



TOSHIBA

TOSHIBA MACHINE-ROOM-LESS ELEVATORS
STANDARD PASSENGER ELEVATOR

SPACEL-III

2nd Edition

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

72-34, Horikawa-cho, Saiwai-ku, Kawasaki
212-8585, Japan
PHONE: +81-44-331-7057 FAX: +81-44-548-9597

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

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THE SOLUTIONS

COMPANY SOLUTIONS

Toshiba Elevator and Building Systems Corporation has built a framework which encompasses all aspects from system development to production, sales to marketing, installation, adjustment, maintenance and services in order to provide clients with the highest quality products and services.

Utilizing the comprehensive technological infrastructure developed by Toshiba Group in more than 140 years since its foundation, we aim to enhance the leading edge technology and quality that we used to develop the ultra high speed elevator, harnessing Toshiba's technological innovations to their fullest extent. To meet clients' expectations and requirements for safe and pleasant elevators as well as 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.

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.

Product Lineup

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

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

Rated speed (m/s)	2																			
	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										

Note
The above scope complies with GB7588:2003 standard.

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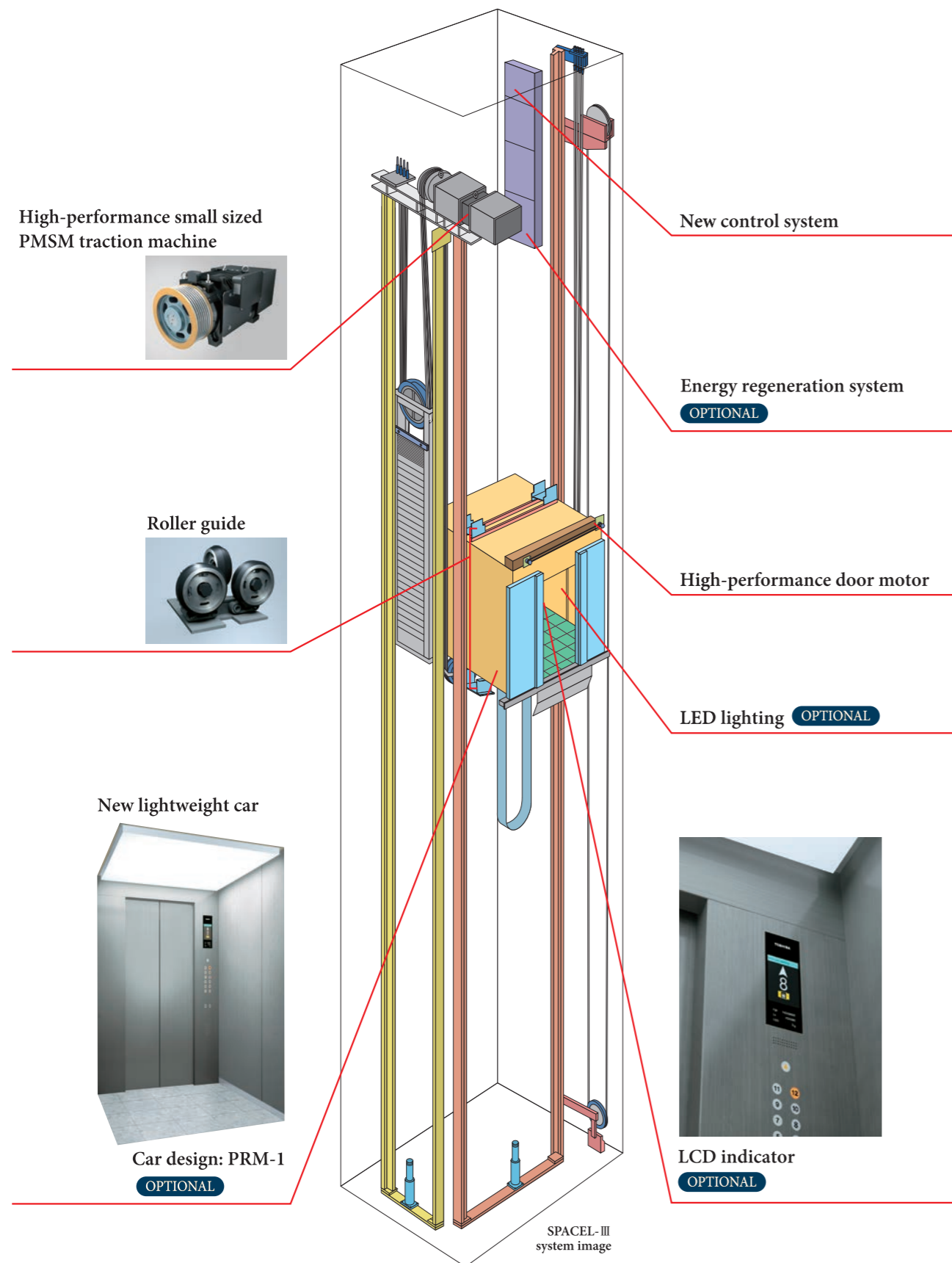
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TECHNOLOGY



The actual product colors may vary slightly from those printed colors in this catalog.

New Technology

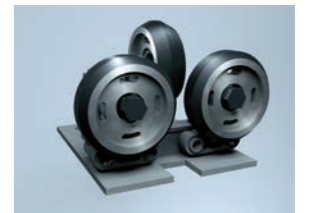
Traction Machine Designed and Manufactured by Toshiba

- ◆ 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% less 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

- A roller guide is used instead of a conventional sliding guide shoe. Features include:
- ◆ 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: Lubrication oil and lubrication unit are eliminated and replaced by a long-life rubber roller to reduce environmental pollution.



