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UCA

High-Speed Passenger Elevator
Planning Guide

Content

Elevator Specification List

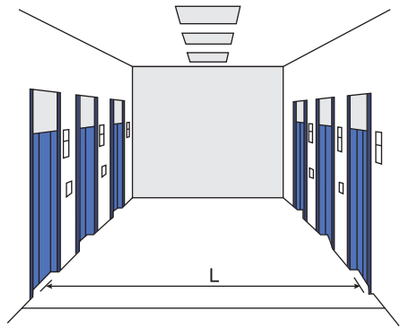
Load (kg)	No. of Passengers ①	Speed (m/min)	Maximum Number of Stops	Maximum Travel (m)	Maximum Travel with Fireman Operation (m)	Minimum Floor Height (mm)
900	12	300/360	64 (Duplex / Group Control) 80 (Simplex Control)	250	250	2800
1050	14	300/360		250	250	
1150	15	300/360		250	250	
1350	18	300/360		250	250	
1600	21	300/360		220	220	
1800	24	300/360		200	200	
2000	26	300/360		250	250	
2250	30	300/360		200	200	

Load (kg)	No. of Passengers ①	Speed (m/min)	Maximum Number of Stops	Maximum Travel (m)	Maximum Travel with Fireman Operation (m)	Minimum Floor Height (mm)
1150	15	420/480	64 (Duplex / Group Control) 80 (Simplex Control)	285	285	2800
1350	18	420/480		285	285	
1600	21	420/480		285	285	
1800	24	420/480		285	285	

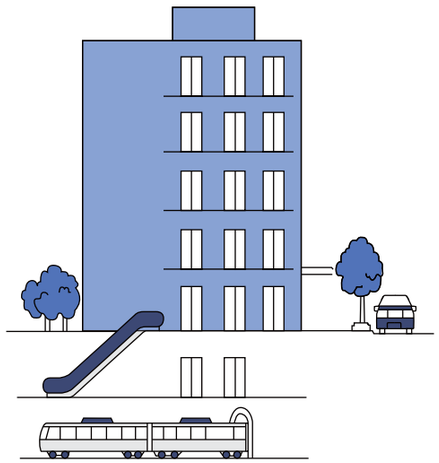
Note:
① Passenger numbers calculated at 75kg per person.
② The information above are based on GB standards.
③ The maximum travel for the load of 1150/1350/1600kg with speed of 300/360 m/min could be up to 330m with conditions. Details, please contact us.
④ The maximum travel for the load of 1800kg with speed of 300/360 m/min could be up to 300m with conditions. Details, please contact us.

Layout

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



- More than 5 units in the same group, the elevators should be set face-to-face. And the distance of facing elevators(L) should be 3.5~4.5m.
- Different group elevators with face-to-face arrangement, the distance of facing elevators(L) should be more than 6m.



- Elevators in same group should have same stops.
- Elevators in same group should be set the same floor as basement and not recommend to set several entrance.

FI System

<FI-600 Features> Future Reference-Trajectory Control

A group control system groups multiple elevators for achieving a well-balanced operation by taking waiting times into account. Such a system requires flexibility so that it can be used in various types and sizes of buildings and be responsive to changing traffic demand.

(FI-600)	(FI-100)	(FI-10)
(3-8 Cars)	(3-6 Cars)	(3-4 Cars)
Allows a flexible control for elevator car allocation and the required number of cars according to the congestion state in the building and the type of building.	Elevator cars are allocated at equal time intervals according to “Reference-Trajectory Control” for shortening the average waiting times and reducing the probability of a long wait.	Provides a ring control to allocate the elevator car closest to the floor where a new hall call is registered.

Basic Specification	Instantaneous reservation and service forecasting		
	Intelligent function		
	Generation of new traffic flow modes Generation of optimum operation programs		
	Congested floor recognition		
	Learning function		
	• Collection of usage data • Recognition of traffic flow mode (40/2 modes) • Search for optimum operation program		
	Arrival notice indication (hall lantern and chimes)		
	Bunching prevention ①		
	Future reference-trajectory control	Reference-trajectory control	Ring control
	Forecasting dynamic allocation control	Zone distribution control	Fixed floor distribution control
System name	FI-600	FI-100	FI-10
Recommended number of cars in a group	3~8 cars	3~6 cars	3~4 cars
Type of building	Large office buildings and hotels	Small office building, department stores, hotels and hospitals	Building with small traffic demand
Optional	VIP service, independent automatic operation		
	Service floor selection		
	Destination floor reservation system Centralized control for special floors Zoning express service		

Note:
① Bunching prevention: Using the “future reference-trajectory control” or the “reference-trajectory control” in the FI-600 or FI-100, elevator cars are operated at equal time intervals to prevent local bunching.

