synergy

ONE WORLD. ONE ELEVATOR.

A ThyssenKrupp
Elevator Company

ThyssenKrupp Company Name

ThyssenKrupp

Nothing above.
synergy is the passenger elevator
without shaft head.

Nothing below.
synergy is the passenger elevator
without shaft pit.

synergy is the passenger elevator for new installations and moderni-zations. Designed for buildings of the future. Unique in technology, quality and economy.

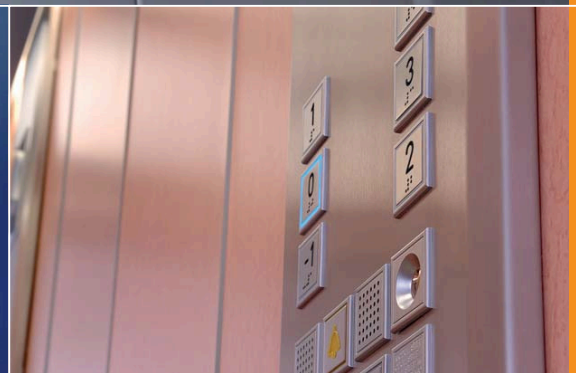
The future begins today. With a unique design and pioneering technology.

ThyssenKrupp Elevator is setting global standards: In technology, design and economic efficiency. The new synergy elevator system is a system solution based on requirements of the future. Hence the name synergy.

The synergy passenger elevator is an impressive revolutionary solution for new installations and modernizations that reflects the know-how of the company on an international level. A corporation-wide development strategy has produced a range of elevators that combine maximum quality, compactness and technology with an attractive design.

OUR VISION FOR THE FUTURE:

- Compact elevator system without machine room, also available without shaft head and / or without shaft pit on request.
- Suitable for residential and commercial buildings with a maximum of 12 floors.
- Modular construction for short delivery times and a wide range of individual requirements.
- A single global elevator concept that assures maximum cost effectiveness while sustaining high levels of quality and advanced innovation.



An inspiring design.
Making the synergy passenger elevator a showpiece in any building.

A design that always fits.
synergy passenger elevators are available in three different design lines with a host of features and accessories. synergy is guaranteed to fit perfectly into any architectural environment.

No shaft head. No shaft pit. Just innovative technology in between.

COMPACT DIMENSIONS

synergy is an extremely compact elevator system. The 2600 mm high shaft top termination of synergy takes up 30% less space than a conventional elevator shaft. synergy also has a 400 mm pit cavity instead of a shaft pit, which takes up 70% less space than conventional shaft pits!

MORE FREEDOM TO PLAN

synergy can be integrated into any building layout due to the compact dimensions, which allow greater architectural freedom. synergy is easier to retrofit in renovated or modernized buildings than conventional elevator designs. Altering the superstructure of the roof on buildings is no longer necessary in most cases.

QUIET OPERATION

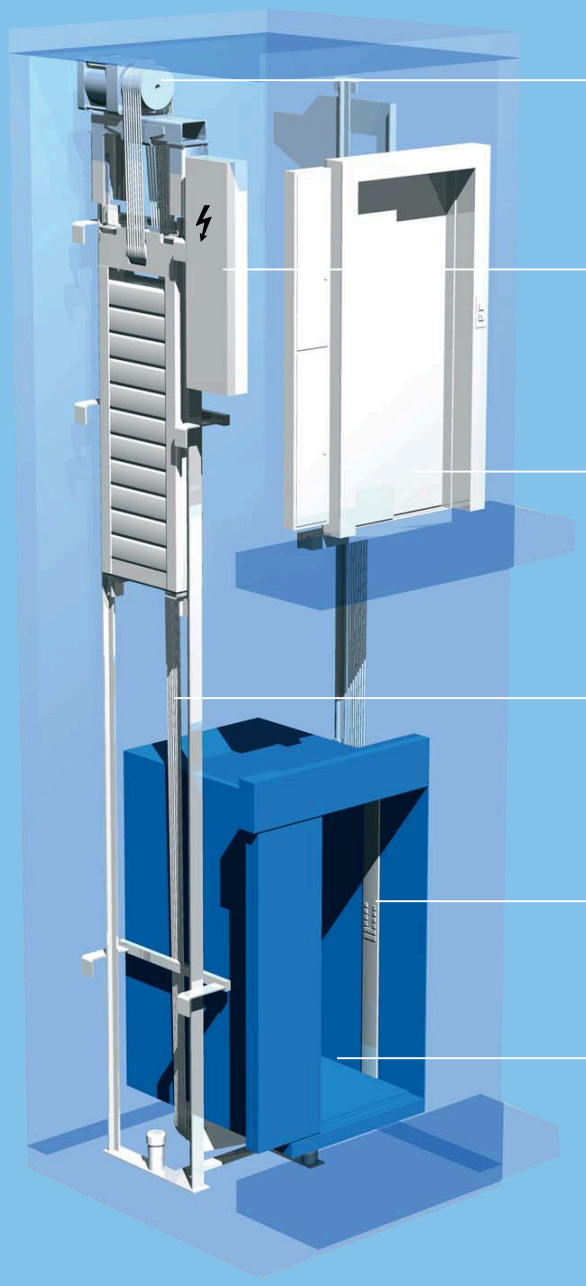
A low noise level for comfort you can feel. For an elevator of its class, synergy stops extremely smoothly and precisely – no unpleasant jerking.

