

LGE

Machine Room-less Elevator
Planning Guide
(For Indian Market)

The information in this catalogue is subject to change without notice. The information and diagram in this catalogue reflect the technical features and configuration of the elevator model at press time (refer to the version number). In line with the principle of continuous development of products, our company reserves the right to change the selection of product technical parameters and colour at any time. The existing image technology cannot accurately reproduce the elevator component structure and decoration colour. Therefore, this catalogue only provides general information, not as a contract document. The specific configuration parameters are subject to the formal agreement.

If you need detailed information, please contact us.



02	Elevator Specification
03	Elevator Function
05	Hoistway
08	Overhead Height and Pit Depth
09	Entrance Design
11	Electrical Information
12	Electrical Data
13	Layout
14	Civil Works Matters

Rated Load (kg)	Number of Passengers	Rated Speed (m/min)	Maximum Number of Stops	Maximum Travel (m)	Maximum Travel with Fireman Operation (m)	Minimum Floor Height (mm)
476	7	60	12	30	Not applicable	2600
544	8	60	60m/min:22 90m/min:36 105m/min:36	60m/min:60 90m/min:90 105m/min:90	60m/min:58 90m/min:86 105m/min:90	
		90				
		105				
680	10	60				
		90				
		105				
748	11	60				
		90				
		105				
952	14	60				
		90				
		105				
1020	15	60				
		90				
		105				
884 (Deep Car)	13	60				
		90				
		105				
952 (Deep Car)	14	60				
		90				
		105				
1020 (Deep Car)	15	60				
		90				
		105				
1156	17	60				
		90				
		105				
1292	19	60				
		90				
		105				
1360	20	60				
		90				
		105				
1496	22	60				
		90				
		105				
1564	23	60				
		90				
		105				

Elevator Function

Standard Function

Control System			
SA1	Selective Collective Control	SA2	Floor Height Self Measurement
SA3	On-Cage (Car Top) Maintenance Operation	SA4	In-Cage Slow Speed Operation
System Protection			
SB1	Overspeed Electrical Protection	SB2	Overspeed Mechanical Protection
SB3	Rope Slipping Running Protection	SB4	Motor Overload (Thermal) Protection
SB5	Automatic Fault Detection	SB6	Automatic Fault Recording
SB7	Standby Regular Auto-Check	SB8	Double Brake-Safety Check Operation
SB9	Synchronous Motor Magnetic Pole Test	SB10	Lift-Position Abnormity Auto-Correction Function
SB11	Nearest Landing Operation	SB12	Anti-Electromagnetic Interference
SB13	Unintended Car Movement Protection, UCMP Function ①	SB14	Intelligent Auxiliary Brake Function
SB15	Ascending Car Overspeed Protection, ACOP Function		
Safe Communication			
SC1	Car Intercom Communication	SC2	Car Top Intercom Communication
SC3	Pit Intercom Communication		
Safe Riding			
SD1	Alarm System	SD2	Door Safety Return System
SD3	Full Load Bypass Operation	SD4	Overload Detection System
SD5	Overload Alarm	SD6	Next Drive (Door Open Abnormity)
SD7	Door Opening/Closing Time Abnormity Protection	SD8	Automatic Door Dwell Time Control
SD9	Automatic Door Dwell Time Adjustment	SD10	Number of Runs Indicator
SD11	Intelligent Multi-Beam Protection ①	SD12	Maintenance Indication at Hall Indicator ①
SD13	Overload Indicator (In Car)		
Emergency Solution			
SE1	Out of Door-Open Zone Alarm	SE2	Car Emergency Lighting
SE3	Fire Emergency Operation (Automatic)	SE4	Emergency Electric Operation
SE5	Automatic Rescue Device (ARD) (Maximum Travel Distance Between Landings ≤ 30m)		
Design for Comfort			
SF1	Parking Operation	SF2	Automatic Return Function
SF3	Start Torque Auto-Adjustment	SF4	Door-Stop Function (Maintenance)
SF5	Micro Levelling (Travel ≥ 30m)	SF6	Mischievous Call Cancellation (Applicable for Simplex and Duplex only)
SF7	Opposite Direction Car Call Cancellation	SF8	Car Light Auto Turn-Off
SF9	Car Fan Auto Turn-Off	SF10	Abnormal Duration Hall Call Detection
SF11	Step-Less Speed Control	SF12	Door Bypass Detection
SF13	Car Floor Button Flashing	SF14	Voice Synthesister

Note:
① For details, please contact us.

