## 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.

# **TOSHIBA**

## **TOSHIBA COMPACT MACHINE ROOM ELEVATORS**

STANDARD PASSENGER ELEVATOR

# **ELCOSMO-**III

<sup>\*</sup> Revised publication effective Sept. 2019

# 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.

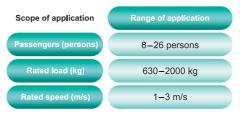
Utilizing the comprehensive technological infrastructure developed by Toshiba Group in more than 140 years since its foundation, we aim to enhance the leading edge technology and quality that we used to develop the ultra high speed elevator, harnessing Toshiba's technological innovations to their fullest 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.

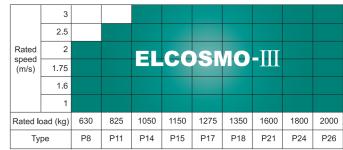
# **CONCEPT of ELCOSMO-III**

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

## **■** Product Lineup

Toshiba offers a wide variety of compact machine room elevators, which include 8-26 passenger elevators as well as single and double entrance elevators. To meet diversification of customer's demand, sufficient options are also available.





Note
The above scope complies with GB7588:2003 standard.

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## The Solutions

Company Solutions
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## Technology New Technology

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## Stylish and Comfortable

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Hall Design

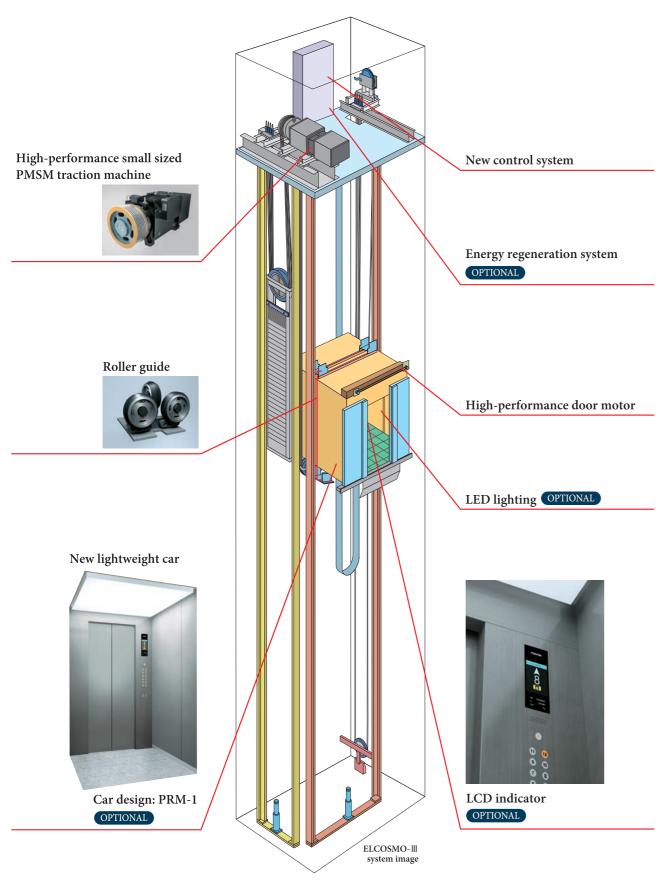
## **Functions**

Hoistway Layout and Specifications

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**Global Network** 

# TECHNOLOGY



# **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.



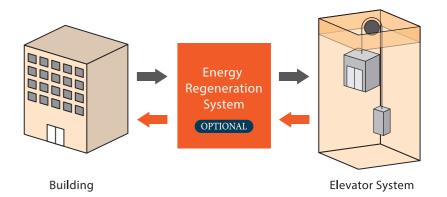
## New Control Systems

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).



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

<sup>\*</sup>This optional system may not be suitable for certain buildings. Please contact us for more information.

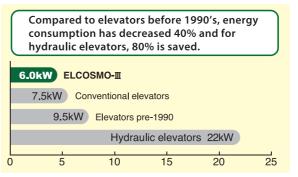


# **Environmental issues**

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

## **Energy Saving**

ELCOSMO-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.



\*Comparison with \*ELCOSMO-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 an fluorescent lamp. (part of ceiling)

