

TOSHIBA

Leading Innovation >>>

New ELBRIGHT

TOSHIBA **HIGH SPEED** ELEVATORS

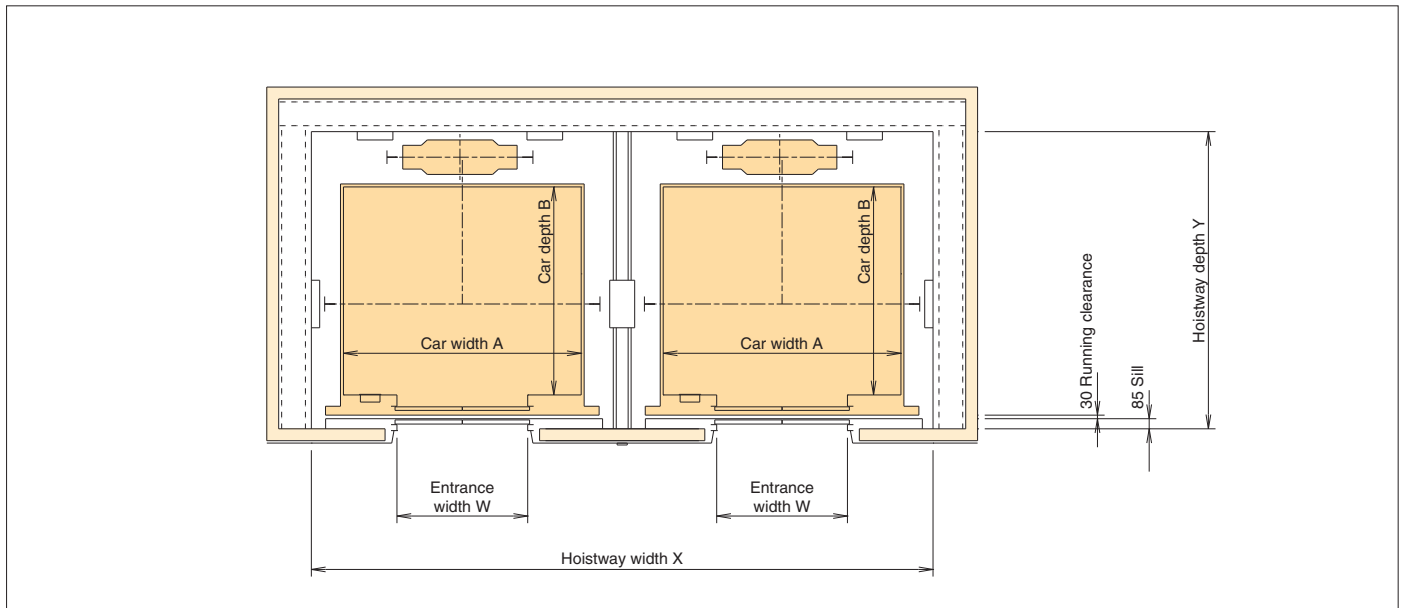
Installation plan and power facility plan for *Malaysia*

