

# KTC 2

high-capacity  
revolving door with  
integrated sliding door





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## **Note on product illustrations in this brochure**

The product illustrations in this brochure are true representations at time of going to print. Actual products may differ from the illustrations due to continuous development and/or local market regulations.



Over the course of the day the functional requirements for access change: whether it's allowing a high number of visitors entry in a short period or ensuring large buildings are securely locked whenever needed or in the evening. It's ideal if the door system is versatile and quickly adaptable to requirements. Maximum reliability is a must, an attractive design and a wide range of adjustment possibilities are the icing on the cake.

KTC 2 revolving door systems with integrated automatic sliding door combine extensive functions, robust technology and attractive design.

KTC 2 high-capacity doors are designed and manufactured to suit individual requirements.



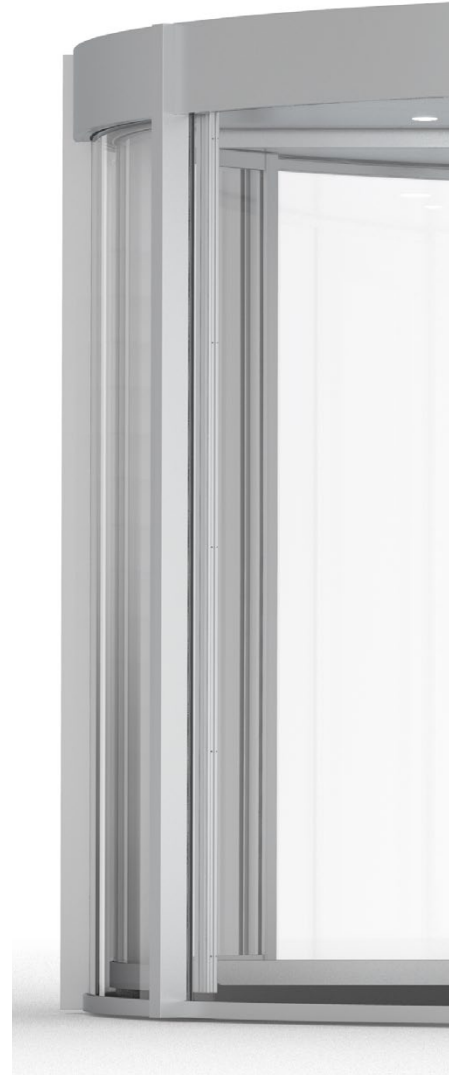
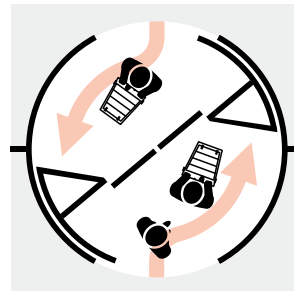
# KTC 2 revolving doors with integrated sliding door.

Tried and tested, versatile, reliable.

The entrance area is the business card of any building. No other element shapes the first impression of the visitor as much as the entrance area and prepares them for their stay. Therefore, the visual quality of a door system should be as important a requirement as its design and functionality.

The KTC 2 2-wing revolving door system offers plenty of scope for architectural creativity. The optimized design ensures maximum reliability with simple, flexible planning and speedy installation.

- Ideal for spacious entrance areas
- Combines the advantages of a revolving door (good climatic separation of indoor and outdoor areas, protection against draughts, dust and noise) and an automatic sliding door (large numbers of people, bulky objects, building ventilation)
- Different operating modes can be adapted as required and easily changed
- Technology designed for high traffic, robust, efficient and quiet
- Can be expanded with many dormakaba products



## Automatic revolving-door operation with optimal climate separation and noise attenuation

It is important for the cost-effective operation of a building to provide effective protection of its interior against cold, heat, draughts, noise and dust. Special brush seals and a harmonised profile system ensure the best possible climate barrier. The high-capacity revolving-door system allows optimal traffic flow, even with luggage or a shopping trolley or for wheelchair users with or without an assistant. KTC 2 door systems provide ease of use at the highest level.

## Selectable operating modes in revolving-door operation

- Upon entry, the rotation starts at walking speed. The door will automatically rotate to the home position after each usage. In switchable winter configuration, the home position is the closed night shield.
- The door rotates continuously at check-speed. Upon entry, the door accelerates to walking speed.



### Catchword escape route

Depending on the equipment selected, it is possible to rotate the KTC 2 to the central position as well as automatically open the sliding door for exit/entrance or ventilation via a signal from a fire alarm system, a building management system – or in the event of power failure. Due to the normative requirements, KTC 2 and other double wing revolving doors of a similar design are not suitable for use in escape routes and emergency exits. Depending on the local regulations, this is reserved for 3 and 4 wing revolving doors (e.g., KTV 3, KTV 4 or KTC 3, KTC 4).



