

TOSHIBA

Leading Innovation >>>

ELCOSMO-III

TOSHIBA **COMPACT MACHINE ROOM** ELEVATORS
STANDARD PASSENGER ELEVATOR

TOSHIBA
eco style

COSMO-III

TOSHIBA COMPACT MACHINE ROOM ELEVATORS

Reduced Energy Consumption

Development of new technology continuously to achieve lower energy consumption
Reduction of Standby Power Consumption, LED Lighting, Use of Roller Guide, Energy Regeneration

Technology

Technique Reveals the Strength of Science and Technology

Original designs and products by Toshiba, Advanced manufacturing, Strict Inspection

Environmentally Conscious

Toshiba Makes Positive Approaches for Environmental Conservation

Supply of Environmental Friendly Products, Noise Control, Lead-free Design of Base Plate, RoHS Compliance and Elimination of Specific Chemical Substances

Original Designed and Manufactured Traction machine, Control panel and Door motor by Toshiba

Traction Machine

- ◆ Toshiba has manufactured motors for over 100 years since 1895. The motors produced by Toshiba promised better quality assurance and quality control.
- ◆ Compact PMSM (Permanent Magnet Synchronous Motor) for space saving.
- ◆ Over 30% lower in power consumption (compared to conventional electric motor).
- ◆ Gearless traction without gear oil for low vibration, low noise and better environmental conservation.
- ◆ Long-axis motor design for a smaller motor diameter, winding in beam, advanced and compact.

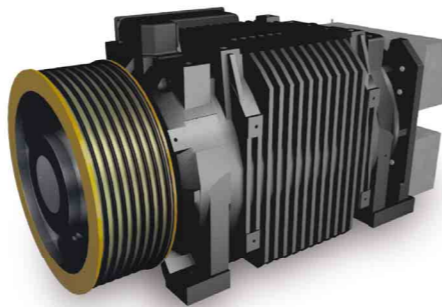
Control Panel

- ◆ Use of multi-functional circuit board.
- ◆ Use of circuit board type relay and simplified component design.
- ◆ Compact size and reduction of installation space.

Door Motor

The latest door control system designed and manufactured by Toshiba is used, and high-performance rotary transformer is used as a speed detector to achieve high reliability, high performance and excellent safety.

- ◆ High reliability: Toshiba's careful design, strict testing and precise manufacture ensure high reliability of its products.
- ◆ High performance: The current-speed double closed loop control system together with the high-performance rotary transformer provides accurate control of door speed and position to ensure quiet and smooth operation.
- ◆ Excellent safety: Door motor current is fully under monitoring. Even if safety edge and light curtain for door failed, the door control device will detect the current abnormality immediately and stop the operation to protect the passengers from harm.



Use of Roller Guide

Roller guide is used instead of the conventional sliding guide shoe. It is featured with:

- ◆ Comfort: Using the successful vibration damping solution from the high-end elevator type, riding comfort is further improved after roller guide is mounted on the car.
- ◆ High efficiency: Visible improvement of the mechanical efficiency with lower friction and energy consumption.
- ◆ Compactness: Due to the advanced design of compact spring-type roller guide, the damping spring which used to be laid horizontally is set upright to further reduce the space occupied by the guide and thus available for all existing types of machine by overcoming the space limitation.
- ◆ Environmental conservation: The parts such as lubrication oil and lubrication unit are eliminated and replaced with long-life rubber roller to reduce environmental pollution.

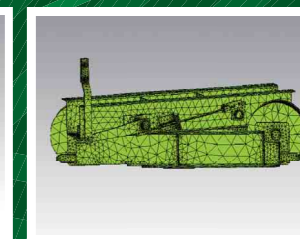
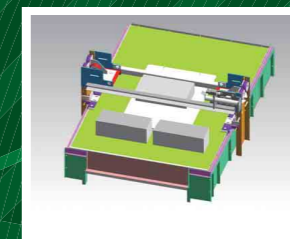


More Scientific Structure

Newly designed car structure in which car sheave has been moved from the top to the bottom of the car.

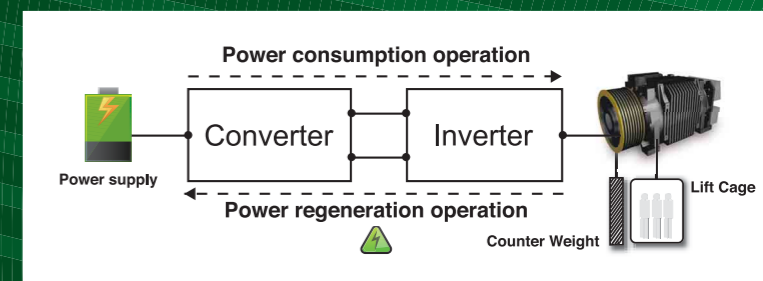
The maintenance space above the car is more spacious than ever to improve serviceability and safety of inspection and repair on a full scale.

Besides, the application of the car sheave mechanism under the car and FEM analysis has minimized the vibration transmitted from the wire rope and guide rail to the inside of the car due to the perfect balance between strength, rigidity and vibration to give passengers the greatest riding comfort as always.