MORE SPACE

The compact, self-supporting elevator car utilizes the shaft cross section extremely well, offering more floor space in new buildings and larger elevator cars in modernized buildings.

BENEFITS OF ADVANCED TECHNOLOGY:

- No machine room.
- Compact: no shaft head, no shaft pit (optional).
- Low-noise, low-vibration design.
- Gearless drive unit protected from vibration.
- Self-supporting elevator car.
- Modern control concept: decentralized in the shaft.
- Electrical control panel installed in any landing as desired (optional).
- Easy adaptation of elevator for handicapped access.
- Quick installation, extremely economical to operate.



Drive: Gearless synchronous machine. Quiet, smooth-running and energy-saving. Secured directly to the rail system, therefore no shaft recess or special attachments required in the building.

Electrical control panel: Extremely flat design, can be recessed in the wall on request. Can be installed on a subjacent level if required.

Door: A wide range of landing doors is available, from shaft installations to the entire shaft front wall of the elevator well.

Ropes: Proven, certified steel wire ropes with a long working life.

Operation and control system: Modern system, extremely reliable and user-friendly. A large number of control functions are available.

Elevator car: Self-supporting elevator car. Saves space and utilizes the shaft area to the full. Numerous versions with different design and equipment features ensure maximum individuality and flexibility.

Functional comfort and attractive design.

People like to be transported through a building quickly, safely and comfortably and this is why synergy elevator components are designed with simplicity in mind while still retaining an element of style.

We have developed different designs because ultimately an elevator is always the showpiece of a building. Different materials, paints and lights integrate a synergy passenger elevator in a building in every respect.

Three design lines are available: colour-line, wood-line and stainless-line. Whichever line and options you choose, the robust, high-quality material will guarantee an attractive appearance for many years to come.

colour-line: Painted or laminated surfaces with discreet gloss effect lend the elevator a high-quality look. An excellent and particularly economical option for the elevator design.

wood-line: The laminate wood-effect walls create an impression of robust reliability and neatness and convey a feeling of warmth. A wide range of versions are possible in combination with other materials.

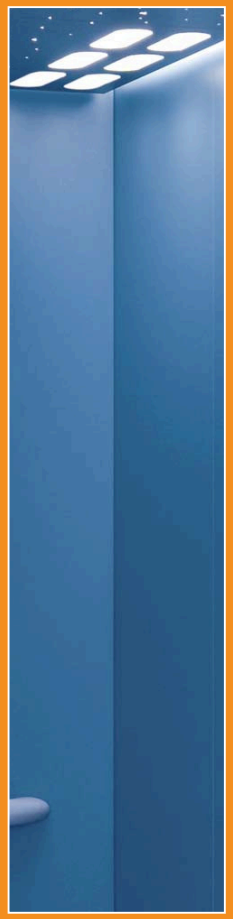
stainless-line: High-quality stainless steel surfaces for walls and doors create a pleasant atmosphere and guarantee a pristine appearance in the long term.

A choice of styles.
A host of options.

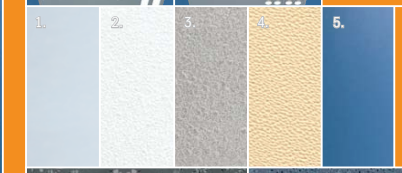
The design sends out a clear message that synergy elevators are safe, reliable high-quality products.

