

TOSHIBA

Leading Innovation >>>

New ELBRIGHT

TOSHIBA **HIGH SPEED ELEVATORS**

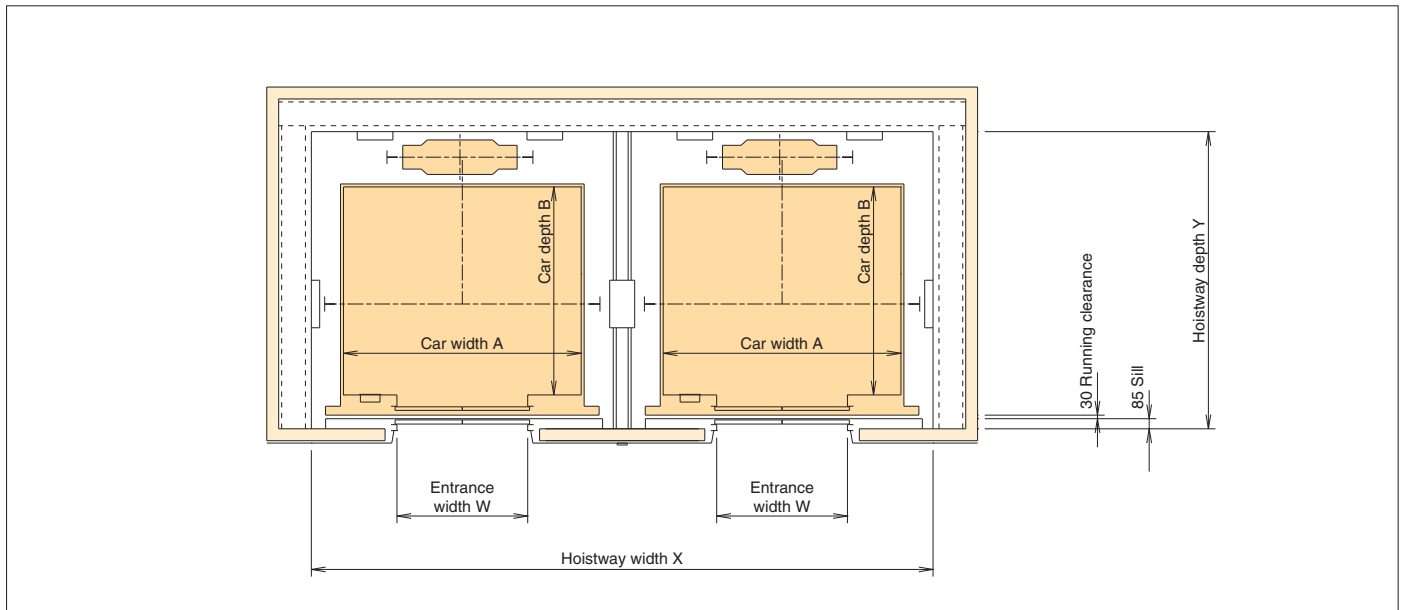
Installation plan and power facility plan for *Hong Kong*