Energy Regeneration OPTIONAL

Toshiba emphasizes on environmental conservation all the time. The consumption of energy feedback system is different from using regenerative resistance. Energy regenerative device feeds energy back to the power grid while the traction machine is under power generation to achieve high-efficiency energy utilization and suppress the temperature rise in the machine room, which results in over 38% energy conservation (with the assumption of 1050kg, 1.75m/s, 12-hour operation per day, 25 days per month).



Reduction of Standby Power Consumption

Functions such as lighting auto sleep, ventilation auto sleep are introduced as standard specifications. Power consumption during standby mode has been improved to reduce power consumption of control panel during standby and save electric energy.

LED Lighting

Under equal brightness, theoretically the LED lighting system only consumes 10% of an incandescent lamp and 50% of a fluorescent lamp. The environment-friendly features of LED lighting include: 1) reduction of carbon dioxide and other wastes; 2) no hazardous heavy metals, such as mercury and lead; 3) no flashing, ultraviolet components and radiation pollution.

Supply of Environmentally Friendly Products

- ◆ Dry guide rail without lubricant oil.
- ◆ Maintenance-free designed oil buffer without leakage problem, which provides sustainable and reliable operation.

Noise Control

New developed gear engagement has significantly reduces the noise and vibration that would be caused by gear engagement of conventional gear-type traction machine. Lower motor rotor speed leads to noise reduction resulting from high-speed electric motor. Integration of VVVF control system and PMSM gearless system technology, makes riding more comfortable. In such an elevator, you will enjoy the feeling of elegance and grace while be taken to the desired floor.

Lead-free Design of Base Plate, RoHS Compliance and Elimination of Specific Chemical Substances (15 Classifications)

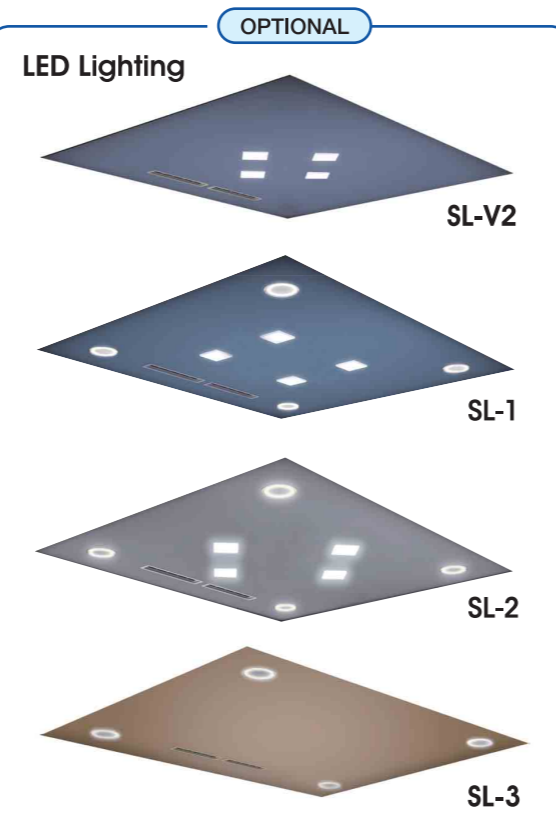
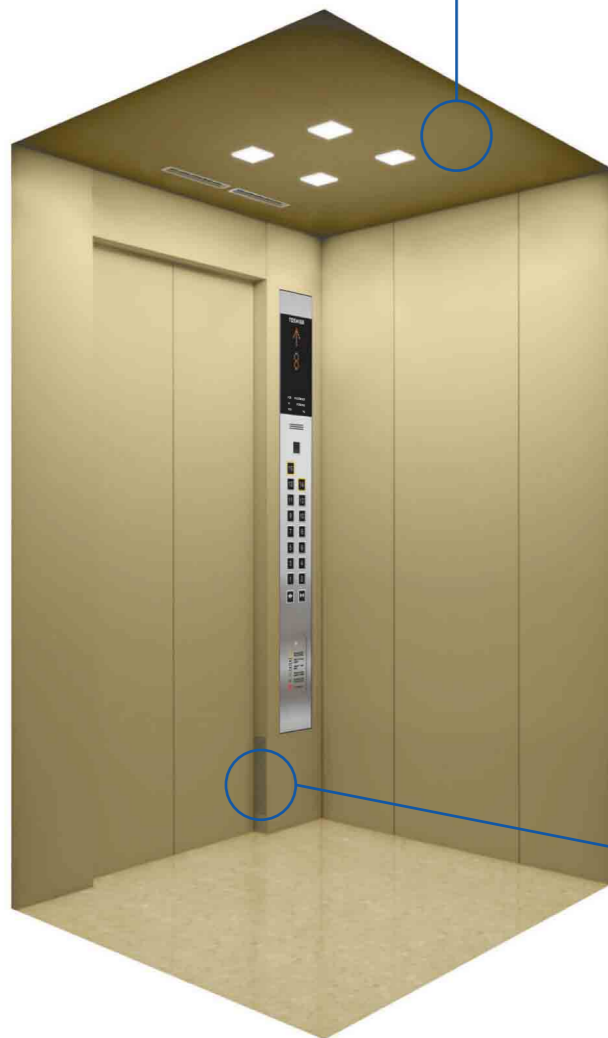
Continuous concern on the RoHS compliance, eliminating 15 classifications of specific chemical substances, and using the lead-free technique for main circuit boards.

