

Elevator Technology

thyssenkrupp Elevator China

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Elevator Technology

GL

Proven MR Performance



thyssenkrupp



engineering.tomorrow.together.

# thyssenkrupp moves people – the future of urban mobility.

In 40 short years, we’ve become one of the world’s leading elevator companies with unique engineering capabilities, offering next-generation solutions like MULTI, the ropeless elevator, ACCEL, an accelerated people mover, and MAX, a cloud-based predictive maintenance service. Whether building a new state-of-the-art system or optimizing and modernizing existing ones, our solutions deliver crucial energy and time efficiencies, helping to address the challenges of urbanization and transform cities into the best places to live.

 <p>Customers in <b>150</b> countries</p>	 <p>Over 900 sales and service locations</p>	<p>Sales of <b>€ 7.5</b> billion</p>	<p><b>50,000+</b> employees </p>
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## A trusted partner

We support our customers throughout their project lifecycle, from the design to the end-of-life phase. Every step of the way, we strive to fully understand their needs and consistently deliver the safest, highest quality passenger transportation solutions, maintenance and modernization packages.

Through our internal technical support function, ITS (International Technical Services), thyssenkrupp trains its service technicians in a multibrand portfolio, enabling them to successfully service more than 1.2 million units under maintenance.

## thyssenkrupp – the diversified industrial group

engineering.tomorrow.together – three words that describe who we are, what we do, and how we do it. Driven by global megatrends such as urbanization and the need for efficient use of environmental resources, our global community of more than 150,000 colleagues works together with our customers to harness our engineering expertise and strive for technological and business solutions that satisfy the demand for “more” in a “better” way.

Find out more: [www.thyssenkrupp.com](http://www.thyssenkrupp.com)



One World Trade Center



Makkah Clock Tower / Source © SL Rasch

We provide smart and innovative products for a wide variety of applications:

- Passenger and freight elevators
- Escalators and moving walks
- Passenger boarding bridges
- Stair and platform lifts
- Customized service and modernization solutions



Mercedes Benz



thyssenkrupp Quartier

engineering.  
tomorrow.  
together.

## thyssenkrupp Elevator AG Asia Pacific

With more than 50,000 skilled employees and customers in 150 countries, thyssenkrupp Elevator is one of the world's leading elevator companies.

The portfolio includes passenger and freight elevators, escalators and moving walks, passenger boarding bridges, stair and platform lifts as well as tailored service solutions for all products. Over 900 locations around the world provide an extensive sales and service network to guarantee closeness to customers.

thyssenkrupp Elevator AG Asia Pacific Office is the regional office for Asia Pacific and the Middle East. It has a strong presence in local markets with manufacturing facilities in China, South Korea and India, plus a dense network of branches and offices in these same countries, Southeast Asia and Australia offering new installation, modernization and service business for the complete product range.





# GL

## Proven MR performance

Engineered to its high performance, GL is suited for mid-rise and high-end residential and commercial buildings. Ride comfort is ensured by sturdy car design, use of noise-reducing materials from moving components, and high precision motor system that results in smooth braking and accurate levelling.

### Designed for

- Commercial buildings
- Mid-rise residential buildings

### Specification

- Max. travel height:  $\leq 150\text{m}$
- Max. number of floors:  $\leq 32$
- Rated speed:  $\leq 3.0\text{m/s}$
- Rated load:  $\leq 1600\text{kg}$
- Group control: 8

## Proven MR performance



### Ride comfort

Sturdy car design, use of noise-reducing materials, and high precision motor system guarantee ride comfort.



### Safe and reliable

Stringent product design based on thyssenkrupp German standards ensures highest degree of passenger safety.



### Comfort and aesthetic design

Embrace aesthetic car interior design and comfort.

## Ride comfort



- **Independent suspension system effectively reduces noise and vibrations.**

High-performance device between the car and the bottom of the car frame reduces vibration.

Hard-wearing polymer guide shoe lining delivers a smooth ride and enhances passenger comfort.

- **Noise-reducing materials minimize noise from moving components.**

Plastic-coated (or fully plastic) compensating cable effectively reduces noise from impacts.

K/S series door system features a wide belt and large rollers to reduce door noise.

- **Precision VVVF frequency drive for smooth deceleration and acceleration.**

Patented variable-frequency drive manufactured using German technology delivers accurate CPI and vector control and greater torque at lower speeds.

Ensure levelling accuracy ( $\pm 5\text{mm}$ ).

Cutting-edge MC series control system automatically maps elevator movement for greater efficiency and enhanced passenger comfort.

## Safe and reliable



thyssenkrupp based on its stringent German product design and safety standards is a trusted brand in the industry. thyssenkrupp is committed to ensuring the highest degree of passenger safety.

- **Training**

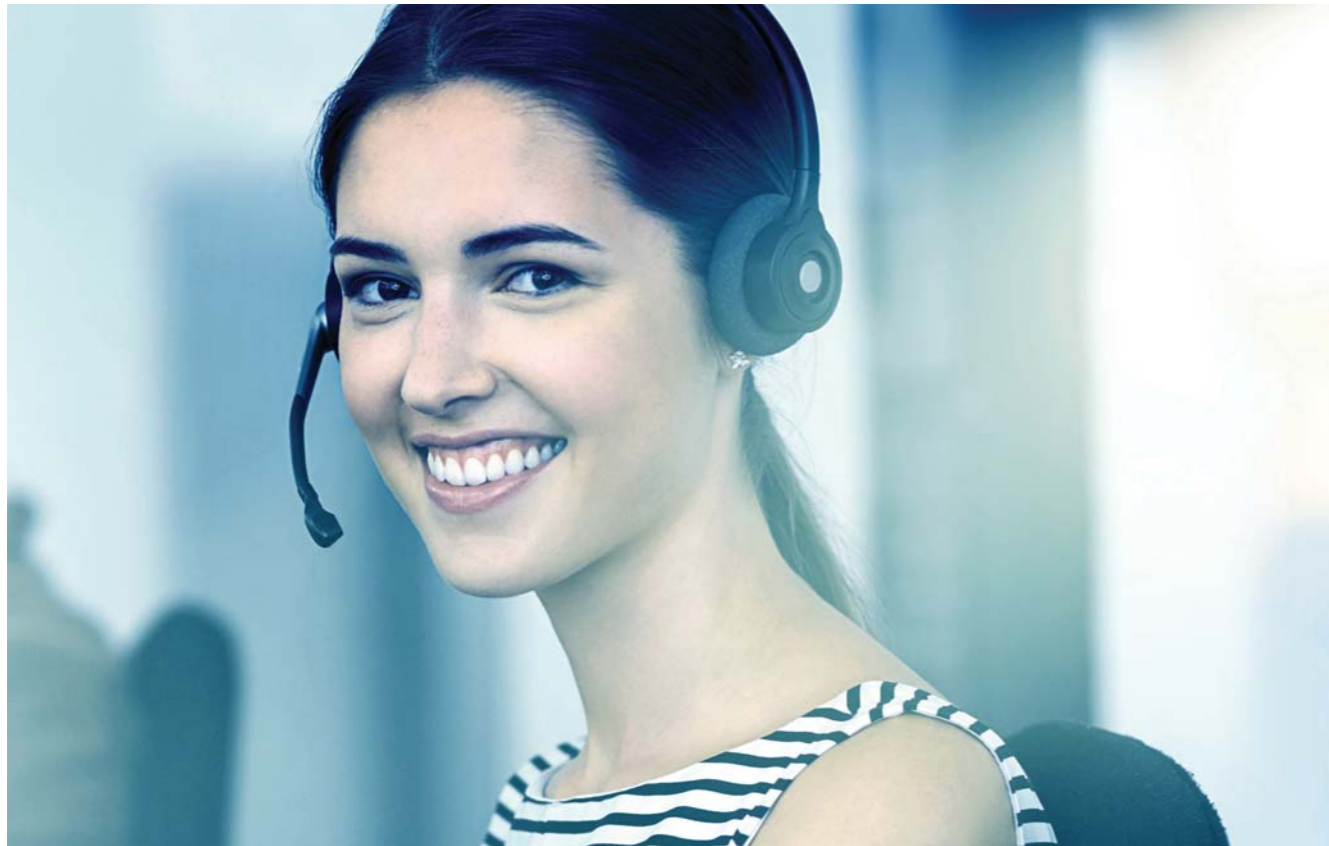
Our technicians are trained to work to the highest safety standards and adhere to stringent safety rules. thyssenkrupp's TEAMService and SEED Campus, the thyssenkrupp Elevator training institution, assure that our team is continuously and systematically trained to deliver the services you depend on.