Basic Function

● : Basic spec. ▲ : Option spec. — : Not applicable

No.	Item		Content	FI-600	FI-100	FI-10
1	Instantaneous reservation and service forecasting (FI-IRF)		Upon receipt of a hall call, this function activates and elevator to serve this call, and at the same time the call is acknowledged by the hall lantern and chime.	●	—	—
2	Arrival notice indication (FI-ANI)		Four to five seconds prior to the arrival of an elevator, this function will activate the hall lantern flickering and the chime sound.	●	●	▲
3	Basic call assignment control	Future reference-trajectory control (FI-FRTC)	Controls the allocation of elevator cars to hall calls according to the future reference trajectory resulting from learning-based daily traffic flows.	●	—	—
		Reference-trajectory control (FI-RTC)	Controls the allocation of elevator cars to hall calls based on the theory used in the highest model in the FI series, FI-600, and the intelligent-based data containing our know-how accumulated over a long period of time.	—	●	—
4	Personalized control		Through the hall call assignment control of waiting time priority assignment, constantly carry out operation management in accordance with waiting time priority.	●	●	—
	Waiting time priority assignment		Prevent long waiting time of passengers by implementation of hall call assignment.	●	●	—
	Riding time priority assignment		Prevent long riding time of passengers by implementation of hall call assignment.	▲	▲	—
	Bunching prevention (FI-BP)		This function prevents local bunching of elevator cars using the "future reference-trajectory control" or the "reference-trajectory control" for operating cars at equal time intervals.	●	●	—
5	Learning function	Collection of usage data (FI-CUD)	Collects the traffic status information by floor and direction for a unit time based on the elevator information such as car positions and the number of passengers getting on and off, and hall call information.	●	●	—
		Recognition of traffic flow mode (FI-RTM)	Extracts characteristics at any given moment, including congested floors, from the collected usage data, and identifies the traffic flow mode at that moment.	● (40 modes)	● (2 modes)	—
		Search for optimum operation program (FI-SOP)	Searches the optimum operation program of the moment based on the identified traffic mode.	●	●	—
6	Congested floor recognition (FI-CFR)		Identifies congested floors according to the usage data learned in each traffic flow mode.	●	—	—
7	Service forecasting for hall call assignment (FI-SFH)		This function assigns elevator cars to hall calls more precisely by forecasting the arrival time and number of passengers in the car according to the learning-based traffic demand.	●	—	—
8	Intelligent function	Generation of new traffic flow modes (FI-GNT)	Extracts new characteristics according to the learning-based usage data, and registers them as a building-specific new traffic flow mode.	●	—	—
		Generation of optimum operation programs (FI-GOP)	Generates an optimum operation program for a building by simulating the elevator operation according to the usage data learned in each traffic mode and preferential control target.	●	—	—
9	Energy saving preference control (FI-ESC)		This system reduces the number of elevator cars in service when traffic demand is low.	●	—	—
10	Floor standby control	Forecasting dynamic allocation control (FI-FDA)	Dynamically allocates elevator cars in response to continuously changing situation in the building by determining the area assigned to each car according to the forecasted number of passengers and car usage.	●	—	—
		Zone distribution control (FI-ZD)	Distributes the waiting elevator cars to the pre-assigned zones.	—	●	—
		Fixed floor distribution (FI-FD)	Distributes the waiting elevator cars to the pre-assigned floors.	—	—	●

Basic Function

● : Basic spec. ▲ : Option spec. — : Not applicable

No.	Item	Content	FI-600	FI-100	FI-10
11	Learning based concentrated service (FL-LCS)	Centralizes the service to the learning-based congested floors during peak times including morning, lunch time and evening peaks while taking the service for other floors into account.	●	—	—
12	Rush-hour schedule operation	All the elevators will automatically return to the start floor after serving the last call during this preset rush-hour timing.	●	—	▲
13	Destination floor priority control	The allocation will be priority when the destination floor and the hall call is the same floor.	●	●	—
14	Full car forecasting control	Control the new allocation according to the number of passengers in car and the times of new calls.	●	●	—
15	Full car control	Stop new allocation or re-allocate the car when full load.	●	●	—
16	Long waiting time allocation control	Re-allocate the cars when long waiting time situation is forcasted.	●	●	—
17	Notice function	Keep the service elevator car door open with hall lantern flickering to guide the passengers.	▲	●	—
18	Automatic door open time control (FI-ADT)	This function automatically controls the duration of the door open time according to the floor and the kind of call (hall call or car call) as well as the elevator condition.	●	●	—

Operating Function

No.	Item	Content	FI-600	FI-100	FI-10
1	Centralized control for special floors (FI-CCF)	This function preferentially assigns an elevator to the special floor. (e.g. the director's room)	▲	—	—
2	Service floor selection (FI-SFS) [Floor lock-out operation]	Allows the operator to select the service and non-service floors using, for example, the switches on the control panel.	▲	▲	—
3	VIP service (FI-VIP)	When welcoming or sending off important guest, this function permits an elevator to be summoned directly to the desired car call floor by pushing a specially provided switch.	▲	▲	▲
4	DFRS	Each passenger registers their destination floor on the registration device located at the landing hall and know in advance the designated elevator to take. System assigned one elevator for the passengers with the same destination floor. This helps to reduce congestion in the elevator lobby and improve efficiency.	▲	—	—
5	Zoning express service (FI-EZS)	Start a divided express service when the peak traffic demand takes place in the present time zones.	▲	—	—

Man-machine Function

No.	Item	Content	FI-600	FI-100	FI-10
1	Malicious operation cancelled function	Cancel the allocation when system identifies the call is malicious.	●	●	—
2	Hall information (FI-HI)	General and elevator operation information is indicated on the LED or LCD hall indicator.	—	—	●

