TOSHIBA

Leading Innovation

SPACEL-Ⅲ

TOSHIBA MACHINE-ROOM-LESS ELEVATORS

STANDARD PASSENGER ELEVATOR

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

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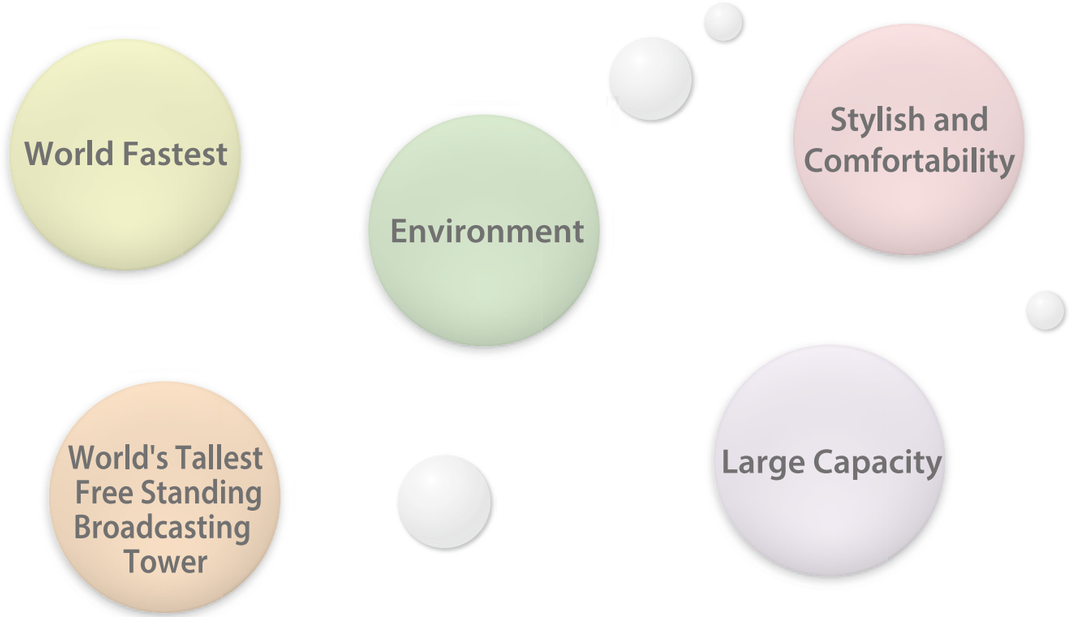
"THE SOLUTIONS"

TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION



CONCEPT of SPACEL-III

Toshiba manufactures elevators by applying the latest technology and improved elevator development skills. SPACEL-III, the most recent high-end machine-room-less elevator which incorporates various technologies to save energy and time contributes to global environment.

COMPANY SOLUTIONS

Toshiba Elevator and Building Systems Corporation has built a framework which encompass all aspects from system development to production, sales to marketing, installation, adjustment, maintenance and services in order to provide clients with highest quality products and services.
Utilizing the comprehensive technological infrastructure developed by Toshiba Group over more than 135 years since its foundation, we aim to enhance the leading edge technology and quality that enabled us to develop the world's fastest elevator, harnessing the full range of Toshiba's technological innovations. To respond to clients' expectations and requirements for safe and pleasant elevators and constantly pursuing further innovation and improvement. Furthermore, we are aiming to strengthen system development, production, enhancing sales channel and sales partnership to expand in the global market.