Elevator Function

Optional Function

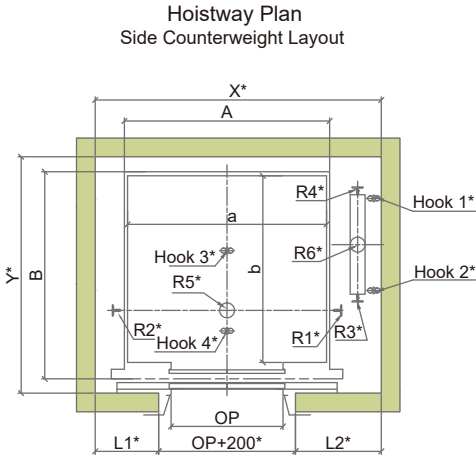
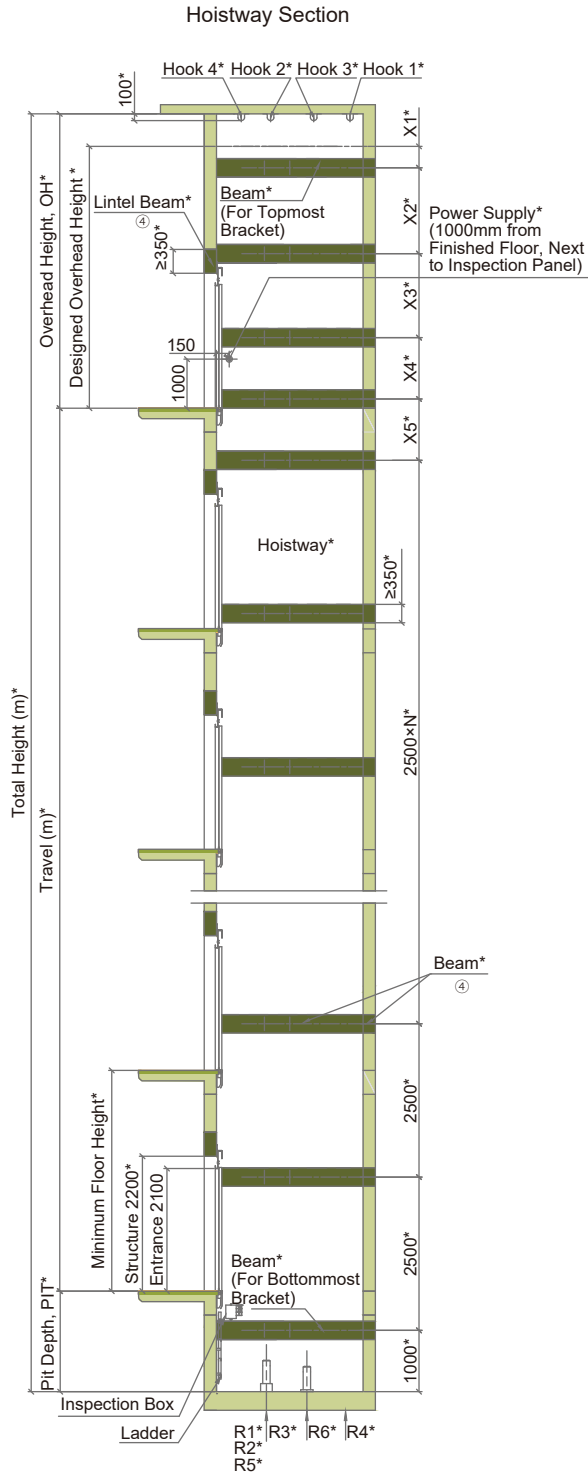
Control System			
OA1	Down Collective Control	OA2	Duplex Collective Control
OA3	FI-10 Group Control System (Maximum 4 Cars Group)	OA4	Independent Automatic Operation (For Duplex and Group Control) ①
OA5	Rush Hour Schedule Operation (Applicable for FI-10 only)		
Safe Communication			
OB1	Interphone System (5 Ways) (5 Ways: Monitoring Center, Inspection Panel, In Car, Car Top and Pit)		
Safe Riding			
OC1	IC Card Security System (In Car) (Not Applicable with OC2, OC4, OC5 or OE5)	OC2	IC Card Security System (Hall) (Not Applicable with OC1, OC4, OC5 or OE5)
OC3	Multi-Beam + Safety Edge Protection	OC4	Hitachi Smart Security [ITM] Interface (Not Applicable with OC1, OC2, OC5 or OE5)
OC5	Intercom Linkage Interface for Elevator Access (Not Applicable with OC1, OC2, OC4 or OE5)	OC6	Contact at Control Panel (RS485)
OC7	Contact at Control Panel (Dry Contacts) (Not Applicable with OC8)	OC8	Supervisory Panel (Dry Contact Type) (Not Applicable with OC7)
OC9	Elevator Monitoring System (Computer Type)	OC10	Twisted Pair Cable (1 Pair) for CCTV Interface
OC11	Twisted Pair Cable (1 Pair) for BGM Interface		
Emergency Solution			
OD1	Fireman Operation (Rated Load ≥ 544kg)	OD2	Emergency Operation for Power Failure (Manual)
OD3	Emergency Operation for Power Failure (Auto)	OD4	Earthquake Emergency Operation
OD5	Pit Flood Operation		
Design for Comfort			
OE1	Attendant Operation	OE2	Independent Operation
OE3	Arrival Chime (Car Top and Bottom)	OE4	Floor Lockout Operation (Not Applicable with OC1, OC2, OC4 or OC5)
OE5	Door Opening Prolong Button	OE6	Nighttime Protective Operation
OE7	Sub Car Operating Panel	OE8	Double Opening Function
OE9	Horizontal Car Operating Panel	OE10	Braille Button
OE11	Door Nudging Operation (Only Applicable with OC3)	OE12	Operation Status Indication at Hall Indicator ①
OE13	Ultraviolet, UV Sterilisation Function ①	OE14	Car Call Deselect Function
OE15	Hall Call Deselect Function	OE16	Quick Door Closing Function (In Car)
OE17	Hall Lantern with Arrival Chime	OE18	Micro Levelling (Travel < 30m)
OE19	Advance Door Opening	OE20	Elevator Specific Floor Door Opening Inspection Interface
OE21	Current Floor Push-Button Reopening Function	OE22	Overloading Hall Call Recovery Function

Note:
① For details, please contact us.