Standard Function

Control System			
SA1	Simplex Collective Control	SA2	Floor Height Self Measurement
SA3	On-Cage (Car Top) Maintenance Operation	SA4	In-Cage Slow Speed Operation
SA5	Machine-Room Debugging Operation Function		
System Protection			
SB1	Over Speed 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 Static Test	SB10	Lift-Position Abnormily Auto-Correction Function
SB11	Nearest Landing Operation	SB12	Anti-electromagnetic Interference
Safe Communication			
SC1	Interphone System (5 Ways)		
Safe Riding			
SD1	Out of Door-Open Zone Alarm	SD2	Alarm System
SD3	Door Safety Return System	SD4	Full Load Bypass Operation
SD5	Overload Detection System	SD6	Overload Alarm
SD7	Next Drive (Door Open Abnormity)	SD8	Door Opening / Closing Time Abnormity Protection
SD9	Automatic Door Dwell Time Control	SD10	Automatic Door Dwell Time Adjustment
SD11	Number of Runs Indicator	SD12	Multi-Beam Protection ①
SD13	Inspection Indication in Hall Indicator	SD14	Current Floor Push-Button Reopening Function ①
SD15	Overload Indicator (In Car)	SD16	Emergency Terminal Stopping Device, ETSD
Emergency Solution			
SE1	Car Emergency Lighting	SE2	Fire Emergency Operation (Automatic)
Design for Comfort			
SF1	Parking Operation	SF2	Automatic Return Function
SF3	Start Torque Auto-Adjustment	SF4	Door-Stop Function (Maintenance)
SF5	Micro Levelling (Travel ≥45m)	SF6	Advance Door Opening
SF7	Mischievous Call Cancellation	SF8	Opposite Direction Car Call Cancellation
SF9	Car Light Auto Turn-off	SF10	Car Fan Auto Turn-off
SF11	Abnormal Duration Hall Call Detection ① (Applicable for Simplex, Duplex and FI-10 only.)	SF12	Car Floor Button Flashing ①
SF13	Car Call Deselect Function	SF14	Regenerative System Function
SF15	Door Bypass Detection	SF16	Overload Hall Call Recovery Function (Not applicable for FI-100 and FI-600.)
SF17	Base Floor Selection (Applicable for Simplex only.)		

Note:
① Details, please contact us.

Elevator Function

Optional Function

Control System			
OA1	Simplex Down Collective Control	OA2	Duplex Collective Control
OA3	Duplex Down Collective Control	OA4	FI-10 ①
OA5	FI-100 ①	OA6	FI-600 ①
OA7	Independent Automatic Operation ①	OA8	VIP Service
OA9	Rush Hour Schedule Operation (Not applicable for FI-100)		
Safe Communication			
OB1	Contact at Control Panel (RS485)	OB2	Elevator Monitoring System (Computer Type)
OB3	Supervisory Panel (Dry Contact Type)	OB4	Twisted Pair Cable (1 pair) for CCTV
OB5	Twisted Pair Cable (1 pair) for BGM Interface	OB6	Contact at Control Panel (Dry Contact)
OB7	Camera Device in Inside the Car		
Safe Riding			
OC1	Multi-Beam + Safety Edge Protection	OC2	Card Reader Interface (In Car) (RS485) ① （Not applicable when OE5 is selected.）
Emergency Solution			
OD1	Fireman Operation (Load≥825kg)	OD2	Automatic Rescue Device (ARD) (Maximum travel distance ≤ 30m)
OD3	EM. Operation for Power Failure (Manual)	OD4	EM. Operation for Power Failure (Auto)
OD5	Earthquake Emergency Operation	OD6	Pit Flood Operation
Design for Comfort			
OE1	Attendant Operation	OE2	Independent Operation
OE3	Voice Synthesizer	OE4	Arrival Chime (Car Top and Bottom)
OE5	Floor Lock Out Operation ① (Not applicable when OC2 is selected.)	OE6	Door Opening Prolong Button
OE7	Hall Call Registration in Car Operating Panel (Applicable when OE1 is selected)	OE8	Sub Car Operating Panel
OE9	Double Opening Function ① (Not applicable for FI-100, FI-600 and FI-10 (>48 stops.)	OE10	Horizontal Car Operating Panel
OE11	Braille Button	OE12	EMC ①
OE13	Operation Status Indication at Hall Indicator	OE14	DFRS (Under FI-600)
OE15	Hall Call Deselect Function ① (Applicable for Simplex, Duplex and FI-10 only.)		

Note:
① Details, please contact us.