Product Line-ups

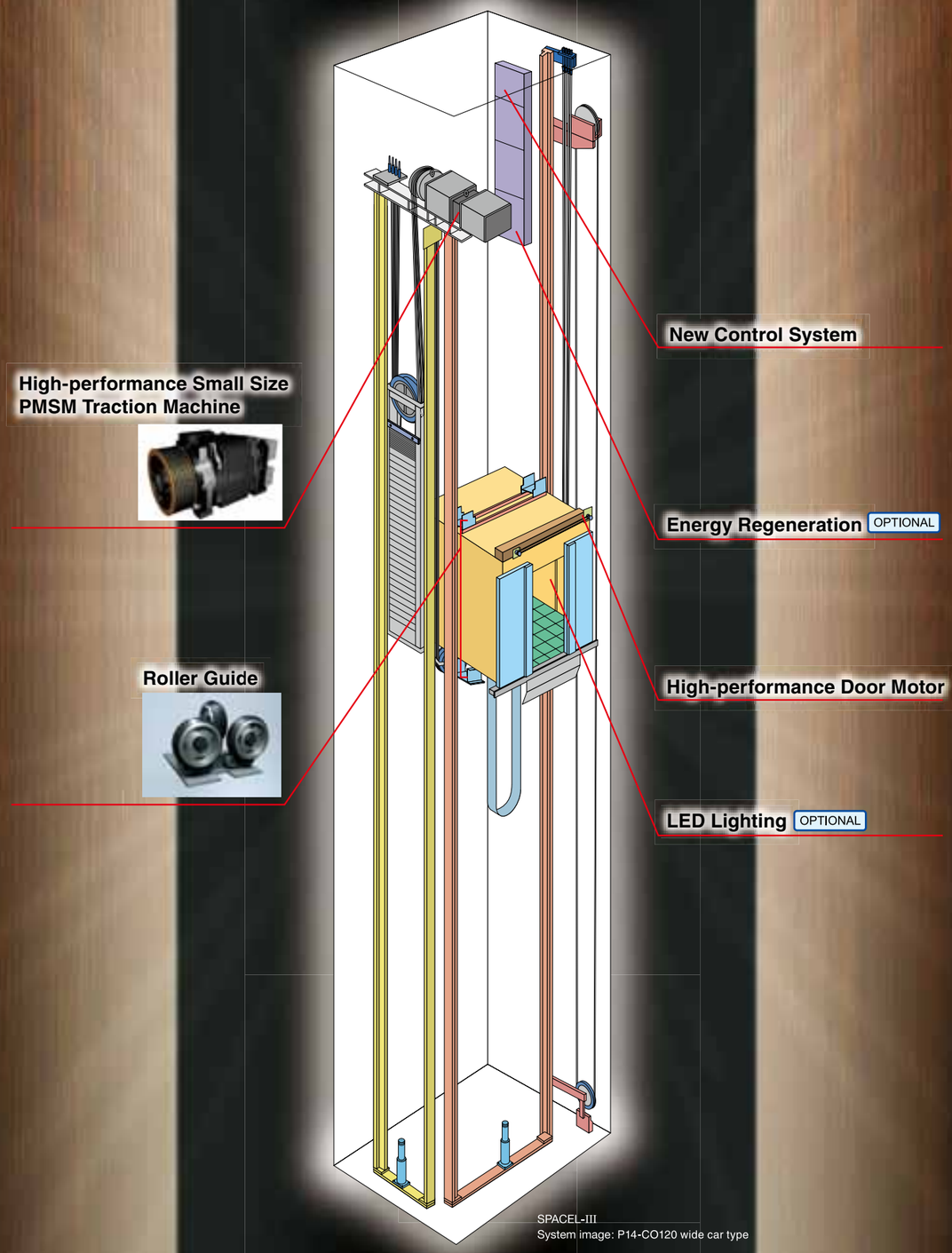
SPACEL-UNI is well-suited to office buildings and apartments by the compact designed machine-room-less elevator.

Scope of application	Range of application
Passenger (persons)	8 – 26 persons
Rated load (kg)	630 – 2000 kg
Rated speed (m/s)	1 – 2 m/s

Note
-The above scope complies with GB7588:2003 standard.

Rated speed (m/s)	2	SPACEL-III							
	1.75								
	1.6								
	1								
Rated load (kg)		630	825	1050	1150	1275	1350	1600	1800	2000
Type		P8	P11	P14	P15	P17	P18	P21	P24	P26

Technology



SPACEL-III
System image: P14-CO120 wide car type

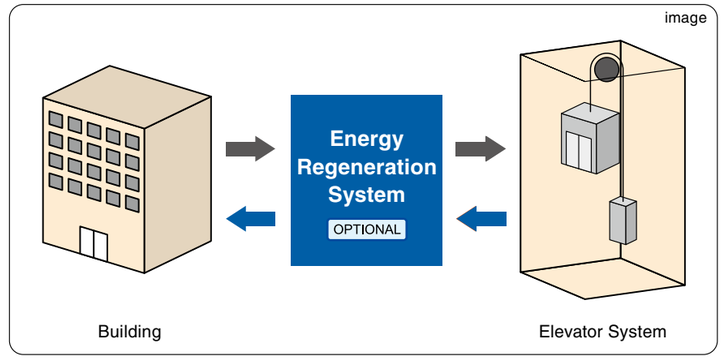
Technology for Energy Conservation

New Control Systems

High performance CPU is employed for advanced newly-developed control system. This control system enables to reduce standby electricity and enables automatic shutoff system for lightings and ventilation to contribute more reduction of electricity.

Energy Regeneration System OPTIONAL

Energy regenerative device feeds energy back to the power grid while the traction machine is under power generation to achieve high-efficiency energy utilization, which results in over 38% energy conservation (with the assumption of 1050kg,1.75m/s, 12-hour operation per day, 25 days per month).



※This optional system may not be suitable for certain buildings.
Please contact us for more information.

Traction Machine Designed and Manufactured by Toshiba

- ◆Toshiba has manufactured motors for over 100 years since 1895. The motors produced by Toshiba promise better quality assurance and quality control.
- ◆Compact PMSM (Permanent Magnet Synchronous Motor) for space saving.
- ◆Over 30% deduction in power consumption (compared to conventional electric motor).
- ◆Gearless traction without gear oil for low vibration, low noise and better environmental conservation.