- **Solutions**

Our unique field operations system, VIEW, stores every elevator's service history, enabling us to see the performance of the units in real time, and monitor the leading indicators that optimize equipment availability.

- **Design**

Stringent global product design standards and cutting-edge technology ensure the highest levels of passenger safety.



### Installation

thyssenkrupp's reputation for customer-centric solutions has come about through our focus on providing solutions to design, select and install people transportation systems for a wide variety of buildings.

- **Systematic project management**

Utilize mobility devices to provide real-time project management and reporting to ensure timely installation.

- **Professional installation**

Utilize vigorous process to select installation teams. Staff are graded on 7 levels. Installation teams are regularly trained and put through stringent tests to qualify them on proven methodology.

- **Comprehensive quality control system**

In-process checks and quality assurance to ensure qualitative and safe installation

### Service

At thyssenkrupp, we are consistently committed to responding to customers' requests in a highly responsive, punctual and timely manner. Driven by a global service strategy, our business operating model contributes to all aspects of customer service satisfaction.

We adopt a proactive approach to go beyond our customers' expectations by providing tailored-made solutions to meet their needs. We strive to protect your investment by delivering a systematic service program of which is smart, stress-free and systematic.

- **Prescriptive maintenance**

Offered through a variety of service agreements that insure a consistent, proactive, and predictable process which you can rely on. Our team is trained to eliminate maintenance problems.

- **Smart tools**

Our network of engineers is well-equipped with intelligent tools to keep passengers moving.

- **Skilled team**

Every engineer is very well-trained to deliver quality work on time.



## Comfort and aesthetic design

### GL embraces comfort and aesthetic.

#### Comfort and aesthetic throughout your building

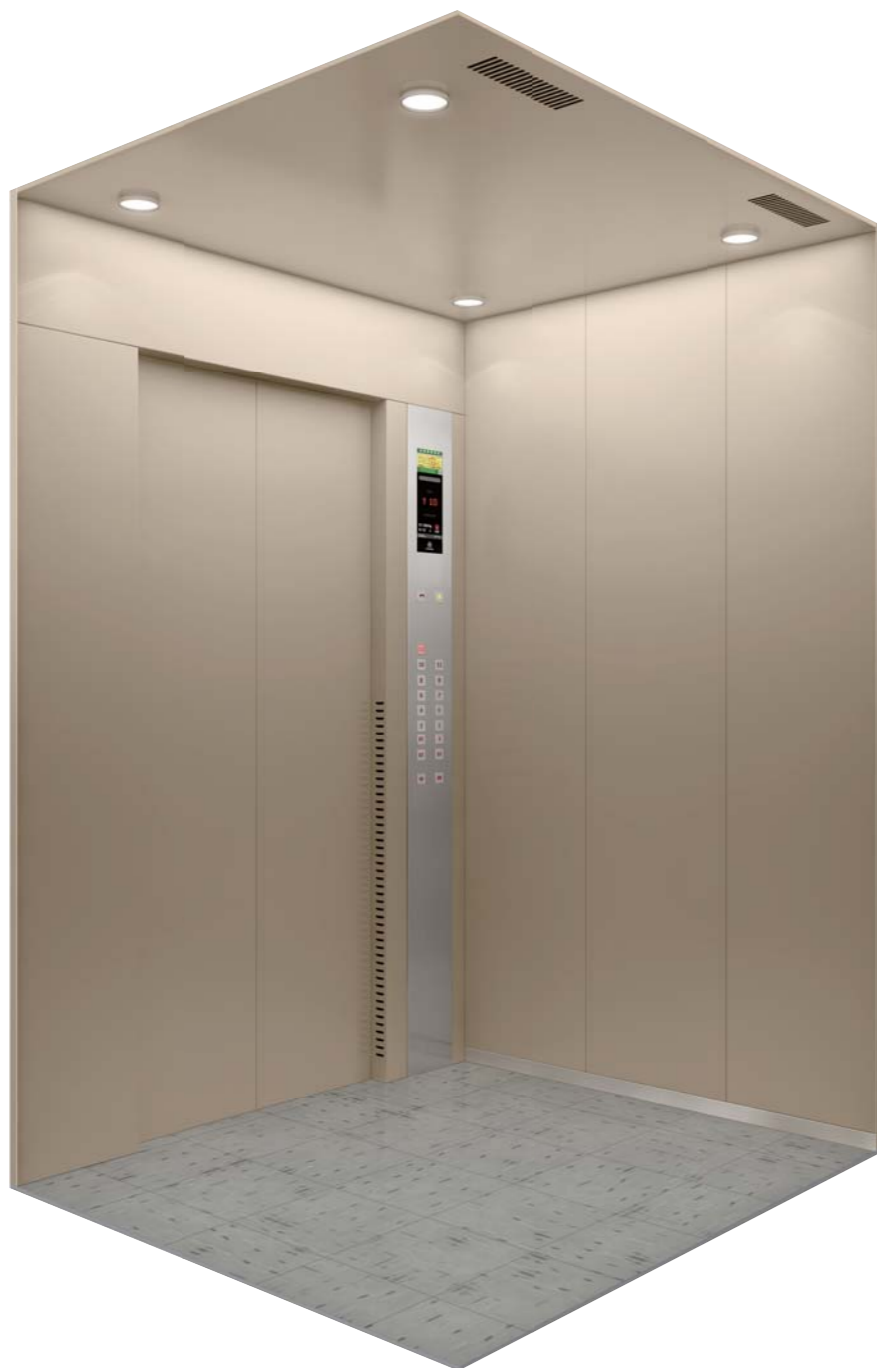
Designed for mid-to-high-end residential and commercial buildings, GL's inspiring car interiors are designed with the building segment in mind. The feeling of comfort will continue from the lobby interior, into the elevator and therefor throughout the entire building.

