HITACHI
Inspire the Next

MACHINE ROOM-LESS PASSENGER ELEVATORS PLANNING GUIDE (OUG)

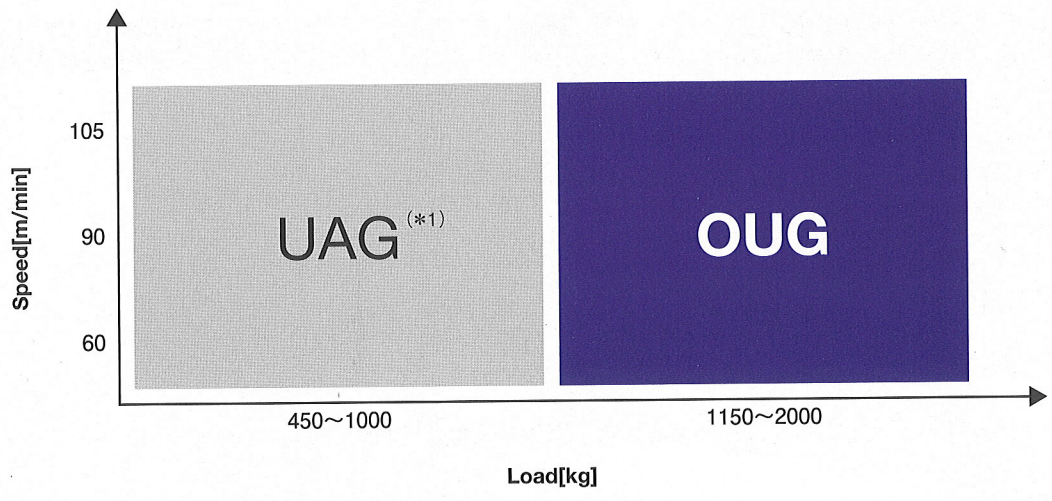


Selecting the most suitable elevator configuration
is the key to realizing an effective vertical
transportation system in a building.

Please use the information for Hitachi's OUG series
contained herein to serve you
in your overall plans for a building.

HITACHI's MACHINE ROOM-LESS ELEVATORS RANGE

Speed and Loading Capacity



Remarks
1. For detailed information on UAG model, please refer to Hitachi's UAG catalogue.

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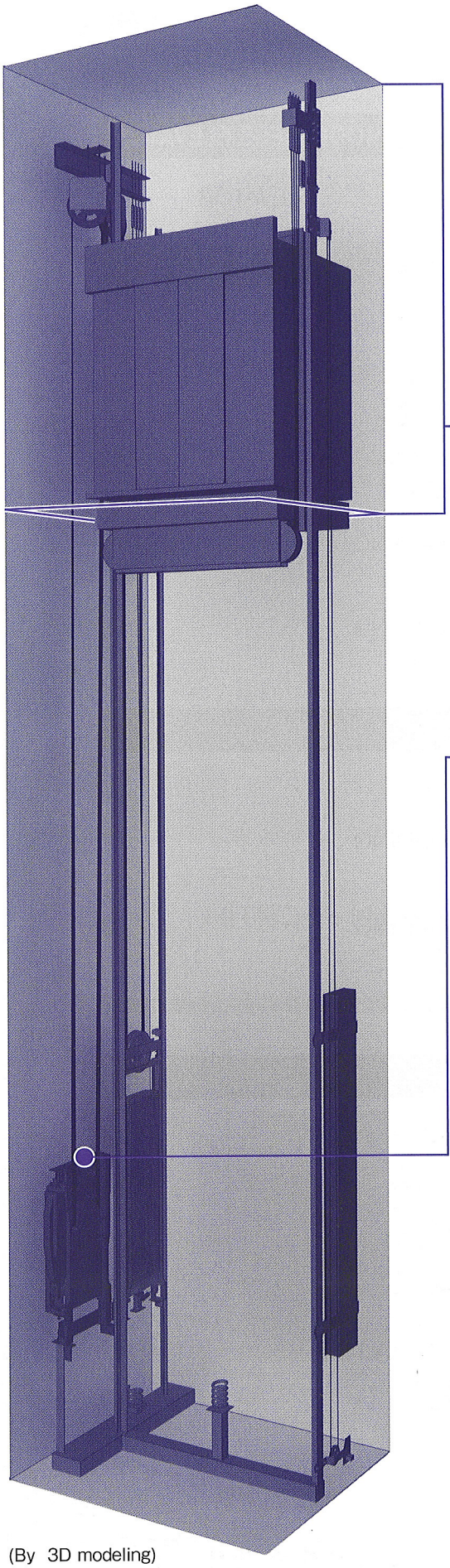


(By 3D modeling)

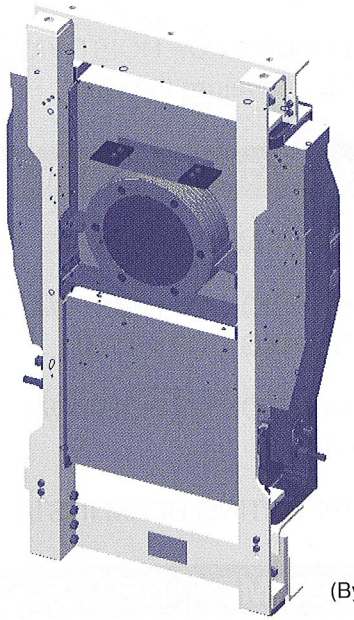
OUG

OUG Basic specifications

- Load : 1150 - 2000 kg
- Speed : 60, 90, 105 m/min
- Travel distance : Maximum 60 m
- Number of stop floors : Maximum 25 stops

OUG Overhead height

- By locating slim-type gearless traction machine on the lower zone and side of the hoistway, overhead height is reduced.



(By 3D modeling)

OUG Reaction loading

- Reaction loading (*1) from elevator equipment, transmitted via guide rail, is supported by pit floor.

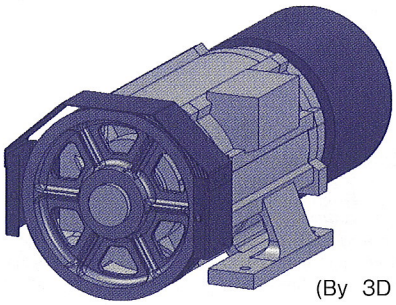
OUG-10T

OUG-10T Basic specifications

- Load : 1150 - 2000 kg
- Speed : 60, 90, 105 m/min
- Travel distance : Maximum 80 m
- Number of stop floors : Maximum 32 stops

OUG-10T Hoistway size

- By locating cylindrical-type gearless traction machine on the higher zone of the hoistway, hoistway size is reduced.



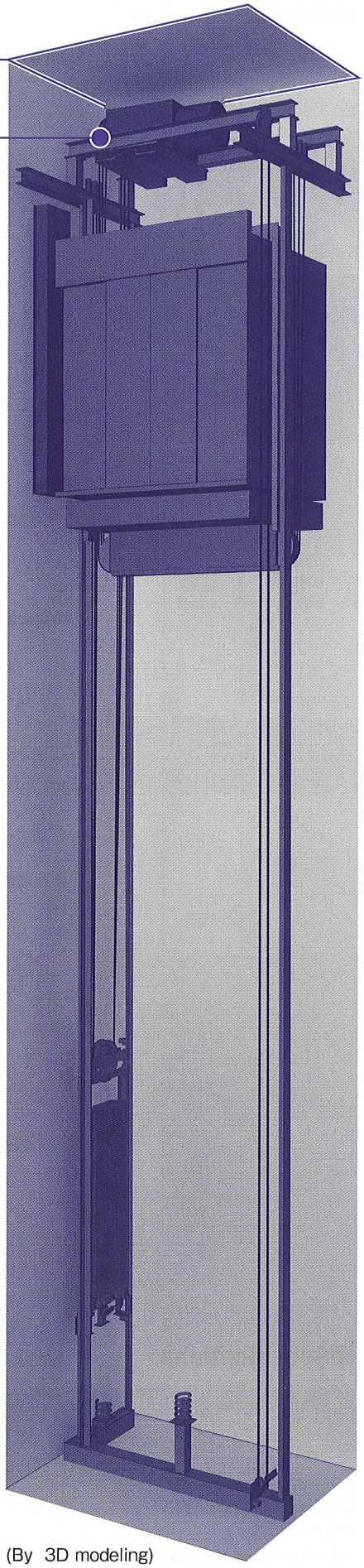
(By 3D modeling)

OUG-10T Reaction loading

- Reaction loading (*2) from elevator equipment, transmitted via supporting beam, is supported by hoistway wall.

Remarks

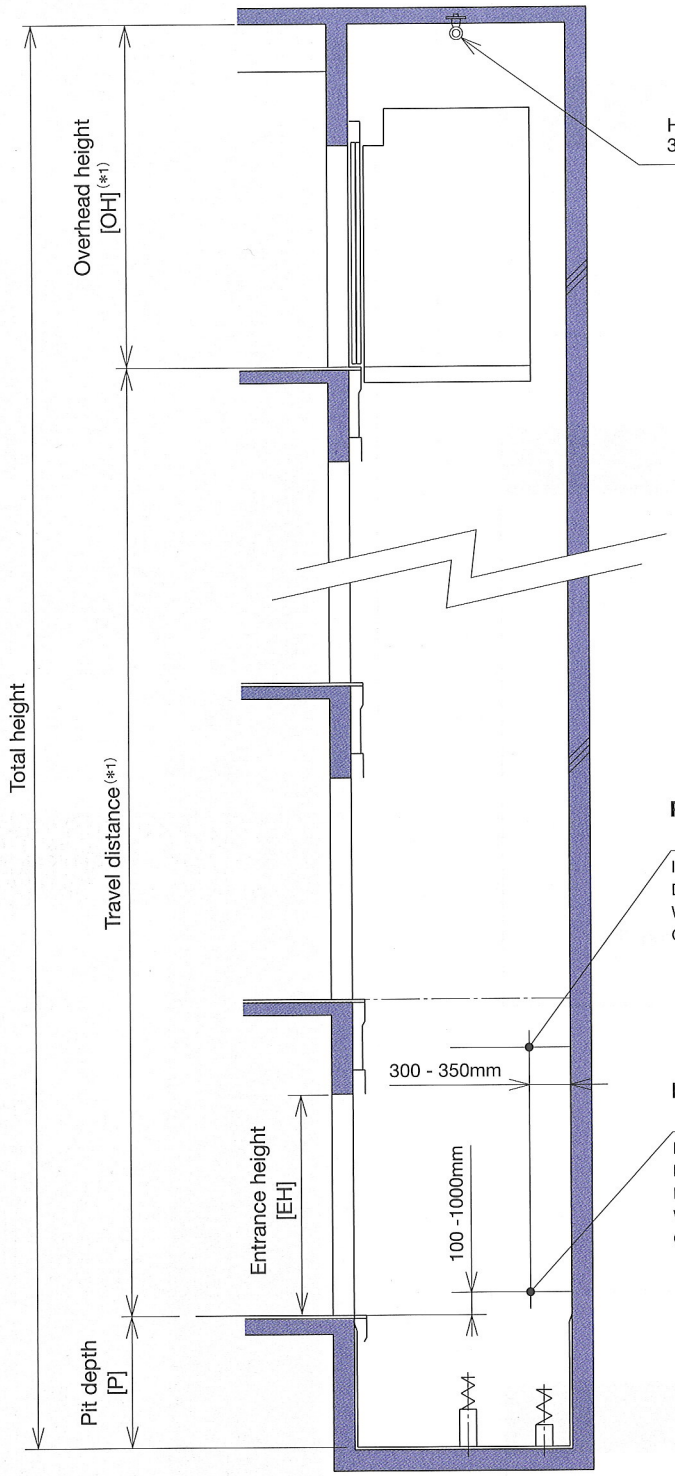
1. Concrete values are shown in page8,10,12,14 as RC2,RC3,RW2,RW3.
2. Concrete values are shown in page21 as R1-R4.