### Automatic sliding door operation with increased passenger volume

When there are larger numbers of people, the revolving-door operation can pause and the internal automatic sliding door allows for a higher throughflow capacity. The passage area can be switched to „permanent open“ mode if necessary, e.g. for transporting bulky objects or for ventilation. Passage widths of up to approx. 2.5 m can be implemented.

### integrated night shield – security outside of operating hours

The integrated night shield bars opening of the revolving doors for entry and exit once the system is switched off. Secure locking is performed via an electro-mechanical bolt locking device. Optionally, category P4A glazing can be used in the night shield and in the drum wall segments of the system. This glazing is specially reinforced and offers additional anti-intruder protection.



#### Individual planning service

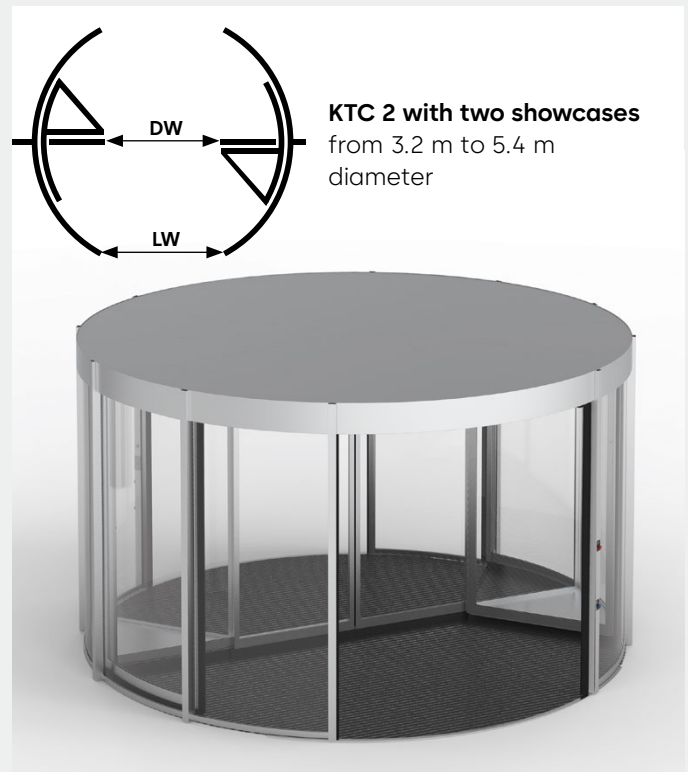
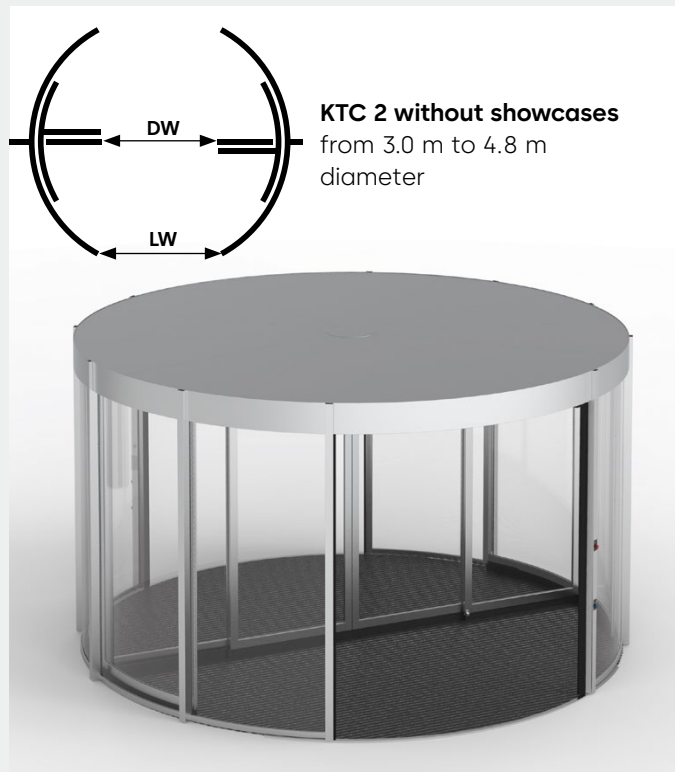
Each door system represents an individual and integral part of the architecture. In view of diverse challenges, we offer you flexible options for KTC 2 revolving doors that will solve even the most demanding tasks.



#### Quick and easy installation

Prefabricated components mean the KTC 2 revolving door can be installed quickly, easily and smoothly. Further, no welding needs to be performed on the floor ring. Ideal for specific processes in new buildings and for refurbishment projects.