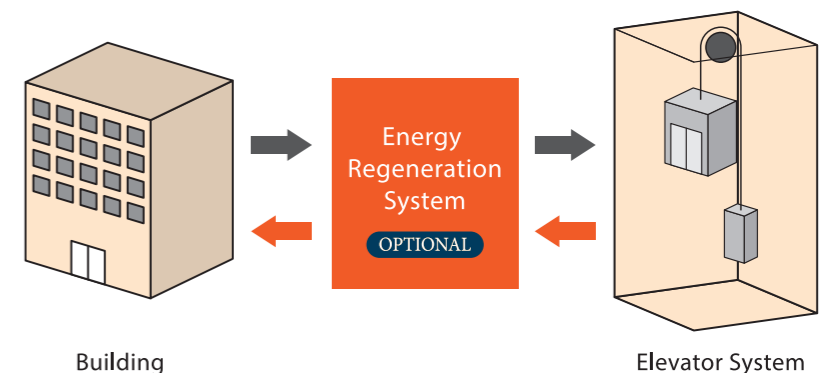
New Control Systems

A high performance CPU is employed for advanced newly developed control system. This control system enables to reduce standby electricity, automatic shutoff system for lightings and ventilation to contribute furthermore reduction of electricity.

Energy Regeneration System OPTIONAL

Note: Applies to specification for models with a capacity of less than 1050kg and fewer 14 persons.

An energy regeneration 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.

TECHNOLOGY



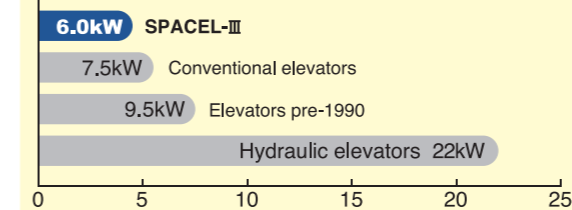
Environmental issues

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

Energy Saving

SPACEL-III employs a newly developed compact gearless PMSM motor which enables high energy efficiency. Furthermore, by using a gearless motor, gear oil is not needed, which contributes to saving natural resources.

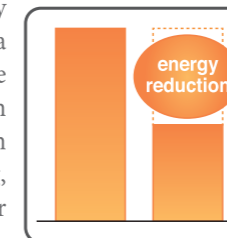
Compared to elevators before 1990's, energy consumption has decreased 40% and for hydraulic elevators, 80% is saved.



*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 focuses on environmental conservation. The consumption of energy feedback system is different from that of regenerative resistance. An energy regeneration device feeds energy back to the power grid while the traction machine is under power generation to achieve high-efficiency energy utilization and suppress a temperature increase 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).



Note: Applies to specification for models with a capacity of less than 1050kg and fewer 14 persons.

LED Lighting

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



Car design: PRM-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, lubricant oil will not be necessary which guide shoe required.



Reducing Hazardous Materials

Reduction of lead use

By changing method to tie rope, lead is not necessary in order to tie rope resulting to reduce lead use.

Employing LED lightings

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

Lead-free Design of Circuit Board, 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.

SPACEL-III, approved as Toshiba Group'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 has been approved as an "Excellent ECP".

STYLISH and COMFORTABLE

New Ceiling Design

The publication of this page is an example of design.
Please refer to the "DESIGN SELECTION" catalog for each the condition and other designs.

Wide variety of newly developed LED lighting available. *Note 1

*Development of environmentally conscious LED lighting.

LED lighting is mercury-free, energy-saving and long life.

The electric consumption fall about 85% and the product life time will be increased 20 times.

Therefore LED lighting reduces CO2 emissions.

Note 1: Applied in car design SL-V1, SL-V2, SL-3, TL-1, DLX-21, DLX-22, DLX-23, DLX-24, DLX-25, PRM-1, PRM-2.

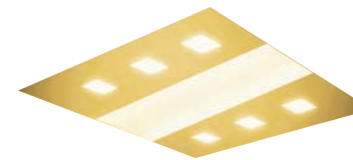
Note 2: Car design SL-1, SL-2 has four square shaped lights at the center, and round LED light at corners.