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.
- ◆Environmental conservation:The parts such as lubrication oil and lubrication unit are eliminated and replaced with long-life rubber roller to reduce environmental pollution.

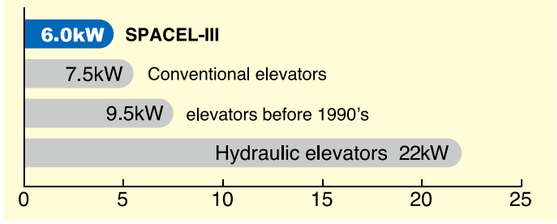
Environmental Issue

In order to propose safe and secure elevator, SPACEL-III focuses on environmental issues. The advanced technologies for energy consumption and resource saving concept offers high concerns for environmental consciousness.

Energy Saving

SPACEL-III employs newly developed compact gearless PMSM motor which enable high energy efficiency. Furthermore, by using gearless motor, gear oil will not be necessary so it can contribute for saving natural resource.

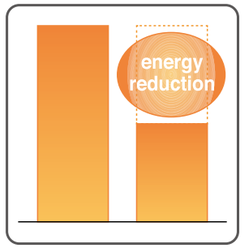
Compared to elevators before 1990's, energy consumption has decreased 40% and for hydraulic elevators, 80% is saved.



*Comparison with"SPACEL-III" (capacity:1050kg speed:60m/min) and "TOSHIBA STANDARD PASSENGER ELEVATOR","Cellebellum VFW" (capacity:1000kg speed:60m/min)

Energy Regeneration System OPTIONAL

Toshiba emphasizes on environmental conservation. 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).



LED Lightings

Under equal brightness, LED lighting system only consumes 10% of an incandescent lamp and 50% of an fluorescent lamp. (part of ceiling)

Car design:TL-1 OPTIONAL

Resource Saving

Machine room less elevator

By eliminating machine room, various constructing procedure and materials will not be necessary.

Eliminating lubricant oil for guide rail

By employing roller guide for both car and counter weight instead of guide shoe lubricant oil will not be necessary which guide shoe required.

Reducing Hazardous Materials

Reduction of lead use

By changing to the lead less fixing rope method, it results to reduce lead use.

Employing LED lightings

By employing LED light, various materials used for light became mercury free.

Lead-free Design of Printed Circuit Boad, 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 printed circuited boards.

SPACEL-III, approved as ToshibaGroup's "Excellent ECP" product.

Toshiba group seeks to create environmentally conscious products and for all the products created, we set a goal to develop No.1 environmentally suitable products. Within Toshiba group, we approve environmentally high potential products as "Excellent ECP" products and SPACEL-III is one of the approved products as "Excellent ECP".

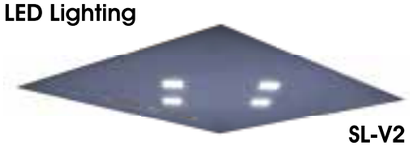
Car Design

Car Ceiling
SL-V1 STANDARD

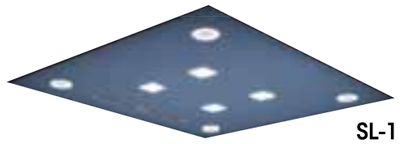
※Sample :
P14-CO120 wide car type

OPTIONAL

LED Lighting



SL-V2



SL-1

SL-2

SL-3

STANDARD

Ventilation apertures

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 Ceiling
TL-1 OPTIONAL

※Sample :
P14-CO120 wide car type

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 Ceiling
DX-21 OPTIONAL

※Sample :
P14-CO120 wide car type

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	Hairline finish stainless steel round type hand rail

Car Design

Car Ceiling DX-22 OPTIONAL

※Sample :
P14-CO120 wide car type

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	Hairline finish stainless steel round type hand rail

Car Ceiling DX-23 OPTIONAL

※Sample :
P14-CO120 wide car type

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

※Sample :
P14-CO120 wide car type

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

※Sample :
P14-CO120 wide car type

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	Hairline finish stainless steel round type hand rail

Operating Panel Design

G1S Series

Thick Type

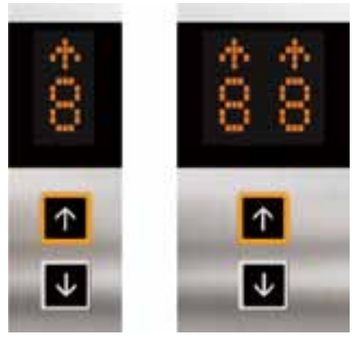
Car Operating Panel

Face plate: Hairline finish stainless steel
Direction indication
Position indicator
Interphone
Emergency call button
Floor selection button
Door opening /closing buttons

COP-G1S-1A-O

Thick Type — STANDARD

Hall Indicator Button



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

HB-G1S-1A

Buttons

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

G1K Series

Thick Type

Car Operating Panel

Face plate: Hairline finish stainless steel
Direction indication
Position indicator
Interphone
Emergency call button
Floor selection button
Door opening /closing buttons

COP-G1K-7A-O

Thin Type — OPTIONAL

Hall Indicator Button

HIB-G1K-7A-O　　HIB-G2K-7A-O

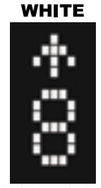
※ “Operation indicator” can mount on the faceplate of Hall indicator button.

