



ISO 9001  
Certificate

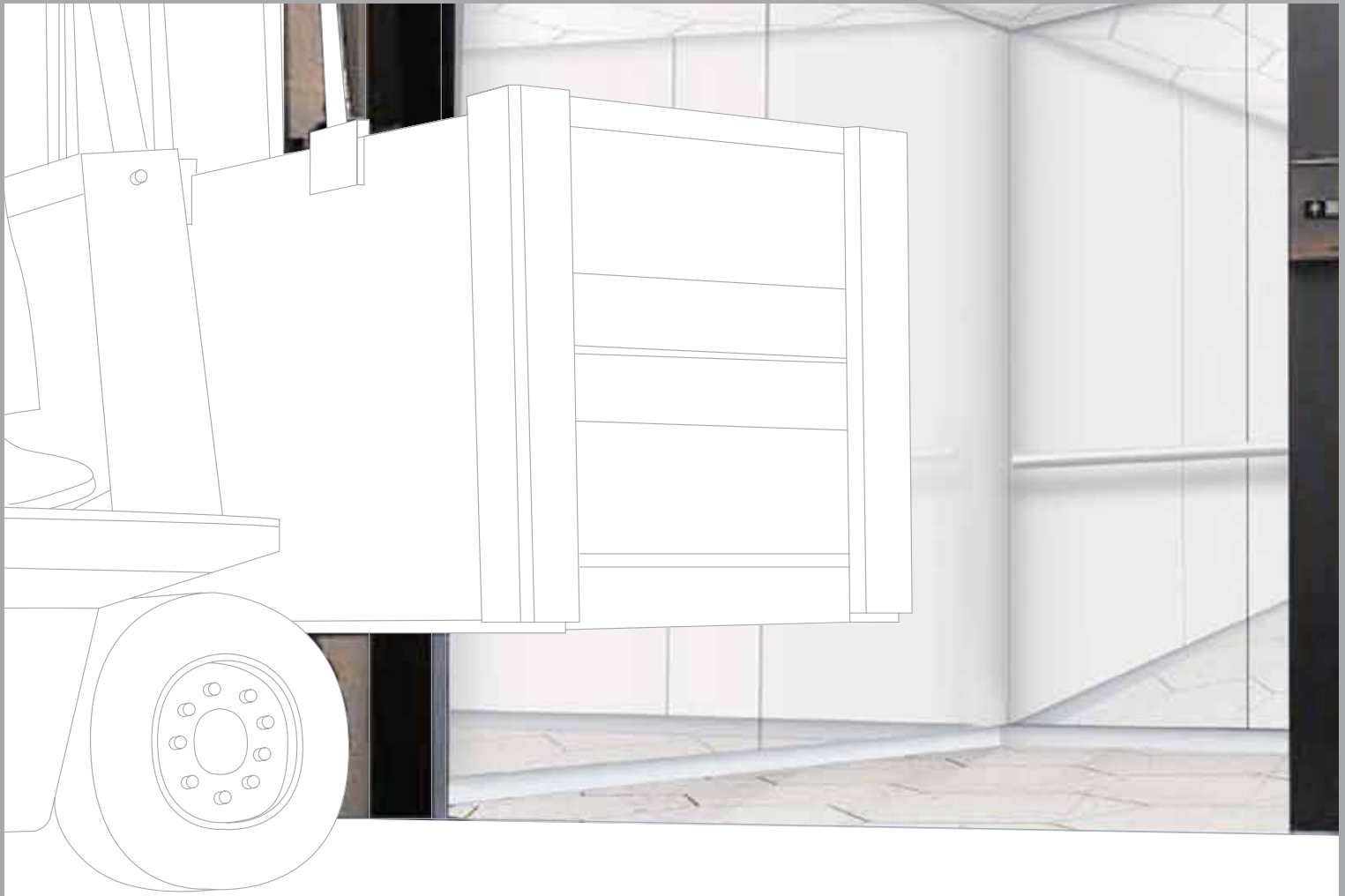


ISO 14001  
Certificate

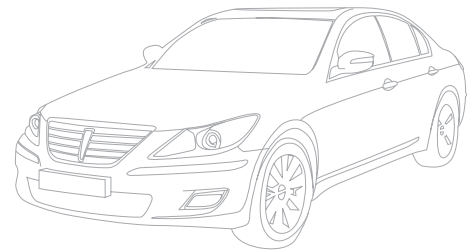


**SIGMA**

Your Elevator Partner  
[www.sigmaelevators.com](http://www.sigmaelevators.com)



# Freight & Car Elevator



Your Elevator Partner... SIGMA

## SIGMA Ride tomorrow, Lift future



### Korean Engineered Products

SIGMA products are engineered by highly qualified Korean engineers and ensure customers to receive excellent products with reliable quality.