PRM-1



PRM-2



DLX-25 / DX-25



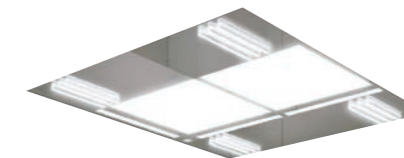
DLX-24 / DX-24



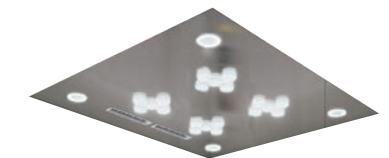
DLX-23 / DX-23



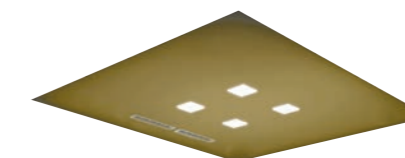
DLX-22 / DX-22



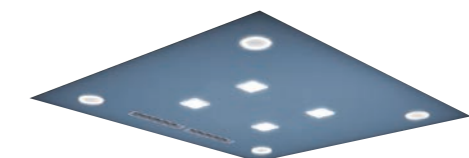
DLX-21 / DX-21



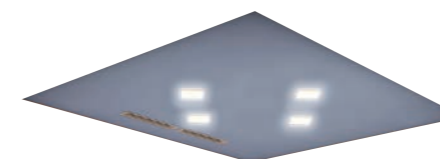
TL-1



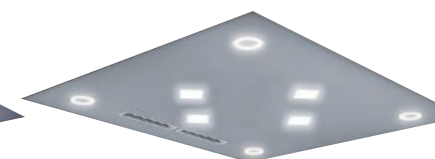
SL-V1



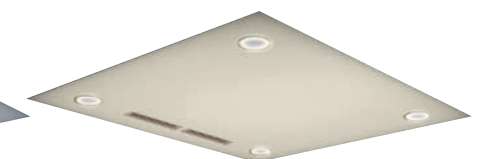
SL-1



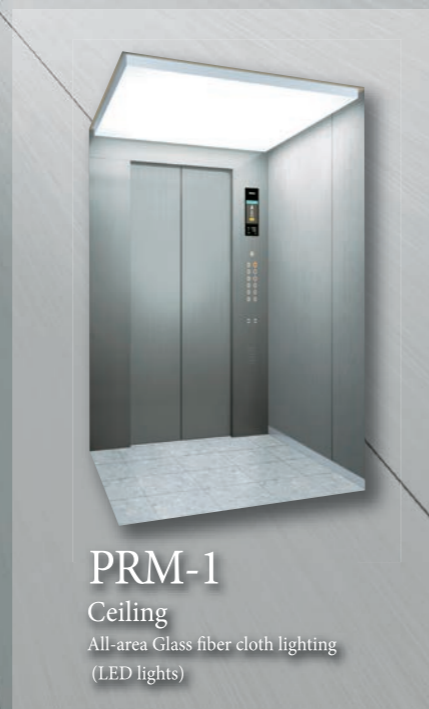
SL-V2



SL-2



SL-3



PRM-1

Ceiling
All-area Glass fiber cloth lighting
(LED lights)

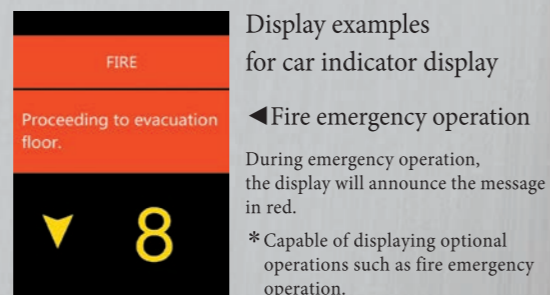
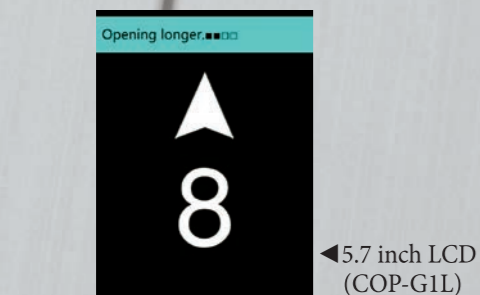
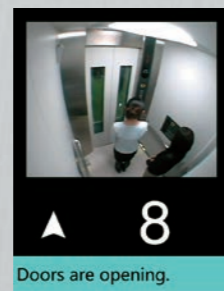
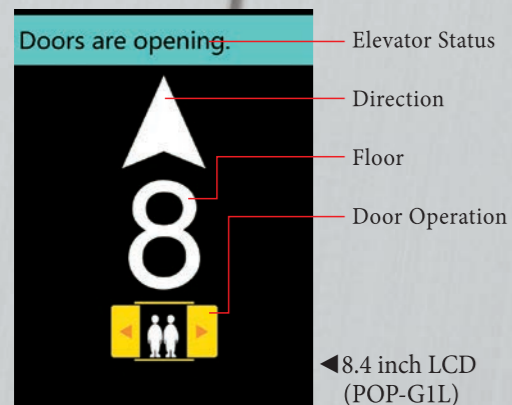
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STYLISH and COMFORTABLE

Large LCD indicator for car operation panel

These 10.4, 8.4 and 5.7 inch LCD indicators are capable of displaying the elevator's various conditions (emergency operations, maintenance status) in large icons and letters in highly visible colors.

OPTIONAL



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STYLISH and COMFORTABLE



Hall Design

The publication of this page is an example of design.
Please refer to the “DESIGN SELECTION” catalog for each the condition and other designs.



Hall design 1

OPTIONAL



Hall design 2

OPTIONAL



Hall design 3

OPTIONAL



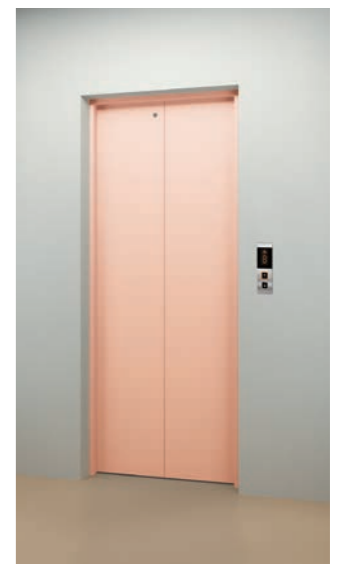
Hall design 4

OPTIONAL



Hall design 5

OPTIONAL



Hall design 6

STANDARD

*Note : Provided hall design specifications with the wide type jamb and transoms, when there is a need to adapt to fireproof specifications.