Installation plan / Power facility plan

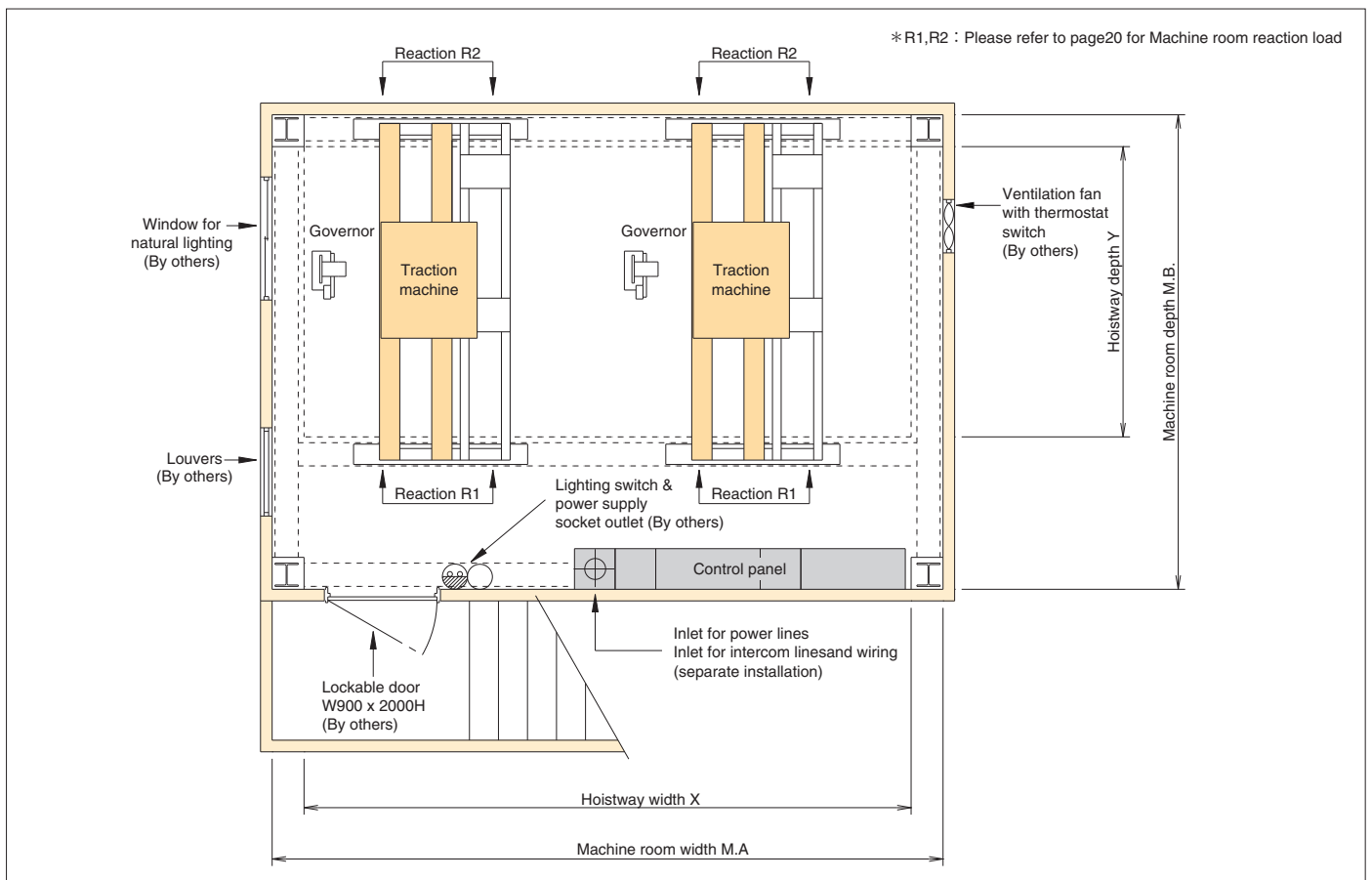
1 Installation plan <Standard type>

Installation diagram for 9 to 27 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	P9-CO	800	2100	1400×1150	1940×1945	4030×1945	6120×1945	8210×1945	2350×3400	4500×3400	7000×3400	9150×3400
	P13-CO	900	2100	1600×1350	2140×2145	4430×2145	6720×2145	9010×2145	2500×3650	4800×3650	7450×3650	9750×3650
	P15-CO	900	2100	1600×1550	2140×2345	4430×2345	6720×2345	9010×2345	2500×3800	4800×3800	7450×3800	9750×3800
	P17-CO	1000	2100	1800×1500	2340×2295	4830×2295	7320×2295	9810×2295	2700×3800	5200×3800	8050×3800	10550×3800
	P20-CO	1000	2100	2000×1550	2540×2345	5230×2345	7920×2345	10610×2345	2900×3800	5600×3800	8650×3800	11350×3800
	P24-CO	1100	2100	2000×1800	2540×2595	5230×2595	7920×2595	10610×2595	2900×4000	5600×4000	8650×4000	11350×4000
	P27-CO	1200	2100	2100×1900	2640×2695	5430×2695	8220×2695	11010×2695	3050×4050	5900×4050	9100×4050	11950×4050