Hoistway

The followings shall be furnished by building contractors:

- Building Structure
- Wall and Floor Finishes
- Beam



Note:

① Items with "*" shall be furnished by building contractors.

② Unit of dimension shall be in mm unless otherwise stated.

③ The hoistway construction shall be reinforced concrete ring beam with strength C25 or whole hoistway of reinforced concrete wall. If you have other situations, please contact us.

④ For hoistway details, please contact us.

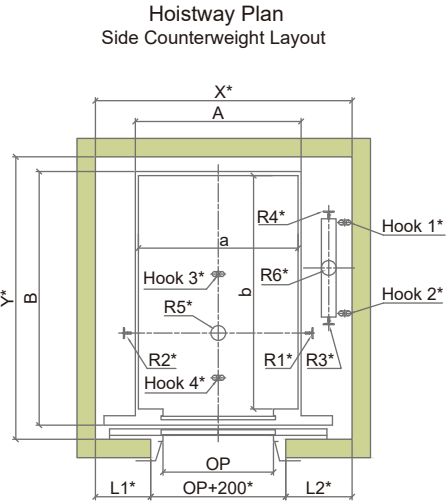
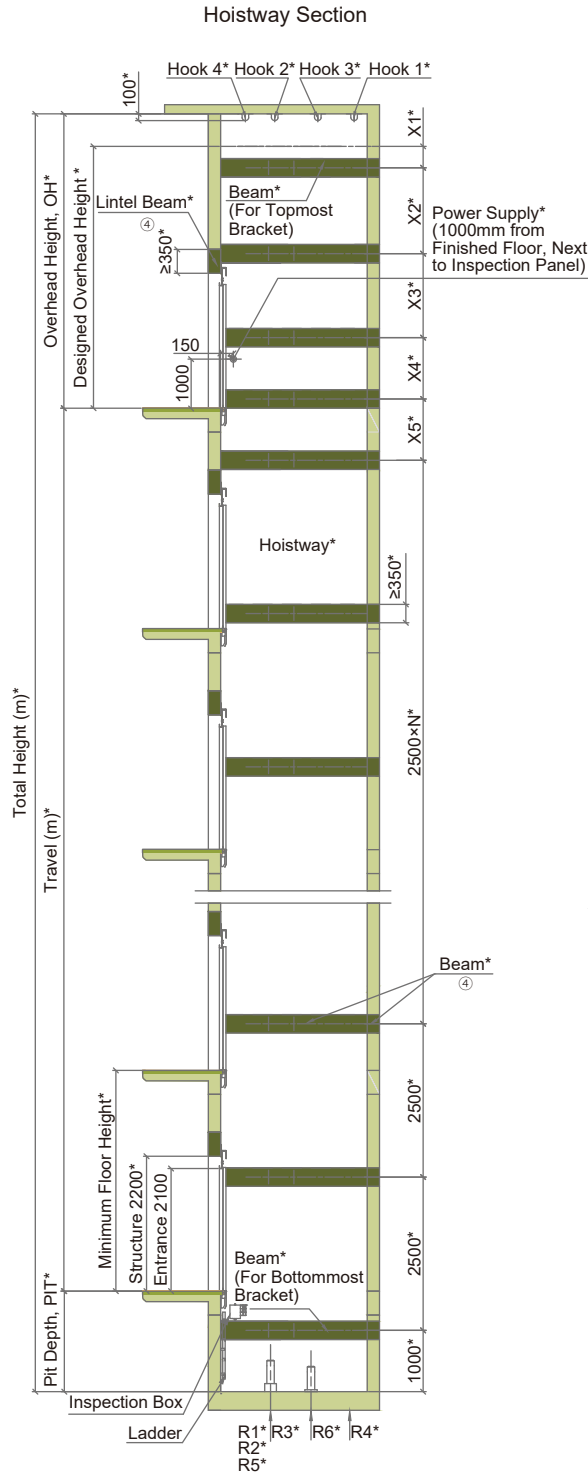
⑤ The suspension hooks capacity shall be as follows:

Rated Load (kg)	Rated Speed (m/min)	Hook 1 (Tons)	Hook 2 (Tons)	Hook 3 (Tons)	Hook 4 (Tons)
476	60	1	1	3	3
544/680/748/952/1020	60/90/105	1	1	3	3
1156/1292/1360/1496/1564	60/90/105	2	2	4	4

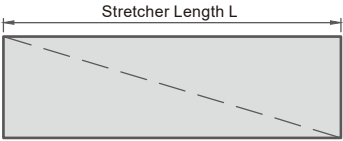
Hoistway

The followings shall be furnished by building contractors:

- Building Structure
- Wall and Floor Finishes
- Beam



Maximum Allowable Stretcher Size (Deep Car):



Rated Load (kg)	Car Inside Size (a×b) (mm)	Maximum Stretcher Length (L) (mm)	Lift Landing Depth (mm)
884	1100×2000	2000	≥2000
952	1100×2100	2100	≥2100
1020	1300×1900	1900	≥1900
1496	1500×2200	2200	≥2200

Note:

① Items with "*" shall be furnished by building contractors.

