

Elevator Technology

thyssenkrupp Elevator China

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Elevator Technology

synergy

Compact Elevator



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.

Customers in **150** countries

Over 900 sales and service locations

Sales of **€ 7.5** billion

50,000+ employees

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



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

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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.





synergy

Compact elevator

synergy is a safe, trustworthy, and value for money elevator that is suited for low-rise residential buildings. With its small traction machine that allows the elevator to have a small overhead and a low pit depth, synergy is compact in size, and thus has a smaller footprint that requires less floor space.

Designed for

- Villas
- Low-rise residential buildings

Specification

- Max. travel height: $\leq 45\text{m}$
- Max. number of floors: ≤ 15
- Rated speed: $\leq 1.0\text{m/s}$
- Rated load: $\leq 1000\text{kg}$
- Group control: 8

Compact elevator



Small elevator footprint

Designed for low-rise residential buildings.



Safe and reliable

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



Pleasant design

Car interiors designed to give residents the comfort they deserve.

Small elevator footprint



Compact in size provides a smaller elevator shaft footprint.

synergy compact components, such as a small traction machine, ensures a smaller overhead and a low pit depth. Its small elevator shaft footprint requires less floor space that is particularly suited for low-rise residential buildings.

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, assures 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 tailor-made solutions to meet their needs. We strive to protect your investment by delivering a service program 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.



Pleasant design

synergy comes with pleasant car interior designs.

Designed for residential applications, synergy's pleasant car interior designs follow the latest trends to give residents the comfort they deserve.

Car interior

CS1-SN

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	-

When load is $\leq 630\text{kg}$, ceiling type is TS-CL01 (Powder coated steel RAL1015).



CS2-SN

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	-

When load is $\leq 630\text{kg}$, ceiling type is TS-CL01 (Powder coated steel RAL7035).



Car interior

CS3-SN

Option

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

When load is ≤ 630 kg, ceiling type is TS-CL01 (Powder-coated steel RAL7035).



CS4-SN

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 floor - TCD314
Handrail	TSF08 - Flat hairline stainless steel handrail

When load is ≤ 630 kg, ceiling type is TS-CL01 (Powder coated steel RAL7035).



Car interior

CL1-SN

Option

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-SN

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-SN

Option

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-SN

Option

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



Back View



Car interior

FV3A

Option

Ceiling	C20 metal spraying - RAL5024, Standard: Hairline stainless steel/Optional: Hairline stainless steel304
Side Wall	Metal spraying - RAL5024, Standard: Hairline stainless steel/Optional: Hairline stainless steel304
Rear Wall	Hairline stainless steel/ Optional: Hairline stainless steel304
Front Wall	Hairline stainless steel/ Optional: Hairline stainless steel304
Handrail	TRH03 - Round hairline stainless steel handrail Both ends in arc-shaped
Floor	PVC floor - 8937
Lighting	LED



Car Operating Panel (COP)

Standard 1

Type	COP M-A01
Indicator	Red dot matrix
Button	MT42

Optional 2

Type	COP M-B01
Indicator	Red dot matrix
Button	AN170

Optional 3

Type	COP M-A02
Indicator	Blue-white segment LCD
Button	MT42

Optional 4

Type	COP M-B02
Indicator	Blue-white segment LCD
Button	AN170



1. COP M-A01

2. COP M-B01

3. COP M-A02

4. COP M-B02

Actual colours of the product may vary from the printed brochure.
The render is produced based on the specifications of the 1,000Kg load car,
thus the renderings of other specifications may vary from this one.

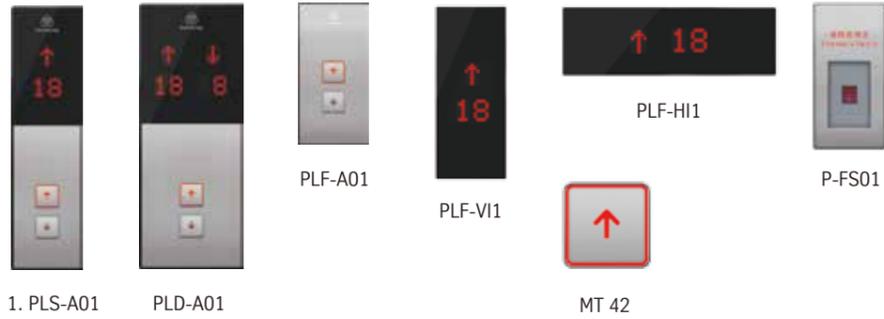
All thyssenkrupp products shipped on or after 1 October, 2016 will feature the new logo.
Products shipped before this date will continue to use the old logo.

Actual colours of the product may vary from the printed brochure.

