

Dimension of Hoistway and Pit Reaction Loading

Dimension and reaction loading of hoistway

Based on SS550

No.	Load [kg]	Persons	Rated speed [m/s] (m/min)	Door type	Door OP width W [mm]	Car internal size A x B [mm]	Hoistway X x Y [mm]	Location [mm]										Pit reaction loading *3*4 [kN]												
								X3					X4					Car side			Counterweight side									
								X3	X4	C	D	E	F	RGC	RGW	RC1	RC2	RC3	RW1	RW2	RW3									
1	600	8	1.0(60)	2PCO	800	1100x1400	1950x1850	1035	915	680 [690]	845	1330	71.5	35.0	28.0	59.0	16.0	25.5												
2			1.5(90)											38.5	31.5		18.5	28.5												
3			1.75(105)											35.0	28.0		16.0	25.5												
4			1.0(60)			1400x1100	2150x1750	1150	1000	635 [645]	530	950	1540	800	78.0	37.0	30.0	63.0	16.5	26.5										
5			1.5(90)													40.5	33.0		19.0	29.5										
6			1.75(105)													41.0	33.0		17.0	28.5										
7	750	11	1.0(60)	2PCO	900	1350x1400	2200x1850	1175	1025	680 [690]	970	1580	90.5	44.5	36.0	72.5	19.5	31.5												
8			1.5(90)											41.0	33.0		17.0	28.5												
9			1.75(105)											44.5	36.0		19.5	31.5												
10			2.0(120)			1500x1450	2250x1900	1200	1050	705 [715]	530	1000	1640	800	90.5	41.0	33.0	72.5	17.0	28.5										
11			2.5(150)													44.5	36.0		19.5	31.5										
12			1.0(60)													44.5	36.0		19.5	31.5										
13			1.5(90)		1600x1350	2450x1800	1355	1095	655 [665]	530	1105	1740	800	91.5	38.0	33.5	73.5	21.0	28.5											
14			1.75(105)												41.0	36.5		24.0	31.5											
15			2.0(120)												41.0	36.5		24.0	31.5											
16			2.5(150)												41.0	36.5		24.0	31.5											
17			1.0(60)												1100x2000	1950x2500		1135	815	1057 [1062]	530	845	1330	800	91.0	41.0	33.0	73.0	17.0	29.0
18			1.5(90)																							44.5	36.5		20.0	32.0
19	1.75(105)	44.5	36.5	20.0	32.0																									
20	2.0(120)	1600x1400	2350x1850	1250	1100	680 [690]	530	1050	1740	800	92.0	41.5	33.5	74.0	17.0	29.0														
21	2.5(150)											45.0	36.5		20.0	32.0														
22	1.0(60)											45.0	36.5		20.0	32.0														
23	1.5(90)											45.0	36.5		20.0	32.0														
24	1.75(105)											45.0	36.5		20.0	32.0														
25	2.0(120)											45.0	36.5		20.0	32.0														
26	2.5(150)	1100x2000	2050x2500	1230	820	640	905	1330	900	111.0	69.0	58.0	92.5	36.0	55.0															
27	1.0(60)															41.0	33.0	17.0	29.0											
28	1.5(90)															41.0	33.0	17.0	29.0											
29	1.75(105)															41.0	33.0	17.0	29.0											
30	2.0(120)															41.0	33.0	17.0	29.0											
31	2.5(150)															41.0	33.0	17.0	29.0											
32	900	13	1.0(60)	2S2P	1000	1100x2100	2000x2600	1140	860	1107 [1112]	530	845	45	1330	800	93.0	45.5	37.0	75.0	20.0	32.0									
33			1.5(90)																			45.5	37.0	75.0	20.0	32.0				
34			1.75(105)																			45.5	37.0	75.0	20.0	32.0				
35			2.0(120)																			45.5	37.0	75.0	20.0	32.0				
36			2.5(150)																			45.5	37.0	75.0	20.0	32.0				
37			1.0(60)																			1600x1400	2500x2100	1360	1140	705 [715]	640	1110	1740	900
38	1.5(90)	41.5	33.5	17.0	29.0																									
39	1.75(105)	41.5	33.5	17.0	29.0																									
40	2.0(120)	41.5	33.5	17.0	29.0																									
41	2.5(150)	41.5	33.5	17.0	29.0																									
42	1.0(60)	1100x2000	1950x2500	1135	815	1057 [1062]	530	845	1330	800	91.0	41.0	33.0	73.0	17.0	29.0														
43	1.5(90)																44.5	36.5	20.0	32.0										
44	1.75(105)																44.5	36.5	20.0	32.0										
45	2.0(120)																44.5	36.5	20.0	32.0										
46	2.5(150)																44.5	36.5	20.0	32.0										
47	1.0(60)																1600x1400	2350x1850	1250	1100	680 [690]	530	1050	1740	800	92.0	41.5	33.5	74.0	17.0
48	1.5(90)	45.0	36.5	20.0	32.0																									
49	1.75(105)	45.0	36.5	20.0	32.0																									
50	2.0(120)	45.0	36.5	20.0	32.0																									
51	2.5(150)	45.0	36.5	20.0	32.0																									
52	1.0(60)	1100x2000	2050x2500	1230	820	640	905	1330	900	111.0	69.0	58.0	92.5	36.0	55.0															
53	1.5(90)															41.0	33.0	17.0	29.0											
54	1.75(105)															41.0	33.0	17.0	29.0											
55	2.0(120)															41.0	33.0	17.0	29.0											
56	2.5(150)															41.0	33.0	17.0	29.0											