② Unit of dimension shall be in mm unless otherwise stated.

③ The hoistway construction shall be reinforced concrete ring beam with strength C25 or whole hoistway of reinforced concrete wall. If you have other situations, please contact us.

④ For hoistway details, please contact us.

⑤ The suspension hooks capacity shall be as follows:

Rated Load (kg)	Rated Speed (m/min)	Hook 1 (Tons)	Hook 2 (Tons)	Hook 3 (Tons)	Hook 4 (Tons)
884/952/1020/1496	60/90/105	1	1	3	3

Rated Load (kg)	Rated Speed (m/min)	Car Size (mm)		Door Opening (mm)		Front Wall Arrangement (mm)		Hoistway Size (mm)	Pit Reaction Force (KN)					
		Car Inside (a×b)	Car Outside (A×B)	Type	Width OP	L1	L2		X×Y	R1	R2	R3	R4	R5
476	60	1000×1200	1050×1360	CO	700	385	415	1700×1620	40	30	30	25	100	90
544	60	1300×1100	1350×1260	CO	800	435	515	1950×1620	65	50	50	45	110	100
	90/105					445	505	1950×1750						
	60	1100×1300	1150×1460			385	415	1800×1700						
	90/105					395	405	1800×1850						
680	60/90/105	1350×1300	1400×1460	CO	800	420	580	2000×1750	70	55	55	45	120	105
748	60/90/105	1250×1500	1300×1660	CO	800	420	530	1950×1900	70	55	55	45	120	105
884	60/90/105	1100×2000	1150×2160	CO	800	460	460	1920×2400	80	65	60	50	135	115
					900	410	410							
		1100×2000	1150×2198	2S	800	145	605	1750×2450						
					900	145	505							
952	60/90/105	1100×2100	1150×2260	CO	900	410	410	1920×2500	80	65	60	50	135	115
			1150×2298	2S	900	145	505	1750×2550						
					1000			1850×2550						
		1500×1500	1550×1660	CO	900	445	605	2150×1900						
					1000	495	555	2250×1900						
		1600×1400	1650×1560	CO	900	495	655	2250×1850						
					1000		605	2300×1850						
1020	60/90/105	1600×1500	1650×2060	CO	900	495	655	2250×1900	80	65	60	50	135	115
			1650×1660		1000		605	2300×1900						
		1500×1600	1550×1760	CO	900	445	605	2150×2000						
		1300×1900	1350×2060	CO	900	440	510	2050×2300						
1156	60/90/105	1800×1500	1850×1660	CO	1000	605	745	2550×2000	90	70	60	50	150	130
1292	60/90/105	2000×1500	2050×1660	CO	1100	655	795	2750×2000	95	75	60	55	170	150
1360	60/90/105	1700×1800	1750×1960	CO	1000	555	695	2450×2200	100	80	70	65	170	150
1496	60/90/105	1800×1850	1850×2010	CO	1000	605	745	2550×2250	105	85	75	65	170	150
					1100	555	695							
		1500×2200	1550×2360	CO	1100	555	695	2550×2600						
			1550×2398	2S	1200	210	640	2250×2670						
1564	60/90/105	2000×1700	2050×1860	CO	1100	655	795	2750×2100	100	80	65	55	170	150

Note:
① The above information and dimensions are based on right side counterweight.
② The above information and dimensions are based on non fire rated door.
③ Configuration is without counterweight safety gear.
④ For rated load 476~544kg, it is based on 50mm door offset configuration.

Rated Load (kg)	Rated Speed (m/min)	Overhead Height, OH (mm)	Pit Depth, PIT (mm)
476	60	3750	1350
544	60	3750	1350
	90	3900	1400
	105	3950	1450
680	60	3750	1350
	90	3900	1400
	105	3950	1450
748	60	3750	1350
	90	3900	1400
	105	3950	1450
952	60	3750	1600
	90	3900	1650
	105	3950	
1020	60	3750	1600
	90	3900	1650
	105	3950	
884 (Deep Car)	60	3750	1600
	90	3900	1650
	105	3950	
952 (Deep Car)	60	3750	1600
	90	3900	1650
	105	3950	
1020 (Deep Car)	60	3750	1600
	90	3900	1650
	105	3950	
1156	60	3750	1600
	90	3950	1700
	105	3950	
1292	60	3750	1600
	90	3950	1700
	105	3950	
1360	60	3750	1600
	90	3950	1700
	105		
1496	60	3750	1700
	90	3950	1800
	105		
1564	60	3750	1700
	90	3950	1800
	105		