Car design: PRM-1 OPTIONAL



## Resource Saving

## 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

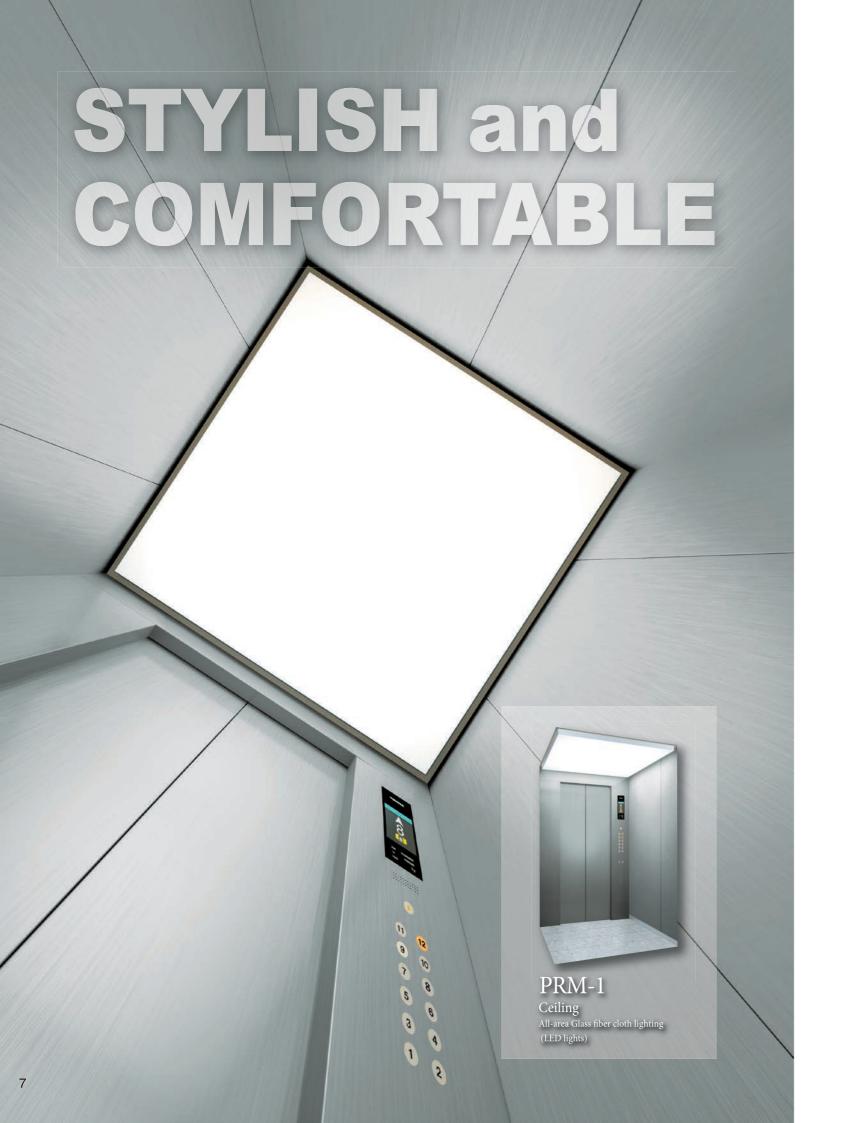
By employing LED light, various materials used for light became mercury free.

## 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.

# ELCOSMO-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 ELCOSMO-III has been approved as an "Excellent ECP".



# **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.

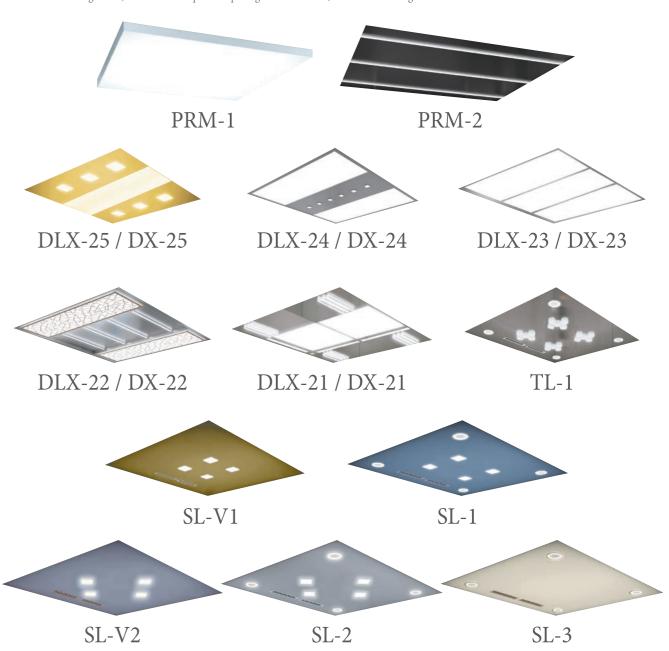
## Wide variety of newly developed LED lighting available.\*\*Note 1

\*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 CO<sub>2</sub> 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.



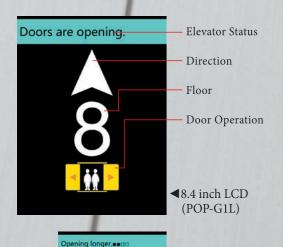
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# STYLISH and COMFORTABLE

## 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.





◀5.7 inch LCD

(COP-G1L)





## OPTIONAL

Coordination with car operation panel indicator display and car security camera.

Large LCD indicator is capable of displaying visuals linked from car security camera.

There is no necessity to provide an extra monitor to display security camera's image.



Display examples for car indicator display

◆Fire emergency operation

During emergency operation, the display will announce the message

\* Capable of displaying optional operations such as fire emergency operation.