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Functions

○: STANDARD △: OPTIONAL

Functions	Notes	Descriptions	
Operations	Simplex selective-collective fully automatic operation	Fully automatic operation by hall and car calls for single car	○
	Duplex selective collective fully automatic operation (Note 1)	Fully automatic operation for 2 cars in the same group	△
	3 or 4-car group supervisory control system	Fully automatic operation for 3 or 4 cars in the same group	△
	Group supervisory control system	For supervisory operation of groups of more than 4 cars, please contact us	△
	Independent operation	Lift car separated from group control operation and responde to car call only	△
	Attendant operation	Operation by attendant by switch & button provided at service cabinet in COP	△
Safety Functions	Automatic landing function when system fails	When system failure occurs, the lift will automatically land at the nearest floor and the door will open for passengers to exit	○
	Car inspection operation (INS)	During car inspection operation, the lift car will run at slowly speed without responding to hall call	○
	Overload protection	The car overload buzzer will sound to prevent overloading and the doors will remain open	○
	Door open when the lift car is overloaded	The doors will re-open when over load is detected, even during the closing of doors.	○
	Fireman's operation	In the event of fire, when the Fireman's switch is activated, the designated lift will be ready for firemen to use	△
	Fire emergency operation	In the event of fire, all lifts will return to the designated floor and stop operation to allow passengers to exit	△
	Power failure emergency operation	In the event of power failure, all lifts will return to the designated floor by emergency power supply from the building to allow passengers to exit	△
	Automatic landing during power failure (TOSLANDER)	In the event of power failure, the lift will land at the nearest floor by emergency battery	△
	Earthquake emergency operation	In the event of an earthquake, the elevator will detect the seismic signal and land at the nearest floor	△
	In-car emergency lamp (self-charging)	In the event of power failure, the in-car emergency lamp will be activated	○
	Emergency call button	A button for passenger to make an emergency call when they are trapped inside the lift	○
	Emergency operation indication at COP	In the event of an emergency, the emergency operation status will be displayed at COP	○
	Mechanical door safety	When the mechanical door safety device is touched by a passenger, the door will open	○
	Multi-beam door safety sensor (or light curtain door safety sensor)	When the multi-beam door safety device senses a passenger, the door will open	△
	2-in-1 door safety (multi-beam door safety + mechanical door safety)	A combination of multi-beam door safety and mechanical door safety	△
Service Functions	Home landing	To reduce passenger waiting time, the lift will return to the designated floor and stand by	△
	Service floor cut-off selection	Disables the designated floor service	△

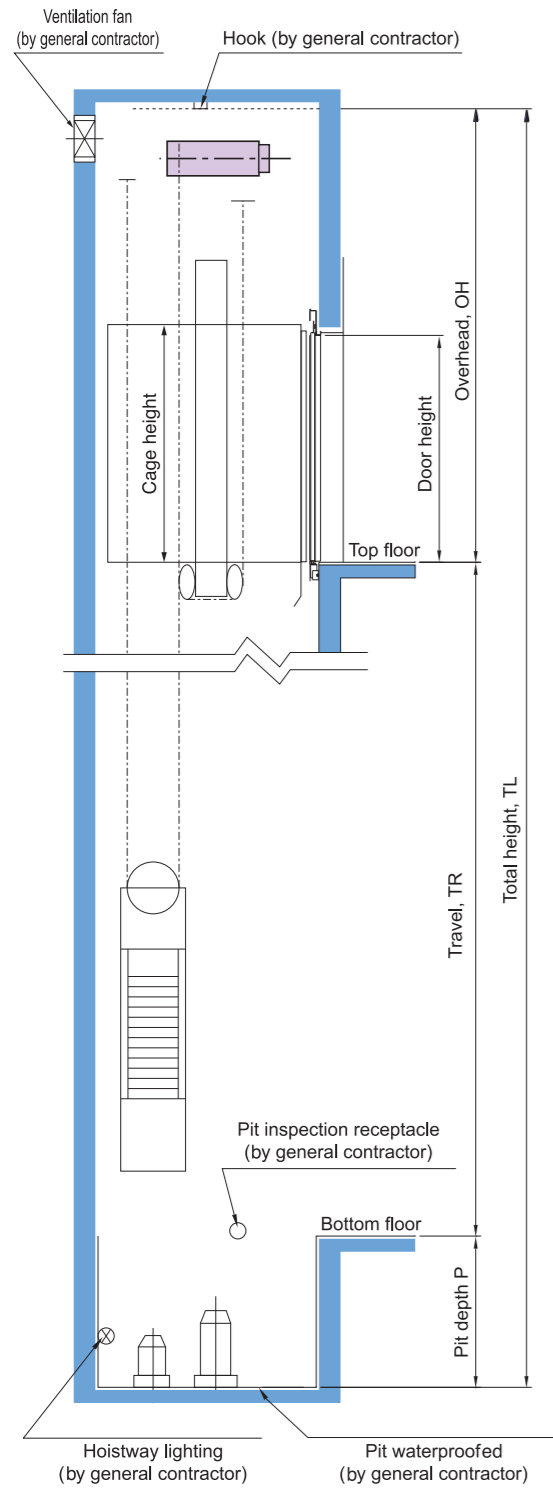
Notes

1: Not applicable to lift car with through door.
2: > 5 floors and car weight < 150kg.