Notes
 - Above tables shows the dimensions on the following conditions
 (1) Single elevator in hoistway (2) Without counterweight safety
 Please consult Hitachi or local agent if other specifications are required.

*1 () : Travel distance > 60m
 *2 [] : With fire rated door
 *3 Rated speed 1.0m/s : Travel distance ≤ 60m
 Rated speed 1.5, 1.75m/s : Travel distance ≤ 80m
 Rated speed 2.0, 2.5m/s : Travel distance ≤ 120m
 *4 The pit reaction loading differs depending on the specifications and design, please consult Hitachi or local agent.

Based on SS550

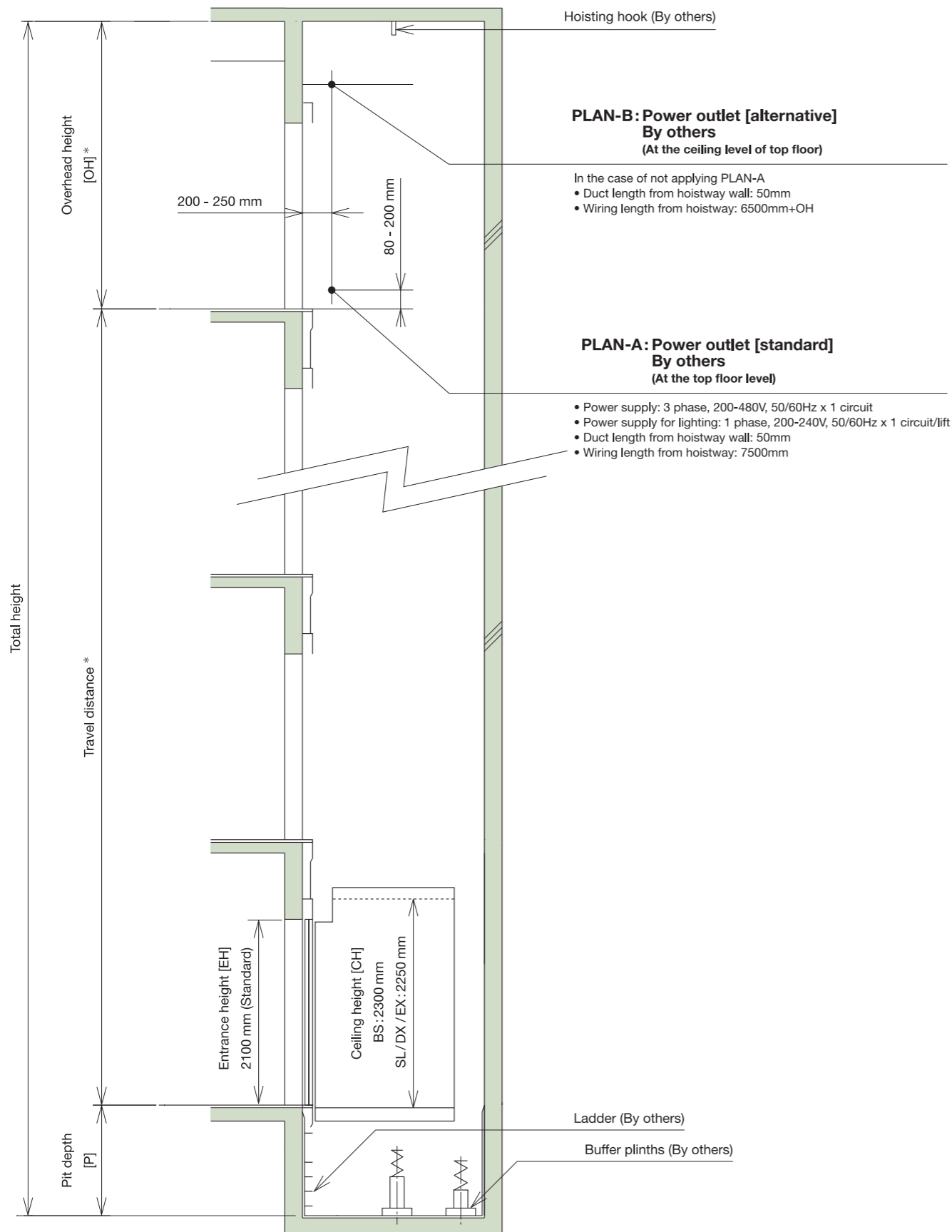
No.	Load [kg]	Persons	Rated speed [m/s] (m/min)	Door type	Door OP width W [mm]	Car internal size A x B [mm]	Hoistway X x Y [mm]	Location [mm]										Pit reaction loading *3*4 [kN]							
								X3					X4					Car side			Counterweight side				
								X3	X4	C	D	E	F	RGC	RGW	RC1	RC2	RC3	RW1	RW2	RW3				
57	1200	17	1.0(60)	2PCO	1100	2000x1400	2850x2000	1520	1330	680 [690]	1310	—	2140	122.5	57.0	46.0	98.0	24.5	40.5						
58			1.5(90)												62.5	50.5		28.5	45.0						
59			1.75(105)												62.5	50.5		28.5	45.0						
60			2.0(120)												62.5	50.5		28.5	45.0						
61			2.5(150)												62.5	50.5		28.5	45.0						
62			1.0(60)												1300x2300	2250x2800		1315	935	1207 [1212]	1005	95	1530	900	101.0
63			1.5(90)			66.0	55.5	85.5	35.5	53.0															
64			1.75(105)			66.0	55.5	85.5	35.5	53.0															
65			2.0(120)			66.0	55.5	85.5	35.5	53.0															
66			2.5(150)			66.0	55.5	85.5	35.5	53.0															
67			1.0(60)			1800x1750	2650x2200	1420	1230	855 [865]	1210	—	1940	800			90.5								
68			1.5(90)												41.0	33.0		17.0	28.5						
69	1.75(105)	41.0	33.0	17.0	28.5																				
70	2.0(120)	41.0	33.0	17.0	28.5																				
71	2.5(150)	41.0	33.0	17.0	28.5																				
72	1.0(60)	2000x1550	2850x2100	1520	1330										755 [765]	1310		—	2140	800	91.5	38.0	33.5	73.5	21.0
73	1.5(90)					41.0	36.5	24.0	31.5																
74	1.75(105)					41.0	36.5	24.0	31.5																
75	2.0(120)					41.0	36.5	24.0	31.5																
76	2.5(150)					41.0	36.5	24.0	31.5																
