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### Selection of Elevator System

### PLANNING GUIDE

The selection of elevators should be made in consideration of the building type/scale, tenant characteristics, elevator usage and the anticipated passenger carrying capacity at the building's traffic peak time.

Hyundai elevators are available from machine-room-less elevators to low-medium and high-speed elevators, covering the full range of vertical transportation requirements.

And a variety of functional and attractive designs per usages, such as passenger, service, observation, freight and automobile elevators are offered for architect's and customer's flexible applications.

### **ELEVATORS**

Product	Speed	Floor	Control
R9	1.0~2.5m/sec		Machine Room
LUXEN I	1.0~2.5m/sec	30 floors or less	Macnine Room
YZERI	1.0~2.5m/sec	-	Machine Room Less
H300	3.0~4.0m/sec	30 floors or more	Machine Room

### **ESCALATORS / MOVING WALKS**

Product	Height	Angle			
C CEDIEC (C DT2)	1.7m~10m	30°			
S-SERIES (S-BT2)	2m~6m	35°			
S-SERIES (S-BT, S-BB)	10.5m~22m	30°			

Product	Height	Angle				
C CEDIEC (CM DT)	100m	0° (Horizontal type)				
S-SERIES (SM-BT)	9m	12° (Inclined type)				
S-SERIES (SMC-BT)	6m	12° (Inclined type)				

### **SIGNATURE PROJECTS**





















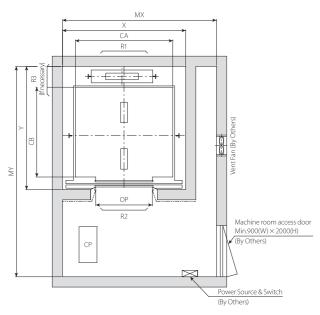
- 1 BUSAN INTERNATIONAL FINANCE CENTER (KOREA)
- FINANCE CENTER (KOREA)

  2 GALLERY WEST (INDONESIA)
- 3 PARK HYATT BUSAN (KOREA)
- 4 METROPOLISTANBUL
- (TURKEY)
- 5 KEANGNAM HANOI LANDMARK TOWER (VIETNAM)
- Thirty-two elevators were installed, including two 10 m/sec units (Korea's fastest), three 9 m/sec units, and eight 8 m/sec units, acquall as fourteen escalators.
- Twenty-three 4 m/sec elevators were installed, as well as twelve escalators.
- Eleven elevators were installed, including two 6 m/sec units and three 4 m/sec units.
- One hundred twenty-seven elevators were installed, including six 6 m/sec units, one 5.8 m/sec unit, and twenty-eight 4 m/sec units, as well as twenty-four escalators.
- $\label{twenty-nine} Twenty-nine\ elevators\ were\ installed, including\ two\ 4\ m/sec\ units, as\ well\ as\ twenty-seven\ escalators.$

- 6 KL GATEWAY (MALAYSIA)
- 7 YANGON HOTEL (MYANMAR)
- 8 F&F TOWER (PANAMA)
- 9 LG U+ YONGSAN OFFICE BUILDING(KOREA)
- 10 VARYAP MERIDIAN (TURKEY)
- Twenty-seven elevators were installed, including eight 3.5 m/sec units, as well as forty-nine escalators and an auto parking system. Twenty elevators were installed, including five 3 m/sec units, two 2.5 m/sec units, and six 2 m/sec units.
- Five 4 m/sec elevators were installed.
- Ten elevators were installed, including 3.5 m/sec double deck units (Korea's first) and four 4m/sec units, as well as two escalators.

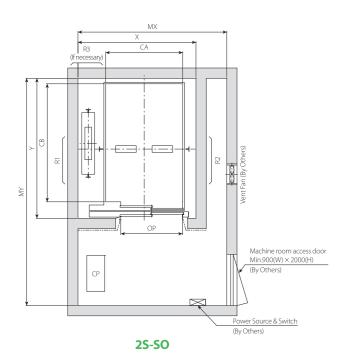
Fifty-three elevators were installed, including seven 4 m/sec units and five 3.5 m/sec units.

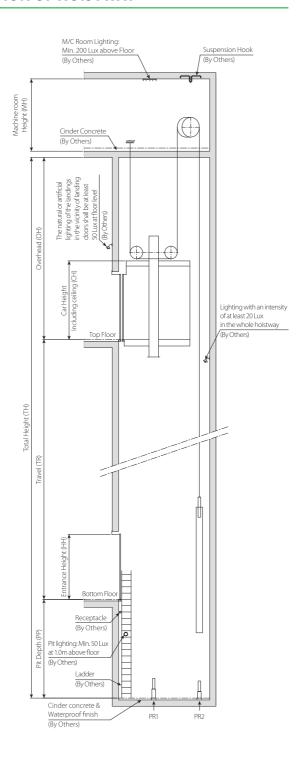
### **SECTION OF HOISTWAY**



▲ **Note:** Angle of car sheave can be changed depending on the car size.

### 1S-CO





### **STANDARD DIMENSIONS & REACTIONS**

												(U	nit : mm)
Capa	city	Speed (m/sec)	Opening	Door Width (mm)	CWT	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)	M/C F	Room Rea	action		action N)
Persons	kg	(m/sec)	Type	OP	Drop	CA×CB	X×Y	MX×MY	R1	R2	R3	PR1	PR2
7	550	10 175		800	Side	1100 × 1350	1900 × 1700	1900 × 3400	34.7	30	-	48.8	37.8
8	630	1.0~1./5		800	Side	1100 × 1400	1900 × 1750	1900 × 3450	48	30	-	53	41
		1.0~2.0	_		1100 × 1800 1900 × 2150	1900 × 3850	57	35	-	69.8	53.5		
		- (m/sec) - 1.0~1.75 - 1.0~2.0 - 2.5 - 1.0~2.0 - 2.5 - 1.0~2.5 - 1.0~2.0 - 2.5 - 1.0~2.0 - 2.5 - 1.0~2.0 - 2.5 - 1.0~2.0 - 2.5 - 1.0~2.0 - 2.5 - 1.0~2.0 - 2.5 - 1.0~2.0 - 2.5 - 1.0~2.0 - 2.5 - 1.0~2.0			Side	1100 X 1800	1900 X 2150	1900 × 3630	66.7	46.8	-	77.2	61.2
10	800	1.0~2.0		800	Side	1350 × 1400	2150 × 1750	2150 × 3450	57	35	-	69.8	53.5
		2.5		_		1330 × 1400	2130 × 1730	2130 × 3430	66.7	46.8	-	77.2	61.2
		1.0~2.5	Opening Type		Rear	1400 × 1350	1850 × 2000	1850 × 3700	57	25	17.5	61	45
		1.0~2.0				1100 × 2100	2000 × 2450	2000 × 4150	68	40	-	80	59.6
		2.5	Type		Side	1100 × 2100	2000 ^ 2430	2000 / 4150	73.6	51.2	-	86.3	65.9
13	1000	1.0~2.0		900	Jide	1400 × 1600	2200 × 1950	2200 × 3650	68	40	_	80	59.6
		2.5	1S-CO	_					73.6	51.2	-	86.3	65.9
		1.0~2.5	_		Rear	1600 × 1500	2050 × 2150	2050 × 3850	68	25	20	71	51
		1.0~2.0	_			1250 × 2100	2150 × 2450	2150 × 4150	72.8	50.8	-	89.6	66.6
		2.5	_		Side	1230 × 2100	2130 × 2430	2130 × 4130	80.8	56.8	-	96.1	72.6
15	1150	1.0~2.0	_	1000	Side	1500 × 1800	2300 × 2150	2300 × 3850	72.8	50.8	-	89.6	66.6
		2.5		_		1500 × 1600	2300 × 2130	2300 × 3030	80.8	56.8	-	96.1	72.6
		1.0~2.5	_		Rear	1800 × 1500	2250 × 2150	2250 × 3850	80.8	35	30	81.6	58.6
18	1350			1000 -	Side	1300 × 2300	2300 × 2650	2300 × 4350	110	61.2	7	124	104
10	1550	1.0~2.5		1000	Rear	1800 × 1700	2200 × 2350	2200 × 4050	110	61.2	7	124	104
21	1600	1.0~2.3		1100 -	Side	1500 × 2300	2500 × 2650	2500 × 4350	119	62	7	140	114.4
21 1600			1100	Rear	2000 × 1750	2400 × 2400	2400 × 4100	119	62	7	140	114.4	

Capa	Capacity		Capacity		Opening	Door Width (mm)	CWT	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)	M/C F	Room Rea (kN)	ction		action (N)
Persons	kg	(m/sec)	Type	OP	Drop	CA×CB	X×Y	$MX \times MY$	R1	R2	R3	PR1	PR2		
8	630	1.0~1.75		800	Side	1100 × 1400	1800 × 1800	1800 × 3500	48	30	=	53	41		
10	10 800 1.0~2.0	2.0~2.0		900	Side	1100 × 1700	1800 × 2150	1800 × 3850	57	35	=	69.8	53.5		
10		2.5		900	Side	1100 × 1700	1000 × 2130	1000 × 3030	66.7	46.8	-	77.2	61.2		
13	13 1000 1.0~2.0	1.0~2.0		900	Side	1100 × 2100	1800 × 2550	1800 × 4250 -	68	40	-	80	59.6		
13	1000	2.5	2S-SO	900	side	1100 × 2100	1000 × 2330		73.6	51.2	=	86.3	65.9		
15	1150	1.0~2.0		1000	Side	1200 × 2100	1900 × 2550	1900 × 4250	72.8	50.8	-	89.6	66.6		
15	1150	2.5		1000	side	1200 X 2100	1900 X 2550	1900 X 4230	80.8	56.8	-	96.1	72.6		
18	1350	1.0~2.5	-	1100	Side	1300 × 2300	2050 × 2750	2050 × 4450	110	61.2	7	124	104		
21	1600	1.0~2.5		1200	Side	1500 × 2300	2250 × 2750	2250 × 4450	119	62	7	140	114.4		

- ▲ Notes: 1. The above table of dimensions as per EN81-20, In case of EN81-1 applied or other country codes, please contact us.
  - 2. The persons is calculated at 75kg per person, as required by EN81-20.
  - 3. If apply through (180 degree) type, please consult with us.
  - 4. In case to requested a safety gear on couterweight side, please contact us.
  - 5. The Hoistway dimensions width & depth are based on clear dimension +50mm horizontal tolerances over the total hoistway height.

### **OVERHEAD & PIT DEPTH**

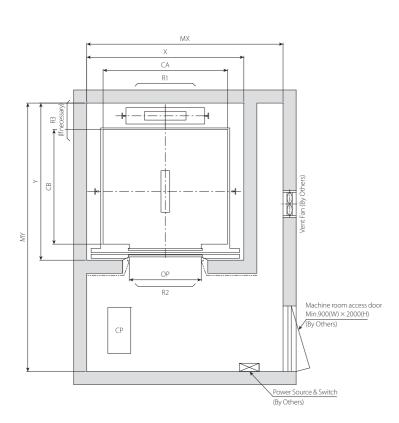
						(Unit:mm)
Capacity	Speed	Max. Travel	Overhe	ad(OH)	Pit Depth	M/C Room Height
(kg)	(m/sec)	(TR(m))	EN81-1	EN81-20	(PP)	(MH)
	1.0	50	CH+1700	CH+1700	1250	2200
550 ~ 630	1.5	75	CH+1800	CH+1800	1300	2200
	1.75	75	CH+1900	CH+1900	1350	2200
	1.0	50	CH+1700	CH+1700	1250	2200
800 ~ 1150 =	1.5	75	CH+1800	CH+1800	1300	2200
500 ~ 1150	1.75	100	CH+1900	CH+1900	1350	2200
	2.0	120	CH+2100	CH+2100	1500	2200
800		130				2200
1000	2.5	140	CH+2350	CH+2350	1700	2200
1150		150				2200
	1.0	50	CH+1800	CH+1900	1400	2200
	1.5	75	CH+1900	CH+2000	1500	2200
1350 ~ 1600	1.75	90	CH+1950	CH+2100	1500	2200
	2.0	100	CH+2050	CH+2200	1550	2200
-	2.5	130	CH+2250	CH+2400	1900	2200

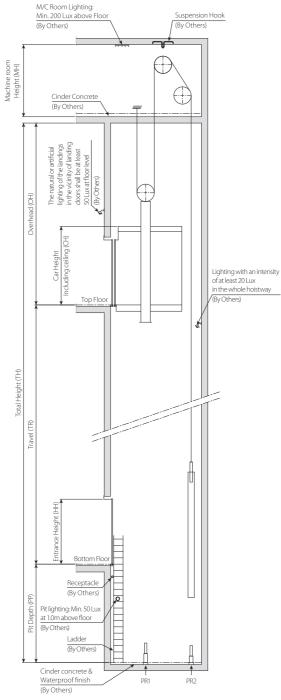
- **◆Notes:** 1. CH means the Ceiling Height which was included car internal ceiling.
  - The table dimensions are complied EN81-20 & EN81-1. In case of other country codes, please contact us.
  - 3. If apply the trap door at car top, OH shall be increased. Please contact us.
  - 4. Optional applied RGS(Roller Guide Shoe), OH value is increased. Please contact us.
  - 5. To apply with the safety gear on counterweight side, Hoistway Width, OH and PIT should be increased. Please contact us.

### LUXEN I ELEVATOR | PASSENGER ELEVATORS | H100 Single 1.0~2.0m/sec

### **PLAN OF HOISTWAY**

### **SECTION OF HOISTWAY**





### **STANDARD DIMENSIONS & REACTIONS**

												Unit:mm
Capacity           Persons         kg           6         450           7         550           8         630           9         680           10         800           12         900	city	Speed (m/sec)	Opening	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)	M/C I	Room Rea (kN)	action		action (N)
Persons	kg	(m/sec)	Type	OP	CA×CB	X×Y	MX×MY	R1	R2	R3	PR1	PR2
		1.0										
6	450	1.5		800	$1400 \times 850$	1800 × 1450	2400 × 3150	29	44	11	53	44
		1.75	_									
		1.0										
7	550	1.5		800	1400 × 1030	1800 × 1650	2400 × 3350	32	48	12	59	48
		1.75									_	
		1.0	_									
8	630	1.5	_	800	1400 × 1100	1800 × 1700	2400 × 3400	34	51	13	63	50
	1.75	1.75	_									
		1.0				_	56	33	6			
9	680	1.5		800	1400 × 1250	1800 × 1860	2400 × 3560	58	34	6.4	64	50
		1.75	- 1S-CO					60	36	6.8		
		1.0	- 13-00				_	60	36	6.9		
10	900	1.5		800	1400 × 1350	1800 × 1970	2400 × 3670	61	37	7.3	70	53
10	000	1.75		800	1400 × 1550			62	38	7.7		
		2.0	_			1850 × 2000	2450 × 3700	62	38	7.7	83	66
		1.0					_	68	40	6.4		
12	000	1.5		900	1600 × 1350	2000 × 1970	2600 × 3700	69	41	6.8	77	58
12	900	1.75		900	1000 X 1550		-	70	42	7.2	-	
		2.0				2050 × 2000	2650 × 3700	75	47	10.2	88	71
		1.0	_					48	44	6.6		
13	1000	1.5		900	1600 × 1500	2000 × 2120	2600 × 3820	69	45	7	83	62
13	1000	1.75	_	900	1000 × 1500			70	46	7.4	-	
		2.0				2050 × 2150	2650 × 3850	75	50	10.4	94	74

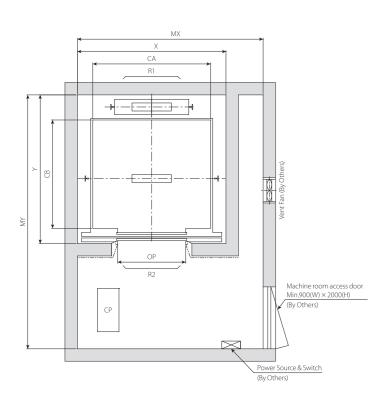
- ▲ Notes: 1. The above table of dimensions as per EN81-20, In case of EN81-1 applied or other country codes, please contact us.
  - $2. Above \ dimensions \ are \ based \ on \ center \ opening \ doors. For \ applicable \ dimensions \ with \ side \ opening \ doors, \ please \ consult \ us.$
  - 3. The persons is calculated at 75kg per person, as required by EN81-20.
  - 4. If apply through (180 degree) type, please consult with us.
  - 5. In case to requested a safety gear on couterweight side, please contact us.
  - 6. The Hoistway dimensions width & depth are based on clear dimension +50mm horizontal tolerances over the total hoistway height.

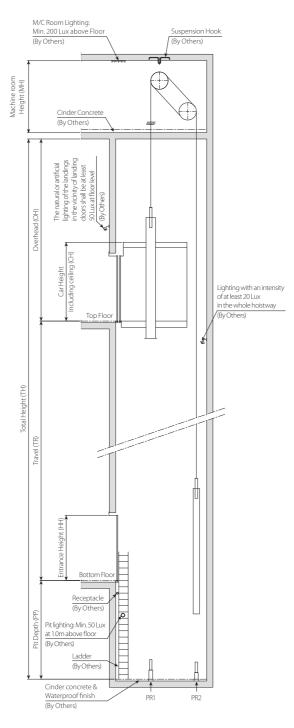
### **OVERHEAD & PIT DEPTH**

							(Unit:mm
		Max. Travel		ad(OH)	Pit Depth	M/C Room Height	Remarks
(kg)	(m/sec)	(TR(m))	EN81-1	EN81-20	(PP)	(MH)	
	1.0	50	CH+1750	CH+1750	1400	2200	
450 ~ 900	1.5	75	CH+1800	CH+1900	1500	2200	
	1.75	90	CH+1850	CH+2000	1550	2200	_
800 ~ 900	2.0	110	CH+2100	CH+2100	1700	2200	Single
	1.0	50	CH+1750	CH+1900	1400	2200	Wrap
1000	1.5	75	CH+1800	CH+2000	1500	2200	
1000	1.75	90	CH+1850	CH+2100	1550	2200	_
	2.0	110	CH+2050	CH+2100	1700	2200	

- ▲ Notes: 1. CH means the Ceiling Height which was included car internal ceiling.
  - 2. The table dimensions are complied EN81-20 & EN81-1. In case of other country codes, Please contact us.
  - 3. If apply the trap door at car top, OH shall be increased, please contact us.
  - 4. Optional applied RGS(Roller Guide Shoe), OH value is increased, please contact us.
  - 5. To apply with the safety gear on counterweight side, Hoistway Width, OH and PIT should be increased. Please contact us.