# Versions and surfaces



- 01 Surface coating in accordance with RAL
- 02 Aluminium surface coating E6/C0 (EV1)
- 03 Stainless steel surface coating INOX

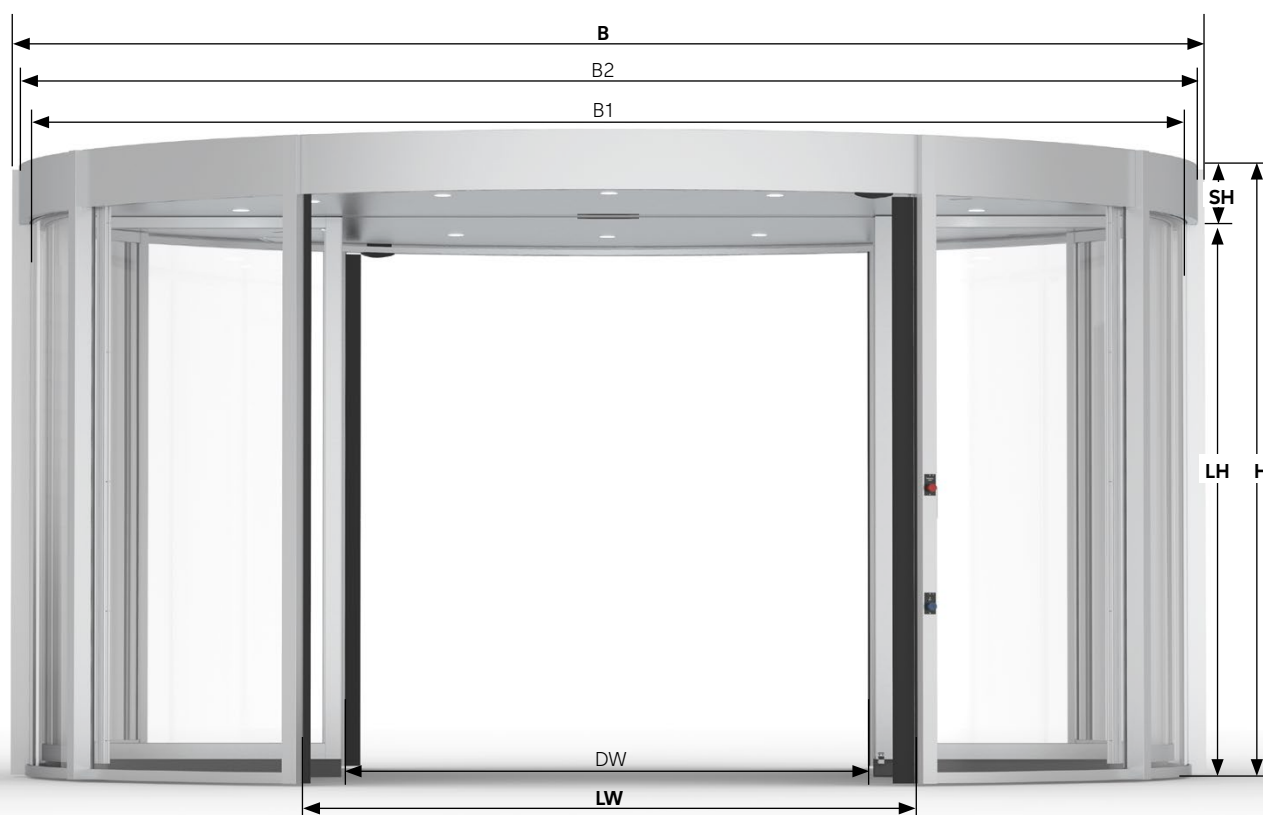
All KTC 2 door systems are equipped with an integrated automatic sliding door with tried-and-tested dormakaba high-volume technology. The rotating part of the system can be equipped with two showcases. They enable attractive decoration of the entrance area or particularly striking presentation of merchandise or offers. The lighting is provided by 14 energy-saving LED recessed downlights. The sliding door and revolving door drives are easily accessible and integrated into the ceiling assembly in a maintenance-friendly manner.

The standard version of the profile and cover surfaces comes with powder coating in individually selectable RAL shades. Alternatively, DB or NCS shades as well as special colours and anodised finishes in accordance with EURAS colour grades are available. For increased protection requirements, particularly resistant coatings can be added, e.g. for locations in coastal climates.

For exclusive requirements, stainless steel cladding in satin finish or polished surface quality (INOX) is available.



# Installation dimensions and clearance widths



The table shows the possible system dimensions from 3,000 to 5,400 mm. Intermediate sizes in 200 mm increments are available.