### Aesthetics Design Excellence

SIGMA's Design Center in Korea and China are fully equipped with professionals who follow the most up-to-date aesthetic designs to satisfy customers needs.



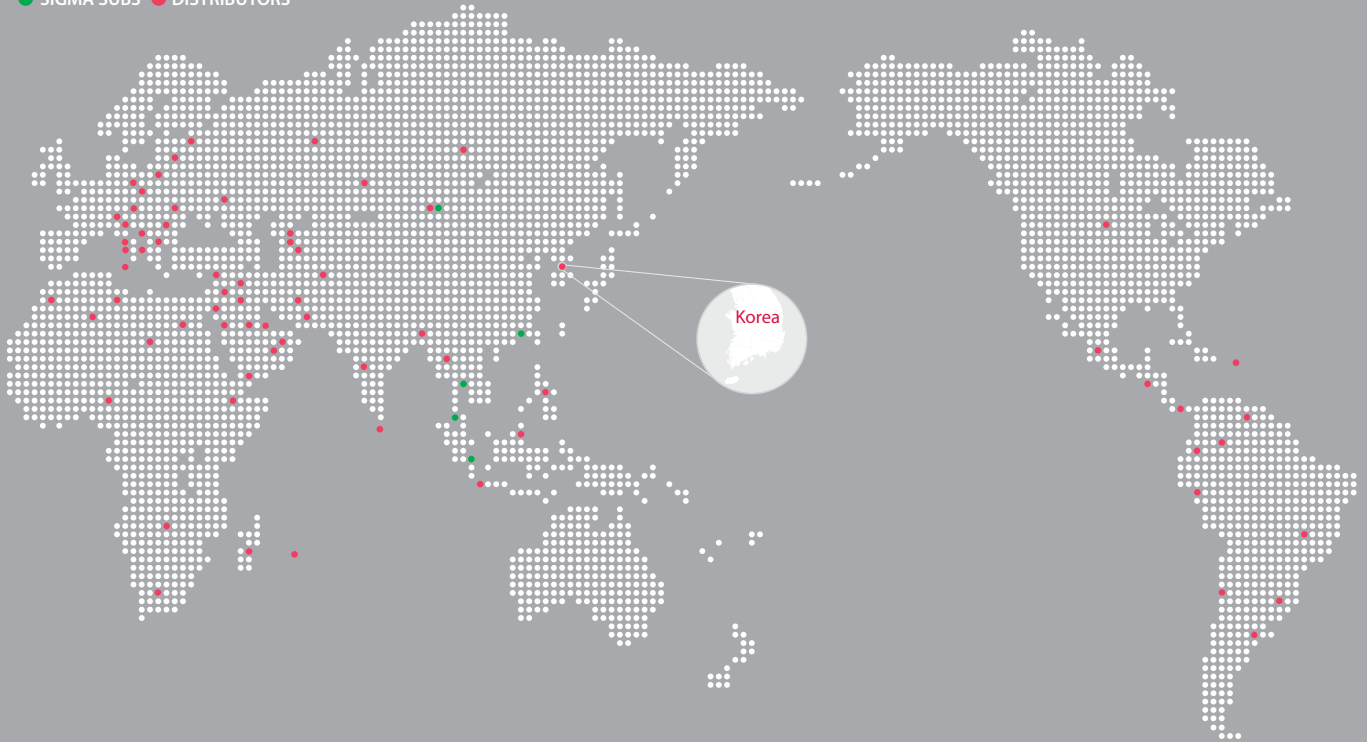
### Global Network

SIGMA has been with you for more than 45 years serving over 60 Countries.



SIGMA has already exported approximately 100,000 elevators worldwide since year 1978

● SIGMA SUBS ● DISTRIBUTORS



Khalid Al Attar Tower  
UAE



Al Rames Tower  
Qatar



Darwaza Tower  
Kuwait



Vorobiev Gory  
Russia



Triumph Palace  
Russia



Antei  
Russia



Sheraton Hotel  
Puerto Rico



Baiyoke Tower  
Thailand



Grand Hyatt Hotel  
Indonesia



Emerald Tower  
Kazakhstan



LG Beijing Tower  
China



ASEM Tower  
Korea



Intercontinental Hotel  
Korea



Korea World Trade Center  
Korea



Plaza La Castellana  
Venezuela



Torre Global Bank  
Panama



Ocean Two  
Panama

# Freight Elevator

Our dedication and passion to reach customer satisfaction always have been a driving force of our creative and innovative ideas.