Installation plan / Power facility plan

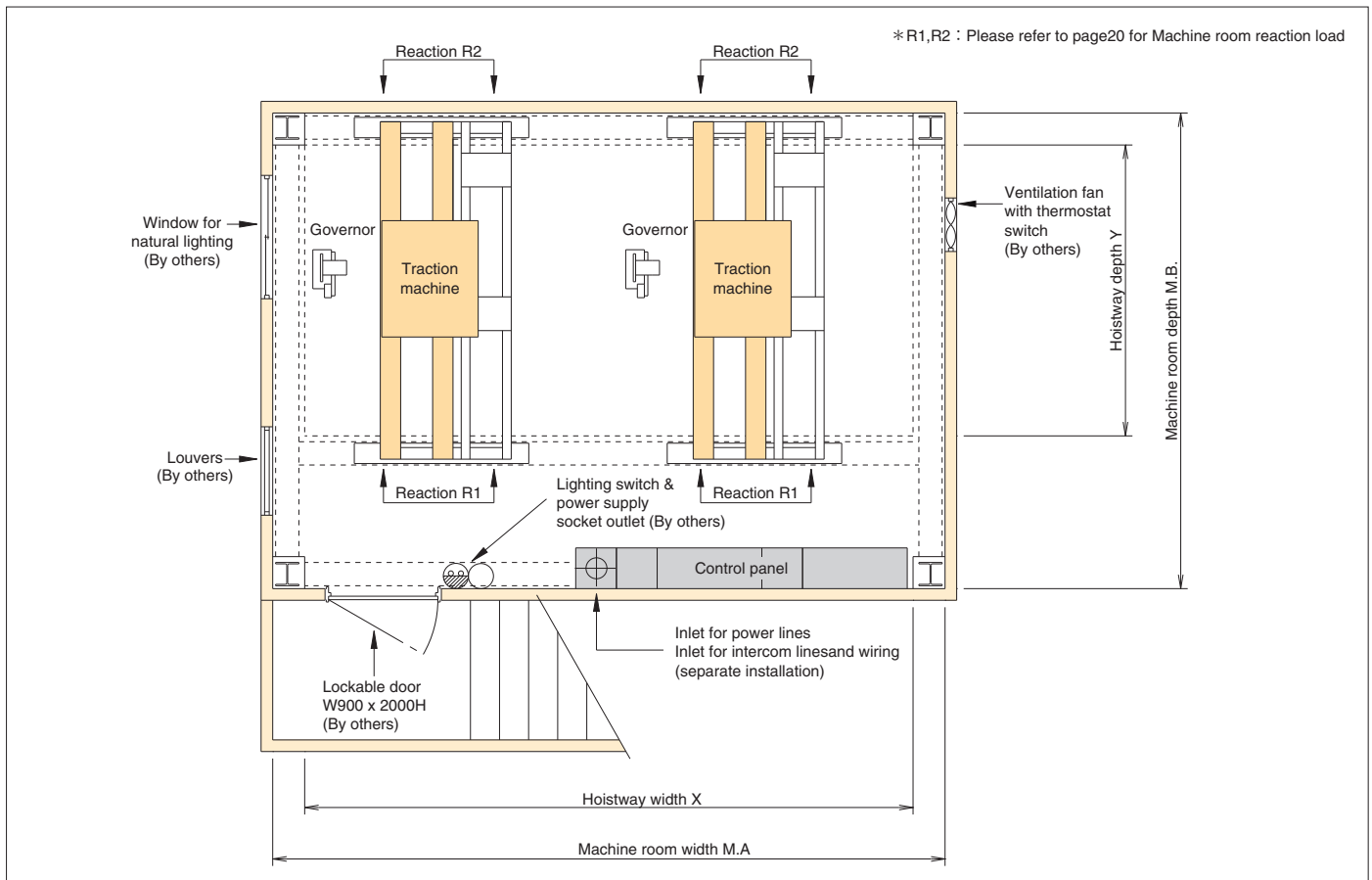
1 Installation plan <Standard type>

Installation diagram for 8 to 24 passenger

■ Hoist-way plan



■ Machine-room plan



■ Shaft and machine room dimensions (Floor plan dimensions)

Rated speed (m/min)	Type	Entrance (mm)		Internal car dimensions (mm) AxB	Shaft (mm)				Machine room (mm)			
		Width	Height		Single shaft* X x Y	Dual shaft** X x Y	Triple shaft X x Y	Quadruple shaft X x Y	Single shaft* MA x MB	Dual shaft** MA x MB	Triple shaft MA x MB	Quadruple shaft MA x MB
120 150 180 210 240	P8-CO	800	2100	1400×1100	1940×1895	4030×1895	6120×1895	8210×1895	2350×3400	4500×3400	7000×3400	9150×3400
	P12-CO	900	2100	1600×1300	2140×2095	4430×2095	6720×2095	9010×2095	2500×3650	4800×3650	7450×3650	9750×3650
	P13-CO	900	2100	1600×1400	2140×2195	4430×2195	6720×2195	9010×2195	2500×3800	4800×3800	7450×3800	9750×3800
	P15-CO	1000	2100	1800×1400	2340×2195	4830×2195	7320×2195	9810×2195	2700×3800	5200×3800	8050×3800	10550×3800
	P18-CO	1000	2100	2000×1500	2540×2295	5230×2295	7920×2295	10610×2295	2900×3800	5600×3800	8650×3800	11350×3800
	P21-CO	1100	2100	2000×1700	2540×2495	5230×2495	7920×2495	10610×2495	2900×4000	5600×4000	8650×4000	11350×4000
	P24-CO	1200	2100	2100×1750	2640×2545	5430×2545	8220×2545	11010×2545	3050×4050	5900×4050	9100×4050	11950×4050