### **SECTION OF HOISTWAY**





### **STANDARD DIMENSIONS & REACTIONS**

											(Unit:mm)				
Capacity		Speed (m/sec)					Opening	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)		n Reaction N)		action N)
Persons	kg	(m/sec)	Type	OP	CA×CB	X×Y	MX×MY	R1	R2	PR1	PR2				
10	800	2.5		800	1400 × 1350	1950 × 2050	2550 × 3750	112.7	63.7	117.6	88.2				
12	900	2.5		900	1600 × 1350	2100 × 2050	2700 × 3750	117.9	65	122.5	93.1				
13	1000	2.5	-	900	1600 × 1500	2150 × 2200	2750 × 3900	125.6	68.2	132.3	98				
		1.0													
		1.5				2350 × 2280	2950 × 3980	64.7	50	106.9	84.3				
15	1150	1.75		1000	1800 × 1500										
		2.0	15.50			2400 14 2250	2000 1/ 2050	120.2	(0.0	1.47	112.7				
		2.5	- 1S-CO			2400 × 2250	3000 × 3950	128.2	69.9	147	112.7				
		1.0	-												
24	1800	1.5	-	1200	2100 × 1800	2650 × 2500	3250 × 4200	93.6	75	149	113.7				
		1.75	-												
		1.0													
26	2000	1.5		1200	2100 × 1900	2650 × 2600	3250 × 4300	103.9	83.3	166.6	127.4				
_	1.75														

- ▲ Notes: 1. The above table of dimensions as per EN81-20, In case of EN81-1 applied or other country codes, please contact us.
  - 2. Above dimensions are based on center opening doors. For applicable dimensions with side opening doors, please consult us.
  - 3. The persons is calculated at 75kg per person, as required by EN81-20.
  - 4. If apply through (180 degree) type, please consult with us.
  - 5. In case to requested a safety gear on couterweight side, please contact us.
  - 6. The Hoistway dimensions width & depth are based on clear dimension +50mm horizontal tolerances over the total hoistway height.

### **OVERHEAD & PIT DEPTH**

							(Unit : mm)
Capacity	Speed	Max. Travel	Overhe	ad(OH)	Pit Depth	M/C Room Height	Remarks
(kg)	(m/sec)	(TR(m))	EN81-1	EN81-20	(PP)	(MH)	Remarks
800 ~ 1000	2.5	150	CH+2400	CH+2400	1900	2200	
	1.0	50	CH+1800	CH+1850	1400	2200	
	1.5	75	CH+1900	CH+2000	1500	2200	_
1150	1.75	90	CH+1950	CH+2050	1500	2200	
	2.0	105	CH+2050	CH+2150	1550	2200	Double Wrap
	2.5	150	CH+2250	CH+2400	1900	2200	- map
	1.0	50	CH+1800 CH+1850		1400	2400	_
1800 ~ 2000	1.5	75	CH+1900	CH+2000	1500	2400	
	1.75	90	CH+1950	CH+2050	1500	2400	_

- $\blacktriangle$  Notes: 1. CH means the Ceiling Height which was included car internal ceiling.
  - 2. The table dimensions are complied EN81-20 & EN81-1. In case of other country codes, Please contact us.
  - 3. If apply the trap door at car top, OH shall be increased, please contact us.
  - 4. Optional applied RGS(Roller Guide Shoe), OH value is increased, please contact us.
  - 5. To apply with the safety gear on counterweight side, Hoistway Width, OH and PIT should be increased. Please contact us.

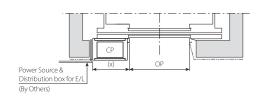
### YZER I ELEVATOR | PASSENGER ELEVATORS 1.0~2.5m/sec, 1S-CO

YZER 1 hoistway, which exploits minimal space, is the product of extensive R&D by Hyundai Elevator's leading technical experts. Besides contributing to superior performance and riding comfort, it achieves a refined architectural design. The end result is the most efficient use of building space, lower construction costs, and easier maintenance.

### **PLAN OF HOISTWAY**

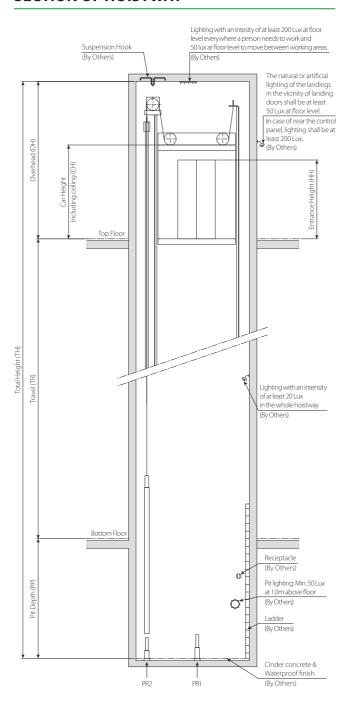
### X CA OP

**TYPICAL FLOORS** 



**TOP FLOOR** 

### **SECTION OF HOISTWAY**



### **STANDARD DIMENSIONS & REACTIONS**

Capa	city	Speed	Opening	Clear Opening	Car Insize (mm)	Hoistway Insize (mm)	Control Panel Box (mm)	Pit Re	(Unit : r action N)				
Persons	kg	– (m/sec)	Type	OP	CA×CB	X×Y	СР	PR1	PR2				
6	450	1.0		700	1100 × 1100	1700 × 1450		55	46				
7	550	1.0		800	1100 × 1300	1800 × 1650		60	49				
8	630	1.0 ~ 2.0		800	1100 × 1400	1800 × 1750	_	69	56				
8	030	1.0 ~ 2.0	•	800	1400 × 1100	2000 × 1450	530	09	30				
9	700	1.0 ~ 2.0		800	1250 × 1400	1850 × 1750		73	59				
10	800	1.0 ~ 2.5		800	1300 × 1400	1900 × 1750	_	77	61				
12	900	1.0 ~ 2.5		900	1600 × 1300	2200 × 1650		85	68				
12	1000	1.0 ~ 2.0	-	900	1600 × 1400	2200 × 1750	530	- 94	7.5				
13	1000	2.5	_	900	1600 X 1400	2200 × 2050	CP : In Hoistway	— 94 ———	75				
1.5	1150	1.0 ~ 2.0		1000	1800 × 1400	2400 × 1750	530	- 108	0.5				
15	1150	2.5	- 1S-CO -	1000	1800 X 1400	2400 × 2050	CP : In Hoistway	- 108	85				
		1.0 ~ 1.5	- 12-00 -			2550 × 1970	530						
18	1350	1.75		1000	1800 × 1600	2550 × 2200	CD 1 - 11 - i - t · · · · · ·	147	118				
		2.0 ~ 2.5	_			2520 × 2200	- CP : In Hoistway						
		1.0				2750 × 2070	530						
21	1600	1.5 ~ 1.75		1100	2000 × 1700	2750 × 2250	- CP : In Hoistway	157	128				
		2.0 ~ 2.5				2720 × 2250	- CF : III HOISTWay						
24	1000	1.0		4400		1100 1600 220		1100 1600 × 2300 250		2500 × 2650	530	- 94 × 2 <sup>Note,7</sup>	76 × 2 <sup>N</sup>
24	1800	1.5 ~ 1.75	_	1100	1000 X 2300	2500 × 2650	CP : In Hoistway	- 94 X Z	76 X Z.				
26	2000		1.0		1200	2100 × 1000	2825 × 2550	530	- 100 × 2 <sup>Note,7</sup>	80 × 2 <sup>N</sup>			
20	2000	1.5 ~ 1.75		1200	1200	2100 × 1900	Z0Z3 X Z33U	CP : In Hoistway	- 100 X Z*****	00 X 2'''			
33	2500	1.0 ~ 1.75	-	1200	2200 × 2200	2925 × 2850	CP : In Hoistway	114 × 2 <sup>Note,7</sup>	89 × 2 <sup>N</sup>				

- ▲ Notes: 1. The above table of dimensions as per EN81-20. In case of EN81-1 or other country codes, please contact us.
  - 2. The persons is calculated at 75kg per person, as required by EN81-20.
  - 3. If apply through(180 degree) type, please consult with us.
  - 4. In case to requested a safety gear on couterweight side, please contact us.
  - 5. Min. Dimension of Wall Thickness+Finished at Top floor is 250mm for install of Control Panel.
  - 6. The Hoistway dimensions width & depth are based on clear dimension + 50 mm horizontal tolerances over the total hoistway height.
  - 7. The car and counterweight of 1800kg~2500kg is Standard configuration with two buffers.

### **OVERHEAD & PIT DEPTH**

					(Unit : mm)
Capacity	Speed	Max. Travel	Over He	ead(OH)	Pit Depth
(kg)	(m/sec)	(TR(m))	EN81-1	EN81-20	(PP)
400 ~550	1.0	50	CH+1350	CH+1500	1150
	1.0	50	CH+1350	CH+1500	1150
630 ~ 1150	1.5	70	CH+1500	CH+1600	1250
	1.75	80	CH+1550	CH+1700	1300
630	2.0	90	CH+1850	CH+1850	1500
700 ~ 1150	2.0	120	CH+1850	CH+1850	1500
800 ~ 1150	2.5	120	CH+2250	CH+2250	1700
	1.0	50	CH+1500	CH+1500	1300
	1.5	70	CH+1600	CH+1600	1400
1350 ~ 1600	1.75	80	CH+1700	CH+1700	1450
	2.0	120	CH+1850	CH+1850	1600
	2.5	120	CH+2150	CH+2150	1800
	1.0	45	CH+1700	CH+1700	1400
1800 ~ 2500	1.5	90	CH+1850	CH+1850	1600
	1.75	90	CH+1950	CH+1950	1650

- **Notes:** 1. CH means the Ceiling Height which was included car internal ceiling.
  - 2. The table dimensions are complied EN81-20 & EN81-1. In case of other country codes, please contact us.
  - 3. To apply with the safety gear on counterweight side, Hoistway Width, OH and PIT should be increased. Please contact us.

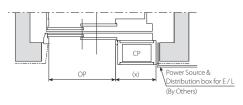
### YZER I ELEVATOR | PASSENGER ELEVATORS 1.0~2.5m/sec, 2S-SO

YZER 1 hoistway, which exploits minimal space, is the product of extensive R&D by Hyundai Elevator's leading technical experts. Besides contributing to superior performance and riding comfort, it achieves a refined architectural design. The end result is the most efficient use of building space, lower construction costs, and easier maintenance.

### **PLAN OF HOISTWAY**

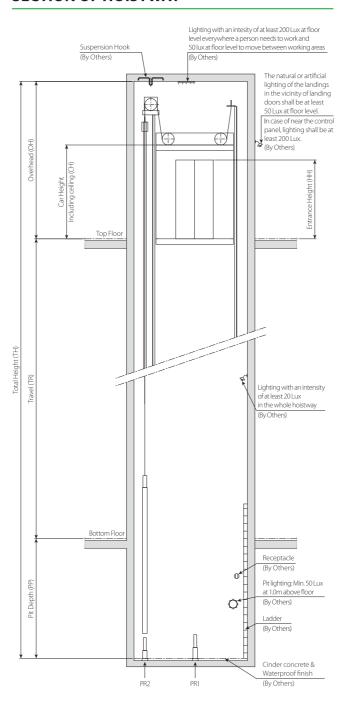
### X CA

### **TYPICAL FLOORS**



**TOP FLOOR** 

### **SECTION OF HOISTWAY**



### STANDARD DIMENSIONS & REACTIONS

Capa	city	Speed	Opening	Clear Opening	Car Insize (mm)	Hoistway Insize (mm)	Control Panel Box (mm)	Pit Rea		
Persons	kg	– (m/sec)	Type	OP	CA×CB	X×Y	CP	PR1	PR2	
5	400	1.0		800	1000 × 1100	1600 × 1500		52	44	
6	450	1.0		800	1100 × 1100	1700 × 1550		55	46	
7	550	1.0		800	1100 × 1300	1700 × 1700	-	60	49	
8	630	1.0 ~ 2.0		900	1100 × 1400	1700 × 1800	530	69	56	
9	700	1.0 ~ 2.0		900	1200 × 1400	1800 × 1800	_	73	59	
10	800	1.0 ~ 2.5		900	1300 × 1400	1900 × 1800		77	61	
12	900	1.0 ~ 2.5		900	1300 × 1600	1900 × 2000	-	85	68	
		1.0 ~ 2.0		000	1100 2100	1700 × 2500	530			
12	1000	2.5		900	1100 × 2100	1750 × 2600	CP : In Hoistway	- 94	75	
13	1000	1.0 ~ 2.0		1200	2100 - 1100	2700 × 1550	530	- 94	75	
		2.5		1200	2100 × 1100	2700 × 1850	CP : In Hoistway			
15	1150	1.0 ~ 2.0	- 20.00	1000	1200 2200	1800 × 2650	530	100	0.5	
15 1150	1150 -	2.5	2S-SO =	1000	1200 × 2200	1850 × 2650	1850 × 2650	CP : In Hoistway	- 108	85
		1.0 ~ 1.5				2050 × 2750	530			
18	1350	1.75		1100	1300 × 2300	2050 × 2750	CD to Heiston	147	118	
		2.0 ~ 2.5				2050 × 2750	- CP : In Hoistway			
		1.0				2150 × 2850	530			
21	1600	1.5 ~ 1.75	_	1200	1400 × 2400	2150 × 2850	CD. In Holeture	157	128	
		2.0 ~ 2.5	_			2150 × 2850	- CP : In Hoistway			
24	1000	1.0		1200	1500 2500	2200 1/ 2050	530	- 94 × 2Note,7	76 20	
24	1800	1.5 ~ 1.75		1200	1500 × 2500	2300 × 2950	CP : In Hoistway	- 94 X Z*****	76 × 2 <sup>N</sup>	
26	2000	1.0		1200	1600 × 2500	2400 × 2050	530	100 x 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	00.22	
26	2000	1.5 ~ 1.75	_	1300	1600 × 2500	2400 × 2950	CP : In Hoistway	- 100 × 2 <sup>Note.7</sup>	80 × 2 <sup>h</sup>	
33	2500	1.0 ~ 1.75		1400	1800 × 2700	2600 × 3150	CP : In Hoistway	114 × 2 <sup>Note.7</sup>	89 × 2 <sup>n</sup>	

- ▲ Notes: 1. The above table of dimensions as per EN81-20.In case of EN81-1 or other country codes, please contact us.
  - 2. The persons is calculated at 75kg per person, as required by EN81-20.
  - 3. If need with two entrances at 180° on one shaft, please contact us.
  - 4. In case to requested a safety gear on couterweight side, please contact us.
  - $5.\,Min.\,Dimension\,of\,Wall\,Thickness+Finished\,at\,Top\,floor\,is\,250mm\,for\,install\,of\,Control\,Panel.$
  - 6. The Hoistway dimensions width & depth are based on clear dimension +50mm horizontal tolerances over the total hoistway height.
  - 7. The car and counterweight of 1800kg~2500kg is Standard configuration with two buffers.

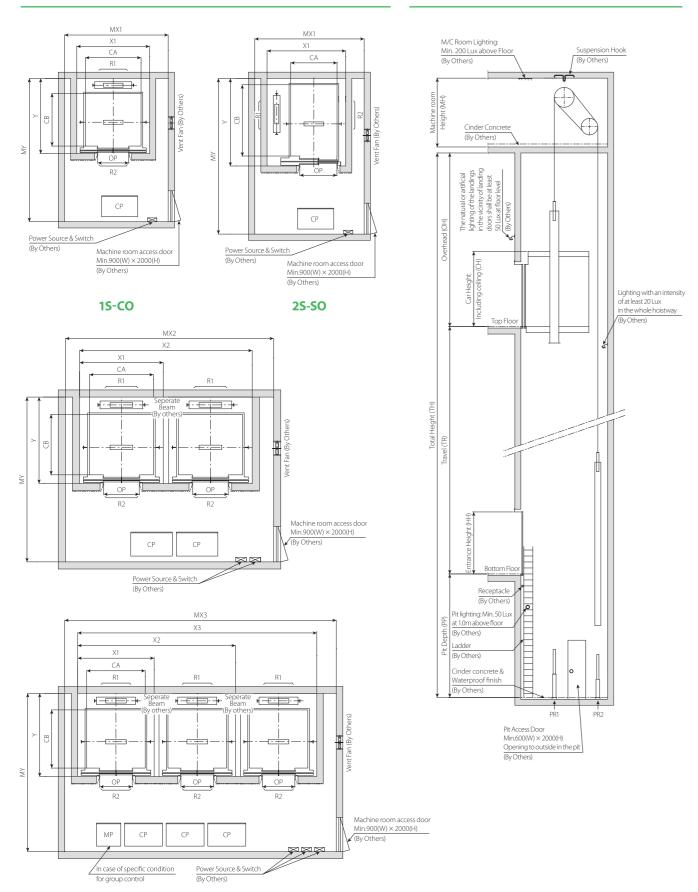
### **OVERHEAD & PIT DEPTH**

					(Unit : mm)
Capacity	Speed	Max. Travel	Over He	ead(OH)	Pit Depth
(kg)	(m/sec)	(TR(m))	EN81-1	EN81-20	(PP)
400 ~550	1.0	50	CH+1350	CH+1500	1150
	1.0	50	CH+1350	CH+1500	1150
630 ~ 1150	1.5	70	CH+1500	CH+1600	1250
	1.75	80	CH+1550	CH+1700	1300
630			CH+1850	CH+1850	1500
700 ~ 1150	~ 1150 2.0		CH+1850	CH+1850	1500
800 ~ 1150	2.5	120	CH+2250	CH+2250	1700
	1.0	50	CH+1500	CH+1500	1300
	1.5	70	CH+1600	CH+1600	1400
1350 ~ 1600	1.75	80	CH+1700	CH+1700	1450
	2.0	120	CH+1850	CH+1850	1600
	2.5	120	CH+2150	CH+2150	1800
	1.0	45	CH+1700	CH+1700	1400
1800 ~ 2500	1.5	90	CH+1850	CH+1850	1600
	1.75	90	CH+1950	CH+1950	1650

**Notes:** 1. CH means the Ceiling Height which was included car internal ceiling.

- 2. The table dimensions are complied EN81-20 & EN81-1. In case of other country codes, please contact us.
- 3. To apply with the safety gear on counterweight side, Hoistway Width, OH and PIT should be increased. Please contact us.

