SOLON® NV

Roped Machine Roomless Elevator

Space savings
Energy savings
Ride comfort
Environmental sensitivity

Your Elevator Partner... SIGMA

www.sigmaelevator.com

SIGMA

SIGMA Reaching new heights

Korean Engineered Products

Sigma products are engineered by highly qualified Korean and Chinese engineers thereby ensuring customers receive excellent products with reliable quality.

Aesthetics Design Excellence

Sigma's design centers in Korea and China are staffed with professionals who continue to pursue ideal aesthetic designs to satisfy customers needs.

Global Network

Sigma has served customers in more than 60 countries over the last 45 years.

Sigma has exported over 100,000 elevators worldwide since 1978


Khalid Al Attar Tower
UAE


Al Rames Tower
Qatar


Darwaza Tower
Kuwait


Vorobievy 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


Juma al Majid Tower
U.A.E


Armada Tower
U.A.E


Rostonskaya
Russia


Shangri La Hotel
Mongolia


Plaza La Castellana
Venezuela


Torre Global Bank
Panama


Ocean Two
Panama

SOLON® NV

Roped Machine Roomless Elevator

Innovative mid-rise elevator with a highly efficient and compact PMSM gearless traction machine

Space saving

Scientific hoistway layout provides smaller hoistway size and class leading buffer height, pit depth and top storey space effectively utilizing the building space.

Intelligent design
Easy maintenance

The main components of the Solon NV are installed in the hoistway where the traction machine is installed on a hoistway beam. The integrated controller is installed outside the landing door at the top floor for easy maintenance and inspection.

Reliable quality
Upgraded safety
High performance

In addition to energy and power savings, Sigma also applies multiple advanced technologies to upgrade safety of the Solon NV. From the start of the product development, Solon NV has followed a strict design philosophy. All safety components have passed E3 certification.

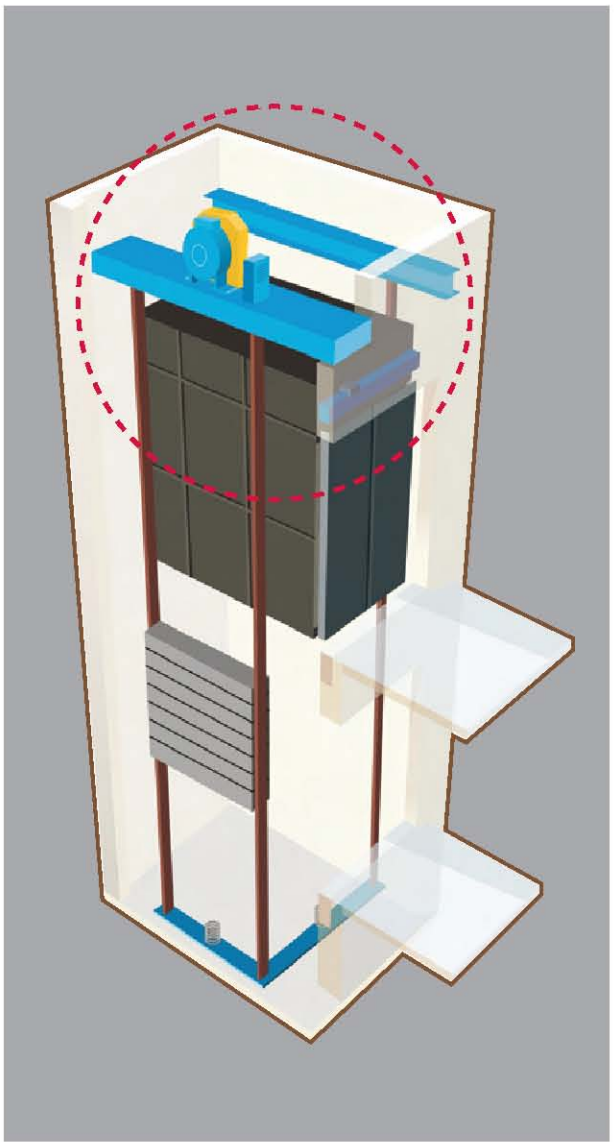
Environmental sensitivity

As global building design increasingly emphasizes environmental sensitivity, Sigma is focused on manufacturing products that better meet customer needs.