Aspects such as the large range of options and matching designs help to support this claim.

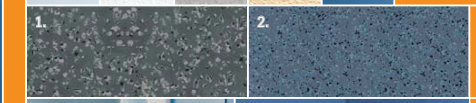
colour-line



Car lightings
1. Polymero
2. Imola
3. Constellation
4. Domino



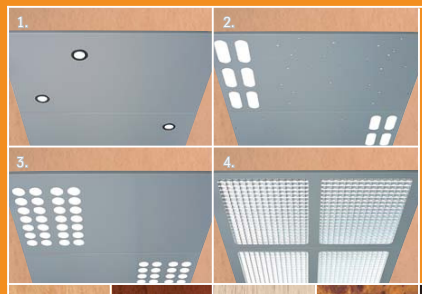
Walls
1. Electrolytically zinc-plated
2. Traffic white (RAL 9016)
3. White aluminium (RAL 9006)
4. Sand yellow
5. Ocean blue



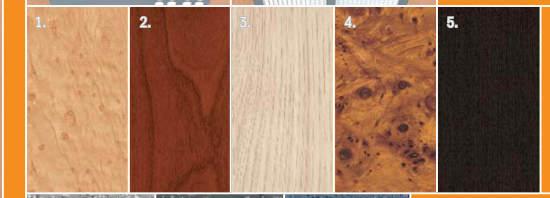
Floorings
1. Dark gray 1582
2. Black blue 2668

Car accessories
1. Back wall mirror
2. Aluminium skirting
3. Focus hand-rail (acc. to EN 81-70)

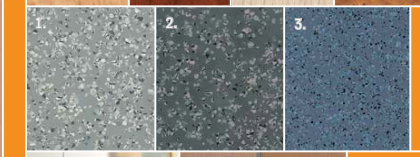
wood-line



Car lightings
1. Spot
2. Constellation
3. Domino
4. Honeycomb



Walls
1. Kiruna Bird
2. Rich Cherry
3. Natural Oak
4. Amber Burl
5. Erable chocolat



Floorings
1. Light gray 1578
2. Dark gray 1582
3. Black blue 2668

Car accessories
1. Back wall mirror
2. Aluminium skirting
3. Stainless steel hand-rail, grain 220, dia. 40 mm
4. Focus hand-rail (acc. to EN 81-70)

stainless-line

Car lightings
1. Honeycomb
2. Spot
3. Constellation
4. Domino
5. Imola

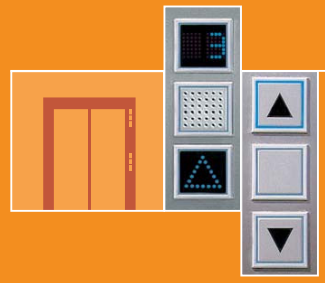
Walls
1. Stainless steel grain 220, polished and brushed
2. Stainless steel “linen”
3. Electrolytically zinc-plated

Floorings
1. Light gray 1578
2. Dark gray 1582
3. Black blue 2668

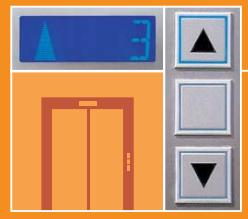
Car accessories
1. Back wall mirror
2. Aluminium skirting
3. Stainless steel hand-rail, grain 220, dia. 40 mm
4. Focus hand-rail (acc. to EN 81-70)

Exemplary communication.

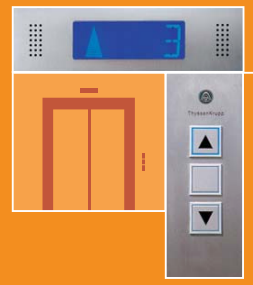
The modern operating and indicating elements inside and outside the car are characterized by an attractive, functional design and hard-wearing quality and are user-friendly in every respect.



Alternatives: synergy is available with different operating and indicating elements. The call buttons are integrated in the shaft door frame here. The position indicator, gong and direction indicator are located at the top. Indications are visualized on blue LED dot matrix displays.



Stylish comfort: The call buttons are installed in the frame of the shaft front wall. The position and direction indicators with integral gong are located at the top. Characterizing features of the new style blue LCD display include effective contrast and a good viewing angle.