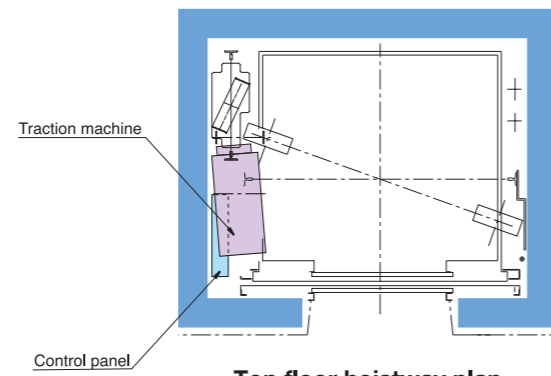
○: STANDARD △: OPTIONAL

Functions	Notes	Descriptions	
Service Functions	Full car bypass (Note 2)	When the lift car is full, the lift will bypass all hall calls and go straight to the designated floor	○
	Car call cancellation	The floor call can be cancelled from the COP by pressing the floor button twice within 3 second	○
	Nuisance call cancellation	Incorrect or nuisance floor calls can be cancelled to eliminate unnecessary operation	○
	Repeated door opening	When an obstacle is detected, the door will repeatedly open and close until the obstacle is removed	○
	Adjustable door opening time	Adjusts the door opening time to reflect building usage	○
	Door open extension button	Extends the door opening time	△
	Car chime	A chime installed in the car ceiling will sound when the lift arrives	△
	Hall chime	A chime installed in the lift lobby will sound when the lift arrives	△
	Hall lantern	The hall lantern will light up when the lift arrived	△
	Sub-car operating panel	Additional car operating panel	△
	Car full load indicator	"Full Load" will display on the hall indicator when the lift car is full	△
	Out of service indicator	"Out of Service" will display on the hall indicator when the lift car is faulty	○
	Parking operation (manual)	Parks the lift at designated floor by key-switch	○
	Parking operation (automatic)	Parks the lift at designated floor autotmatically	△
	Car lighting automatic cut-off	When the lift is not in operation after a pre-determined period of time, the car light will turn off automatically	○
	Ventilation fan automatic cut-off	When the lift is not in operation after a pre-determined period of time, the ventilation fan will turn off automatically	○
	"Door Open" button lamp (for automatically cut-off car lighting)	The "Door Open" button will remain lit when the lift car light is turned off automatically	○
	Nuisance call cancellation at reversal	Cancel intentionally registered nuisance calls automatically in the reversal travel direction	○
	Multi-channel intercom	The intercom system can communicate with multi-stations simultaneously	○
	Designated floor stop operation	Automatically stops the lift at the designated floor for crime prevention purposes	△
	Card access system	Allows activation of the disnated floor call by IC card * Card Access System by others	△
	Speech synthesizer	Announces car operations	△
	Supervisory panel	Located in the building control room, etc. to monitor the status and control of each lift	△

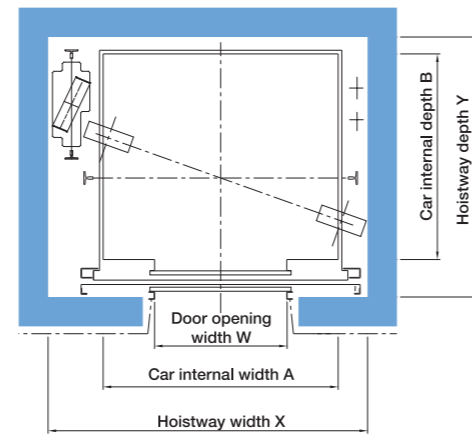
Hoistway Layout



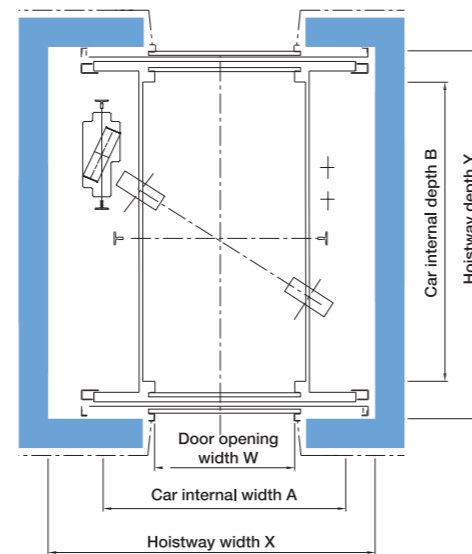
Hoistway section



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(AxB) (mm)	Door with W (mm)	Hoistway size(mm)		Motor Capacity (kW)	Max. Service Stops(s)	Max. Travel (m)		
						X*Y	OH P					
P8-CO60	W	8	630	1	1400x1100	800	1985x1610	3700	1300	3.6	40	80
	D				1100x1400	900	2145x1610					
P8-CO96	W			1.6	1400x1100	800	1985x1610	3900	1400	5.8		
	D				1100x1400	900	2145x1610					
P8-CO105	W			1.75	1400x1100	800	1985x1610	3950	1450	6.3		
	D				1100x1400	900	2145x1610					
P8-CO120	W			2	1400x1100	800	1985x1610	4050	1650	7.2		
	D				1100x1400	900	2145x1610					
P11-CO60	W	11	750	1	1400x1350	800	2000x1720	3700	1300	3.6	40	80
	D				1100x1700	900	2100x1720					
	D2				1100x1700	800	1850x2000					
P11-CO96	W			1.6	1400x1350	800	2000x1720	3900	1400	5.8		
	D				1100x1700	900	2100x1720					
	D2				1100x1700	800	1850x2000					
P11-CO105	W			1.75	1400x1350	800	2000x1720	3950	1450	6.3		
	D				1100x1700	900	2100x1720					
	D2				1100x1700	800	1850x2150					
P11-CO120	W			2	1400x1350	800	2000x1720	4050	1650	7.2		
	D				1100x1700	900	2100x1720					
	D2	1100x1700	800		1850x2150							
P14-CO60	W	14	950	1	1600x1400	900	2200x1770	3700	1300	3.6	40	80
	D				1100x2100	1000	2300x1770					
	D2				1100x2100	1100	2400x1770					
					1100x2100	900	1850x2400					
P14-CO96	W			1.6	1600x1400	900	2200x1770	3900	1400	5.8		
	D				1100x2100	1000	2300x1770					
	D2				1100x2100	900	1850x2400					
					1100x2100	1000	2020x2400					
P14-CO105	W			1.75	1600x1400	900	2200x1770	3950	1450	6.3		
	D				1100x2100	1000	2300x1770					
	D2				1100x2100	900	1850x2400					
					1100x2100	1000	2020x2400					
P14-CO120	W	2	1600x1400	900	2200x1770	4050	1650	7.2				
	D		1100x2100	1000	2300x1770							
	D2		1100x2100	900	1850x2400							
			1100x2100	1000	2020x2400							