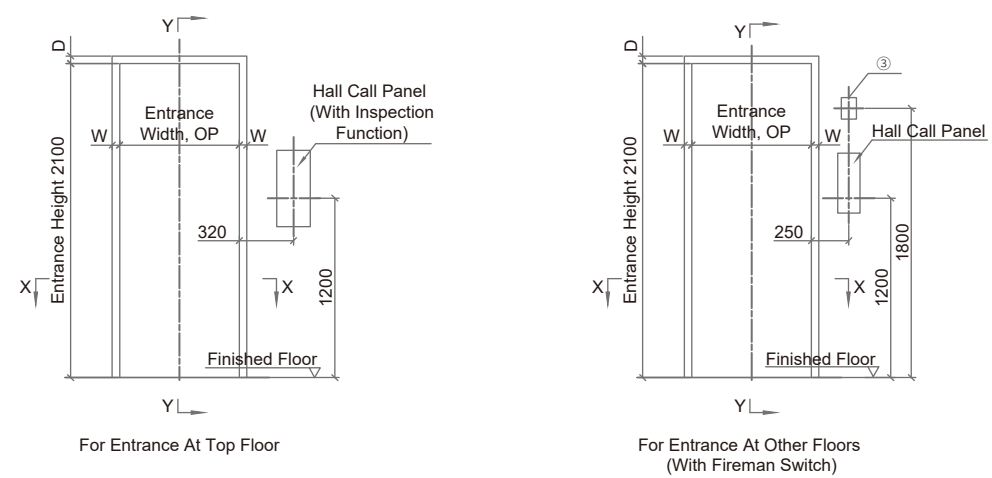
Note:
① The pit depth, PIT is based on standard vinyl tile finish without floor recess.
② The overhead height, OH is based on bare ceiling height of 2300mm.
③ Configuration is without counterweight safety gear.
④ Configuration is based on decoration weight provision up to 200kg.

Entrance Design

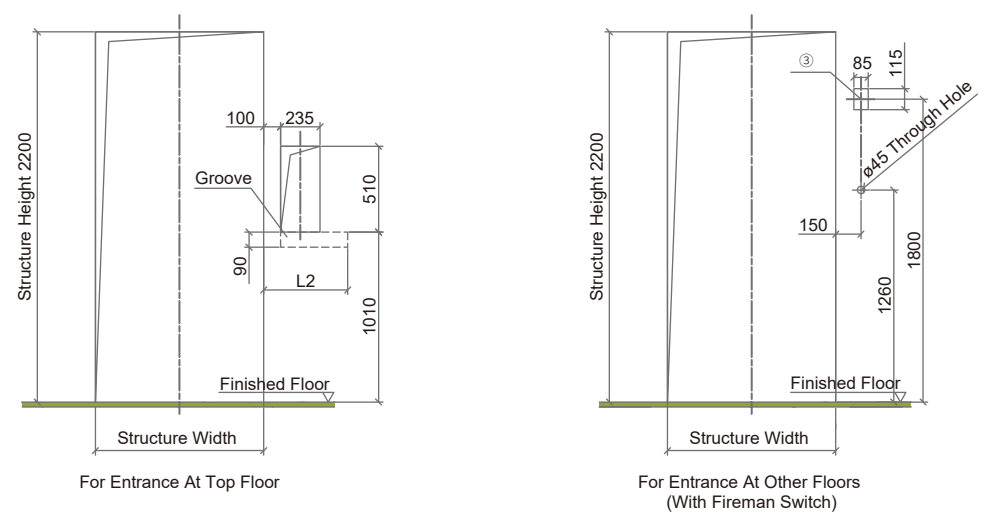
The followings shall be furnished by building contractors:

- Wall and Floor Finishes

Elevation of Entrance



Structure Opening of Entrance



Type	AS-1X
W	10
D	10

Note:

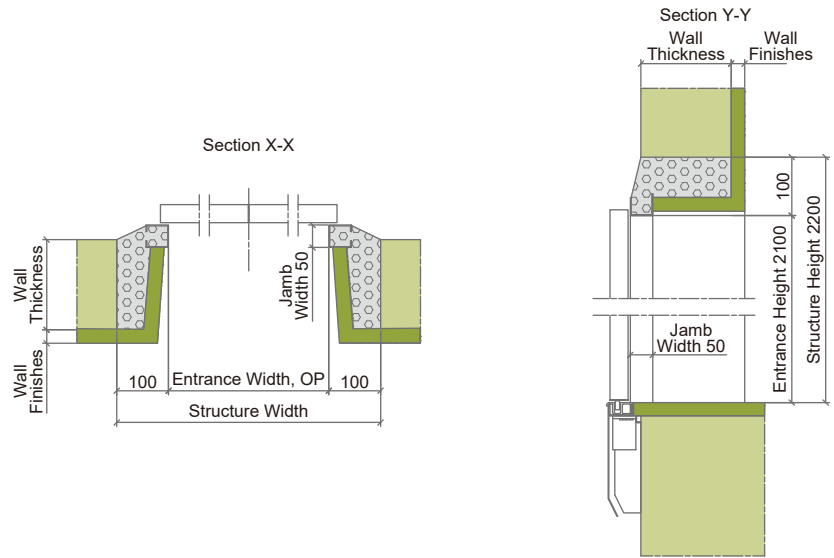
- Unit of dimension shall be in mm unless otherwise stated.
- Applicable only when fireman operation with switch is located at lift landing.
- Structure opening of entrance shall be furnished by building contractor.
- For value of L2, please refer to page 07.