Hall Button

ORANGE

(Orange light)

WHITE



(White light)

Thin Type

HB-G1K-7A

Buttons

OPTIONAL

Orange light: A
B: White light

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

Operating Panel Design

G1U Series

Thick Type

Car Operating Panel

- Face plate: Hairline finish stainless steel
- Direction indication
- Position indicator
- Interphone
- Emergency call button
- Floor selection button
- Door opening /closing buttons

COP-G1U-4A-O

Thick Type　OPTIONAL

Hall Indicator Button

One Car　Two Car

HIB-G1U-4A-O　HIB-G2U-4A-O

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

Hall Button

ORANGE

(Orange light)

WHITE

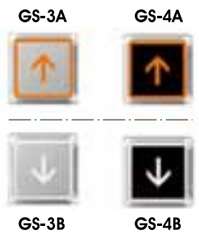
(White light)

Thick Type

HB-G1S-1A

Buttons

OPTIONAL



Orange light　A

B　White light

Hall design decorations

OPTIONAL

Hall Indicator

HI-G1

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

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

* G1K Series : Thin type design for faceplate.

Hall Design

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

Other Optional Items

HANDRAIL (OPTIONAL)

Hairline finish stainless steel round type hand rail

Hairline finish stainless steel flat type hand rail

STEEL PANEL PAINTING (STANDARD)

1N 3N 37YR 41YR 52YR 62Y 66Y 77G 114PB

FLOOR TILE (STANDARD)

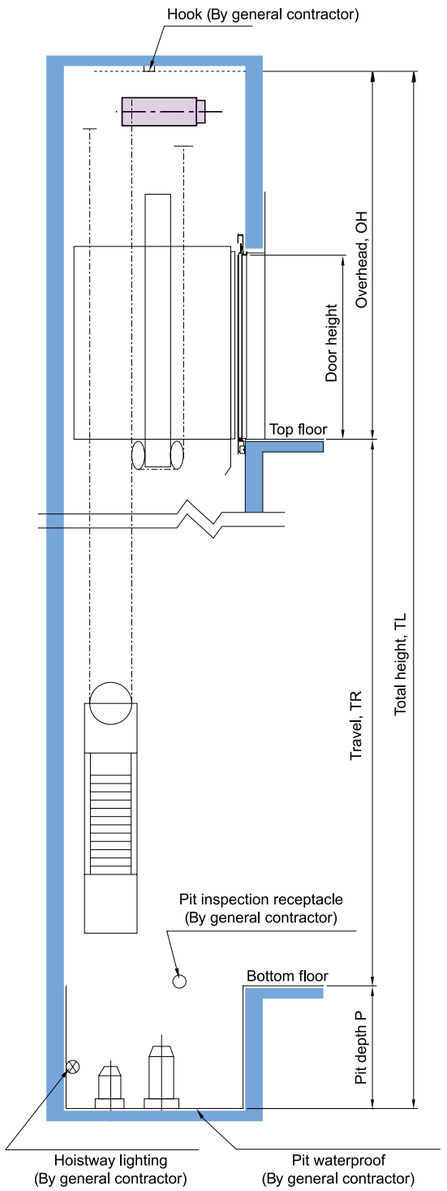
MID806 MID809 MID815 MID823 MID829 MID831 MID832 MID833 MID834

FLOOR TILE (OPTIONAL)