(By 3D modeling)

OVERHEAD HEIGHT AND PIT DEPTH

■Hoistway section



Plan B : Power Outlet (By others)
[Around the Ceiling level of lowest floor]

In case power outlet can't be provided in PLAN A
Duct length from hoistway wall : 50mm
Wiring length from hoistway wall : 6500mm + floor height
Circuit breaker (By others)

Plan A : Power Outlet (By others)
[Around the Floor level of lowest floor]

Power supply for motor : 3 Phase, 380-440V, 50Hz×1 circuit
Power supply for lighting : 1 Phase, 200-220V, 50Hz,1mmϕ×1 circuit
Duct length from hoistway wall : 50mm
Wiring length from hoistway wall : 7500mm
Circuit breaker (By others)

■Specifications

Maximum travel distance		60 m
Maximum number of stops		25 stops
Minimum floor height	EH < 2100mm	2500mm
	EH ≧ 2100mm	EH + 400mm

Remarks
1. If total number of floors is 2, please consult Hitachi or local agent about minimum travel distance and overhead height.

■Dimension for overhead height (OUG)

Load [kg]	Speed [m/min]	Minimum overhead height : OH [mm]							
		Counterweight location : Rear				Counterweight location : Side			
		EN	HKG COP	KFB	SS550	EN	HKG COP	KFB	SS550
1150	60	4150 (4250)			4200 (4300)	3800 (3900)	3950 (4050)	3800 (3900)	3750 (3850)
1350									
1600									
1800						3800 (3850)		3800 (3850)	3750 (3650)
2000									
1150	90	4300 (4400)				4100 (4200)	4100 (4200)	4100 (4200)	4050 (4150)
1350									
1600									
1800						4150 (4000)	4150 (4200)	4150 (4000)	4100 (3950)
2000									
1150	105	4350 (4450)			4400 (4500)	4250 (4350)	4250 (4350)	4250 (4350)	4150 (4250)
1350									
1600									
1800						4300 (4150)	4300 (4250)	4300 (4150)	4200 (4050)
2000									

■Dimension for pit depth (OUG)

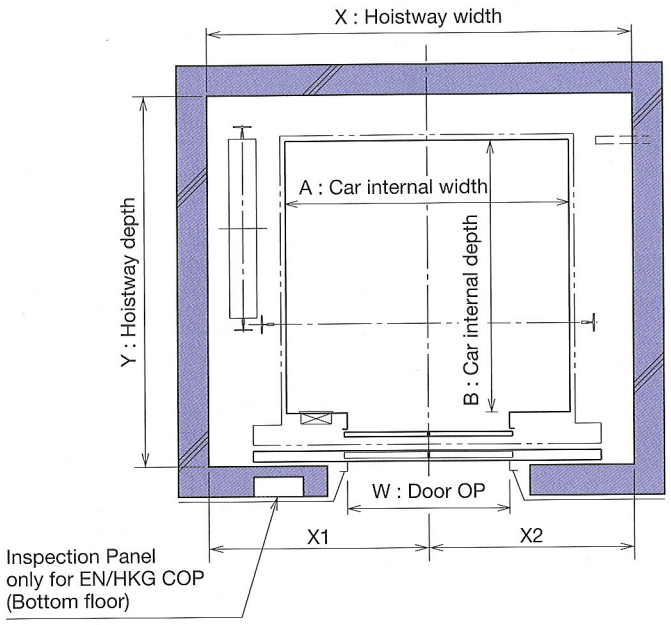
Load [kg]	Speed [m/min]	Minimum pit depth : P [mm]								Maximum pit depth : P [mm]
		Counterweight location : Rear				Counterweight location : Side				Counterweight location : Rear/Side
		EN	HKG COP	KFB	SS550	EN	HKG COP	KFB	SS550	EN/HKG COP/KFB/SS550
1150	60	1550			1650	1550			1650	2150
1350										
1600		1650			1750	1650			1750	
1800		1650 (1850)			1750 (1950)	1650 (1850)			1750 (1950)	
2000										
1150	90	1650 (1700)			1750 (1800)	1650 (1700)			1750 (1800)	2150
1350										
1600										
1800		1650 (1900)			1750 (2000)	1650 (1900)			1750 (2000)	
2000										
1150	105	1700 (1750)			1800 (1850)	1700 (1750)			1800 (1850)	2150
1350										
1600										
1800		1700 (1950)			1800 (2050)	1700 (1950)			1800 (2050)	
2000										

Remarks

1. If bare ceiling height is more than 2300mm, please consult to Hitachi or local agent.
2. ( ) : For 30 < travel distance ≦60 m
3. If total number of floors is 2, please consult Hitachi or local agent about minimum travel distance and overhead height.

DIMENSION OF HOISTWAY AND PIT REACTION LOADING [EN / HKG COP / KFB]

■Hoistway dimension (OUG, Counterweight location : Side)



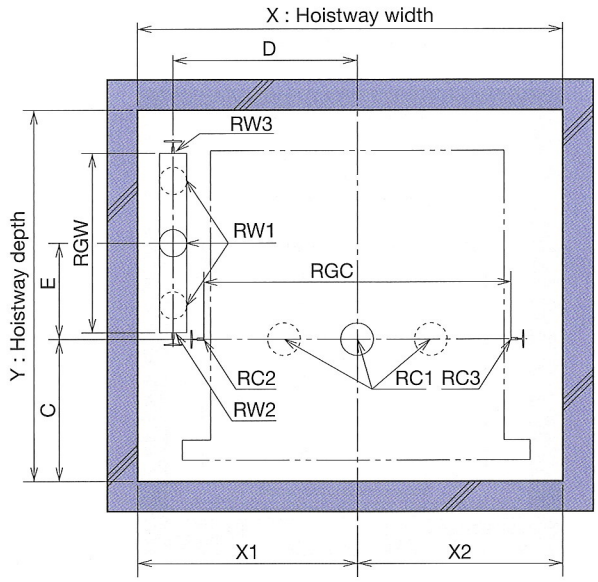
■Dimension of hoistway

Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Door OP width W [mm]	Hoistway X × Y [mm]	Location [mm]	
					X1	X2
1150	60	1800 × 1450	1000	2750 × 2050	1575	1175
	90					
	105					
1350	60	1800 × 1650	1000	2750 × 2050	1575	1175
	90			2800 × 2050		1225
	105					
	60	2000 × 1500	1100	2950 × 2050	1675	1275
	90			3000 × 2050		1325
	105					
1600	60	2000 × 1700	1100	3000 × 2150	1735	1265
	90			3050 × 2150	1750	1300
	105					
	60	2100 × 1650	1100	3100 × 2100	1785	1315
	90			3150 × 2100	1800	1350
	105					
1800	60	2000 × 1850	1100	3000 × 2300 (3050 × 2400)	1735 (1750)	1265 (1300)
	90			3050 × 2300 (3050 × 2400)	1750	1300
	105					
2000	60	2000 × 2000	1100	3000 × 2450 (3050 × 2550)	1735 (1750)	1265 (1300)
	90			3050 × 2450 (3050 × 2550)	1750	1300
	105					

Remarks

1. ( ) : For 30 < travel distance ≦60 m
2. Above table shows the dimension for single elevator in hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

■Pit and reaction loading (OUG, Counterweight location : Side)



In case of 2 buffers

■Pit and reaction loading

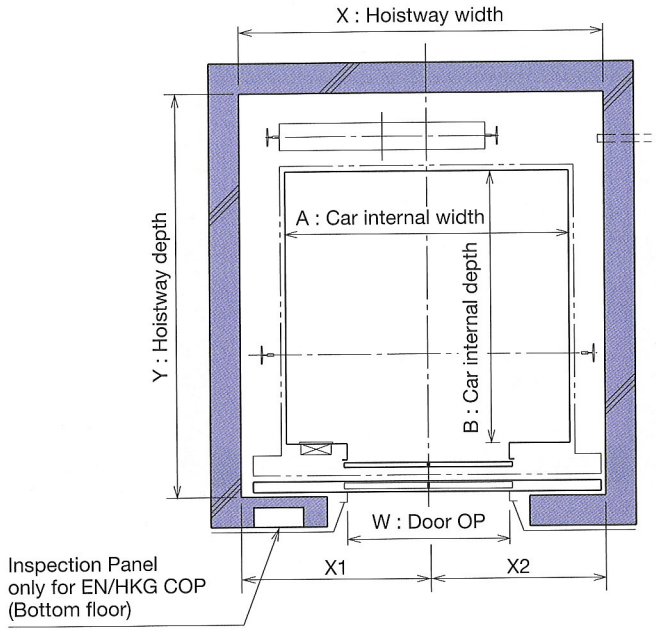
Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Location [mm]							Pit reaction loading [kN]					
										Car side			Counterweight side		
			X1	X2	C	D	E	RGC	RGW	RC1	RC2	RC3	RW1	RW2	RW3
1150	60	1800 × 1450	1575	1175	655	1415	425	1940	1250	71.5 × 2sets	56 (61.5)	41.5 (46.5)	61 × 2sets	54 (59.5)	21.5 (26.5)
	90									132.5			112.5		
	105									138.5			117.5		
1350	60	1800 × 1650	1575	1175	655	1415	425	1940	1250	80 × 2sets	60 (65)	45 (50.5)	68 × 2sets	58 (63)	23.5 (29)
	90			1225						148.5			125		
	105									155.5			131		
	60	2000 × 1500	1675	1275		1515		2140		80 × 2sets			68 × 2sets		
	90			1325						148.5			125		
	105									155.5			131		
1600	60	2000 × 1700	1735	1265	705	1580	425	2140	1550	120	66.5 (72)	50.5 (55.5)	76 × 2sets	61 (66.5)	30 (35)
	90		1750	1300						168			140		
	105									176			146.5		
	60	2100 × 1650	1785	1315	655	1630		2240		120			76 × 2sets		
	90		1800	1350						168			140		
	105									176			146.5		
1800	60	2000 × 1850	1735 (1750)	1265 (1300)	855	1580	425 (525)	2140	1550	132 (135)	71.5 (77.5)	54.5 (61)	83 × 2sets (85.5 × 2sets)	65.5 (79.5)	32.5 (31.5)
	90		1750	1300						184.5 (189)			152.5 (157)		
	105									193 (197)			159.5 (164)		
2000	60	2000 × 2000	1735 (1750)	1265 (1300)	985	1580	425 (525)	2140	1550	72 × 2sets (73.5 × 2sets)	75 (81.5)	58.5 (65)	90 × 2sets (92.5 × 2sets)	69.5 (83.5)	35 (33.5)
	90		1750	1300						100.5 × 2sets (103 × 2sets)			165 (169.5)		
	105									105 × 2sets (107.5 × 2sets)			173 (177.5)		

Remarks

1. ( ) : For 30 < travel distance ≦60 m
2. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

DIMENSION OF HOISTWAY AND PIT REACTION LOADING [EN / HKG COP / KFB]

■Hoistway dimension (OUG, Counterweight location : Rear)