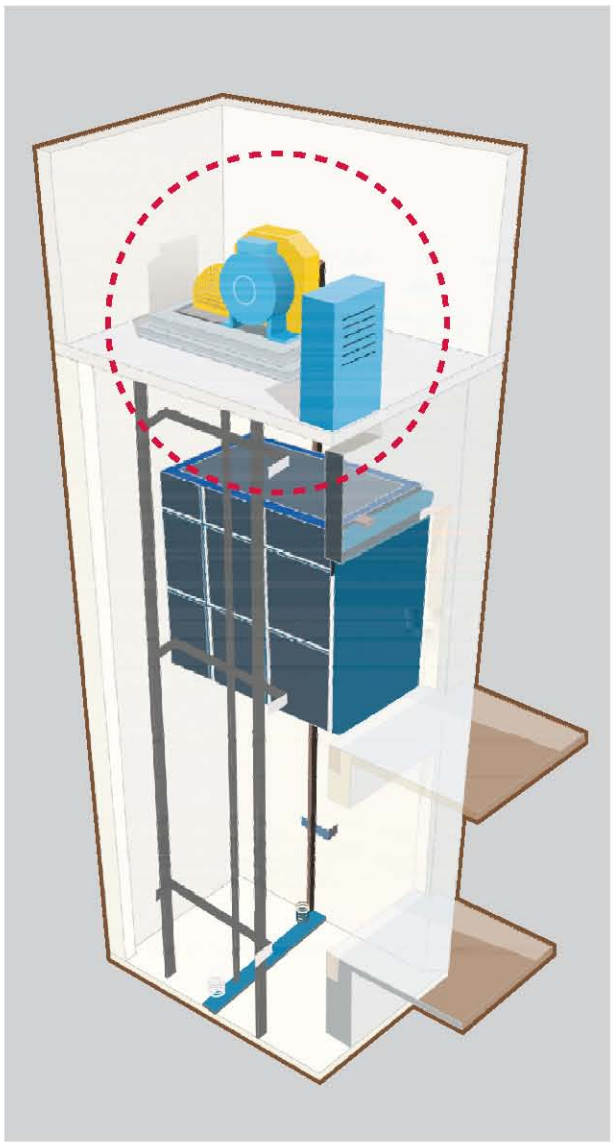
Space saving

Solon NV creates possibilities in limited building space, saving space and construction costs. Compared with other MRL elevators, Solon NV offer better quality and performance in terms of safety, reliability, energy savings and ride comfort.

Coverage	1.0 ~ 1.75m/s	450 ~ 1000kg	up to 32 stops
	Speed	Duty	Stops



Solon NV



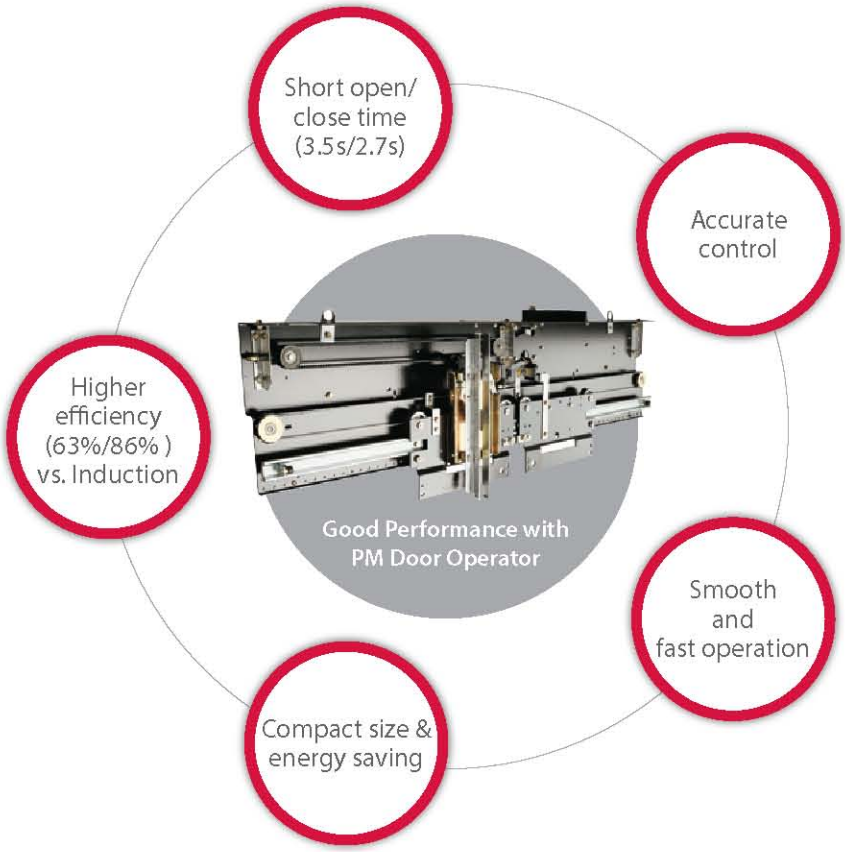
Traditional Elevator

Energy saving
Environmental protection

A permanent magnet synchronous gearless elevator traction machine is used in the Solon NV with drive efficiency of up to 90%, which increases the operating efficiency and saves energy. No lubricating oil is required which helps to reduce oil pollution. The Solon NV adopted advanced control technology with an integrated controller which saves energy and building space. The SIN/COS speed encoder offers high flexibility, accurate leveling and smoother elevator braking, thus improving ride comfort for customers.