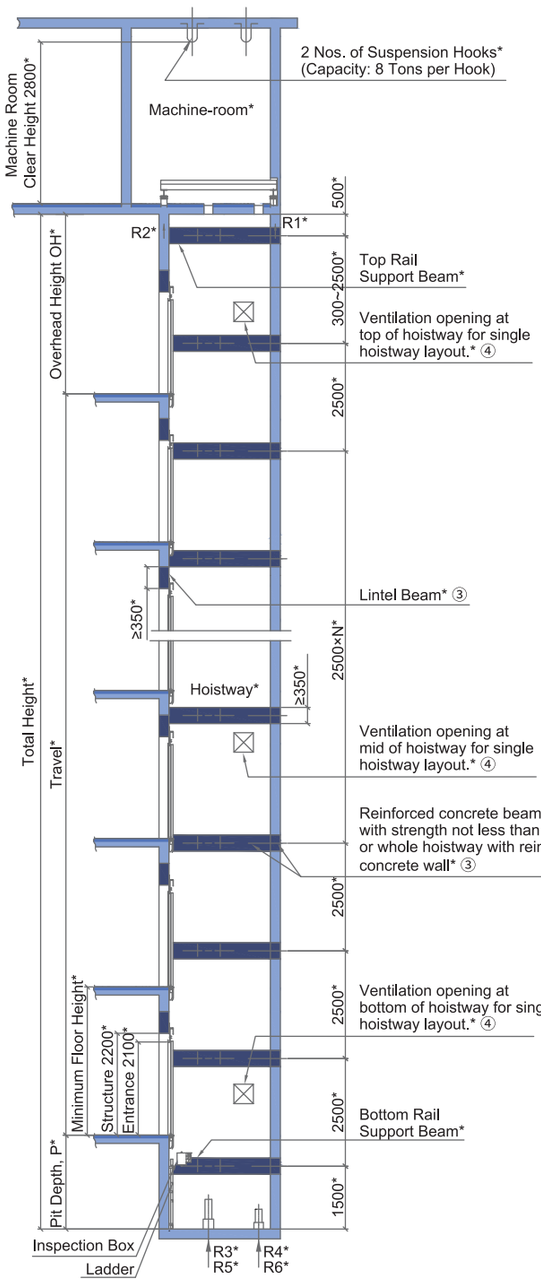
Overhead Height and Pit Depth

Load (kg)	Speed (m/min)	Overhead Height OH (mm)		Pit Depth P (mm)	
		Double	Single	Double	Single
900	300	7100	6900	3750	4100
	360	7400	7100	4100	4400
1050	300	7100	6900	3750	4100
	360	7400	7100	4100	4400
1150	300	7100	6900	3750	4100
	360	7400	7100	4100	4400
	420	7900	—	5850	—
	480	8100		5850	
1350	300	7100	6900	3750	4100
	360	7400	7100	4100	4400
	420	7900	—	5850	—
	480	8100		5850	
1600	300	7100	6900	3750	4100
	360	7400	7100	4100	4400
	420	7900	—	5850	—
	480	8100		5850	
1800	300	7100	6900	3750	4100
	360	7400	7100	4100	4400
	420	7900	—	5850	—
	480	8100		5850	
2000	300	7100	6900	3750	4100
	360	7400	7100	4100	4400
2250	300	7100	6900	3750	4100
	360	7400	7100	4100	4400

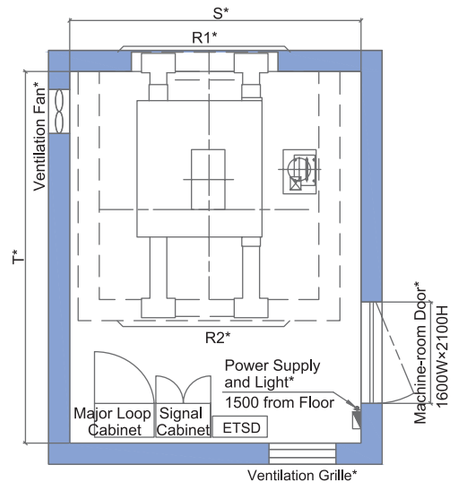
Note:
① The information and dimensions above are based on GB standards.
② Configuration is based on rear counterweight arrangement without counterweight safety gear.
③ The information above is based on decoration weight provision up to 450kg.
④ The overhead height above is based on bare ceiling height of 2800mm.
⑤ The pit depth above is based on standard vinyl tile finish without floor recess.

Hoistway and Machine Room
(Standard Car Design, Counterweight Location: Rear)

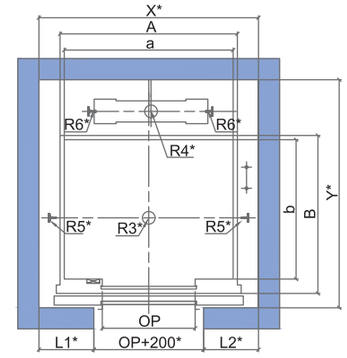
Hoistway Section



Machine-room Plan
(Not applicable for speed 420 & 480m/min)



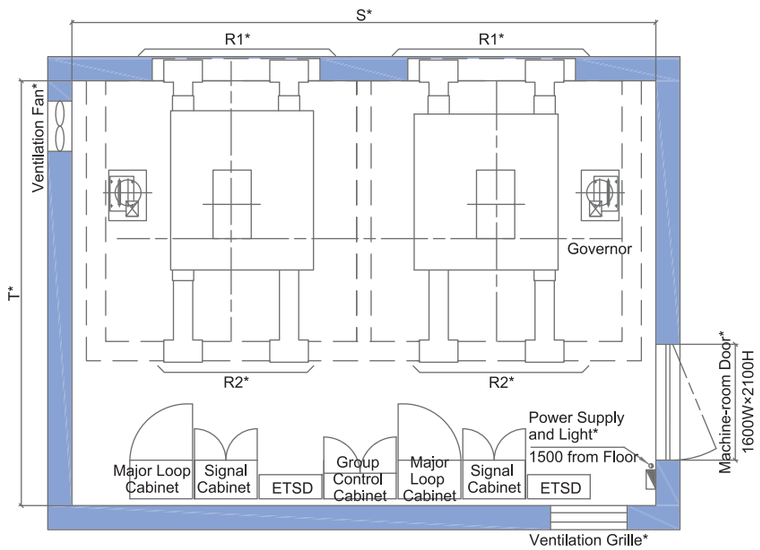
Hoistway Plan
(Not applicable for speed 420 & 480m/min)



