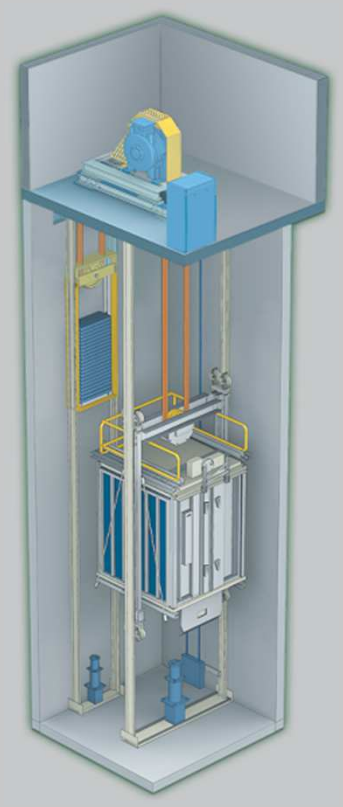

SIGMA
ACRA
Company restricted information
Reaching New Heights

PART 1

PRODUCT OVERVIEW

ACRA



Load (kg)	V(m/s)				
	1	1.5	1.75	2	2.5
450					
630					
800					
1000					
1150					
1350					
1600					

130m	40	400kg	G8C
Max rise	Max stop	Max additional load	Max group control

GB7588; EN81-1998; EN81-20

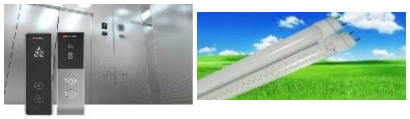
Comply with SIGMA/OTIS design and qualification standard