Reliable quality
Upgraded safety

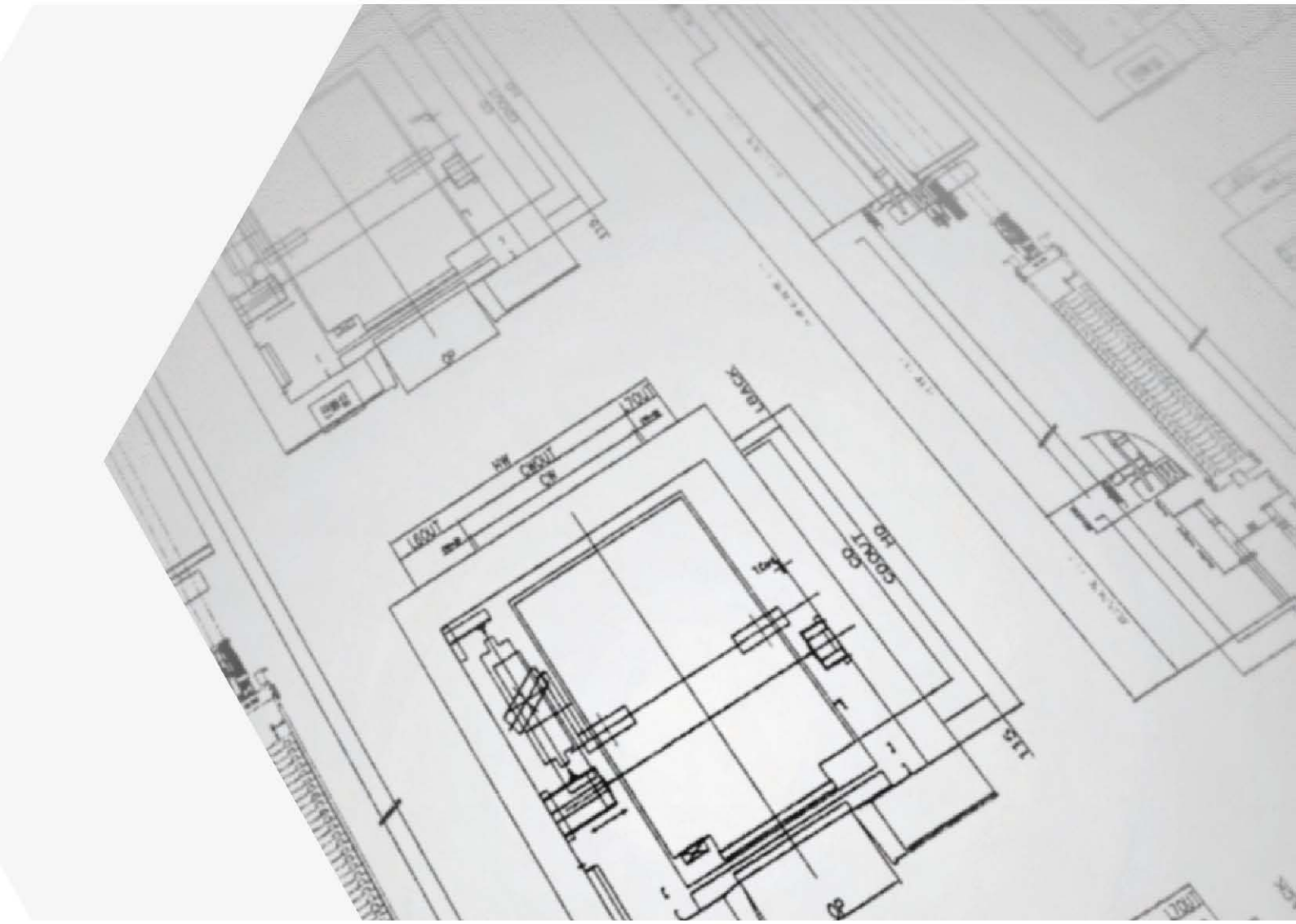
By strictly complying with the highest safety standards, the Solon NV ensures passenger safety. The Solon NV is equipped with 11 different elevator safety components, such as protection device for light curtain, secure identification device, overload protection device, protection device for end station and man-machine interaction device. All safety devices have passed E3 global product safety certification.