Entrance Design

The followings shall be furnished by building contractors:

- Building Structure
- Wall and Floor Finishes
- Grouting Work

Narrow Jamb (AS-1X)



Note:

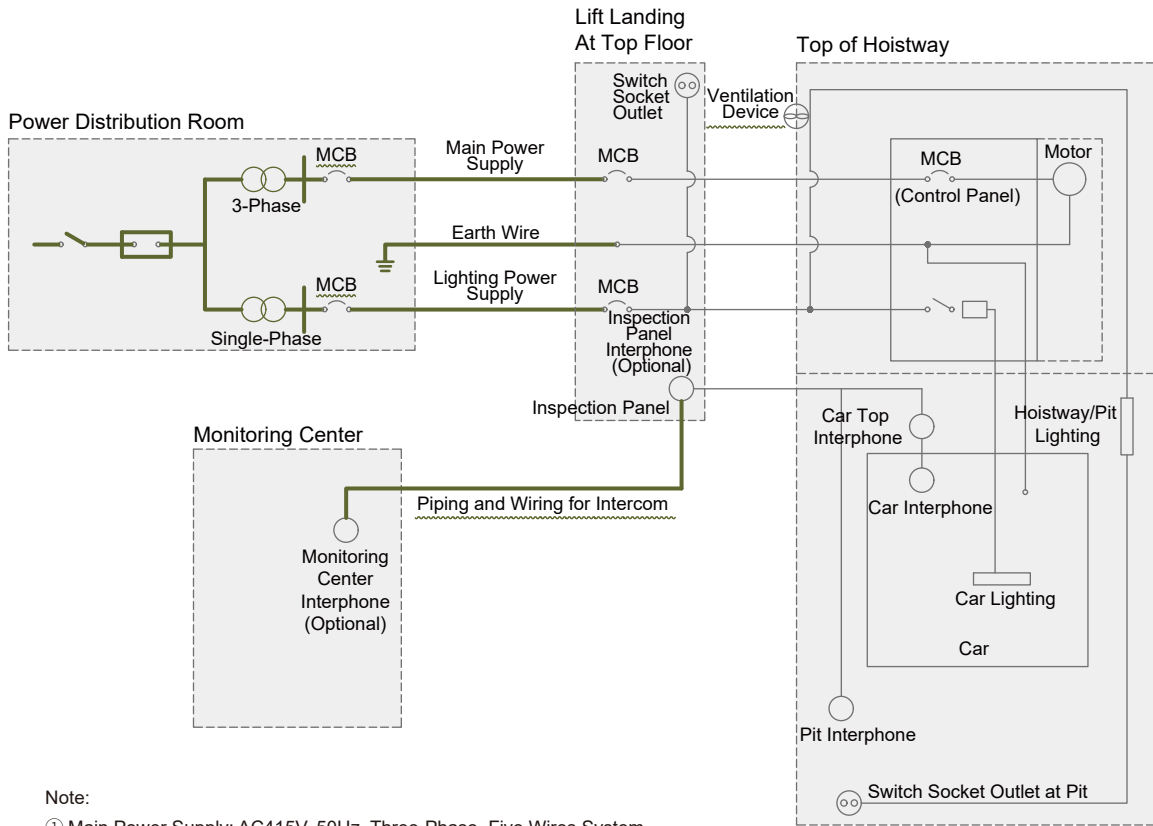
- Unit of dimension shall be in mm unless otherwise stated.