ACRA

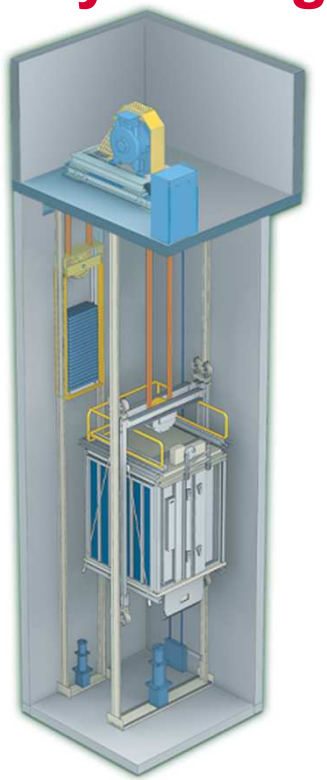
Key Change

New design controller

Robust car wall

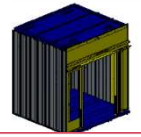


New aesthetics option



New PureMotion machine

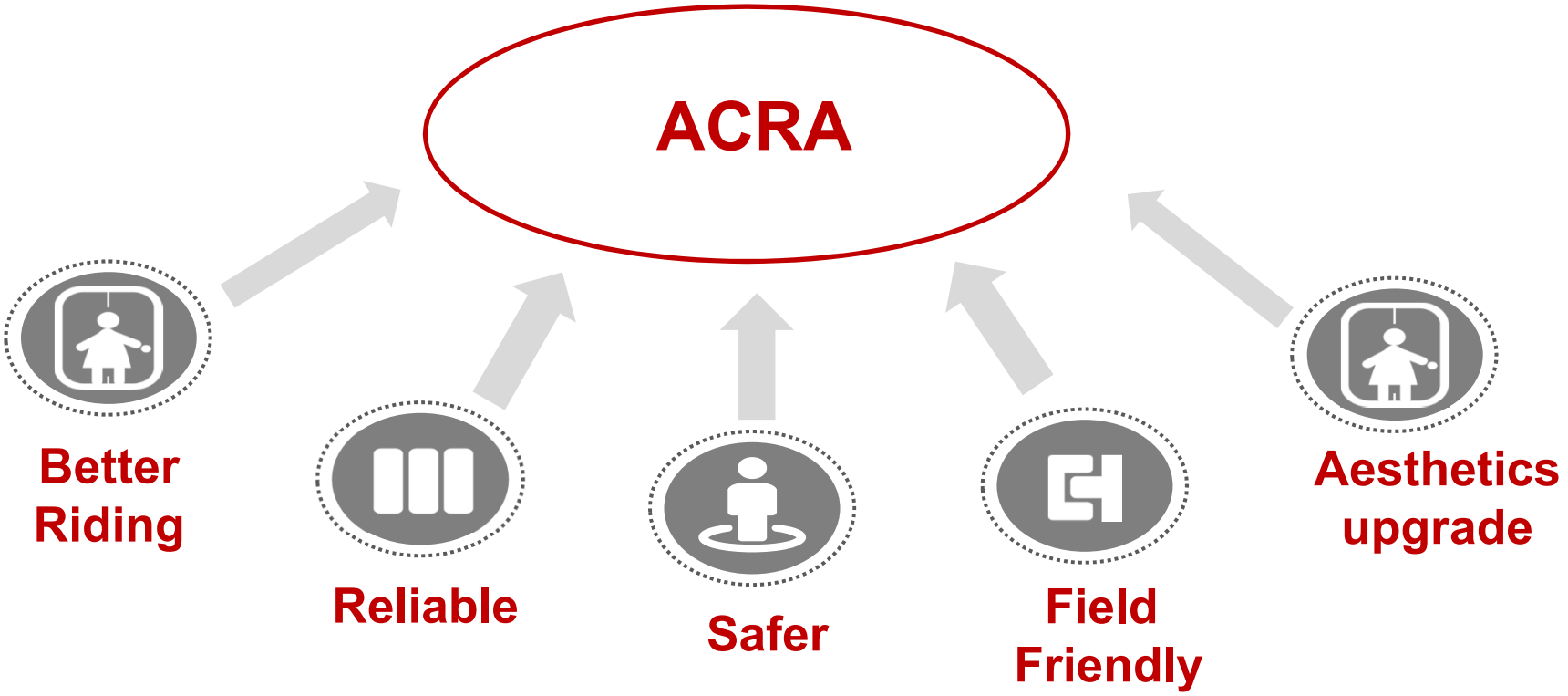
EN81-20 door



Easy-install car panel

Welding free brackets

KEY AREA OF IMPROVEMENTS

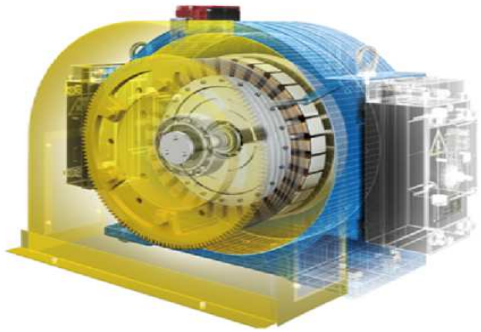


PART 2

BETTER RIDING

BETTER RIDING

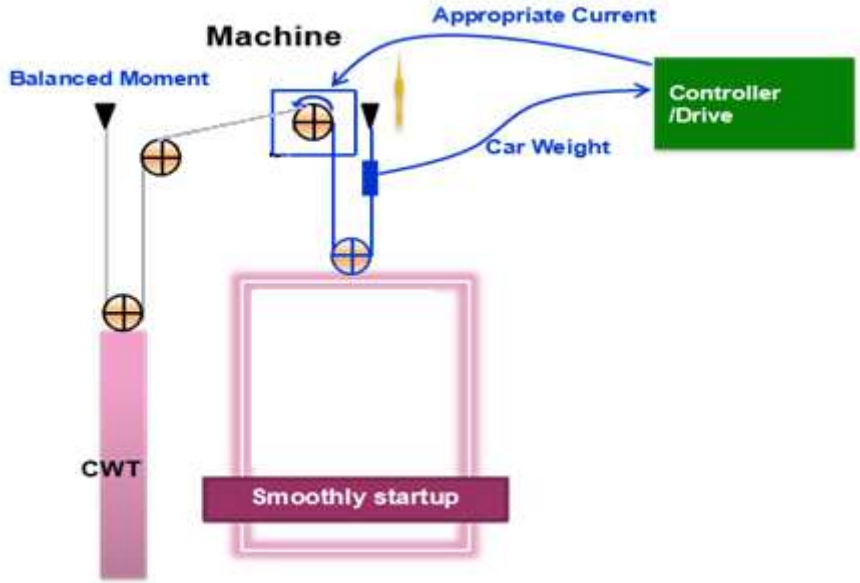
Pure Motion
PM gearless Machine



30% Lower on Machine Vibration

12% Better on Ride Quality

Start Up Smoothly



BETTER RIDING

Improved ventilation

Exchanges the entire air in cab

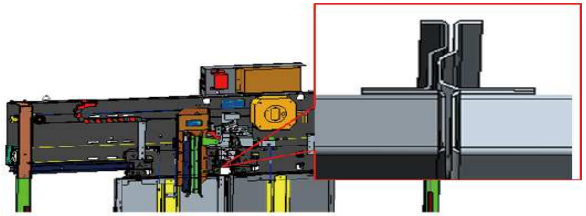
every 38 seconds

BETTER RIDING

LED lighting

Car illumination Increased from 50lux to 100lux

Car Door



- **No glare**
- **Living room standard lighting**
- **Labyrinth structure**
- **No bright light gap**