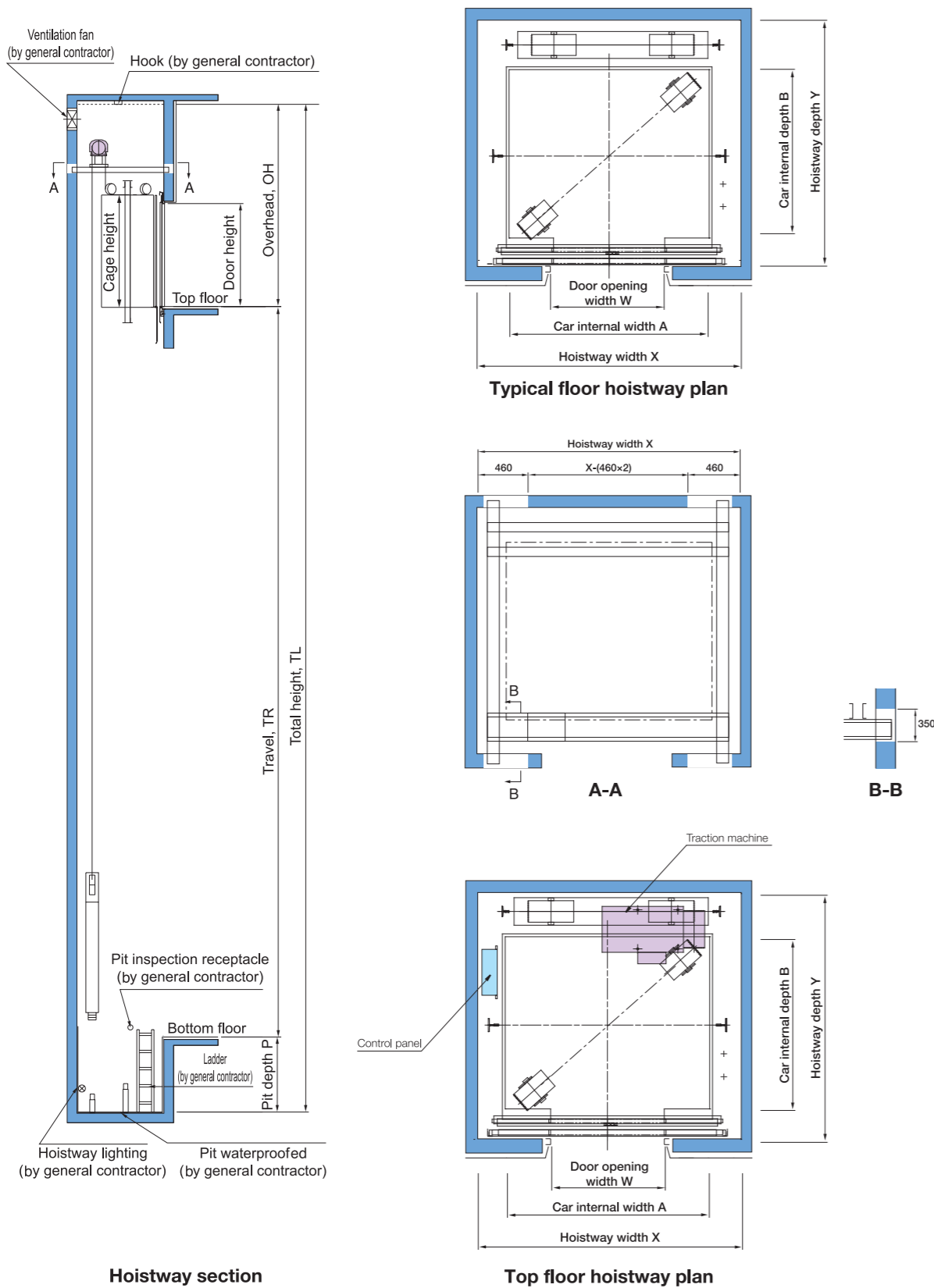
※ Please consult our local distributor.

Note:

- The above table complies with GB7588:2003 standards.
 - In case of travel is 40m or more, add 150mm to OH dimension and TC dimension at the above-stated dimension.
 - Please contact to our local distributor 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.
 - The above data table of "OH" dimensions is based cage height: 2300mm. Please contact our local distributor to check for other conditions.
 - If the size of the hoistway is greater than the above sizes, OH will be larger. Please consult our local distributor.
 - If the location of Power source panel, Control panel and Electric power supply are changed. Please consult our local distributor.
- W: Wide car D: Deep car D2: Front and rear opening door