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



# 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



Hall design 2



Hall design 3
OPTIONAL



Hall design 4
OPTIONAL



Hall design 5



Hall design 6
STANDARD

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

# **Functions**

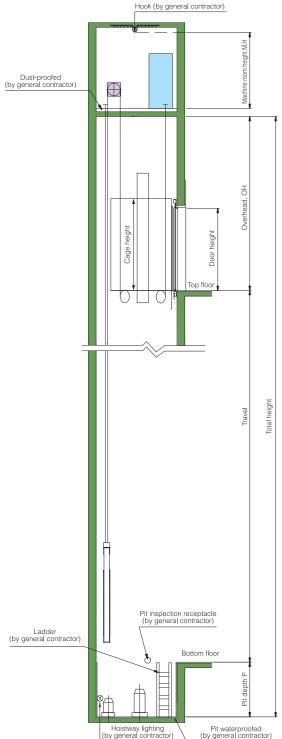
 $\bigcirc$ : STANDARD  $\triangle$ : OPTIONAL

Functions	Notes	Descriptions					
	Simplex selective-collective fully automatic operation	Fully automatic operation by hall and car calls for single car	0				
	Duplex selective collective fully automatic operation (Note 1)	Fully automatic operation for 2 cars in the same group	Δ				
Onerations	3 or 4-car group supervisory control system	Fully automatic operation for 3 or 4 cars in the same group	Δ				
Operations	Group supervisory control system	For supervisory operation of groups of more than 4 cars, please contact us	Δ				
	Independent operation	Lift car separated from group control operation and responde to car call only	Δ				
	Attendant operation	Operation by attendant by switch & button provided at service cabinet in COP	Δ				
	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	0				
	Car inspection operation (INS)	During car inspection operation, the lift car will run at slowly speed without responding to hall call	0				
	Overload protection	The car overload buzzer will sound to prevent overloading and the doors will remain open	0				
	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					
Safety	Automatic landing during power failure (TOSLANDER)	In the event of power failure, the lift will land at the nearest floor by emergency battery					
Functions	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	0				
	Emergency operation indication at COP	In the event of an emergency, the emergency operation status will be displayed at COP	0				
	Mechanical door safety	When the mechanical door safety device is touched by a passenger, the door will open	0				
	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	Δ				
	2-in-1 door safety (multi-beam door safety + mechanical door safety)	A combination of multi-beam door safety and mechanical door safety	Δ				
Service	Home landing	To reduce passenger waiting time, the lift will return to the designated floor and stand by	Δ				
Functions	Service floor cut-off selection	Disables the designated floor service	Δ				

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

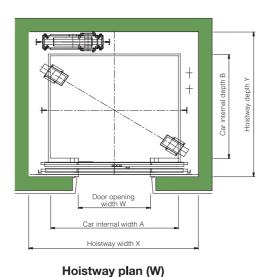
 $\bigcirc$ : STANDARD  $\triangle$ : OPTIONAL

Functions	Notes	Descriptions						
	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	0					
	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 repeatedly pending removal of the obstacle	0					
	Adjustable door opening time	Adjusts the door opening time to reflect building usage	0					
	Door open extension button	Extends the door opening time	Δ					
	Car chime	A chime installed in the car ceiling will sound when the lift arrives	Δ					
	Hall chime	A chime installed in the lift lobby will sound when the lift arrives	Δ					
	Hall lantern	The hall lantern will light up when the lift arrived	Δ					
Service	Sub-car operating panel	Additional car operating panel						
Functions	Car full load indicator	"Full Load" will display on the hall indicator when the lift car is full	Δ					
	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 auotmatically						
	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	0					
	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	0					
	"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	0					
	Nuisance call cancellation at reversal	Cancel intentionally registered nuisance calls automatically in the reversal travel direction	0					
	Multi-channel intercom	The intercom system can communicate with multi-stations simultaneously	0					
	Designated floor stop operation	Automatically stops the lift at the designated floor for crime prevention purposes	Δ					
	Card access system	Allows activation of the disnated floor call by IC card * Card Access System by others	Δ					
	Speech synthesizer	Announces car operations	Δ					
	Supervisory panel	Located in the building control room, etc. to monitor the status and control of each lift	Δ					