<b>D</b>	internal diameter of drum	(Formula)	3000	3600	4200	4800	5400
<b>B</b>	Width of the door unit	powder-coated (D+206)	3210	3810	4410	5010	5610
		with stainless-steel sheeting (D+210)	3210	3810	4410	5010	5610
<b>B1</b>	Outside diameter of drum wall	(D+67)	3067	3667	4267	4867	5467
<b>B2</b>	Outside diameter of canopy	(D+138)	3138	3738	4338	4938	5538
<b>LW</b>	Revolving door clearance width	(D/2-163)	1337	1637	1937	2237	2537
	People per section (approx.) <sup>1)</sup>		3	5	7	9	11
	User capacity when the revolving door is entered in both directions, per minute (approx.) <sup>1)</sup>		↑29+↓29	↑40+↓40	↑48+↓48	↑54+↓54	↑59+↓59
<b>DW</b>	Sliding door clearance width	(D/2-184)	1316	1616	1916	2216	2516
<b>LH</b>	Maximum clear height	3000	3000	3000	3000	3000	3000
<b>SH</b>	Standard canopy height		300 – 1000 (larger canopy heights on request)				
<b>H</b>	Total height		LH + SH				

<sup>1)</sup> The user capacity is the theoretically achievable maximum value when the revolving door is used under optimal conditions and in both directions. The prerequisite is that the door is operated at all times under optimal conditions and at full capacity and the maximum permissible rotation speed.

**Minimum façade opening height = LH + SH + min. 40 mm**

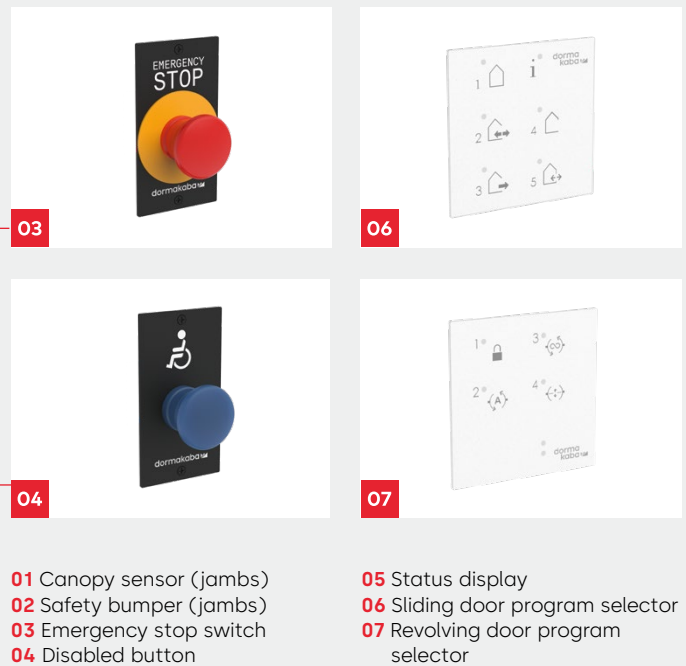
**Minimum façade opening width = B + min. 80 mm**



## Catchword suitability for wheelchair users

Revolving doors are not considered barrier-free according to DIN 18040. If standard compliant barrier-free access is required, this is usually achieved by an additional, automated side entrance door. However, in practice, revolving doors above a certain diameter are perfectly suitable to provide comfortable access to buildings for persons with restricted mobility. Highly visible and accessible disabled buttons when activated temporarily reduce the rotation speed. The system safety sensor can also be optimally pre-set to comply with these requirements. Access to the KTC 2 with a wheelchair is possible above a system diameter of 3.6 m. For wheelchair users with an assistant, we recommend door diameters above 4.2 m.

# Operating modes and function programs



The operating modes of the KTC 2 door system are selected using the program selectors. Different revolving door and sliding door settings allow the operation to be tailored to the situation. If further optimization is required, many other parameters such as rotation speeds, delay and restart times can be individually pre-set.

## Operating modes in revolving door operation

- "Automatic 1": Motion sensors start the rotation at walking speed. The door will automatically rotate to the home position after each usage. In switchable winter configuration, the home position is the closed night shield.
- "Automatic 2": The door rotates continuously at check-speed. Motion sensor prompts acceleration to walking speed automatically upon access.
- Sliding door operation: The revolving door is fixed in central position. The automatic sliding door is used instead as an entrance solution.
- "Off": The door rotates to the home position. In this position, the entrance is barred by the night shield and the system is securely closed by means of electro-mechanical bolt locking.