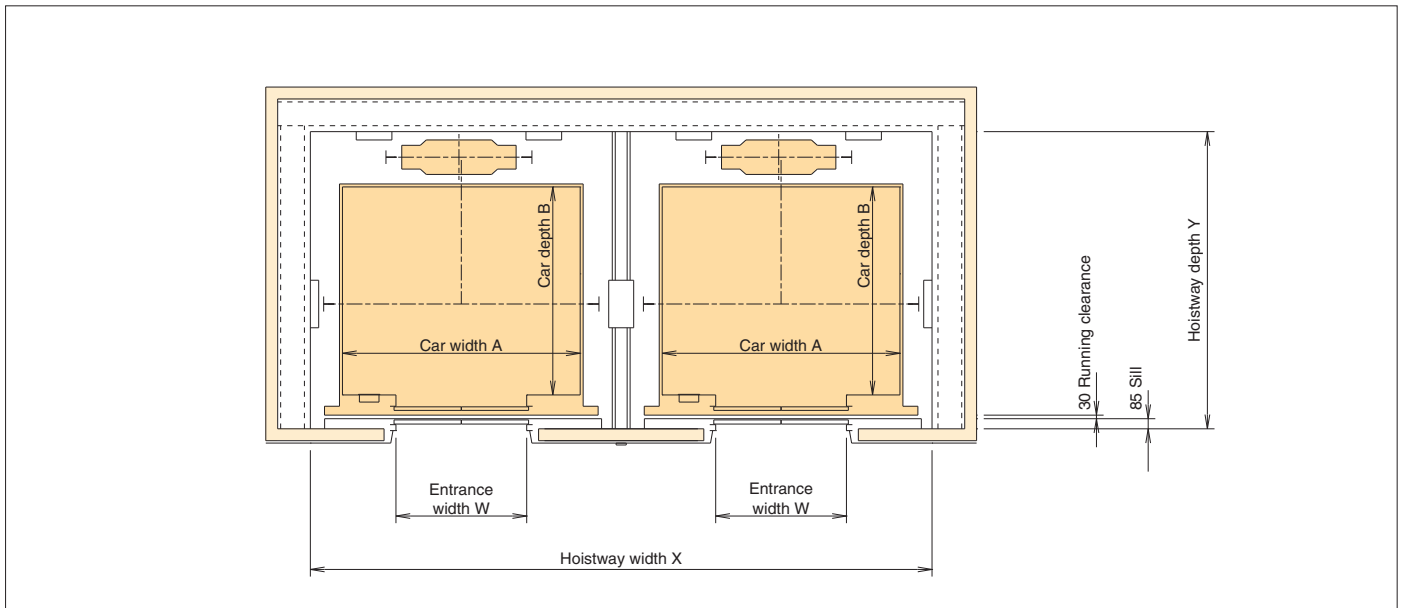
* In order to prevent noise in the car for a single-shaft elevator with a speed of 180 m/min or greater, increase the dimensions of the shaft X and machine room MA.
 ** In order to prevent noise in the car for a double-shaft elevator with a speed of 210 m/min or greater, increase the dimensions of the shaft X and machine room MA.
 Note: Please contact us for detailed dimensions.