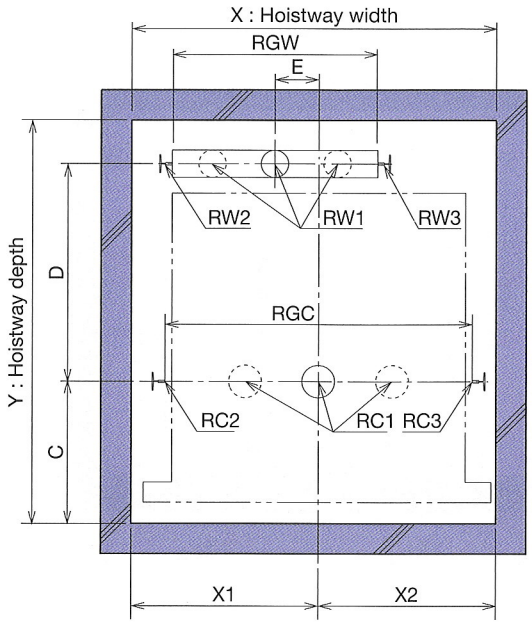
■Dimension of hoistway

Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Door OP width W [mm]	Hoistway X × Y [mm]	Location [mm]	
					X1	X2
1150	60	1800 × 1450	1000	2500 × 2300	1350	1150
	90					
	105					
1350	60	1800 × 1650	1000	2500 × 2300	1350	1150
	90					
	105					
	60	2000 × 1500	1100	2700 × 2300	1425	1275
	90					
	105					
1600	60	2000 × 1700	1100	2750 × 2400	1460	1290
	90					
	105					
	60	2100 × 1650	1100	2850 × 2350	1550	1300
	90					
	105					
1800	60	2000 × 1850	1100	2750 × 2550	1460	1290
	90					
	105					
2000	60	2000 × 2000	1100	2750 × 2650	1460	1290
	90					
	105					

Remarks

1. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

■Pit and reaction loading (OUG, Counterweight location : Rear)



In case of 2 buffers

■Pit and reaction loading

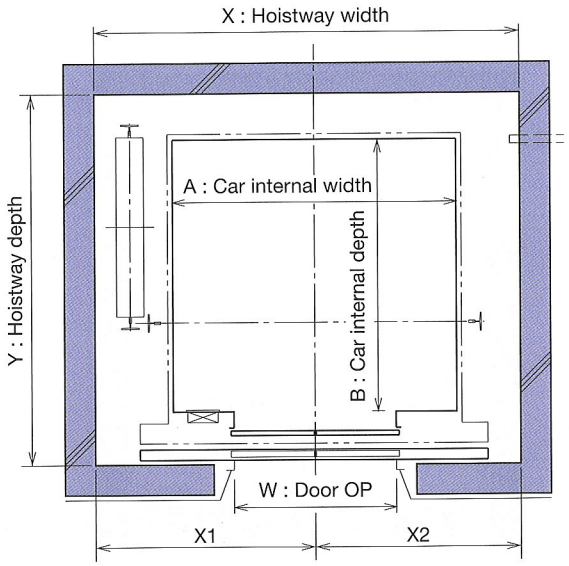
Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Location [mm]							Pit reaction loading [kN]					
										Car side			Counterweight side		
			X1	X2	C	D	E	RGC	RGW	RC1	RC2	RC3	RW1	RW2	RW3
1150	60	1800 × 1450	1350	1150	655	1465	345	1940	1250	71.5 × 2sets	37 (42.5)	41.5 (46.5)	61 × 2sets	59.5 (65)	35 (40.5)
	90									132.5			112.5		
	105									139			117.5		
1350	60	1800 × 1650	1350	1150	655	1465	345	1940	1250	80 × 2sets	39.5 (45)	45 (50.5)	68 × 2sets	64 (69.5)	38 (43.5)
	90									148.5			125		
	105									155.5			131		
	60	2000 × 1500	1425	1275			445	2140		80 × 2sets			68 × 2sets		
	90									148.5			125		
	105									155.5			131		
1600	60	2000 × 1700	1460	1290	705	1505	295	2140	1550	120	45.5 (50.5)	50.5 (55.5)	76 × 2sets	70.5 (76)	42 (47.5)
	90									168			140		
	105									176			146.5		
	60	2100 × 1650	1550	1300	655		345	2240		120			76 × 2sets		
	90									168			140		
	105									176			146.5		
1800	60	2000 × 1850	1460	1290	855	1505	295	2140	1550	132 (135)	48.5 (54.5)	54.5 (61)	83 × 2sets (85.5 × 2sets)	76 (83)	45.5 (51.5)
	90									184.5 (189)			152.5 (157)		
	105									193 (197)			159.5 (164)		
2000	60	2000 × 2000	1460	1290	985	1505	295	2140	1550	72 × 2sets (73.5 × 2sets)	51.5 (57)	58.5 (65)	90 × 2sets (92.5 × 2sets)	80.5 (87)	48 (54.5)
	90									100.5 × 2sets (103 × 2sets)			165 (169.5)		
	105									105 × 2sets (107.5 × 2sets)			173 (177.5)		

Remarks

1. ( ) : For 30 < travel distance ≦60 m
2. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

DIMENSION OF HOISTWAY AND PIT REACTION LOADING [SS550]

■Hoistway dimension (OUG, Counterweight location:Side)



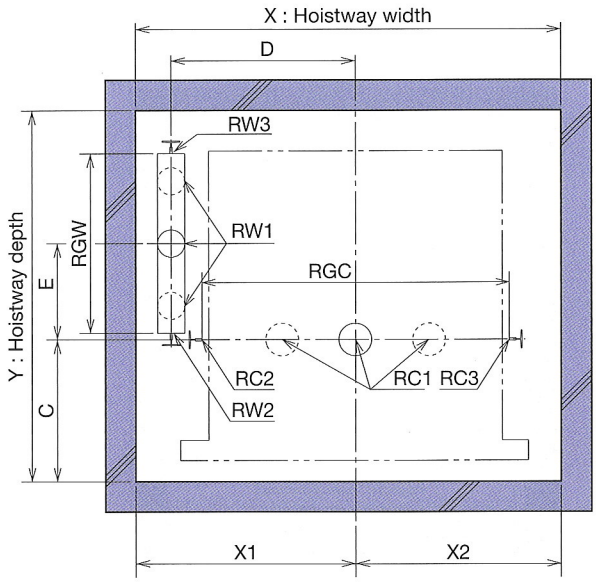
■Dimension of hoistway

Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Door OP width W [mm]	Hoistway X × Y [mm]	Location [mm]	
					X1	X2
1150	60	1800 × 1500	1000	2750 × 2050	1575	1175
	90					
	105					
1350	60	1800 × 1750	1000	2750 × 2150	1575	1175
	90			2800 × 2150		1225
	105					
	60	2000 × 1550	1100	2950 × 2050	1675	1275
	90			3000 × 2050		1325
	105					
1600	60	2000 × 1750	1100	3000 × 2200	1735	1265
	90			3050 × 2200	1750	1300
	105					
	60	2100 × 1700	1100	3100 × 2150	1785	1315
	90			3150 × 2150	1800	1350
	105					
1800	60	2000 × 1950	1100	3000 × 2400 (3050 × 2500)	1735 (1750)	1265 (1300)
	90			3050 × 2400 (3050 × 2500)	1750	1300
	105					
2000	60	2000 × 2100	1100	3000 × 2500 (3050 × 2600)	1735 (1750)	1265 (1300)
	90			3050 × 2500 (3050 × 2600)	1750	1300
	105					

Remarks

1. ( ) : For 30 < travel distance ≦60 m
2. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

■Pit and reaction loading (OUG, Counterweight location:Side)



In case of 2 buffers

■Pit and reaction loading

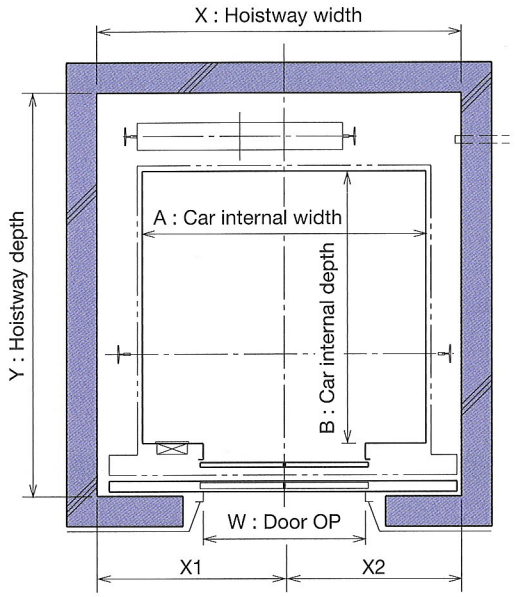
Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Location [mm]							Pit reaction loading [kN]					
										Car side			Counterweight side		
			X1	X2	C	D	E	RGC	RGW	RC1	RC2	RC3	RW1	RW2	RW3
1150	60	1800 × 1500	1575	1175	655	1415	425	1940	1250	71.5 × 2sets	56 (61.5)	41.5 (46.5)	61 × 2sets	54 (59.5)	21.5 (26.5)
	90									132.5			112.5		
	105									138.5			117.5		
1350	60	1800 × 1750	1575	1175	755	1415	425	1940	1250	80 × 2sets	60 (65)	45 (50.5)	68 × 2sets	58 (63)	23.5 (29)
	90			1225						148.5			125		
	105									155.5			131		
	60	2000 × 1550	1675	1275	655	1515		2140		80 × 2sets			68 × 2sets		
	90			1325						148.5			125		
	105									155.5			131		
1600	60	2000 × 1750	1735	1265	755	1580	425	2140	1550	120	66.5 (72)	50.5 (55.5)	76 × 2sets	61 (66.5)	30 (35)
	90		1750	1300						168			140		
	105									176			146.5		
	60	2100 × 1700	1785	1315	705	1630		2240		120			76 × 2sets		
	90		1800	1350						168			140		
	105									176			146.5		
1800	60	2000 × 1950	1735 (1750)	1265 (1300)	955	1580	425 (525)	2140	1550	132 (135)	71.5 (77.5)	54.5 (61)	83 × 2sets (85.5 × 2sets)	65.5 (79.5)	32.5 (31.5)
	90		1750	1300						184.5 (189)			152.5 (157)		
	105									193 (197)			159.5 (164)		
2000	60	2000 × 2100	1735 (1750)	1265 (1300)	1035	1580	425 (525)	2140	1550	72 × 2sets (73.5 × 2sets)	75 (81.5)	58.5 (65)	90 × 2sets (92.5 × 2sets)	69.5 (83.5)	35 (33.5)
	90		1750	1300						100.5 × 2sets (103 × 2sets)			165 (169.5)		
	105									105 × 2sets (107.5 × 2sets)			173 (177.5)		

Remarks

1. ( ) : For 30 < travel distance ≦60 m
2. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

DIMENSION OF HOISTWAY AND PIT REACTION LOADING [SS550]

■Hoistway dimension (OUG, Counterweight location:Rear)



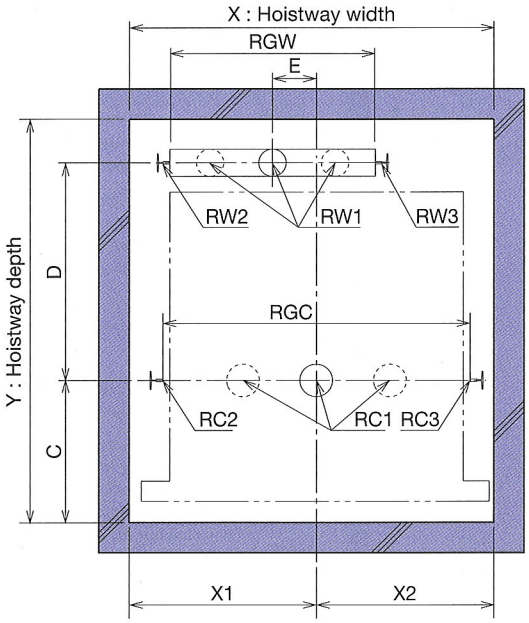
■Dimension of hoistway

Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Door OP width W [mm]	Hoistway X × Y [mm]	Location [mm]	
					X1	X2
1150	60	1800 × 1500	1000	2500 × 2300	1350	1150
	90					
	105					
1350	60	1800 × 1750	1000	2500 × 2400	1350	1150
	90					
	105					
	60	2000 × 1550	1100	2700 × 2300	1425	1275
	90					
	105					
1600	60	2000 × 1750	1100	2750 × 2500	1460	1290
	90					
	105					
	60	2100 × 1700	1100	2850 × 2400	1550	1300
	90					
	105					
1800	60	2000 × 1950	1100	2750 × 2650	1460	1290
	90					
	105					
2000	60	2000 × 2100	1100	2750 × 2750	1460	1290
	90					
	105					