## Operating modes in sliding door operation

- Automatic system: The sliding door will open automatically each time the door is used. Door hold-open time, opening and closing speed adjustable
- Partial open function: The sliding door only opens partially
- Permanent open: Particularly suitable for high numbers of visitors or as a ventilation opening
- Exit: Sliding door only opens from inside e.g. for use at closing time
- "Off": The sliding door is closed and locked (required sliding door mode for revolving door operation)

## Optional supplementary features

- Disabled button: Temporary slow traverse
- Smoke extraction function: When a signal is sent to a control input, the door wings rotate to the central position and open the sliding door leaves (permanent open).
- Emergency power supply or battery emergency operation
- Night/bank function
- Interface for door status signals (analogue via floating potential-contacts or DCW bus)
- Module for networking with LON/LAN building control systems



### Catchword night/bank function

The locked door can be released via an electronic access system, e.g. a card reader, to allow access to the building. Typical scenarios are night access to hotels or the self-service area of banks.

# Safety equipment and sensors

## Operational safety

The KTC 2 revolving door provides a comprehensive safety system for optimum protection. The counter-closing edges are secured with state-of-the-art laser sensors and safety contact battens. Light barriers additionally monitor the motion range of the door wings. If the door wings catch up with people, the rotation speed is first reduced and then stopped completely. If an obstacle is detected, the drive is switched off until the movement range is clear again. All safeguarding devices are designed for failure monitoring. In addition, flow sensors are integrated in the ceiling, each of which is positioned in front of the night shield that travels with it. The detection area is located directly in front of the main closing edge and extends from the ceiling to near the floor.

### A Safety equipment for body

	Function
<b>01</b> Canopy sensors (jambs), the monitoring range detects the hazard area and can be preset to be only temporarily active depending on the position of the revolving door	Slow traverse / Stop
<b>02</b> Safety bumpers (jambs) temporarily active	Stop
<b>03</b> Emergency stop switch (optional outdoors)	Stop

### B Safety equipment for revolving system part

	Function
<b>06</b> Flow sensors (night shield)	Slow traverse / Stop
<b>07</b> Safety bumpers (night shield)	Impact protection
<b>08</b> Light barrier	Slow traverse
<b>09</b> Light barrier	Stop
<b>10</b> Showcase door sensor	Stop

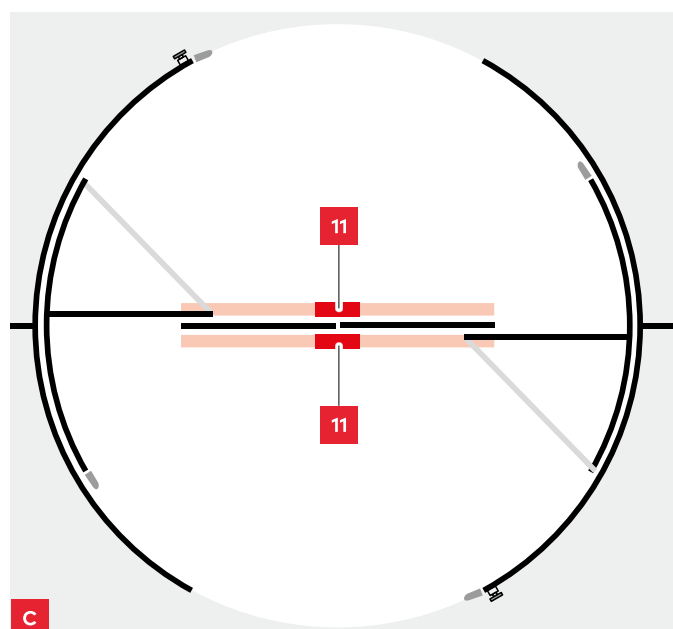
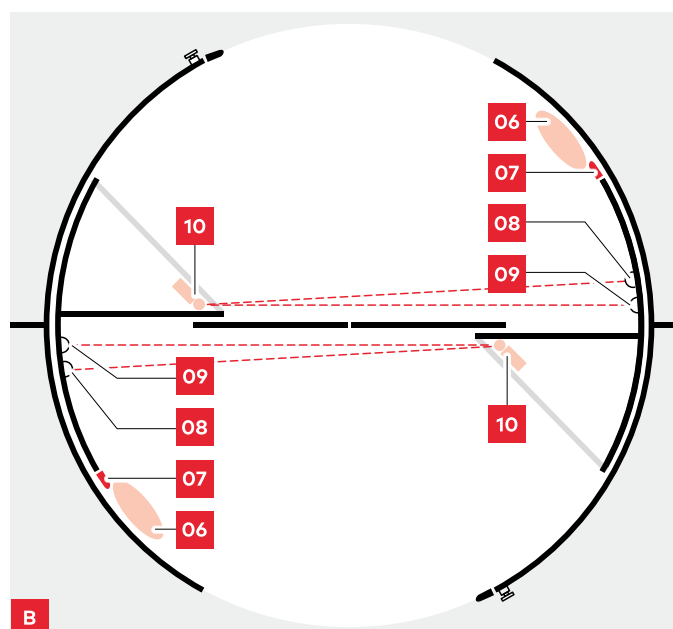
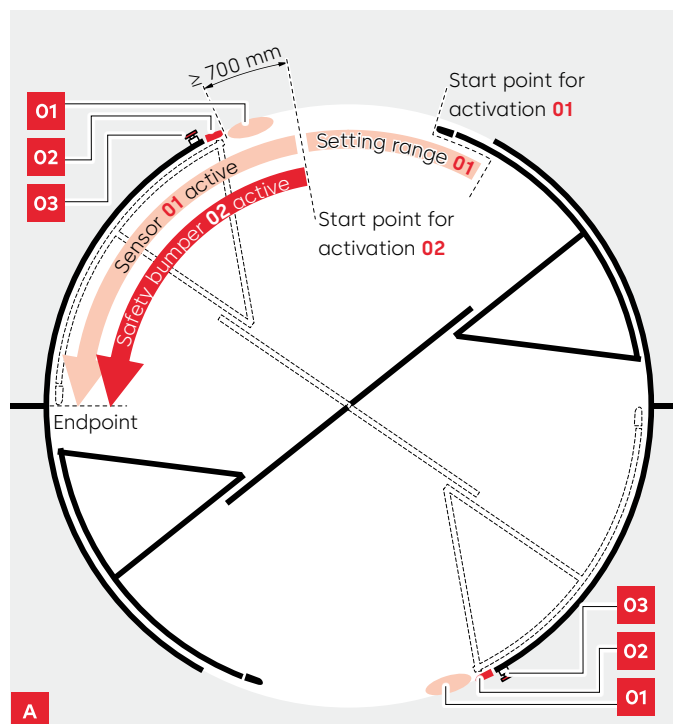
### C Safety equipment for sliding-door