Machine room door W600 × H1800

Machine room plan



**Hoistway section** 

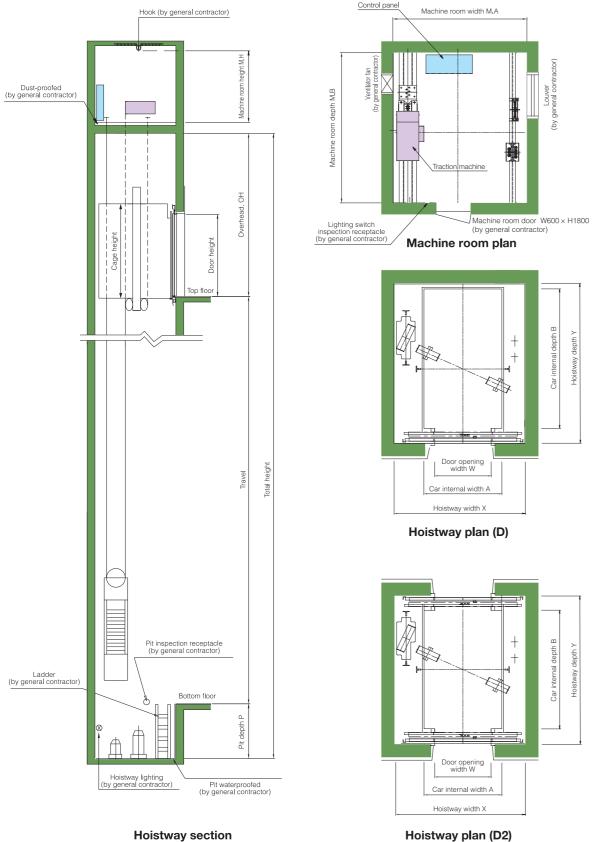
# **Specifications**

Туре		Nos.of	internal(A×B) vv			Machine ro dimensoins(	mm)	Motor Capacity	Max.Service	Max.Travel				
		Person	(kg)	(m/s)	(mm̀) ′	(mm)	X×Y	OH	Р	M.A×M.B	М.Н	(kW)	Stops(s)	(m)
P8-CO60	l w			1		800	1850×1660	3700	1300	1850×1660		3.6		90
1 0 0000	-"				]	900	2050×1660	0,00	1000	2050×1660		0.0		- 00
P8-CO96	w			1.6		800	1850×1660	3900	1400	1850×1660		5.8		
10000		8	630	1.0	1400×1100	900	2050×1660	0000	1100	2050×1660		0.0	40	100
P8-CO105	l w	_		1.75		800	1850×1660	3950	1450	1850×1660		6.3		100
1 0 00 100	_ ''			1.70	]	900	2050×1660	0000	1400	2050×1660		0.0	]	
P8-CO120	w			2		800	1850×1660	4050	1650	1850×1660		7.2		125
F6 <del>-</del> C0120	V V			2		900	2050×1660	4030	1030	2050×1660		1.2		125
P11-CO60	w			1		800	1850×1910	3700	1300	1850×1910		4.7		90
P11-C060	vv			l '		900	2050×1910	3/00	1300	2050×1910		4.7		90
D44 0000	147			4.0	]	800	1850×1910	0000	4400	1850×1910		7.5		
P11-CO96	W			1.6		900	2050×1910	3900	1400	2050×1910		7.5		
		1			1	800	1850×1910			1850×1910			1	100
P11-CO105	W	11	825	1.75	1400×1350	900	2050×1910	3950	1450	2050×1910		8.3	40	
		1			1	800	1850×1910			1850×1910			1	
P11-CO120	W			2		900	2050×1910	4050	1650	2050×1910		9.5		
		1			1	800	1850×1910			1850×1910	2000		1	125
P11-CO150	W			2.5		900	2050×1910	4250	2100	2050×1910		11.8		
						900	2100×1960			2100×1960				
P14-CO60	l w			1		1000	2300×1960	3700	1300	2300×1960		6.0		90
				· ·		1100	2500×1960	0.00		2500×1960		0.0		
					1	900	2100×1960			2100×1960			1	
P14-C096	l w			1.6		1000	2300×1960	3900	1400	2300×1960		9.7		
						1100	2500×1960	1		2500×1960		"		
					1	900	2100×1960			2100×1960				100
P14-CO105	l w	14	1050	1.75	1600×1400	1000	2300×1960	3950	1450	2300×1960		10.5	40	
	''	14	1050		1600×1400	1100	2500×1960	1 0000	1100	2500×1960		10.0	40	
		1			1	900	2100×1960			2100×1960			1	
P14-CO120	l w			2		1000	2300×1960	4050	1650	2300×1960		12.0		
1 14-00120	""					1100	2500×1960	7000	1000	2500×1960 2500×1960		12.0		
					1	900	2100×1960			2100×1960			1	125
P14-CO150	w			2.5		1000	2300×1960	4250	2100	2300×1960		15.0		
14-00150	VV			2.3		1100	2500×1960 2500×1960	4250	2100	2500×1960 2500×1960		13.0		
						1100	2300 1960			2300 1960				

- 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.