Remarks

1. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

■Pit and reaction loading (OUG, Counterweight location:Rear)



In case of 2 buffers

■Pit and reaction loading

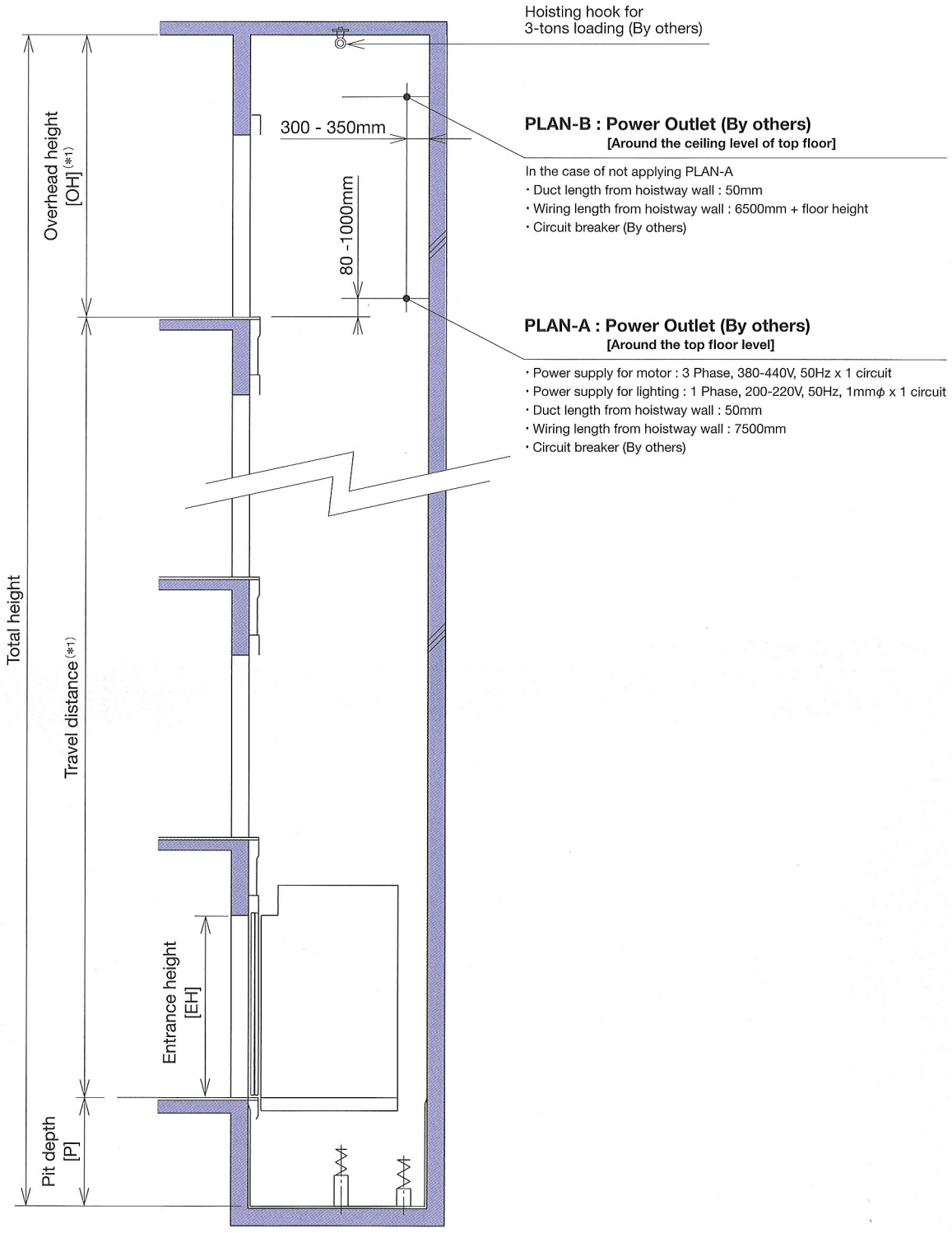
Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Location [mm]							Pit reaction loading [kN]					
										Car side			Counterweight side		
			X1	X2	C	D	E	RGC	RGW	RC1	RC2	RC3	RW1	RW2	RW3
1150	60	1800 × 1500	1350	1150	655	1465	345	1940	1250	71.5 × 2sets	37 (42.5)	41.5 (46.5)	61 × 2sets	59.5 (65)	35 (40.5)
	90									132.5			112.5		
	105									139			117.5		
1350	60	1800 × 1750	1350	1150	755	1465	345	1940	1250	80 × 2sets	39.5 (45)	45 (50.5)	68 × 2sets	64 (69.5)	38 (43.5)
	90									148.5			125		
	105									155.5			131		
	60	2000 × 1550	1425	1275	655		445	2140		80 × 2sets			68 × 2sets		
	90									148.5			125		
	105									155.5			131		
1600	60	2000 × 1750	1460	1290	755	1505	295	2140	1550	120	45.5 (50.5)	50.5 (55.5)	76 × 2sets	70.5 (76)	42 (47.5)
	90									168			140		
	105									176			146.5		
	60	2100 × 1700	1550	1300	705		345	2240		120			76 × 2sets		
	90									168			140		
	105									176			146.5		
1800	60	2000 × 1950	1460	1290	955	1505	295	2140	1550	132 (135)	48.5 (54.5)	54.5 (61)	83 × 2sets (85.5 × 2sets)	76 (83)	45.5 (51.5)
	90									184.5 (189)			152.5 (157)		
	105									193 (197)			159.5 (164)		
2000	60	2000 × 2100	1460	1290	1035	1505	295	2140	1550	72 × 2sets (73.5 × 2sets)	51.5 (57)	58.5 (65)	90 × 2sets (92.5 × 2sets)	80.5 (87)	48 (54.5)
	90									100.5 × 2sets (103 × 2sets)			165 (169.5)		
	105									105 × 2sets (107.5 × 2sets)			173 (177.5)		

Remarks

1. ( ) : For 30 < travel distance ≦60 m
2. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

OVERHEAD HEIGHT AND PIT DEPTH

■Hoistway section



PLAN-B : Power Outlet (By others)
[Around the ceiling level of top floor]

In the case of not applying PLAN-A
- Duct length from hoistway wall : 50mm
- Wiring length from hoistway wall : 6500mm + floor height
- Circuit breaker (By others)

PLAN-A : Power Outlet (By others)
[Around the top floor level]

- Power supply for motor : 3 Phase, 380-440V, 50Hz x 1 circuit
- Power supply for lighting : 1 Phase, 200-220V, 50Hz, 1mmϕ x 1 circuit
- Duct length from hoistway wall : 50mm
- Wiring length from hoistway wall : 7500mm
- Circuit breaker (By others)

■Specifications

Maximum travel distance		80 m
Maximum number of stops		32 stops
Minimum floor height	EH < 2100mm	2500mm
	EH ≧ 2100mm	EH + 400mm

Remarks
1. If total number of floors is 2, please consult Hitachi or local agent about minimum travel distance and overhead height.

■Dimension for overhead height (OUG-10T)

Load [kg]	Speed [m/min]	Minimum overhead height : OH [mm]			
		EN	HKG COP	KFB	SS550
1150	60	4350 (4400) 〈4450〉	4550 (4600) 〈4650〉	4350 (4400) 〈4450〉	4250 (4300) 〈4350〉
1350					
1600					
1800		4500 (4550) 〈4600〉	4700 (4750) 〈4800〉	4500 (4550) 〈4600〉	4400 (4450) 〈4500〉
2000					
1150	90	4500 (4550) 〈4600〉	4700 (4750) 〈4800〉	4500 (4550) 〈4600〉	4400 (4450) 〈4500〉
1350					
1600					
1800		4650 (4700) 〈4750〉	4850 (4900) 〈4950〉	4650 (4700) 〈4750〉	4550 (4600) 〈4650〉
2000					
1150	105	4600 (4650) 〈4700〉	4800 (4850) 〈4900〉	4600 (4650) 〈4700〉	4500 (4550) 〈4600〉
1350					
1600					
1800		4750 (4800) 〈4850〉	4950 (5000) 〈5050〉	4750 (4800) 〈4850〉	4650 (4700) 〈4750〉
2000					

■Dimension for pit depth (OUG-10T)

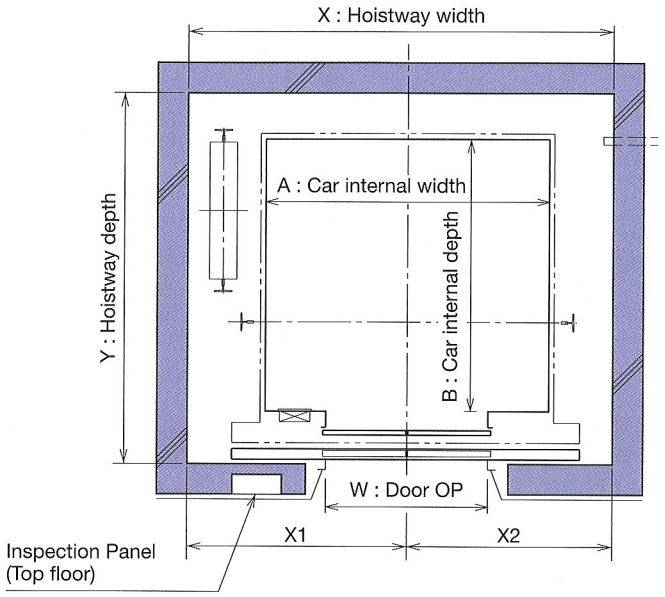
Load [kg]	Speed [m/min]	Minimum pit depth : P [mm]				Maximum pit depth : P [mm]
		EN	HKG COP	KFB	SS550	EN/HKG COP/KFB/SS550
1150	60	1550			1650	2200
1350						
1600		1650			1750	
1800						
2000						
1150	90	1650			1750	2200
1350						
1600						
1800						
2000						
1150	105	1700			1800	2200
1350						
1600						
1800						
2000						

Remarks

1. If bare ceiling height is more than 2300mm, please consult to Hitachi or local agent.
2. ( ) : For 30 < travel distance ≦60 m
   < > : For 60 < travel distance ≦80 m
3. If total number of floors is 2, please consult Hitachi or local agent about minimum travel distance and overhead height.