77	1.0(60)					1400x2400	2350x2900	1365	985	1257 [1262]	1055	95	1630	800			91.0								
78	1.5(90)	44.5	36.5	20.0	32.0																				
79	1.75(105)	44.5	36.5	20.0	32.0																				
80	2.0(120)	44.5	36.5	20.0	32.0																				
81	2.5(150)	44.5	36.5	20.0	32.0																				
82	1.0(60)	2000x1750	2850x2200	1520	1330										855 [865]	1310		—	2140	800	92.0	41.5	33.5	74.0	17.0
83	1.5(90)					45.0	36.5	20.0	32.0																
84	1.75(105)					45.0	36.5	20.0	32.0																
85	2.0(120)					45.0	36.5	20.0	32.0																
86	2.5(150)					45.0	36.5	20.0	32.0																
87	1.0(60)					2100x1700	2950x2150	1570	1380	830 [840]	1360	—	2240	800			99.5								
88	1.5(90)	44.0	35.5	17.5	30.5																				
89	1.75(105)	44.0	35.5	17.5	30.5																				
90	2.0(120)	44.0	35.5	17.5	30.5																				
91	2.5(150)	44.0	35.5	17.5	30.5																				
92	1.0(60)	1500x2500	2550x3000	1580	970										1307 [1312]	1130		145	1730	800	93.0	42.0	33.5	75.0	17.5
93	1.5(90)					42.0	33.5	17.5	29.5																
94	1.75(105)					42.0	33.5	17.5	29.5																
95	2.0(120)					42.0	33.5	17.5	29.5																
96	2.5(150)					42.0	33.5	17.5	29.5																
97	1.0(60)					1600x1700	2450x2150	1320	1130	830 [840]	1110	—	1740	900			116.5								
98	1.5(90)	60.5	49.0	28.0	44.0																				
99	1.75(105)	60.5	49.0	28.0	44.0																				
100	2.0(120)	60.5	49.0	28.0	44.0																				
101	2.5(150)	60.5	49.0	28.0	44.0																				
102	1.0(60)	1800x1500	2650x2050	1420	1230										730 [740]	1210		—	1940	800	93.0	55.5	44.5	93.5	24.0
103	1.5(90)					55.5	44.5	24.0	39.5																
104	1.75(105)					55.5	44.5	24.0	39.5																
105	2.0(120)					55.5	44.5	24.0	39.5																
106	2.5(150)					55.5	44.5	24.0	39.5																
107	1.0(60)					2700x2050	1460	1240	730 [740]	1210	1940	—	1940	800			126.5								
108	1.5(90)	60.0	49.0	28.0	43.5																				

Notes
 - Above tables shows the dimensions on the following conditions
 (1) Single elevator in hoistway (2) Without counterweight safety
 Please consult Hitachi or local agent if other specifications are required.