### **SECTION OF HOISTWAY**



### **STANDARD DIMENSIONS & REACTIONS**

																		(U	nit : mm)
Capa	acity	Speed	Opening	Door Width (mm)	Car Insize (mm)		Hoistw (n	ay Ins nm)	ize		N	lachine (i	Room mm)	Siz	e	M/C Room (k			action N)
Persons	kg	(m/sec)	Type	OP	CA×CB	X1	X2	Х3	×	Υ	MX1	MX2	MX3	×	MY	R1	R2	PR1	PR2
13	1000			900	1600 × 1500	2300	4550	6900	×	2350	2800	5500	7900	×	4700	130.7	70.9	149	128.6
15	1150			1000	1800 × 1500	2500	4950	7500	×	2350	3000	6100	8800	×	4700	133.5	72.8	175.5	152
18	1350	3.0	1S-CO	1000	1800 × 1700	2500	4950	7500	×	2550	3000	6100	8900	×	5000	146.5	78.1	191.8	164.3
10	1530	5.0	13-CO	1100	2000 × 1500	2700	5350	8100	×	2350	3200	6250	9100	×	4700	140.3	/0.1	191.0	104.5
21	1600			1100 -	2000 × 1750	2700	5350	8100	×	2600	3200	6250	9100	×	5000	154	82.4	214.3	174.5
21	1000			1100	2150 × 1600	2850	5650	8550	×	2450	3400	6500	9400	×	4900	134	02.4	214.3	174.5
13	1000			900	1600 × 1500	2300	4600	6950	×	2350	2800	5600	8200	×	4900	130.7	79.6	149	128.6
15	1150			1000	1800 × 1500	2500	5000	7550	×	2350	3000	6100	8900	×	4900	143.9	81.6	175.5	152
18	1350	3.5	1S-CO	1000	1800 × 1700	2500	5000	7550	×	2550	3000	6100	8800	×	5000	154.1	82.1	191.8	164.3
	1330	4.0	13-00	1100	2000 × 1500	2700	5400	8150	×	2350	3200	6200	9000	×	5000	154.1	02.1	191.0	104.5
21	1600			1100 -	2000 × 1750	2700	5400	8150	×	2600	3200	6400	9100	×	5000	160.2	82.7	214.3	174.5
	1000			1100	2150 × 1600	2850	5700	8650	×	2450	3400	6500	9400	×	5000	100.2	02.7	214.3	174.3
13	1000			900	1100 × 2100	2100	4350	6600	×	2650	2650	4900	7150	×	5000	130.7	70.9	149	128.6
15	1150	3.0	2S-SO	1000	1200 × 2100	2200	4550	6900	×	2650	2750	5100	7450	×	5000	133.5	72.8	175.5	152
18	1350	. 5.0	23-30	1100	1300 × 2300	2300	4750	7200	×	2850	2850	5300	7750	×	5200	146.5	78.1	191.8	164.3
21	1600			1200	1400 × 2400	2400	4950	7500	×	2950	2950	5500	8050	×	5300	154.0	82.4	214.3	174.5
13	1000			900	1100 × 2100	2150	4450	6750	×	2650	2750	5000	7300	×	5000	130.7	79.6	149	128.6
15	1150	3.5	2S-SO	1000	1200 × 2100	2250	4650	7050	×	2650	2850	5200	7600	×	5000	143.9	81.6	175.5	152
18	1350	4.0	23-30	1100	1300 × 2300	2350	4850	7350	×	2850	2950	5400	7900	×	5200	154.1	82.1	191.8	164.3
21	1600			1200	1400 × 2400	2450	5050	7650	×	2950	3050	5600	8200	×	5300	160.2	82.7	214.3	174.5

- ▲ Notes: 1. The table of dimensions as per EN81-20, For other country codes and spec requirements, please contact us.
  - 2. If apply the safety gear on Counterweight side, please contact us.
  - 3. If apply through (180 degree) type, please consult with us.
  - 4. The Hoistway dimensions width & depth are based on clear dimension +0~50mm horizontal tolerances over the total hoistway height.

### **OVERHEAD & PIT DEPTH**

			(Unit:mm)
Speed (m/sec)	Over Head (OH)	Pit Depth (PP)	M/C Room Height (MH)
3.0	CH+3050	2700 <sup>Note.3</sup>	2500
3.5	CH+3300	3500	2800
4.0	CH+3650	4000	2800

\* CH: (External) Car Height

- ▲ Notes: 1. Above dimensions are applied base on EN81-20 & EN81-1.
  - 2. OH in the table is standard dimensions, standard value equals to minimum value.
  - 3. The value is for compensation chain applied.
    If use compensation rope, please consult with us.
  - 4. Machine room temperature should be maintained below 40°C with ventilating fan and/or air conditioner(if necessary) and humidity below 90%.
  - 5. If the height of non-stop floor is over 11m, please consult Hyundai as to the needs for emergency exit.

16 HYUNDAI ELEVATOR **Planning guide** 

# Machine room access door Min.500(M) × 2000(H) By Others) 1 SIDE TYPE (REAR) (REAR & 1 SIDE)

### **STANDARD DIMENSIONS & REACTIONS**

												(U	Jnit : mm)		
Car Type	Capa	city	Speed	Opening	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)	M/C F	Room Rea	action		eaction (N)		
	Persons	kg	- (m/sec)	Type	OP	CA×CB	X×Y×S	MX×MY	R1	R2	R3	PR1	PR2		
1.005	10	800	1.0-2.0		800	1300 × 1450	2250 × 2050 × 1250	2850 × 3550	82.8	42.8	7	93	76		
1 SIDE (REAR)	13	1000	1.0-2.0	1S-CO	900	1500 × 1600	2450 × 2200 × 1350	3050 × 3700	91	48	7	106	76		
(IILAII)	18	1350	1.0-2.0	-	1000	1700 × 1800	2700 × 2400 × 1500	3300 × 3900	124	62	11.5	140	112		
2 CIDEC	10	800	1.0-2.0		800	1300 × 1450	2250 × 2050 × 1250	2850 × 3550	82.8	42.8	7	93	76		
2 SIDES (REAR & 1 SIDE)	13	1000	1.0-2.0	1S-CO	900	1500 × 1600	2450 × 2200 × 1350	3050 × 3700	91	48	7	106	85		
(IL) III & I SIDE)	18	1350	1.0-2.0		1000	1700 × 1800	2700 × 2400 × 1500	3300 × 3900	124	62	11.5	140	112		
	10 900	10 800	10 800	10 800 1.0-1.75			800	1400 × 1500	2300 × 2100 × 1250	2900 × 3600	82.8	42.8	7	93	76
ROUND	10	800	2.0	- 1S-CO	800	1400 × 1500	2350 × 2100 × 1250	2950 × 3600	02.0	42.0	/	95	/0		
ROUND	13	1000	1.0-2.0	13-00	900	1500 × 1750	2450 × 2350 × 1350	3050 × 3850	91	48	7	106	85		
	18	1350	1.0-2.0		1000	1700 × 1980	2700 × 2550 × 1500	3300 × 4050	124	62	11.5	140	112		
	10	10	10		1.0-1.75		800	1400 × 1450	2250 × 2050 × 1250	2850 × 3550	82.8	42.8	7	93	76
	10	000	2.0		800	1400 X 1430	2300 × 2050 × 1250	2900 × 3550	02.0	42.0	/	93	70		
3 SIDES	13	1000	1.0-1.75	1S-CO	000	1600 × 1600	2500 × 2200 × 1350	3100 × 3700	01	48	7	106	OE.		
	13	1000	2.0	_	900 1	1600 × 1600 -	2550 × 2200 × 1350	3150 × 3700	91 4	40		100	85		
	18	1350	1.0-2.0		1000	1700 × 1870	2700 × 2450 × 1500	3300 × 3950	124	62	11.5	140	112		

- ▲ Notes: 1. The above table of dimensions as per EN81-20, In case of EN81-1 or other country codes, please contact us.
  - 2. The persons is calculated at 75kg per person, as required by EN81-20.
  - 3. The Hoistway dimensions width & depth are based on clear dimension +50mm horizontal tolerances over the total hoistway height.

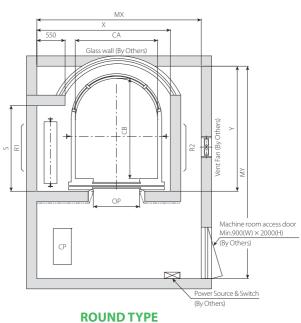
### **OVERHEAD & PIT DEPTH**

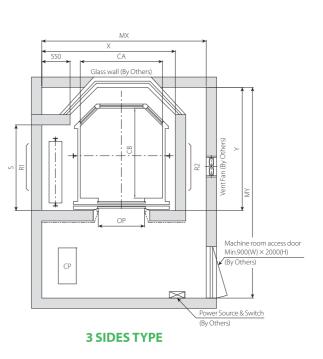
							(Unit:mm)
Capacity	Speed	Max. Travel	Over He	ead(OH)	Pit Depth	M/C Room	Note
(kg)	(m/sec)	(TR(m))	EN81-1	EN81-20	(PP)	Height(MH)	Note
	1.0	50	CH+1800	CH+1800	2000	2200	
	1.5	60	CH+1900	CH+1900	2100	2200	
800 ~ 1350	1.75	70	CH+2000	CH+2000	2100	2200	
	2.0	80	CH+2300	CH+2300	2400	2200	
	2.0	00	CH+2500	CH+2500	2400	2200	Only Round

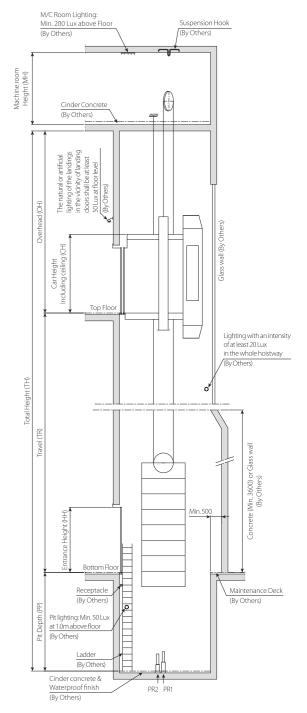
- **◆Notes:** 1. CH means the Ceiling Height which was included car internal ceiling.
  - 2. The table dimensions are complied EN81-20 & EN81-1.
  - In case of other country codes, please contact us.
  - 3. If apply the trap door at car top, OH shall be increased, please contact us.
  - Optional applied RGS(Roller Guide Shoe), OH value is increased, please contact us.
  - 5. To apply with the safety gear on counterweight side, Hoistway Width, OH and PIT should be increased. Please contact us.

### \_\_\_\_

**SECTION OF HOISTWAY** 



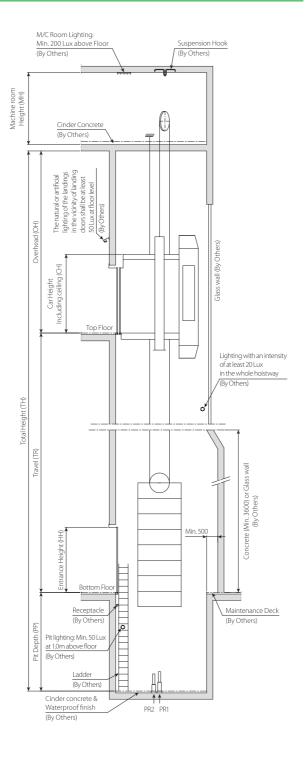




### Power Source & Switch

**NUDE TYPE** 

### **SECTION OF HOISTWAY**



### **STANDARD DIMENSIONS & REACTIONS**

												(U	Jnit : mm)
Car Type	Capacity		Speed (m/sec)	Opening	Door Width Car Insize (mm) (mm)		Hoistway Insize (mm)	Machine Room Size (mm)	M/C Room Reaction (kN)			Pit Reaction (kN)	
	Persons	kg	(m/sec)	Type	OP	CA×CB	X×Y	MX×MY	R1	R2	R3	PR1	PR2
	10	800			800	1300 × 1450	2200 × 1900	2800 × 3400	82.8	42.8	7	93	76
NUDE	13	1000	1.0~2.0	1S-CO	900	1500 × 1600	2400 × 2050	3000 × 3550	91	48	7	106	85
	18	1350	_		1000	1700 × 1700	2650 × 2250	3250 × 3750	124	62	11.5	140	112

- ▲ Notes: 1. The above table of dimensions as per EN81-20, In case of EN81-1 or other country codes, please contact us.
  - 2. The persons is calculated at 75kg per person, as required by EN81-20.
  - 3. The Hoistway dimensions width & depth are based on clear dimension +50mm horizontal tolerances over the total hoistway height.

### **OVERHEAD & PIT DEPTH**

						(Ur	nit : mm
Capacity	Speed	Max. Travel	Over He	ead(OH)	Pit Depth	M/C Room Height	Note
(kg)	(m/sec)	(TR(m))	EN81-1	EN81-20	(PP)	(MH)	
	1.0	50	CH+1800	CH+1800	2000	2200	
800 ~ 1350	1.5	60	CH+1900	CH+1900	2100	2200	
000 ~ 1550	1.75	70	CH+2000	CH+2000	2100	2200	
	2.0	80	CH+2300	CH+2300	2400	2200	

- ▲ Notes: 1. CH means the Ceiling Height which was included car internal ceiling.
  - 2. The table dimensions are complied EN81-20 & EN81-1. In case of other country codes, please contact us.
  - 3. If apply the trap door at car top, OH shall be increased, please contact us.

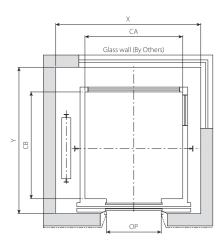
  - 4. Optional applied RGS(Roller Guide Shoe), OH value is increased, please contact us.

    5. To apply with the safety gear on counterweight side, Hoistway Width, OH and PIT should. be increased. Please contact us.

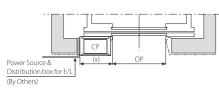
20 HYUNDAI ELEVATOR PLANNING GUIDE ELEVATOR 21

### CA Glass wall (By Others)

1 SIDE TYPE (REAR)

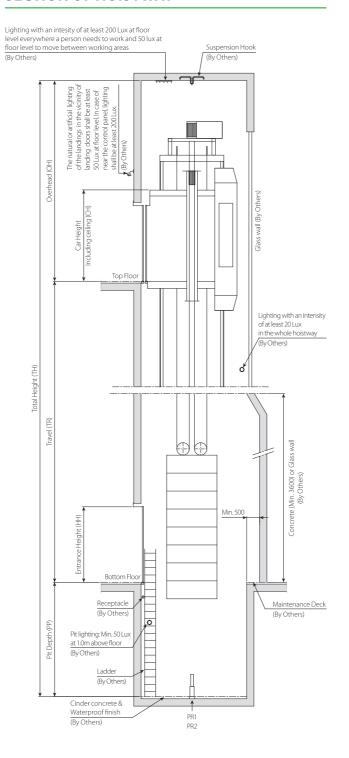


2 SIDES TYPE (REAR & 1 SIDE)



**TOP FLOOR** 

### **SECTION OF HOISTWAY**



### **STANDARD DIMENSIONS & REACTIONS**

									(U	nit : mm)						
Car Type	Capa	city	Speed	Opening	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Control Panel Box (mm)		action :N)						
	Persons	kg	(m/sec)	Type	OP	CA×CB	X×Y	СР	PR1	PR2						
	8	630			800	1100 × 1400	1900 × 1900		78	62						
	10	800	1.0 ~ 1.75		800	1300 × 1400	1900 × 1900	530	96	76						
	13	1000	_		900	1600 × 1400	2200 × 1900		110	87						
1 SIDE (REAR)	15	1150	1.0 ~ 1.5	1S-CO	1000	1700 × 1500	2500 × 2000	530	150	120						
(12, 11)	15	1150	1.75	_	1000	1700 × 1500	2700 × 2000	CP: In Hoistway	130	120						
	18	18 13	1350	1.0		1000	1800 × 1600	2550 × 2100	530	160	130					
	10	1330	1.5 ~ 1.75		1000	1000 × 1000	2800 × 2100	CP: In Hoistway	100	130						
	8	630			800	1100 × 1400	1900 × 1900		78	62						
	10	800	1.0 ~ 1.75		800	1300 × 1400	1900 × 1900	530	96	76						
- 0.0.50	13	1000			900	1600 × 1400	2200 × 1900		110	87						
2 SIDES (REAR & 1 SIDE)	15	1150	1.0 ~ 1.5	1S-CO	1000	1700 × 1500	2500 × 2000	530	150	120						
(12, 11, 0, 1, 5, 5, 5, 7,	13	15 1150	1.75	_	1000	1700 × 1300	2700 × 2000	CP: In Hoistway	130	120						
	10	1250	1.0		1000	1800 × 1600	2550 × 2100	530	160	130						
	10	18 1350	18 1350	18 1350	18 1350	18 1350	18 1350	18 1350 -	1.5 ~ 1.75		1000	1000 × 1000	2550 × 2100	CP: In Hoistway	160	130

- ▲ Notes: 1. The above table of dimensions as per EN81-20. In case of EN81-1 or other country codes, please contact us.
  - 2. The persons is calculated at 75kg per person, as required by EN81-20.
  - 3. In case to requested a safety gear on couterweight side, please contact us.
  - 4. Min. Dimension of Wall Thickness+Finished at Top floor is 250mm for install of Control Panel.
  - 5. The Hoistway dimensions width & depth are based on clear dimension +50mm horizontal tolerances over the total hoistway height.

### **OVERHEAD & PIT DEPTH**

					(Unit : mm	)
Capacity	Speed	Max. Travel	Overhe	ad(OH)	Pit Depth	Ī
(kg)	(m/sec)	(TR(m))	EN81-1	EN81-20	(PP)	
	1.0	50	CH+1900	CH+1900	1650	_
630 ~ 1000	1.5	70	CH+2000	CH+2000	1750	Ī
	1.75	80	CH+2100	CH+2100	1800	_
	1.0	50	CH+2100	CH+2100	1650	
1150	1.5	70	CH+2200	CH+2200	1750	
	1.75	80	CH+2300	CH+2300	1800	
	1.0	50	CH+2100	CH+2100	1650	_
1350	1.5	60	CH+2200	CH+2200	1750	
	1.75	60	CH+2300	CH+2300	1800	
						_

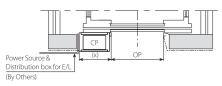
- ▲ Notes: 1. CH means the Ceiling Height which was included car internal ceiling.
  - 2. The table dimensions are complied EN81-20 & EN81-1. In case of other country codes, please contact us.
  - 3. To apply with the safety gear on counterweight side, Hoistway Width, OH and PIT should be increased. Please contact us.