DIMENSION OF HOISTWAY AND PIT REACTION LOADING [EN / HKG COP / KFB]

■Hoistway dimension (OUG-10T)



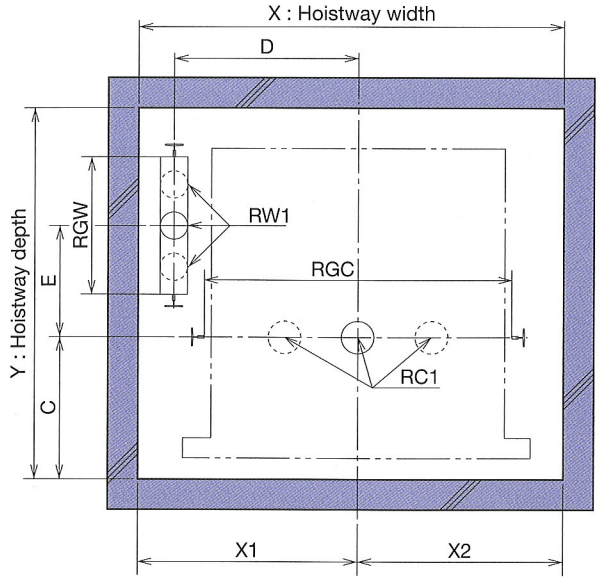
■Dimension of hoistway

Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Door OP width W [mm]	Hoistway X × Y [mm]	Location [mm]	
					X1	X2
1150	60	1800 × 1450	1000	2500 × 1850 〈2600 × 1850〉	1360 〈1385〉	1140 〈1215〉
	90					
	105					
1350	60	1800 × 1650	1000	2500 × 2050 〈2600 × 2050〉	1360 〈1385〉	1140 〈1215〉
	90					
	105					
	60	2000 × 1500	1100	2700 × 1900 〈2800 × 1900〉	1460 〈1485〉	1240 〈1315〉
	90					
	105					
1600	60	2000 × 1700	1100	2700 × 2100 〈2800 × 2100〉	1460 〈1485〉	1240 〈1315〉
	90					
	105					
	60	2100 × 1650	1100	2800 × 2050 〈2900 × 2050〉	1510 〈1535〉	1290 〈1365〉
	90					
	105					
1800	60	2000 × 1850	1100	2750 × 2250 〈2850 × 2250〉	1510 〈1535〉	1240 〈1315〉
	90					
	105					
2000	60	2000 × 2000	1100	2750 × 2400 〈2850 × 2400〉	1510 〈1535〉	1240 〈1315〉
	90					
	105					

Remarks

1. < > : For 60 < travel distance ≦80 m
2. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

■Pit and reaction loading (OUG-10T)



In case of 2 buffers

■Pit and reaction loading

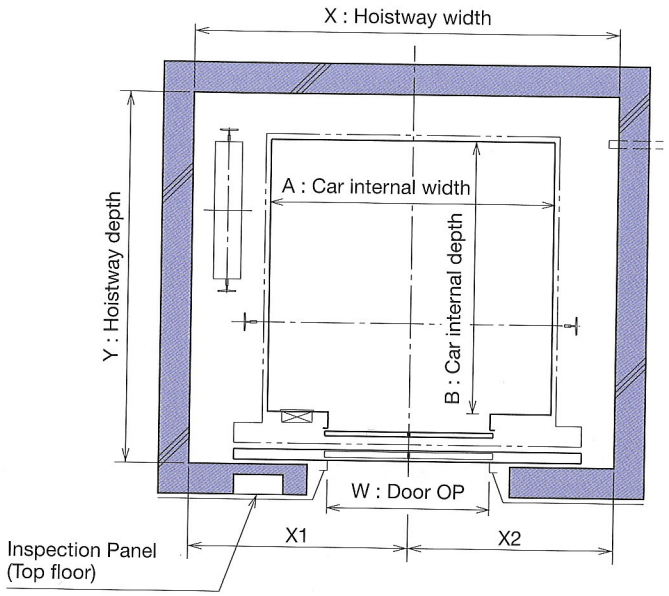
Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Location [mm]							Pit reaction loading [kN]	
			X1	X2	C	D	E	RGC	RGW	Car side RC1	Counterweight side RW1
1150	60	1800 × 1450	1360 〈1385〉	1140 〈1215〉	655	1190	590	1940	800	71.5 × 2sets	61 × 2sets
	90									132.5	112.5
	105									139	117.5
1350	60	1800 × 1650	1360 〈1385〉	1140 〈1215〉	765	1190	590	1940	800	80 × 2sets	68 × 2sets
	90									148.5	125
	105									155.5	131
	60	2000 × 1500	1460 〈1485〉	1240 〈1315〉	655	1290	590	2140	800	80 × 2sets	68 × 2sets
	90									148.5	125
	105									155.5	131
1600	60	2000 × 1700	1460 〈1485〉	1240 〈1315〉	785	1290	590	2140	800	120	76 × 2sets
	90									168	140
	105									176	146.5
	60	2100 × 1650	1510 〈1535〉	1290 〈1365〉	765	1340	590	2240	800	120	76 × 2sets
	90									168	140
	105									176	146.5
1800	60	2000 × 1850	1510 〈1535〉	1240 〈1315〉	855	1290	640	2140	900	132	83 × 2sets
	90									178.5	146
	105									186.5	153
2000	60	2000 × 2000	1510 〈1535〉	1240 〈1315〉	985	1290	640	2140	900	72 × 2sets	90 × 2sets
	90									94.5 × 2sets	152.5
	105									98.5 × 2sets	159.5

Remarks

1. < > : For 60 < travel distance ≦80 m
2. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

DIMENSION OF HOISTWAY AND PIT REACTION LOADING [SS550]

■Hoistway dimension (OUG-10T)



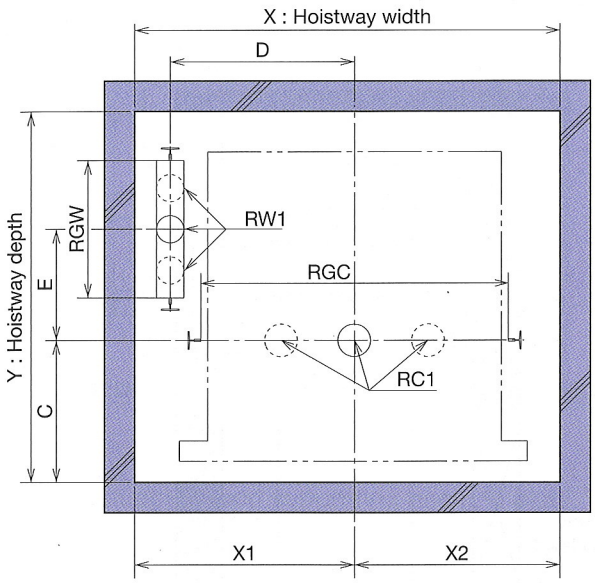
■Dimension of hoistway

Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Door OP width W [mm]	Hoistway X × Y [mm]	Location [mm]	
					X1	X2
1150	60	1800 × 1500	1000	2500 × 1900 〈2600 × 1900〉	1360 〈1385〉	1140 〈1215〉
	90					
	105					
1350	60	1800 × 1750	1000	2500 × 2150 〈2600 × 2150〉	1360 〈1385〉	1140 〈1215〉
	90					
	105					
	60	2000 × 1550	1100	2700 × 1950 〈2800 × 1950〉	1460 〈1485〉	1240 〈1315〉
	90					
	105					
1600	60	2000 × 1750	1100	2700 × 2150 〈2800 × 2150〉	1460 〈1485〉	1240 〈1315〉
	90					
	105					
	60	2100 × 1700	1100	2800 × 2100 〈2900 × 2100〉	1510 〈1535〉	1290 〈1365〉
	90					
	105					
1800	60	2000 × 1950	1100	2750 × 2350 〈2850 × 2350〉	1510 〈1535〉	1240 〈1315〉
	90					
	105					
2000	60	2000 × 2100	1100	2750 × 2500 〈2850 × 2500〉	1510 〈1535〉	1240 〈1315〉
	90					
	105					

Remarks

1. < > : For 60 < travel distance ≦80 m
2. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

■Pit and reaction loading (OUG-10T)



In case of 2 buffers

■Pit and reaction loading

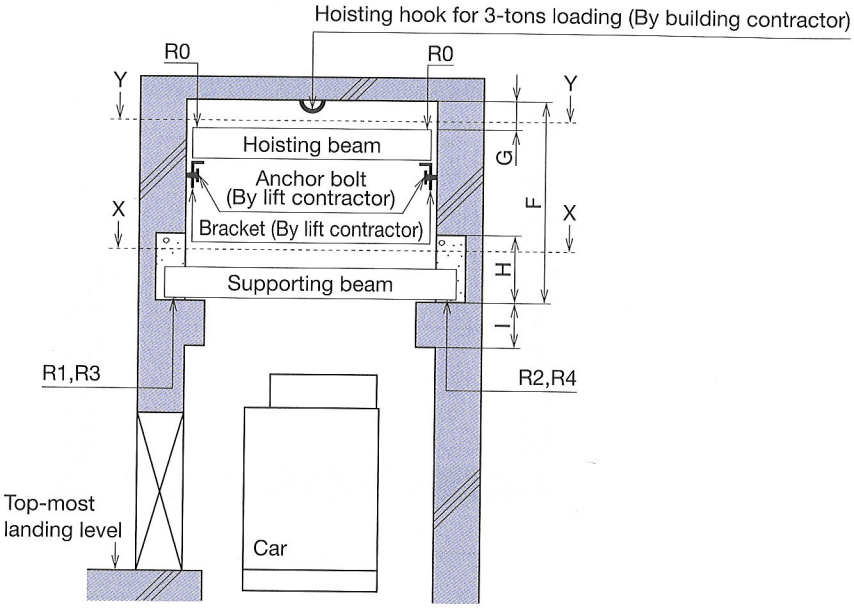
Load [kg]	Speed [m/min]	Car internal size A × B [mm]	Location [mm]							Pit reaction loading [kN]	
			X1	X2	C	D	E	RGC	RGW	Car side RC1	Counterweight side RW1
1150	60	1800 × 1500	1360 〈1385〉	1140 〈1215〉	665	1190	590	1940	800	71.5 × 2sets	61 × 2sets
	90									132.5	112.5
	105									139	117.5
1350	60	1800 × 1750	1360 〈1385〉	1140 〈1215〉	815	1190	590	1940	800	80 × 2sets	68 × 2sets
	90									148.5	125
	105									155.5	131
	60	2000 × 1550	1460 〈1485〉	1240 〈1315〉	715	1290	590	2140	800	80 × 2sets	68 × 2sets
	90									148.5	125
	105									155.5	131
1600	60	2000 × 1750	1460 〈1485〉	1240 〈1315〉	815	1290	590	2140	800	120	76 × 2sets
	90									168	140
	105									176	146.5
	60	2100 × 1700	1510 〈1535〉	1290 〈1365〉	785	1340	590	2240	800	120	76 × 2sets
	90									168	140
	105									176	146.5
1800	60	2000 × 1950	1510 〈1535〉	1240 〈1315〉	955	1290	640	2140	900	132	83 × 2sets
	90									178.5	146
	105									186.5	153
2000	60	2000 × 2100	1510 〈1535〉	1240 〈1315〉	1035	1290	640	2140	900	72 × 2sets	90 × 2sets
	90									94.5 × 2sets	152.5
	105									98.5 × 2sets	159.5

Remarks

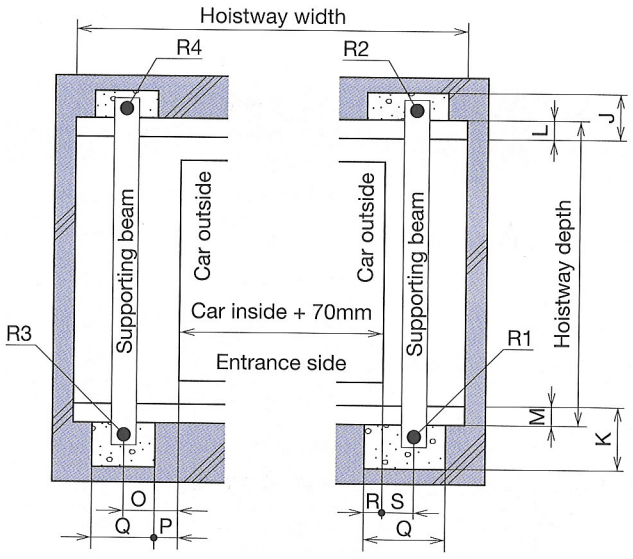
1. < > : For 60 < travel distance ≦80 m
2. Above table shows the dimension for single hoistway.
   Please consult Hitachi or local agent in the case multiple elevators in same hoistway are required.