*1 () : Travel distance > 60m
 *2 [] : With fire rated door
 *3 Rated speed 1.0m/s : Travel distance ≤ 60m
 Rated speed 1.5, 1.75m/s : Travel distance ≤ 80m
 Rated speed 2.0, 2.5m/s : Travel distance ≤ 120m
 *4 The pit reaction loading differs depending on the specifications and design, please consult Hitachi or local agent.

Overhead Height and Pit Depth

Hoistway section



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

Dimensions for overhead height, pit depth and other specifications

Standard overhead height : OH *1 *2 *3 [mm]

No.	Rated speed [m/s] (m/min)	Hitachi standard Hitachi standard for India			EN81-20/50 SASO-EN81-20/50			Malaysian regulations		
		Load ≤ 1050kg	Load ≥ 1150kg	Load > 1600kg	Load ≤ 1050kg	Load ≥ 1150kg	Load > 1600kg	Load ≤ 1050kg	Load ≥ 1150kg	Load > 1635kg
1	1.0(60)	3750 (3870)	4150 (4270)	4300 (4420)	4150 (4270)	4250 (4370)	4300 (4420)	4200(4320)	4300(4420)	4350(4470)
2	1.5(90)							4400(4520)	4400(4520)	4400(4520)
3	1.75(105)	4050(4170)	4350(4470)	4350(4470)	4350(4470)	4350(4470)	4350(4470)	4450(4570)	4450(4570)	4450(4570)
4	2.0(120)	4600(4600)	4600(4600)	—	4600(4600)	4600(4600)	—	5600(5720)	5600(5720)	—
5	2.5(150)	4700(4700)	4700(4700)	—	4700(4700)	4700(4700)	—	5750(5870)	5750(5870)	—

No.	Rated speed [m/s] (m/min)	SS550		
		Load ≤ 1050kg	Load ≥ 1150kg	Load > 1630kg
1	1.0(60)	3950(4070)	4150(4270)	4300(4420)
2	1.5(90)	4150(4270)	4400(4520)	4400(4520)
3	1.75(105)	4300(4420)	4500(4620)	4500(4620)
4	2.0(120)	5500(5620)	5500(5620)	—
5	2.5(150)	5650(5770)	5650(5770)	—

Minimum pit depth : P *4 [mm]

No.	Rated speed [m/s] (m/min)	Hitachi standard Hitachi standard for India EN81-20/50 SASO-EN81-20/50			Malaysian regulations			SS550		
		Load ≤ 1050kg	Load ≥ 1150kg	Load > 1600kg	Load ≤ 1050kg	Load ≥ 1150kg	Load > 1635kg	Load ≤ 1050kg	Load ≥ 1150kg	Load > 1630kg
1	1.0(60)				1500	1750	1750	1500	1750	1900
2	1.5(90)	1350	1600	1650	1600	1850	1900	1600	1900	2050
3	1.75(105)	1450	1700	1800	1650	1950	2000	1650	2100	2250
4	2.0(120)	2000	2300	—	2050(2000)	2300	—	2050(2000)	2300	—
5	2.5(150)	2050	2350	—	2150(2050)	2350	—	2200(2050)	2350	—

Others

No.	Rated speed [m/s] (m/min)	Maximum number of stops	Maximum travel distance [m]
1	1.0(60)	24	60
2	1.5(90)	32	80
3	1.75(105)		
4	2.0(120)	36	120
5	2.5(150)		

Notes
- Above tables shows the dimensions based on standard specifications.
Please consult Hitachi or local agent if other specifications are required.

Rated Speed 1.75m/s or less

- *1 (): SL/DX/EX series ceiling
- *2 Travel distance ≤ 30m
30m < Travel distance ≤ 60m : Above overhead height + 50mm
60m < Travel distance ≤ 80m : Above overhead height + 100mm
- *3 Overhead height will be increased accordingly if either EH or CH increases.
- *4 Travel distance ≤ 45m
LOAD ≤ 1050kg 45m < Travel distance ≤ 60m : Above pit depth + 50mm
60m < Travel distance : Above pit depth + 200mm
LOAD ≥ 1150kg 45m < Travel distance : Above pit depth + 50mm