	Function
<b>11</b> Combined safety and motion sensor	Open & Stop



#### Catchword emergency stop switch

When the emergency stop switch is triggered, the door stops moving immediately. It can then be manually rotated in both directions. Resetting the emergency stop switch puts the door back into the standard operating mode.



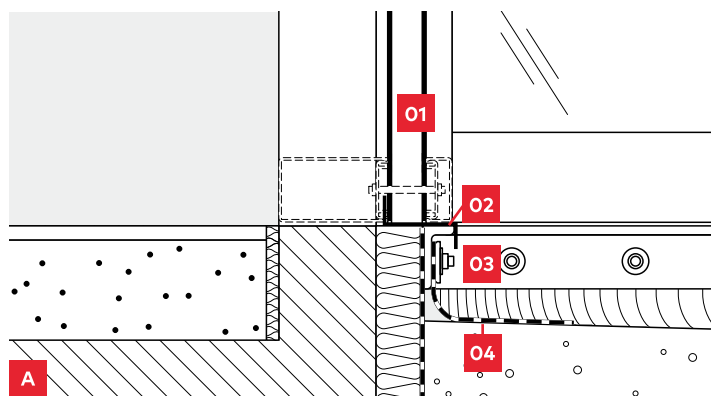
# Planning

Each KTC 2 swing door system is planned individually. The illustrations displayed here are examples of possible designs. Different finishes and equipment are possible. Contact us: we'll coordinate with our application technology department to find a suitable solution.

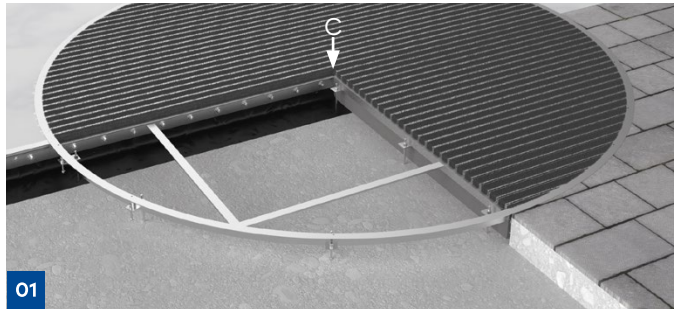
## Ground connection



Design with floor ring and circumferential outside seal

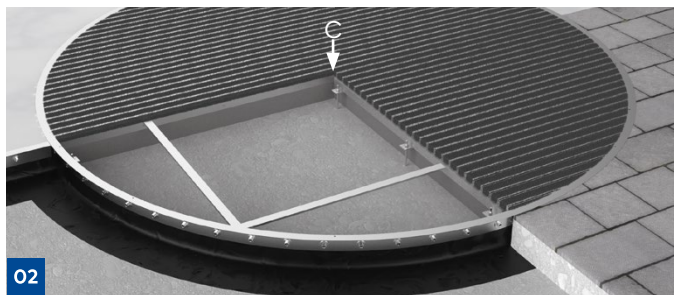


- 01 Façade joint profile
- 02 Z profile (on-site)
- 03 Foil flange
- 04 Sheeting (on-site)