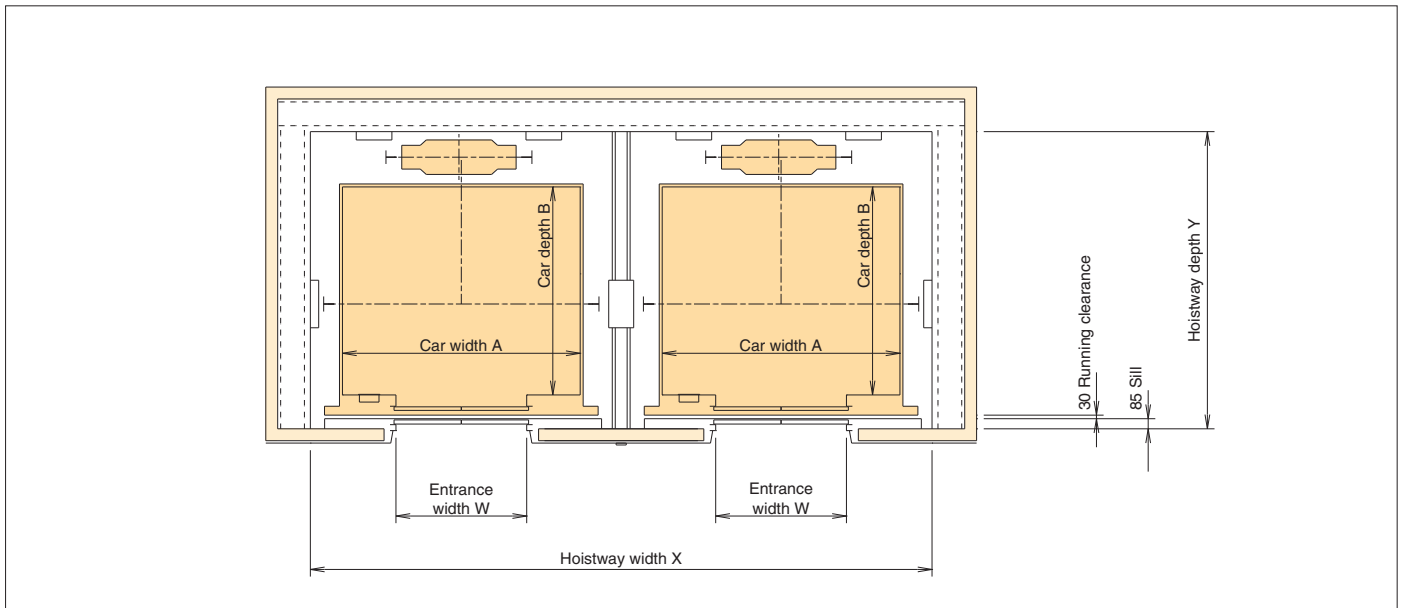
* In order to prevent noise in the car for a single-shaft elevator with a speed of 180 m/min or greater, increase the dimensions of the shaft X and machine room MA.
 ** In order to prevent noise in the car for a double-shaft elevator with a speed of 210 m/min or greater, increase the dimensions of the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