Hoistway Layout

Specifications

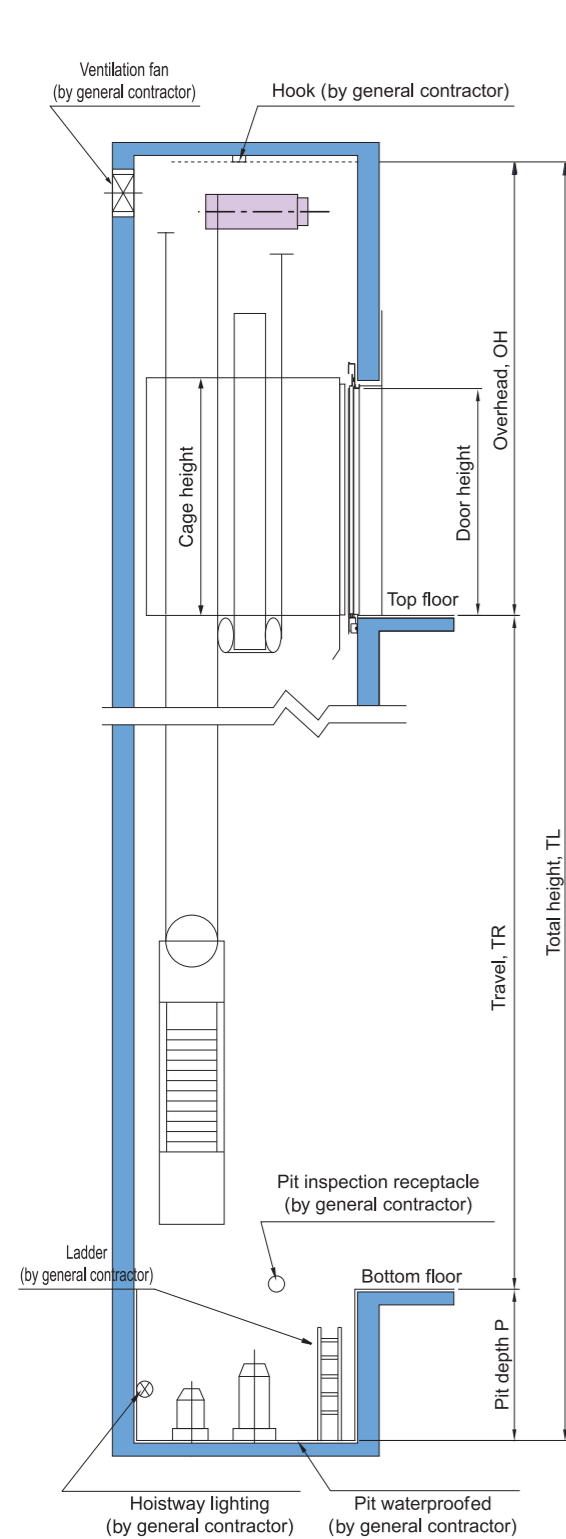


Type	Nos. of Person	Capacity (kg)	Speed (m/s)	Cage size Internal (AxB) (mm)	Door with W (mm)	Hoistway size (mm)		Motor Capacity (kW)	Max. Service Stops (s)	Max. Travel (m)		
						XxY	OH P					
P15-CO60	W	1150	1	1800x1500	1000	2400x2150	4300	1300	7.0	48	80	
P15-CO96	W		1.6		1100		4500	1400				12.0
P15-CO105	W		1.75		1100		4550	1450				12.0
P15-CO120	W		2		1100		4800	1600				14.0
P18-CO60	W	1350	1	2000x1500	1100	2600x2150	4300	1300	8.0	48	80	
P18-CO96	W		1.6				4500	1400				14.0
P18-CO105	W		1.75				4550	1450				14.0
P18-CO120	W		2				4800	1600				16.0
P21-CO60	W	1600	1	2000x1700	1100	2650x2350	4300	1300	10.0	48	80	
P21-CO96	W		1.6		1200		4500	1400				16.0
P21-CO105	W		1.75		1100		4550	1450				18.0
P21-CO120	W		2		1200		4800	1600				20.0
P24-CO60	W	1800	1	2100x1750	1200	2750x2400	4300	1300	12.0	48	80	
P24-CO96	W		1.6				4500	1400				18.0
P24-CO105	W		1.75				4550	1450				20.0
P24-CO120	W		2				4800	1600				22.0
P26-CO60	W	2000	1	2100x1950	1200	2750x2600	4300	1300	12.0	48	80	
P26-CO96	W		1.6				4500	1400				20.0
P26-CO105	W		1.75				4550	1450				22.0
P26-CO120	W		2				4800	1600				24.0

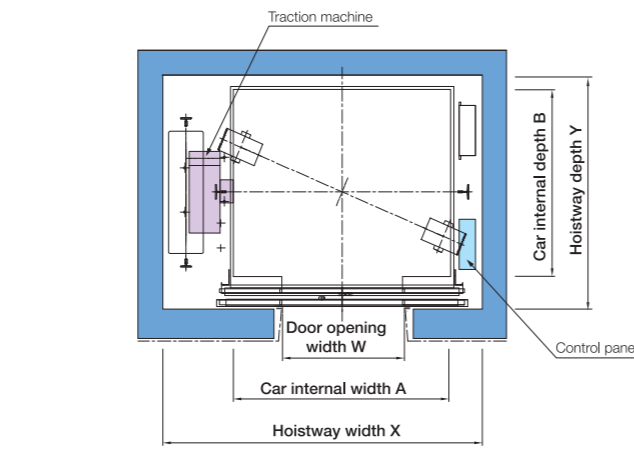
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 - The hoistway structure wall must be 150mm thick or more.
 - Piping, wiring and cables which is not relevant to elevator are prohibited inside the hoistway.
 - The above data table of "OH" dimensions is based cage height: 2300mm. Please contact our local distributor to check for other conditions.
 - If the size of the hoistway is greater than the above sizes, OH will be larger. Please consult our local distributor.
 - If the location of Power source panel, Control panel and Electric power supply are changed. Please consult our local distributor.
- W: Wide car