01

Design with floor ring and seal in the façade level



02

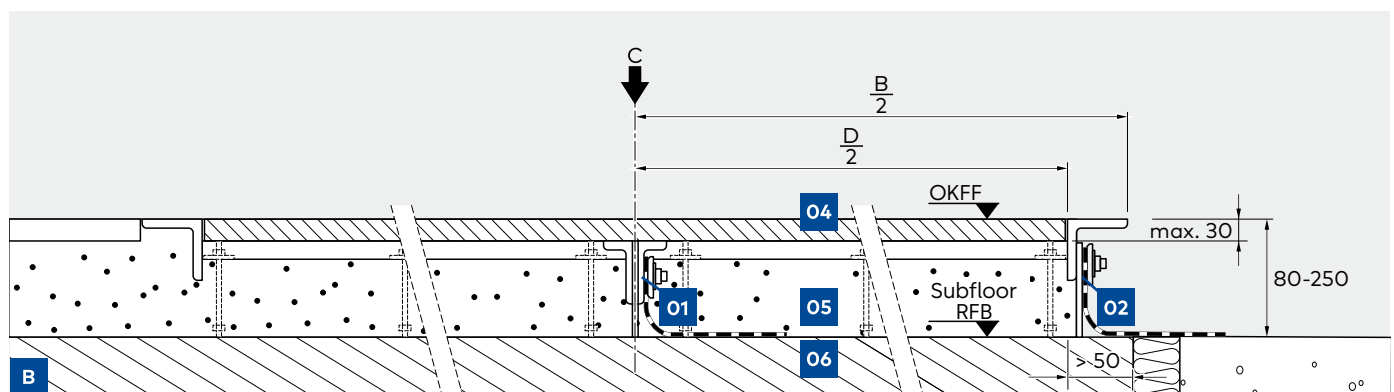
Design with floor ring and circumferential outside seal

In new construction projects, a stainless-steel floor ring is set in the screed, which allows for professional and precise door installation. The sophisticated fastening system makes anchoring the component in the subfloor fast and easy – without additional welding and with precise alignment to the required height level. The casting panels facilitate the professional casting of the floor rings with screed. In addition, textile or rubber coated cleaning mats can be inserted into the floor ring as a cleanwalk zone.

Alternatively, the door system may be installed directly on the existing floor if it is sufficiently stable and level (max. +/- 2 mm levelling difference over the entire system area).

Optional extras:

- Cleaning mat with textile or rubber insert
- Clamping flange for on-site foil sealing (at centre axis **01** or circumferentially outside **02**), also in accordance with DIN 18195-5.
- Floor sheets or foil guide plates



- 01** Foil flange and foil guide plate with façade-level design  
**02** Foil flange and foil guide plate with outer circumferential design  
**04** Floor covering max. 30 mm  
**05** Screed  
**06** Subfloor