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- 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 section** 

# **Specifications**

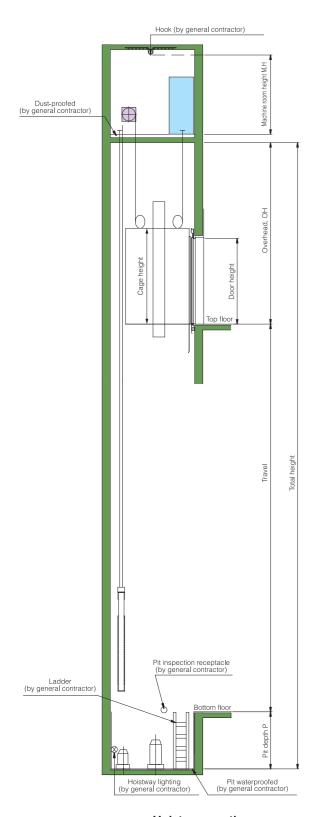
Туре		Nos.of	Capacity	Speed	Cage size Internal(A×B)	Door with W	Hoistway	size(m	m)	Machine ro dimensoins	oom (mm) _	Motor Capacity	Max.Service	Max.Travel	
		Person	(kg)	(m/s)	(mm̀) ′	(mm)	X×Y	ОН	Р	M.A×M.B	M.H	(kW)	Stops(s)	(m)	
P8-CO60	D I			1		800	1835×1725	3700	1300	1835×1725		3.6		90	
	_			-	1100×1400	900	2020×1725			2020×1725	1				
P8-CO96	D			1.6		800	1835×1725	3900	1400	1835×1725		5.8			
		8	630			900	2020×1725			2020×1725			40	100	
P8-CO105	D				1.75		800	1835×1725	3950	1450	1835×1725 2020×1725		6.3		
								900	2020×1725 1835×1725						
P8-CO120	D			2		900	2020×1725	4050	1650	1835×1725 2020×1725		7.2		125	
						800	1850×2000			1850×2000					
	D					900	2020×2000	1		2020×2000			40		
P11-C060	-			1		800	1850×2150	3700	1300	1850×2150		4.7		90	
	D2					900	2020×2150	1		2020×2150			80		
						800	1850×2000			1850×2000					
	D					900	2020×2000			2020×2000		7.5	40		
P11-C096				1.6		800	1850×2150	3900	1400	1850×2150				İ	
	D2					900	2020×2150	1		2020×2150			80		
					1	800	1850×2000			1850×2000			40	100	
D	D	44	005	4 75	1100×1700	900	2020×2000			2020×2000			40		
P11-C0105	Da	11	825	1.75	1100×1700	800	1850×2150	3950	1450	1850×2150		8.3	80		
	D2					900	2020×2150	1		2020×2150	1				
	D				1	800	1850×2000			1850×2000			40		
P11-C0120	U			2		900	2020×2000	4050	1650	2020×2000		9.5	40		
F11-C0120	D2					800	1850×2150			1850×2150			80		
	DZ					900	2020×2150			2020×2150	2000		00	125	
	D I			2.5		800	1850×2000	4250 2		1850×2000	2000	11.8	40		
P11-C0150						900	2020×2000		2100	2020×2000			10		
	D2					800	1850×2150			1850×2150			80		
						900	2020×2150			2020×2150					
	D			1		800	1850×2400	3700 1	00 1300	1850×2400			40	- 90	
P14-C060						900	2020×2400			2020×2400		6.0			
	D2					800	1850×2550			1850×2550			80		
						900	2020×2550			2020×2550					
	D					900	1850×2400 2020×2400	-		1850×2400			40		
P14-CO96	-			1.6		800	1850×2550	3900	1400	2020×2400 1850×2550		9.7		1	
	D2					900	2020×2550			2020×2550			80		
					1	800	1850×2400			1850×2400				100	
	D					900	2020×2400	1		2020×2400	1		40		
P14-C0105		14	1050	1.75	1100×2100	800	1850×2550	3950	1450	1850×2550		10.5			
	D2					900	2020×2550			2020×2550			80		
	_					800	1850×2400			1850×2400					
	D					900	2020×2400			2020×2400		400	40		
P14-CO120				2		800	1850×2550	4050	1650	1850×2550		12.0	00		
	D2					900	2020×2550	1		2020×2550			80	405	
	_				1	800	1850×2400			1850×2400			10	125	
D44 00450	D			2.5		900	2020×2400			2020×2400		45.0	40		
P14-CO150	D2			2.5		800	1850×2550	4250	2100	0 1850×2550	15.0	90	1		
	D2 I				I	900	2020×2550			2020×2550	1		80	1	

<sup>※</sup> Please consult our local distributor.