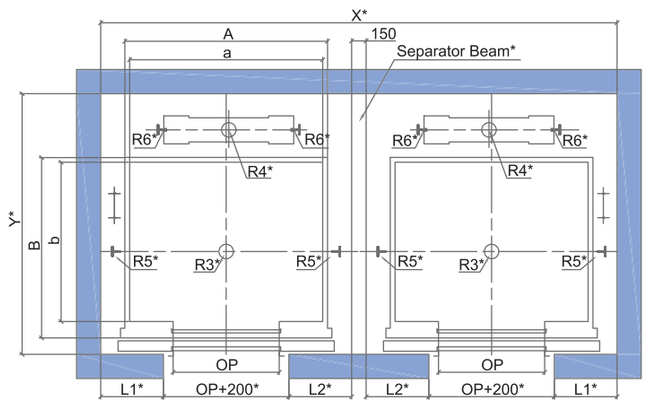
Note:
① Items with "*" shall be furnished by building contractors.
② Hoistway shall not be located next to bedrooms, classroom, ward, library or any other places where low noise is required.
③ The hoistway construction shall be reinforced concrete ring beam with strength C25 or whole hoistway of reinforced concrete wall. If you have other situations, please contact us.
④ For hoistway and machine room details, please contact us.
⑤ Unit of dimension shall be in mm unless otherwise stated.

Hoistway and Machine Room
(Standard Car Design, Counterweight Location: Rear)

Machine-room Plan



Hoistway Plan



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④ For hoistway and machine room details, please contact us.
⑤ Unit of dimension shall be in mm unless otherwise stated.

Hoistway and Machine Room
(Standard Car Design, Counterweight Location: Rear)

Single

Load (kg)	Speed (m/min)	Car Size (mm)		Door Opening (mm)		Front Wall Arrangement (mm)		Hoistway (mm)	Machine Room (mm)	Reaction Loading (KN)					
		Internal (a×b)	External (A×B)	Type	Width (OP)	L1	L2	X×Y	S×T	Machine Room		Pit			
								Single	Single	R1	R2	R3	R4	R5	R6
900	300	1600×1350	1700×1570	2P-CO	900	570	570	2240×2350	2570×4050	265	165	520	520	160	160
	360									265	165	580	580	160	160
1050	300	1600×1500	1700×1720	2P-CO	900	570	570	2240×2500	2570×4200	265	165	520	520	160	160
	360									265	165	580	580	160	160
1150	300	1800×1500	1900×1720	2P-CO	1000	620	620	2440×2500	2670×4200	290	195	550	550	180	180
	360									290	195	600	600	180	180
1350	300	2000×1500	2100×1720	2P-CO	1100	670	670	2640×2500	2770×4200	310	200	560	560	185	185
	360									310	200	610	610	185	185
1600	300	2000×1700	2100×1920	2P-CO	1100	670	670	2640×2700	2770×4400	310	215	580	580	190	190
	360									310	215	630	630	190	190
1800	300	2200×1700	2300×1920	2P-CO	1200	720	720	2840×2700	2940×4400	325	230	600	600	195	195
	360									325	230	650	650	195	195
2000	300	2200×1850	2300×2070	2P-CO	1200	720	720	2840×2850	2940×4550	325	230	610	610	195	195
	360									325	230	670	670	195	195
2250	300	2200×2000	2300×2220	2P-CO	1200	720	720	2840×3000	2940×4700	325	230	610	610	195	195
	360									325	230	670	670	195	195