Wall installation: The operating and indicating elements can also be installed in the wall separately. The modern LCD position and direction indicators with integral gong are located above the door.

Design and function: Attractive functionality is another impressive aspect of the modern synergy car operating panel “blue-line”. The design of the buttons corresponds with individual requirements. A variant with information and operating elements designed for the handicapped and blind in accordance with EN 81-70 is available on request as well as other car features.

synergy always fits.

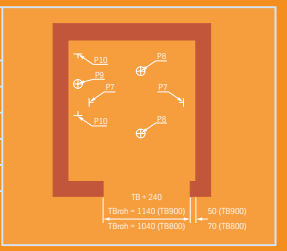
Planning an elevator installation has never been so easy. The compact design of the synergy allows for smaller shaft dimensions. The absence of a machine room, shaft head and shaft pit decreases building and renovation costs.

We recommend consulting our experienced sales advisors as early as possible during the planning process.

OCCURING FORCES IN THE SHAFT PIT

Rated load (kg)	**450**	**630**	**1000**
Load points P 7 (guide rails)	2 x 6	2 x 8	2 x 11
Load points P 8 (car buffer)	2 x 24	2 x 30	2 x 43
Load point P 9 (counterweight buffer)	37	44	2 x 31
Load points P 10 (guide rails)	2 x 6	2 x 7	2 x 9

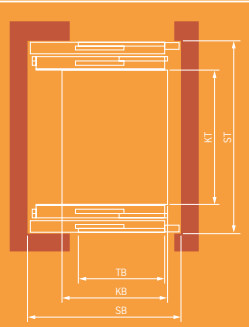
Load specifications are guide values in kN.
The forces P7-P10 never occur simultaneously.



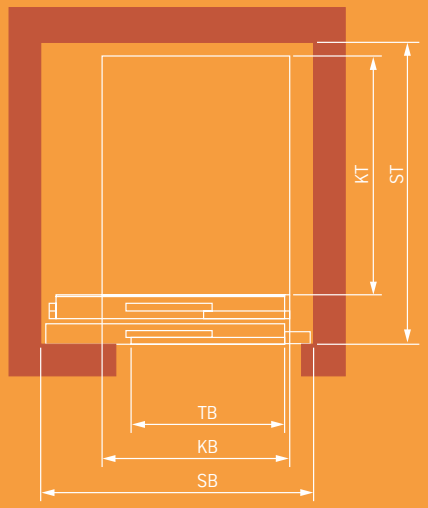
SHAFT LAYOUTS

1. Car entrance with telescopic door
2. Car entrances with telescopic doors (front and rear entrance).

2.



1.



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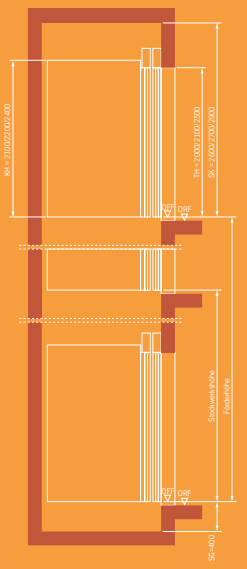

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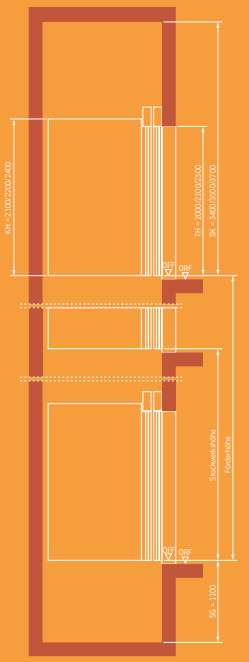


SHAFT VERTICAL SECTIONS

1. synergy – without shaft head and without shaft pit for maximum utilization of space.
synergy is also available with conventional shaft head and / or shaft pit on request.
Please observe all applicable regulations stipulated by the relevant notified body and all applicable national regulations. Our sales advisors would be glad to provide information or explanations on these issues.

2. synergy – with conventional shaft headroom and with conventional shaft pit.
Select this version if the absence of shaft head and shaft pit do not bring any benefits from a structural viewpoint.