## Car interior

### CS1-GE

#### Standard

Ceiling	RF-CL1S (Powder coated steel - RAL1015)
Side Wall	Powder coated steel - RAL1015
Rear Wall	Powder coated steel - RAL1015
Front Wall	Powder coated steel - RAL1015
Floor	PVC floor - TCD314
Handrail	-



### CS2-GE

#### Option

Ceiling	RF-CL1S (Powder coated steel - RAL7035)
Side Wall	Powder coated steel - RAL7035
Rear Wall	Powder coated steel - RAL7035
Front Wall	Powder coated steel - RAL7035
Floor	PVC floor - CFL010
Handrail	-



## Car interior

### CS3-GE

#### Standard

Ceiling	RF-CL1S (Powder coated steel - RAL7035)
Side Wall	Hairline stainless steel
Rear Wall	Hairline stainless steel
Front Wall	Hairline stainless steel
Floor	PVC patterned - PF001 (TCD319, TCD314)
Handrail	-



### CS4-GE

#### Option

Ceiling	RF-CL1S (Powder coated steel - RAL7035)
Side Wall	Hairline stainless steel, mirror stainless steel
Rear Wall	Hairline stainless steel, mirror stainless steel
Front Wall	Hairline stainless steel
Floor	PVC patterned - PF001 (TCD319, TCD314)
Handrail	TSF08 - flat hairline stainless steel handrail



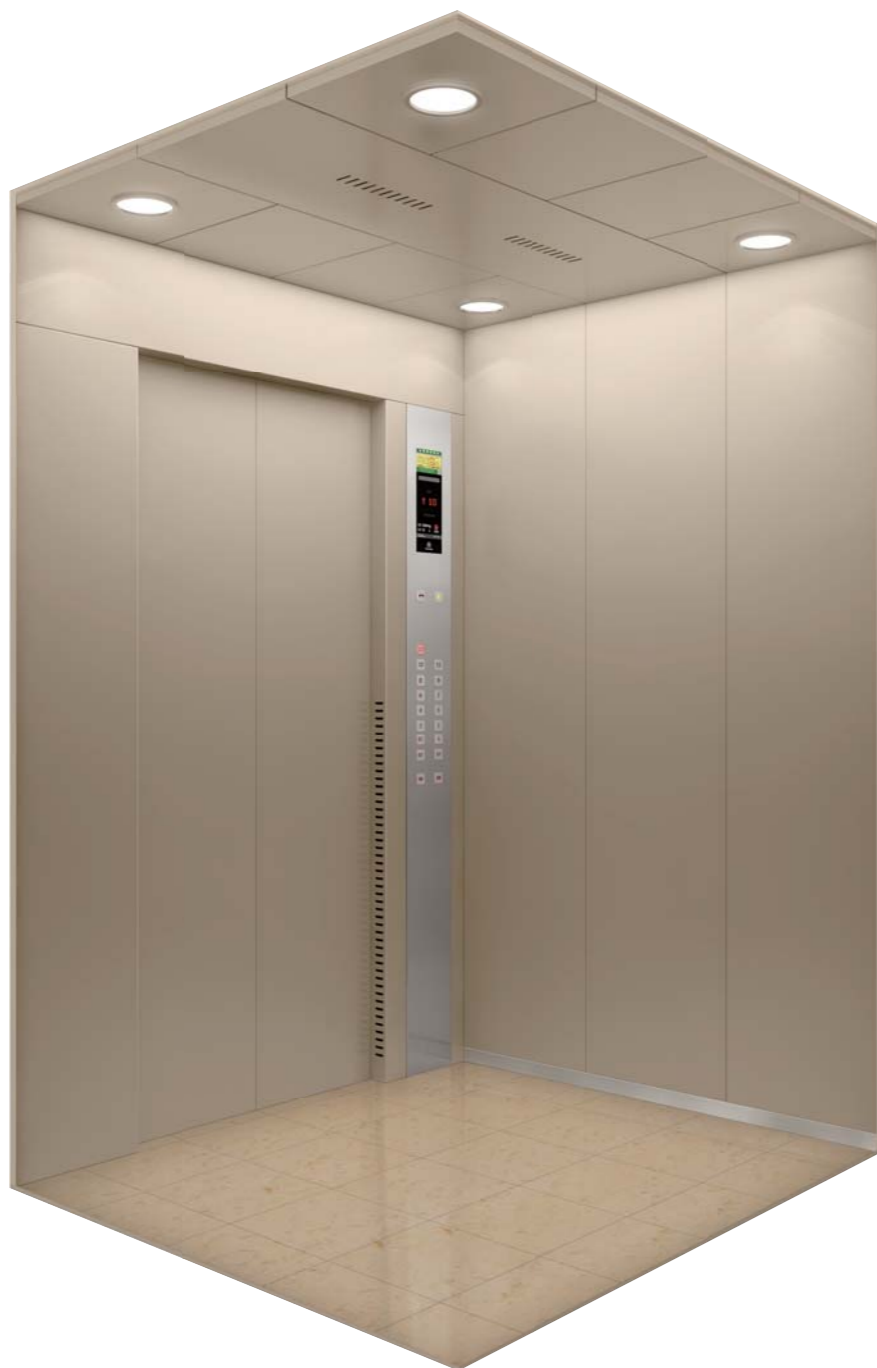


## Car interior

### CL1-GE

#### Standard

Ceiling	Starlight (Powder coated steel - RAL1015)
Side Wall	Powder coated steel - RAL1015
Rear Wall	Powder coated steel - RAL1015
Front Wall	Powder coated steel - RAL1015
Floor	PVC floor - CFL008
Handrail	-



### CL2-GE

#### Option

Ceiling	Starlight (Powder coated steel - RAL7035)
Side Wall	Powder coated steel - RAL7035 mirror stainless steel
Rear Wall	Powder coated steel - RAL7035 mirror stainless steel
Front Wall	Powder coated steel - RAL7035
Floor	PVC floor - CFL010
Handrail	-



## Car interior

### CL3-GE

#### Standard

Ceiling	Starlight (Hairline stainless steel)
Side Wall	Hairline stainless steel
Rear Wall	Hairline stainless steel
Front Wall	Hairline stainless steel
Floor	PVC patterned - PF002 (CFL008, CFL006)
Handrail	-



### CL4-GE

#### Option

Ceiling	Starlight (Hairline stainless steel)
Side Wall	Color-painted steel HK04
Rear Wall	Mirror stainless steel, color-painted steel HK04
Front Wall	Hairline stainless steel
Floor	PVC patterned - PF002 (CFL010, CFL006)
Handrail	TSF08 - flat hairline stainless steel handrail