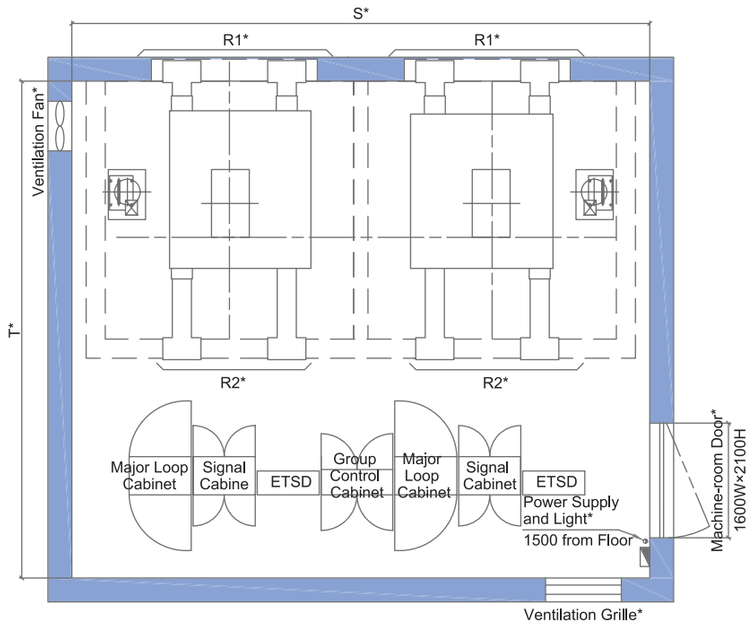
Double

Load (kg)	Speed (m/min)	Car Size (mm)		Door Opening (mm)		Front Wall Arrangement (mm)		Hoistway (mm)	Machine Room (mm)	Reaction Loading (KN)					
		Internal (a×b)	External (A×B)	Type	Width (OP)	L1	L2	X×Y	S×T	Machine Room		Pit			
								Double	Double	R1	R2	R3	R4	R5	R6
1150	300	1800×1500	1900×1720	2P-CO	1000	600	600	4950×2480	5050×4180	290	195	550	550	180	180
	360									290	195	600	600	180	180
1350	300	2000×1500	2100×1720	2P-CO	1100	650	650	5350×2480	5450×4180	310	200	560	560	185	185
	360									310	200	610	610	185	185
1600	300	2000×1700	2100×1920	2P-CO	1100	650	650	5350×2680	5450×4380	310	215	580	580	190	190
	360									310	215	630	630	190	190
1800	300	2200×1700	2300×1920	2P-CO	1200	700	700	5750×2680	5850×4380	325	230	600	600	195	195
	360									325	230	650	650	195	195
2000	300	2200×1850	2300×2070	2P-CO	1200	700	700	5750×2830	5850×4530	325	230	610	610	195	195
	360									325	230	670	670	195	195
2250	300	2200×2000	2300×2220	2P-CO	1200	700	700	5750×2980	5850×4680	325	230	610	610	195	195
	360									325	230	670	670	195	195

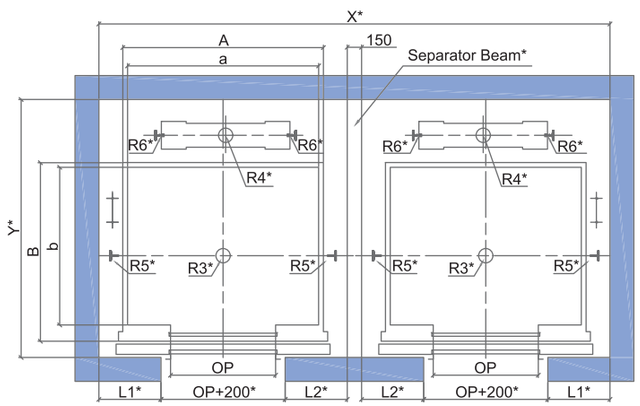
Note:
① The information and dimensions above are based on GB standards.
② Hoistway dimension for double elevators are based on 150mm width separator beam.
③ Configuration is without counterweight safety gear.

Hoistway and Machine Room
(Standard Car Design, Counterweight Location: Rear)

Machine-room Plan



Hoistway Plan



Note:
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② Hoistway shall not be located next to bedrooms, classroom, ward, library or any other places where low noise is required.
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 and machine room details, please contact us.
⑤ Unit of dimension shall be in mm unless otherwise stated.

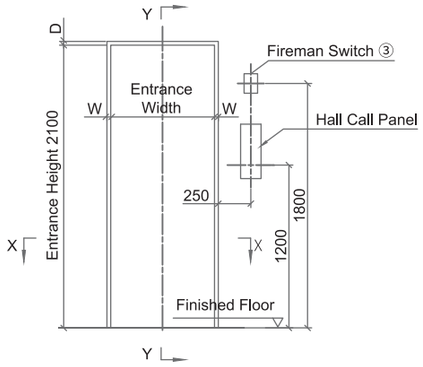
Hoistway and Machine Room
(Standard Car Design, Counterweight Location: Rear)

Double

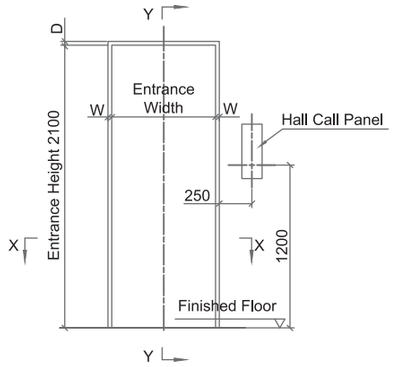
Load (kg)	Speed (m/min)	Car Size (mm)		Door Opening (mm)		Front Wall Arrangement (mm)		Hoistway (mm)	Machine Room (mm)	Reaction Loading (KN)					
		Internal (a×b)	External (A×B)	Type	Width (OP)	L1	L2	X×Y	S×T	Machine Room		Pit			
								Double	Double	R1	R2	R3	R4	R5	R6
1150	420	1800×1500	1900×1720	2P-CO	1000	600	600	4950×2480	5050×4910	290	195	600	600	185	185
	480									290	195	720	720	185	185
1350	420	2000×1500	2100×1720	2P-CO	1100	650	650	5350×2480	5450×4910	310	200	610	610	190	190
	480									310	200	730	730	190	190
1600	420	2000×1700	2100×1920	2P-CO	1100	650	650	5350×2680	5450×5110	320	215	640	640	195	195
	480									320	215	780	780	195	195
1800	420	2200×1700	2300×1920	2P-CO	1200	700	700	5750×2680	5850×5110	325	230	660	660	200	200
	480									325	230	800	720	200	200

Note:
① The information and dimensions above are based on GB standards.
② Hoistway dimension for double elevators are based on 150mm width separator beam.
③ Configuration is without counterweight safety gear.