Installation plan / Power facility plan

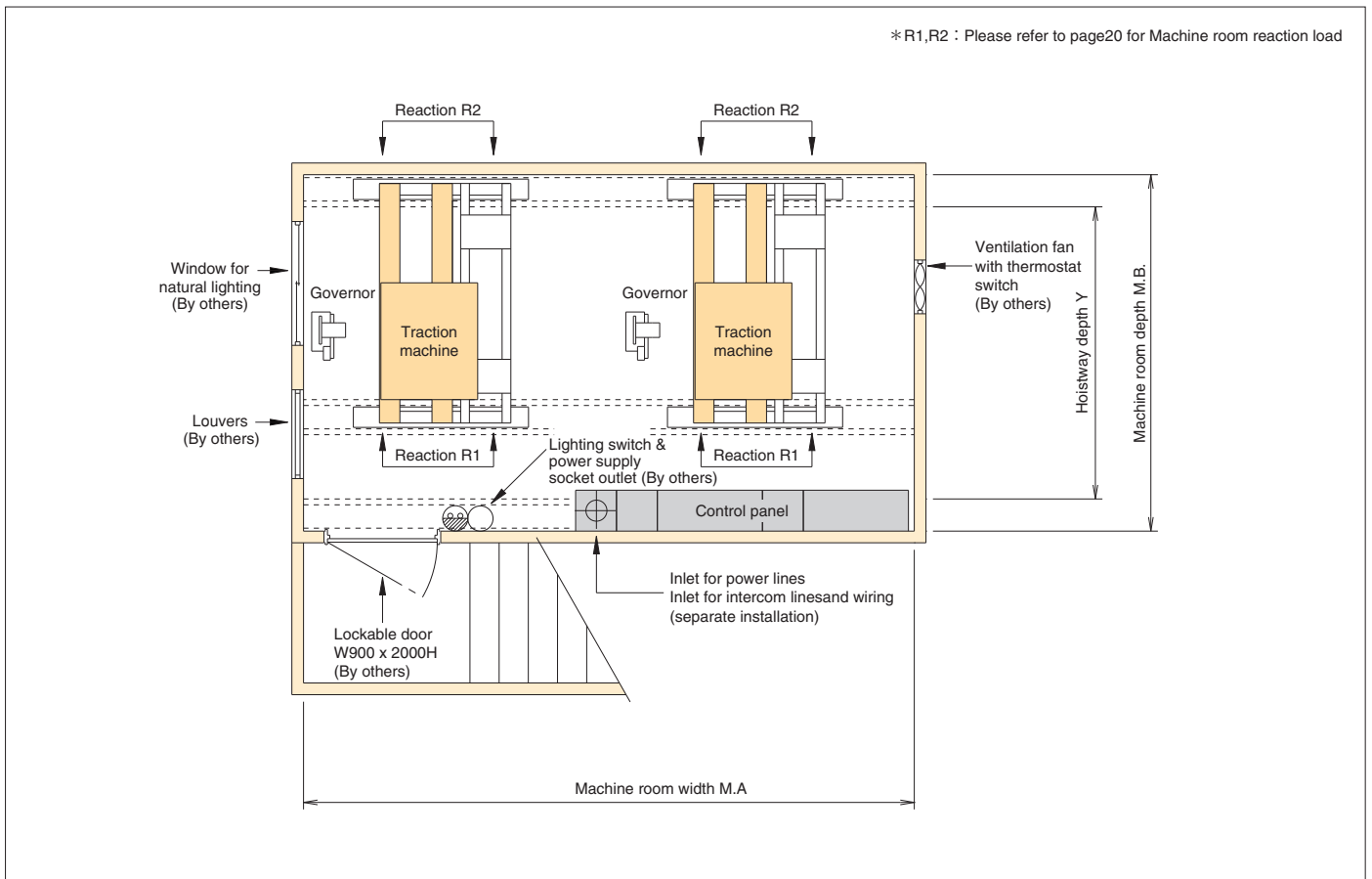
2 Installation plan <Compact machine room type>