Car Design

Car Design

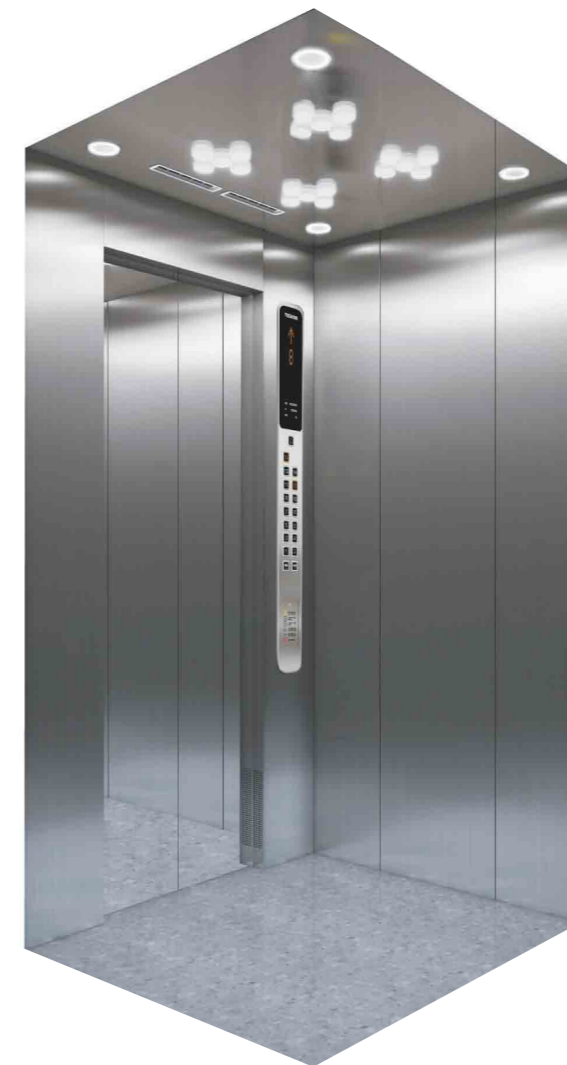
Car Ceiling SL-V1

STANDARD



Car Ceiling TL-1

OPTIONAL



Car Ceiling DX-21

OPTIONAL



Car Design

Four LED lights at the center, even lighting, no flashing

Ventilation	At the front of car ceiling
Car panels	Lacquer finish steel panel
Car door	Lacquer finish steel panel
Car operating panel	COP-G1S-1A-O
Car indicator	Car operating panel with digital car indicator
Flooring	Vinyl tile

Car Design

Flower pattern LED lights at the center, and round LED lights at corners, with elegant appearance

Ventilation	At the front of car ceiling
Car panels	Hairline finish stainless steel
Car door	Mirror finish stainless steel
Car operating panel	COP-G1U-4A-O
Car indicator	Car operating panel with digital car indicator
Flooring	Vinyl tile

Car Design

Down-light with propylene panel at the center, frosted acrylic on both sides

Ventilation	At the rear of car ceiling
Car panels	Hairline finish stainless steel
Car door	Mirror finish stainless steel
Car operating panel	COP-G1K-7A-O
Car indicator	Car operating panel with digital car indicator
Flooring	Vinyl tile
Hand rail	Stainless steel round type hand rail

Car Design

Car Design

Car Ceiling DX-22 OPTIONAL



Car Design
Acrylic at the center, down-light propylene panel on both sides.

Ventilation	At the rear of car ceiling
Car panels	Hairline finish stainless steel, Mirror etching finish stainless steel
Car door	Mirror finish stainless steel
Car operating panel	COP-G1K-7A-O
Car indicator	Car operating panel with digital car indicator
Flooring	Vinyl tile
Hand rail	Stainless steel round type hand rail

Car Ceiling DX-23 OPTIONAL



Car Design
Large-area lighting, simple and neat, high luminance

Ventilation	At the rear of car ceiling
Car panels	Black titanium hairline finish stainless steel, Mirror finish stainless steel
Car door	Black titanium hairline finish stainless steel
Car operating panel	COP-G1S-1A-O, with black titanium face plate
Car indicator	Car operating panel with digital car indicator
Flooring	Vinyl tile

Car Ceiling DX-24 OPTIONAL



Car Design
Large-area lighting, white square pattern at the center

Ventilation	At the rear of car ceiling
Car panels	Hairline finish stainless steel
Car door	Hairline finish stainless steel
Car operating panel	COP-G1S-1A-O
Car indicator	Car operating panel with digital car indicator
Flooring	Vinyl tile

Car Ceiling DX-25 OPTIONAL



Car Design
Golden car decoration combined with symmetrical top looks steady and magnificent.

Ventilation	At the rear of car ceiling
Car panels	Yellow titanium mirror finish stainless steel, Yellow titanium hairline finish stainless steel
Car door	Yellow titanium mirror finish stainless steel
Car operating panel	COP-G1S-1A-O, with yellow titanium face plate
Car indicator	Car operating panel with digital car indicator
Flooring	Vinyl tile
Hand rail	Stainless steel flat type hand rail

Operating Panel Design

Operating Panel Design

G1S Series

Thick Type

Car Operating Panel

Direction indication

Position indicator

FOR PASSENGER
14 PERSONS
1050 kg

Interphone

Emergency call button

Floor selection button

Door opening /closing buttons

COP-G1S-1A-O

Thick Type **STANDARD**

Hall Indicator Button

One Car Two Car

HIB-G1S-1A-O **HIB-G2S-1A-O**

※ "Operation indicator" can not mount on the faceplate of Hall indicator button.