PART 3

RELIABLE

RELIABLE

PureMotion Machine

OTIS Standard Brake Qualification

UCMP & ACOP Certified

240 Starts/hour

100 E-stops Passed

Environment
Worse simulation test

3,000,000 Cycle test Passed

RELIABLE

Door System

DO3000S (STD)

Non fire rated only, CLD, OP=800/900, OPH=2000/2100 mm
CLD=Center Opening Landing Door

DO3000X (Option)

Fire rated, TLD and CLD other sizes
TLD= Telescope Landing Door

OP=700-1200 , OPH=2000-2400

Test	DO3000S	DO3000X	Result
Safety impact (Code Required)	353J Meets Code	450J Exceeds Code	No damage – door still in position
Reliability impact (Otis extra test)	189J Exceeds Code	189J Exceeds Code	Doors still operating normally

Safety impact test

450J = 2 X 75kg people hit the door at 2.5m/s (jogging pace)

353J = 2 X 75kg people hit the door at 2.1m/s(slower jogging pace)

Reliability impact test

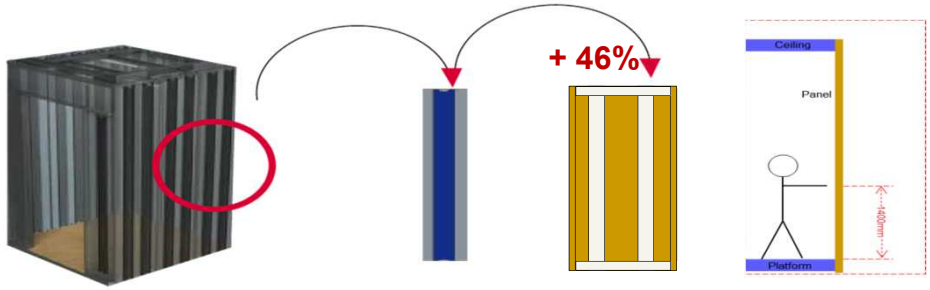
189J = 1 X 75kg people hit the door at 2.3m/s for 15 times

RELIABLE

Improvement base on IRIS

Car Wall

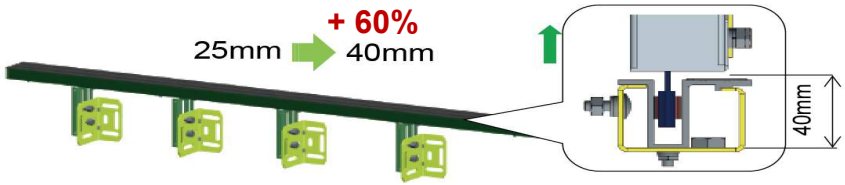
Car wall strength improved 46%



Less deformation than key competitors, 300N@5cm2

Sill Support

Sill strength improved 60%



Support heavy loading during building decoration

RELIABLE

Fixture

Life test

3,000,000 life cycle test

One press per second continually for 35 days(7x24)

Environmental test

- Salt fog test
- Thermal Shock test
- Temperature & humidity test
- Dusty test
- ……

PART 4

SAFER

SAFER

Door system

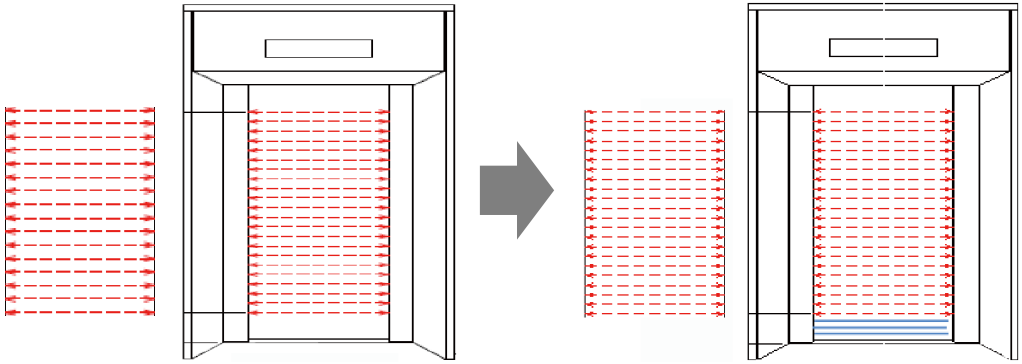
DDD

When passenger is trapped in car he cannot open the door manually

Dangerous!