### YZER I ELEVATOR | OBSERVATION ELEVATORS NUDE TYPE

### **PLAN OF HOISTWAY**

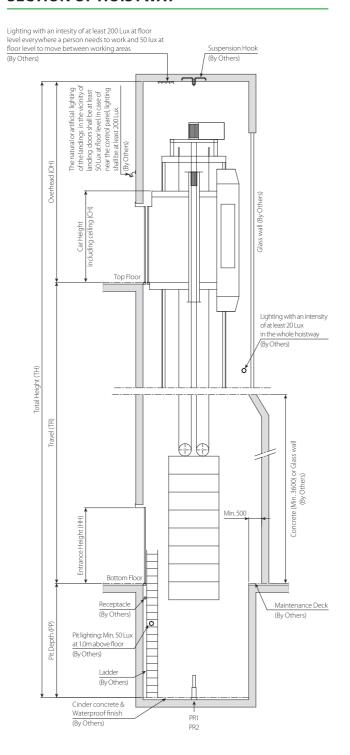
### X CA Glass wall (By Others)

**NUDE TYPE** 



**TOP FLOOR** 

### **SECTION OF HOISTWAY**



### **STANDARD DIMENSIONS & REACTIONS**

									(U	Init : mm)			
Car Type	Capa	city	Speed - (m/sec)	Opening	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Control Panel Box (mm)		action (N)			
	Persons	kg	- (m/sec)	Type	OP	CA×CB	X×Y	СР	PR1	PR2			
	8	630			800	1100 × 1400	1900 × 1900		78	62			
	10	800	1.0 ~ 1.75		800	1300 × 1400	2000 × 1900	530	96	76			
	13	1000						900	1600 × 1400	2300 × 1900		110	87
NUDE	15	1150	1.0 ~ 1.5	1S-CO	1000	1700 × 1500	2600 × 2000	530	<b>—</b> 150	120			
	13	1130	1.75		1000	1700 × 1300	2700 × 2000	CP: In Hoistway	- 130	120			
	18	1350	1.0	_	1000	1800 × 1600	2650 × 2100	530	— 160	130			
	10	1550	1.5 ~ 1.75		1000	1000 × 1000	2800 × 2100	CP: In Hoistway	100	130			

- ▲ Notes: 1. The above table of dimensions as per EN81-20. In case of EN81-1 or other country codes, please contact us.
  - 2. The persons is calculated at 75kg per person, as required by EN81-20.
  - 3. In case to requested a safety gear on couterweight side, please contact us.
  - 4. Min. Dimension of Wall Thickness+Finished at Top floor is 250mm for install of Control Panel.
  - $5. The \ Hoistway \ dimensions \ width \& \ depth \ are \ based \ on \ clear \ dimension + 50mm \ horizontal \ tolerances \ over the \ total \ hoistway \ height.$

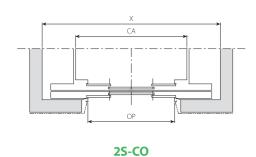
### **OVERHEAD & PIT DEPTH**

					(Unit : m
Capacity	Speed	Max. Travel	Overhe	ead(OH)	Pit Depth
(kg)	(m/sec)	(TR(m))	EN81-1	EN81-20	(PP)
	1.0	50	CH+1900	CH+1900	1650
630 ~ 1000	1.5	70	CH+2000	CH+2000	1750
	1.75	80	CH+2100	CH+2100	1800
	1.0	50	CH+2100	CH+2100	1650
1150	1.5	70	CH+2200	CH+2200	1750
	1.75	80	CH+2300	CH+2300	1800
	1.0	50	CH+2100	CH+2100	1650
1350	1.5	60	CH+2200	CH+2200	1750
	1.75	60	CH+2300	CH+2300	1800

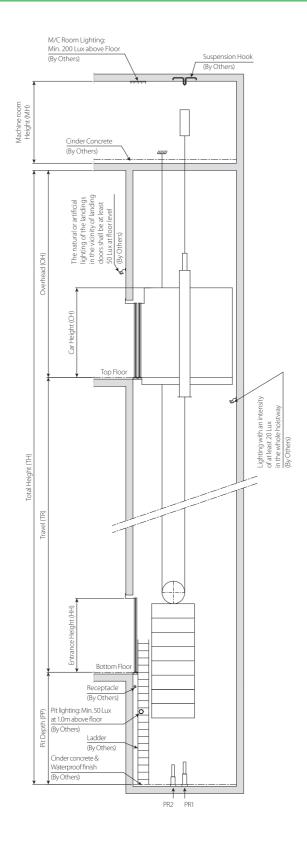
- **◆Notes:** 1. CH means the Ceiling Height which was included car internal ceiling.
  - 2. The table dimensions are complied EN81-20 & EN81-1. In case of other country codes, please contact us.
  - To apply with the safety gear on counterweight side, Hoistway Width, OH and PIT should be increased. Please contact us.

# Power Source & Switch (By Others) Machine room access door No. 2000 Machine room access door

**2S-SO** 



### **SECTION OF HOISTWAY**



### **STANDARD DIMENSIONS & REACTIONS**

																(Unit:mm)
	Capacity (kg)	Speed (m/sec)	Entrance Type	Opening Type	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)		/C Roo leactio (kN)		P Read (k	tion	Overhead (mm)	Pit Depth (mm)	M/C Room HT (mm)
					OP	CA×CB	X×Y	$MX \times MY$	R1	R2	R3	PR1	PR2	ОН	PP	МН
	1000	0.5 ~ 1.0	1 way		1100	1400 × 1500	2350 × 2040	2950 × 4040	65	42	18	88	68	CH+2050	1500	
	1000	0.5 ~ 1.0	2 way		1100	1400 X 1500	2350 × 2210	2950 × 4210	03	42	10	00	00	CH+2030	1500	_
	1500	0.5 ~ 1.0	1 way	- 2S-SO	1300	1600 × 1900	2550 × 2440	3150 × 4440	108	78	22	118	88	CH+2050	1500	
	1300	0.5 ~ 1.0	2 way	23-30	1300	1000 × 1500	2550 × 2610	3150 × 4610	100	70	22	110	00	CI 172030	1300	
	2000	0.5 ~ 1.0	1 way		1500	1700 × 2300	2700 × 2840	3300 × 4840	138	88	24	79×2	118	CH+2050	1500	
	2000	0.5 - 1.0	2 way		1500	1700 × 2300	2700 × 3010	3300 × 5010	130			73 ^ 2	110	CH+2030	1300	
Geared	2500	0.5 ~ 1.0	1 way		1800	2000 × 2300	3300 × 2860	3900 × 4860	198	108	26	105×2	150	CH+2100	1500	2400
Geg	2300	0.5 ** 1.0	2 way		1000	2000 \ 2500	3300 × 3010	3900 × 5010	150	100	20	103 / 2	150	CITIZIOO	1500	2400
	3000	0.5 ~ 1.0	1 way		2000	2000 × 2800	3450 × 3270	4050 × 5270	222	106	28	118×2	80 V 2	CH+2100	1500	
	3000	0.5 - 1.0	2 way	2S-CO	2000	2000 × 2000	3450 × 3340	4050 × 5340		100	20	110 / 2	03 / 2	CHITZIOO	1300	
	4000	0.25 ~ 0.5	1 way	25-00	2000	2000 × 3600	3450 × 4070	4050 × 6070	238	125	42	167 ∨ 2	123×2	CH+2100	1600	
	4000	0.25 - 0.5	2 way		2000	2000 \ 3000	3450 × 4140	4050 × 6140	230	123	72	10/ / 2	123 / 2	CITIZIOO	1000	
	5000	0.25 ~ 0.5	1 way		2600	2600 × 3400	4250 × 3870	4850 × 5870	256	145	54	197×2	148 × 2	CH+2100	1600	
	5000	0.25 ~ 0.5	2 way		2000	2000 ^ 3400	4250 × 3940	$4850 \times 5940$	230	143	24	12/ ^ Z	170 ^ Z	CI 172 100	1000	

	Capacity (kg)	Speed (m/sec)	Entrance Type	Opening Type	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)		/C Roo Reactio (kN)		Pi Reac (kl	tion	Overhead (mm)	Pit Depth (mm)	M/C Room HT (mm)
					OP	CA×CB	X×Y	MX×MY	R1	R2	R3	PR1	PR2	ОН	PP	МН
	1000	10 175	1 way		1100	1400 × 1500	2350 × 2040	2950 × 4040	- 78	52	18	88	68	CH+2200	1400	
	1000	1.0 ~ 1.75	2 way		1100	1400 X 1500	2350 × 2210	2950 × 4210	/0	32	10	00	00	CH+2200	1400	
10	1500	1.0 ~ 1.75	1 way	- 2S-SO	1300	1600 × 1900	2550 × 2440	3150 × 4440	108	78	22	118	88	CH+2350	1400	
Gearless	1500	1.0 ~ 1.75	2 way	25-30	1300	1000 X 1900	2550 × 2610	3150 × 4610	100	/0	22	110	00	CH+2330	1400	- 2400
jeai	2000	1.0 ~ 1.75	1 way		1500	1700 × 2300	2700 × 2840	3300 × 4840	138	88	24	70 2 2	110	CH+2350	1400	- 2400
J	2000	1.0 ~ 1./5	2 way	-	1500	1/00 X 2300	2700 × 3010	3300 × 5010	138	88	24	79×2	118	CH+2330	1400	
	2500	1.0	1 way	- 2S-CO	1000	1000 × 2500	3250 × 3060	3850 × 5060	100	100	26	10E v 2	150	CILLOSEO	1400	
	2500	1.0	2 way	· 23-CO	1800	1900 × 2500	3250 × 3210	3850 × 5210	198	108	26	105 × 2	150	CH+2350	1400	

- ▲ Notes: 1. CH means the Ceiling Height which was included car internal ceiling.
  - 2. 2 Way means Double Entrance at 180° on one shaft.
  - 3. If the sizes of the civil engineering are different with the above-mentioned values of our company, we can conduct the adjustment within the EN code. Please contact us.

### **ALLOWABLE TRAVEL**

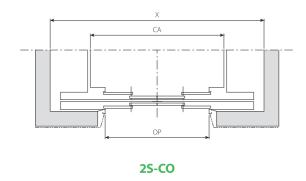
					(Unit : m
Model -		:	Speed (m/sec)	)	
wodei -	0.25	0.5	1.0	1.5	1.75
Geared	16	30	50	-	-
Gearless	-	-	40	60	70

### FREIGHT ELEVATOR | FREIGHT ELEVATORS MRL (Machine Room Less)

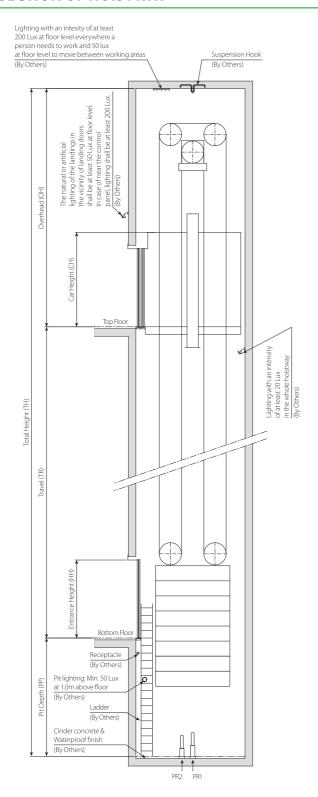
### **PLAN OF HOISTWAY**

## X CA R3

**2S-SO** 



### **SECTION OF HOISTWAY**



### **STANDARD DIMENSIONS & REACTIONS**

																(Unit : mm)
	Capacity (kg)	Speed (m/sec)	Entrance Type	Opening Type	Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)		M/C Room Reaction (kN)		Pit Reaction (kN)		tion	Overhead (mm)	Pit Depth (mm)
				-	OP	CA×CB	X×Y	$MX \times MY$	R1	R2	R3	R4	PR1	PR2	ОН	PP
	2000	0.5 ~ 1.0	1 way 2 way	- 2S-SO	1500	1700 × 2300	3250 × 2840	=	148	108	50	50	79×2	118	CH+2500	1650
MRL	2000	0.5 ~ 1.0	2 way	23-30	1500	1700 X 2300	3250 × 3010	=	140	100	50	50	79 X Z	110	CH+2300	1030
Σ	3000	0.5 ~ 1.0	1 way 2 way	- 2S-CO	2000	2000 × 2800	3650 × 3270	-	160	120	50	50	110 🗸 ว	90 V 2	CH+2800	1850
	3000	0.5 ~ 1.0	2 way	23-00	2000	2000 × 2000	3650 × 3340	=	100	120	30	30	110 ^ 2	09 ^ 2	CH+2000	1030

▲ Notes: 1. CH means the Ceiling Height which was included car internal ceiling.

- 2. 2 Way means Double Entrance at 180° on one shaft.
- 3. If the sizes of the civil engineering are different with the above-mentioned values of our company, we can conduct the adjustment within the EN code. Please contact us.

### **ALLOWABLE TRAVEL**

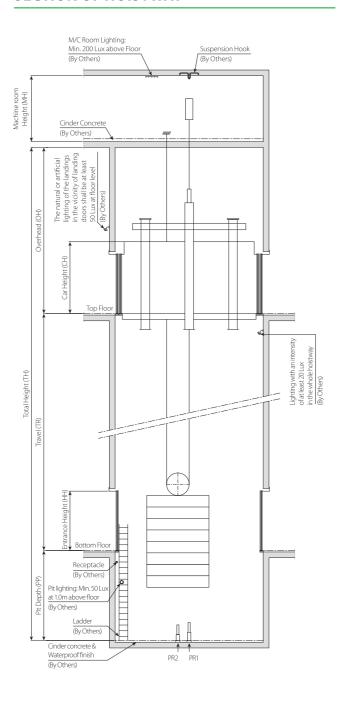
					(Unit:r
Model -			Speed (m/sec	)	
Model	0.25	0.5	1.0	1.5	1.75
MRL	-	30	50	-	-

### ENTRANCE LAYOUT | GENERAL TYPE E050, E100, E200

### **PLAN OF HOISTWAY**

# Power Source & Switch (By Others) MA Machine room access door Min,900(W) x 2000(H) (By Others)

### **SECTION OF HOISTWAY**



### **STANDARD DIMENSIONS & REACTIONS**

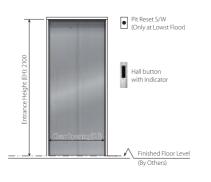
																(Unit:mm)
			Entrance		Door Width (mm)	Car Insize (mm)	Hoistway Insize (mm)	Machine Room Size (mm)		C Roo		Pit Re (k	action N)	Over Head (mm)	Pit Depth (mm)	M/C Room HT (mm)
	(kg)	(m/sec)	Type	Type	OP	CA×CB	X×Y	MX×MY	R1	R2	R3	PR1	PR2	ОН	PP	МН
	2500	0.5	1 way 2 Way		2200	2300 × 5300	3700 × 6000	3700 × 6000	190	110	20	150×2	120×2	CH+2300	1600	
Geared	3000	0.5	1 way 2 Way	2S-CO	2200	2400 × 5800	3750 × 6500	3750 × 6500	268	150	24	157×2	128×2	CH+2300	1600	2400
Ū	5000	0.5	1 way 2 Way		2300	2600 × 6500	4000 × 7200	4000 × 7200	515	220	50	240×2	192×2	CH+2300	1600	-

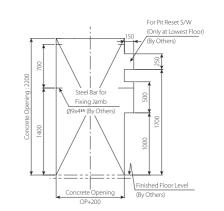
▲ Notes: 1. CH means the Ceiling Height which was included car internal ceiling.

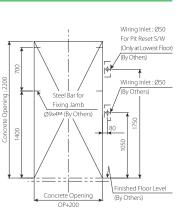
2. 2 Way means Double Entrance at 180° on one shaft.

### **ENTRANCE**

### STRUCTURAL OPENING OF ENTRANCE



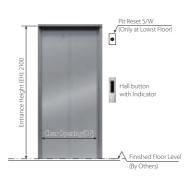


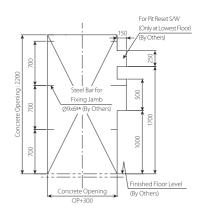


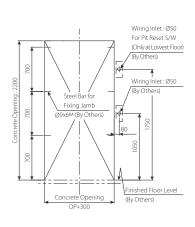
**E050 TYPE (STANDARD)** 

**BOX TYPE** 

**BOXLESS TYPE** 



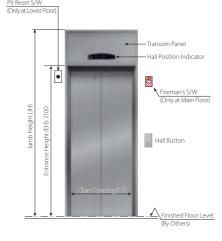


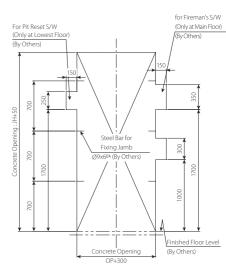


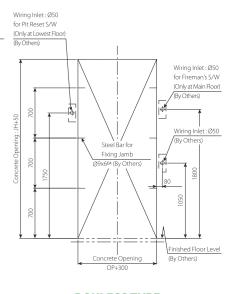
**E100 TYPE (OPTIONAL)** 

**BOX TYPE** 

**BOXLESS TYPE** 







E200 TYPE (OPTIONAL)

**BOX TYPE** 

**BOXLESS TYPE** 

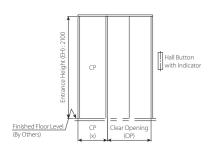
▲ Note: Pit Reset S/W is only applied EN81-20.

### ENTRANCE LAYOUT | 2-PANEL CENTER-OPENING DOORS | 15-CO

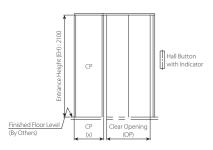
Building Structure (\*By others)

### **ENTRANCE DESIGN**

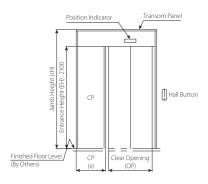
### STRUCTURAL OPENING OF ENTRANCE



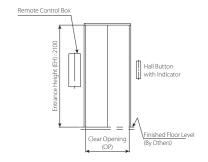
### **WE050 TYPE (STANDARD)**



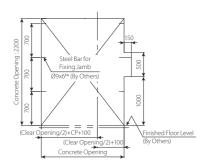
### **WE100 TYPE (OPTIONAL)**



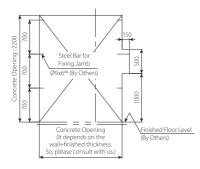
### **WE200 TYPE (OPTIONAL)**



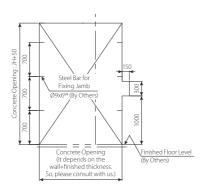
### **E050 TYPE WITH INSTALLED CP IN HOISTWAY**



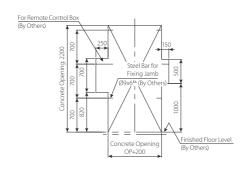
**WE050 TYPE (STANDARD)** 



### **WE100 TYPE (OPTIONAL)**



### **WE200 TYPE (OPTIONAL)**

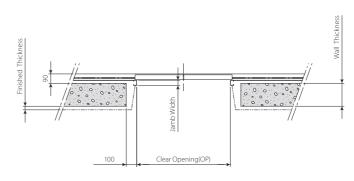


### **E050 TYPE WITH INSTALLED CP IN HOISTWAY**

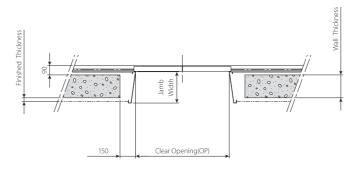
▲ Notes: 1. The Control Panel size shall be followed the standard dimension table of Machine-Room-Less Elevators.

2. In case of E050 type with installed CP in hoistway, Remote control box size is based on EN81-20. If EN81-1 is applied, please consult with us.