Hall Button

ORANGE
(Orange light)

WHITE
(White light)

Thick Type

HIB-G1S-1A

Buttons

STANDARD		OPTIONAL		
GS-1A	GS-2A	GS-3A	GS-4A	Orange light
GS-1B	GS-2B	GS-3B	GS-4B	White light

G1K Series

Thick Type

Car Operating Panel

Direction indication

Position indicator

FOR PASSENGER
14 PERSONS
1050 kg

Interphone

Emergency call button

Floor selection button

Door opening /closing buttons

COP-G1K-7A-O

Thick Type **OPTIONAL**

Hall Indicator Button

One Car Two Car

HIB-G1K-7A-O **HIB-G2K-7A-O**

※ "Operation indicator" can mount on the faceplate of Hall indicator button.

Hall Button

ORANGE
(Orange light)

WHITE
(White light)

Thick Type

HIB-G1K-7A

Buttons

				OPTIONAL
KB-1	KB-2	KB-3	KB-4	Orange light
KB-5	KB-6	KB-7	KB-8	White light

※ This series of buttons are used for thin type faceplate design.

Operating Panel Design

Operating Panel Design

G1U Series

Thick Type

Car Operating Panel

Direction indication

Position indicator

FOR PASSENGER
14 PERSONS
1950 kg

Interphone

Emergency call button

Floor selection button

Door opening /closing buttons

COP-G1U-4A-O

Thick Type **OPTIONAL**

Hall Indicator Button

One Car

HIB-G1U-4A-O

Two Car

HIB-G2U-4A-O

※ "Operation indicator" can not mount on the faceplate of Hall indicator button.

Hall Button

Thick Type

ORANGE

(Orange light)

WHITE

(White light)

HB-G1S-1A

Buttons

OPTIONAL

GS-3A

GS-3B

GS-4A

GS-4B

Orange light

A

White light

B

Hall design decorations

Hall Indicator

HI-G1

OPTIONAL

Hall Lantern

HL-G1 **HL-G2**

※ LED lighting colour of Hall lantern can be chosen from orange or white.

Installation for Hall Indicator Button

* G1S, G1U Series

- Thick type design and compact size
- Φ60 threading holes, without damages to the building

* G1K Series : Thin type design for faceplate.

Simple Installation Structure

* G1S, G1U Series

- Hidden screw fixing, better aesthetic, secure, steal-proof
- Parking switch is separated from HIB, better design flexibility for faceplate

Hall Design

Other Optional Items



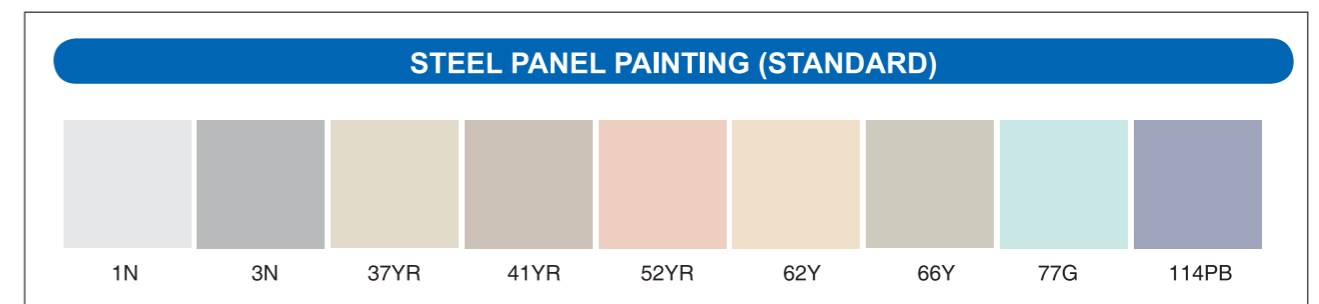
STANDARD

- Hall jamb**
Narrow type jamb (lacquer finish steel panel):
- Hall door**
Lacquer finish steel panel
- Hall position indicator button : HIB-G1S-1A-O**
Digital car indication
- Hall sill**
Hardened aluminium