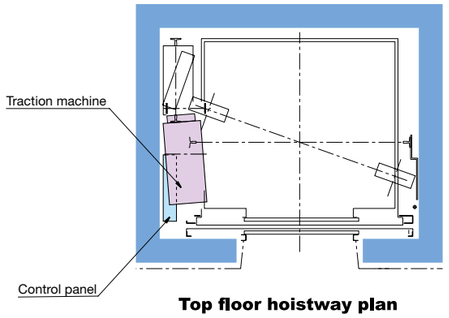
TSF-1A TSF-1B TSF-1C TSF-1D

TSF-1E TSF-2A TSF-2B TSF-2C

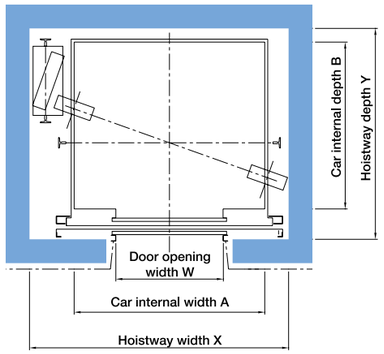
Hoistway Layout



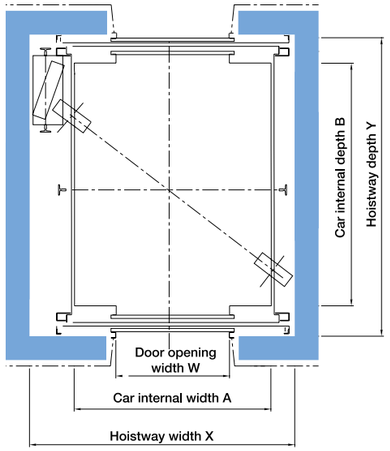
Hoistway section



Top floor hoistway plan



Typical floor hoistway plan (W, D)



Typical floor hoistway plan (D2)

Specifications

Type		Nos.of Person	Capacity (Kg)	Speed (m/s)	Cage size Internal(A×B) (mm)	Door width W (mm)	Hoistway size(mm) X×Y	Hoistway size(mm) OH	Hoistway size(mm) P	Motor Capacity (kw)	Max.Service Stops(s)	Max.Travel (m)
P8-CO60	W	8	630	1	1400×1100	800	2085×1660	3900	1300	3.6	40	80
						900	2245×1660					
	D				1100×1400	800	1935×1775					
						900	2120×1775					
P8-CO96	W			1.6	1400×1100	800	2085×1660	4100	1400	5.8	40	100
						900	2245×1660					
	D				1100×1400	800	1935×1775					
						900	2120×1775					
P8-CO105	W			1.75	1400×1100	800	2085×1660	4150	1450	6.3	40	
						900	2245×1660					
	D				1100×1400	800	1935×1775					
						900	2120×1775					
P8-CO120	W			2	1400×1100	800	2085×1660	4250	1650	7.2	40	
						900	2245×1660					
	D				1100×1400	800	1935×1775					
						900	2120×1775					
P11-CO60	W	11	825	1	1400×1350	800	2100×1770	3900	1300	4.7	40	80
						900	2200×1770					
	D				1100×1700	800	1950×2050					
						900	2120×2050					
	D2					800	1950×2150				※	
						900	2120×2150					
P11-CO96	W			1.6	1400×1350	800	2100×1770	4100	1400	7.5	40	100
						900	2200×1770					
	D				1100×1700	800	1950×2050					
						900	2120×2050					
	D2					800	1950×2150				※	
						900	2120×2150					
P11-CO105	W			1.75	1400×1350	800	2100×1770	4150	1450	8.3	40	
						900	2200×1770					
	D				1100×1700	800	1950×2050					
						900	2120×2050					
	D2					800	1950×2150				※	
						900	2120×2150					
P11-CO120	W			2	1400×1350	800	2100×1770	4250	1650	9.5	40	
						900	2200×1770					
	D				1100×1700	800	1950×2050					
						900	2120×2050					
	D2					800	1950×2150				※	
						900	2120×2150					
P14-CO60	W	14	1050	1	1600×1400	900	2300×1820	3900	1300	6.0	40	80
						1000	2400×1820					
	D				1100×2100	800	1950×2450					
						900	2120×2450					
	D2					800	1950×2550				※	
						900	2120×2550					
P14-CO96	W			1.6	1600×1400	900	2300×1820	4100	1400	9.7	40	100
						1000	2400×1820					
	D				1100×2100	800	1950×2450					
						900	2120×2450					
	D2					800	1950×2550				※	
						900	2120×2550					
P14-CO105	W			1.75	1600×1400	900	2300×1820	4150	1450	10.5	40	
						1000	2400×1820					
	D				1100×2100	800	1950×2450					
						900	2120×2450					
	D2					800	1950×2550				※	
						900	2120×2550					
P14-CO120	W			2	1600×1400	900	2300×1820	4250	1650	12.0	40	
						1000	2400×1820					
	D				1100×2100	800	1950×2450					
						900	2120×2450					
	D2					800	1950×2550				※	
						900	2120×2550					