Intelligent Design
Easy Maintenance

The main components of the Solon NV are installed in the hoistway where the traction machine is installed on a hoistway beam. The integrated controller is installed outside the landing door at the top floor for easy maintenance and inspection operation. The permanent magnet synchronous gearless traction machine used in the Solon NV has a remote brake release system, which allows brake release for rescue outside the landing in case no external power supply is provided. Sufficient maintenance space is reserved in the hoistway to facilitate maintenance of Solon NV traction machine. Besides, parameter adjustment ports are reserved in the control system where controller maintenance can be carried out without entering the hoistway.



Car Design | Standard

Specification

Ceiling	C-RL02
COP	CBL-85C-N
Car Door	Stainless steel HL
Car Wall	Stainless steel HL
DECO Floor	DE313

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

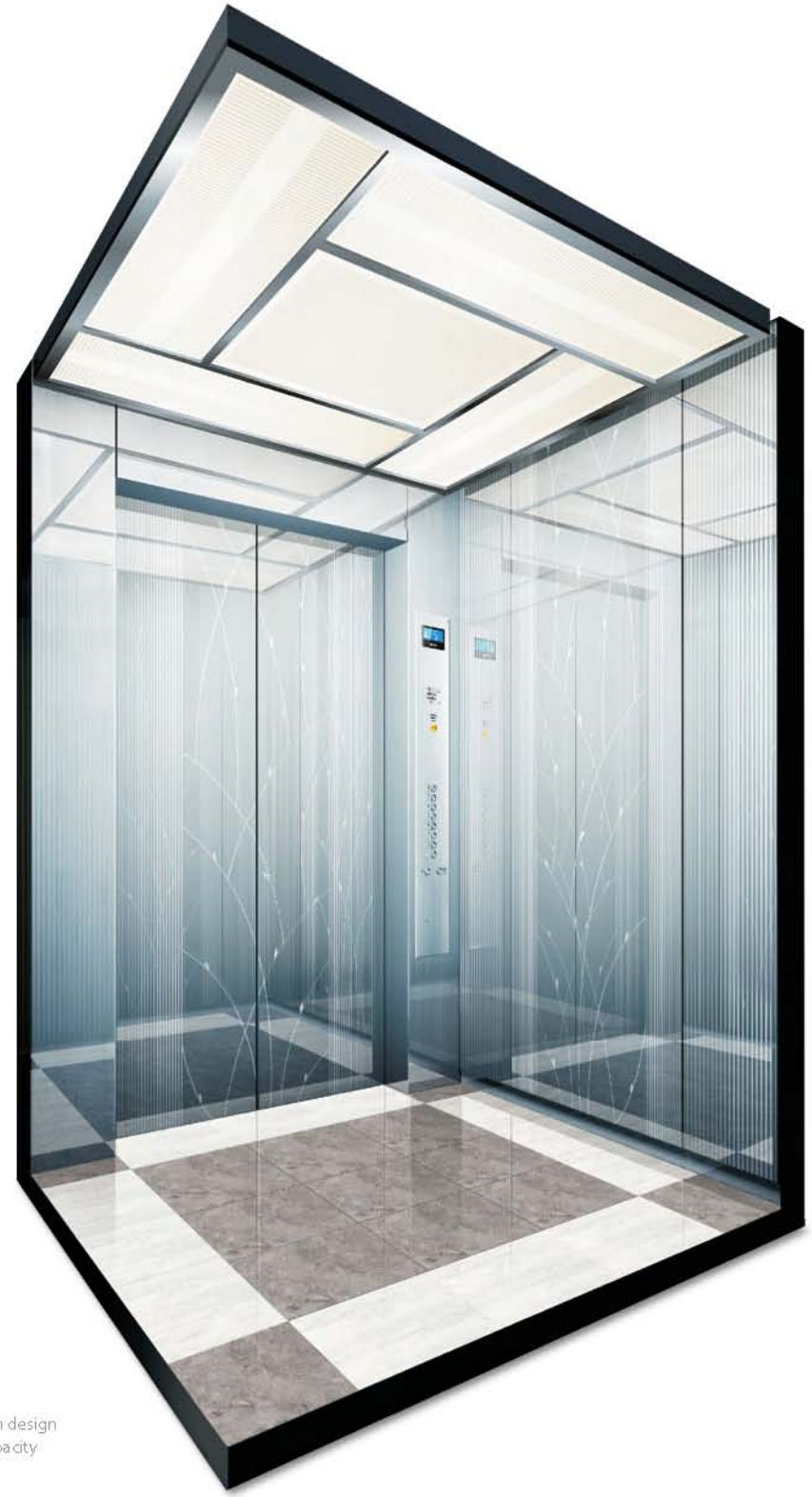
Car Design | Standard

Specification

Ceiling	C-NL02
COP	CBL-85C-N
Car Door	Stainless steel HL
Car Wall	Stainless steel HL
DECO Floor	DE103

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

Car Design | Luxury

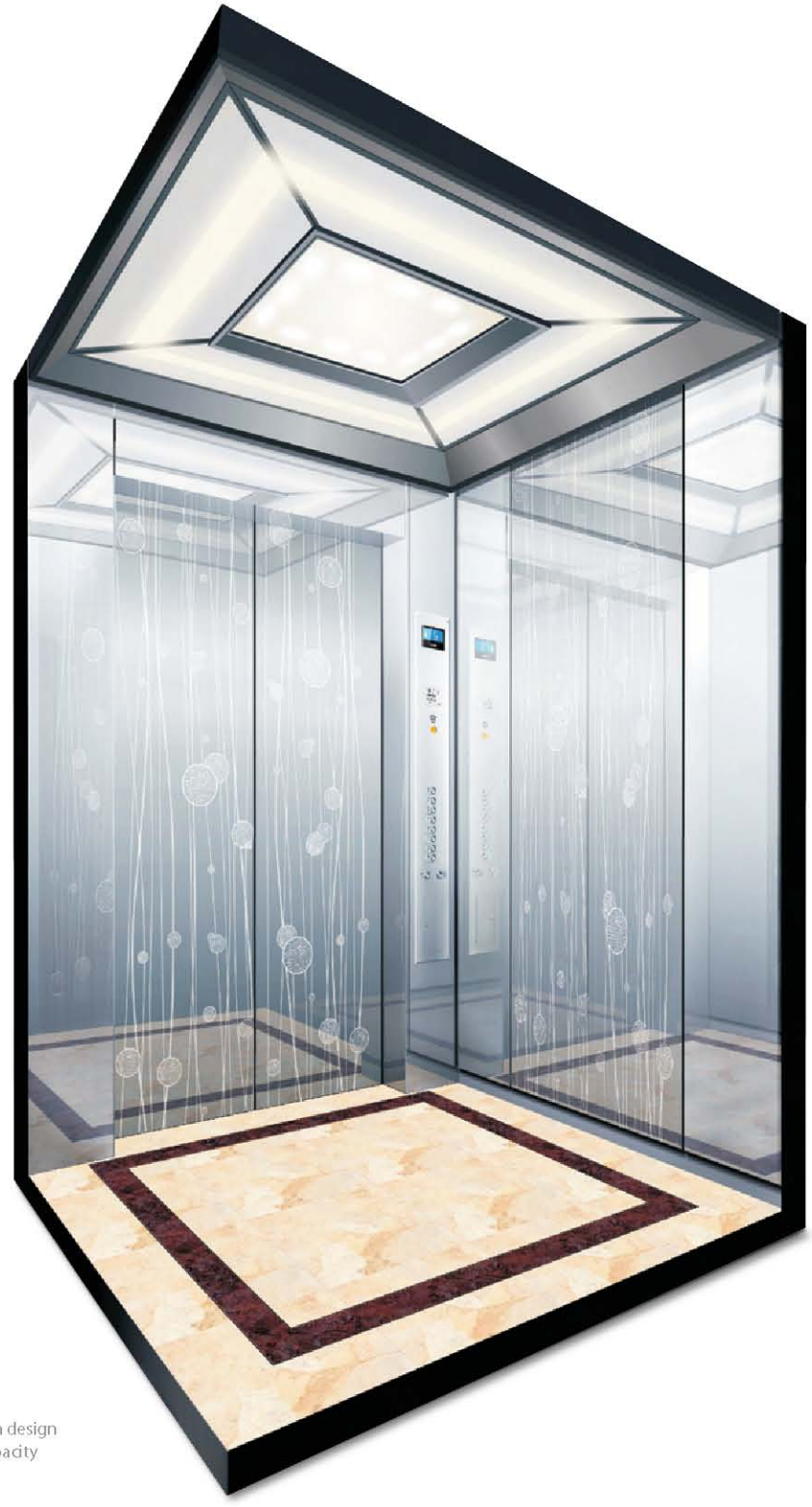


Specification

Ceiling	C-LA01
COP	CBL-85C-N
Car Door	Mirror Etching EH1-085
Car Wall	Mirror Etching EW2-085
DECO Floor	DT01