Installation plan / Power facility plan

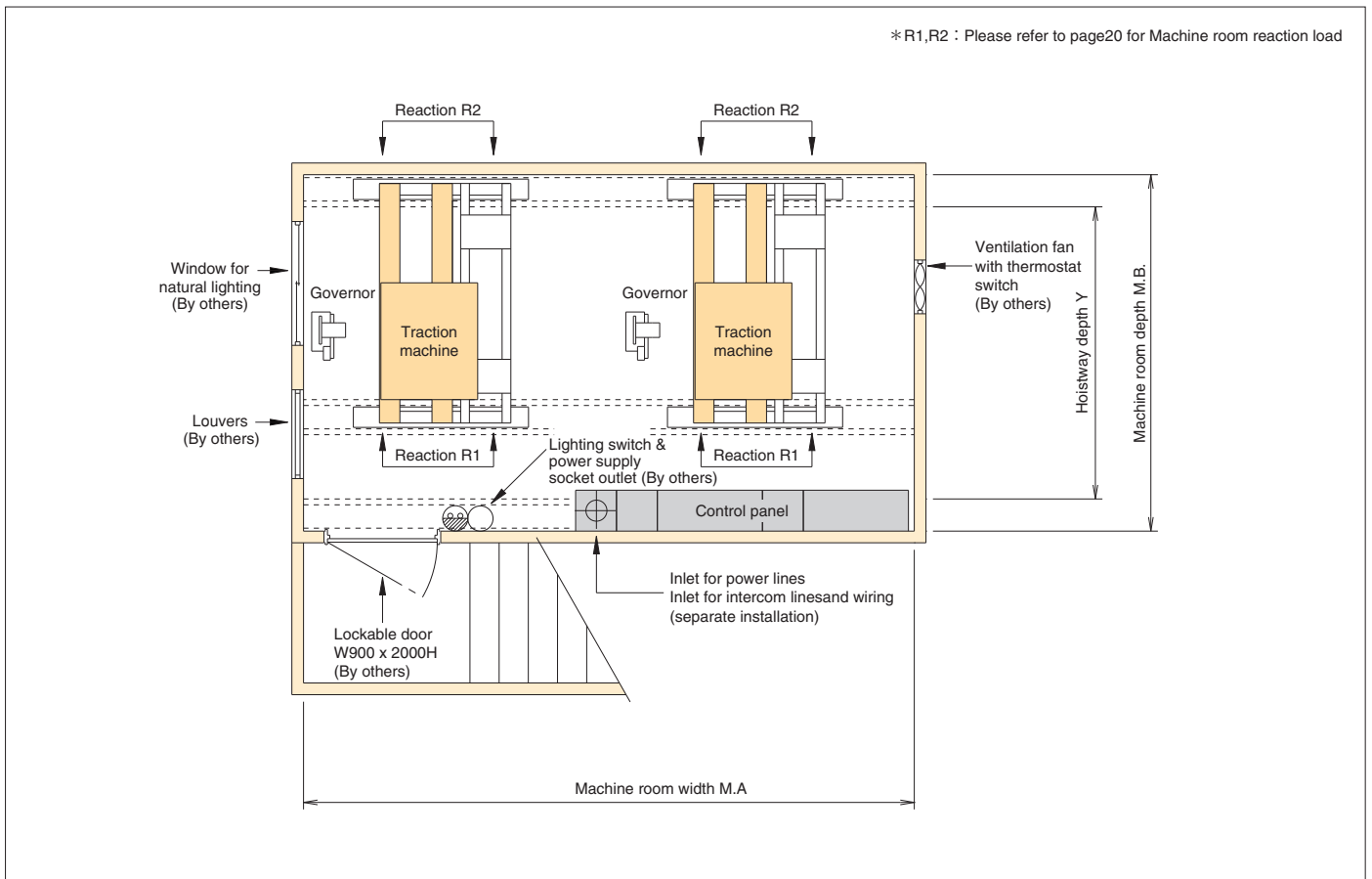
2 Installation plan <Compact machine room type>

Installation diagram for 8 to 24 passenger

■ Hoist-way plan



■ Machine-room plan



■ Shaft and machine room dimensions (Floor plan dimensions)

Rated speed (m/min)	Type	Entrance (mm)		Internal car dimensions (mm) AxB	Shaft (mm)				Machine room (mm)			
		Width	Height		Single shaft* X x Y	Dual shaft** X x Y	Triple shaft X x Y	Quadruple shaft X x Y	Single shaft* MA x MB	Dual shaft** MA x MB	Triple shaft MA x MB	Quadruple shaft MA x MB
120 150 180 210 240	P8-CO	800	2100	1400×1100	1940×1895	4030×1895	6120×1895	8210×1895	2100×2950	4230×2950	6370×2950	8610×2950
	P12-CO	900	2100	1600×1300	2140×2095	4430×2095	6720×2095	9010×2095	2250×3050	4430×3050	6720×3050	9010×3050
	P13-CO	900	2100	1600×1400	2140×2195	4430×2195	6720×2195	9010×2195	2250×3100	4430×3100	6720×3100	9010×3100
	P15-CO	1000	2100	1800×1400	2340×2195	4830×2195	7320×2195	9810×2195	2700×3100	5200×3100	7850×3100	10350×3100
	P18-CO	1000	2100	2000×1500	2540×2295	5230×2295	7920×2295	10610×2295	2900×3150	5600×3150	8450×3150	11150×3150
	P21-CO	1100	2100	2000×1700	2540×2495	5230×2495	7920×2495	10610×2495	2900×3250	5600×3250	8450×3250	11150×3250
	P24-CO	1200	2100	2100×1750	2640×2545	5430×2545	8220×2545	11010×2545	3050×3250	5900×3250	8900×3250	11750×3250