OTIS patented
Door Deterrent Device as standard

Gate Protection



Min. detection distance: 34mm
Ray density : 154 ray

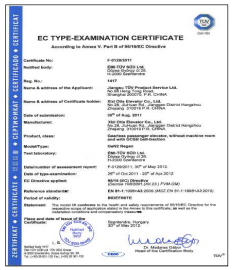
Min. detection distance: 18mm
Ray density : 194 ray

UCMP as Standard

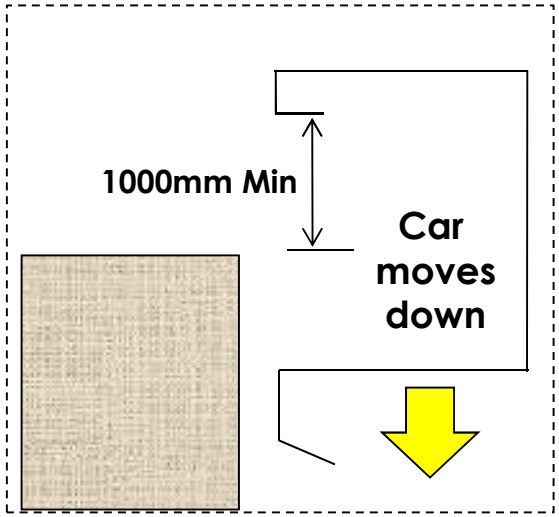
UCMP – Uncontrolled movement protection

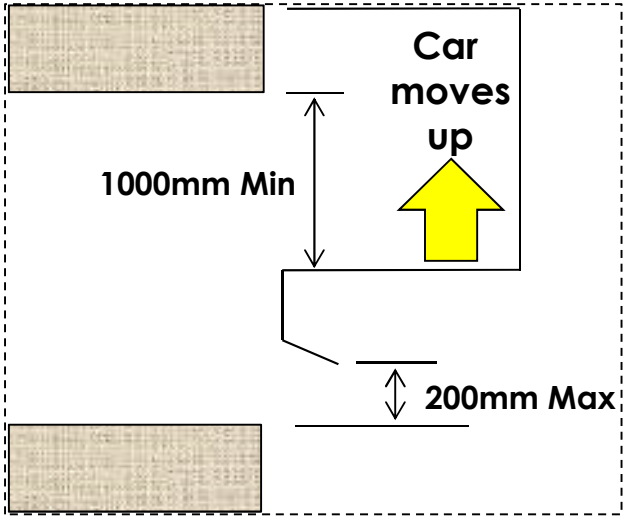
Protection against unintended car movement(required by EN81-1, A3) if a fault occurs during re-leveling or ADO conditions.