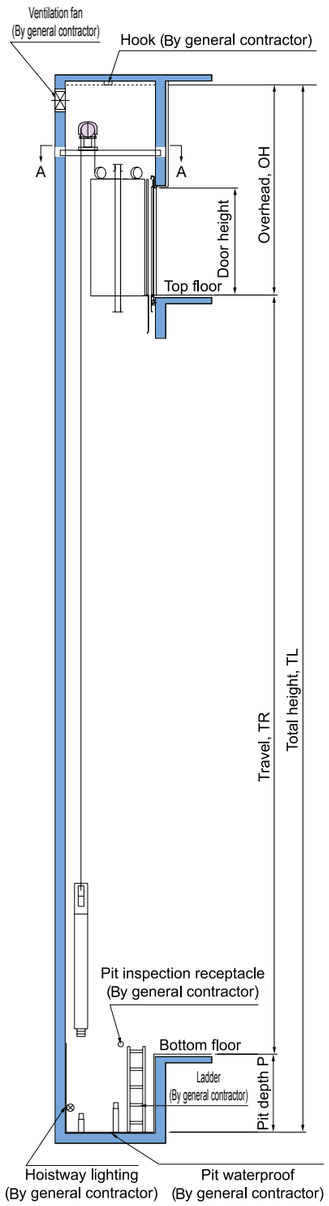
※ **Please contact us.**

Note:

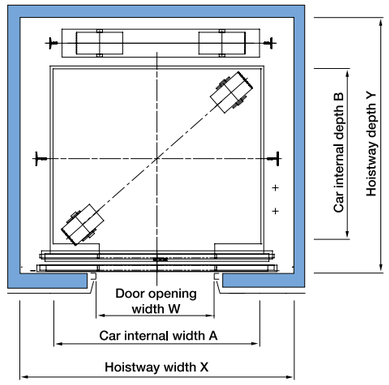
- The above table complies with GB7588:2003 standards.
- Please contact to our local agency to check for other standards.
- Hoistway dimensions are the minimum dimension after the construction work.
- The hoistway dimensions in chart are the minimum requirement.
- The hoistway structure wall must be 150mm thick or more.
- Piping, wiring and cables which is not relevant to elevator are prohibited inside the hoistway.
- OH value in the chart is for standard ceiling. As for the non-standard cars, please contact us.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- If the location of power source panel, control panel and electric power supply are changed, please contact us.

W: Wide car D: Deep car D2: Front and rear opening door

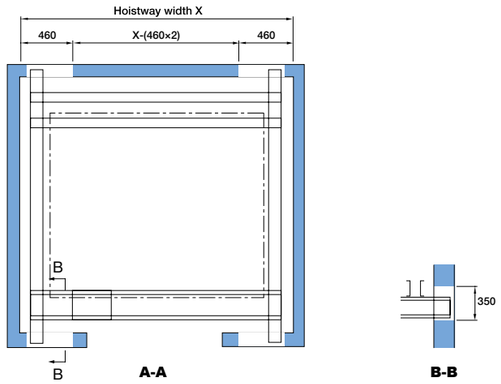
Hoistway Layout



Hoistway section

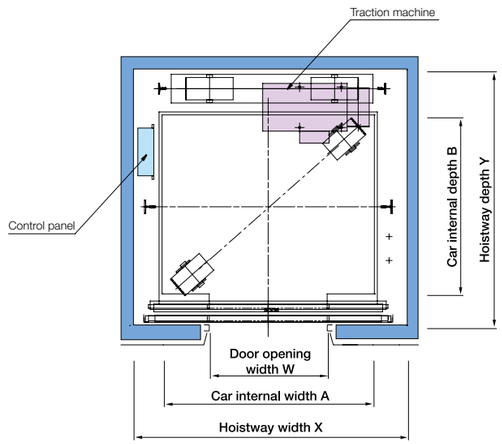


Typical floor hoistway plan



A-A

B-B



Top floor hoistway plan

Specifications

Type		Nos.of Person	Capacity (Kg)	Speed (m/s)	Cage size Internal(A×B) (mm)	Door width W (mm)	Hoistway size(mm)			Motor Capacity (kw)	Max.Service Stops(s)	Max.Travel (m)
							X×Y	OH	P			
P15-CO60	W	15	1150	1	1800×1500	CO 1000	2450×2190	4100	1300	8.0	40	80
	W					CO 1100	2450×2190					
P15-CO96	W			1.6		CO 1000	2450×2190	4300	1400	12.0		100
	W					CO 1100	2450×2190					
P15-CO105	W			1.75		CO 1000	2450×2190	4350	1450	14.0		100
	W					CO 1100	2450×2190					
P15-CO120	W			2		CO 1000	2450×2190	4600	1600	16.0		100
	W					CO 1100	2450×2190					
P18-CO60	W	18	1350	1	2000×1500	CO 1100	2650×2190	4100	1300	8.7	40	80
P18-CO96	W			1.6				4300	1400	14.0		100
P18-CO105	W			1.75				4350	1450	16.0		100
P18-CO120	W			2				4600	1600	18.0		100
P21-CO60	W	21	1600	1	2000×1700	CO 1100	2700×2390	4100	1300	12.0	40	80
	W					CO 1200	2700×2390					
P21-CO96	W			1.6		CO 1100	2700×2390	4300	1400	18.0		100
	W					CO 1200	2700×2390					
P21-CO105	W			1.75		CO 1100	2700×2390	4350	1450	18.0		100
	W					CO 1200	2700×2390					
P21-CO120	W			2		CO 1100	2700×2390	4600	1600	22.0		100
	W					CO 1200	2700×2390					
P24-CO60	W	24	1800	1	2100×1750	CO 1200	2800×2440	4100	1300	12.0	40	80
P24-CO96	W			1.6				4300	1400	20.0		100
P24-CO105	W			1.75				4350	1450	20.0		100
P24-CO120	W			2				4600	1600	24.0		100
P26-CO60	W	26	2000	1	2100×1950	CO 1200	2800×2640	4100	1300	14.0	40	80
P26-CO96	W			1.6				4300	1400	22.0		100
P26-CO105	W			1.75				4350	1450	22.0		100
P26-CO120	W			2				4600	1600	26.0		100