### **PLAN OF ENTRANCE**

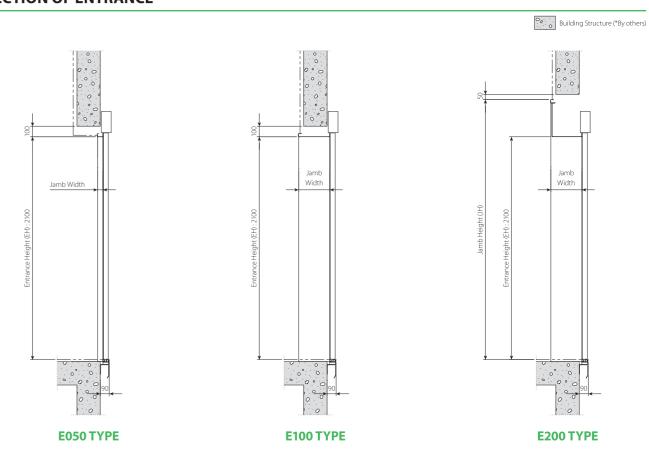


**E050 TYPE** 



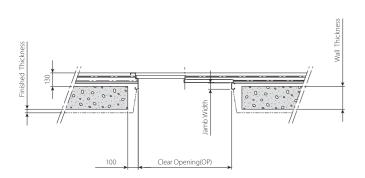
E100, 200 TYPE

### **SECTION OF ENTRANCE**

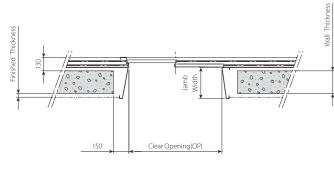


Building Structure (\*By others)

### **PLAN OF ENTRANCE**

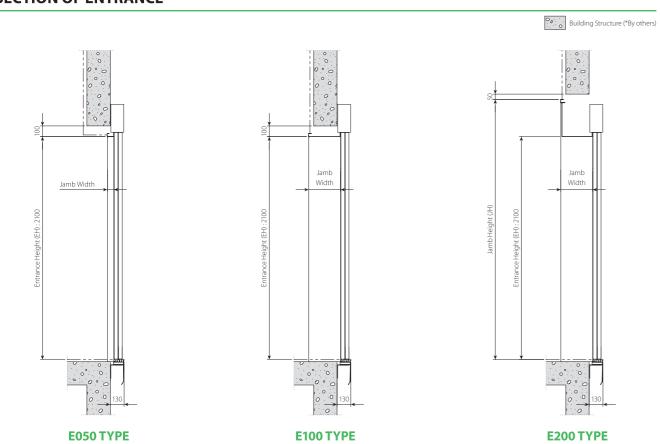


### **E050 TYPE**



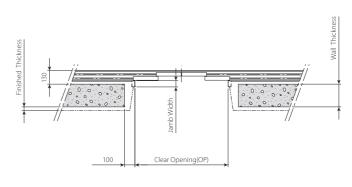
E100, 200 TYPE

### **SECTION OF ENTRANCE**

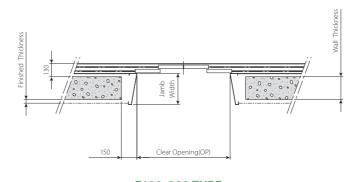


### **PLAN OF ENTRANCE**

Building Structure (\*By others)

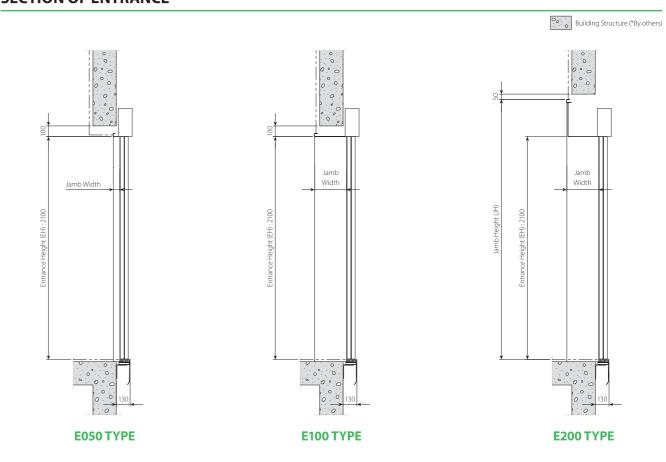


### **E050 TYPE**

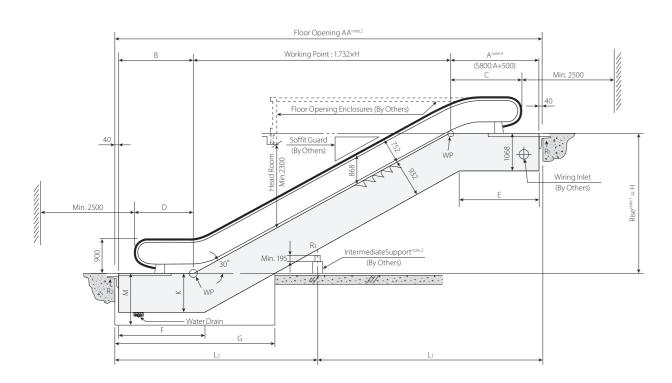


E100, 200 TYPE

### **SECTION OF ENTRANCE**



### S-SERIES ESCALATOR (35°) | COMMERCIAL TYPE | S-BT 2



- ▲ Notes: 1. Vertical Rise: 1.7m≤H≤7m.
  - 2. AA=1.732×H+A+B+80

When maximum floor opening exceeds AA=15,800mm, intermediate support(s) are required. Consult Hyundai for the intermediate support data.

- 3. When vertical rise is over 6,000mm, 3-flat step shall be applied.
- 4. In case 800 type is applied, dimension A, E shall increase 500 mm In case inverter system is applied, dimension A, E shall increase 100 mm for only 1000 type.
- 5. Please refer to the table.

Туре	К	М
Indoor	1008	1100
Outdoor	1186	1300

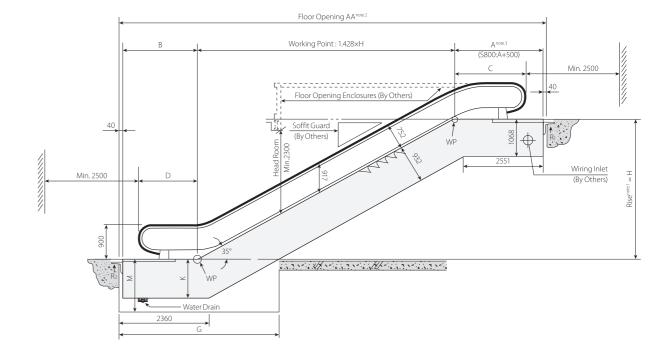
Q'ty of Flat Step	Α	В	С	D	E	F	G
2	2598	2087	2208	1698	2584	2205	4350
3	2998	2487	2608	2098	2984	2605	4750

### **SECTION DIMENSIONS**

			(Unit:mm)
Туре	S800	S1000	S1200
W <sub>1</sub>	608	807	1007
W <sub>2</sub>	837	1037	1237
W <sub>3</sub>	1130	1330	1530
W <sub>4</sub>	1100	1300	1500
W <sub>5</sub>	1200	1400	1600

### **REACTIONS**

		(Unit : kg)
Туре		\$800
Rise H (mm)	H ≤ 6000	6000 < H ≤ 7000
Number of Intermediate Support	=	1
R <sub>1</sub>	0.65H + 2300	0.36L <sub>1</sub> + 900
R <sub>2</sub>	0.65H + 1600	0.36L <sub>2</sub> + 300
R <sub>3</sub>	=	$0.36(L_1 + L_2) + 450$
R <sub>4</sub>	-	=
Туре		S1000
Rise H (mm)	H ≤ 6000	6000 < H ≤ 7000
Number of Intermediate Support	=	1
R <sub>1</sub>	0.72H + 2600	0.41L <sub>1</sub> + 900
R <sub>2</sub>	0.72H + 1900	0.41L <sub>2</sub> + 300
R <sub>3</sub>	-	$0.41(L_1 + L_2) + 450$
R <sub>4</sub>	=	=
Туре		S1200
Rise H (mm)	H ≤ 6000	6000 < H ≤ 7000
Number of Intermediate Support	=	1
R <sub>1</sub>	0.78H + 2900	0.45L <sub>1</sub> + 1000
R <sub>2</sub>	0.78H + 2200	0.45L <sub>2</sub> + 300
Rз	-	0.45(L <sub>1</sub> + L <sub>2</sub> ) + 500
R <sub>4</sub>	=	=



### ▲ Notes: 1. Vertical Rise: 2m≤H≤6m.

2. AA=1,428×H+A+B+80

When maximum floor opening exceeds AA=15,800mm, intermediate support(s) are required. Consult Hyundai for the intermediate support data.

- In case 800type is applied, dimension A shall increase 500mm In case inverter system is applied, dimension A shall increase 100mm for only 1000type.
- 4. Please refer to the table.

Туре	K	М
Indoor	1008	1100
Outdoor	1186	1300

Q'ty of Flat Step	Α	В	С	D	G
2	2650	2175	2260	1785	4450

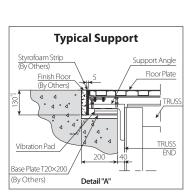
### **SECTION DIMENSIONS**

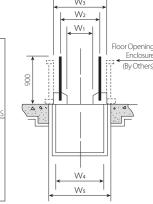
			(Unit : mm)
Туре	\$800	S1000	S1200
W <sub>1</sub>	608	807	1007
W <sub>2</sub>	837	1037	1237
W <sub>3</sub>	1130	1330	1530
W4	1100	1300	1500
W <sub>5</sub>	1200	1400	1600

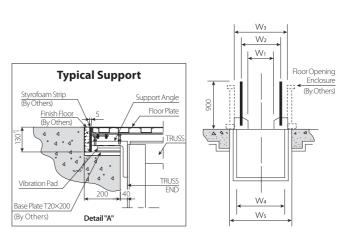
### **REACTIONS**

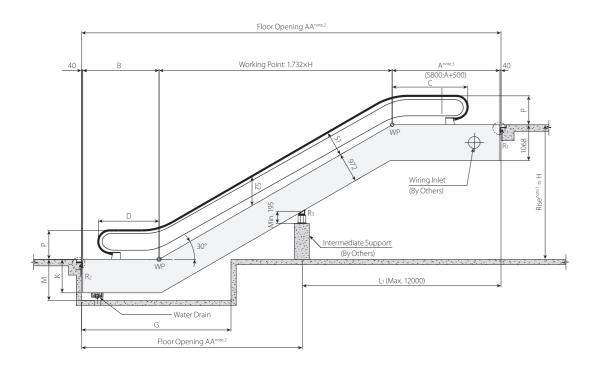
				(Unit : kg)
Vertical Rise H (mm)	Reactions	S800	S1000	S1200
2000	R <sub>1</sub>	0.51H + 2400	0.59H + 2700	0.66H + 3000
~ 6000	R <sub>2</sub>	0.51H + 1800	0.59H + 2100	0.66H + 2300

▲ Note: When AA is over 15,300mm, Consult Hyundai for reactions data.









### ▲ Notes: 1. Vertical Rise: 7m<H≤10m

2. AA=1,732×H+A+B+80

When maximum floor opening exceeds AA=14,400mm, intermediate support(s) are required. Consult Hyundai for the intermediate support data.

- 3. In case inverter system is applied, dimension "A" shall be increased 500mm for only \$800 type.
- 4. Above dimensions are based on EN115.
- 5. Q'ty of flat step:3
- 6. Please refer to the table.

**Typical Support** 

Detail "A"

ase Plate T20×200

Tuno	Balustrade		lype	
Type	S-BT2		Indoor	10
Α	2998		Outdoor	1.
В	2487			
C	2608			
D	2097			
G	4750			
Р	900			
S1	752			
52	868			
	C D G P S1	Type S-BT2  A 2998  B 2487  C 2608  D 2097  G 4750  P 900  S1 752	Type S-BT2  A 2998  B 2487  C 2608  D 2097  G 4750  P 900  S1 752	Type S-BT2 Indoor  A 2998 B 2487 C 2608 D 2097 G 4750 P 900 S1 752

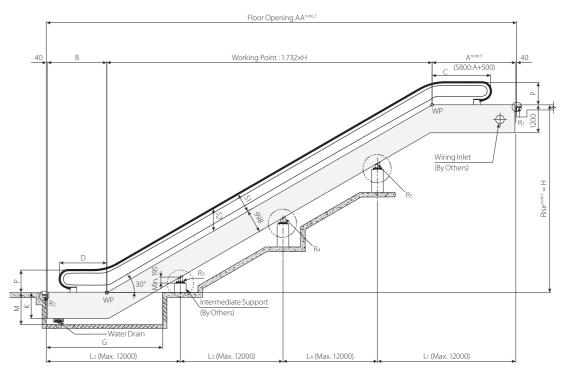
e e USS	W <sub>3</sub> W <sub>2</sub> W <sub>1</sub> W <sub>3</sub> W <sub>2</sub> W <sub>3</sub> W <sub>4</sub> W <sub>1</sub> W <sub>3</sub> W <sub>4</sub> W <sub>5</sub> W <sub>4</sub> W <sub>5</sub> W <sub>4</sub> W <sub>5</sub> W <sub>5</sub> W <sub>6</sub> W <sub>7</sub>	Floor Opening Enclosure (By Others
Ď	W <sub>4</sub> W <sub>5</sub>	•

### **SECTION DIMENSIONS**

			(Unit : mm)
Туре	S800	S1000	S1200
W <sub>1</sub>	608	807	1007
W <sub>2</sub>	837	1037	1237
W <sub>3</sub>	1130	1330	1530
W4	1100	1300	1500
W <sub>5</sub>	1200	1400	1600

### **REACTIONS**

	(Unit : k
Туре	\$800
Rise H (mm)	7000 < H ≤ 10000
Number of Intermediate Support	1
R <sub>1</sub>	0.36L <sub>1</sub> + 900
R <sub>2</sub>	0.36L <sub>2</sub> + 300
R <sub>3</sub>	$0.36(L_1 + L_2) + 450$
R <sub>4</sub>	-
Туре	\$1000
Rise H (mm)	7000 < H ≤ 10000
Number of Intermediate Support	1
	0.41L <sub>1</sub> + 900
R <sub>2</sub>	0.41L <sub>2</sub> + 300
R <sub>3</sub>	$0.41(L_1 + L_2) + 450$
R <sub>4</sub>	-
Туре	\$1200
Rise H (mm)	7000 < H ≤ 10000
Number of Intermediate Support	1
	0.45L <sub>1</sub> + 1000
R <sub>2</sub>	0.45L <sub>2</sub> + 300
R <sub>3</sub>	$0.45(L_1 + L_2) + 500$
R <sub>4</sub>	-



### ▲ Notes: 1. Vertical Rise: 10.5m<H≤16m.

2. AA=1.732×H+A+B+40

When maximum floor opening exceeds AA=12,000mm, intermediate support(s) are required.

- 3. In case inverter system is applied, dimension "A" shall be increased 500mm for only \$800 type.
- 4. Above dimensions are based on EN115.
- 5. Q'ty of flat step: 3
- 6. Please refer to the table.

Type	BT MODEL	BB MODEL		
А	3600			
В	2554			
C	2523	2400		
D	2032	1911		
G	5000			
Р	967	992		
S1	857	844		
S2	1031	1016		

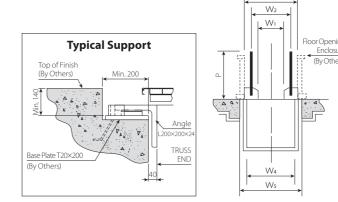
-	BT MODEL	BB MODEL		Туре	K	М
	3600		]	Indoor	1116	122
	2554			Outdoor	1296	140
	2523	2400				

### **SECTION DIMENSIONS**

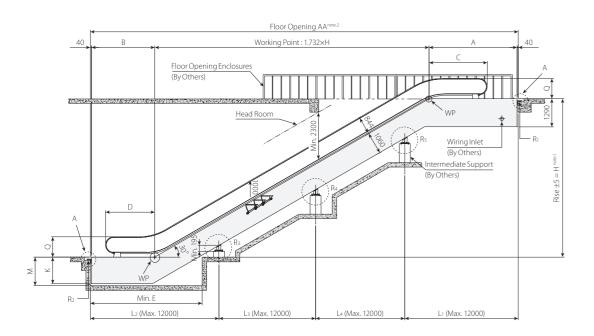
			(Unit : mm)
Туре	S800	S1000	S1200
W <sub>1</sub>	608	807	1007
W <sub>2</sub>	837	1037	1237
W <sub>3</sub>	1150	1350	1550
W4	1120	1320	1520
W <sub>5</sub>	1250	1450	1650

### **REACTIONS**

		(Unit : kg)
Туре	S8	800
Rise H (mm)	10500 ≤ H ≤ 14000	14000 ≤ H ≤ 16000
Number of Intermediate Support	2	3
R <sub>1</sub>	0.47L <sub>1</sub> + 1200	0.47L <sub>1</sub> + 1200
R <sub>2</sub>	0.47L <sub>2</sub> + 400	0.47L <sub>2</sub> + 400
R <sub>3</sub>	$0.47(L_2 + L_3) + 100$	0.47(L <sub>2</sub> + L <sub>3</sub> ) + 100
R <sub>4</sub>	0.47(L <sub>1</sub> + L <sub>3</sub> ) + 350	0.47(L <sub>3</sub> + L <sub>4</sub> ) + 100
R₅	=	0.47(L <sub>1</sub> + L <sub>4</sub> ) + 350
Туре	S1	000
Rise H (mm)	10500 ≤ H ≤ 14000	14000 ≤ H ≤ 16000
Number of Intermediate Support	2	3
R <sub>1</sub>	$0.51L_1 + 1400$	0.51L <sub>1</sub> + 1400
R <sub>2</sub>	0.51L <sub>2</sub> + 500	0.51L <sub>2</sub> + 500
R₃	$0.51(L_2 + L_3) + 150$	0.51(L <sub>2</sub> + L <sub>3</sub> ) + 150
R <sub>4</sub>	$0.51(L_1 + L_3) + 450$	$0.51(L_3 + L_4) + 150$
R₅	=	0.51(L <sub>1</sub> + L <sub>4</sub> ) + 450
Туре	S1:	200
Rise H (mm)	10500 ≤ H ≤ 14000	14000 ≤ H ≤ 16000
Number of Intermediate Support	2	3
R <sub>1</sub>	0.54L <sub>1</sub> + 1700	0.54L <sub>1</sub> + 1700
R <sub>2</sub>	0.54L <sub>2</sub> + 600	0.54L <sub>2</sub> + 600
R <sub>3</sub>	0.54(L <sub>2</sub> + L <sub>3</sub> ) + 300	0.54(L <sub>2</sub> + L <sub>3</sub> ) + 300
R <sub>4</sub>	0.54(L <sub>1</sub> + L <sub>3</sub> ) + 700	0.54(L <sub>3</sub> + L <sub>4</sub> ) + 300
R <sub>5</sub>	-	0.54(L <sub>1</sub> + L <sub>4</sub> ) + 700
K5	-	U.54(L1 + L4) + /00



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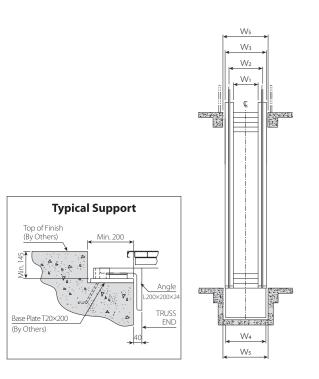


- ▲ Notes: 1. Vertical Rise: 16m<H≤22m.
  - 2. AA=(1.732×H+A+B+80) ± 5.