Certified solution


EC TYPE-EXAMINATION CERTIFICATE

Must be able to stop car with 100% rated load in car





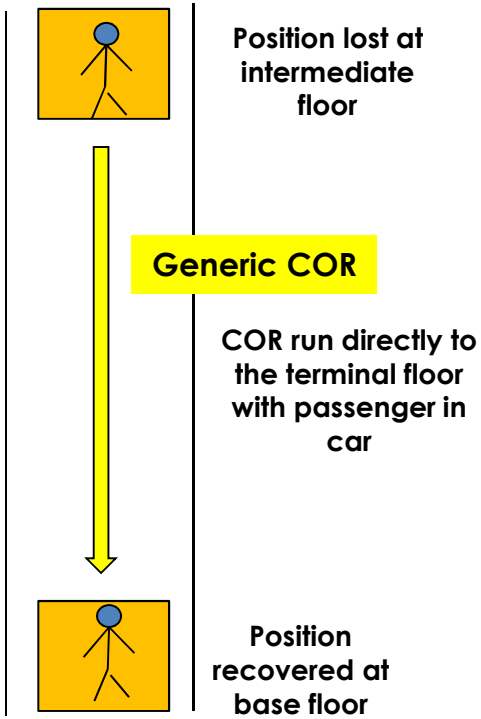
Upgraded COR

COR
Correction Rescue Run
If control system loses car position feedback

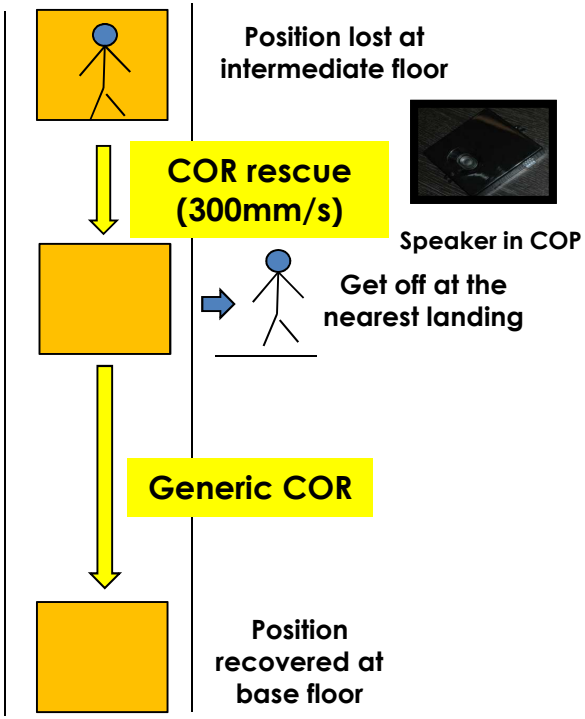
Added Functions

- Comfort passengers during COR via speaker;
- Automatically rescue passenger at the nearest landing

Prior function



Upgraded function



SIGMA

Safety Components

Safety Gear

Speed Governor

Buffer

E3 Qualified

- Otis design qualification
- Otis MFG process control
- Otis change control
- Reliable
- Durable
- Traceability

Component	*OTIS E3 Requirements*	*EN81 -1 Requirements*
Safety Gear	25 freefall and runaway test	4 freefall test
Speed Governor	25 Continuous tripping	20 Continuous tripping
Buffer	100 strike test	6 strike test

PART 5

FIELD FRIENDLY

FIELD FRIENDLY

Car Wall Installation

Full bolts connection

Use bolt & nut to connect
the car wall in hoist way

Eliminated ~50 bolts connection

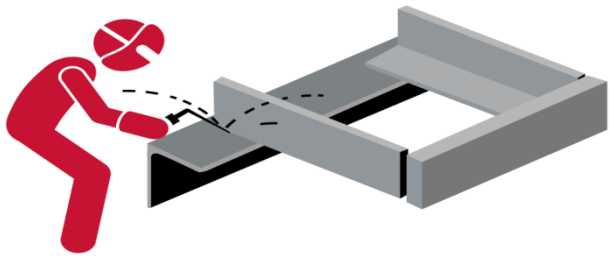
Pin connection in middle section

Base:1000kg cab with CRH 2400mm

FIELD FRIENDLY

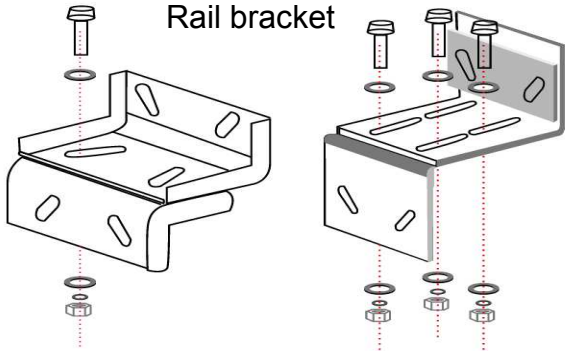
Welding-free bracket

Welding type

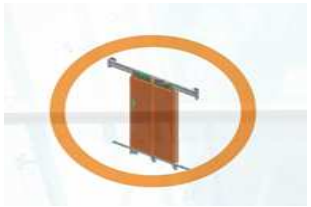


Welding-free type

Rail bracket



Door bracket



- No welding machine
- No fire use at site
- Position locked by pin

Available Function

SIGMA

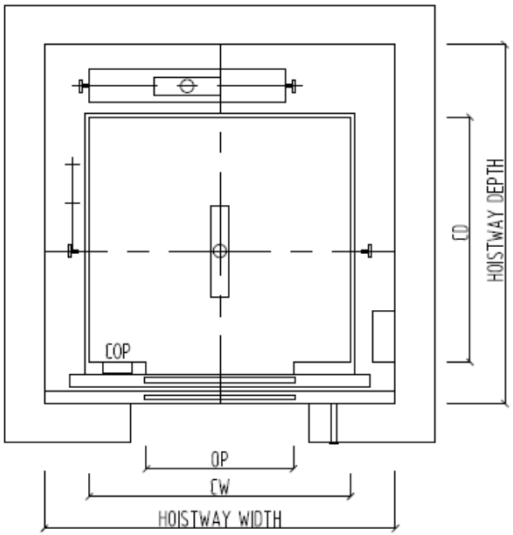
Key functions tailored for residential segment