Rated Speed 2.0m/s or 2.5m/s

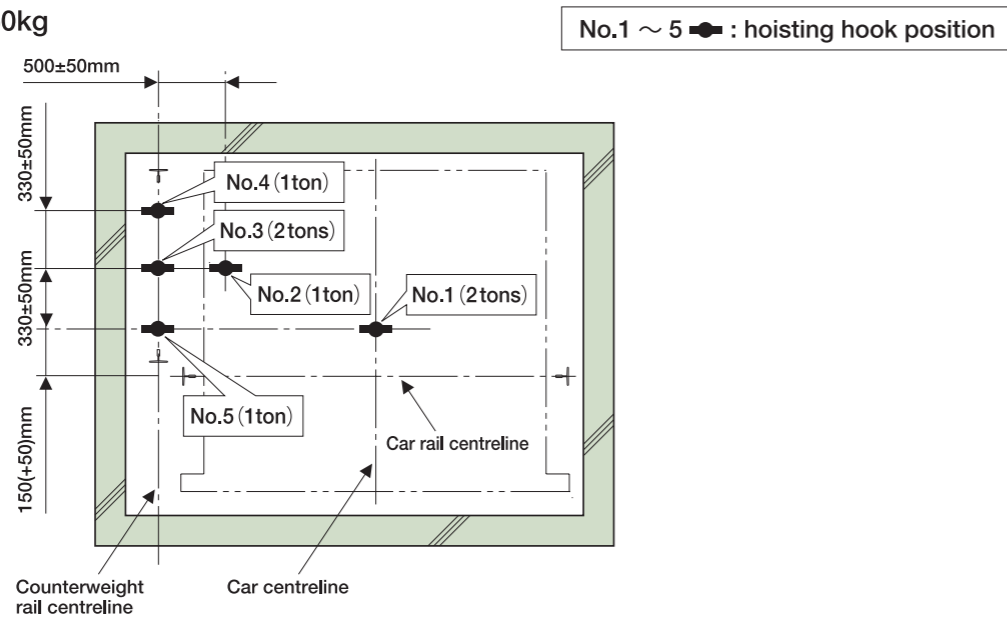
- *1 (): SL/DX/EX series ceiling
- *2 30m ≤ Travel distance ≤ 45m
45m < Travel distance ≤ 80m : Above overhead height + 50mm
80m < Travel distance ≤ 120m : Above overhead height + 100mm
- *3 Overhead height will be increased accordingly if either EH or CH increases.
- *4 For SS550 and Malaysian regulations, (): Travel distance ≤ 60m

Location of hoisting hook and hoisting beam

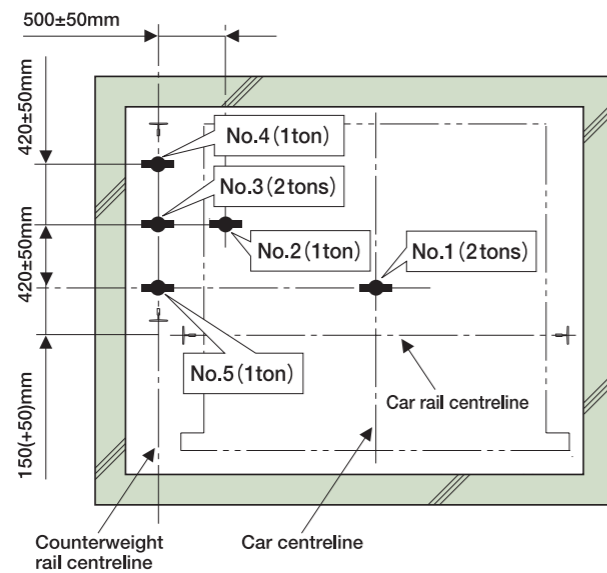
If the hoistway is made of reinforced concrete, hoisting hooks (installed by other contractors) are required at the top of the hoistway. If the hoistway is a steel structure, hoisting beams (installed by other contractors) are required at the top of the hoistway. The details of the hoisting hook and hoisting beam mounting position are as follows:

① Hoisting hooks

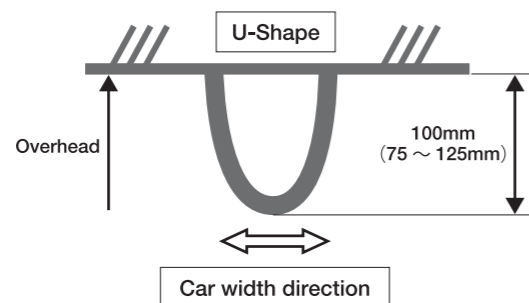
1. Rated Load ≤ 1050kg



2. Rated Load > 1050kg



3. Orientation and size of Hoisting Hooks

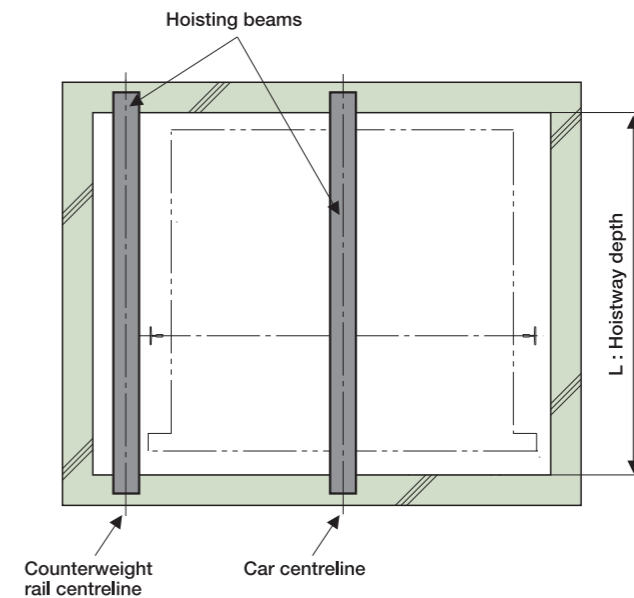


Notes
 - The hoisting hooks should be orientated such that the U-shape is facing the hoistway landing entrance.
 - This hoisting hook size is required to ensure that the hoisting equipment can fit in.

② Hoisting beams

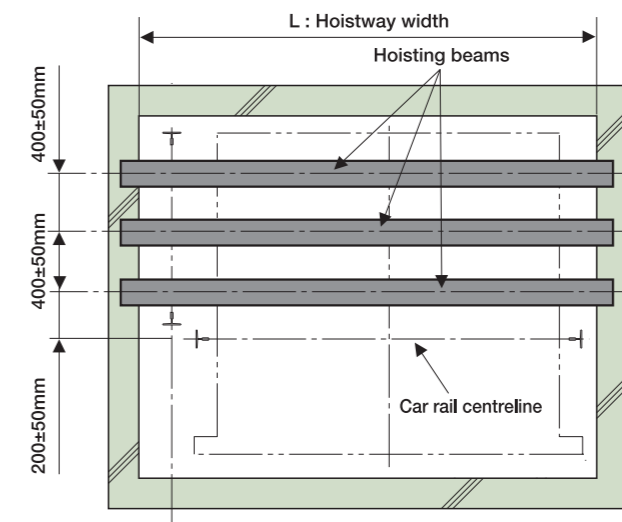
1. Hoisting beams layout (Standard)