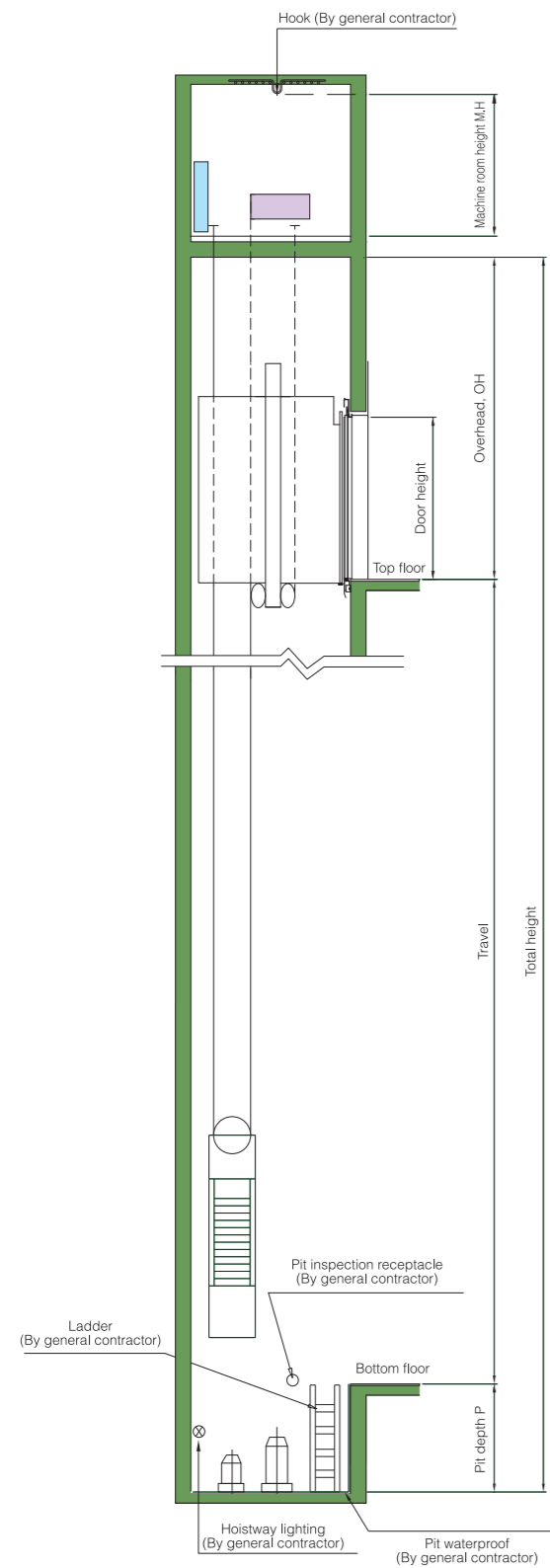
OPTIONAL

- Hall jamb**
Wide type jamb (Hairline finish stainless steel panel)
- Hall door**
Hairline finish stainless steel panel
- Hall position indicator : HI-G1**
Digital car indication
- Hall lantern : HL-G1**
Translucent acrylic, Hairline finish stainless steel panel
- Hall sill**
Hardened aluminium
- Hall button : HB-G1S-1A**
Thick Type faceplate

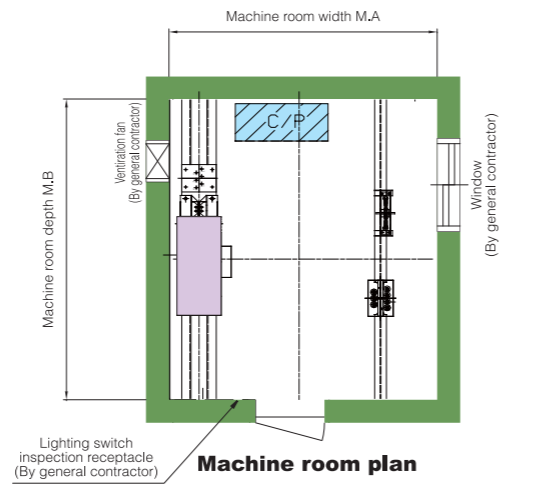


Hoistway Layout

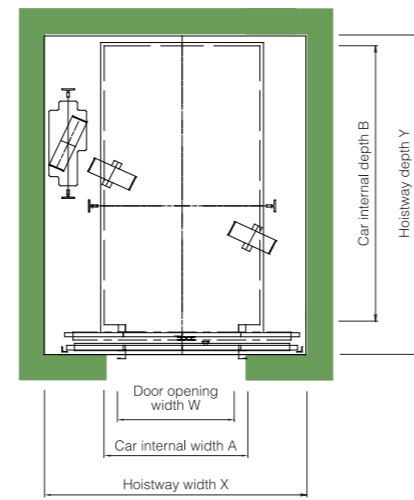
Specifications



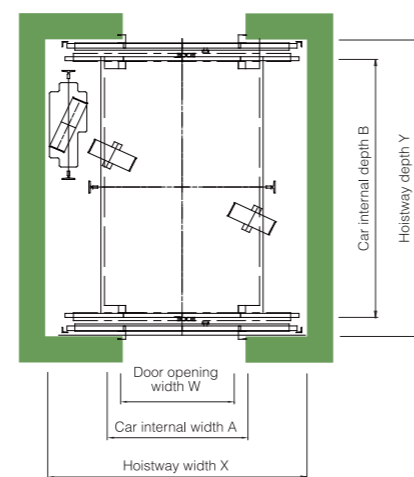
Hoistway section



Machine room plan



Hoistway plan (D)



Hoistway plan (D2)