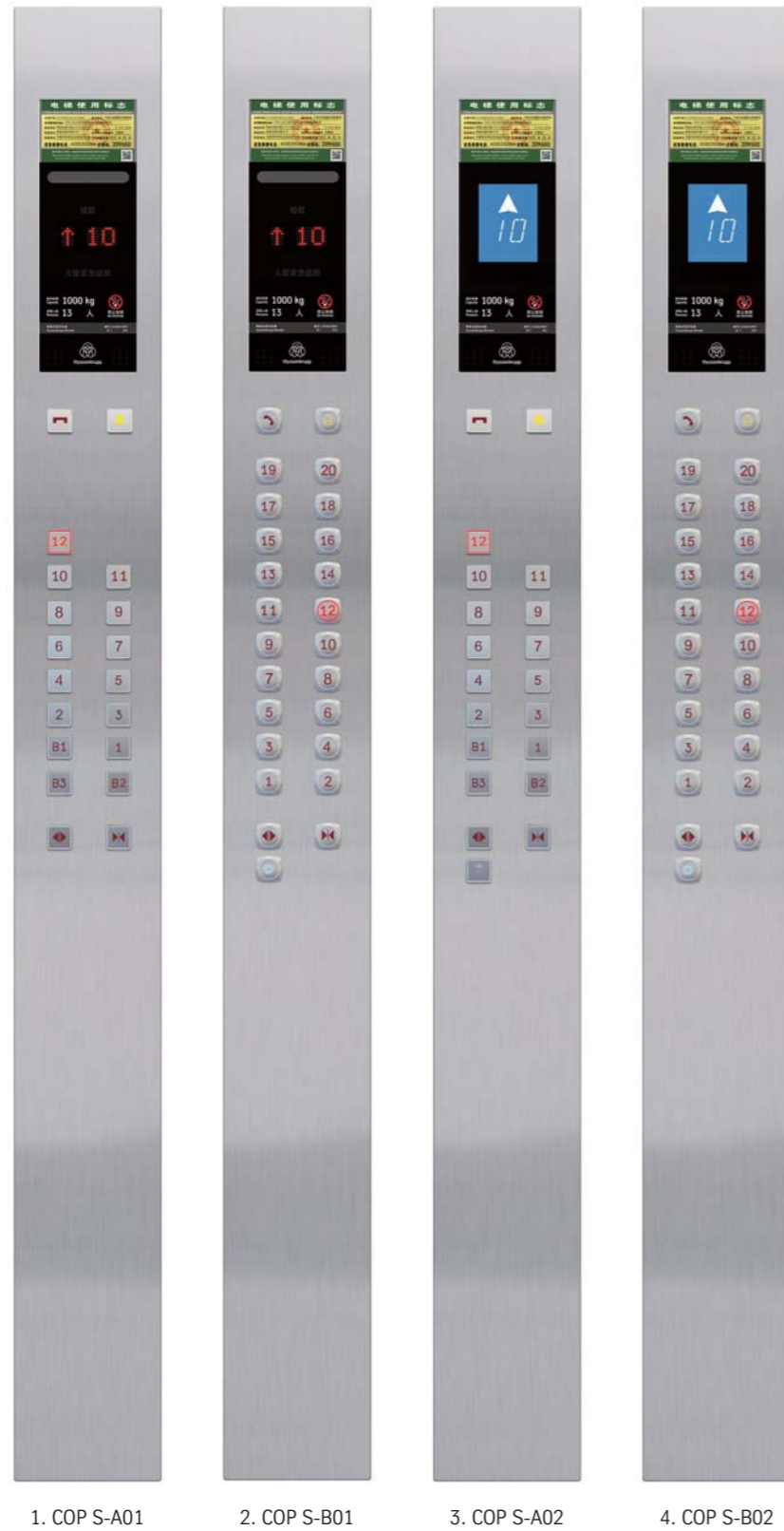


Back View



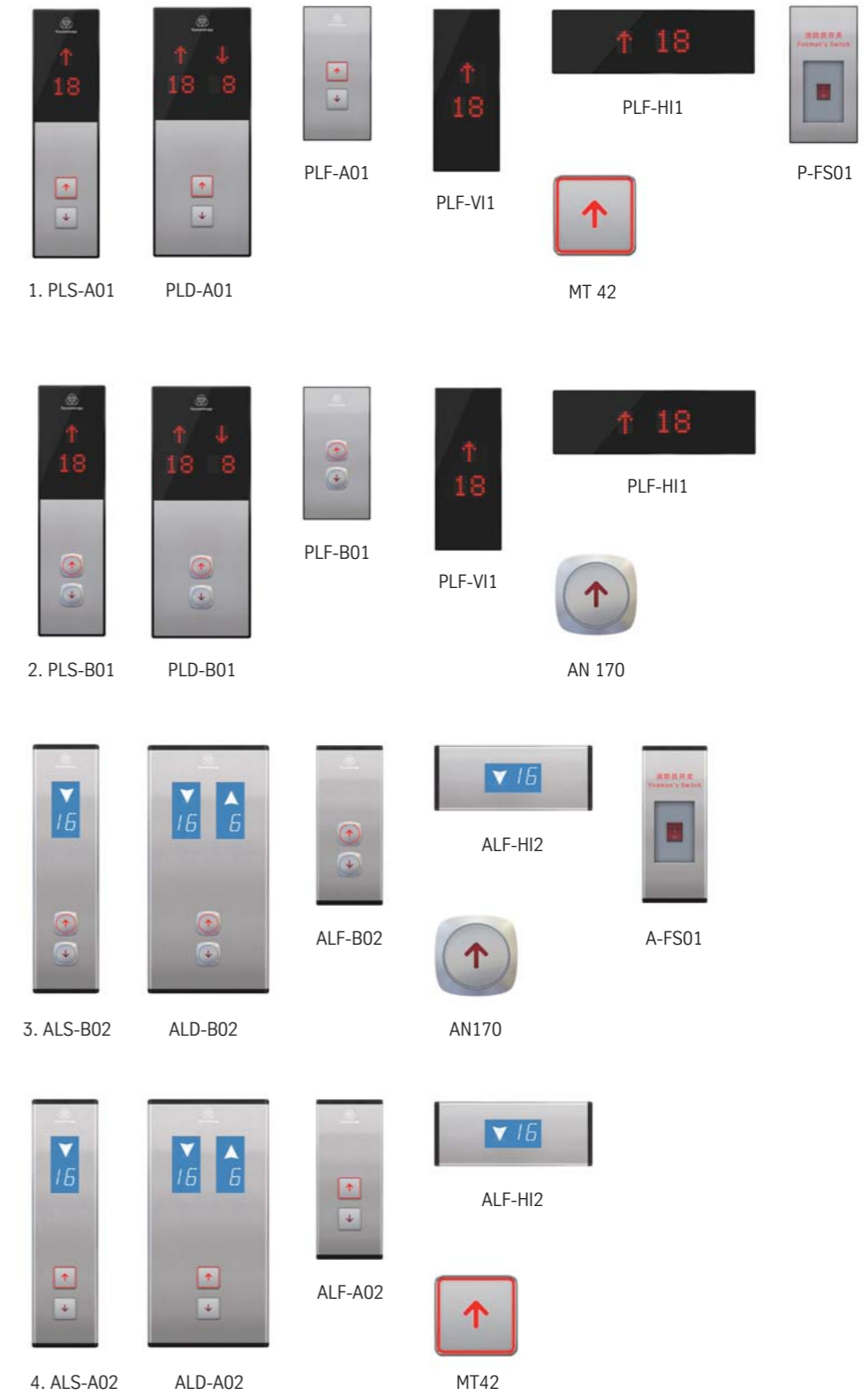
## Car Operating Panel (COP)