As your Elevator Partner, upgrading our ideas in providing elevators that fit our customers needs and devoting ourselves in protecting environment are our ultimate goal.





# Elevator Design

Security and stability are the key marks for SIGMA gear products, which ensures customers a strong powering system with sound quality

## Specification


CEILING	C-100A
COP	XCP4-A
CAR DOOR	Stainless Steel Hairline
CAR WALL	Stainless Steel Hairline
HALL BUTTON	XHB4-A



| Ceiling |



| Car Door |

 The actual product can be different (changed) depending on design  
Car wall image can be different (changed) depending on capacity

# Elevator Design



## Specification

CEILING	C-100A
COP	XCP4-A
CAR DOOR	NDSP016
CAR WALL	NDSP016
HALL BUTTON	XHB4-A



| Ceiling |



| Car Door |

## Specification

CEILING	C-100A
COP	XCP4-A
CAR DOOR	NLGP928
CAR WALL	NLGP928
HALL BUTTON	XHB4-A



| Ceiling |



| Car Door |



The actual product can be different (changed) depending on design  
Car wall image can be different (changed) depending on capacity

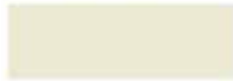


# Elevator Fixtures

## | Car Wall Colors



Stainless Steel Hairline(Standard)



NDSP002 Oyster White



NDSP016 Paster Green

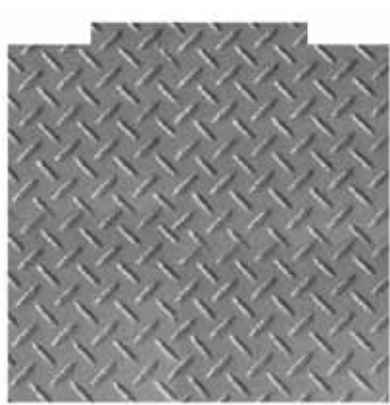


NDSP017 Grey White



NLGP928 Camel

## | Floor



### Remark

- 1/ Load capacity ≤ 2000kg Floor thickness : 4mm
- 2/ Load capacity > 2000kg Floor thickness : 5mm