ACP Anti Crime protection	ADO Advanced Door Open	ALARB Alarm bell	ALCOR Advanced Releveling	CBC Cancel error calls	CFT Cafeteria mode	EDP Electronic door protection	CSP Close Torque protection	Standard
CUT CALL Block floor	DCBL/DOBL Door close/open butt on light	DCP Delayed car protection	DDT Independent car/landing door control	DLM Door lock shortcut measure	DOB/DCB Door open/close button	DTC Door time protection -close	DTO Door time protection - open	
ELTU Emergency Light	EN-CCO Call opposition direction cancel	EN-CK Door hold cancel	EN-HCC Hall call cancel	ERO Electrical recall o peration	FCL Full collective operati on	HAD Hoistway auto detect	HDI/CDI Hall/Car direction indicator	
HPI/CPI Hall/car position indicator	ICU3 Intercom unit	LNS Load non stop	LOBBY Floor of lobby	LR Car light & ventil ation	LWS Overload protection	NDG Door nudge function	NTSD Near terminal slow down	
OHT Drive overheat protection	PKS Parking operation	RLEV Releveling	RE-OP Hall door re-open	RIN Re-initialize	SE Start Equalize	SELF-BTI Self brake torque inspection	SLD Safety landing	
TCI Top of car inspection	VSC Voice speech comfort	UCMP Uncontrolled car movement protection						
ANS Anti-Nuisance	ARED Automatic Rescue Emergency Device	ATT Attendant service	BA Building monitor port	DHB Door hold button	EFO Emergency fireman operation	EFS2 Emergency fireman service (manual)	Group Group Control	Optional
ISC Independent service	SSM Speech Synthesis Module	CCM Car arrival bell	GSCS Safety shoe & Light screen	AES Area elevator system	AMS Area Monitoring Screen	EPO Emergency Power Operation	EQO Earthquake Operation	

For more information, refer to SEB

Layout (GB Code)

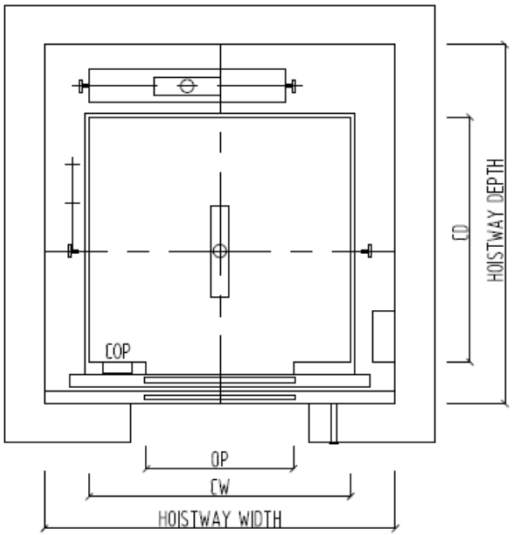
Hoistway plan size



Duty Load (kg)	Open type	OP(mm)	CW (mm)	CD (mm)	HW (mm)	HD (mm)	CWT Location
450	CLD	700	1150	1030	1950	1750	BACK
550		800	1400	1030	1950	1750	
630		800	1400	1100	1950	1800	
680		800	1400	1250	1950	1950	
750		800	1400	1350	1950	2050	
900		900	1600	1350	2150	2050	
1000		900	1600	1500	2150	2200	
			1600	1400	2150	2100	
1150		1000	1800	1500	2400	2250	
		1100	2000	1350	2600	2100	
1350		1000	1800	1700	2400	2450	
		1100	2000	1500	2600	2250	
1600		1100	2000	1750	2600	2500	
			2150	1600	2750	2350	

Layout (EN81-20 Code)