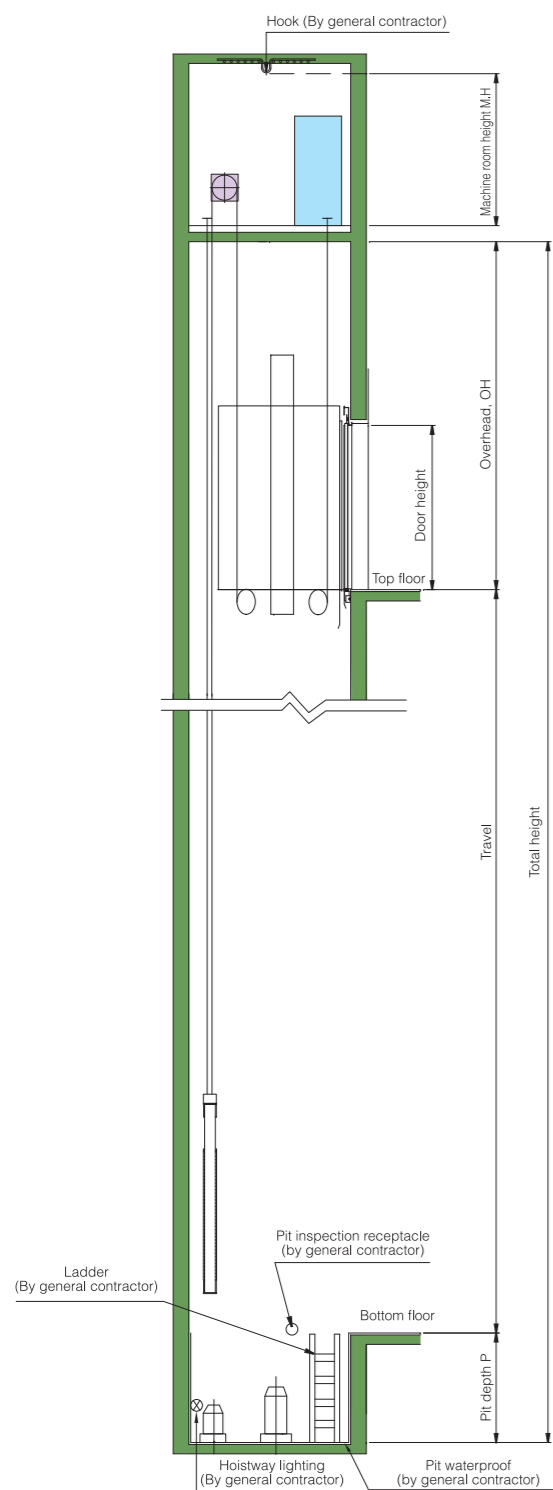
Type	Nos. of Person	Capacity (Kg)	Speed (m/s)	Cage size Internal (AxB) (mm)	Door width W (mm)	Hoistway size (mm)			Machine room dimensions (mm)		Motor capacity (kw)	Max. service stops (s)	Max. travel (m)
						XxY	OH	P	MAxMB	M.H			
P8-CO60	D		1	1100x1400	CO 800	1835x1725	3900	1300	1835x1725	2000	3.6	40	90
					CO 900	2020x1725			2020x1725				
P8-CO96	D		1.6	1100x1400	CO 800	1835x1725	4100	1400	1835x1725	2000	5.8	40	100
					CO 900	2020x1725			2020x1725				
P8-CO105	D	8	1.75	1100x1400	CO 800	1835x1725	4150	1450	1835x1725	2000	6.3	40	100
					CO 900	2020x1725			2020x1725				
P8-CO120	D		2	1100x1400	CO 800	1835x1725	4250	1650	1835x1725	2000	7.2	40	125
					CO 900	2020x1725			2020x1725				
P8-CO150	D		2.5	1100x1400	CO 800	1835x1725	4450	2100	1835x1725	2000	9	40	125
					CO 900	2020x1725			2020x1725				
P11-CO60	D		1	1100x1700	CO 800	1850x2000	3900	1300	1850x2000	2000	4.7	40	90
					CO 900	2020x2000			2020x2000				
					CO 800	1850x2150			1850x2150				
P11-CO96	D		1.6	1100x1700	CO 800	1850x2000	4100	1400	1850x2000	2000	7.5	40	100
					CO 900	2020x2000			2020x2000				
					CO 800	1850x2150			1850x2150				
P11-CO105	D	11	1.75	1100x1700	CO 800	1850x2000	4150	1450	1850x2000	2000	8.3	40	100
					CO 900	2020x2000			2020x2000				
					CO 800	1850x2150			1850x2150				
P11-CO120	D		2	1100x1700	CO 800	1850x2000	4250	1650	1850x2000	2000	9.5	40	125
					CO 900	2020x2000			2020x2000				
					CO 800	1850x2150			1850x2150				
P11-CO150	D		2.5	1100x1700	CO 800	1850x2000	4450	2100	1850x2000	2000	11.8	40	125
					CO 900	2020x2000			2020x2000				
					CO 800	1850x2150			1850x2150				
P14-CO60	D		1	1100x2100	CO 800	1850x2400	3900	1300	1850x2400	2000	6	40	90
					CO 900	2020x2400			2020x2400				
					CO 800	1850x2550			1850x2550				
P14-CO96	D		1.6	1100x2100	CO 800	1850x2400	4100	1400	1850x2400	2000	9.7	40	100
					CO 900	2020x2400			2020x2400				
					CO 800	1850x2550			1850x2550				
P14-CO105	D	14	1.75	1100x2100	CO 800	1850x2400	4150	1450	1850x2400	2000	10.5	40	100
					CO 900	2020x2400			2020x2400				
					CO 800	1850x2550			1850x2550				
P14-CO120	D		2	1100x2100	CO 800	1850x2400	4250	1650	1850x2400	2000	12	40	125
					CO 900	2020x2400			2020x2400				
					CO 800	1850x2550			1850x2550				
P14-CO150	D		2.5	1100x2100	CO 800	1850x2400	4450	2100	1850x2400	2000	15	40	125
					CO 900	2020x2400			2020x2400				
					CO 800	1850x2550			1850x2550				