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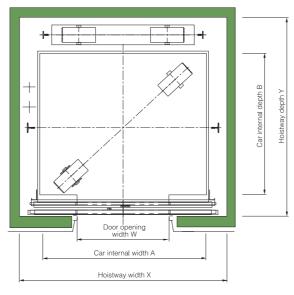
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- W: Wide car D: Deep car D2: Front and rear opening door



Machine room door W600 × H1800 Control panel

Machine room plan



Hoistway plan

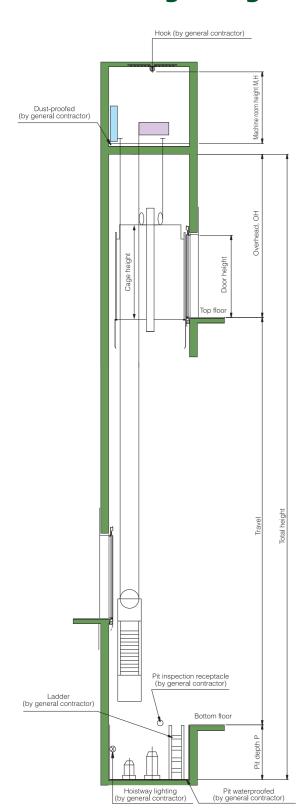
**Hoistway section** 

# **Specifications**

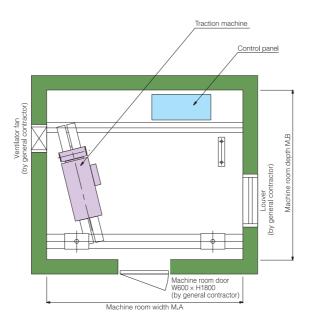
Туре		Nos.of	Capacity	Speed	Cage size Internal(A×B)	Door with . W	Hoistway	size(m	m)	Machine ro	om (mm)	Motor Capacity	Max.Service			
		Person	(kg)	(m/s)	(mm)	(mm)	X×Y	OH	Р	M.A×M.B	M.H	(kW)	Stops(s)	(m)		
P14-C0180	W	14	1050	3	1600×1400	900	2050×2050	4950	2500	2050×2050		20.0	48	150		
	W					1000	2175×2050			2175×2050						
P15-CO60	W			1		1000	2250×2150	3900	1300	2250×2150		7.0		90		
	W			1.6		1100	2400×2150			2400×2150						
P15-CO96	W					1000 1100	2250×2150 2400×2150	4050	1400	2250×2150		12.0				
	W									2400×2150			1	100		
P15-CO105	W			1.75		1000	2250×2150 2400×2150	4100	1450	2250×2150 2400×2150		12.0				
	W	15	1150		1800×1500	1000	2250×2150			2250×2150			48			
P15-CO120	w			2		1100	2400×2150	4200	1600	2400×2150		14.0		í I		
	W					1000	2250×2150			2250×2150			ł			
P15-CO150	W			2.5		1100	2400×2150	4500	2000	2400×2150		20.0		150		
	W					1000	2250×2150			2250×2150			l			
P15-CO180	w			3		1100	2400×2150	4950	2500	2400×2150		22.0				
P17-CO60	W			1				3900	1300			8.0		90		
P17-CO96	W			1.6				4050	1400	1		12.0	1	400		
P17-CO105	W	47	4075	1.75	0000.4400	1100	2450×2050	4100	1450	2450×2050		14.0	4.0	100		
P17-CO120	W	17	1275	2	2000×1400	1100	24302030	4200	1600	2450*2050		16.0	48			
P17-CO150	W			2.5				4500	2000	1		20.0		150		
P17-CO180	W			3				4950	2500			24.0	1			
P18-CO60	W			1				3900	1300			8.0		90		
P18-CO96	W			1.6	2000×1500			4050	1400			14.0		100		
P18-CO105	W	18	1350	1.75		1100	2450×2150	4100	1450	2450×2150		14.0	48	100		
P18-CO120	W			2	2000-1000			4200	1600	[	2200	16.0				
P18-CO150	W			2.5				4500	2000		2200	20.0		150		
P18-CO180	W			3				4950	2500			24.0		++		
P21-C060	W						1		1100	2450×2350	3900 1300	2450×2350		10.0		90
	W										1200	2650×2350			2650×2350 2450×2350	
P21-C096	W			1.6		1100	2450×2350	4050	1400			16.0				
	W					1200 1100	2650×2350 2450×2350			2650×2350 2450×2350				100		
P21-CO105	W			1.75		1200	2650×2350	4100	1450	2650×2350	1	18.0				
	W	21	1600		2000×1700	1100	2450×2350			2450×2350			48			
P21-CO120	w			2		1200	2650×2350	4200	1600	2650×2350		20.0				
	W					1100	2450×2350			2450×2350			ł			
P21-CO150	W			2.5		1200	2650×2350	4500	2000	2650×2350		24.0		150		
	W					1100	2450×2350			2450×2350						
P21-CO180	W			3		1200	2650×2350	4950	2500	2650×2350		28.0				
P24-CO60	W			1				3900	1300			12.0		90		
P24-CO96	W			1.6	1			4050	1400	1		18.0	1	400		
P24-CO105	W	24	1800	1.75	2100×1750	1200	2650×2400	4100	1450	2650×2400		20.0	48	100		
P24-CO120	W		1600	2	2100*1/50	1200	2000*2400	4200	1600	2000^2400		22.0	48			
P24-CO150	W			2.5				4500	2000			26.0		150		
P24-CO180	W			3				4950	2500			32.0				
P26-CO60	W			1				3900	1300			12.0		90		
P26-CO96	W			1.6				4050	1400			20.0		100		
P26-CO105	W		2000	1.75	2100×1950	1200	2650×2600	4100	1450	2650×2600		22.0	48	100		
P26-CO120	W	20	2000	2	2100×1950			4200	1600			24.0	"			
P26-CO150	W			2.5				4500	2000			30.0		150		
P26-CO180	W			3				4950	2500			36.0				

- 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.