Electrical Information

The following shall be furnished by building contractors:

~~~~~ Electrical Equipment

———— Cable



- Note:
- ① Main Power Supply: AC415V, 50Hz, Three-Phase, Five Wires System
  - ② Lighting Power Supply: AC230V, 50Hz, Single-Phase, Three Wires System

| Item                  | Works to be provided by building contractor                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main Power Supply     | To provide power supply switch around the entrance of top floor. To install facilities to ensure the power supply voltage fluctuation shall be within ±7%. |
| Lighting Power Supply | To provide lighting power supply for car lighting, fan and indicator.                                                                                      |
| Ventilation Device    | To provide mechanical ventilation to the hoistway to ensure that the temperature in the hoistway is maintained at below 40°C.                              |

Electrical Data

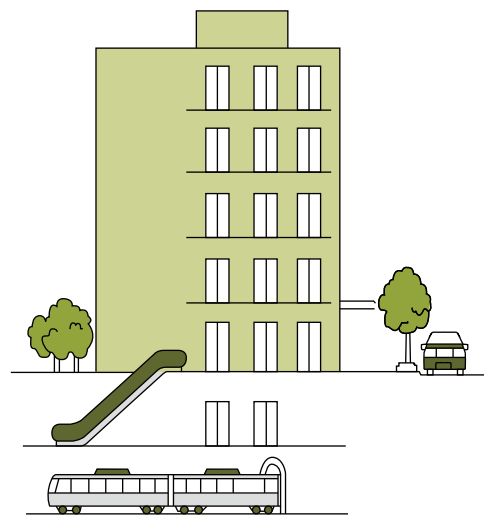
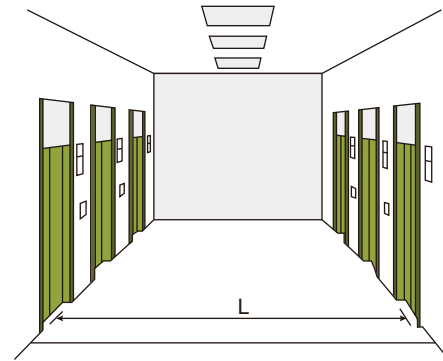
| No. | Rated Load (kg) | Rated Speed (m/min) | Supply Voltage           | Transformer Capacity (kVA) |         | Circuit Breaker Capacity (A) |         | Main Power Wire Size (mm²) |         | Earth Wire Size (mm²) |         |
|-----|-----------------|---------------------|--------------------------|----------------------------|---------|------------------------------|---------|----------------------------|---------|-----------------------|---------|
|     |                 |                     |                          | 1 unit                     | 2 units | 1 unit                       | 2 units | 1 unit                     | 2 units | 1 unit                | 2 units |
| 1   | 476             | 60                  | 3Φ415V<br>1Φ230V<br>50Hz | 6                          | 11      | 40                           | 40      | 6                          | 8       | 6                     | 8       |
| 2   | 544             | 60                  |                          | 7                          | 12      | 40                           | 40      | 6                          | 8       | 6                     | 8       |
|     |                 | 90                  |                          | 9                          | 15      | 40                           | 50      | 6                          | 10      | 6                     | 10      |
|     |                 | 105                 |                          | 10                         | 16      | 40                           | 50      | 6                          | 10      | 6                     | 10      |
| 3   | 680             | 60                  |                          | 8                          | 14      | 40                           | 40      | 6                          | 8       | 6                     | 8       |
|     |                 | 90                  |                          | 11                         | 18      | 40                           | 50      | 8                          | 10      | 8                     | 10      |
|     |                 | 105                 |                          | 12                         | 20      | 40                           | 63      | 8                          | 16      | 8                     | 16      |
| 4   | 748             | 60                  |                          | 8                          | 14      | 40                           | 40      | 6                          | 8       | 6                     | 8       |
|     |                 | 90                  |                          | 11                         | 18      | 40                           | 50      | 8                          | 10      | 8                     | 10      |
|     |                 | 105                 |                          | 12                         | 20      | 40                           | 63      | 8                          | 16      | 8                     | 16      |
| 5   | 952             | 60                  |                          | 9                          | 16      | 40                           | 50      | 6                          | 8       | 6                     | 8       |
|     |                 | 90                  |                          | 12                         | 20      | 40                           | 63      | 8                          | 16      | 8                     | 16      |
|     |                 | 105                 |                          | 13                         | 22      | 40                           | 80      | 8                          | 16      | 8                     | 16      |
| 6   | 1020            | 60                  |                          | 9                          | 16      | 40                           | 50      | 6                          | 8       | 6                     | 8       |
|     |                 | 90                  |                          | 12                         | 20      | 40                           | 63      | 8                          | 16      | 8                     | 16      |
|     |                 | 105                 |                          | 13                         | 22      | 40                           | 80      | 8                          | 16      | 8                     | 16      |
| 7   | 884 (Deep Car)  | 60                  |                          | 10                         | 16      | 40                           | 50      | 6                          | 10      | 6                     | 10      |
|     |                 | 90                  |                          | 12                         | 21      | 40                           | 63      | 8                          | 16      | 8                     | 16      |
|     |                 | 105                 |                          | 14                         | 23      | 40                           | 80      | 8                          | 16      | 8                     | 16      |
| 8   | 952 (Deep Car)  | 60                  |                          | 10                         | 16      | 40                           | 50      | 6                          | 10      | 6                     | 10      |
|     |                 | 90                  |                          | 12                         | 21      | 40                           | 63      | 8                          | 16      | 8                     | 16      |
|     |                 | 105                 |                          | 14                         | 23      | 40                           | 80      | 8                          | 16      | 8                     | 16      |
| 9   | 1020 (Deep Car) | 60                  |                          | 10                         | 16      | 40                           | 50      | 6                          | 10      | 6                     | 10      |
|     |                 | 90                  |                          | 12                         | 21      | 40                           | 63      | 8                          | 16      | 8                     | 16      |