When maximum floor opening exceeds AA=12,000mm, intermediate support(s) are required.

- 3. Above dimensions are based on EN115.
- 4. Q'ty of flat step: 3, 4 step.
- 5. Please refer to the table.

Туре	K	М
Indoor	1183	1378
Outdoor	1283	1478



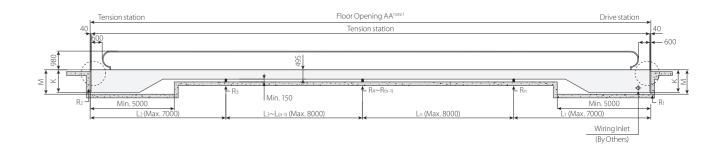
Tuno	16m <l< th=""><th>H≤22m</th><th><ul><li>Drive Unit</li></ul></th><th colspan="2">Remark</th></l<>	H≤22m	<ul><li>Drive Unit</li></ul>	Remark	
Type	3 Step	4 Step	Drive Onit	nemark	
	4181	4581	Cinala Daire	Motor Power≤30kW	
Α	4431 4831	<ul> <li>Single Drive</li> </ul>	Motor Power>30kW		
А	4581	4981	Daubla Driva	One Motor Power≤22kW	
	4981	5381	- Double Drive -	One Motor Power>22kW	
В	2828	3228	-	-	
С	2854	3254		=	
D	2118			-	
E	5600	6000	-	-	
Q	952	952	-	-	

### **SECTION DIMENSIONS**

		(Unit:mm)
Туре	S1000	S1200
W <sub>1</sub>	807	1007
W <sub>2</sub>	1100	1300
W <sub>3</sub>	1500	1700
W <sub>4</sub>	1450	1650
W <sub>5</sub>	1580	1780

### **REACTIONS**

		(Unit : kg)
Туре	S1	000
Number of Intermediate Support	2	3
R <sub>1</sub>	0.61L1+900	0.61L1+900
R <sub>2</sub>	0.61L <sub>2</sub> +200	0.61L <sub>2</sub> +200
R₃	0.61(L <sub>2</sub> +L <sub>3</sub> )	0.61(L <sub>2</sub> +L <sub>3</sub> )
R <sub>4</sub>	0.61(L <sub>1</sub> +L <sub>3</sub> )	0.61(L <sub>2</sub> +L <sub>3</sub> )
R <sub>5</sub>	-	0.61(L <sub>1</sub> +L <sub>4</sub> )
Type	S1	200
Number of Intermediate Support	2	3
R <sub>1</sub>	0.64L1+1100	0.64L1+1100
R <sub>2</sub>	0.64L <sub>2</sub> +300	0.64L <sub>2</sub> +300
R <sub>3</sub>	0.63(L <sub>2</sub> +L <sub>3</sub> )	0.63(L <sub>2</sub> +L <sub>3</sub> )
R <sub>4</sub>	0.67(L <sub>1</sub> +L <sub>3</sub> )	0.67(L <sub>1</sub> +L <sub>3</sub> )
R <sub>5</sub>	-	0.67(L <sub>1</sub> +L <sub>4</sub> )



### ▲ Notes: 1. AA=10<AA≤100m.

### 2. Please refer to the table.

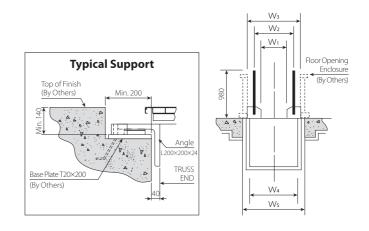
Type	K	M
Indoor	1200	1300
Outdoor	1380	1480

### **SECTION DIMENSIONS**

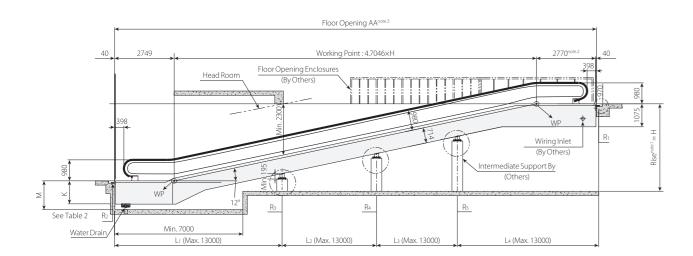
		(Unit:mm)
Туре	SM1000	SM1200
W <sub>1</sub>	807	1007
W <sub>2</sub>	1037	1237
W <sub>3</sub>	1350	1550
W <sub>4</sub>	1320	1520
W <sub>5</sub>	1450	1650

### **REACTIONS**

							(L <sub>1~</sub> L <sub>n</sub> Unit : m)
Inclination	Floor Opening AA	Type	R <sub>1</sub> (kg)	R₂(kg)	R₃(kg)	R₄(kg)	R <sub>n</sub> (kg)
00	10m-100m -	SM1000	400 × L <sub>1</sub> + 1300	$400 \times L_2 + 400$	$370 \times (L_2 + L_3)$	$370 \times (L_3 + L_4)$	370 × (L <sub>1</sub> + L <sub>n</sub> )
 0	10m-100m -	SM1200	420 × L <sub>1</sub> + 1700	420 × L <sub>2</sub> + 700	460 × (L <sub>2</sub> + L <sub>3</sub> )	$460 \times (L_3 + L_4)$	460 × (L <sub>1</sub> + L <sub>n</sub> )



### MOVING WALKS (12°) | INCLINED TYPE SMC-BT



▲ Notes: 1. Vertical Rise: 1.42m≤H≤9m.

- 2. When vertical rise is over 7000mm, dimension 2770mm of 1200 type shall increase 500mm.
- 3. AA=4.706×H+2770+2749+80

  Maximum distance between intermediate supports is 13,000mm.

  Consult Hyundai for the intermediate supports and reactions data.
- 4. Please refer to the table.

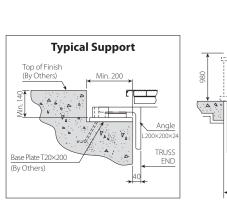
Туре	K	М
Indoor	1075	1200
Outdoor	1255	1380

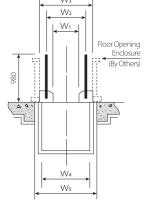
### **SECTION DIMENSIONS**

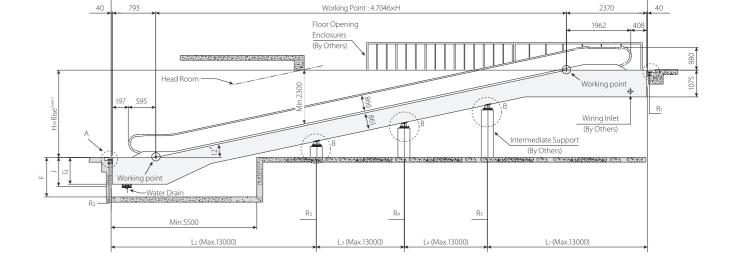
		(Unit:mm)
Туре	SM1000	SM1200
W <sub>1</sub>	807	1007
W <sub>2</sub>	1037	1237
W <sub>3</sub>	1350	1550
W <sub>4</sub>	1320	1520
W <sub>5</sub>	1450	1650

### **REACTIONS**

										(L <sub>1</sub> -L <sub>n</sub> Unit : m)
Number of SM1000 Intermediate						SM1200				
Support	R <sub>1</sub> (kg)	R <sub>2</sub> (kg)	R₃ (kg)	R <sub>4</sub> (kg)	R₅ (kg)	R <sub>1</sub> (kg)	R <sub>2</sub> (kg)	R₃ (kg)	R <sub>4</sub> (kg)	R₅ (kg)
1	350×L1+1450	350×L2+720	410×(L <sub>1</sub> +L <sub>2</sub> )+1600	=	-	390×L1+1600	390×L <sub>2</sub> +790	450×(L <sub>1</sub> +L <sub>2</sub> )+1750	=	=
2	350×L1+1450	350×L2+720	410×(L <sub>2</sub> +L <sub>3</sub> )+1600 4	110×(L <sub>1</sub> +L <sub>3</sub> )+1600	-	390×L1+1600	390×L2+790	450×(L <sub>2</sub> +L <sub>3</sub> )+1750	450×(L <sub>1</sub> +L <sub>3</sub> )+1750	=
3	350×L <sub>1</sub> + 1450	350×L2+720	410×(L2+L3)+1600 4	110×(L3+L4)+1600	410×(L <sub>1</sub> +L <sub>4</sub> )+1600	390×L1+1600	390×L2+790	450×(L2+L3)+1750	450×(L <sub>3</sub> +L <sub>4</sub> )+1750	450×(L <sub>1</sub> +L <sub>4</sub> )+1750







Floor Opening: (H-25.6)×4.7046+3250

- ▲ Notes: 1. Vertical Rise: 1.42m≤H≤6m.
  - 2. Dimension between the end of handrail to the wall: Min. 2500mm.
  - 3. Dimensions are based on EN115.
  - 4. Please refer to the table.

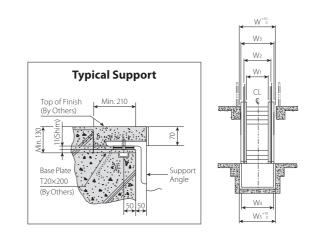
Туре	G	J	F
Indoor	1075	-	1200
Outdoor	-	1255	1380

### **SECTION DIMENSIONS**

		(Unit:mm)
Туре	SM1000	SM1200
W <sub>1</sub>	807	1007
W <sub>2</sub>	1037	1237
W <sub>3</sub>	1330	1550
W <sub>4</sub>	1320	1520
W <sub>5</sub>	1500	1700

### **REACTIONS**

										(L <sub>1</sub> -L <sub>n</sub> Unit : m)	
Number of Intermediate			SM1000			SM1200					
Support	R <sub>1</sub> (kg)	R <sub>2</sub> (kg)	R₃ (kg)	R <sub>4</sub> (kg)	R₅ (kg)	R <sub>1</sub> (kg)	R <sub>2</sub> (kg)	R₃ (kg)	R <sub>4</sub> (kg)	R₅ (kg)	
1	$450 \times L_1 + 700$	420 × L <sub>2</sub> + 45	$440\times (L_1+L_2)$	=	=	500 × L <sub>1</sub> + 780	$470 \times L_2 + 50$	$490 \times (L_1 + L_2)$	=	=	
2	450 × L <sub>1</sub> + 700	420 × L <sub>2</sub> + 45	$440 \times (L_2 + L_3)$	440 × (L <sub>1</sub> + L <sub>3</sub> )	-	500 × L <sub>1</sub> + 780	470 × L <sub>2</sub> + 50	490 × (L <sub>2</sub> + L <sub>3</sub> )	$500 \times (L_1 + L_3)$	-	
3	450 × L <sub>1</sub> + 700	420 × L <sub>2</sub> + 45	440 × (L <sub>2</sub> + L <sub>3</sub> )	440 × (L <sub>3</sub> + L <sub>4</sub> )	440 × (L <sub>1</sub> + L <sub>4</sub> )	500 × L <sub>1</sub> + 780	470 × L <sub>2</sub> + 50	490 × (L <sub>2</sub> + L <sub>3</sub> )	490 × (L <sub>3</sub> + L <sub>4</sub> )	500 × (L <sub>1</sub> + L <sub>4</sub> )	



### **REQUIREMENTS FOR FIREFIGHTERS LIFTS (EN81-72)**

### **BUILDER REQUIREMENTS**

- It is the responsibility of national/local regulations to determine the required levels of fire resistance, and other building requirements. The related walls and doors, fire shutters, machine rooms, etc. shall apply to the level of fire resistance.
- A suitable fire resistant structure of the building, safe areas, fire detection and extinguisher systems are provided.
- 3. The firefighters lift is located in a well with a safe area in front of every landing door. In front of every landing door a safe area, a fire shutter or a fire door shall be provided.
- 4. If there are other lifts in the same well, then the entire common well shall fulfil the fire resistance requirements of firefighters lift wells. Where there is no intermediate fire wall to separate the firefighters Lift from other lifts in a common lift well, then all lifts and their electrical equipment have the same fire protection as the firefighters Lift.
- 5. Any compartment containing the lift machine and its associated equipment shall be provided with at least the same degree of fire protection as is given to the lift well.
- 6. The locations of the lift main switch, emergency and testing panel or machine room should be included in a label at the fire service access level.
- 7. The firefighters lift well and machinery spaces shall not contain sprinklers.

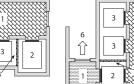
 1. Safe area
 3. Normal lift
 5. Safe area

 2. Firefighters lift
 4. Intermediate fire wall
 6. To escape route









Basic layout of a dual entry car in a multiple well and safe areas

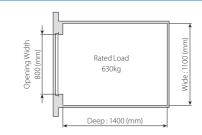
- 8. Providing arrangements to minimize water ingress
  - (1) Measures to address the ingress of water into the lift well (Strongly recommended) Provision of drainage channels in front of every lift landing entrance and drainpipes
  - Raising or ramping of the floor in front of every lift landing entrance
  - $\hbox{(2) Measures to address the accumulation of water in the lift pit (If 8.(1) is not provided)}\\$
  - Drains which prevent the water level in the lift pit from reaching defined level - The use of permanently installed drainage pumps, outside the lift well with a secondary power supply
- 9. Electrical equipment outside of the well shall be protected from malfunction caused
- 10. The lift electrical power supply cable(s) from building to distribution box shall be fire
- Reliability of power supplies and circuitry is essential to the operation of the firefighters lift.
- 12. Independence between primary and secondary supplies shall be provided. Also, there shall be separated from other power supplies.
- 13. A secondary power supply with automatic switching gear should be provided, and located in a fire-protected area and it should have sufficient capacity to operate the firefighters lift for a suitable above 2 hours. Also, lighting of lift well & machine room should be provided by secondary power supply. When the power supply is re-established the lift shall become available for service within 1 min.
- 14. When the distance between consecutive landing door sills exceeds 7 m, intermediate emergency doors shall be provided.
- 15. The firefighter lift should be serve all floors as defined by building design.
- X Safe area((refuge area, fire protected lobby)
- Area, provided with a safe route to the lift and safe exit
- Fire service access level
- -Entry level in the building intended to be used by firefighters to gain access to the firefighters lift.
- \* Water level in the pit: It will not rise above the level of the fully compressed car buffer

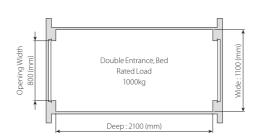
### **ELEVATOR MANUFACTURER REQUIREMENTS**

- 1. The minimum size of the firefighters lift:
- 1100mm(W)  $\times$  1400mm(D) with a rated load of 630kg &800mm of entrance width.
- Where the intended use of the firefighters lift is to include evacuation, to accommodate such items as a stretcher or bed, then the minimum size is as below.
   1100mm(W) × 2100mm(D) with a rated load of 1000kg & 800mm of entrance width.
- 3. The firefighters lift shall be able to reach the highest landing to be served in firefighters operations from the fire service access level within 60 s, from after the closing of the lift doors. (If higher travel than 200 m, this time to reach the highest landing may be increased by 1 s for each 3 m additional travel height.)
- 4. An emergency trap door shall be fitted to the car roof

  Minimum clear opening size: 0.5m × 0.7m (In case of 630kg: 0.4m × 0.5m).
- 5. Additional ladders(Inside & outside of car) are provided to facilitate escape from the lift car.
- 6. Firefighters lift switch with pictogram shall be located at the fire service access level.

  The switch shall be located within 2 m horizontally from the firefighters lift, at a height between 14 m and 2 m above floor level.
- 7. Fire service access level shall have a position indicator.



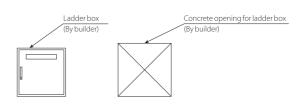


### PROVISION OF LADDER MATERIAL AND INSTALLATION (BY BUILDER)

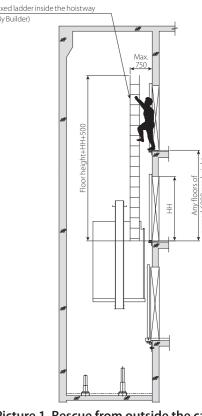
### 1) Under A) or B) with ladder box and Considering C) 2) Considering D)

### [Rescue from outside the car]

- A) Portable Ladders;
- B) Safety rope systems, where safe fixing points for the rescue means are provided in the vicinity of each landing;
- NOTE: However, all such means come under the responsibility of the Local Authorities and not the lift manufacturer.
- [Example of installation for ladder box (By builder)]
- (1) Arranged the ladder box on main entry level
- (ex, Around mailbox or Fire extinguisher box)
- (2) Firefighters should be able to recognize the location of the ladder box easily at the lift landing entrance.
- (3) Providing one ladder box per one elevator
- (4) A) or B) must be in each ladder box



C) Fixed ladder inside the hoistway (In case of any floors of exceed 6000 mm height) (Length(mm): Refer to the picture 1)



Picture 1. Rescue from outside the car

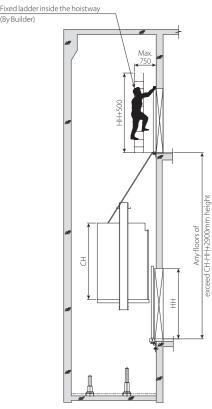
### [Self-rescue from inside the car]

To enable the firefighter to release the landing door lock device of the next floor,

- D) Fixed ladder inside the hoistway
- (In case of any floors of exceed CH-HH+2900mm height)
- (Length(mm): Refer to the picture 2)

If the floor height is not exceed CH-HH+2900mm, it is available to use the ladder attached outside of car.

- \* CH: Car height including ceiling
- # HH:Doorheight
- Fixed ladder: There shall be at least one hand hold within easy reach at the top end of the ladder and located within 0.75 m from the sill of the landing entrance above.