Hoisting beams in the direction of car depth

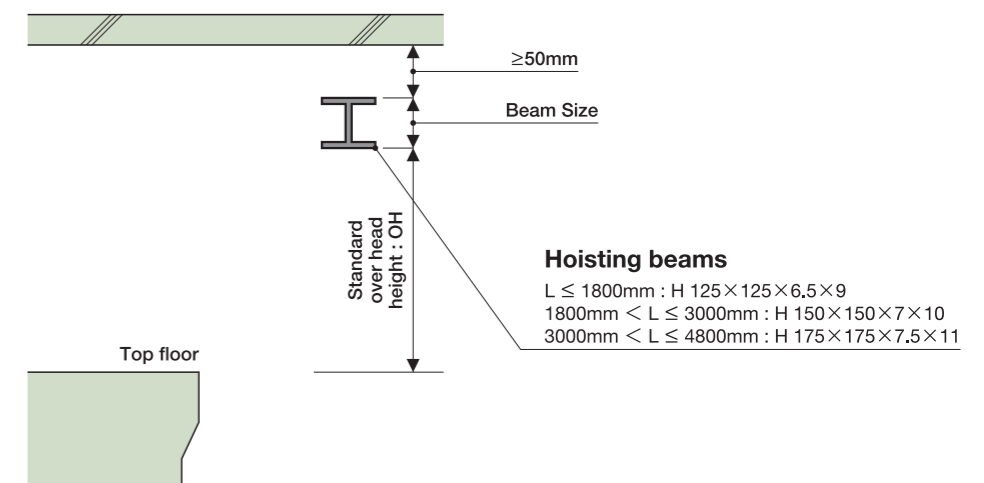


2. Hoisting beams layout (Alternative)

Hoisting beams in the direction of car width



3. Height of Hoisting beams



Electrical information

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

Electrical Data

No.	Load [kg]	Rated speed [m/s] (m/min)	Motor capacity [kW]	Supply voltage [V]	Breaker capacity [A]			Transformer capacity [kVA]			Starting power [kVA]	Lead-in wire for drive [mm ²]			Earth wire [mm ²]	Calorific value [kcal/hr]		
					1 unit	2 units	3 units	1 unit	2 units	3 units		1 unit	2 units	3 units				
1	451 ~ 630	1.0(60)	3.9	220-230	100	125	150	5	9	12	15	22.0	38	60	3.5	830		
2				380-415	20	30	30					5.5	14	14	2.0			
3				440-480	50	75	100					8	8	2.0				
4		220-230	100	125	150	6	11	15	20	22.0	60	60	3.5	1250				
5		380-415	30	30	40					8.0	14	22	2.0					
6		440-480	50	75	100					5.5	14	14	2.0					
7		220-230	100	125	150	7	12	17	23	38.0	60	100	3.5		1460			
8		380-415	30	40	50					8.0	14	22	2.0					
9		440-480	50	75	100					5.5	14	14	2.0					
10	631 ~ 750	1.0(60)	4.6	220-230	100	125	150	5	9	12	16	22.0	38			60	3.5	990
11				380-415	20	30	40					5.5	14			14	2.0	
12				440-480	50	75	100					8	8			2.0		
13		220-230	100	125	150	7	12	17	23	38.0	60	100	3.5	1490				
14		380-415	30	40	50					8.0	14	22	2.0					
15		440-480	50	75	100					5.5	14	14	2.0					
16		220-230	100	125	150	7	12	17	26	38.0	60	100	3.5		1730			
17		380-415	40	40	50					14.0	22	22	3.5					
18		440-480	50	75	100					8.0	14	22	3.5					
19	748 ~ 750	2.0(120)	11.0	220-230	175	200	250	14	26	36	44	60.0	150			150(114m)*1	5.5	1980
20				380-415	40	50	75					22.0	38			60	3.5	
21				440-480	100	100	150					14.0	22			38	3.5	
22		220-230	175	200	250	16	30	41	50	100.0	150(138m)*1	150(98m)*1	5.5	2470				
23		380-415	50	60	100					22.0	38	60	3.5					
24		440-480	100	100	150					14.0	22	38	3.5					
25		220-230	100	125	150	6	11	15	19	22.0	38	60	3.5		1190			
26		380-415	30	30	40					8.0	14	22	2.0					
27		440-480	50	75	100					5.5	14	14	2.0					
28	220-230	100	125	150	8	14	19	27	38.0	60	100	3.5	1780					
29	380-415	40	40	50					14.0	22	38	3.5						
30	440-480	50	75	100					8.0	14	22	3.5						
31	751 ~ 900	1.75(105)	9.7	220-230	100	125	150	10	17	24	30	38.0		100		150	5.5	2080
32				380-415	40	40	60					14.0		22		38	3.5	
33				440-480	50	75	100					8.0		14		22	3.5	
34		220-230	175	200	250	15	28	39	47	100.0	150(148m)*1	150(106m)*1		5.5	2380			
35		380-415	50	60	75					22.0	38	60		3.5				
36		440-480	100	100	150					14.0	22	38		3.5				
37		220-230	175	200	250	18	33	46	57	100.0	150(121m)*1	150(86m)*1	5.5	2970				
38		380-415	50	75	100					22.0	38	60	3.5					
39		440-480	100	100	150					100.0	150(138m)*1	150(98m)*1	5.5					
40	901 ~ 1050	1.0(60)	6.5	220-230	100	125	150	7	12	17	22	38.0	60			100	3.5	1390
41				380-415	30	40	40					8.0	14			22	2.0	
42				440-480	50	75	100					5.5	14			14	2.0	
43		220-230	100	125	150	9	16	22	30	38.0	100	150	5.5		2080			
44		380-415	40	40	60					14.0	22	38	3.5					
45		440-480	50	75	100					8.0	14	22	3.5					
46		220-230	100	125	150	10	17	24	36	60.0	100	150	5.5	2430				
47		380-415	40	50	75					14.0	38	38	3.5					
48		440-480	50	75	100					22.0	38	38	3.5					
49	220-230	175	200	250	16	30	41	50	100.0	150(138m)*1	150(98m)*1	5.5	2770					
50	380-415	50	60	100					22.0	38	60	3.5						
51	440-480	100	100	150					14.0	22	38	3.5						
52	220-230	175	200	250	20	37	51	64	100.0	150(108m)*1	150(77m)*1	5.5			3460			
53	380-415	60	75	100					38.0	60	100	5.5						
54	440-480	100	100	150					22.0	38	60	5.5						
55	1051 ~ 1150	1.0(60)	7.1	220-230	100	125	150	7	12	17	23	38.0		60		100	3.5	1520
56				380-415	40	40	50					8.0		14		22	2.0	
57				440-480	50	75	100					5.5		14		14	2.0	
58		220-230	100	125	150	10	17	24	34	60.0	100	150	5.5	2280				
59		380-415	40	50	75					14.0	22	38	3.5					
60		440-480	50	75	100					10	17	24	3.5					

Notes
- Maximum length of lead-in wire is 150m, maximum lead-in wire size is 150mm².