Standard	1
Type	COP S-A01
Indicator	Red dot matrix
Button	MT42
Optional	2
Type	COP S-B01
Indicator	Red dot matrix
Button	AN170
Optional	3
Type	COP S-A02
Indicator	Blue-white segment LCD
Button	MT42
Optional	4
Type	COP S-B02
Indicator	Blue-white segment LCD
Button	AN170



## Landing operating panel (LOP)

Standard	1
Indicator	Red dot matrix
Button	MT42
Firemen's switch	P-FS01
Optional	2
Indicator	Red dot matrix
Button	AN170
Optional	3
Indicator	4.3" Blue-white segment LCD
Button	AN170
Firemen's switch	A-FS01
Optional	4
Indicator	4.3" Blue-white segment LCD
Button	MT42



All thyssenkrupp products shipped on or after 1 October, 2016 will feature the new logo. Products shipped before this date will continue to use the old logo. Actual colours of the product may vary from the printed brochure. Due to the differences of the floor configurations and functions, the design of the operating panel may differ slightly.

## Function list

TE-GL			
Category	No.	Function	Standard / Optional
Enhanced Car Functions	1	Door reopen by following landing call at same landing	S
	2	Collective selective control	S
	3	Full-load non-stop	S
	4	Onward travel to the next stop in the case of a non-opening door	S
	5	Anti- nuisance "limit number of car call when empty load"	S
	6	Anti- nuisance "car call cancellation at terminal landing"	S
	7	Anti- nuisance "car call deletion opposite to travel direction"	S
	8	Adjustable waiting time for opening door at the main landing	S
	9	Adjustable speed and torque of door operator	S
	10	Re-leveling	S
	11	Energy saving operation for car light and fan	S
	12	Elevator start-up loading weighting compensation function	S
	13	In advance door open	0
	14	Changing fire landing	0
	15	Changing parking landing	0
	16	Changing main landing	0
	Safety and Emergency Functions	17	Main landing return
18		Landing to the nearest floor in case of problem (eg. motor overheat, car position missing)	S
19		Fire emergency return (FER)	S
20		Alarm button & Intercom button	S
21		Emergency car lighting	S
22		Overload protect	S
23		Repeat door closing in the event of lock failure	S
24		Safety curtain for door	S
25		Door overload protect	S
26		Parking (by key switch)	S
27		Phase failure and phase reversal protection	S
28		Lockable main switch integrated for controller cabinet	S
29		Emergency electrical operation	S
30		Inspection operation	S
31		Traction machine overheat supervision	S
32		Traction machine skidding protection	S
33		Prepared fire emergency return signal	S
34		Prevent unintended movement of elevator cab	S

Note: S – Standard 0 – Optional

## Function list

TE-GL				
Category	No.	Function	Standard / Optional	
Safety and Emergency Functions	35	Restrict the opening of the car door inside the car	S	
	36	Brake Torque Detection Function	S	
	37	Main COP attendance	0	
	38	Fireman service	0	
	39	Door lock bypass function	0	
	40	Automatic rescue operation	0	
	41	Earthquake function (sensors by customer)	0	
	42	Earthquake function (incl. sensors)	0	
	43	Emergency power operation (generator by customer)	0	
	Trip Functions	44	Automatic doors	S
		45	Collective fault signal	S
		46	Operation counting (trip and hour)	S
		47	Car priority	0
48		Through door	0	
49		Selective door (only in through car case)	0	
Human Machine Interface	50	Door close button	S	
	51	Door open button	S	
	52	Car call cancellation (by double press)	S	
	53	Landing indicator of dot-matrix (red)	S	
	54	Car indicator of dot-matrix (red)	S	
	55	Landing indicator of 4.3" blue-white segment LCD	0	
	56	Car indicator of 5.7" blue-white segment LCD	0	
	57	Car arrival alarm	0	
	58	Second COP (excl. (car attendant and intercom)	0	
	59	COP for disabled persons (no indicator, braille push buttons as standard)	0	
Monitoring and Tele-service	60	Intercom system	S	
	61	Traveling cable (incl. video transmission function)	0	
	62	BAS interface function (dry contactor signal)	0	
	63	Color video camera (in car)	0	
	64	Remote monitor interfacing (excl. MH2 board)	0	
	65	Remote monitor interfacing (incl. MH2 board, without modem)	0	
	66	Supervision panel (cable by other, cable length<=150m)	0	
	67	Build automation interfacing (RS232, MM board)	0	
	68	Build automation interfacing (RS485, MMC board)	0	