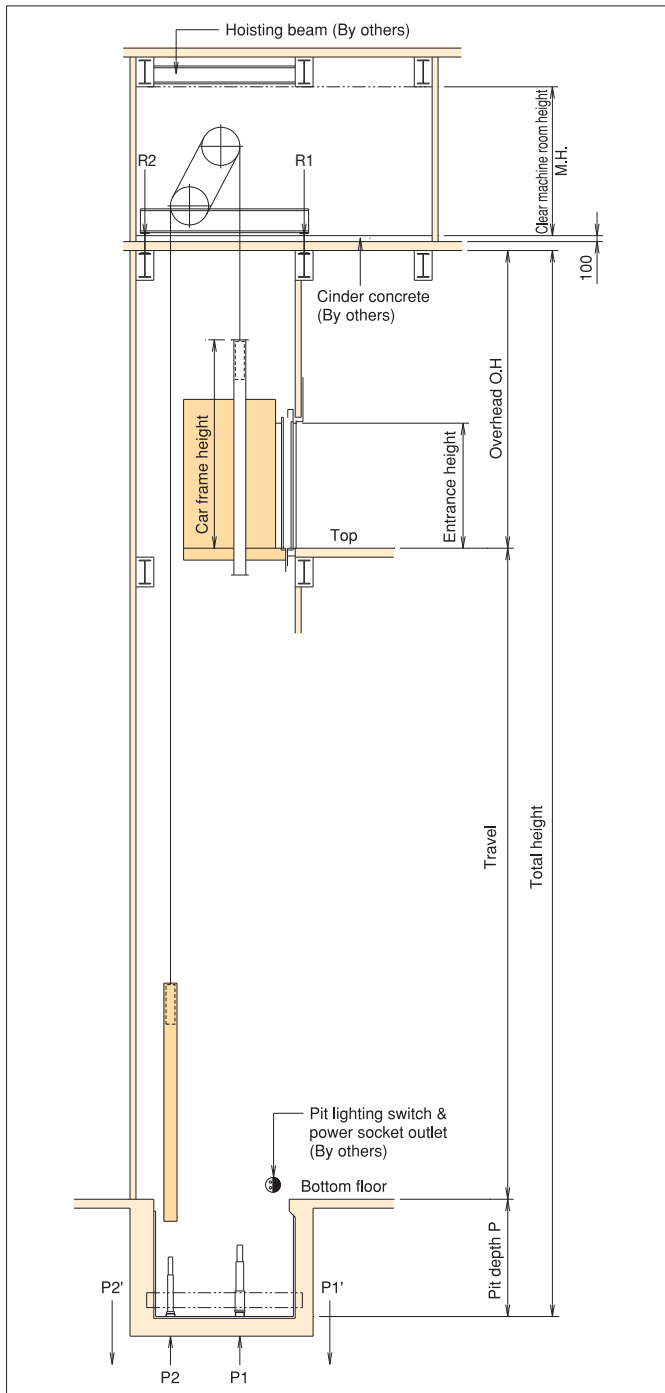
* In order to prevent noise in the car for a single-shaft elevator with a speed of 180 m/min or greater, increase the dimensions of the shaft X and machine room MA.

** In order to prevent noise in the car for a double-shaft elevator with a speed of 210 m/min or greater, increase the dimensions of the shaft X and machine room MA.
Note: Please contact us for detailed dimensions.