Elevation of Entrance

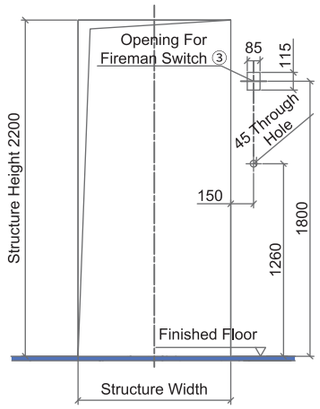


For Entrance With Fireman Switch

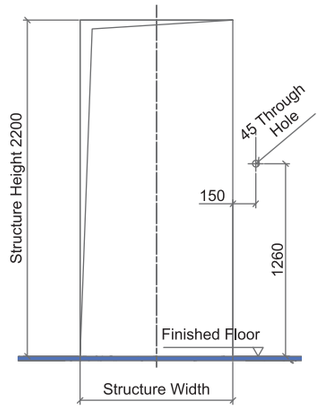


For Entrance Without Fireman Switch

Structure Opening of Entrance ①



For Entrance With Fireman Switch



For Entrance Without Fireman Switch

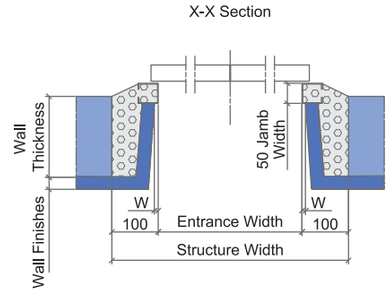
Type	AS-1X	SS-1X
W	10	25
D	10	25

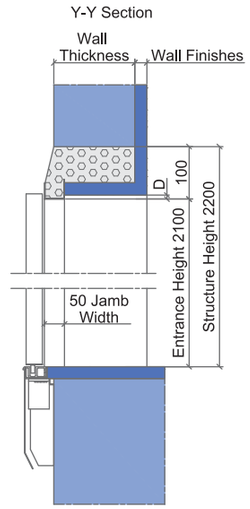
Note:
① Structural opening of entrance shall be furnished by building contractor.
② Unit of dimension shall be in mm unless otherwise stated.
③ Applicable only when fireman operation function with fireman switch is located at lift landing.

The followings shall be furnished by building contractors:

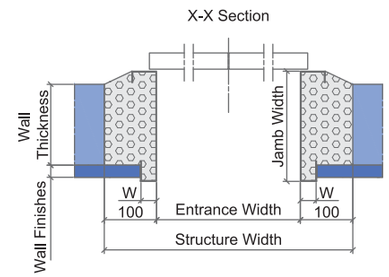
- Building Structure
- Wall and Floor Finishes
- Grouting Work

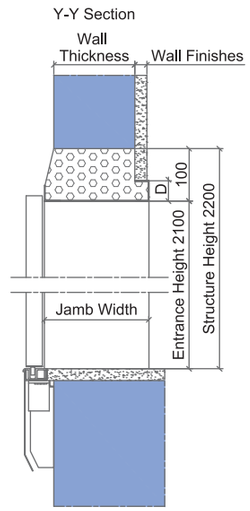
Narrow Jamb (AS-1X)





Wide Jamb (SS-1X)



