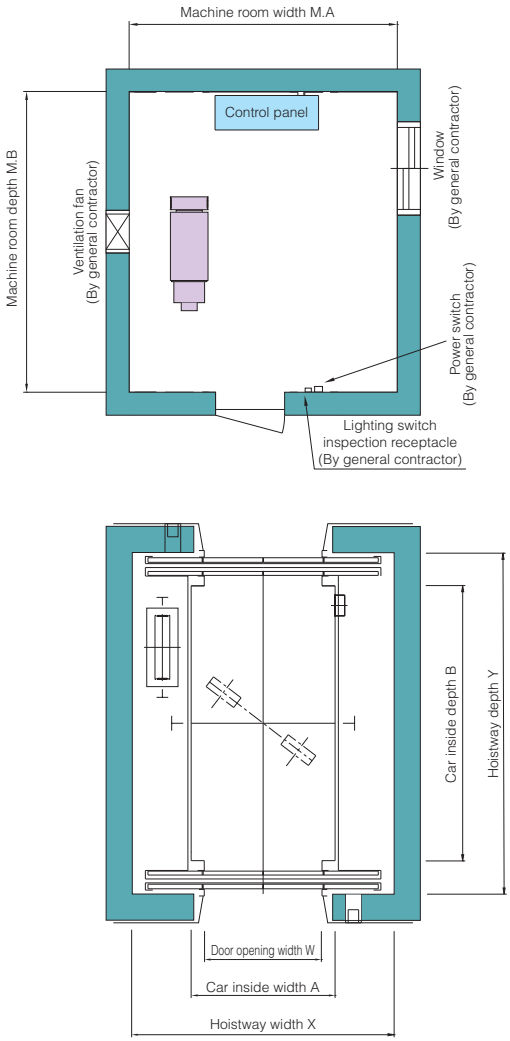
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- Hoistway dimensions are the minimum requirement.
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- In case that more than one (simplex) elevator is required, please contact us.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- Example: P15W W: Wide car

# Hoistway layout

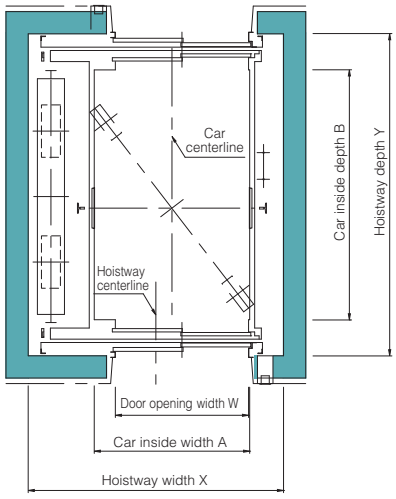
## Front and rear opening door (Counterweight at side)




Front and rear opening
hoistway section




Front and rear opening
hoistway plan
(Type: P13D2)




Front and rear opening
hoistway plan
(Type: P21D2)

## 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 | Machine room dimensoins (mm) M.A x M.B | M.H | Motor capacity (kw) | Max. service stops (s) | Max. travel (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **P13-CO60** | D2 | 13 | 1000 | 1 | 1100x2100 | 800 | 1820x2610 | 4050 | 1300 | 1820x2610 | 2000 | 5.7 | ※1 | |
| **P13-CO96** | D2 | | | 1.6 | | | | 4300 | 1400 | | | 9.2 | | |
| **P13-CO105** | D2 | | | 1.75 | | | | 4300 | 1450 | | | 10.0 | | |
| **P13-CO120** | D2 | | | 2 | | | | 4350 | 1650 | | | 11.4 | | |
| **P13-CO150** | D2 | | | 2.5 | | | | 4700 | 2100 | | | 14.3 | | |
| **P21-2S60** | D2 | 21 | 1600 | 1 | 1400x2300 | 1200 | 2300x2970 | 4050 | 1300 | 2300x2970 | 2200 | 10.0 | ※1 | |
| **P21-2S96** | D2 | | | 1.6 | | | | 4300 | 1400 | | | 16.0 | | |
| **P21-2S105** | D2 | | | 1.75 | | | | 4300 | 1450 | | | 18.0 | | |
| **P21-2S120** | D2 | | | 2 | | | | 4350 | 1650 | | | 20.0 | | |
| **P21-2S150** | D2 | | | 2.5 | | | | 4700 | 2100 | | | 24.0 | | |

※1 Please contact us.

### Note:

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- In case that more than one (simplex) elevator is required, please contact us.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- The front and rear opening floor are less than 8 floor
- Example: P13D2 D2: Front and rear opening door deep car

# Global network

**Together with our global partners, we will connect with Asia and then the world, through our technology and our spirit.**
**The planet is our shared heritage. We must live together, grow together and delight in one another.**

### TOSHIBA ELEVATOR (SHENYANG) CO.,LTD.
Head Office: No.5 Feiyun Road Hunnan New District Shenyang, The People's Republic of China



### TOSHIBA ELEVATOR (CHINA) CO.,LTD.
Head Office: No. 685 Wen Chuan Road, Baoshan District, Shanghai 201901, The People's Republic of China.



### MS ELEVATORS Sdn. Bhd.
Head Office: 8th Floor Wisma Penang Garden, 42 Jalan Sultan Ahmad Shah, 10050 Penang, Malaysia.
Factory: 2530, Lorong Perusahaan 10, Prai Industrial Estate, 13600 Prai, Province, Wellesley, Malaysia.



### MS ELEVATORS ENGINEERING Sdn. Bhd.
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KL Office: Wisma MS, No.15, Jalan 2/116 D, Kuchai Entrepreneurs' Park, Off Jalan Kuchai Lama, 58200 Kuala Lumpur, Malaysia.

### CHEVALIER HONGKONG LTD.
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### CHEVALIER SINGAPORE HOLDINGS PTE LTD.
Head Office: CHEVALIER HOUSE. 23 Genting Road #07-01/02 349681 Singapore

### TOSHIBA ELEVATOR KOREA INC.
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Chung-Gu, Seoul 100-191, the Republic of Korea



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671-1242 Japan




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PHONE: +81-3-5423-3389 FAX: +81-3-5423-2746

**http://www.toshiba-elevator.co.jp**

## 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

TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION

5-27, Kitashinagawa 6-chome, Shinagawa-ku,
Tokyo 141-0001 Japan
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- The data given in this catalog are subject to change without notice.

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