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

Car Design | Luxury



Specification

Ceiling	C-LN01
COP	CBL-85C-N
Car Door	Mirror Etching EH1-086
Car Wall	Mirror Etching EW2-086
DECO Floor	DT03

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

Fixtures | Standard

Car Operation Panel

CBX-22C

CBL-82C

Position Indicator

HIX-A162

HIX-C162

Hall Button

HBM-R45

HBM-RA5S

VIX-M652

Handicapped COP

CBM-44SH

Fixtures | Optional

Car Operation Panel

LED Display

Emergency Button

Fashion Design Button

CBL-85C-N

CBX-16C

OPB

CBT-70C

Position Indicator

HIL-A193

HIL-C193

Vertical Hall Indicator

VIX-M692

VIX-MA92S

Hall Button

VIL-MBB2SN

HBM-RBBS

HBM-S78

HBM-S49

HBM-SA9S

Handicapped COP

CBM-D1SH

Fixtures

Ceiling

C-RL02

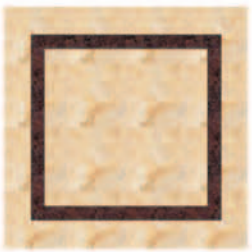
C-NL02

C-LA01 [LED]

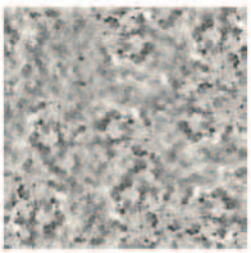
C-LN01 [LED]

DECO Floor

DT01



DT03



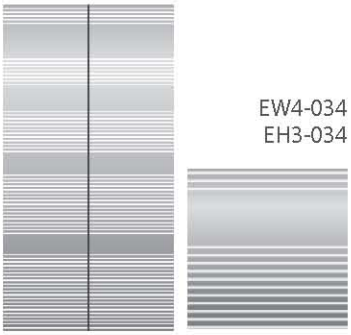
DE313

DE103

Etching Pattern

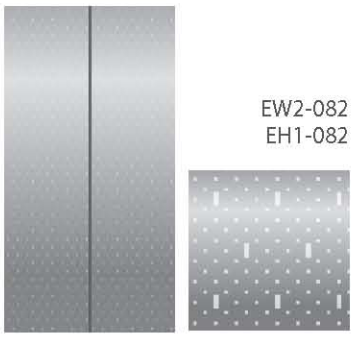
EW2-043
EH1-043

EW2-059
EH1-059



EW4-034
EH3-034

EW3-003
EH4-003



EW2-082
EH1-082

EW2-084
EH1-084

EW2-085
EH1-085

EW2-086
EH1-086

EW2-087
EH1-087

Painting

NDSP002	NDSP004	NDSP006	NDSP007	NDSP008	NDSP009
Oyster White	Grey Bridge	Golden Yellow	Pigeon Blue	Black Blue	Iron Grey

Entrance Design

A (Wide Jamb)

Landing Door	STS HL etching EH1-067 (Stylish)
Position Indicator	HIL-A193
Hall Button	VIL-MBB2SN

B (Narrow Jamb)

Landing Door	STS HL etching EH1-063 (Luxury)
Position Indicator	HIL-C193
Hall Button	HBM-RBBS

A (Wide Jamb)

Jamb Finish	Stainless Steel Hairline Finish
Door Finish	STS HL etching EH3-034
Hall Button	VIX-M652

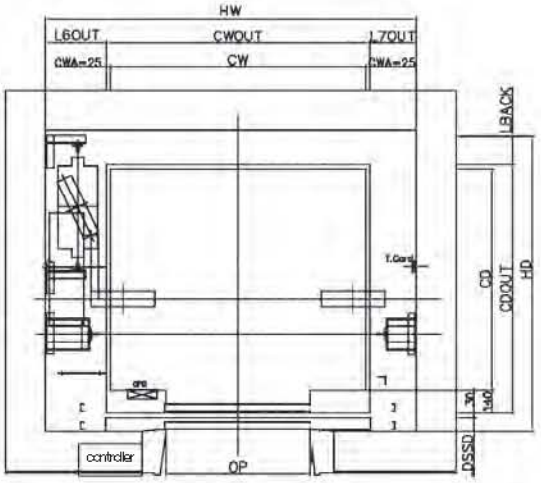
B (Narrow Jamb)