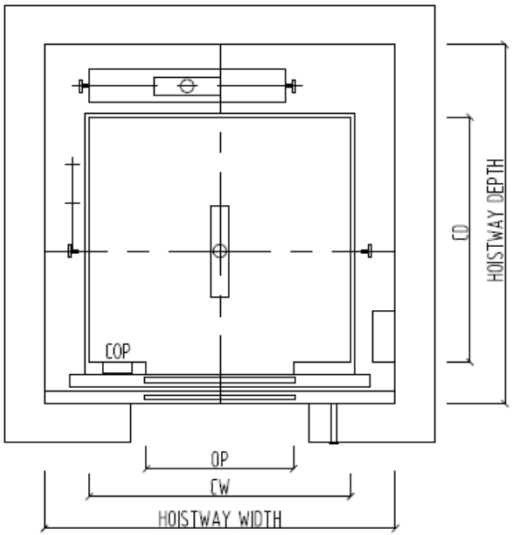
Hoistway plan size



Duty Load (kg)	Open type	OP(mm)	CW (mm)	CD (mm)	HW (mm)	HD (mm)	CWT location
680	CENTR	800	1350	1250	1900	1950	BACK
800		800	1400	1350	1950	2050	
900		900	1600	1300	2150	2000	
1000		900	1600	1500	2150	2200	
			1600	1400	2150	2100	
1150		1000	1800	1500	2400	2250	
		1100	2000	1350	2600	2100	
1350		1000	1800	1700	2400	2450	
		1100	2000	1500	2600	2250	
1600		1100	2000	1750	2600	2500	
			2150	1600	2750	2350	

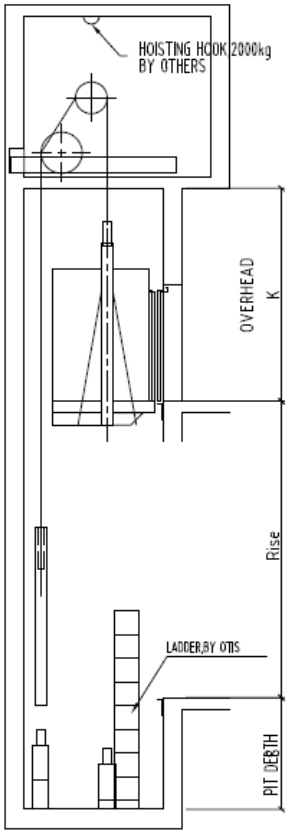
Layout (MS2021 Code)

Hoistway plan size



Duty Load (kg)	Open type	OP (mm)	CW (mm)	CD (mm)	HW (mm)	HD (mm)	CWT Location
410	CLD	700	1150	1000	1950	1700	BACK
545		800	1400	1030	1950	1750	
615		800	1400	1150	1950	1850	
685		800	1400	1250	1950	1950	
750		800	1400	1350	1950	2050	
885		900	1600	1350	2150	2050	
1025		900	1600	1550	2150	2250	
1160		1000	1800	1500	2400	2250	
1365		1000	1800	1750	2400	2500	
		1100	2000	1550	2600	2300	
1565		1100	2000	1750	2600	2500	

Layout -- Overhead & Pit depth



Duty Load (kg)	Speed (m/s)	Car Ceiling Height (mm)	Over Head (mm)	PIT (mm)
<= 1000	1	2400	4150	1380
	1.5	2400	4340	1520
	1.75	2400	4420	1570
	2	2400	4550	1610
	2.5	2400	4780	1870
> 1000	1	2400	4180	1380
	1.5	2400	4380	1520
	1.75	2400	4470	1570
	2	2400	4570	1610
	2.5	2400	4790	1870

Key Aesthetics-Ceiling

C-NL2
-DCH: 175mm

C-RL2
-DCH: 175mm

C-VS2
-DCH: 0mm

C-NS1
-DCH: 175mm

C-NS3
-DCH: 175mm

C-ES1
-DCH: 175mm

C-ES2
-DCH: 85mm

C-PS1
-DCH: 110mm

C-LA1
-DCH: 175mm

CL-31
-DCH: 120mm

C-ES3
-DCH: 162mm

C-LN1
-DCH: 175mm

- **LED light**

✓ **More saving energy**

✓ **Longer service life (The service life can reach 60000 ~ 100000 hours)**

✓ **High brightness, low heat**

✓ **Power consumption saving 85%**

✓ **No glare, no radiation**

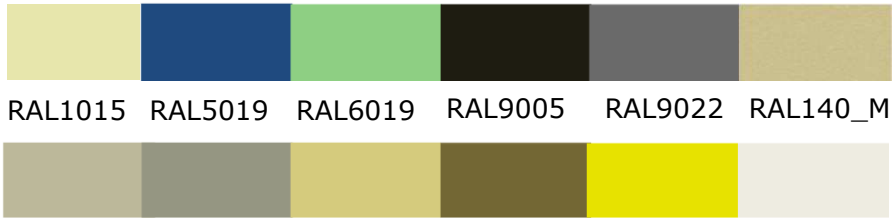
✓ **Firm & durable**

Key Aesthetics-Car Wall

Material

Finish Type

Painted Steel (2130)