*1 (): Maximum length of lead-in wire with 150mm².

*2 Please consult Hitachi or local agent about maximum size and maximum length of lead-in wire.

Electrical Data

No.	Load [kg]	Rated speed [m/s] (m/min)	Motor capacity [kW]	Supply voltage [V]	Breaker capacity [A]			Transformer capacity [kVA]			Starting power [kVA]	Lead-in wire for drive [mm ²]			Earth wire [mm ²]	Calorific value [kcal/hr]			
					1 unit	2 units	3 units	1 unit	2 units	3 units		1 unit	2 units	3 units					
61	1051 ~ 1150	1.75(105)	13	220-230	100	125	150	11	19	26	40	60	100	150(146m)*1	5.5	2660			
62				380-415	50	60	75					14	38	38	3.5				
63				440-480	75	100	100					22	22	38	3.5				
64		220-230	175	200	250	18	33	46	57	100	150(121m)*1	150(86m)*1	5.5	3030					
65		380-415	50	75	100					22	60	60	3.5						
66		440-480	100	100	150					22	38	60	3.5						
67		220-230	175	200	250	21	39	54	68	150	150(102m)*1	150(73m)*1	5.5		3790				
68		380-415	60	75	125					38	60	100	5.5						
69		440-480	100	100	150					22	38	60	5.5						
70	1151 ~ 1350	1.0(60)	8.3	220-230	100	125	150	8	14	19	27	38	60			100	3.5	1780	
71				380-415	40	40	50					14	22			38	3.5		
72				440-480	50	75	100					8	14			22	3.5		
73		220-230	100	125	150	11	19	26	40	60	100	150(146m)*1	5.5	2670					
74		380-415	50	60	75					14	38	38	3.5						
75		440-480	75	100	100					22	22	38	3.5						
76		220-230	100	125	150	12	21	29	45	60	150	150(128m)*1	5.5		3120				
77		380-415	50	60	100					22	38	60	3.5						
78		440-480	50	75	100					14	22	38	3.5						
79	1351 ~ 1635	2.0(120)	17	220-230	175	200	250	20	37	51	64	100	150(108m)*1			150(77m)*1	5.5	3560	
80				380-415	60	75	100					38	60			100	5.5		
81				440-480	100	100	150					22	38			60	3.5		
82		220-230	175	200	250	16	30	41	50	100.0	150(138m)*1	150(98m)*1	5.5	4450					
83		380-415	60	100	125					22.0	38	60	3.5						
84		440-480	100	100	150					14.0	22	38	3.5						
85		1636 ~ 1800	1.0(60)	10	220-230	100	125	150	9	16	22	31	38		100	150	3.5		2160
86					380-415	40	50	60					8.0		14	22	2.0		
87					440-480	50	75	100					5.5		14	14	2.0		
88	220-230		100	125	150	12	21	29	45	38.0	60	100	3.5		3230				
89	380-415		40	40	50					14.0	22	38	3.5						
90	440-480		50	75	100					8.0	14	22	3.5						
91	1801 ~ 2000		1.75(105)	18	220-230	100	125	150	15	26	36	53	100	150		150(109m)*1	5.5	3770	
92					380-415	60	75	100					22	38		60	3.5		
93					440-480	50	75	100					14	24		33	3.5		
94		220-230	175	200	250	25	46	64	78	150	150(88m)*1	150(63m)*1	5.5	4310					
95		380-415	60	100	125					38	60	100	5.5						
96		440-480	100	100	150					22	22	38	5.5						
97		220-230	175	200	250	30	55	77	95	150(131m)*1	150(72m)*1	*2	8.0		5390				
98		380-415	75	125	150					38	100	150	5.5						
99		440-480	100	100	150					22	60	100	5.5						
100	1636 ~ 1800	1.0(60)	12	220-230	175	200	250	10	17	24	38	60	150			144(63m)*1	5.5	2380	
101				380-415	50	50	75					14	38			38	3.5		
102				440-480	100	100	150					22	22			38	3.5		
103		220-230	175	200	250	14	24	33	51	100	150(144m)*1	150(105m)*1	5.5	3560					
104		380-415	60	75	100					22	38	60	3.5						
105		440-480	100	100	150					14	38	38	3.5						
106		220-230	175	200	250	16	28	38	60	100	150(124m)*1	150(90m)*1	5.5		4150				
107		380-415	60	100	125					22	60	60	5.5						
108		440-480	100	100	150					22	38	60	5.5						
109	1801 ~ 2000	1.0(60)	13	220-230	175	200	250	11	19	26	40	60	150			150(134m)*1	5.5	2640	
110				380-415	50	60	75					14	38			38	3.5		
111				440-480	100	100	150					22	22			38	3.5		
112		220-230	175	200	250	20	37	51	64	1									