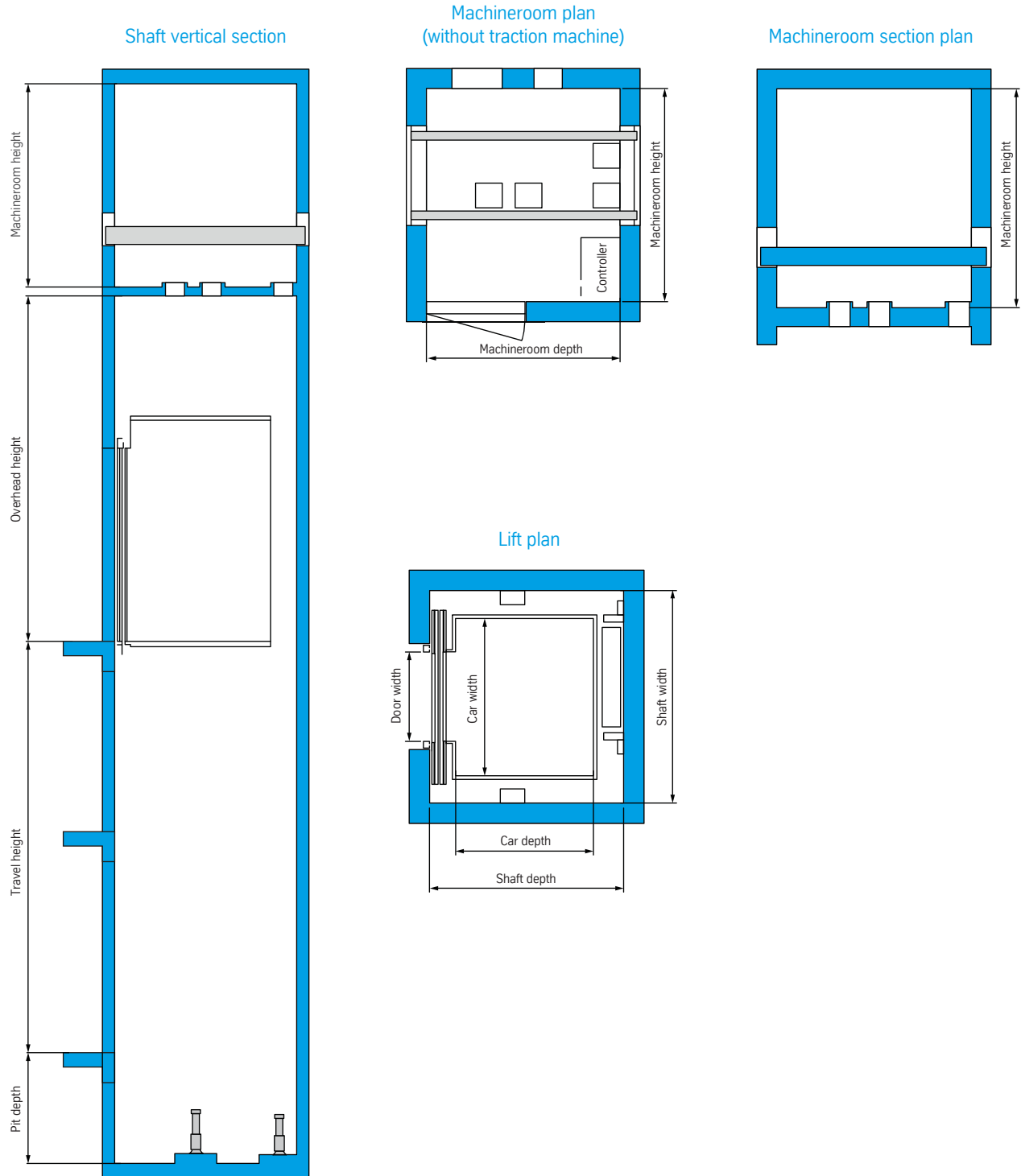
Note: S – Standard 0 – Optional

## Function list

TE-GL			
Category	No.	Function	Standard / Optional
Group / Duplex Control	68	Group control (max 8 units)	0
	69	Automatically allocate lower load elevator to response landing call in group	0
	70	Continued group / duplex operation in case of failure of the other elevator	0
	71	Taking units out of group (timer / switch)	0

Note: S – Standard 0 – Optional

# Layout (Counter weight at rear)



According to the elevator construction specification, the elevator shaft horizontal size is the minimum clearance by plumbing, and the allowed deviation as follows:

Shaft height	SH≤30m	30m<SH≤60m	60m<SH≤90m	90m<SH≤125m
Permitted deviation	0~+25mm	0~+35mm	0~+50mm	0~+80mm

## Technical specifications (Counter weight at rear)

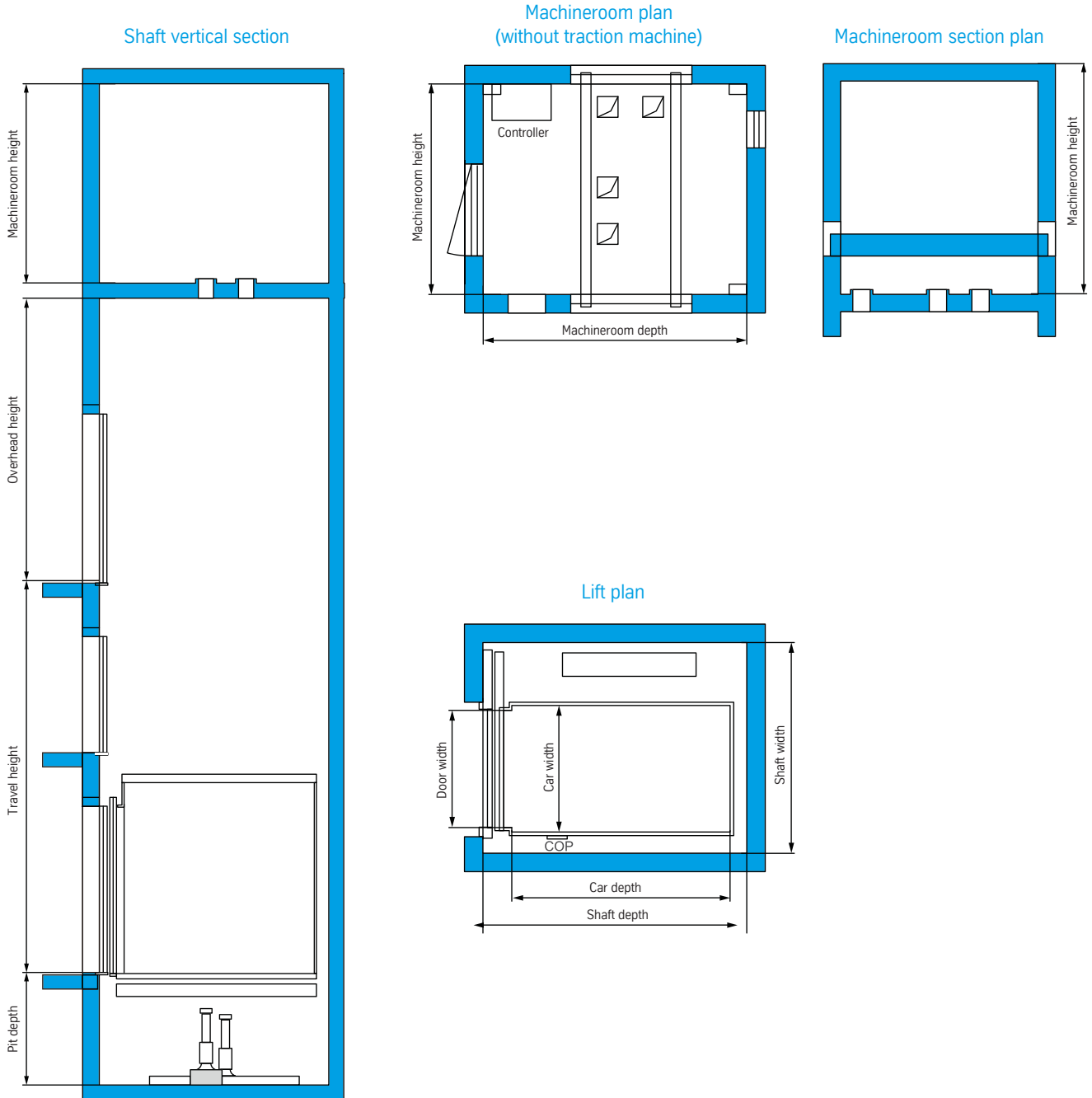
GL						
Rated Load (kg)	Rated Speed (m/s)	Max. Travel Height (m)	Max. Number of Floors	Center Opening Door Size (DW x DH)(mm)	Car Size (CW x CD x HD)(mm)	Shaft Size (SW x SD)(mm)
630	1.0	55	18	800 x 2100	1100 x 1400 x 2400	1800 x 2000
	1.5	75	26			
	1.6	85	30			
	1.75	85	30			
800	1.0	50	17	800 x 2100	1350 x 1400 x 2400	1900 x 2000
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			
	3.0	150	40*			1900 x 2150
1000	1.0	50	17	900 x 2100	1600 x 1400 x 2400	2150 x 2000
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			
	3.0	150	40*			2150 x 2150
1150	1.0	50	17	1100 x 2100	1800 x 1400 x 2400	2350 x 2000
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			
1250	1.0	50	17	1100 x 2100	2000 x 1450 x 2400	2450 x 2170
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			
1350	1.0	50	17	1100 x 2100	2000 x 1550 x 2400	2450 x 2270
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			
1600	1.0	50	17	1100 x 2100	2000 x 1750 x 2400	2450 x 2470
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			