## | Hall Button



XHB4-A-BR38

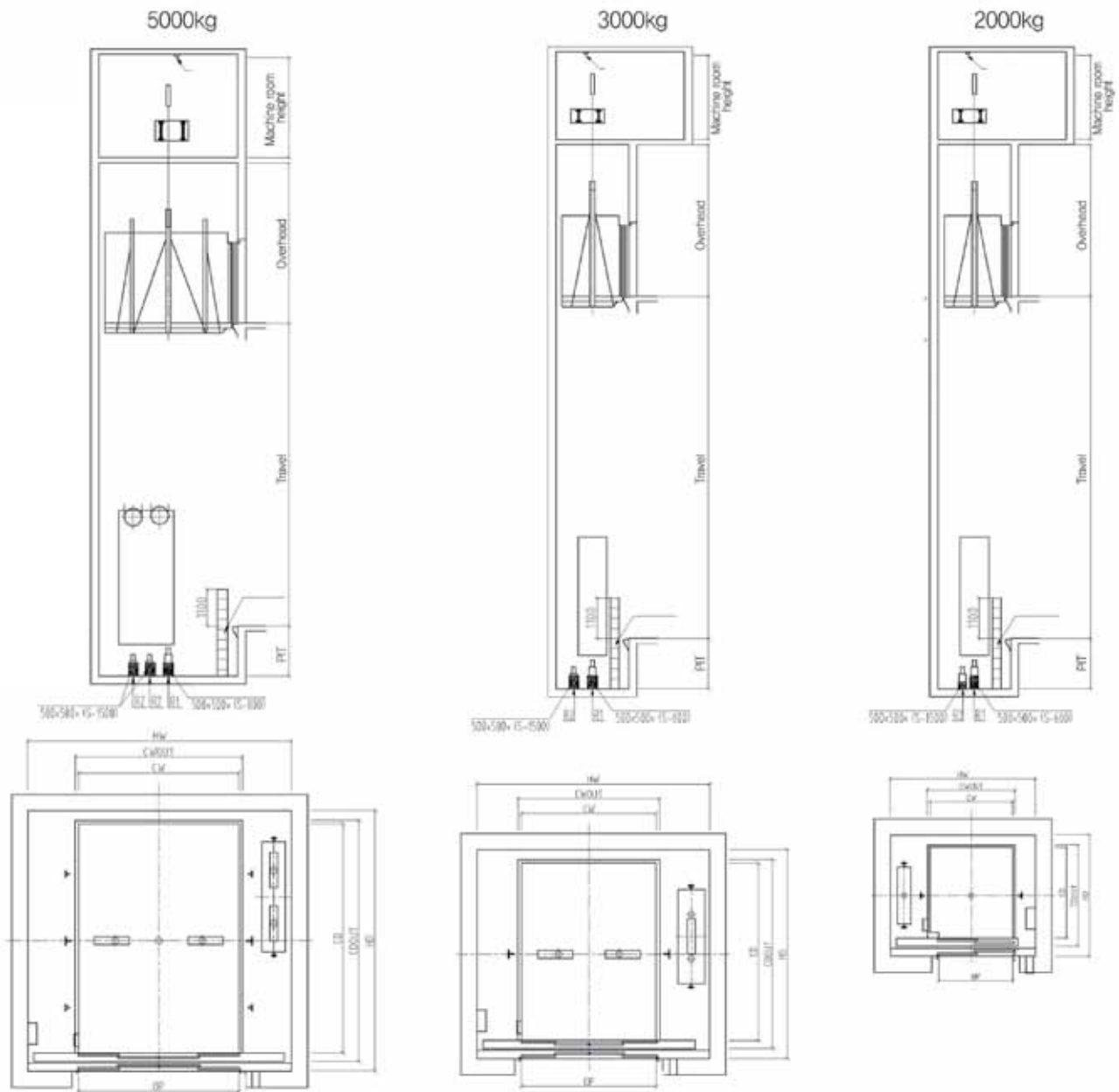
## | COP



XCP4-A

! The actual product can be different (changed) depending on design

# Technical Data



Speed (m/s)	Load (kg)	Travel (m)	OH (mm)	Pit (mm)	M/C Room HT(mm)	Hook Load(Kg)
0.25	5000	16	4800	1500	3000	4000
	630				2500	2000
	1000		4500		2500	2000
	1600				2500	3000
	2000				2500	3000
	3000		4800		3000	4000
	5000				3000	4000
1.0	630	50	4500	2500	2000	
	1000			2500	2000	
	1600			2500	3000	
	2000			2500	3000	
	3000			4800	3000	4000
	5000		3000		4000	

Speed (m/s)	Load (kg)	Door	OP (mm)	Car Inside Size(mm) CW X CD	Car Outside Size(mm) CWOUT X CDOUT	Hoistway Size(mm) HW X HD	
0.25	5000	CLD2	2400	2400*3431	2500*3600	3950*3900	
	0.5		TLD	1100	1232*1262	1300*1500	2150*1800
				1100	1432*1562	1500*1800	2350*2100
				1300	1532*2162	1600*2400	2500*2700
	1.0		TLD	1500	1732*2262	1800*2500	2700*2800
				2000	2000*2631	2100*2800	3450*3100
				2400	2400*3431	2500*3600	3950*3900

## Technical Data

### Technical Features

#### I Operation Functions

● Standard ○ Option

Features	Description	
<b>Enable Cancel Door Time with CCB</b>	Under automatic conditions, while the door is fully open and holding period, it can be closed in advance by pressing the CCB button constantly.	●
<b>Calls in Opposite Direction Auto-clear</b>	Calls in opposite direction can be cleared automatically while the car moves up and down.	●
<b>Delayed Car Door Close Protection</b>	If the door opened for a predetermined time due to constantly pressing the hall call button or other reasons, the elevator will be forced to close to respond other signals. And in case the elevator fails to carry out DCP force-closure, the elevator will stop and the inside or outside calls will be cancelled automatically. And the elevator will recover to normal operation till it detects the door is closed naturally.	●
<b>Door Time Protection-Open</b>	If the car door does not open completely within an adjustable time (default 20s) after the door open command due to some mechanical problems or any other reasons, the elevator will cancel all the signals (including external and internal) and go to the floor nearby to release passengers.	●
<b>Door Time Protection-Close</b>	If there is no door closing signal, the elevator will automatically enter protection mode after the third door closing demand when it is blocked and exceeds the predetermined time limit due to some mechanical problems or any other reasons. It will resume normal operation only if the door closes successfully.	●
<b>Full Load Non Stop</b>	When a car is loaded to a predetermined percentage of its capacity, it is considered 'full'. Additional passengers would be unable to enter.	●
<b>Parking Operation</b>	That is stop switch, after the key which is installed at the predetermined floor been triggered, elevator will move to the predetermined floor after finishing response to all commands. At the same time, energy saving mode will start, cutting off all in car lighting and turning on all stop-lift switch indicator.	●
<b>Parking</b>	Elevators in a same group will park on different floors once idle in order to shorten the response time.	●
<b>Floor of Lobby</b>	Lobby can be set according to various requirements. If no registration of calls or operations after preset timeout, the car will return to lobby and wait there. Lobby should be the floor with maximum passenger flow or the first floor.	●
<b>Electron Light Curtain Door Protection</b>	Light red unit for special purpose enhanced the safety of elevator, a curtain can be formed in front of the car door, A quick response will be acted when something entered this area.	●
<b>Top of Car Inspection</b>	The inspection operation switch and its push buttons and an emergency stopping device 'TES' shall be placed on the car roof that they are readily accessible.	●
<b>Electrical Recall Operation</b>	An ERO device in the controller for emergency operation	●
<b>Light and Ventilation in Car</b>	After a preset timeout, the car will suspend in a minor power consuming mode, the light and ventilation device in the car will be shut down if no operations are registered.	●
<b>Overload Protection</b>	If the load exceeds the rated load, sound signal will be given out by speaker, and "OVER LOAD" will be displayed, the car door will not close, the elevator will not start.	●
<b>Door Open / Close Button</b>	The door open buttons in the car operating panel permits to open or re-open an automatic door and to keep it open/close it by constant pressure.	●
<b>Independent Time Control of Car Door and Landing Door</b>	Refer to the statistical information, the waiting time of door opening by hall call is longer than that by car commands. The system performance can be raised by adjusting the door hold time for both car door and landing door separately. The size of a possible stopping error depends on the type of drive and the accuracy of the position sensors.	●
<b>Hall/Car Direction Indicator</b>	To inform the passengers about the operation direction, there should be a Direction Indicator on car operational board or in the jamb of the car entrance.	●