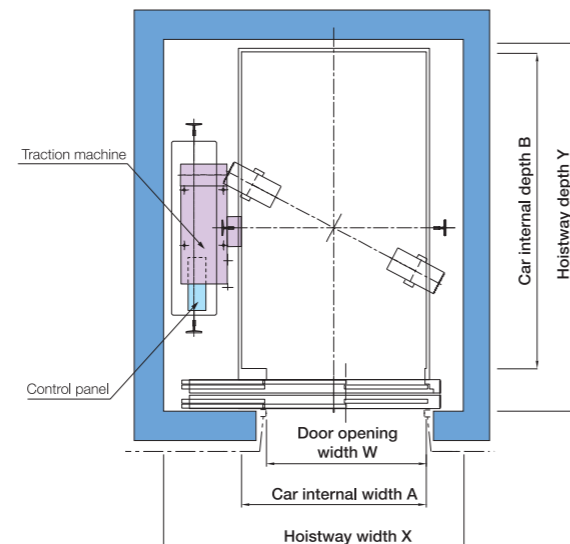
Hoistway Layout



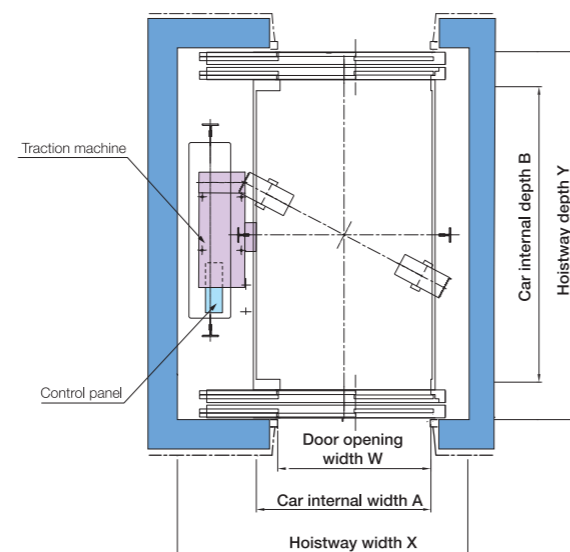
Hoistway section



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(AxB) (mm)	Door with W (mm)	Hoistway size(mm)		Motor Capacity (kW)	Max. Service Stops(s)	Max. Travel (m)																				
						X*Y	OH P																							
P15-CO60	W	15	1	1800x1500	1000	2600x1840	4100	1300	7.0	48	80																			
	W				1100	2650x1840	4300	1400																						
P15-CO96	W				1.6	1000	2600x1840	4300				1400	12.0																	
	W					1100	2650x1840	4350				1450																		
P15-CO105	W					1.75	1000	2600x1840				4350		1450	12.0															
	W						1100	2650x1840				4600		1600																
P15-CO120	W		2				1000	2600x1840	4600	1600	14.0																			
	W						1100	2650x1840																						
P17-CO60	W				17		1	2000x1400	1100	2800x1800		4100	1300	8.0		48	100													
P17-CO96	W								1.6	4300		1400	12.0																	
P17-CO105	W					1.75				4350		1450			14.0															
	W									4600		1600						16.0												
P17-2S60	D	1	1200x2300	1100						2050x2710	4100	1300							8.0	48	100									
	P17-2S96										D	1.6										4300	1400	12.0						
P17-2S105							D				1.75			4350		1450	14.0													
	P17-2S120						D		2				4600	1600		16.0														
P17-2S60						D2	1						1200x2200	1100	2050x2870							4100	1300		8.0	※				
	P17-2S96					D2												1.6				4300	1400				12.0			
P17-2S105		D2	1.75	4350		1450				14.0																				
	P17-2S120	D2		2		4600						1600							16.0											
P18-CO60		W			18	1		1800x1500			1100	2800x1840					4100			1300	8.0	48	80							
	P18-CO96	W							1.6							4300	1400			14.0										
P18-CO105		W					1.75						4350	1450	14.0															
	P18-CO120	W											2	4600		1600	16.0													
P21-CO60		W	21							1				2000x1700		1100		2825x2050						4100	1300	10.0	48	80		
	P21-CO96	W		1.6												1200		2875x2050	4300					1400	16.0					
P21-CO105		W				1.75					1100	2825x2050				4350		1450			18.0									
	P21-CO120	W							2		1200	2875x2050								4600		1600	20.0							
P21-2S60		D					1				1400x2400	1200			2275x2810														4100	1300
	P21-2S96	D											1.6				4300												1400	16.0
P21-2S105		D								1.75							4350									1450	18.0			
	P21-2S120	D		2													4600		1600					20.0						
P21-2S60		D2			1	1400x2300		1200								2275x2970	4100	1300	10.0		※									
	P21-2S96	D2							1.6								4300	1400		16.0										
P21-2S105		D2					1.75				4350	1450			18.0															
	P21-2S120	D2									2	4600	1600				20.0													
P24-CO60		W	24							1		2100x1750	1200	2925x2100				4100				1300	12.0		48	80				
	P24-CO96	W		1.6														4300				1400		18.0						
P24-CO105		W			1.75	4350		1450								20.0														
	P24-CO120	W				2		4600	1600									22.0												
P26-CO60		W					26	1	2100x1950						1200				2925x2300	4100	1300	12.0					48	80		
	P26-CO96	W									1.6						4300			1400	20.0									
P26-CO105		W								1.75			4350	1450			22.0													
	P26-CO120	W		2									4600	1600						24.0										

※ Please consult our local distributor.

Note:

- The above table complies with GB7588:2003 standards.
 - In case of travel is 40m or more, add 150mm to OH dimension and TC dimension at the above-stated dimension.
 - Please contact to our local distributor 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.
 - The above data table of "OH" dimensions is based cage height: 2300mm. Please contact our local distributor to check for other conditions.
 - If the size of the hoistway is greater than the above sizes, OH will be larger. Please consult our local distributor.
 - If the location of Power source panel, Control panel and Electric power supply are changed. Please consult our local distributor.
- W: Wide car D: Deep car D2: Front and rear opening door