Picture 2. Self-rescue from inside the car

### ELECTRIC POWER REQUIREMENTS | R9 ELEVATOR (By Others)

### ELECTRIC POWER REQUIREMENTS | R9 OB ELEVATOR (By Others)

### **POWER SUPPLY PLAN**

Capacity	Speed	Motor Capacity		Capacity ding (A)		ply Capacity VA)		able Size m²)		Vire Size m²)
(kg)	(m/sec)	(kW) -	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars
450	1.0	5.0	32	75	10	20	6	16	6	16
550	1.0	5.0	32	75	10	20	6	16	6	16
	1.0	5.0	32	75	10	20	6	16	6	16
630	1.5	7.8	32	75	18	35	6	16	6	16
	1.75	9.0	32	75	18	35	6	16	6	16
	1.0	5.0	32	75	10	20	6	16	6	16
	1.5	7.8	32	75	18	35	6	16	6	16
800	1.75	9.0	32	75	18	35	6	16	6	16
	2.0	13.4	40	80	25	50	10	25	10	16
	2.5	17.6	63	150	33	67	16	35	16	25
	1.0	6.0	32	75	12	24	6	16	6	16
	1.5	10.0	40	80	22	44	10	25	10	16
1000	1.75	11.7	40	80	22	44	10	25	10	16
	2.0	13.4	40	80	25	50	10	25	10	16
	2.5	17.6	63	150	33	67	16	35	16	25
	1.0	7	32	75	15	29	6	16	6	16
	1.5	10.6	40	80	19	38	10	25	10	16
1150	1.75	12.3	40	80	23	47	10	25	10	16
	2.0	14.1	40	80	25	50	10	25	10	16
	2.5	17.6	63	150	33	67	16	35	16	25
	1.0	8.8	32	75	19	39	6	16	6	16
	1.5	13.3	50	100	32	63	10	25	10	16
1350	1.75	15.4	63	150	32	63	16	35	16	25
	2.0	17.6	63	150	43	86	16	35	16	25
	2.5	22.1	80	150	43	86	25	50	16	35
	1.0	10.5	40	80	22	44	10	25	10	16
	1.5	15.8	63	150	33	66	16	35	16	25
1600	1.75	18.3	63	150	33	66	16	35	16	25
	2.0	20.9	80	150	46	93	25	50	16	35
	2.5	26.1	80	150	46	93	25	50	16	35

- ▲ Notes: 1. If requested 1.5 or 1.75m/sec for 450~550kg, please applied the data of 630kg to above table.
  - 2. The above table is for lengths of electric wire to 50 meters from the machine room to the building transformer.
  - 3. If the cable lengths above 50 meters, the following formula should be applied:

Power Feeder size (mm<sup>2</sup>) =  $\frac{\text{Power feeder length(m)}}{50} \times \text{size in the above (mm<sup>2</sup>)}$ 

- $4. \, \text{The above power feeder thickness are based on copper wires use and metalic tubing}.$
- 5. It is recommended a larger diameter earth wire be used.
- 6. Please consult us if you need electric power requirements for 220V or 440V Class.
- 7. For installing several elevators, apply the following formula

Transformer Capacitiy[kVA] = Number of elevator  $\times$  Diversity factor

Number of Elevator	1	2	3	4	5
Deversity Factor	1.00	0.91	0.85	0.8	0.76

### **POWER SUPPLY PLAN**

										[380V]
Capacity	Speed (m/sec)	Motor Capacity (kW)		MCCB Capacity of Building (A)		ply Capacity VA)		able Size m²)		Vire Size m²)
(kg)	(m/sec)	(KVV) -	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars
	1.0	6.3	32	75	10	21	6	16	6	16
800	1.5	9.5	32	75	14	27	6	16	6	16
800	1.75	11.0	32	75	17	33	6	16	6	16
	2.0	11.0	32	75	18	35	6	16	6	16
	1.0	7.5	32	75	13	25	6	16	6	16
1000	1.5	11.0	32	75	17	33	6	16	6	16
1000	1.75	13.9	40	80	21	41	10	25	10	16
	2.0	15.0	40	80	22	44	10	25	10	16
	1.0	10.5	32	75	19	37	6	16	6	16
1250	1.5	15	50	100	28	56	10	25	10	16
1350	1.75	18.3	63	150	28	56	16	35	16	25
	2.0	20.9	63	150	39	78	16	35	16	25

- ▲ Notes: 1. The above table is for lengths of electric wire to 50 meters from the machine room to the building transformer.
  - 2. If the cable lengths above 50meters, the following formula should be applied:

Power Feeder size (mm²) =  $\frac{\text{Power feeder length(m)}}{50} \times \text{size in the above (mm²)}$ 

- 3. The above power feeder thickness are based on copper wires use and metalic tubing.
- 4. It is recommended a larger diameter earth wire be used.
- 5. Please consult us if you need electric power requirements for 220V or 440V Class.
- 6. For installing several elevators, apply the following formula

Transformer Capacitiy[kVA] = Number of elevator  $\times$  Diversity factor

Number of Elevator	1	2	3	4	5
Deversity Factor	1.00	0.91	0.85	0.8	0.76

### ELECTRIC POWER REQUIREMENTS | LUXEN I ELEVATOR (By Others)

### ELECTRIC POWER REQUIREMENTS | YZER I ELEVATOR (By Others)

### **POWER SUPPLY PLAN**

Capacity	Speed	Motor Capacity		Capacity ding (A)		ply Capacity VA)		able Size m²)		[380 Vire Size m²)
(kg)	(m/sec)	(kW) –	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars
	1.0	3.0	32	75	7	13	6	16	6	16
450	1.5	4.4	32	75	10	20	6	16	6	16
	1.75	5.2	32	75	10	20	6	16	6	16
	1.0	3.6	32	75	8	15	6	16	6	16
550	1.5	5.4	32	75	13	24	6	16	6	16
	1.75	6.3	32	75	13	24	6	16	6	16
	1.0	4.1	32	75	9	17	6	16	6	16
630	1.5	6.2	32	75	14	28	6	16	6	16
	1.75	7.2	32	75	14	28	6	16	6	16
	1.0	5.0	32	75	10	20	6	16	6	16
680	1.5	7.8	32	75	18	35	6	16	6	16
	1.75	9.0	32	75	18	35	6	16	6	16
	1.0	5.0	32	75	10	20	6	16	6	16
	1.5	7.8	32	75	18	35	6	16	6	16
800	1.75	9.0	32	75	18	35	6	16	6	16
	2.0	10.7	32	75	21	40	6	16	6	16
	2.5	13.8	40	80	26	52	10	25	10	16
	1.0	6	32	75	12	24	6	16	6	16
-	1.5	10.0	40	80	22	44	10	25	10	16
900	1.75	11.7	40	80	22	44	10	25	10	16
	2.0	13.4	40	80	25	50	10	25	10	16
	2.5	17.4	63	150	34	67	16	35	16	25
	1.0	6.0	32	75	12	24	6	16	6	16
·	1.5	10.0	40	80	22	44	10	25	10	16
1000	1.75	11.7	40	80	22	44	10	25	10	16
	2.0	13.4	40	80	25	50	10	25	10	16
	2.5	17.4	63	150	34	67	16	35	16	25
	1.0	8.8	32	75	17	34	6	16	6	16
	1.5	13.9	50	100	27	55	10	25	10	16
1150	1.75	15.3	63	150	30	59	16	35	16	25
•	2.0	17.6	63	150	34	68	16	35	16	25
	2.5	21.8	63	150	42	84	16	35	16	25
	1.0	14	40	80	27	53	10	25	10	16
1800	1.5	28	80	150	50	100	25	50	16	35
	1.75	28	80	150	50	100	25	50	16	35
	1.0	14	40	80	27	53	10	25	10	16
2000	1.5	28	80	150	50	100	25	50	16	35
	1.75	28	80	150	50	100	25	50	16	35

▲ Notes: 1. The above table is for lengths of electric wire to 50 meters from the machine room to the building transformer.

2. If the cable lengths above 50 meters, the following formula should be applied:

Power Feeder size (mm<sup>2</sup>) =  $\frac{\text{Power feeder length(m)}}{50} \times \text{size in the above (mm<sup>2</sup>)}$ 

- 3. The above power feeder thickness are based on copper wires use and metalic tubing.
- 4. It is recommended a larger diameter earth wire be used.
- 5. Please consult us if you need electric power requirements for 220V or 440V Class.
- 6. For installing several elevators, apply the following formula

 $Transformer\ Capacitiy[kVA] = Number\ of\ elevator\ \times\ Diversity\ factor$ 

Number of Elevator	1	2	3	4	5
Deversity Factor	1.00	0.91	0.85	0.8	0.76

### **POWER SUPPLY PLAN**

Capacity	Speed	Motor Capacity		Capacity ding (A)		ply Capacity VA)		able Size		Vire Size
(kg)	(m/sec)	(kW) -	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars
400	1.0	2.7	32	75	6	10	6	16	6	16
450	1.0	3.0	32	75	7	13	6	16	6	16
550	1.0	3.7	32	75	7	13	6	16	6	16
	1.0	4.2	32	75	8	17	6	16	6	16
	1.5	6.3	32	75	14	28	6	16	6	16
630	1.75	7.4	32	75	14	28	6	16	6	16
	2.0	9.8	32	75	19	38	6	16	6	16
	1.0	4.7	32	75	8	17	6	16	6	16
	1.5	7.0	32	75	15	29	6	16	6	16
700	1.75	8.3	32	75	15	29	6	16	6	16
	2.0	10.3	32	75	20	39	6	16	6	16
	1.0	5.3	32	75	9	19	6	16	6	16
	1.5	8.0	32	75	17	33	6	16	6	16
800	1.75	9.4	32	75	17	33	6	16	6	16
	2.0	10.7	32	75	21	41	6	16	6	16
	2.5	14.7	50	100	28	57	10	25	10	16
	1.0	6.1	32	75	11	22	6	16	6	16
	1.5	9.0	40	80	19	38	10	25	10	16
900	1.75	10.6	40	80	19	38	10	25	10	16
200	2.0	12.7	40	80	23	45	10	25	10	16
	2.5	14.9	50	100	29	57	10	25	10	16
	1.0	6.7	32	75	12	25	6	16	6	16
	1.5	10.0	40	80	21	42	10	25	10	16
1000	1.75	11.7	40	80	21	42	10	25	10	16
	2.0	13.9	40	80	25	49	10	25	10	16
	2.5	17.9	63	150	35	69	16	35	16	25
	1.0	7.7	32	75	14	28	6	16	6	16
	1.5	11.5	40	80	22	44	10	25	10	16
1150	1.75	12.3	40	80	22	44	10	25	10	16
1130	2.0	14.1	40	80	25	50	10	25	10	16
	2.5	18.8	63	150	36	72	16	35	16	25
		9.2		75	19		6	16	6	16
	1.0		32 50	100	28	38 55		25	10	
1250	1.75	13.8	63	150	31	61	10	35	16	16 25
1350	2.0	17.6	63	150	34	67	16	35	16	25
		22.1	80	150	42	85	25	50	16	35
	2.5							-		
	1.0	10.8	40	80	23	45	10	25	10	16
1600	1.5	16.3	63	150	32	65	16	35	16	25
1600	1.75	19.0	63	150	36	72	16	35	16	25
	2.0	20.8	63	150	40	79	16	35	16	25
	2.5	26	80	150	50	99	25	50	16	35
1000	1.0	12.1	40	80	23	45	10	25	10	16
1800	1.5	18.1	63	150	38	76	16	35	16	25
	1.75	21.1	63	150	38	76	16	35	16	25
2005	1.0	13.4	40	80	25	50	10	25	10	16
2000	1.5	20.1	80	150	42	85	25	50	16	35
	1.75	23.4	80	150	42	85	25	50	16	35
	1.0	16.7	63	150	30	60	16	35	16	25
2500	1.5	25.1	80	150	50	99	25	50	16	35
	1.75	29.3	80	150	50	99	25	50	16	35

▲ Notes: 1. The above table is for lengths of electric wire to 50 meters from the machine room to the building transformer.

2. If the cable lengths above 50 meters, the following formula should be applied:

Power Feeder size (mm²) =  $\frac{\text{Power feeder length(m)}}{50} \times \text{size in the above (mm²)}$ 

- ${\it 3.}\, {\it The\, above\, power\, feeder\, thickness\, are\, based\, on\, copper\, wires\, use\, and\, metalic\, tubing.}$
- 4. It is recommended a larger diameter earth wire be used.
- 5. Please consult us if you need electric power requirements for 220V or 440V Class.
- 6. For installing several elevators, apply the following formula Transformer Capacitiy[kVA] = Number of elevator × Diversity factor

 Number of Elevator
 1
 2
 3
 4
 5

 Deversity Factor
 1.00
 0.91
 0.85
 0.8
 0.76

### ELECTRIC POWER REQUIREMENTS | YZER I OB ELEVATOR (By Others)

### ELECTRIC POWER REQUIREMENTS | H300 ELEVATOR (By Others)

### **POWER SUPPLY PLAN**

										[380V]
Capacity	Speed	Motor Capacity		Capacity ding (A)		ply Capacity VA)		able Size m²)		/ire Size m²)
(kg)	(m/sec)	(kW) -	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars
	1.0	4.2	32	75	8	17	6	16	6	16
630	1.5	6.3	32	75	14	28	6	16	6	16
	1.75	7.4	32	75	14	28	6	16	6	16
	1.0	5.3	32	75	9	19	6	16	6	16
800	1.5	8.0	32	75	17	33	6	16	6	16
	1.75	9.4	32	75	17	33	6	16	6	16
	1.0	7.7	32	75	14	28	6	16	6	16
1000	1.5	11.5	40	80	22	44	10	25	10	16
	1.75	12.3	40	80	22	44	10	25	10	16
	1.0	9.2	32	75	19	38	6	16	6	16
1150	1.5	13.8	50	100	28	55	10	25	10	16
	1.75	16.1	63	150	31	61	16	35	16	25
	1.0	10.8	40	80	23	45	10	25	10	16
1350	1.5	16.3	63	150	32	65	16	35	16	25
	1.75	19.0	63	150	36	72	16	35	16	25

▲ Notes: 1. The above table is for lengths of electric wire to 50 meters from the machine room to the building transformer.

2. If the cable lengths above 50 meters, the following formula should be applied:

Power Feeder size (mm<sup>2</sup>) =  $\frac{\text{Power feeder length(m)}}{50} \times \text{size in the above (mm<sup>2</sup>)}$ 

- 3. The above power feeder thickness are based on copper wires use and metalic tubing.
- 4. It is recommended a larger diameter earth wire be used.
- 5. Please consult us if you need electric power requirements for 220V or 440V Class.
- 6. For installing several elevators, apply the following formula

  Transformer Capacitiv(k)(A) = Number of elevator × Diversity factor

 $\label{eq:Transformer Capacity kval} Transformer Capacitiy [kVA] = Number of elevator \times Diversity factor$ 

Number of Elevator	1	2	3	4	5
Deversity Factor	1.00	0.91	0.85	0.8	0.76

### **POWER SUPPLY PLAN**

									[380V]
Speed (m/ses)	Motor Capacity		MCCB Capacity of Building (A)						Vire Size m²)
(m/sec)	(KVV) –	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars	1 Car	2 Cars
3.0	18.4	75	150	38	76	25	50	25	50
3.5	21.5	75	150	43	76	25	50	25	50
4.0	24.5	75	150	48	87	25	50	25	50
3.0	21.1	75	150	43	76	25	50	25	50
3.5	26.7	75	150	51	87	25	50	25	50
4.0	28.2	75	150	54	99	25	50	25	50
3.0	24.8	75	150	48	87	25	50	25	50
3.5	28.9	75	150	55	102	25	50	25	50
4.0	33.0	100	200	61	115	35	70	25	50
3.0	29.4	75	150	56	104	25	50	25	50
3.5	34.3	100	200	63	120	35	70	25	50
4.0	39.2	100	200	71	138	35	70	25	50
	3.0 3.5 4.0 3.0 3.5 4.0 3.0 3.5 4.0 3.0 3.5 4.0 3.5 4.0 3.5	(m/sec)         (kW)         -           3.0         18.4         3.5         21.5           4.0         24.5         3.0         21.1           3.5         26.7         4.0         28.2           3.0         24.8         3.5         28.9           4.0         33.0         33.0           3.0         29.4         3.5         34.3	Speed (m/sec)         Motor Capacity (kW)         of Built           3.0         18.4         75           3.5         21.5         75           4.0         24.5         75           3.5         26.7         75           4.0         28.2         75           3.0         24.8         75           3.5         28.9         75           4.0         33.0         100           3.0         29.4         75           3.5         34.3         100	Speed (m/sec)         Motor Capacity (kW)         of Building (A)           3.0         18.4         75         150           3.5         21.5         75         150           4.0         24.5         75         150           3.0         21.1         75         150           3.5         26.7         75         150           4.0         28.2         75         150           3.0         24.8         75         150           3.5         28.9         75         150           4.0         33.0         100         200           3.0         29.4         75         150           3.5         34.3         100         200	Speed (m/sec)         Motor Capacity (kW)         of Building (A)         (k           3.0         18.4         75         150         38           3.5         21.5         75         150         43           4.0         24.5         75         150         48           3.0         21.1         75         150         43           3.5         26.7         75         150         51           4.0         28.2         75         150         54           3.0         24.8         75         150         48           3.5         28.9         75         150         55           4.0         33.0         100         200         61           3.0         29.4         75         150         56           3.5         34.3         100         200         63	Speed (m/sec)         Motor Capacity (kW)         of Building (A)         (kVA)           3.0         18.4         75         150         38         76           3.5         21.5         75         150         43         76           4.0         24.5         75         150         48         87           3.0         21.1         75         150         43         76           3.5         26.7         75         150         51         87           4.0         28.2         75         150         54         99           3.0         24.8         75         150         48         87           3.5         28.9         75         150         55         102           4.0         33.0         100         200         61         115           3.0         29.4         75         150         56         104           3.5         34.3         100         200         63         120	Speed (m/sec)         Motor Capacity (kW)         of Building (A)         (kVA)         (kVA)         (m           3.0         18.4         75         150         38         76         25           3.5         21.5         75         150         43         76         25           4.0         24.5         75         150         48         87         25           3.0         21.1         75         150         43         76         25           3.5         26.7         75         150         51         87         25           4.0         28.2         75         150         54         99         25           3.0         24.8         75         150         48         87         25           3.5         28.9         75         150         55         102         25           4.0         33.0         100         200         61         115         35           4.0         33.0         5         150         55         102         25           4.0         33.0         100         200         61         115         35           3.0         29.4	Speed (m/sec)         Motor Capacity (kW)         of Building (A)         (kVA)         (kVA)         (mm²)           3.0         18.4         75         150         38         76         25         50           3.5         21.5         75         150         43         76         25         50           4.0         24.5         75         150         48         87         25         50           3.0         21.1         75         150         43         76         25         50           3.5         26.7         75         150         43         76         25         50           4.0         28.2         75         150         51         87         25         50           3.0         24.8         75         150         54         99         25         50           3.5         28.9         75         150         48         87         25         50           3.5         28.9         75         150         55         102         25         50           3.0         29.4         75         150         55         102         25         50           4.	Speed (m/sec)         Motor Capacity (kW)         of Building (A)         (kVA)         (kVA)         (mm²)         (mm²)         (mm²)           3.0         18.4         75         150         38         76         25         50         25           3.5         21.5         75         150         43         76         25         50         25           4.0         24.5         75         150         48         87         25         50         25           3.0         21.1         75         150         43         76         25         50         25           3.5         26.7         75         150         43         76         25         50         25           3.5         26.7         75         150         51         87         25         50         25           4.0         28.2         75         150         54         99         25         50         25           3.0         24.8         75         150         48         87         25         50         25           3.5         28.9         75         150         55         102         25         50 <td< td=""></td<>