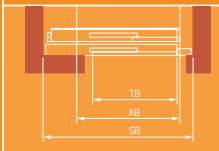
SHAFT DIMENSIONS

Rated load (kg)	**450**	**630**	**630** (front and rear entrance)	**1000**	**1000** (front and rear entrance)
Car width CW	1000	1100	1100	1100	1100
Car depth CD	1250	1400	1400	2100	2100
Door width DW	800	800 / 900	800 / 900	800 / 900	800 / 900
Shaft width SW	1500	1600	1600	1600	1600
Shaft depth SD door in shaft	1650	1770	2010	2470	2710
Shaft depth SD door in recess	1580	1700	1870	2400	2570
Shaft depth SD door on landing	1540	1660	1790	2360	2490

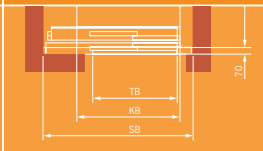
All dimensions are finished dimensions in mm. The shaft depths for elevators with front and rear entrance are fixed dimensions and can not therefore be increased.

LANDING DOOR INSTALLATIONS

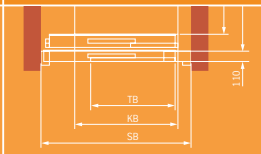
Landing door installed **directly in the shaft** using dowels or anchor rails, otherwise no special structural requirements.



Landing door installed **in recess** in the shaft; the shaft depth can be optimized as a result.



Landing door installed **on the landing** in the entire shaft front wall; no special shaft door opening required in the building.



synergy –
the facts speak for themselves.

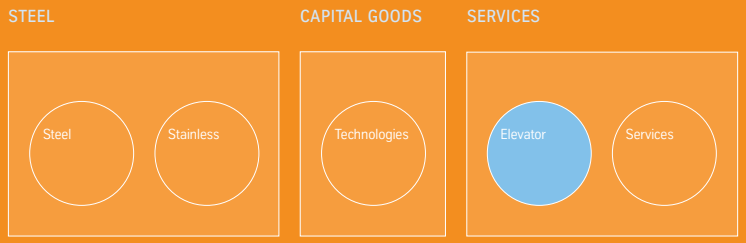
RATED LOAD	450 kg [6]	630 kg	630 kg [7]	1000 kg	1000 kg [7]
Number of passengers	6	8	9	13	14
One-sided entrance	•	•	–	•	–
Two-sided entrance (front and rear entrance)	–	–	•	–	•
Speed	1.0 m/s	1.0 m/s		1.0 m/s	
Travel height max.	33 m	33 m		33 m	
Number of landings max.	12	12		12	
Dimensions in mm					
Car width CW	1000	1100		1100	
Car depth CD	1250	1400		2100	
Car height CH [DH+100]	2100 / 2200 / 2300 / 2500				
Shaft and car door	Two-panel telescopic sliding doors				
Door width DW	800	800 / 900		800 / 900	
Door height DH	2000 / 2100 / 2300				
Shaft width SW	1500	1600		1600	
Shaft depth SD door in shaft	1650	1770	2010	2470	2710
Shaft depth SD door in recess	1580	1700	1870	2400	2570
Shaft depth SD door on landing	1540	1660	1790	2360	2490
Shaft head height without shaft head [CH+500] [1]	2600 / 2700 / 2800 / 3000				
Shaft head height conventional [CH+1300]	3400 / 3500 / 3600 / 3800				
Shaft pit depth without shaft pit [1, 2]	400	400		400	
Shaft pit depth conventional	1100	1100		1100	
Floor-to-floor-distance min. [DH+360]	2360	2360		2360	
Drive	Synchronous gearless drive, frequency controlled VVVF				
Starts per hour max.	180 s/h	180 s/h		180 s/h	
Operating input power [3, 4]	3.7 kVA	5.3 kVA		7.8 kVA	
Operating current [3, 5]	5.4 A	7.7 A		11.3 A	
Starting current [3, 5]	8.3 A	11.8 A		17.1 A	
Landing accuracy	+/- 5 mm	+/- 5 mm		+/- 5 mm	

[1] During the planning phase, please consider all applicable regulations stipulated by the relevant notified body and all applicable national regulations. Our sales advisors would be glad to provide information or explanations on these issues. [2] With elevator car flooring material thickness of up to 3.5 mm; shaft pit depth of 425 mm with flooring material thickness of up to 25 mm. [3] With 400 Volt / 50 Hz. [4] For the control unit 2.1 kVA have to be added. [5] For the control unit 3 A have to be added. [6] Available 12/2007. [7] Available 07/2007. As of: 04.04.2007

THYSSENKRUPP IN BRIEF

ThyssenKrupp is a global concern with business activities focused on the areas of Steel, Capital Goods and Services. We have 188,000 employees developing innovative and forward-looking products and services for the world of today and tomorrow. In all five segments – Steel, Stainless, Technologies, Elevator and Services – they are committed to finding solutions to the needs of our demanding customers. We want to make a difference.