Note:

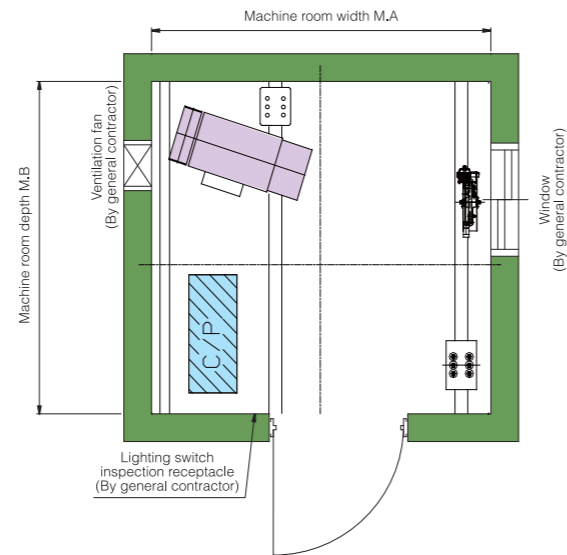
- The above table complies with GB7588:2003 standards.
- Please contact to our local agency to check for other standards.
- Hoistway dimensions are the minimum dimension after the building work.
- Hoistway dimensions are the minimum requirement.
- The hoistway structure wall must be 150mm thick or more.
- 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: P14W, W: Wide car, D: Deep car, D2: Freight and rear opening door

Hoistway Layout

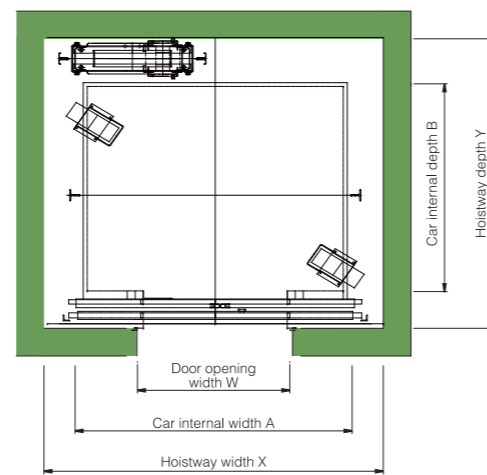
Specifications



Hoistway section



Machine room plan



Machine room plan (W)

Type	Nos. of Person	Capacity (Kg)	Speed (m/s)	Cage size Internal (A×B) (mm)	Door width W (mm)	Hoistway size (mm)			Machine room dimensions (mm)		Motor capacity (kw)	Max. service stops (s)	Max. travel (m)
						X×Y	OH	P	M.A×M.B	M.H			
P8-CO60	W		1	1400×1100	CO 800	1950×1710	3900	1300	1950×1710	2000	3.6	40	90
					CO 900	2050×1710							
P8-CO96	W		1.6	1400×1100	CO 800	1950×1710	4100	1400	1950×1710	2000	5.8	40	100
					CO 900	2050×1710			2050×1710				
P8-CO105	W	8	1.75	1400×1100	CO 800	1950×1710	4150	1450	1950×1710	2000	6.3	40	100
					CO 900	2050×1710			2050×1710				
P8-CO120	W		2	1400×1100	CO 800	1950×1710	4250	1650	1950×1710	2000	7.2	40	125
					CO 900	2050×1710			2050×1710				
P8-CO150	W		2.5	1400×1100	CO 800	1950×1710	4450	2100	1950×1710	2000	9	40	125
					CO 900	2050×1710			2050×1710				
P11-CO60	W		1	1400×1350	CO 800	1950×1960	3900	1300	1950×1960	2000	4.7	40	90
					CO 900	2050×1960			2050×1960				
P11-CO96	W		1.6	1400×1350	CO 800	1950×1960	4100	1400	1950×1960	2000	7.5	40	100
					CO 900	2050×1960			2050×1960				
P11-CO105	W	11	1.75	1400×1350	CO 800	1950×1960	4150	1450	1950×1960	2000	8.3	40	100
					CO 900	2050×1960			2050×1960				
P11-CO120	W		2	1400×1350	CO 800	1950×1960	4250	1650	1950×1960	2000	9.5	40	125
					CO 900	2050×1960			2050×1960				
P11-CO150	W		2.5	1400×1350	CO 800	1950×1960	4450	2100	1950×1960	2000	11.8	40	125
					CO 900	2050×1960			2050×1960				
P14-CO60	W		1	1600×1400	CO 900	2200×2010	3900	1300	2200×2010	2000	6	40	90
					CO 1000	2300×2010			2300×2010				
					CO 1100	2500×2010			2500×2010				
P14-CO96	W		1.6	1600×1400	CO 900	2200×2010	4100	1400	2200×2010	2000	9.7	40	100
					CO 1000	2300×2010			2300×2010				
					CO 1100	2500×2010			2500×2010				
P14-CO105	W	14	1.75	1600×1400	CO 900	2200×2010	4150	1450	2200×2010	2000	10.5	40	100
					CO 1000	2300×2010			2300×2010				
					CO 1100	2500×2010			2500×2010				
P14-CO120	W		2	1600×1400	CO 900	2200×2010	4250	1650	2200×2010	2000	12	40	125
					CO 1000	2300×2010			2300×2010				
					CO 1100	2500×2010			2500×2010				
P14-CO150	W		2.5	1600×1400	CO 900	2200×2010	4450	2100	2200×2010	2000	15	40	125
					CO 1000	2300×2010			2300×2010				
					CO 1100	2500×2010			2500×2010				