LOCATION AND REACTION LOADING FOR SUPPORTING BEAM AND HOISTING HOOK

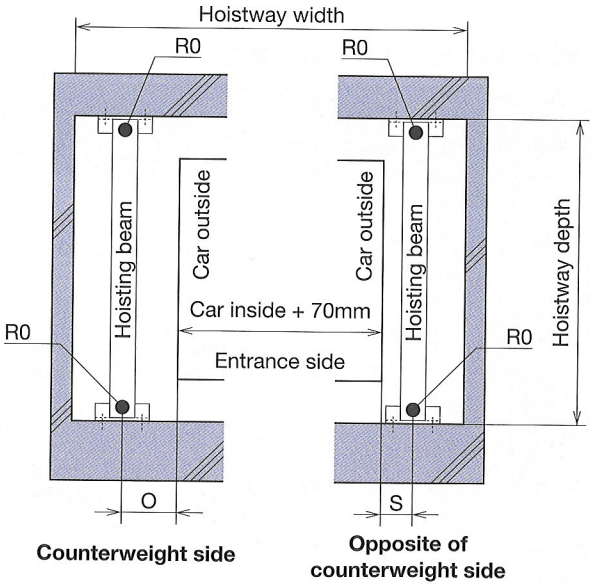
1. Parameters for each dimension and reaction loading of hoisting beam and cutout for installing supporting beam



Section X-X : Location and loading for supporting beam



Section Y-Y : Location and loading for hoisting beam



: Grouting by building contractor

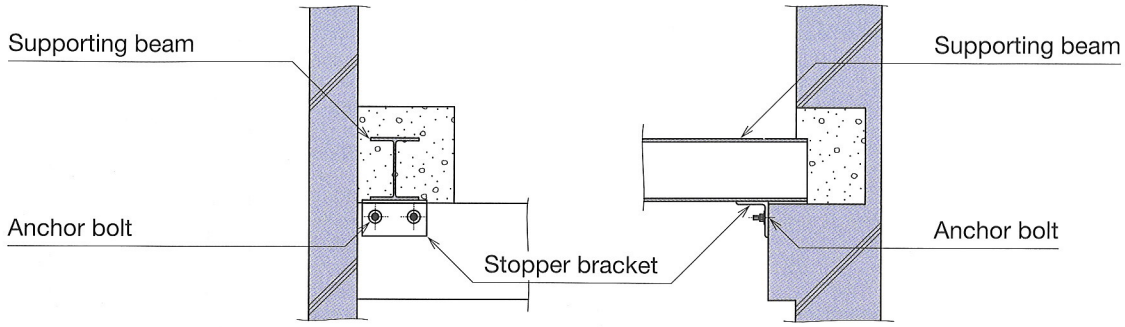
2. Cutout size, location, and reaction loading

Load [kg]	Speed [m/min]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	O [mm]	P [mm]	Q [mm]	R [mm]	S [mm]	R0 [kN]	R1 [kN]	R2 [kN]	R3 [kN]	R4 [kN]
1150	60 90 105	Min. 1100	50	Min. 400	Max. 300	Min. 150	Min. 300	Max. 50	Max. 85	300	125	Min. 300	95	100	15	30	27	51	60
1350	60 90 105	Min. 1100	50	Min. 400	Max. 300	Min. 150	Min. 300	Max. 50	Max. 85	300	125	Min. 300	95	100	15	32	28	58	66
1600	60 90 105	Min. 1100	50	Min. 400	Max. 300	Min. 150	Min. 300	Max. 50	Max. 85	300	125	Min. 300	95	100	15	34	32	62	73
1800	60 90 105	Min. 1175	50	Min. 400	Max. 300	Min. 150	Min. 300	Max. 50	Max. 85	320	125	Min. 300	95	100	15	36	34	63	78
2000	60 90 105	Min. 1175	50	Min. 400	Max. 300	Min. 150	Min. 300	Max. 50	Max. 85	320	125	Min. 300	95	100	15	37	37	63	83

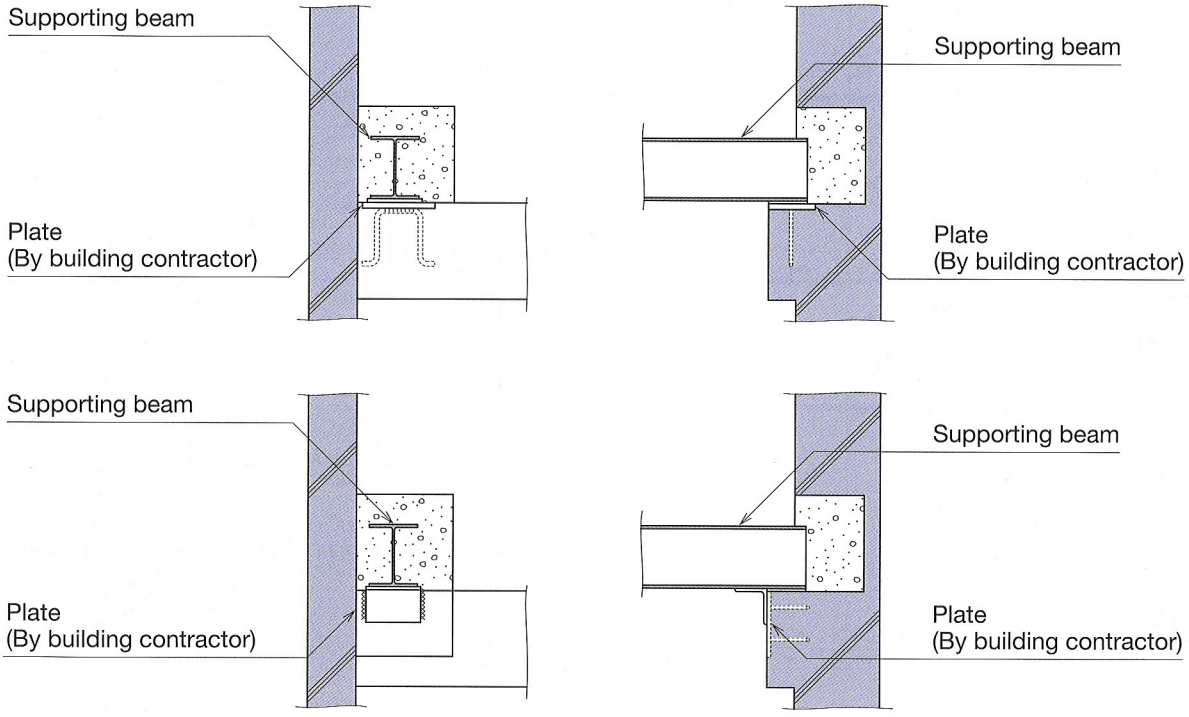
3. Method of installing supporting beam

① **For concrete structure building :**

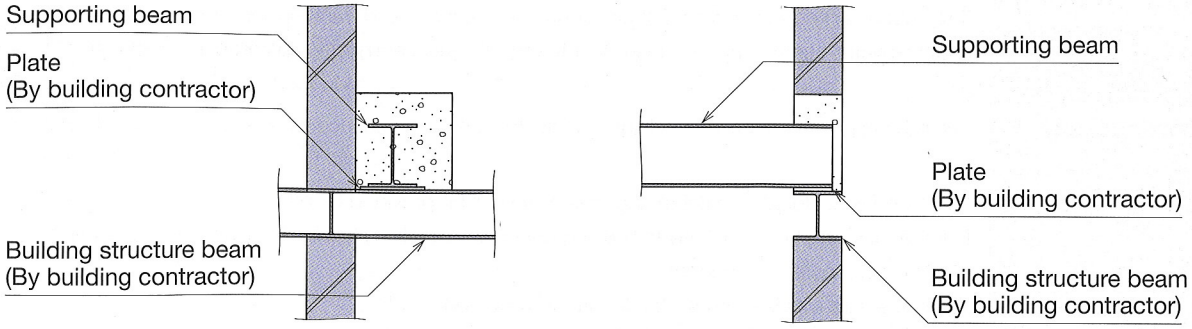
(1) Weld supporting beam to stopper bracket fixed with building by anchor bolts.



(2) Provide the plate(by building contractor), and supporting beam to plate.



② **For steel frame structure building :** Weld supporting beam to steel frame.

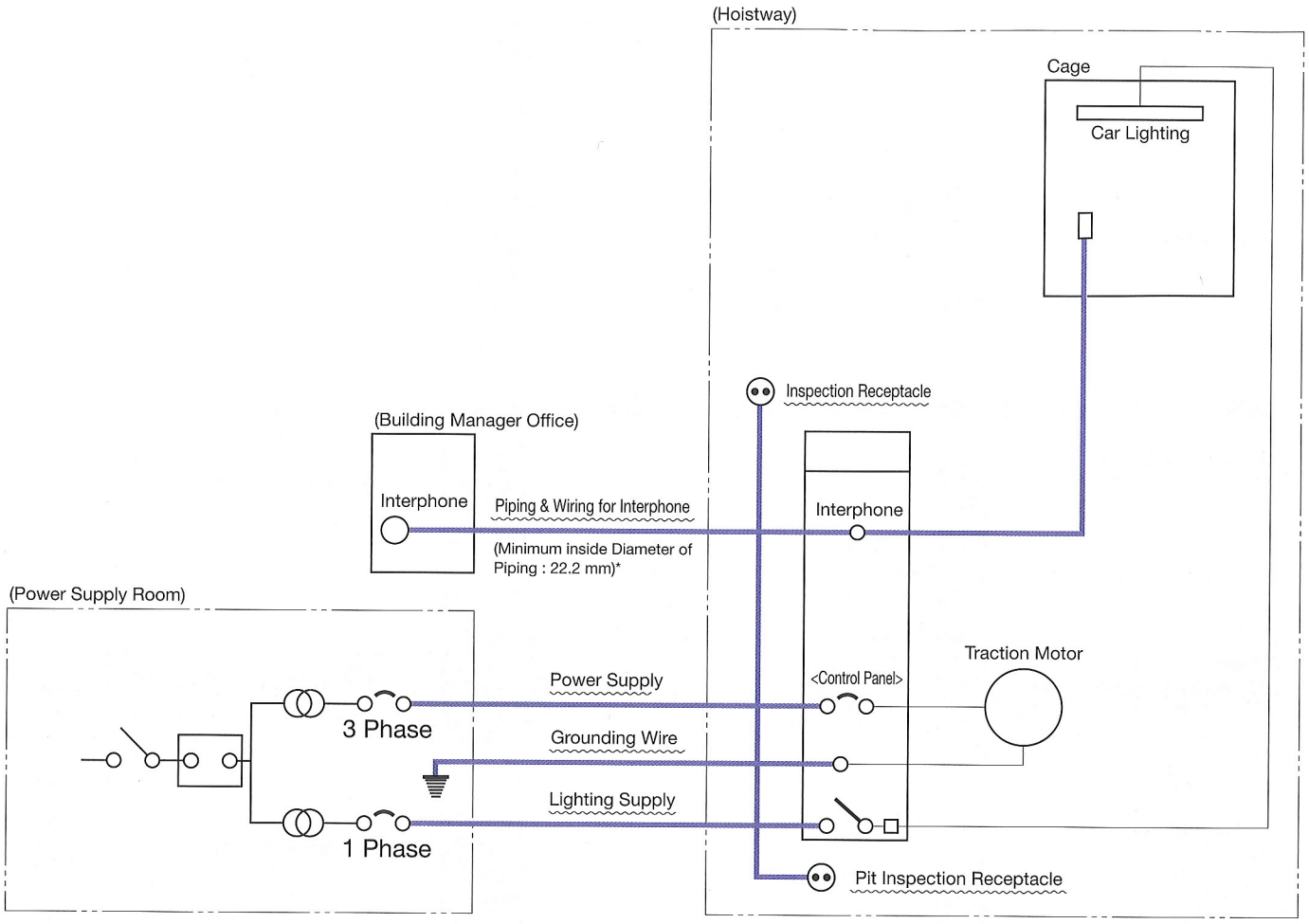


Remarks

1. In the case hoistway wall does not have enough strength for supporting reaction loading (e.g. brick etc.), please supply building structure beam, which has enough strength for reaction loading to install supporting beam as same as steel frame structure building shown as above figure.

Wiring diagram

(~~~~) and (———) shows the works to be done by others.



*In case building management office has only one interphone unit.