### Min. overhead height & pit depth

Rated Speed	Min. Overhead height (mm)				Min. Pit Depth (mm)			
	3800	3900	3950	4050	1250	1300	1300	1400
1.0	3800	3800	3800	4100	1250	1250	1250	1300
1.5	3900	3900	3900	4400	1300	1300	1300	1400
1.6	3900	3900	3900	4450	1300	1300	1300	1400
1.75	3950	3950	3950	4500	1300	1300	1300	1400
2.0	/	4050	4050	4550	/	1350	1350	1400
2.5	/	4750	4750	4750	/	1750	1750	1750
3.0	/	4750	/	/	/	2200	/	/

\* Note: The maximum number of floors permitted in the standard design when in the case without driver function is 40. If in the case of which the client requests the number of floors and driver function to be more than 32, please contact your contract engineering department.

# Layout (Counter weight at side 1250~1600kg)



According to the elevator construction specification, the elevator shaft horizontal size is the minimum clearance by plumbing, and the allowed deviation as follows:

Shaft height	SH≤30m	30m<SH≤60m	60m<SH≤90m	90m<SH≤125m
Permitted deviation	0~+25mm	0~+35mm	0~+50mm	0~+80mm



## Technical Specifications (Counter weight at side 1250~1600kg)

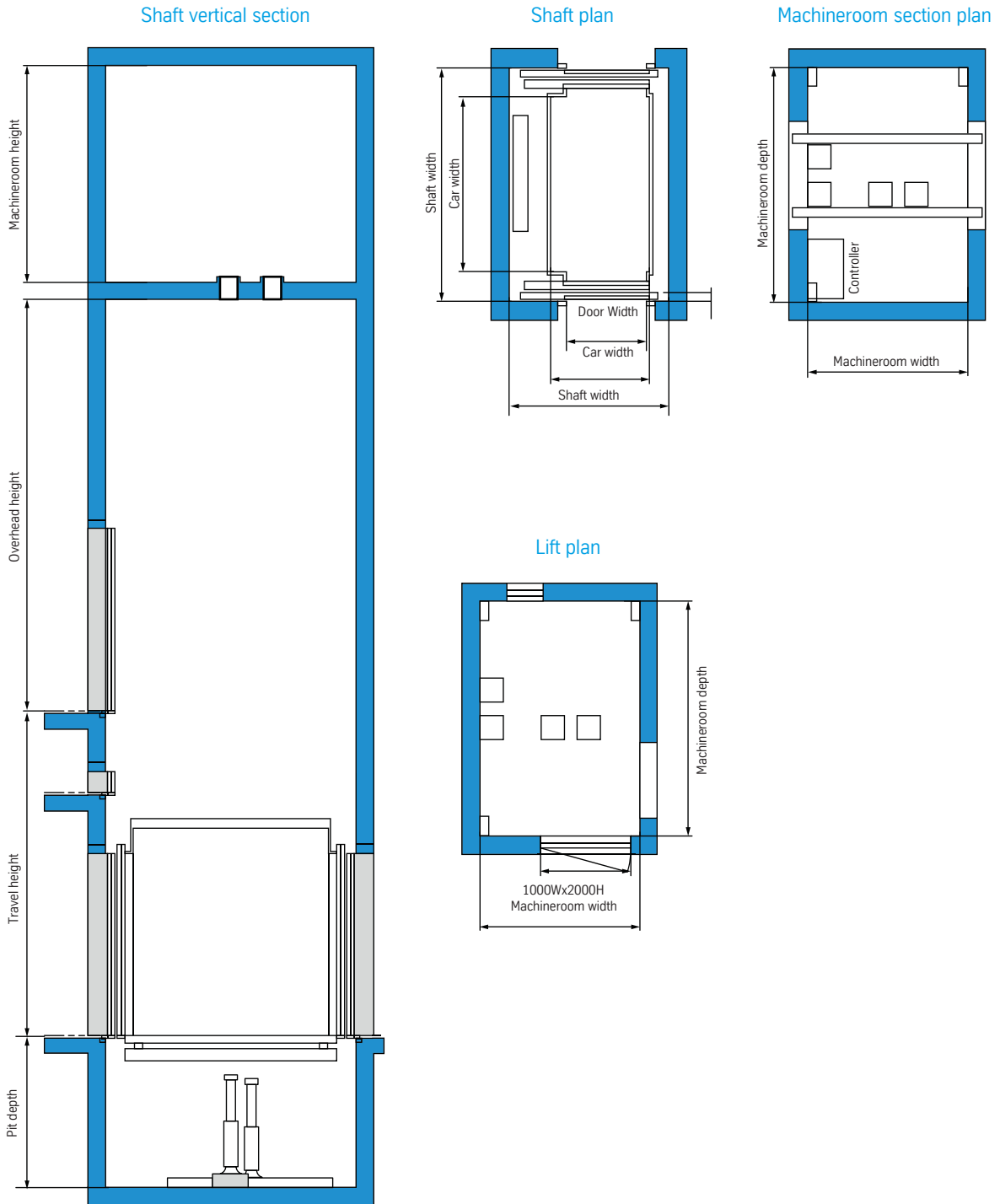
GL

Rated Load (kg)	Rated Speed (m/s)	Max. Travel Height (m)	Max. Number of Floors	Center Opening Door Size (DW x DH)(mm)	Car Size (CW x CD x HD)(mm)	Shaft Size (SW x SD)(mm)
1250	1.0	50	17	1100 x 2100	1400 x 2050 x 2400	2300 x 2540
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			
1350	1.0	50	17	1100 x 2100	1400 x 2200 x 2400	2300 x 2690
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			
1600	1.0	50	17	1300 x 2100	1400 x 2400 x 2400	2310 x 2890
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			

### Min. overhead height & min. pit depth

Rated Speed	Min. Overhead height (mm)	Min. Pit Depth (mm)
	1250-1600kg	
1.0	4100	1300
1.5	4400	1400
1.6	4450	1400
1.75	4500	1400
2.0	4550	1400
2.5	4750	1750

# Layout (Through door)



According to the elevator construction specification, the elevator shaft horizontal size is the minimum clearance by plumbing, and the allowed deviation as follows:

Shaft height	SH≤30m	30m<SH≤60m	60m<SH≤90m	90m<SH≤125m
Permitted deviation	0~+25mm	0~+35mm	0~+50mm	0~+80mm