# Technical Data

## Technical Features

### I Operation Functions

● Standard ○ Option

Features	Description	
Hall/Car Position Indicator	Persons both in car and at landings (generally main landing) may see, where the elevator(s) are.	●
Intercom System	Provide emergency communication between passengers in the car, car top, platform(pit), the machine room or building staff in a security or maintenance room.	●
Alarm Bell	An alarm sound signal will be given out to the outside in specific conditions.	●
Drive Overheat Protection	Self-protection mode will be achieved if the temp of the motor exceeds the preset value due to the heat made by motor itself or the high temp in the environment. The car stops at the nearest floor, unload and shut down the light and ventilation device; once the temp falls down to normal, the car will recover.	●
Cancel Error Calls	Before the car starts, the registration of a call or operation can be canceled by double click of this button. After the car starts, registration cancel will not be allowed for the sake of passenger's safety.	●
Door Re-open	This function allows the door to reopen while there is a call in the same direction of the car in door closing process.	●
Reinitiate	When the power recovered from a cut, position signals cannot be given or the position cannot be detected, the car will move to lobby and reinitiate. After that the floor info can be displayed and the elevator backs to normal.	●
Terminal Protection	If the speed is not slowed to the preset value while the car reach the end floor, a forced deceleration will be carried out by system in order to protect the safety of the car.	●
Start Torque compensation	For better comfort at the car's start, computing the load in the car by system will make start smooth.	●
Door Close/Open Button Light	Door Close/Open Button will be highlighted if the buttons are pressed as a success echo.	●
Attendant Service Operation	The Attendant Operation feature allows semi-automatic operation with manual control.	○
Door Hold Button	Pressure on the Door Hold button 'DHB' in the car operating panel opens the door, reverses the door, and keeps the door open for a specified adjustable door hold time.	○
Emergency Fire Return Operation	If there is a fire in a building, the system will cancel all commands, control the elevator back to the fireman's floor to evacuate the passenger and wait for the fireman's operation after receiving a fire alarm signal. The control center will send the signal when the forced homing has been done successfully.	○
Emergency Fireman Service	When the operated switch inside the car is activated, the elevator will cancel all the call and only answer the command from the car to coordinate with the fireman's work and this function requires the coordination of fire lift.	○
Independent Service	In order to satisfy and cater for the customers' special requirements, independent service state is set up to make the elevator operation & its gate operation being controlled manually only.	○
Car Chime	On the top of the car, a bell ring will be given out when the car reaches the destination floor.	○
MSD device	When a sudden power cut happens, the device will work and the car will stop at the nearest floor, and after the leveling action, a sound signal will be given out and the door opens meanwhile for unloading.	○
Non Stop Button	Once the NSB button is pressed, all calls outside will not be registered, and the car moves directly to the destination floor.	○
Fireman's Service Light	Indicates that the car is on any kind of Fireman service.	○
Re-leveling Operation	Stopping errors shall be corrected by re-leveling when loading or unloading. The possible stopping accuracy depends on the type of drive and the position sensors.	○





# Car Elevator

With the development of elevator technology, elevators are no longer only for passengers. It can deliver cars to designated floors for parking which adds convenience to our daily life.