Main power supply	Building contract installs facilities to ensure that power does not fluctuate outside the range of −10% to +10% of the normal voltage rating and to ensure that the unbalance factor of voltage does not exceed 5%. It should be noted that insufficient circuit breaker capacity and transformer capacity may adversely affect elevator control and/or cause trouble with electrical equipment installed in the building.
Lighting power supply	The lighting power supply for car lighting indicators and maintenance work shall be provided by others.
Interphone	Pipes and wires located outside and hoistway shall be provided by others. Number of wiring from hoistway to building management office shall be "7+ Number of Elevators" (for 1unit of master interphone). When the wire size is 0.9mm^2, the length shall be 200m or less. When the wiring distance exceeds 200m, please consult Hitachi for details.
Pit inspection receptacle	10A power outlet for maintenance shall be provided by others under the entrance floor level.

■Required capacity of circuit breaker, transformer & starting power at building side

Load [kg]	Speed [m/min]	Motor capacity [kW]	Supply voltage [V]	Breaker capacity [A]			Transformer capacity [kVA]			Starting power [kVA]	Lead-in wire for drive [mm²]			Earth wire [mm²]	Calorific value [kcal/hr]
				1 unit	2 units	3 units	1 unit	2 units	3 units		1 unit	2 units	3 units		
1150	60	7.1	200~220	50	60	100	7	12	17	24	38	60	100	3.5	1540
			380~440	40	40	40					8	14	22	3.5	
	90	11	200~220	60	100	125	9	16	22	34	60	100	150	5.5	2300
			380~440	40	50	60					14	22	38	3.5	
	105	13	200~220	75	100	150	11	19	26	40	60	150	200	5.5	2700
			380~440	50	50	75					14	22	38	3.5	
1350	60	8.3	200~220	50	75	100	8	14	19	27	38	100	100	3.5	1800
			380~440	40	40	50					8	14	22	3.5	
	90	13	200~220	75	100	150	11	19	26	40	60	150	200	5.5	2700
			380~440	50	50	75					14	22	38	3.5	
	105	15	200~220	100	125	150	12	21	29	45	100	150	250	5.5	3150
			380~440	50	60	75					14	38	38	3.5	
1600	60	9.9	200~220	60	75	125	9	16	22	31	60	100	150	5.5	2140
			380~440	40	40	60					14	22	22	3.5	
	90	15	200~220	100	125	150	12	21	29	46	100	150	250	5.5	3200
			380~440	50	60	75					14	38	38	3.5	
	105	18	200~220	125	150	150	15	26	36	54	100	200	325	5.5	3740
			380~440	50	75	100					22	38	60	3.5	
1800	60	12	200~220	75	100	125	10	17	24	37	60	100	200	5.5	2380
			380~440	40	50	60					14	22	38	3.5	
	90	17	200~220	100	125	150	14	24	33	51	100	200	325	5.5	3600
			380~440	50	60	100					14	38	38	3.5	
	105	20	200~220	125	150	150	16	28	38	60	100	200	400	5.5	4200
			380~440	60	75	100					22	38	60	5.5	
2000	60	13	200~220	75	100	150	11	19	26	40	60	150	200	5.5	2670
			380~440	50	50	75					14	22	38	3.5	
	90	19	200~220	125	150	150	15	26	36	57	100	200	400	5.5	3800
			380~440	60	75	100					22	38	60	5.5	
	105	22	200~220	125	150	150	18	31	43	65	150	250	500	5.5	4670
			380~440	60	100	125					22	38	60	5.5	

Remarks

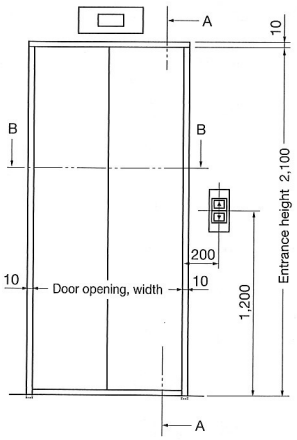
1. Maximum length of lead-in wire is 150m.

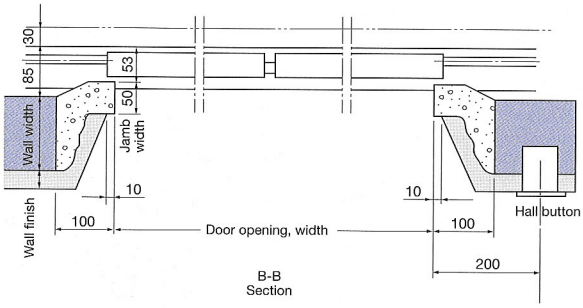
ENTRANCE DETAILS

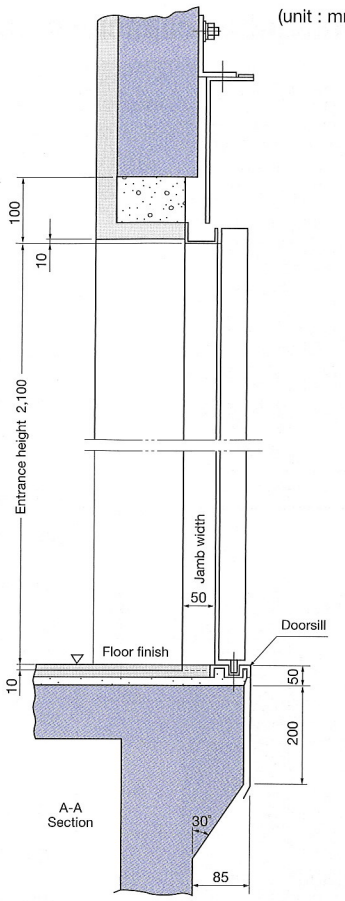
■AS-1X Type Jamb (Standard)

(unit : mm)

Building structure (By other contractors)
Wall and floor finishing (By other contractors)
Grouting (By other contractors)



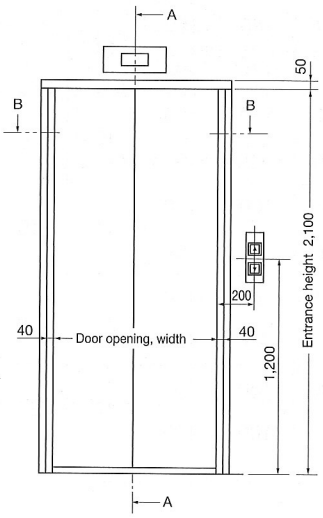


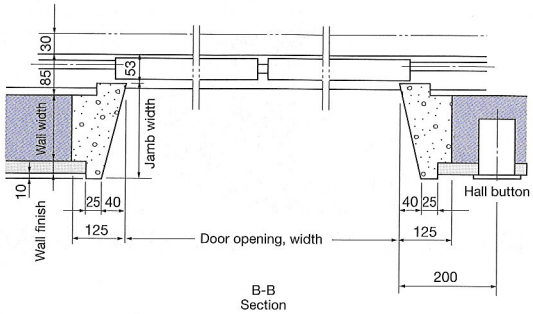


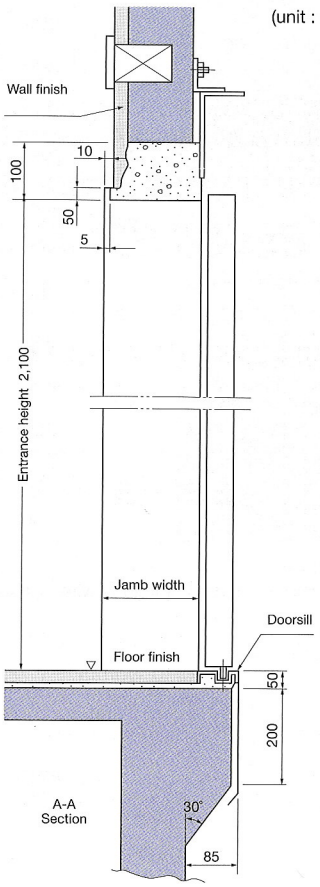
■TS-1X Type Jamb (Option)

(unit : mm)

Building structure (By other contractors)
Wall and floor finishing (By other contractors)
Grouting (By other contractors)







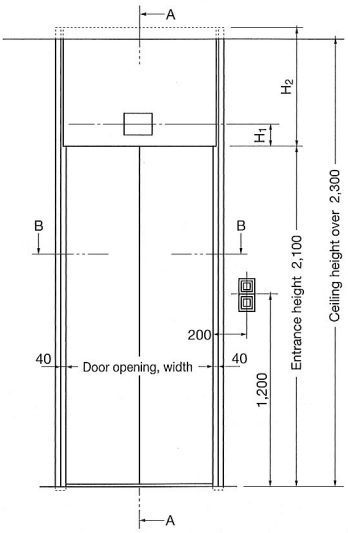
■TL-2X Type Jamb (option)

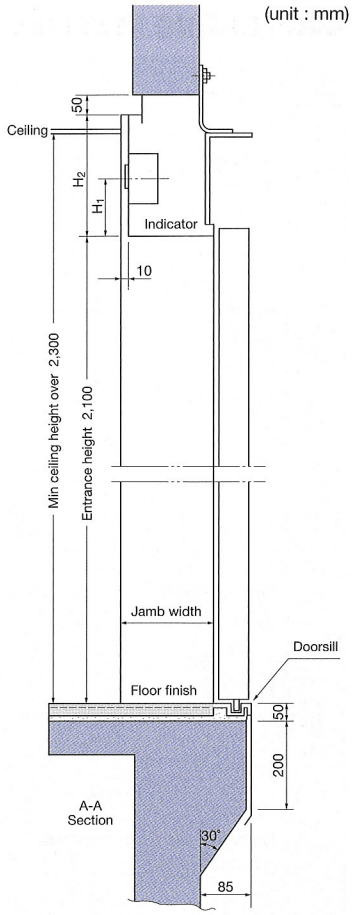
(unit : mm)

Building structure (By other contractors)

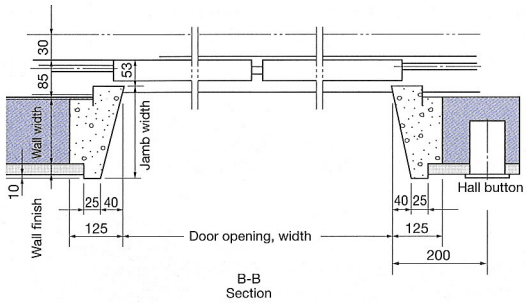
Wall and floor finishing (By other contractors)

Grouting (By other contractors)





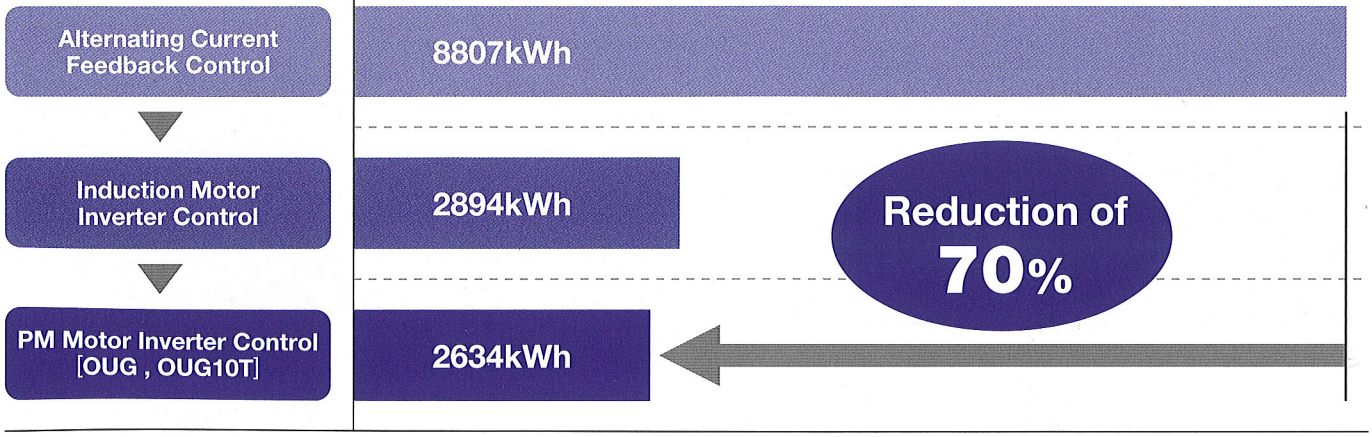
Transom height,H_2	H_1
$200 \leqq H_2 \leqq 320$	100
$320 < H_2 \leqq 900$	160