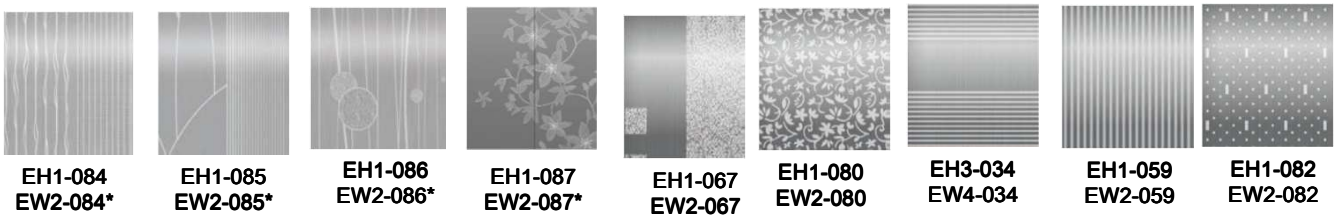


Stainless Steel

2120: Hairline st. st.
2111: Mirror st. st.
2301: Vibration st. st.

2302: Hairline etching
2303: Mirror etching
2304: Vibration etching

Etched Steel



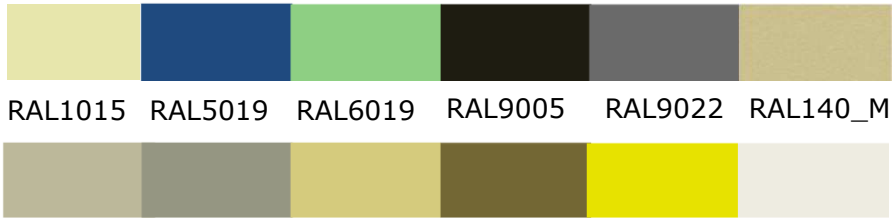
Key Aesthetics-Car Door

SIGMA

Material

Finish Type

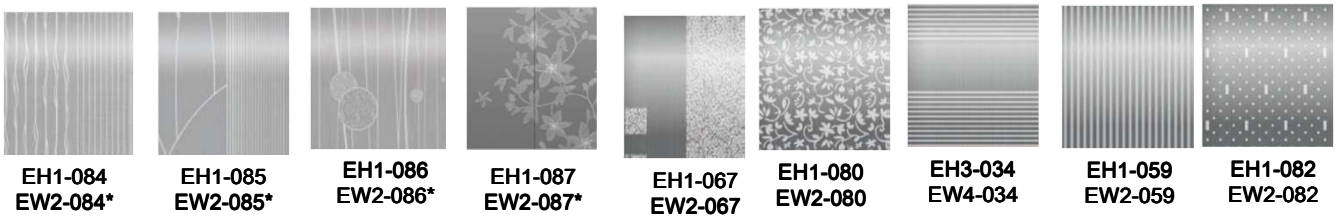
Painted Steel



Stainless Steel

HAIRLINE (Hairline st. st.)
MIRROR (Mirror st. st.)
STMH (Vibration st. st.)

Etched Steel



Key Aesthetics-COP & Button

COP

COP27H-A COP25H-A CBX22C CBX16C CBX64C CBL85CN COP29FH-C COP30VG-C

HCOP

CBM44SH

CBMD1SH

Key Aesthetics-HBP & Button

VIP


VIXM652


VIXM692


VILMBB2SN


VIXMA52S


VIXMA92S


VHB25H-A


VHB27H-A


VHB30BG-C


VHB29H-C

HB


HBMR45


HBMS49


HBMRB5S


HBM-RBBS


HBMRA5S


HBMSA9S


HBMR65


HBMR95


HBMS99

HPI


HIXA162


HIXC162


HIL-A193


HIL-C193

HL


HLVC08

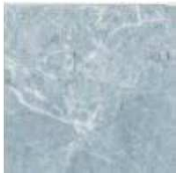

HLVC48

Key Aesthetics-Floor & Handrail

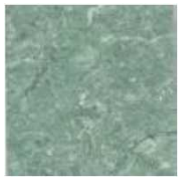
Floor

DE103

DE313



DE111



DE114

DT01

DT02

DT03

Handrails

HR04HL/HR04POL
1Rowφ38mm Hairline/
1Rowφ38mm Polishing

HR08HL/HR08POL

8mm x 80 mm hairline with stretch edge/
8mm x 80 mm polishing with stretch edge

HR05HL
8mm x 80 mm with round edge/


END
SIGMA
Reaching New Heights