SIGMA Car Elevator

# CDA-C01 | Elevator Design |



## CDA-C01

Walls & Ceiling Design	C-CA1
Finish	SBC(Color No. LGP-943)
Car Door	None
COP	CBM-14C
CPI	Digital (included in COP)
Ventilation	Diffuser Fan
Flooring	Check Plate
Pfotocell Beam	Car Wall Both Sides
Car Stopping Bumps	Safety Angle



SIGMA Car Elevator

# CDA-E01 | Elevator Design |

**Car Status Indicator**

When car moves indicator lights & bell ring



**Photocell Beam**

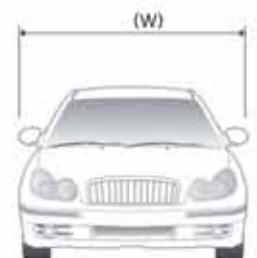
## CDA-E01

Door Frame	SBC(Color No. LGP-943)
Landing Doors	SBC(Color No. LGP-943)
Flooring	Check Plate
HPI	VID-M432P
Car Status Indicator	Provided
Photocell Beam	Door Jamb Both Sides

## Capacity and Allowed Dimensions

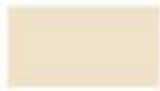
Capacity	Allowed maximum dimensions		
	(L)	(W)	(H)
2000kg	4800mm	1800mm	1700mm
2500kg	5200mm	2050mm	1700mm
3000kg	5200mm	2050mm	1700mm

**Note.** In case of SUV cargo vehicles, you may to contact SIGMA Elevator



## Designs

### | Colors



LGP-015



LGP-923



LGP-928



LGP-943



LGP-922

### | COP



CBM-14C(MAIN)



CBM-14C(SUB)