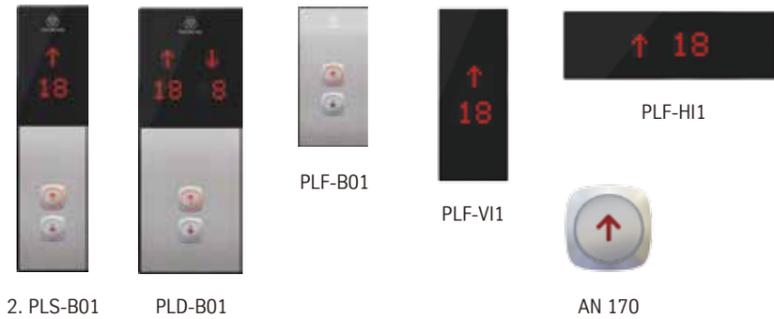
Due to the differences of the floor configurations and functions, the design of the operating panel may differ slightly.

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



Function list

synergy			
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	O
	14	Changing fire landing	O
	15	Changing parking landing	O
	16	Changing main landing	O
	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 and intercom function	S
21		Emergency car lighting	S
22		Overload protect	S
23		Repeat door closing in the event of lock failure	S
24		Door overload protect	S
25		Safety curtain for door	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		Terminal deceleration monitoring	S

Note: S – Standard O – Optional

Function list

synergy				
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	Emergency operation for electrical brake release	S	
	38	Main COP attendance	0	
	39	Fireman service	0	
	40	Door lock bypass function	0	
	41	Automatic rescue operation	0	
	42	Earthquake function (sensors by customer)	0	
	43	Earthquake function (incl. Sensors)	0	
	44	Top of car emergency exit	0	
	Trip Functions	45	Automatic doors	S
		46	Collective fault signal	S
		47	Operation counter (trip and hour)	S
		48	Car priority	0
49		Card reader operate car call (instead of push button)	0	
Human Machine Interface	50	Door close button	0	
	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	Speech synthesis service	0	
	59	Second COP (excl. car attendant and intercom)	0	
Monitoring and Tele-service	60	COP for disabled persons (no indicator, braille push buttons as standard)	0	
	61	Intercom system	S	
	62	Travelling cable (incl. MH2 board, without modem)	0	
	63	BAS interdice function (dry contactor signal)	0	
	64	Color video camera (in car)	0	
	65	Remote monitor interfacing (excl. MH2 board)	0	
	66	Remote monitor interfacing (incl. MH2 board, without modem)	0	
	67	Supervision panel (cable by other, cable length <=150m)	0	
	68	Build automation interfacing (RS232, MM board)	0	