Note:
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- The hoistway dimensions in chart are the minimum requirement.
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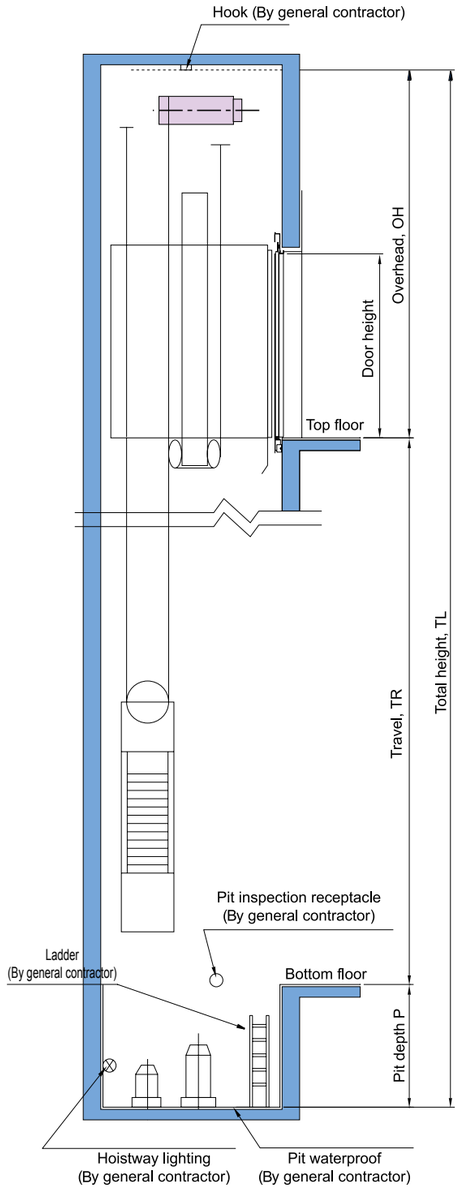
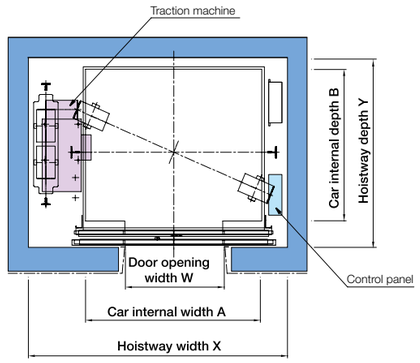
- Piping, wiring and cables which is not relevant to elevator are prohibited inside the hoistway.
- OH value in the chart is for standard ceiling. As for the non-standard cars, please contact us.
- If the size of the hoistway is greater than above sizes, OH will be larger, please contact us.
- If the location of power source panel, control panel and electric power supply are changed, please contact us.

W: Wide car D: Deep car D2: Front and rear opening door

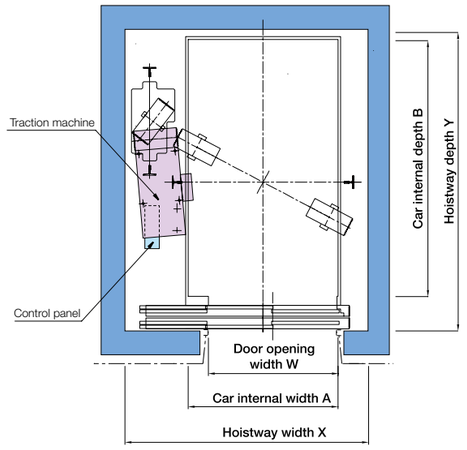
Hoistway Layout



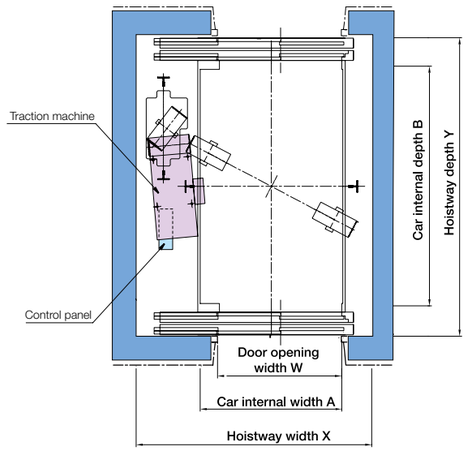
Hoistway section



Typical floor hoistway plan (W)