## Technical Specifications (Through door)

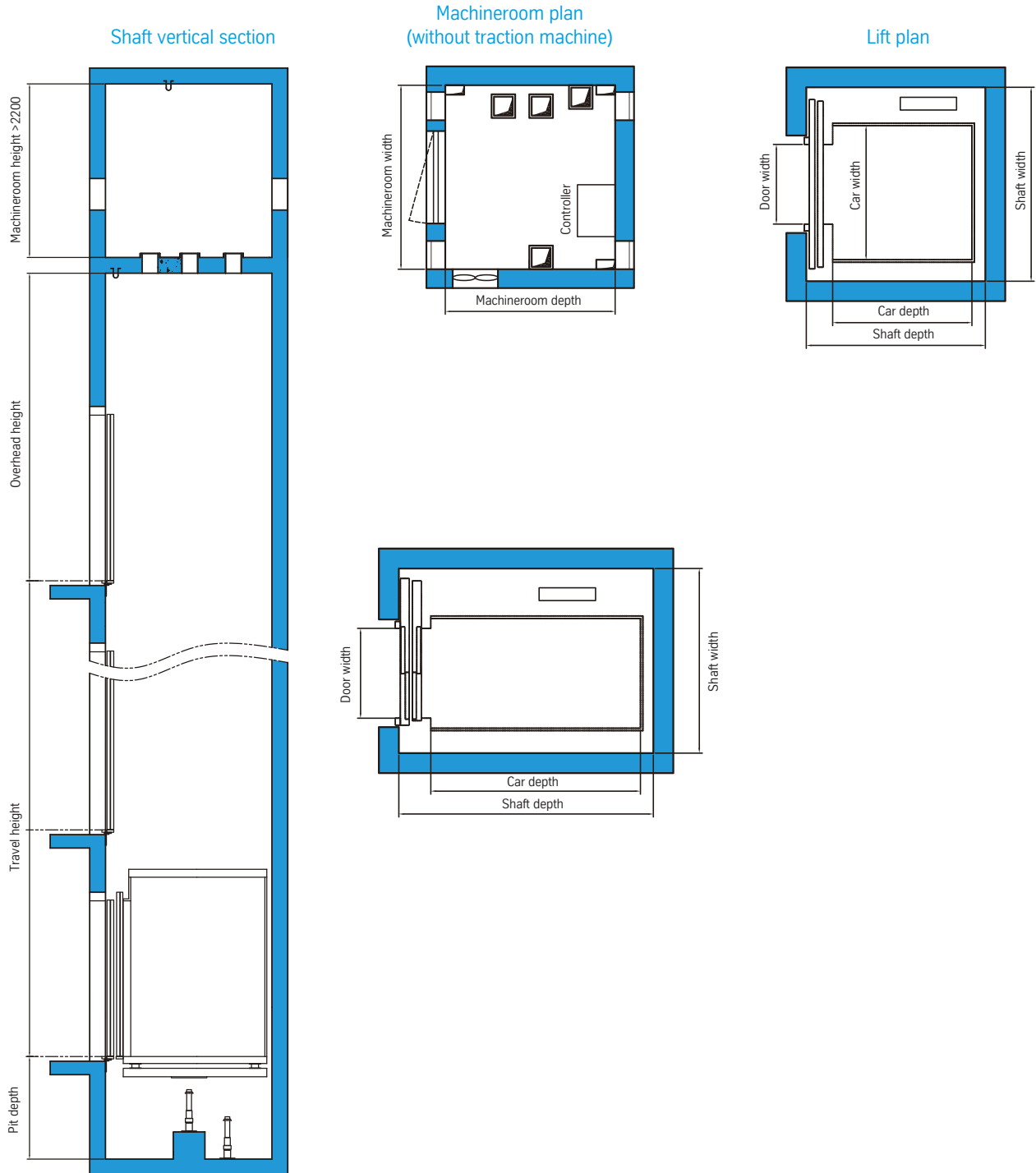
GL

Rated Load (kg)	Rated Speed (m/s)	Max. Travel Height (m)	Max. Number of Floors	Side Opening Door Size (DW x DH)(mm)	Car Size (CW x CD x HD)(mm)	Shaft Size (SW x SD)(mm)
630	1.0	55	18	800 x 2100 (Center Opening Door)	1100 x 1320 x 2400	1820 x 1850
	1.5	75	26			
	1.6	85	30			
	1.75	85	30			
800	1.0	50	17	900 x 2100	1100 x 1480 x 2400	1850 x 2120
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
1000	1.0	50	17	900 x 2100	1100 x 1880 x 2400	1850 x 2520
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
1150	1.0	50	17	1000 x 2100	1200 x 1880 x 2400	1950 x 2520
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
1250	1.0	50	17	1100 x 2100	1400 x 1900 x 2400	2300 x 2540
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			
1350	1.0	50	17	1100 x 2100	1400 x 2050 x 2400	2300 x 2690
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			
1600	1.0	50	17	1300 x 2100	1400 x 2250 x 2400	2890
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
	2.5	125	32			

### Min. overhead height & pit depth

Rated Speed	Min. Overhead height (mm)				Min. Pit Depth (mm)			
	1.0	1.5	1.6	1.75	2.0	2.5	1.0	1.5
1.0	3800	3800	3800	4100	1250	1250	1250	1300
1.5	3900	3900	3900	4400	1300	1300	1300	1400
1.6	3900	3900	3900	4450	1300	1300	1300	1400
1.75	3950	3950	3950	4500	1300	1300	1300	1400
2.0	/	4050	4050	4550	/	1350	1350	1400
2.5	/	/	/	4750	/	/	/	1750

# Layout (Counter weight at side 630~1150kg)



According to the elevator construction specification, the elevator shaft horizontal size is the minimum clearance by plumbing, and the allowed deviation as follows:

Shaft height	SH $\leq$ 30m	30m<SH $\leq$ 60m	60m<SH $\leq$ 90m	90m<SH $\leq$ 125m
Permitted deviation	0~+25mm	0~+35mm	0~+50mm	0~+80mm

## Technical Specifications (Counter weight at side 630~1150kg)

GL						
Rated Load (kg)	Rated Speed (m/s)	Max. Travel Height (m)	Max. Number of Floors	Door Size (DW x DH)(mm)	Car Size (CW x CD x HD)(mm)	Shaft Size (SW x SD)(mm)
630	1.0	55	18	800 x 2100 (Center Opening Door)	1100 x 1400 x 2400	1850 x 1800
	1.5	75	26			
	1.6	85	30			
	1.75	85	30			
800	1.0	50	17	800 x 2100 (Center Opening Door)	1350 x 1400 x 2400	1950 x 1800
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
1000	1.0	50	17	900 x 2100 (Center Opening Door)	1600 x 1400 x 2400	2200 x 1800
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
1000	1.0	50	17	900 x 2100 (Side Opening Door)	1100 x 2100 x 2400	1850 x 2550
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
1150	1.0	50	17	900 x 2100 (Center Opening Door)	1800 x 1400 x 2400	2400 x 1800
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			
1150	1.0	50	17	900 x 2100 (Side Opening Door)	1200 x 2100 x 2400	1950 x 2250
	1.5	75	26			
	1.6	75	26			
	1.75	90	31			
	2.0	110	32			

### Min. overhead height & min. pit depth

Rated Speed	Min. Overhead height (mm)		Min. Pit Depth (mm)	
	630kg	800-1150kg	630kg	800-1150kg
1.0	3750	3750	1300	1300
1.5	3900	3900	1400	1400
1.6	3900	3900	1400	1400
1.75	3950	3950	1450	1450
2.0	/	4050	/	1550