Note: S – Standard 0 – Optional

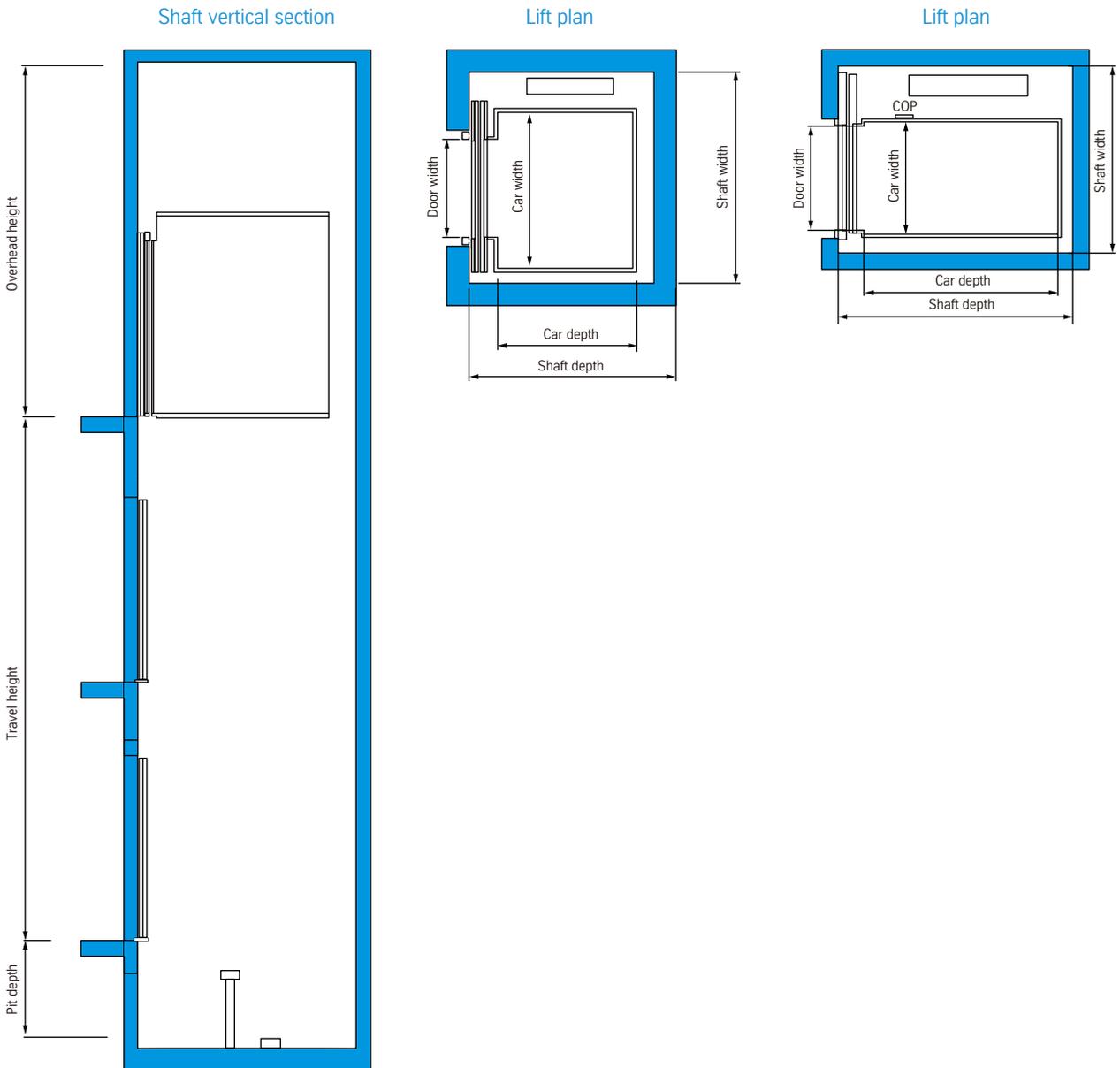
Function list

synergy			
Category	No.	Function	Standard / Optional
Monitoring and Tele-service	69	Build automation interfacing (RS485, MMC board)	0
	70	Lift Monitoring system (excl. computer & printer)	0
	71	Group control (max 8 units)	0
Group / Duplex Control	72	Automatically allocate lower load elevator to response landing call in group	0
	73	Continued group / duplex operation in case of failure of the other elevator	0
	74	Taking units out of group (timer / switch)	0

Note: S – Standard 0 – Optional



Layout



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
Permitted deviation	0~+25mm	0~+35mm

Technical specifications

synergy						
Rated Load (kg)	Rated Speed (m/s)	Max. Number of Floors	Max. Travel Height (m)	Center Opening Door Size (DW x DH)(mm)	Car Size (CW x CD)(mm)	Shaft Size (SW x SD)(mm)
320	0.5	5	15	700x2100	850x1100	1620x1500
	1.0	15	45			
400	0.5	5	15	800x2100	1000x1100	1830x1500
	1.0	15	45			
450	0.5	5	15	800x2100	1100x1100	1870x1500
	1.0	15	45			
630	0.5	5	15	800x2100	1100x1400	1870x1800
	1.0	15	45			
800	0.5	5	15	800x2100	1350x1400	2000x1860
	1.0	15	45			
800*	0.5	5	15	900x2100	1100x1700	2070x2090
	1.0	15	45			
1000	0.5	5	15	900x2100	1600x1400	2250x1860
	1.0	15	45			
1000*	0.5	5	15	900x2100	1100x2100	2070x2490
	1.0	15	45			

Rated Load (kg)	Rated Speed (m/s)	Max. Number of Floors	Max. Travel Height (m)	Side Opening Door Size (DW x DH)(mm)	Car Size (CW x CD)(mm)	Shaft Size (SW x SD)(mm)
320	0.5	5	15	700x2100	850x1100	1550x1560
	1.0	15	45			
400	0.5	5	15	800x2100	1000x1100	1680x1560
	1.0	15	45			
450	0.5	5	15	800x2100	1100x1100	1750x1560
	1.0	15	45			
630	0.5	5	15	800x2100	1100x1400	1750x1860
	1.0	15	45			
800*	0.5	5	15	900x2100	1100x1700	1850x2150
	1.0	15	45			
1000*	0.5	5	15	900x2100	1100x2100	1850x2550
	1.0	15	45			

*Suitable for stretchers.

Note: 1. The standard car height is 2200mm. 2300mm/2400mm/2500mm/2600mm options are available.

2. Starlight ceiling is not applicable for car height of 2200mm.

3. Standard: Center opening door, Optional: Side opening door

Overhead height & pit depth

Rated Load (kg)	Car Height (mm)	Overhead Height (mm)	Pit Depth (mm)
320 - 630kg	CH=2200-2300	3700	1200
	CH=2400	3800	
	CH=2500	3900	
	CH=2600	4000	
800 - 1000kg	CH=2200-2300	3900	1300
	CH=2400	4000	
	CH=2500	4100	
	CH=2600	4200	