Installation diagram for 9 to 27 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	P9-CO	800	2100	1400×1150	1940×1945	4030×1945	6120×1945	8210×1945	2100×2750	4230×2750	6370×2750	8610×2750
	P13-CO	900	2100	1600×1350	2140×2145	4430×2145	6720×2145	9010×2145	2250×2850	4430×2850	6720×2850	9010×2850
	P15-CO	900	2100	1600×1550	2140×2345	4430×2345	6720×2345	9010×2345	2250×2950	4430×2950	6720×2950	9010×2950
	P17-CO	1000	2100	1800×1500	2340×2295	4830×2295	7320×2295	9810×2295	2700×2950	5200×2950	8050×2950	10550×2950
	P20-CO	1000	2100	2000×1550	2540×2345	5230×2345	7920×2345	10610×2345	2900×2950	5600×2950	8650×2950	11350×2950
	P24-CO	1100	2100	2000×1800	2540×2595	5230×2595	7920×2595	10610×2595	2900×3100	5600×3100	8650×3100	11350×3100
	P27-CO	1200	2100	2100×1900	2640×2695	5430×2695	8220×2695	11010×2695	3050×3150	5900×3150	9010×3150	11950×3150

* 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.

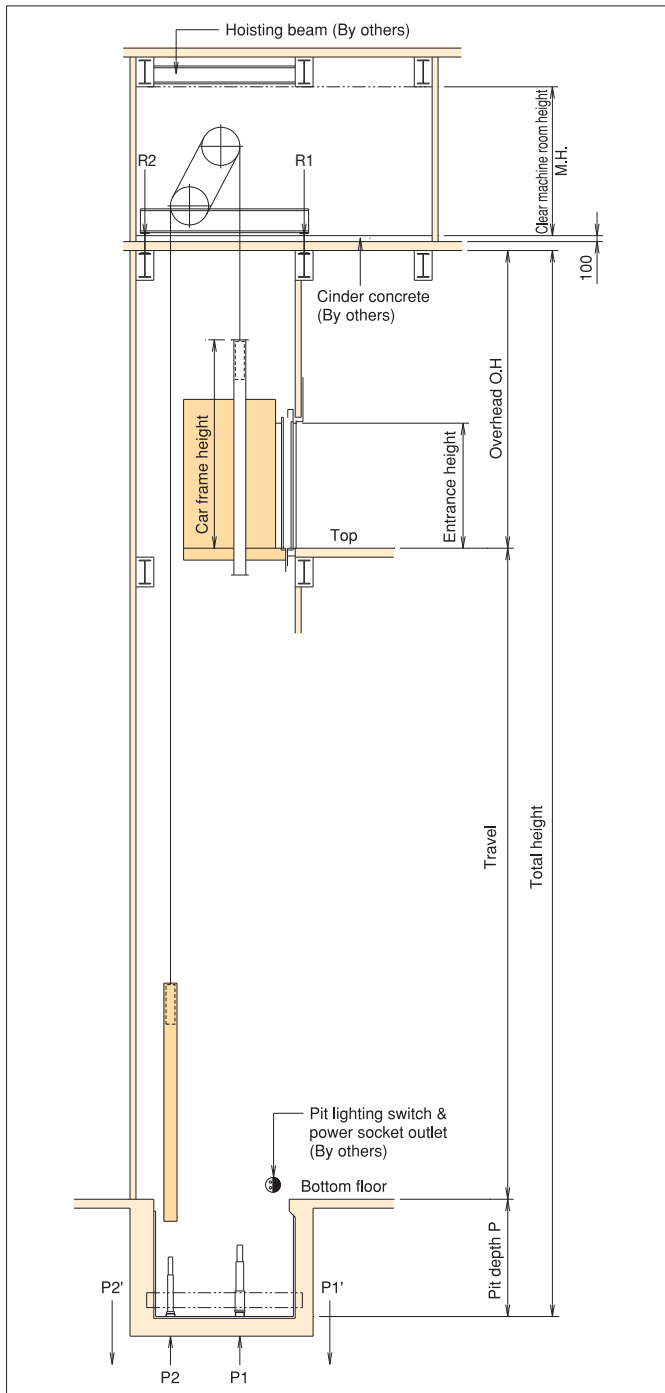
** In order to prevent noise in the car for a double-shaft elevator with a speed of 210 m/min or greater, increase the dimensions of the shaft X and machine room MA.

Note: Please contact us for detailed dimensions.