Typical floor hoistway plan (D)



Typical floor hoistway plan (D2)

Specifications

Type		Nos.of Person	Capacity (Kg)	Speed (m/s)	Cage size Internal(A×B) (mm)	Door width W (mm)	Hoistway size(mm) X×Y	Hoistway size(mm) OH	Hoistway size(mm) P	Motor Capacity (kw)	Max.Service Stops(s)	Max.Travel (m)
P15-CO60	W	15	1150	1	1800×1500	CO 1000	2650×1880	3750	1350	8.0	40	80
	W					CO 1100	2700×1880					
P15-CO96	W			1.6		CO 1000	2650×1880	3900	1450	12.0		100
	W					CO 1100	2700×1880					
P15-CO105	W			1.75		CO 1000	2650×1880	4000	1500	14.0		100
	W					CO 1100	2700×1880					
P15-CO120	W			2		CO 1000	2650×1880	4150	1650	16.0		100
	W					CO 1100	2700×1880					
P17-CO60	W	17	1275	1	2000×1400	CO 1100	2850×1840	3750	1350	8.0	40	80
P17-CO96	W			1.6				3900	1450	14.0		100
P17-CO105	W			1.75				4000	1500	14.0		100
P17-CO120	W			2				4150	1650	16.0		100
P17-2S60	D	17	1275	1	1200×2300	2S 1100	2100×2750	3750	1350	8.0	40	80
P17-2S96	D			1.6				3900	1450	14.0		100
P17-2S105	D			1.75				4000	1500	14.0		100
P17-2S120	D			2				4150	1650	16.0		100
P17-2S60	D2	17	1275	1	1200×2200	2S 1100	2100×2870	3750	1350	8.0	※	
P17-2S96	D2			1.6				3900	1450	14.0		
P17-2S105	D2			1.75				4000	1500	14.0		
P17-2S120	D2			2				4150	1650	16.0		
P18-CO60	W	18	1350	1	2000×1500	CO 1100	2850×1880	3750	1350	8.7	40	80
P18-CO96	W			1.6				3900	1450	14.0		100
P18-CO105	W			1.75				4000	1500	16.0		100
P18-CO120	W			2				4150	1650	18.0		100
P21-CO60	W	21	1600	1	2000×1700	CO 1100	2850×2090	3750	1400	12.0	40	80
	W					CO 1200	2900×2090					
P21-CO96	W			1.6		CO 1100	2850×2090	3900	1500	18.0		100
	W					CO 1200	2900×2090					
P21-CO105	W			1.75		CO 1100	2850×2090	4000	1550	18.0		100
	W					CO 1200	2900×2090					
P21-CO120	W			2		CO 1100	2850×2090	4150	1700	22.0		100
	W					CO 1200	2900×2090					
P21-2S60	D	21	1600	1	1400×2400	2S 1200	2300×2850	3750	1400	12.0	40	80
P21-2S96	D			1.6				3900	1500	18.0		100
P21-2S105	D			1.75				4000	1550	18.0		100
P21-2S120	D			2				4150	1700	22.0		100
P21-2S60	D2	21	1600	1	1400×2300	2S 1200	2300×2970	3750	1400	12.0	※	
P21-2S96	D2			1.6				3900	1500	18.0		
P21-2S105	D2			1.75				4000	1550	18.0		
P21-2S120	D2			2				4150	1700	22.0		
P24-CO60	W	24	1800	1	2100×1750	CO 1200	2950×2140	3750	1400	12.0	40	80
P24-CO96	W			1.6				3900	1500	20.0		100
P24-CO105	W			1.75				4000	1550	20.0		100
P24-CO120	W			2				4150	1700	24.0		100
P26-CO60	W	26	2000	1	2100×1950	CO 1200	2950×2340	3750	1400	14.0	40	80
P26-CO96	W			1.6				3900	1500	22.0		100
P26-CO105	W			1.75				4000	1550	22.0		100
P26-CO120	W			2				4150	1700	26.0		100

※ **Please contact us.**

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W: Wide car D: Deep car D2: Front and rear opening door

List of Functions

● STANDARD ○ OPTIONAL

	NOTES			NOTES	
Operations	Selective-collective full automatic operation	●		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	○	**Service functions**	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.

Related Work for Elevator Construction

■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.
15. Hole opening work for machine beam pocket. (If necessary)

■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 Elevator shaft.
2. Wiring work of the power supply to the supervisory panels.
3. Piping and wiring works of interphones outside hoistways 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 set.
3. Number of stops.
4. Floor height.
5. Voltage and frequency of main power supply.
6. Desired completion date.

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.

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