COMMON INFORMATION (3)

REDUCTION OF ELECTRICITY CONSUMPTION

OUG & OUG-10T Reduction of electricity consumption due to improvement of operation energy efficiency



※Based on 1600kg load and 60m/min speed

OPERATING SYSTEMS

■OPERATING SYSTEMS

No.	Name		Description	STD	OPT
1	Simplex collective control (CCTL)		This is a fully automatic operation used for a single elevator system. Hall calls in the direction in which the elevator is travelling are responded to sequentially and when all calls in that direction are cleared, calls in the opposite direction are responded to. When there are no more calls, the elevator will stop at the last floor served.	●	
2	Duplex collective control (DCTL)		This is a fully automatic operation used for a two-elevator system. Hall calls are responded to by whichever elevator that can serve the hall call faster. When there are no more calls, one of the elevators will stand-by at the start floor while the other elevator will stay at the last floor served.		●
3	Group control	FI-600	This is a group control system used to operate three to eight elevators in a large-sized building. This control system consists of 3 smart systems; "future reference-trajectory control", "learning system" and "intelligent system".		●
4		FI-100	This is a group control system used to operate three to six elevators in a medium-sized building. This control system uses "reference-trajectory control", which is based on the theory used in the highest model of the "future reference-trajectory control".		●
5		FI-10	This is a simplified group control system used to operate three or four elevators. The system provides a ring control to allocate the elevator car closed to the floor where a new hall call is registered.		●
6	Down collective control (DWCC)		For this system, all floors have "down" call buttons only, except for the start floor, where there is "up" call button only. The other operations are the same as in selective-collective and duplex selective-collective operations.		●
7	Attendant operation (ATT)		For this system, the stop floor is manually set by an attendant, such as in a department store.		●
8	Independent operation (INOC)		This operation system is used when there is a need to serve special passengers. Under this operation, all hall calls are disabled and the elevator is reserved for exclusive use of the special passengers.		●

FUNCTIONS (1/2)

■SAFETY FUNCTIONS

No.	Name	Description	STD	OPT
1	Multi-beam door sensor (MBDS)	In the event that the beam paths are obstructed, this sensor, installed at the edge of the doors, will keep the doors open.		●
2	Door safety return system (ORS)	In the event of door overload, such as when passengers get their fingers, hands or personal belongings caught in the door, this system automatically senses this and either re-closes or re-opens the doors to prevent injury.	●	
3	Interphone system (INPS)	An interphone system is provided for emergency communication between the elevator and the master unit (in the supervisory panel, etc.).	●	
4	Car emergency lighting (CEML)	In the event of a power failure, an emergency light inside the elevator will be automatically activated.	●	
5	Nearest landing operation (NLNO)	In the unlikely event of temporary trouble during operation, the elevator automatically goes to the nearest floor at a low speed and doors will open to prevent passengers from being trapped inside.	●	
6	Overload detection system (OLDS)	In the event of overloading, this system will activate an audio/ visual signal to prevent the elevator from moving.	●	
7	Door safety edge (both sides or one side) (DSEB)	Mechanical safety units are installed on both sides or one side of the elevator doors. In the event of passengers coming into contact with the safety edges of closing doors, the doors will immediately reopen.	●	
8	Careful sensor (CS)	In the event the sensor beam detects some obstructions, this sensor, installed at door machine, will keep the doors open. This is effective to prevent accidental trapping since this sensor will keep detecting the obstruction until just before the completion of door closing.		●
9	Abnormal speed protection function (ASPF)	In the event that the elevator is moving downwards at an abnormally high speed, the breakers will be automatically engaged and the elevator will cease operation.	●	
10	Out of door-open zone alarm (ASOZ)	In the event that the elevator stops out of the door open zone of a selected floor, doors will not open, and an alarm will be sounded in the elevator.	●	

■SERVICE FUNCTIONS

No.	Name	Description	STD	OPT
1	Mischievous call cancellation (MCCC)	In the event that a large number of calls is registered by a small number of passengers, the calls are determined to be mischievous and will be automatically cancelled upon responding to the next call. This thus eliminates unnecessary stops.	●	
2	Door time adjustment (DTAD)	The duration of the door open timing is tailored to usage conditions, substantially improving operational efficiency.	●	
3	Floor "deselect" function (FDSF)	This function allows passenger to cancel the selection of a floor which is accidentally pressed by pressing the button again. (This thus eliminates unnecessary stops.)	●	
4	Automatic return function (ARTF)	After all the calls have been served, the elevator will return to the start floor for stand-by.	●	
5	Door open prolong button (DOPB)	In the event that this button on the car operation board is pressed, the elevator doors remain open for a pre-set period of time.		●
6	Automatic bypass Operation (ABPO)	In the event that the elevator is fully loaded, this operation will not respond to any hall calls and will only respond to the car calls.		●
7	Keypad sub-operating board (KSOP)	In order to comply with the barrier-free code, especially for high-rise buildings, individual car call buttons can be replaced by a keypad system.		●
8	Sub-operating panel (SOPB)	Additional floor selection and door open/close buttons are located on the opposite side of the main operating panel in the elevator. This will be extremely convenient during rush hours.		●
9	Voice synthesizer (VSYS)	Preset standard messages are announced to the passengers by a voice synthesizer.		●
10	Arrival signal (ASGN)	An electronic chime (located at the top and bottom of the elevator) will be sound just before the arrival of the elevator.		●
11	Interfacing with BGM speaker (BGMS)	A speaker for background music and public announcements for the building can be installed in the elevator. (Music and announcement systems, including wiring, is to be provided by others.)		●
12	Destination floor reservation system (DFRS)	Passenger registers their destination floor at elevator lobby before getting on the elevator. (This device can be applied only with FI-600 group control.)		●

FUNCTIONS (2/2)

■MANAGEMENT FUNCTIONS

No.	Name	Description	STD	OPT
1	Automatic turn-off of elevator light and fan (ATFL)	In the event that the elevator is not in use, the light and ventilation fan in the elevator are automatically turned off to conserve energy.	●	
2	Maintenance operation (MTNO)	In the event that elevator maintenance is being carried out, the elevator operates at a lower speed.	●	
3	Parking operation (PKGO)	The elevator can be parked at the designated floor with a key switch.	●	
4	Rush-hour schedule operation (RHSO)	All the elevators will automatically return to the start floor, after serving the last call during this preset rush-hour timing.		●
5	Floor lock-out operation (FLLO)	Specific service floors can be locked-out by activating the switch.		●
6	Floor lock-out operation by cipher code (ROCC)	By inputting a pre-programmed code using the car operating board floor buttons, passengers can gain access to certain restricted floors.		●
7	Intelligent operation security system (IPSS)	This function allows controlled access to certain floors by means of a password or ID cards. Note: Keypad or ID card-reader system is to be provided and installed by others, interfacing shall be by means of dry (voltage-free) contacts.		●
8	Interfacing with closed-circuit TV (CCTV)	This system enables the security personnel to monitor the movement inside the elevator. This will be effective in preventing criminal and mischievous acts inside the elevator. (CCTV system, including wiring, is to be supplied by others.)		●
9	Supervisory panel (SVP)	This panel provides various supervisory operations, including communication, and status monitoring.		●
10	Extensible elevator monitoring system (XEMS)	This system shows the real time situation of the elevators such as the elevator position, movement direction and abnormal operation on the PC (Personal Computer) display. It is also possible to turn on/off the elevators and change the service floors of the elevators using the PC.		●

■EMERGENCY FUNCTIONS

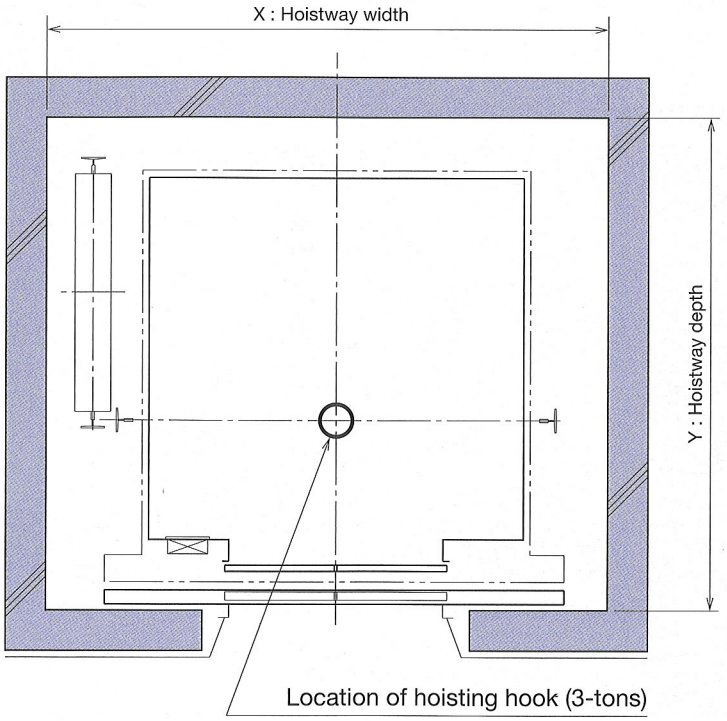
No.	Name	Description	STD	OPT
1	Earthquake emergency operation (EEMO)	In the event that an earthquake is detected, the elevator will stop at the nearest floor. (This function is not applicable to private lobby layouts.)		●
2	Fire emergency operation (FEMO)	In the event of fire, the elevator is automatically brought to the designated floor where it remains inoperative for passengers' safety.		●
3	Emergency operation for power failure (EPFO)	In the event of building power failure, the elevator can be operated by the building standby generator to move the elevator to the designated floor.		●
4	Automatic rescue device for power failure (ALP)	In the event of building power failure, the elevator automatically switches to battery power to bring itself to the nearest floor. (This function is not applicable to private lobby layout buildings.)		●
5	Fireman operation (FMNO)	In the event that the fireman switch is turned on, the elevator returns to the designated floor and will be ready for firemen's use.		●

WORK TO BE DONE BY BUILDING CONTRACTORS

The preparatory work for elevator installation outlined in below table should be undertaken by building contractors in accordance with Hitachi drawings and in compliance with local or relevant codes and regulations

No.	ITEMS
1	Prepare hoistway with proper framing and enclosure, suitable pit of proper depth with drains and water-proofing if required, properly lit and ventilated hoistway of adequate size with concrete floors, access doors, ladders and guards as required.
2	Provide and / or cut all necessary holes, chases, openings and finishes 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 of brackets, bolts, machine beams, etc.
5	Prepare and erect suitable scaffolding and protective measures during work in progress.
6	Furnish mains for three-phase electric power and single-phase lighting supply for car lighting and lift pit and power outlet to the hoistway, following the instructions of the elevator contractor on outlet position and wire size.
7	Provide, free of charge, a suitable theft-proof storage area for materials and tools during erection work.
8	Supply electric power for lighting of work area, installation work, elevator testing and spray painting.
9	Hoisting hook for 3-tons loading at top of the hoistway. Location of hoisting hook shall be below figure.
10	Hoistway ventilation to be provided to maintain the hoistway temperature at below 40℃.

■Location of hoisting hook



Specifications and designs are subject to change without notice.

Hitachi, Ltd.

14-1, Sotokanda 4-chome
Chiyoda-ku, Tokyo, 101-8010 Japan
TEL: +81-3-4564-3722
FAX: +81-3-4564-3882
http://www.hitachi.co.jp/urban/

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