### | Hall Indicator



VID-M432P



VID-M432

### | Status



Car Status  
Indicator



Hall Lantern

! The actual product can be different (changed) depending on design

# Technical Data

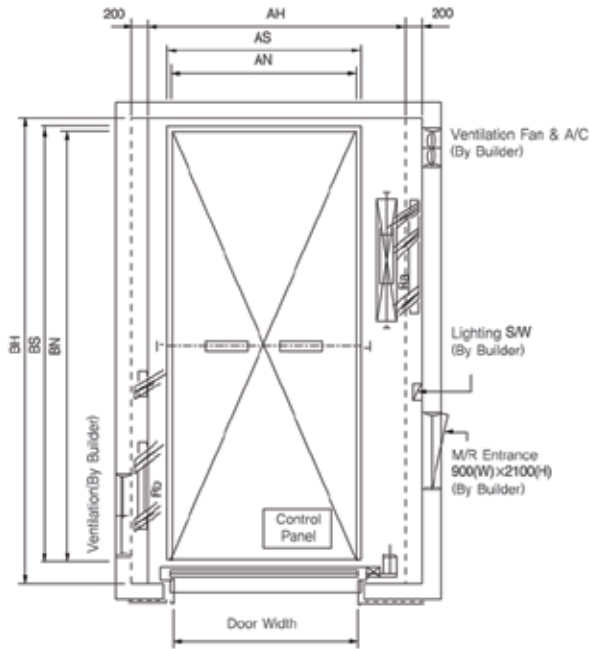
## Technical Features

Section		2000kg						2500kg				3000kg				
		Rope type			Hydraulic			Rope type		Hydraulic		Rope type		Hydraulic		
Load (kg)		2000						2500				3000				
Speed (m/min)		30	45	60	20	30	30	45	60	20	30	30	45	20	30	
Motor Capacity (kw)		11	15	22	24	37	15	18.5	30	29	37	18.5	22	37	48	
Overhead (mm)		4200		4400	4200		4200		4400	4200		4200		4200		
Pit Depth (mm)		1500						1500				1500				
Power  220v / 380v	Building NFB Capa (A)	1set	100/75	100/75	125/75	225/125	300/175	100/75	100/75	150/100	225/125	300/175	125/75	125/75	300/175	400/225
		2sets	100/75	100/75	175/100	450/250	600/350	100/75	125/100	175/100	450/250	600/350	175/100	175/100	600/350	750/450
	Building Transformer Capa (kVA)	1set	11	11	16	75	75	12	14	20	75	75	15	16	75	90
		2sets	19	19	27	110	140	21	23	34	110	140	26	27	140	180
	Service Wire Size (mm <sup>2</sup> )	1set	22/8	22/8	38/14	80/38	125/50	22/8	22/8	50/22	80/38	125/50	125/50	38/14	125/50	200/80
		2sets	60/14	60/14	100/22	250/100	325/150	60/14	60/22	100/38	250/100	325/150	60/22	60/22	325/150	*/200
Grounding Contactor SIZE (mm <sup>2</sup> ) 1/2		14/14			22/38			14/14			22/38		14/14		22/38	22/60
Car Insize AN×BN	Nomal	2350×5400						2500×6200				2500×6200				
	Through Type	2350×5400						2500×6200				2500×6200				
Hoistway Size AN×BN	Nomal	1set	3650×5800			3450×5800			3800×6600		3600×6600		3800×6600		3600×6600	
		2sets	7550×5800			7150×5800			7850×6600		7450×6600		7850×6600		7450×6600	
	Through Type	1set	3650×5850			3450×5850			3800×6650		3600×6650		3800×6650		3600×6650	
		2sets	7550×5850			7150×5850			7850×6650		7450×6650		7850×6650		7450×6650	
Machine Room Insize AN×BN	Nomal	1set	4050×5800			2500×2500			4200×6600		2500×2500		4200×6600		2500×2500	
		2sets	7950×5800			2500×5000			8250×6600		2500×5000		8250×6600		2500×5000	
	Through Type	1set	4050×5850			2500×2500			4200×6650		2500×2500		4200×6650		2500×5000	
		2sets	7950×5850			2500×5000			8250×6650		2500×5000		8250×6650		2500×5000	
Elevator Door Type	Car	No Car Door			No Car Door			No Car Door		No Car Door		No Car Door		No Car Door		
	Landing	2panel Upsliding						2panel Upsliding				2panel Upsliding				
Elevator Door Dimension	Width (EW)	2350						2500				2500				
	Height (EH)	1800						1800				1800				
Reaction Load	Machine	Nomal	Ra	14300	15300	9000	18400	20000	13100	24500	13100					
			Rb	7700	7800	600	9000	9800	600	12200	700					
		Through Type	Ra	17800	19100	9000	23000	25000	13100	30600	13100					
			Rb	9600	9700	600	11200	12200	600	15200	700					
	PIT	Nomal	Rc	23000	31000	31700	32500	42500	36000	43100	51000					
			Rw	18000	26000	11100	26000	3700	12100	36700	19100					
		Through Type	Rc	28700	38700	31700	40600	53100	36000	57600	51000					
			Rw	22500	32500	11100	32500	46000	12100	45900	13100					