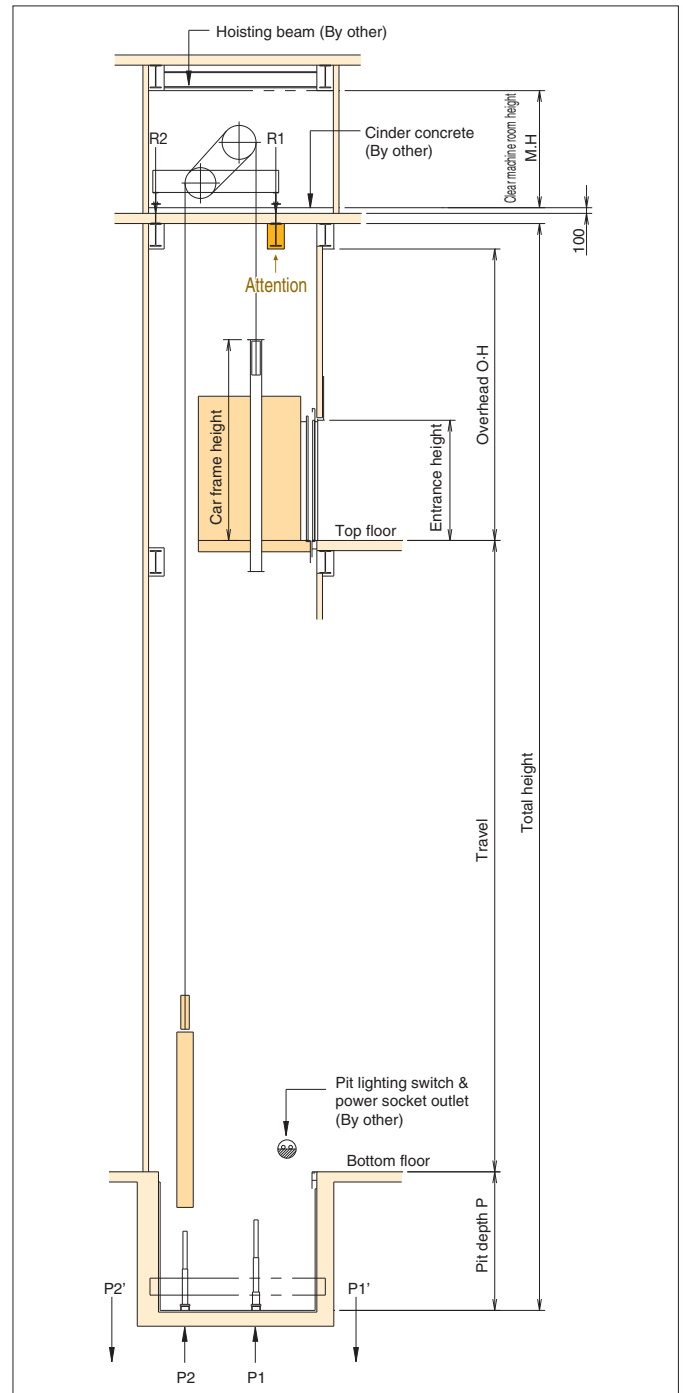
Installation plan / Power facility plan

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)
	P9,P13	Other		
120	5950	5350	2150	2250
150	6150	5550	2450	
180	6450	5850	2750	
210	6850	6250	3250	
240	7450	6850	3850	

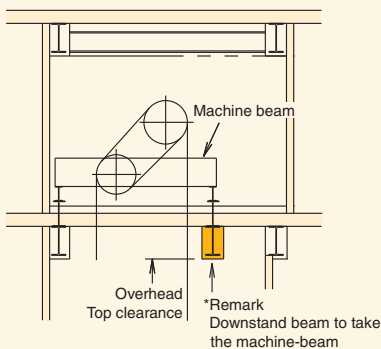
Note: Dimensions are displayed with a leeway of 50 mm.
Impact force applied to machine-room reactive-force pit, force applied to tie-down safety, and force applied to machine-room ceiling trolley beam.