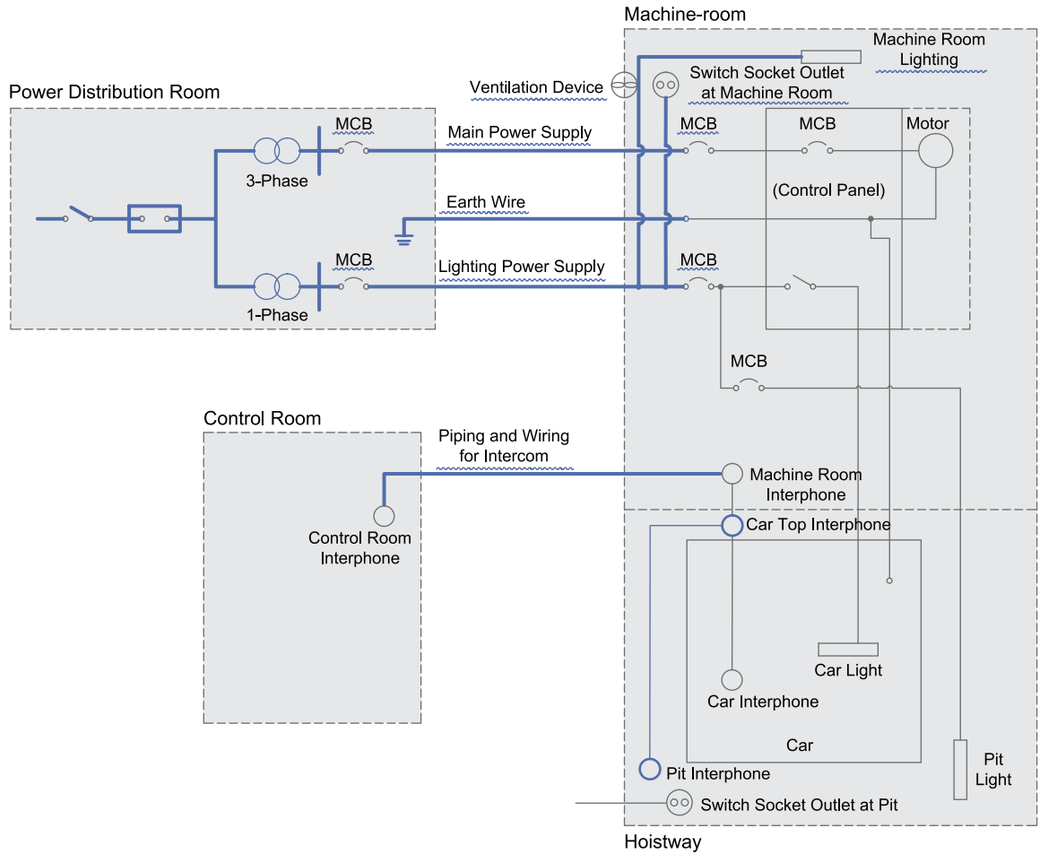


Electrical Information

The followings shall be furnished by building contractors:

Electrical Equipment

Cable



Note:
① Main Power Supply: Three-phase, five wires system, AC380V 50Hz
② Lighting Power Supply: Single-phase, three wires system, AC220V 50Hz

Item	Works to be provided by building contractor
Main Power Supply	To provide power supply switch around the entrance of machine room. To install facilities to ensure that 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 machine room to ensure that the temperature in the machine room is maintained at below 40˚C.
Pit light, Switch Socket Outlet	To provide single phase AC 220V, 10A switch socket outlet and pit lighting with switch below the entrance floor level for maintenance purposes.

Electrical Data

No.	Load (kg)	Speed (m/min)	Voltage	Circuit Breaker Capacity (A)		Transformer Capacity (kVA)		Main Power Wire Size (mm²)		Earth Wire Size (mm²)		Machine Room Ventilation
				1 unit	2 units	1 unit	2 units	1 unit	2 units	1 unit	2 units	Ventilation Fan Size Dia (Ø mm)
1	900	300	3Φ380V 1Φ220V 50Hz	200	200	40	80	60	125	30	65	400
		360		200	200	50	100	80	150	40	75	350×2
2	1050	300		200	200	50	80	60	125	30	65	350×2
		360		200	200	63	100	80	200	40	100	350×2
3	1150	300		200	200	50	100	60	125	30	65	350×2
		360		200	200	63	125	80	200	40	100	400×2
		420		250	250	63	125	100	280	50	140	400×2
		480		250	250	80	125	125	325	65	165	400×2
4	1350	300		200	200	63	100	80	150	40	75	350×2
		360		200	200	80	125	80	200	40	100	400×2
		420		250	250	80	125	100	280	50	140	400×2
		480		250	250	80	160	125	325	65	165	400×3
5	1600	300		200	200	63	125	80	150	40	75	400×2
		360		200	250	80	160	80	200	40	100	400×2
		420		250	250	80	160	125	325	65	165	400×3
		480		250	275	100	200	150	350	75	175	400×3
6	1800	300		200	250	80	160	100	200	50	100	400×2
		360		200	250	100	160	125	325	65	165	400×3
		420		250	275	100	200	125	325	65	165	400×3
		480		250	325	125	200	150	350	75	175	400×3
7	2000	300		200	250	80	160	100	200	50	100	400×2
		360		225	300	100	200	125	325	65	165	400×3
8	2250	300		225	275	100	160	100	200	50	100	400×3
		360		225	325	125	200	100	280	50	140	400×3

Note:
① The main power wire size specified above is applicable for wire length less than 150m.
For main power wire length more than 150m, please calculate using the following formula:
Main power wire size(mm2) = [Actual wire length / 150] × [Wire size in above table]
② Ventilation rate of fan shall be as below:

Fan Size (Φmm)	Ventilation Rate (m³/h)
350	2460
400	3720

Civil Works Matters

Working environment of the elevator shall be as follow:

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

About hoistway and machine-room:

1. Hoistway walls (including reinforced concrete ring beams) should be vertical, and the allowable deviation for the hoistway verticality is:
   Total Height ≤ 30m:0~+25mm.
   30m<Total Height ≤ 60m:0~+35mm
   Total Height > 60m:0~+50mm
2. Hoistway walls shall be 200mm concrete walls.
3. Elevator hoistway is preferably not located in the space above accessible area. If the actual situation cannot meet the regulations, please contact us.
4. If elevator hoistway is of steel structure construction, please contact us.
5. Hoistway and machine room walls, floors and roofs should be able to absorb a large number of elevator operation noise.
6. Hoistway and machine room 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.

Work to be done by Building Contractors:

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

Note

Note

Note