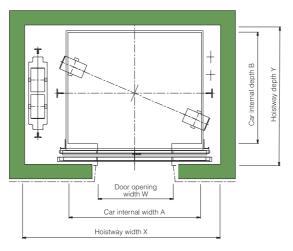
- Please contact to our local distributor to check for other standards.
  Hoistway dimensions are the minimum dimension after the construction work.
  The hoistway dimensions in chart are the minimum requirement.
  The hoistway structure wall must be 150mm thick or more.
  Piping, wiring and cables which 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



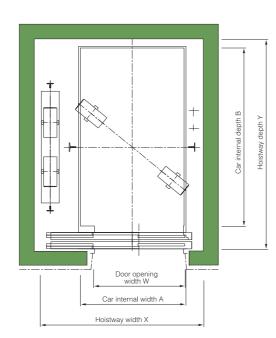
**Hoistway section** 



Machine room plan



Typical floor hoistway plan (W)



Typical floor hoistway plan (D)

# **Specifications**

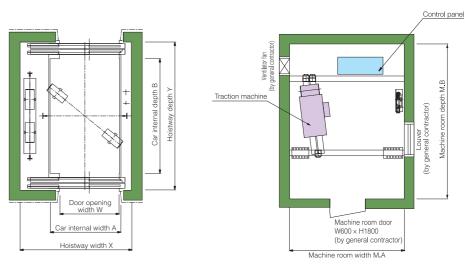
Туре		Nos.of	Capacity	Speed	Cage size Internal(A×B)	Door with W	Hoistway	/ size(mı	m)	Machine ro		Motor Capacity	Max.Service										
		Person	(kg)	(m/s)	(mm)	(mm)	X×Y	OH	Р	M.A×M.B	M.H	(kW)	Stops(s)	(m)									
P14-CO180	l w l	13	1050	1050	3	1600×1400	900	2400×1820	4950	2500	2400×1820		20.0	48	150								
1 14-00100		10	1000		10001400	1000	2450×1820	4550	2000	2450×1820		20.0	70	100									
P15-CO60	W								1		1000	2600×1840	3900	1300	2600×1840		7.0		90				
1 13-0000	W			'	-	1100	2650×1840	3900	1300	2650×1840		7.0	]	30									
P15-CO96	W			1.6		1000	2600×1840	4050	1400	2600×1840 2650×1840		12.0											
F 15-CO96	W			1.0		1100	2650×1840	4030	1400			12.0	1	100									
P15-CO105	W			1.75		1000	2600×1840	4100	1450	2600×1840		12.0		100									
F 13-CO 103	W	17	1150	1.75	1800×1500	1100	2650×1840	4100	1430	2650×1840		12.0											
P15-CO120	W	17	1130	2	1000~1300	1000	2600×1840	4200	1600	2600×1840		14.0	48										
P15-C0120	W														1100	2650×1840	4200	1600	2650×1840		14.0	] 40	
D45 00450	W			2.5		1000	2600×1840	4500	2000	2600×1840		20.0	1	150									
P15-CO150	W			2.5		1100	2650×1840	4500	2000	2650×1840		20.0		150									
D45 00400	W			3		1000	2600×1840	4050	0500	2600×1840		22.0	1										
P15-CO180	W			3		1100	2650×1840	4950	2500	2650×1840		22.0											
P17-2S60	D			1				3900	1300			8.0		90									
P17-2S96	D			1.6				4050	1400	1		12.0	1	100									
P17-2S105	D	47	4075	1.75	1200×2300	1100	2030×2710	4100	1450	2030×2710		14.0	1 40	100									
P17-2S120	D	17	1275	2			2030*2710	4200	1600			16.0	48										
P17-2S150	D			2.5				4500	2000		2200	20.0	]	150									
P17-2S180	D			3				4950	2500	1	2200	24.0	1										
P17-2S60	D2			1				3900	1300			8.0		•									
P17-2S96	D2			1.6				4050	1400		12.0	1											
P17-2S105	D2	4-7	4075	1.75	4000 0000	4400	00000070	4100	1450	1		14.0	1										
P17-2S120	D2	17	1275	2	1200×2200	1100	2030×2870	4200	1600	2030×2870		16,0	1 ,	<b>K</b>									
P17-2S150	D2			2.5				4500	2000	1		20.0	1										
P17-2S180	D2			3				4950	2500	1		24.0	1										
P21-2S60	D			1				3900	1300			10.0		90									
P21-2S96	D			1.6	1			4050	1400	1		16.0	1										
P21-2S105	D	04	4000	1.75	1,,,,,,,,,,,	4000	00000040	4100	1450	00000040		18.0	1	100									
P21-2S120	D	21	1600	2	1400×2400	1200	2230×2810	4200	1600	2230×2810		20.0	48										
P21-2S150	D			2.5	1			4500	2000	1		24.0	1	150									
P21-2S180	D			3	1			4950	2500	1		28.0	1	.50									
P21-2S60	D2			1				3900	1300			10.0											
P21-2S96	D2	21 1600		1.6	1			4050	1400	1		16.0	1										
P21-2S105	D2			1.75				4100	1450	1		18.0	1 .										
P21-2S120	D2		1600	2	1400×2300	1200	2230×2970	4200	1600	2230×2970		20.0	† ;	Ķ.									
P21-2S150	D2			2.5				4500	2000	1		24.0	1										
P21-2S180	D2			3				4950	2500	1		28.0	1										
Y DI		14 1					l	1 4000	1 2000			20.0											