Note:

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- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- Example: P14W, W: Wide car

List of Functions

Related Work for Elevator Construction

● STANDARD ○ OPTIONAL

	NOTES			NOTES	
Operations	Selective-collective full automatic operation	●	Service functions	Nuisance call cancellation (manual)	●
	2-car group selective collective full automatic operation Note 1	○		In-car prank cancellation Note 4	●
	3 and 4-car group supervisory operation system Note 1	○		Running times record	●
	Group supervisory full automatic operation	○		Data automatic recording function at the time of failure	●
	Independent operation	○		Repetitive door opening safety	●
	Attendant operation	○		Car indicator	●
Safety functions	Automatic landing function in system failure	●		Adjustable door open timing	●
	Automatic withdrawn from group operation	●		Door open extension button	○
	Inspection operation (INS)	●		Car chime	○
	Overload protection	●		Hall chime	○
	Overspeed protection	●		Hall full load indicator	○
	Fireman's operation Note 2	○		Hall lantern	○
	Fire emergency operation	●		Starting torque compensate	●
	Force landing feedback signal in emergency	●		Sub car operating panel	○
	In-car emergency operation displays	●	Hall out of service indicator	●	
	Power failure emergency operation	○	Direction changing reopen	●	
	Automatic landing in power failure	○	Parking operation (manual)	●	
	Earthquake emergency operation	○	Automatic parking operation	○	
	In-car emergency lamp (self-charging)	●	Lighting auto sleep	●	
	Emergency electromotion succor (HRQ)	●	Ventilation auto sleep	●	
	Braking security detection	●	Door open button lamp (as the car lighting has been cut off automatically)	●	
	Emergency call button	●	Automatic selection clear upon direction reversal	●	
	Motor racing protection	●	Five-way interphone	●	
	Overload door reversal device	●	Group control in support running (only for group control)	○	
	Mechanical door safety	●	Specific floor stop operation	○	
	Photoelectric cell door safety	○	Interface contact	IC card system	○
	Infrared light curtain door safety	○		Announce feature	○
	2 in 1 door closing protection (light-beam curtain + mechanical shoe)	○		Supervisory panel	○
	Automatic leveling	●		Remote monitoring Note 5	○
	Pulse position abnormality automatic correction	●		Interface for building automation system Note 6	○
Car door zone position indicator	●	Expandable functions		Cable for camera	○
Power resupply automatic running	●		In-car BGM	○	
Service functions	Main floor homing		○	Cable for CCTV monitoring	○
	Service cut-off selection (software interface)		○	Wheel-chair aid specification Note 7	○
	Service floor cutoff switch (manual)		○	Air conditioning exclusive for elevator Note 8	○
	Full car bypass Note 3	●			

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: >5 floors and in-car weight<150kg;

- 5: This function shall be otherwise contracted;
- 6: For the details of the interface for building automation system, please contact us.
- 7: Handrail and car operating panel are included;
- 8: Overhead (OH) has to be increased, please contact us for details.

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 beams, back beams and lateral beams (if necessary).
3. 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 equipment 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 of the pit ladders (and backfill work for pit if necessary)
8. Water-proofing work of the pit (including drainage if necessary).
9. Re-arrangement of the building plan if the space under the pit is to be used.
10. Installation work of emergency exits for rescue purpose if the floor to floor distance is too high.
11. Shelter equipment at landing entrances from direct rain contact.
12. Installation work of lighting in hoistway (if necessary).
13. Installation work of a guard fence to prevent falling into the pit (in case of pit levels are different.)
14. 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 equipment

1. Wiring work of the power supply for motors and that for lighting equipment, and of grounding to power source panels of elevators in the machine room.
2. Wiring work of the power supply to the supervisory panels.
3. Piping and wiring works of interphones outside machine rooms 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.

Note

- Space for Indoor installation and material storage shall be provided free of charge.
- Guard fence shall be set up around the construction site.
- Electricity for installation work and trial run shall be provided free of charge.
- There shall be no exposed pipes such as piping for other purposes and ventilation pipes in the hoistway.
- Fluctuation of supply voltage: power supply for elevator within ±10%, power supply for lighting ±2%.
- Please keep the temperature in hoistway within 5°C-40°C, monthly average relative humidity of the most humid month below 90%, and average temperature per month is not higher than 25°C.
- For a special-structure hoistway, if the temperature in the hoistway exceeds 40°C, ventilation equipment shall be provided according to the installation environment.
- There shall be no wastes or toxic and harmful gas in hoistway.
- Neither hoistway nor entrance shall be exposed to weather to prevent embedded parts from corrosion.

Quotation and Consultation

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

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



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.