Jamb Finish	Stainless Steel Hairline Finish
Door Finish	Stainless Steel Hairline
Hall Button	VIX-M652

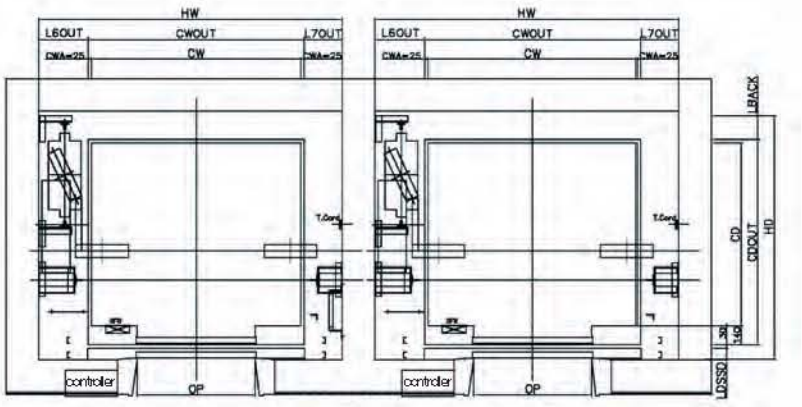
! The actual product can be different (changed) depending on design

Technical Data

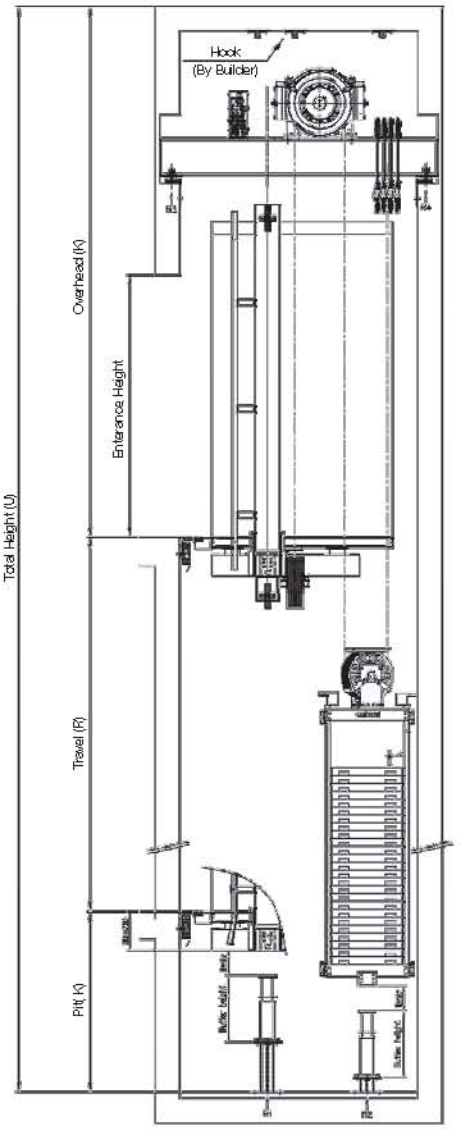
Layout



Layout of Hoisway (Simplex)



Layout of Hoistway (Duplex)



Section of Hoistway

Shaft size table

Speed (m/sec)	Load (kg)	Travel (m)	Overhead (mm)	Pit (mm)	Hook Load (Kg)
1.0	450/550/630/800/1000	TR ≤ 80	3750	1350	3000
1.5	450/550/630/800/1000	TR ≤ 80	3900	1450	
1.75	450/550/630/800/1000	TR ≤ 80	3950	1500	

Speed (m/sec)	Person	Load (kg)	OP (mm)	Car Size(mm) CWxCD	Hoistway Size(mm)	
					Simplex HW X HD	Duplex HW X HD
1.0/1.5/1.75	6	450	700	1100*1100	1800*1800	3800*1800
	7	550	700	1100*1200	1800*1800	3800*1800
	8	630	800	1100*1400	1850*1850	3900*1850
	10	800	800	1350*1400	2000*2000	4200*2000
	13	1000	900	1600*1400	2200*2000	4600*2000