<sup>\*</sup> Please consult our local distributor.

## Note:

- 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 agency to check for other standard.
- · 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 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



Typical floor hoistway plan (D2)

Machine room plan

# **Works by Others**

Works below are not included in elevator installation works:

## **►** Hoistways

- 1. Hoistway construction and fire-proofing, and opening 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
- Installation of separating beams, intermediate beam, back beam and lateral beams (if necessary).
   Installation of the base plate for each floor and of bed steel for furnishing the equipment related to landing entrance, in case of hoistways of steel structure of PC structure.
- 4. Fire-proofing of steel frame material in steel structured hoistways, and fire-proofing around landing entrances (if necessary).
- 5. Finishing of walls and floors, etc., around entrances, after furnishing equipment related to landing entrances.

  6. Furnishing of base steel or others for furnishing rail brackets, especially where the floor height is high (if necessary).
- 7. Installation of the entrance or the gangway for pit inspection (if necessary).
- 8. Water-proofing of the pit (including drainage if necessary).
- 9. Rearrangement of the building body in case that there are some spaces to be used under the pit.
- 10. Installation of emergency exits for rescue purposes in the event there are floors at which the elevator does not stop and installation of a fascia plate.
- 11. Shelter equipment from rain at landing entrances directly contacting to the air in the place like roof.
- 12. Installation of hooks or beams on top of the elevator shaft.
- 13. Installation of lighting in hoistway (if necessary).
- 13. Installation of vent opening at the top of shaft (if necessary).
  14. Installation of vent opening at the top of shaft (if necessary).
  15. Installation of a net or wall to prevent falling into the pit (in cases where the pit level is different.)
  16. All related to the building structure other than works above.

## ► Machine rooms

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

## ► Works for Equipment

- 1. Wiring 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 of the power supply to the supervisory panels.
- 3. Piping and wiring of intercoms outside hoistway and of others necessary for elevators.
- Supply and installation of switching devices for emergency power supply in case of power failure and two pairs of relay contacts for normal / emergency power identification, and their piping and wiring (if necessary).
- 5. Piping and wiring of supervisory panels, alarm panels and inter-communication systems, etc., outside hoistways.
- 6. Furnishing of receptacles for inspection in pits.

## ► Temporary Works

It is required to arrange the following matters:

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

## Note

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

- 1. Provide power facility so that voltage regulation of the power supply at the receiving terminals in the hoistway is kept within  $\pm 10\%$  for the motor, and  $\pm 2\%$  for the lighting equipments.
- 2. In the hoistways, please prevert the temperature from exceeding 40  $^{\circ}\text{C}$  and humidity from exceeding 90% (monthly mean) and 95% (daily mean).
- 3. Please do not allow any chemically toxic gas or an excessive amount of dust to enter into the hoistways, as these can corrode the metal or electrical contacts.

When asking for an 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.

## Memo

## **Global Network**

Head office / Manufacturing base Head office

TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION

Head Office: 72-34, Horikawa-cho, Saiwai-ku, Kawasaki 212-8585, Japan Factory: 1 Toshiba-cho, Fuchu City, Tokyo 183-8511

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

E CHEVALIER (HK) LIMITED Head Office: 22nd Floor, Chevalier Commercial Centre, 8 Wang Hoi Road, Kowloon Bay, Hong Kong

CHEVALIER SINGAPORE HOLDINGS PTE. LTD. Head Office: 23 Genting Road #07-01/02 Chevalier House, Singapore 349481

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SIAM ELEVATOR & ESCALATOR CO., LTD. Head Office: 5 Soi Premruthai Village 20 Srinakarin Road, Nongbon Prawech Bangkok 10250

Together with our global partners, we connect with Asia and then the world, through our technology and our spirit.

This planet is our shared heritage. We must live together, grow together and delight in one another.

[For more information]

## Toshiba Elevator and Building Systems Corporation

Head office: 72-34, Horikawa-cho, Saiwai-ku, Kawasaki 212-8585, Japan

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