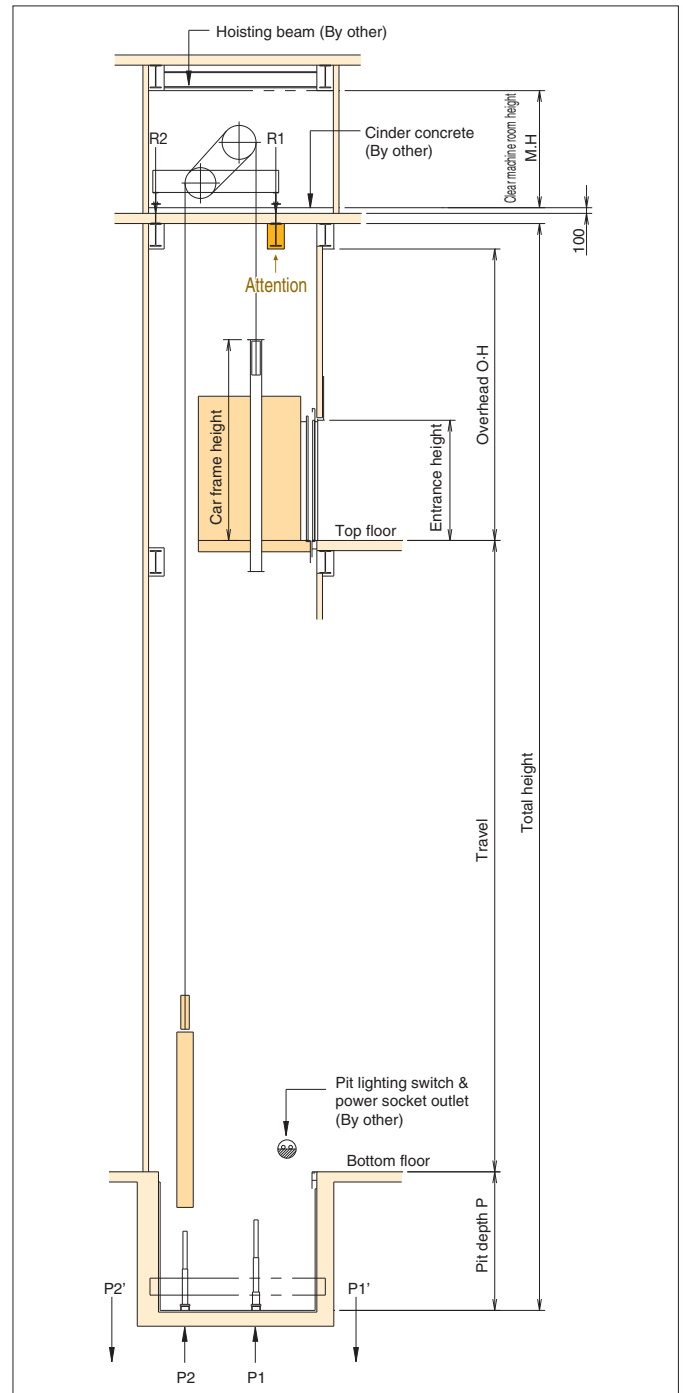
Installation plan / Power facility plan

3 Hoistway section

■ Hoistway section <Standard type>



■ Hoistway section <Compact machine room type>



Note :
 When car safety is suddenly actuated or when car strikes against buffers during high-speed operation, the counterweight will jump up. Likewise when the counterweight safety (where provided) is actuated or when it strikes the buffer, the car will also jump up.
 Hence for the elevators with speed of 240m/min or higher, tie-down safety device is provided at the compensating sheave to reduce the jumping effect of the car and counterweight by absorbing the jumping energy into the springs of the tie-down safety and elastic strain energy of the compensating ropes.

■ Shaft & Machine room dimensions (Cross section dimensions)

Rated speed (m/min)	Overhead		Pit depth	Clear machine room height
	O.H.(mm)		P(mm)	M.H(mm)
	P8,P12	Other		
120	5950	5350	2150	2250
150	6150	5550	2450	
180	6450	5850	2750	
210	6850	6250	3250	
240	7450	6850	3850	

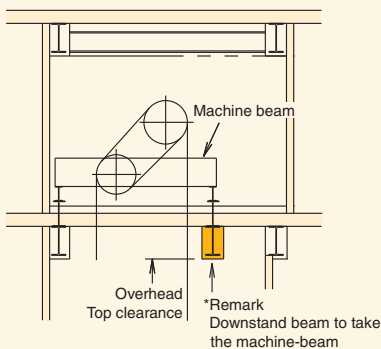
Note: Dimensions are displayed with a leeway of 50 mm.
Impact force applied to machine-room reactive-force pit, force applied to tie-down safety, and force applied to machine-room ceiling trolley beam.

■ Machine room reaction, pit reaction, tie-down safety and hoisting beam load.