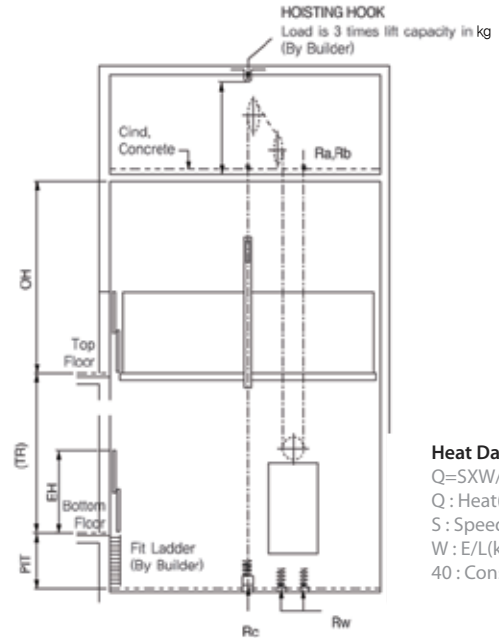


## Layout

### I Hoiswtay and M/R Plan (Traction Rope Type)

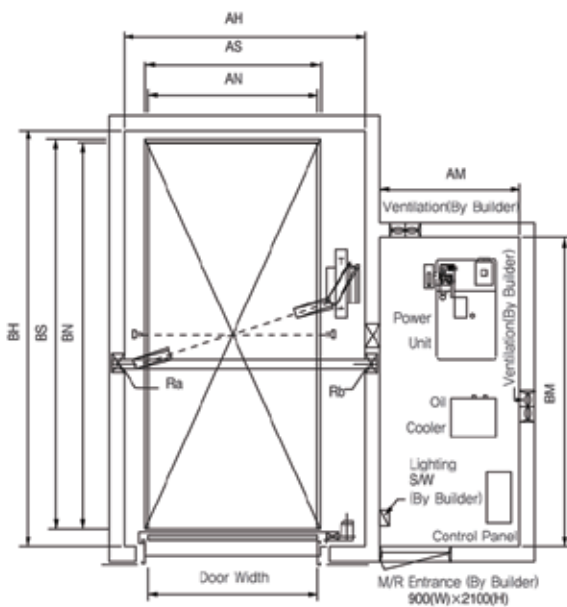


### I Section

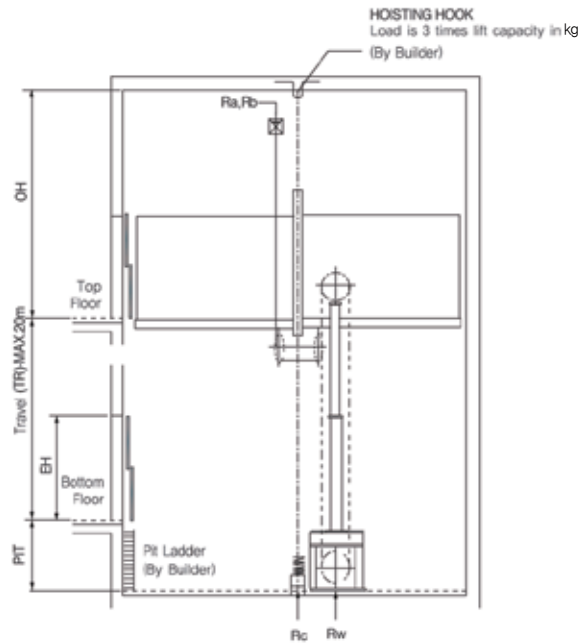


**Heat Date**  
 $Q = SXW/40$   
 Q : Heat(kcal/h)  
 S : Speed(m/min)  
 W : E/L(kg)  
 40 : Constant Number

### I Hoiswtay and M/R Plan (Hydraulic Type)



### I Section



**Heat Date**  
 $Q = (585XPXTr) / (51 + Tr \times 2)$   
 Q:Heat(kcal/h)  
 P:Motor Capacity (kW)  
 Tr:Travel Time (m/sec)  
 TR:Travel (m)  
 585,51 : Constant Number

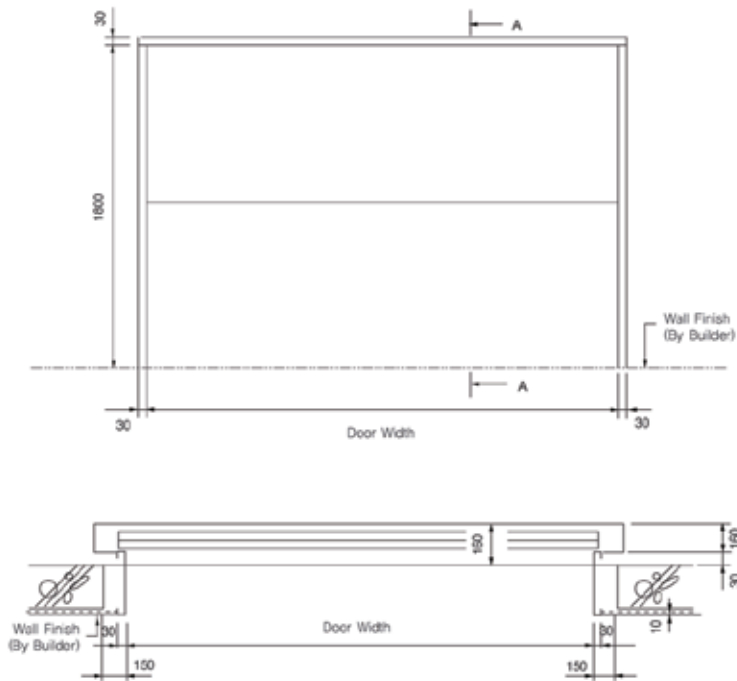
Heat	Tr
20 (m/min)	3TR+3.35
30 (m/min)	2TR+3.35

**Note**

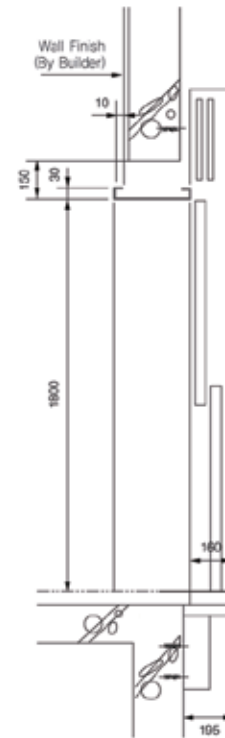
- Overhead from FFL top floor to bottom of shaft ceilings slab
- Pit depth from FFL bottom floor to top of shaft floor slab

# Layout

## | Entrance Front View



## | Section A-A



## | Structural Opening