ThyssenKrupp Elevator is the world's third-largest elevator company and is represented at over 800 locations in more than 60 countries. With over 36,000 employees, the company generated sales of around 4.3 billion euros in the fiscal year 2005/2006. Products include passenger and freight elevators, escalators and moving walks, stair and platform lifts, passenger boarding bridges as well as high-quality service and support for all products.



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CONTROL FUNCTIONS (RESUMPTION)	COLOUR-LINE	WOOD-LINE	STAINLESS-LINE
Intercom			
two way intercom / three way intercom	● / –	● / ○	● / ○
three way intercom to central	–	○	○
Penthouse control	–	○	○
Selective door control	–	○	○
Overload signal	●	●	●
Emergency light in the car			
with emergency button / with STEP element	● / ○	● / ○	● / ○
Teleservice			
Generation 7 / Modem	○ / ○	○ / ○	○ / ○
lift warden	○	○	○
Emergency system			
Easy Alarm / MEMCO	○ / ○	○ / ○	○ / ○
Landing key switch			
looking of level / out of service at level	– / –	○ / ○	○ / ○
Non simultaneous starting	○	○	○
Option: output of order relais	–	○	○
Alarm output	○	○	○
Automatic lightning control at landing	–	○	○
Humidity sensor in the pit	○	○	○
Phase comparator	●	●	●
Second COP in cabin	○	○	○

REGULATION AND OTHERS			
EN 81-70 package / EN 81-70 package with inductor loop	○ / ○	○ / ○	○ / ○
Country specific technical requirements	○	○	○

● Serial Equipment, ○ Option, – Not available.
Regarding availability of options please consider specifications in our sales tools Genesis and Cameleon. As of 04.04.2007.

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A ThyssenKrupp
Elevator Company

ThyssenKrupp Company Name

ThyssenKrupp

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synergy –
serial equipment and options

TECHNICAL DATA	COLOUR-LINE	WOOD-LINE	STAINLESS-LINE
Rated load			
Q=450 kg [1] / Q=630 kg / Q=1000 kg	● / ● / ●	● / ● / ●	● / ● / ●
Q=630 kg [2] / Q=1000 kg [2] (open through car)	○ / ○	○ / ○	○ / ○
Speed 1.0 m/s	●	●	●
Travel height max. 33 m	●	●	●
Number of landings max. 12	●	●	●
Car height CH 2100 mm / 2200 mm / 2300 mm / 2500 mm	○ / ● / ○ / ○	○ / ○ / ● / ○	○ / ○ / ● / ○
Type of door			
2 panel telescopic sliding door	●	●	●
Door width DW 800 mm / 900 mm	● / ○	○ / ●	○ / ●
Door height DH 2000 mm / 2100 mm / 2300 mm	● / ○ / ○	○ / ● / ○	○ / ● / ○
Shaft head			
min. 3400 mm, CH + 1300 mm	●	●	●
reduced min. 2900 mm, CH + 800 mm	○	○	○
reduced min. 2600 mm, CH + 500 mm	–	○	○
Shaft pit			
min. 1100 mm	●	●	●
min. 1400 mm	○	○	○
reduced min. 400 mm + height of floor	–	○	○
dowel fixing	○	○	○

LANDING DOOR			
Landing door in shaft / in recess (70 mm)	● / ○	● / ○	● / ○
Landing door on landing floor (110 mm)	○	○	○
Fire test report E120 EW60	●	●	●
Fire test report Russia / UK	– / –	○ / ○	○ / ○
Gap covering finishing prime painted / stainless steel *grain 220*	○ / –	○ / ○	– / ○
Finishing			
Prime painted / stainless steel *grain 220* / stainless steel *Linen*	● / – / –	○ / ● / ○	– / ● / ○
Sill finish material aluminium	●	●	●
Profile of aluminium between shaft door frame	–	○	○
Dowel fixing	○	○	○
Floor-to-floor distance min. DH + 360 mm	●	●	●

[1] Available 12/2007, [2] Available 07/2007. ● Serial Equipment, ○ Option, – Not available.
Regarding availability of options please consider specifications in our sales tools Genesis and Cameleon. As of 04.04.2007.