Type	Rated speed (m/min)	Machine room reaction load (kN)				Pit reaction load (kN)		Tie-down safety reaction load (kN)		Hoisting beam load (kN)
		Standard type		Space saving machine room type		P1(Cage)	P2(C/W)	P1'(Cage)	P2'(C/W)	
		R1(Cage)	R2(C/W)	R1(Cage)	R2(C/W)					
P8-CO	120	95.5	132.5	134.0	94.0	194.0	172.5	-	-	54.0
	150					195.5	173.5	19.0	35.0	
	180									
	210									
P12-CO	120	106.0	147.0	153.0	99.5	211.5	184.0	-	-	
	150					220.0	192.5	22.0	46.5	
	180									
	210									
P13-CO	120	107.5	150.5	157.5	100.5	225.0	195.5	-	-	
	150					226.0	196.5	20.0	48.5	
	180									
	210									
P15-CO	120	110.5	154.5	12.5	102.5	232.5	200.5	-	-	
	150					234.0	201.5	21.0	48.5	
	180									
	210									
P18-CO	120	115.0	161.0	168.5	107.5	244.5	208.5	-	-	
	150					245.5	209.5	20.5	50.0	
	180									
	210									
P21-CO	120	123.5	173.0	183.0	113.5	265.5	224.5	-	-	
	150					266.5	225.5	22.5	61.5	
	180									
	210									
P24-CO	120	128.5	179.0	190.0	117.5	277.5	232.0	-	-	
	150					278.5	233.0	21.5	63.0	
	180									
	210									
	240	131.5	183.5	194.5	121.0	285.0	240.0	21.5	63.0	

Values may differ slightly, depending on car design and car-room size.
Please contact us for details.

■ Attention <Compact machine room type>



- ① Provision of a downstand beam is necessary to take the loading
- ② Please ensure sufficient clearance for overhead and top clearance
- ③ Please consult the structural engineer on the design of the downstand beam.
- ④ Downstand beam to be provided by others.

Installation plan / Power facility plan

4 Power facility plan

Power facility plan for 8 to 24 passenger

■ Single elevator use (1 line per elevator) 380v-50Hz

Model	Rated speed (m/min)	Motor capacity (kW)	Motor source capacity (kVA)	Non-fuse circuit breaker (A)	Total applicable length of the power source line (m)					Grounding line size (mm ²)	Heat generation (W)
					5.5 (mm ²)	8 (mm ²)	14 (mm ²)	22 (mm ²)	38 (mm ²)		
P8-CO	120	8	14	40	63	98	174	273	461	3.5	2050
	150	10	16	40	50	79	140	219	370	3.5	2600
	180	12	18	40	42	66	117	183	309	3.5	3100
	210	14	20	50	36	56	100	157	266	3.5	3600
	240	16	22	50	31	49	87	136	230	3.5	4100
P12-CO	120	12	18	40	55	86	154	240	407	3.5	3100
	150	14	21	50	43	68	121	189	319	3.5	3850
	180	18	25	60	36	56	100	157	266	5.5	4600
	210	20	28	60	-	45	86	135	228	5.5	5400
	240	22	31	75	-	38	74	115	195	5.5	6150
P13-CO	120	12	19	50	52	81	145	227	384	3.5	3450
	150	16	23	50	41	65	115	180	305	3.5	4300
	180	18	27	60	-	50	95	149	253	5.5	5150
	210	22	30	75	-	42	81	128	216	5.5	6000
	240	24	34	75	-	-	67	113	192	5.5	6850
P15-CO	120	14	22	50	51	80	143	223	377	3.5	3950
	150	18	26	60	-	58	112	175	296	5.5	4900
	180	22	30	60	-	48	92	144	244	5.5	5900
	210	26	34	75	-	-	73	124	209	5.5	6850
	240	28	38	100	-	-	63	105	179	5.5	7850
P18-CO	120	18	25	60	46	72	128	201	340	5.5	4600
	150	22	29	60	-	52	100	157	266	5.5	5750
	180	26	34	75	-	-	77	130	220	5.5	6900
	210	30	39	100	-	-	67	112	190	5.5	8050
	240	34	44	100	-	-	57	96	163	5.5	9200
P21-CO	120	20	28	60	-	61	117	183	309	5.5	5450
	150	24	34	75	-	-	84	142	241	5.5	6850
	180	30	40	100	-	-	70	119	201	5.5	8200
	210	34	45	125	-	-	61	103	174	8	9550
	240	40	51	125	-	-	52	87	148	8	10900
P24-CO	120	22	31	75	-	57	110	173	292	5.5	6150
	150	28	38	100	-	-	81	136	230	5.5	7700
	180	34	44	100	-	-	66	111	188	5.5	9200
	210	38	51	125	-	-	56	95	160	8	10750
	240	44	57	125	-	-	-	80	146	8	12300