- Notes: 1. The above table is for lengths of electric wire to 50 meters from the machine room to the building transformer.
  - 2. If the cable lengths above 50 meters, the following formula should be applied:

Power Feeder size (mm²) =  $\frac{\text{Power feeder length(m)}}{50} \times \text{size in the above (mm²)}$ 

- 3. The above power feeder thickness are based on copper wires use and metalic tubing.
- 4. It is recommended a larger diameter earth wire be used.
- 5. Please consult us if you need electric power requirements for 220V or 440V Class.
- 6. For installing several elevators, apply the following formula

Transformer Capacitiy[kVA] = Number of elevator  $\times$  Diversity factor

Number of Elevator	1	2	3	4	5
Deversity Factor	1.00	0.91	0.85	0.8	0.76

### ELECTRIC POWER REQUIREMENTS | ESCALATOR (By Others)

### **POWER SUPPLY PLAN**

						[
Capacity	Speed	Motor Capacity	MCCB Capacity of Building (A)	Power Supply Capacity (kVA)	Power Cable Size (mm²)	Earth Wire Size (mm²)
(kg)	(m/sec)	(kW) —	1 Car	1 Car	1 Car 1 Car	
1000	0.5	5.5	32	8.9	4	4
1000	1.0	11.0	50	17	6	6
1500	0.5	8.5	50	17	6	6
1500	1.0	11.0	50	17	6	6
2000 -	0.5	8.5	50	17	6	6
	1.0	15.0	63	21	6	6
2500	0.5	15.0	80	24	10	10
2500	1.0	26.0	100	40	16	16
2000	0.5	18.5	80	30	10	10
3000	1.0	30.0	100	40	16	16
4000	0.25	11.0	50	17	6	6
4000	0.5	22.0	80	30	10	10
F000	0.25	15.0	80	24	10	10
5000	0.5	26.0	100	40	16	16

	Capacity	Speed (m/sec)	Motor Capacity (kW) —	MCCB Capacity of Building (A)	Power Supply Capacity (kVA)	Power Cable Size (mm²)	Earth Wire Size (mm²)
	(kg)	(m/sec)	(KVV) —	1 Car	1 Car	1 Car	1 Car
		1.0	6.7	40	11	4	4
	1000	1.5	10.0	50	17	6	6
		1.75	11.7	63	21	6	6
^		1.0	11.0	63	21	6	6
	1500	1.5	16.6	80	30	10	10
		1.75	19.4	80	30	10	10
		1.0	13.9	63	21	6	6
	2000	1.5	20.7	100	40	16	16
		1.75	24.2	100	40	16	16
	2500	1.0	16.8	80	24	10	10

	Capacity (kg)	Speed (m/sec)	Motor Capacity (kW) —	MCCB Capacity of Building (A)	Power Supply Capacity (kVA)	Power Cable Size (mm²)	Earth Wire Size (mm²)	
	(kg)	(111/36C)	(KVV)	1 Car	1 Car	1 Car	1 Car	
	2000	0.5	6.7	40	11	4	4	
₹	2000	1.0	13.4	63	21	6	6	
Σ	3000	0.5	11.0	63	21	6	6	
	3000	1.0	22.2	100	40	16	16	

▲ Notes: 1. The above table is for lengths of electric wire to 50 meters from the machine room to the building transformer.

2. If the cable lengths above 50 meters, the following formula should be applied:

Power Feeder size (mm<sup>2</sup>) =  $\frac{\text{Power feeder length(m)}}{50} \times \text{size in the above (mm<sup>2</sup>)}$ 

3. The above power feeder thickness are based on copper wires use and metalic tubing.

4. It is recommended a larger diameter earth wire be used.

5. Please consult us if you need electric power requirements for 220V or 440V Class.

### **ELECTRIC POWER**

Motor	Power Supply	Power Supply Voltage	C.B Rated	F	ower Feeder (n	nm²) (from pow	er room to esca	alator controlle	-)	
(kW)	Capacity (kVA)		(AC-3Phase)	Current (A)	20m	40m	60m	80m	100m	120m
		200V Class	50	10	16	25	35	35	35	
5.5	12	380V Class	30	6	6	10	16	16	16	
		440V Class	30	6	6	6	10	10	16	
		200V Class	60	10	25	35	35	50	50	
7.5	14	380V Class	40	6	6	10	16	16	25	
		440V Class	30	6	6	6	10	16	16	
		200V Class	100	16	25	35	50	50	95	
11	19	380V Class	50	6	10	16	25	25	25	
		440V Class	40	6	6	10	16	16	25	
		200V Class	125	16	25	35	50	70	95	
15	25	380V Class	60	10	16	25	25	35	35	
		440V Class	50	10	16	16	25	16 50 25 16 70	25	
		200V Class	175	25	50	95	120	120	120	
11 × 2	36	380V Class	100	10	16	25	35	35	50	
		440V Class	75	6	16	25	25	35	35	
		200V Class	200	35	95	120	120	185	185	
15 × 2	52	380V Class	125	16	25	35	50	70	95	
		440V Class	100	16	25	25	35	35	50	
		200V Class	300	50	95	120	185	185	240	
$18.5 \times 2$	60	380V Class	150	16	35	50	70	95	95	
15 11×2 15×2		440V Class	125	16	25	35	35	50	70	

### **MOTOR CAPACITY**

			Esca	lator				Moving	g Walks	
Speed			0.5n	n/sec				0.5m	n/sec	
Inclination		30°			35°			)°	12°	
Nominal Width	1200	1000	800	1200	1000	800	1200	1000	1200	1000
Motor Rating(kW)	Maximum Rise(m)									
5.5	3.5	3.9	5.9	3.5	3.9	5.9	54	72	2.4	3.4
7.5	4.7	5.4	8.1	4.7	5.4	6.0	74	98	3.5	4.8
11	7.0	7.9	10.5	6.0	6.0		100	100	5.3	7.3
15	8.0	11.3	13.0	-	=	-	-	=	7.0	9.0
11 × 2	12.4	-	-	-	-	=	=	=	9.0	_

▲ Notes: 1. These are based on the commercial type. Consalt Hyundai for the public type.

2. In case of the inclination of 0°, maximum rise means maximum floor opening AA.

3. In case of outdoor, please contact us for heater capacity(kW).

### **LIGHTING POWER**

Balustrade	Vertical Rise	Power Supply	Power Supply	C.B Rated		Power Feeder (mm²)									
Type	(m)	Capacity (kVA)	Voltage (AC-1Phase)	Current (A)		20m		20m 40m 60m 80m		60m 80m		100m		120m	
	1.83-4.27	1.4(3)	100 110	30(40)		6	I	10				16			
With Handrail	4.28-7.6	2(6)	- 100-110 -	40(70)	(	5	10		16		1	25			
Lighting (BTL Type)	1.83-4.27	1.4(3)	- 200-265 -	20	П		4	I		6		1	10		
( )	4.28-7.6	2(6)		20(40)			4		6	I		10			
Without Handrail		1.2	100-110	20	-	2.5	1	4		6		[	10		
Lighting	=	1.2	200-265	20	Ī		2.5	4			6			10	

▲ Notes: 1. Consult Hyundai when the rise over 7600mm.

2. The capacity shown by ( ) mark shall be applied to moving walks.

### **SYSTEM FUNCTION**

### WORK TO BE DONE BY OTHER CONSTRUCTIONS

Function	Description	ard: ● / Option: ○)  Standard / Option
Collective Selective Control	Selective and automatically response to all collected call signals.	•
Safe Landing Operation	If the car cannot stop in the landing zone, it will automatically move to the nearest floor at a reduced speed and open the door to let out passengers.	•
Inspection Mode	When the inspection switch is turned on, all calls will be cancelled and ignored and display "Stop" on the COP and hall indicators. The car will move at slower inspection mode speed when "Up" or "Down" button is continuously pressed on the control panel or car junction box.	•
Attendant Operation	When turned on, it will ignore all external calls and can only be operated using the buttons and switches located inside the car operating panel.	•
Home Landing Service	In the automatic operating state, If there is no call for a pre-determined time, the car will move to the main floor or pre-designated floor.	•
Car Call Canceling	False car calls can be canceled by pressing the button twice.	•
Reversal Direction Car Call Canceling	When a car finishes serving the last floor in one direction, the system will automatically cancel all registered car calls towards the opposite direction, before moving.	•
Emergency Car Lighting	When power fails, emergency lighting in the car will be turned on immediately.	•
Automatic Car Light Off	If the elevator is not used for a predetermined period of time, the car light will turn off automatically to conserve energy. The light turns back on, when car call is registered.	•
Automatic Car Fan Off	If the elevator is not used for a predetermined period of time, the car fan will turn off automatically to conserve energy. The fan turns back on when a car call is registered.	•
Door Safety Multi-Beam	Multiple infrared light beams covering the full height of the door detects passengers or objects in between the closing door panels and re-open the door immediately when there is an interruption.	•
Multi Point Communication	The communication device located at the machine room, inside the car, car top, pit, and building management room, allows communication between passengers and maintenance personnel in emergency situations.	•
Anti-Nuisance Function	If the registered car calls are too many compared to the load inside the car, all car calls are cancelled.	•
Service Floor Setting	Stop, non-stop and main/lobby floor can be adjusted on the control panel.	•
Overload Detection	When the load exceeds the rate load, the car door remains open while sounding a buzzer and display "OVER LOAD". The door will only close when the load is reduced to the rated load.	•
Full Load Pass	If the car is at full load, the car will not take hall calls and pass the floor without stopping.	•
Reverse Operation Protection	If the car moves in an opposite direction from the order for three seconds the car stops with an alarm.	•
Emergency Fire Operation	When the fire operation key switch (on the entrance floor) is turned or fire signal from the building management system is sent to the elevator control panel, all car and hall calls are cancelled and the car will either stops at the closest floor or move to the pre-designated floor (usually the entrance floor), open door to let out passengers to evacuate.	•
Car Arrival Chime	Chime will ring when the car arrives on the floor.	0
Duplex Control	Groups two cars and optimizes the operation by dispatching the nearest car to respond a call.	0
Group Control	Groups up to eight cars to optimize the operation through efficient distribution of cars.	0
Parking Service	When the parking switch key is turned, the car returns to the designated floor and waits for further instruction.	0
Rush Time Service	If the group control mode is applied, the lifts can be arranged to prioritize specific floor for a fixed duration of time. This can increase the efficiency of lifts in case there is an event in the building that intensifies the traffic load.	0
Additional Car Operating Panel	Extra car operating panel can be installed for convenience in a large-capacity elevator.	0
Voice Synthesizer	A voice synthesizer directs passengers with audible operational information, such as car direction, floor landed and emergency alerts.	0
Door Safety Edge	The sensitive door edge will mechanically detect any object or person in between the closing door panels and immediately re-open.	0
Door Safety Ray	Two or three rays of infrared rays are installed on the door so that closing door can detect any passenger or object obstructing the closing door.	0
ELD (Emergency Landing Device)	If there is a power failure, the car will stop at the nearest floor by using power from a rechargeable battery.	0
Regenerative Drive (PWM)	The option feeds back the power generated during the operation, instead of burning them as heat energy through the resistor.	0
Supervisory Panel	Computer installed in the building monitoring room or other places to monitor the operation of the elevator, signals status, fault state and change operation settings through the CAN /LAN.	0
Emergency Fireman's Service	When emergency fireman's switch is activated, all car calls will be canceled. Elevator only response to car interior calls for fire-extinguishing coordination with firemen. This function need to be used in conjunction with fire elevator.	· 0
	Power is supplied from building's power generator and elevators operate under emergency power mode during	0
Emergency Power Operation	power outage.	O

Following construction and electric works are not included in our supply scope for elevators, escalators, and moving walks. These should be carried out by the building construction companies. (Note: For elevators without machine room, please contact us.)

### **ELEVATOR**

### **CONSTRUCTION WORK**

### Hoistway

- 1. Forming holes on the wall surrounding the entrance on each floor. (entrance, hall button, hall lantern, etc.), and finishing the walls and floors after installation of the elevator. (including mortar filling)
- 2. Installation of steel frame to fix the left/right jambs on the entrance.
- 3. Installation of ladder for pit inspection where there the pit depth not exceeding 2.5m
- 4. Installation of Pit access door where the pit depth exceeds 2.5m.
- Access door size: Min. 600mm(W) × Min. 2000mm(H
- 5. Waterproofing work inside the pit and finishing work after installation of the buffer.
- 6. Installation of hoistway partitions or separating beams (If necessary)
- 7. Removing various tie pins and molds.
- 8. Others. (items indicated on the layout plan)
- $9. \ \ \, \text{Construction of concrete structures (thickness of 150mm or above) or steel structures}$ to fix the rail brackets.
- 10. Supplying storage for construction tools and materials free of charge
- 11. Destruction and finishing of concrete structures that are not constructed as indicated on the layout plan
- 12. Installation of lifting beam or hook that is designed to lift the machine to the top of hoistway.

### Machine Room

- 1. Forming holes for machines and ropes on the floor, finishing on cinder concrete, and installation of those indicated on the layout plan
- 2. Installation of lifting beam or hook on the top of machine room.
- 3. Installation of reinforcement beam on the machine room floor, (If necessary)
- 4. Supplying water used for construction free of charge.
- 5. Supplying storage for construction tools and materials free of charge

### **ELECTRIC WORK**

### Hoistway

- 1. The natural or artificial lighting of the landings in the vicinity of landing doors shall be at least 50 lux at floor level.
- 2. Lighting with an intensity of at least 50 lux at 1.0m above the pit floor everywhere a person can stand and 1.0m above the car roof within its vertical projection.
- 3. Lighting with an intensity of at least 20 lux in the whole hoistway.
- 4. Piping and wiring work from monitoring panel to hoistway when monitoring panel is installed. (Wire specifications: UTP 0.5mm × 4P per each elevator)
- 5. Piping and wiring work when CCTV is installed.
- 6. Others. (items indicated on the layout plan)
- 7. Wiring work on power system within the hoistway for supplying power and lighting (Refer to the layout plan for electrical power requirements.)
- 8. Installation of distribution box for elevator (including N.F.B) on electrical room, (Install near the hoistway. Refer to the layout plan for electrical power requirements.)
- 9. Construction for power supply to maintain the voltage regulation of distribution source within  $\pm\,5\%$  to and lighting within  $\pm\,2\%$ .
- 10. Piping and wiring work on lighting outlet for pit inspection.
- 11. Supplying power needed during installation and commissioning free of charge.
- 12. Piping and wiring work on emergency communication device between elevator control panel and central control room. (Wire specifications: UTP 0.5 mm × 3P per each elevator) 1) Communication device that connects the inside and outside of the elevator should be installed redundantly on the area where the managing personnel is stationed (security office, electric room, and central control room). In case of the facility where the managing personnel is stationed in only one place, only one communication device may be installed.
- 2) Also, a communication device that automatically requests for help to maintenance company or self-inspector should be installed in order to deal with the situation where the internal communication is not established.
- 3) In order to implement the above functions, the provided communication devices shall be replaced with devices that match the local communication lines and them

### Machine Room (MR)

- 1. Piping and wiring work outside the hoistway for the installation of emergency call equipment (intercom) in a place other than the machine room.
- 2. Construction of lighting and lighting outlets for inspection in machine room.
- 3. Supplying power needed during installation and commissioning free of charge.

- 4. Installation of lighting for power system and cage, and construction of machine room incoming panel and its wiring for emergency power
- 5. Lighting with an intensity of at least 200 lux at floor level everywhere a person needs to work and 50 lux at floor level to move between working areas.

### Machine Room Less (MRL)

1. Power supply(Including piping and wiring work) to the control panel and per-manently installed lighting with an intensity of at least 200 Lux from the bottom of the control panel

### **MATTERS TO NOTE**

- 1. Exit for machine room should be made of fire-proof material and should be installed in a structure that does not lead to other places
- 2. Do not install ducts or pipes for other purposes (electricity, water, gas, hydrant) on the hoistway and walls inside the machine room
- 3. Lower part of pit should not be used as residence, pathway, or for other purposes.
- 4. Power and voltage regulation should be within +5 % to -5 %.
- Temperature in machine room should be 40°C and humidity should be 90 % or below. Be sure to install the entilation window, ventilator, or other air-conditioning facilities to prevent generation of dust or poisonous gas inside the machine room.
- \* When you wish to build the hoistway in steel frame, please contact us. (Steel frame construction for hoistway is excluded from our supply scope.)
- \* Construction errors: Inner hoistway size that is indicated on the blueprint of this catalog is the minimum size that is designed to fit the size of the elevator interior. So, the construction error limit for hoistway width and overall height is ±30 mm.
- \* Calculation equation for heat generation in machine room (based on one elevator)  $Q:(kcal/H)=W\times V\times F\times N$  V:Rated speed (m/min)W: Loading capacity (kg) F: Coefficient based on control type (1/42: VVVF) N: Number of elevators

### **ESCALATOR/MOVING WALK**

### **CONSTRUCTION WORK**

- 1. Forming holes on the floor slab for installation and filling the holes after installation
- 2. Installation of intermediate strut beams for installation (when necessary)
- 3. Forming holes on the floor slab for introducing escalator/moving walk and filling the
- 4. Construction and waterproofing work on the lowest floor and lower pit of the escalator/moving walk (Constructing fire-proof pit when there is a living room under the lower machine room)
- 5. Finishing work on floor and ceiling around the escalator/moving walk
- 6. Construction of handle around escalator/moving walk 7. Bordering work on the part where the ceiling of the building and the escalator/moving walk meet each other
- 7. Installation of fall protection net in case that the floor of escalator/moving walk has a hole
- 8. Forming holes for introducing the escalator/moving walk and filling the holes after installation
- 9. Curing and restoring the borders of escalator/moving walk when it is installed on an existing building
- 10. Supplying storage for construction tools and materials free of charge
- 11. Exterior work on escalator/moving walk

### **ELECTRIC WORK**

- 1. Power system and lighting: Piping and wiring work on upper incoming panel of escalator/moving walk
- 2. Power for inspection: Piping and wiring work on upper incoming panel of escalator/
- 3. Grounding wire (class III): Piping and wiring work on upper incoming panel of escalator/
- 4. Piping and wiring work for the installation of fire-proof shutter and electrical contacts up to the upper control panel of escalator/moving walk (Piping and wiring work on electrical contacts and monitoring panels)
- 5. Supplying power needed during installation and commissioning free of charge

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