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CAR DOOR	COLOUR-LINE	WOOD-LINE	STAINLESS-LINE
Re-opening device			
with one beam photo cell	●	–	–
with light curtain	○	●	●
Door panel finishing			
Prime painted	●	○	–
Stainless steel grain *220*	○	●	●
Stainless steel *Linen*	–	○	○
Sill finish material aluminium	●	●	●
Car door locking device mechanical	○	○	○

CAR AESTHETICS			
Car height 2100 mm / 2200 mm / 2300 mm / 2500 mm	○ / ● / ○ / ○	○ / ○ / ● / ○	○ / ○ / ● / ○
Car roof trap door	–	○	○
Car ladder	–	○	○
Wall finishing			
electrolytically zinc-plated	●	–	○
Traffic White [1] */ White Aluminium* [2] */ Sand Yellow / Ocean Blue*	○ / ○ / ○ / ○	–	–
Rich Cherry / Amber Burl / Natural Oak / Kiruna Bird / Erable chocolat	–	○ / ○ / ○ / ● / ○	–
Stainless steel *grain 220 / Linen*	– / –	– / –	● / ○
Car roof finishing *Traffic White* [1]	●	●	●
Car lighting			
Polymero	●	–	–
Imola	○	–	–
Spot	–	●	○
Constellation	○	○	○
Domino	○	○	○
Honeycomb	–	○	●
Car front panel finishing			
Prime painted / Stainless Steel *grain 220* / Stainless steel *Linen*	● / – / –	– / ● / ○	○ / ● / ○
Skirting (aluminium)	○	●	●
Flooring			
Light gray 1578 / Dark grey 1582 / Black blue 2668	– / ● / ○	● / ○ / ○	● / ○ / ○
Type of flooring 25 mm height (flooring by others)	–	○	○
Handrail			
Stainless Steel dia. 40 mm	–	○	○
Focus (EN 81-70)	○	○	○
Wall mirror (back wall)	○	○	○

[1] RAL 9016, [2] RAL 9006. ● Serial Equipment, ○ Option, – Not available.
Regarding availability of options please consider specifications in our sales tools Genesis and Cameleon. As of 04.04.2007.

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OPERATING AND INDICATING ELEMENTS	COLOUR-LINE	WOOD-LINE	STAINLESS-LINE
Car operating panel (COP) *blue-line*	●	●	●
Button			
STEP classic blue / Blue Tactile, Braille	● / ○	● / ○	● / ○
Direction indicator STEP classic at every landing (LED dot matrix blue)	●	●	●
Position indicator STEP classic at every landing (LED dot matrix blue)	–	○	○
LCD indicator position & direction indicator at every landing (LCD blue)	○	○	○
Priority switch	○	○	○
Inscription panel *in case of fire* in COP	○	○	○
Positioning of landing operating & indicating element			
STEP Modul (in door frame)	●	●	●
in wall	○	○	○
shaft door frame front	○	○	○

CONTROL FUNCTIONS			
Service box finishing hairline			
stainless steel *grain 220*	●	●	●
service box to built up on wall	●	●	●
service box in the wall	○	○	○
service box in the front wall of the shaft	○	○	○
service box in upper landing	●	●	●
One-button collective control	●	●	●
Two-button collective control	–	○	○
Duplex-Control groupe of two lifts	–	○	○
Relevelling	–	○	○
Levelling with open doors	–	○	○
Two opposite car entrances on the same level	○	○	○
Fire emergency control			
ONE fire emerg. landing	○	○	○
TWO fire emerg. landing	–	○	○
key switch at 1 landing	–	○	○
Pushbutton box for switching off power of control/light	–	○	○
Collective fault	○	○	○
Evacuation			
automatic release in nearest landing	○	●	●
in any landing	–	○	○
Parking level	–	○	○

To be continued on page 5. ● Serial Equipment, ○ Option, – Not available.
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