|     |                 | 105                 |                          | 14                         | 23      | 40                           | 80      | 8                          | 16      | 8                     | 16      |
| 10  | 1156            | 60                  |                          | 10                         | 17      | 63                           | 63      | 6                          | 10      | 6                     | 10      |
|     |                 | 90                  |                          | 13                         | 22      | 63                           | 63      | 8                          | 16      | 8                     | 16      |
|     |                 | 105                 |                          | 15                         | 25      | 63                           | 80      | 10                         | 25      | 10                    | 16      |
| 11  | 1292            | 60                  |                          | 11                         | 19      | 63                           | 63      | 8                          | 10      | 8                     | 10      |
|     |                 | 90                  |                          | 15                         | 25      | 63                           | 80      | 10                         | 25      | 10                    | 16      |
|     |                 | 105                 |                          | 17                         | 28      | 63                           | 100     | 10                         | 25      | 10                    | 16      |
| 12  | 1360            | 60                  |                          | 11                         | 19      | 63                           | 63      | 8                          | 10      | 8                     | 10      |
|     |                 | 90                  |                          | 15                         | 25      | 63                           | 80      | 10                         | 25      | 10                    | 16      |
|     |                 | 105                 |                          | 17                         | 28      | 63                           | 100     | 10                         | 25      | 10                    | 16      |
| 13  | 1496            | 60                  |                          | 13                         | 21      | 63                           | 63      | 8                          | 16      | 8                     | 16      |
|     |                 | 90                  |                          | 17                         | 28      | 63                           | 100     | 10                         | 25      | 10                    | 16      |
|     |                 | 105                 |                          | 19                         | 32      | 63                           | 100     | 16                         | 25      | 16                    | 16      |
| 14  | 1564            | 60                  |                          | 13                         | 21      | 63                           | 63      | 8                          | 16      | 8                     | 16      |
|     |                 | 90                  |                          | 17                         | 28      | 63                           | 100     | 10                         | 25      | 10                    | 16      |
|     |                 | 105                 |                          | 19                         | 32      | 63                           | 100     | 16                         | 25      | 16                    | 16      |

- Note:
- ① The transformer capacity and circuit breaker capacity in the above table are the requirements at building side.
  - ② The main power wire size specified above is applicable for wire length less than 150m. For main power wire length more than 150m, please contact us.
  - ③ Main power supply shall be in three-phase, five wires system with independent ground wire.



- Maximum in-line arrangement is 4 elevators.
- Elevators not in the same group should not be set in the same line.
- Avoid placing the elevators entrance near pillars.

- Elevators in the same group with face-to-face arrangement, the distance of facing elevators (L) should be 3.5~4.5m.
- Elevators not in the same group with face-to-face arrangement, the distance of facing elevators (L) should be more than 6m.



- Elevators in the same group is recommended to have the same service floors.
- Elevators in the same group is recommended to have one base floor instead of having multiple access floors.

## Working environment of the elevator shall be as follow:

1. Hoistway ambient temperature shall be between 5°C to 40°C.
2. Maximum relative humidity is 90%, and the monthly mean minimum temperature should be below 25°C.
3. Supply voltage fluctuation shall be within  $\pm 7\%$ .
4. Surrounding environment shall be free from explosive and corrosive hazard, anti-insulation and conductive particles atmosphere.

## About hoistway:

1. Hoistway shall not be used for purposes other than those connected with the elevators.
2. Hoistway walls (including reinforced concrete ring beams) should be vertical, and the allowable deviation for the hoistway verticality is 0 ~ +30mm.
3. Hoistway walls, floors and roofs should be able to absorb a large amount of elevator operation noise.
4. Hoistway should not be located directly adjacent to bedrooms, classrooms, wards, library or any other places where low noise is required. Where such arrangements need to be imposed, the building contractors must be responsible for taking measures of sound insulation and cushioning.
5. Hoistway walls shall be 200mm concrete walls.
6. If elevator hoistway is steel structure construction, please contact us.
7. Elevator hoistway is preferably not located in the space above accessible area. If the actual situation cannot meet the regulations, please contact us.

## Work to be done by Building Contractors:

The preparatory work for elevator installation outlined below should be undertaken by building contractors in accordance with Hitachi drawing and applicable national or local codes and regulation.

1. Prepare hoistway with proper framing and enclosure, suitable pit of proper depth with drains and waterproofing if required, properly lighted with concrete floor, access door, ladder and guards as required.
2. Provide and/or cut all necessary holes, chases, and openings and finish after equipment installation.
3. Supply and secure all supports, reinforced concrete slabs, etc., necessary for installation of the machinery, doors, buffers, etc.
4. Furnish all necessary cement and/or concrete for grouting-in of brackets, bolts, machine beams etc.
5. Suspension hooks at top of hoistway with required loading as shown in this catalogue.
6. Furnish main for three-phase electric power and single-phase lighting supply to hoistway, following the instructions of the elevator contractors on outlet position and wire size.
7. Supply electric power for lighting of work area, installation work, elevator testing and spray painting.
8. Provide, free of charge, a suitable theft-proof storage area for materials and tools during erection work.
9. Prepare and erect suitable scaffolding and protective measures for the works in progress.