Power Reference Table

Speed (m/sec)	Person	Load (kg)	Motor Capacity (kW)	Transfomer Capacity (kVA)	MCCB Capa (A)	Lead-in Wire Size (mm^2)		Earth Wire Size (mm^2)		Thermal Losses (kcal/hr)	Starting Power (kVA)
						Simplex	Duplex	Simplex	Duplex		
1.0	6	450	4.5	4.6	25A	6	6	6	6	675	8.8
	7	550	4.5	4.6	25A	6	6	6	6	825	9.9
	8	630	4.5	5.5	25A	6	6	6	6	900	10.6
	10	800	5.5	5.5	25A	6	6	6	6	1200	14.8
	13	1000	6.7	6.7	25A	6	10	6	10	1500	16.3
1.5	6	450	6.8	6.9	25A	6	10	6	10	1013	14.5
	7	550	6.8	6.9	25A	6	10	6	10	1238	16.2
	8	630	6.8	8.3	25A	6	10	6	10	1350	17.3
	10	800	8.3	8.3	32A	10	10	10	10	1800	22.5
	13	1000	10	10.0	32A	10	16	10	16	2250	24.8
1.75	6	450	7.9	8.1	25A	6	10	6	10	1181	17.5
	7	550	7.9	8.1	25A	6	10	6	10	1444	19.6
	8	630	7.9	9.7	25A	6	10	6	10	1575	20.9
	10	800	9.6	9.7	32A	10	10	10	10	2100	27.2
	13	1000	11.7	11.7	40A	10	16	10	16	2625	29.9

Technical Data

Function

● standard ○ option

Function	Description	
Automatic operation	Elevator operates automatically	●
Anti-nuisance operation	In case of a significant difference between the number of calls registered on the car operating panel and actual load in the elevator, the elevator prevents unnecessary operation by canceling all registered calls when it arrives at the nearest floor.	●
Car call cancellation	Allows cancellation of an incorrectly registered car call if a passenger accidently push an incorrect button, the call can be cancelled by pressing the same button once more.	●
Nearest stop	When the car stops between the floors due to a mechanical malfunction, it will move to the nearest floor to enable passengers to exit safely.	●
Automatic door open & close time adjustment	Door open and close are automatically adjusted depending on whether it is a hall call or a car call, increasing the operating efficiency.	●
Car door safety shoe	Extending the full height of the car door, this device enables the doors to return to the fully open position, should the door encounter a person or obstacle while closing.	●
Automatic car light & fan switch	Car illumination and fan are turned off automatically to save energy.	●
Bypass operation (80%)	If the actual load exceeds 80% of the allowable maximum load, the elevator will not react to calling signals from other floors.	●
Over load (110% of rated load) holding stop	When the load of passengers exceeds the maximum capacity, a buzzer will activate and the elevator remains at that floor. When passengers step out of the elevator, the buzzer will stop and the elevator doors will close and operation continues.	●
Car position display	Car position display in car or hall, operated by car indicator or hall indicator.	●
Over speed governor	Located at the top of the hoistway, engages the governor rope, and helps activation of the elevator safety device, should the elevator car accelerate beyond the predetermined maximum speed for both "up and down" direction.	●
Emergency lighting feature	In case of power failure, the emergency light will be turned on and the light will maintain on for certain period of time	●
Changeable reference floor	The reference floor can be changed by the customer.	●
Inspection mode	When checking and repairing, the elevator will operate at a lower speed as to ensure technician's safety.	●
Terminal limit switches	Prevents the elevator from traveling beyond a terminal landing.	●
Intercom	Provides emergency communication between passengers in the car and the machine room or the building personnel in a security or maintenance room.	●
Car chime	Arrival signal	●
Duplex	2 Unit duplex control	○
Firemen Operation	In case of fire, firemen can use the elevator which is stopped at the specified floor in order to support fire-fighting.	○
Fire Return Operation	In case of fire, every car will return to the specified floor to evacuate passenger safely.	○
Automatic Rescue Device	In case of power failure, when the building has no emergency power supply, the elevator is sent to the nearest floor by DC power battery to prevent passengers from being trapped inside the car.	○
Supervisory Interface	Provide dry contact (BA Interface)	○
Earthquake Sensor	When earthquakes occur, the device will force the elevator to stop at the nearest floor with door fully opened, and the elevator will stop operating. The elevator will not operate until reset.	○
Voice Synthesizer	Automatic broadcast of status information of the elevator.	○
Night Noise Restriction	When a timer or RTC (Real Time Clock) reaches designated time, chime and/or gong is deactivated.	○
CCTV	Provide CCTV signal from car to supervisory room. Customer provides CCTV equipment and CCTV cable from machine room to supervisory room. Sigma provides CCTV cable from car to controller and hole position of CCTV equipment on ceiling.	○

SIGMA

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ISO 9001
Certificate

ISO 14001
Certificate

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