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

Type	Rated speed (m/min)	Machine room reaction load (kN)		Compact machine room reaction load (kN)		Pit reaction load (kN)		Tie-down safety reaction load (kN)		Hoisting beam load (kN)
		R1(Cage)	R2(C/W)	R1(Cage)	R2(C/W)	P1(Cage)	P2(C/W)	P1'(Cage)	P2'(C/W)	
P9-CO	120	95.5	132.5	134.0	94.0	194.0	172.5	-	-	54.0
	150					195.5	173.5			
	180									
	210					19.0	35.0			
P13-CO	120	106.0	147.0	153.0	99.5	211.5	184.0	-	-	
	150					220.0	192.5			
	180									
	210					22.0	46.5			
P15-CO	120	107.5	150.5	157.5	100.5	225.0	195.5	-	-	
	150					226.0	196.5			
	180									
	210					20.0	48.5			
P17-CO	120	110.5	154.5	162.5	102.5	232.5	200.5	-	-	
	150					234.0	201.5			
	180									240.5
	210					21.0	48.5			
P20-CO	120	115.0	161.0	168.5	107.5	244.5	208.5	-	-	
	150					245.5	209.5			
	180									252.0
	210					20.5	50.0			
P24-CO	120	123.5	173.0	183.0	113.5	265.5	224.5	-	-	
	150					266.5	225.5			
	180									273.5
	210					22.5	61.5			
P27-CO	120	128.5	179.0	190.0	117.5	277.5	232.0	-	-	
	150					278.5	233.0			
	180									285.0
	210					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 9 to 27 passenger

■ Single elevator use (1 line per elevator) 415v-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)		
P9-CO	120	8	14	40	69	107	190	298	*	3.5	2050
	150	10	16	40	54	84	150	235	397	3.5	2600
	180	12	18	40	45	70	124	194	328	3.5	3100
	210	14	20	50	38	60	107	167	283	3.5	3600
	240	16	22	50	33	52	93	145	246	3.5	4100
P13-CO	120	12	18	40	59	92	165	258	436	3.5	3100
	150	14	21	50	47	74	132	206	348	3.5	3850
	180	18	25	50	39	61	108	169	287	3.5	4600
	210	20	28	60	33	51	92	144	243	5.5	5400
	240	22	31	60	-	41	80	125	211	5.5	6150
P15-CO	120	12	19	40	56	87	156	244	412	3.5	3450
	150	16	23	50	45	70	124	194	328	3.5	4300
	180	18	27	60	37	58	103	161	273	5.5	5150
	210	22	30	60	-	46	88	138	233	5.5	6000
	240	24	34	75	-	39	76	118	200	5.5	6850
P17-CO	120	14	22	50	54	84	150	235	397	3.5	3950
	150	18	26	50	42	66	117	183	310	3.5	4900
	180	22	30	60	-	51	97	152	257	5.5	5900
	210	26	34	75	-	43	83	130	220	5.5	6850
	240	28	38	75	-	-	66	111	188	5.5	7850
P20-CO	120	18	25	50	50	77	138	216	365	3.5	4600
	150	22	29	60	-	56	108	169	287	5.5	5750
	180	26	34	75	-	47	90	141	238	5.5	6900
	210	30	39	75	-	-	71	120	204	5.5	8050
	240	34	44	100	-	-	61	103	174	5.5	9200
P24-CO	120	20	28	60	-	66	126	197	333	5.5	5450
	150	24	34	75	-	51	98	154	260	5.5	6850
	180	30	40	100	-	-	76	127	215	5.5	8200
	210	34	45	100	-	-	64	109	184	5.5	9550
	240	40	51	125	-	-	55	93	158	8	10900
P27-CO	120	22	31	60	-	62	119	186	314	5.5	6150
	150	28	38	75	-	-	86	145	246	5.5	7700
	180	34	44	100	-	-	71	119	202	5.5	9200
	210	38	51	125	-	-	60	101	171	8	10750
	240	44	57	125	-	-	52	88	149	8	12300