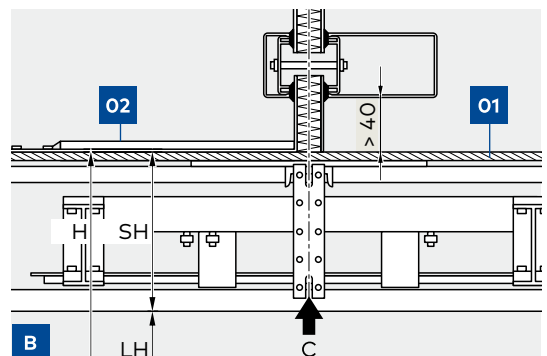
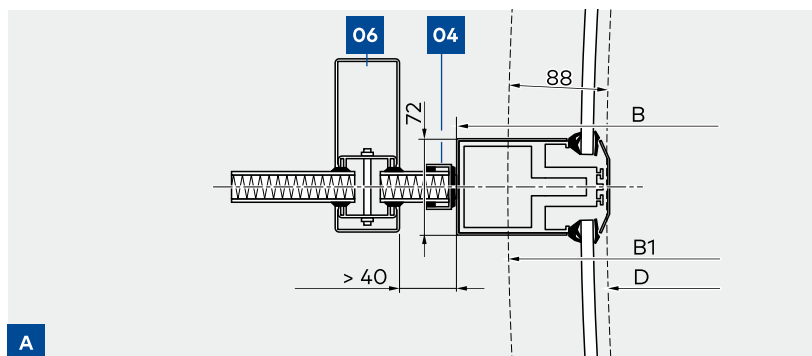
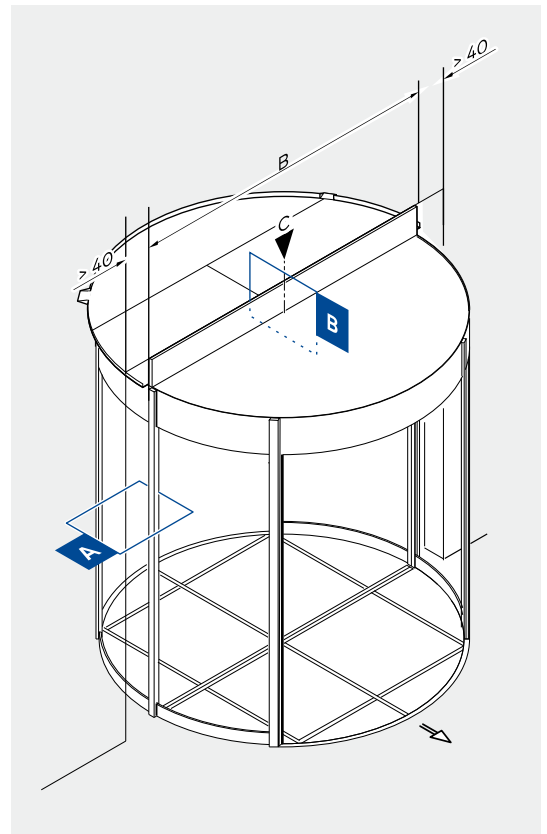
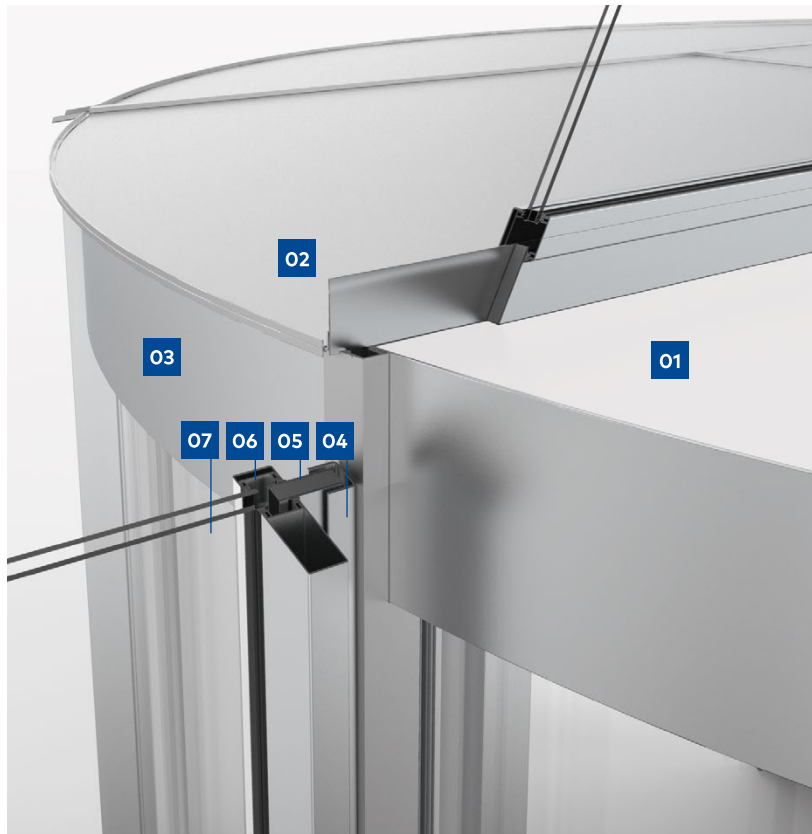
# Façade and building connections



## Example of upper ceiling design

The upper ceiling can be supplied with different finishes.

- As protective cover made of composite fibre panels with melamine coating, white (A)
- With decorative metal sheet on top in system-coordinated finish (B)
- With waterproof metal sheet on top and lateral spouts in system colour (C)
- With raised canopy (D)
- Prepared for on-site, rain-proof roof sealing with sheeting or bitumen (no illustrations)



### Example of façade connection (upper ceiling with waterproof metal sheet on top)

The façade connection is planned individually for each project and adapted to the intended façade. The illustrations display the usual façade connection in the central axis. Other versions (e.g. off-centre connection) are possible by arrangement.

- 01 Dust cover (fibre composite plate with melamine coating)
- 02 Rain-proof metal sheet on top with spout
- 03 Canopy
- 04 Façade joint profile
- 05 Façade joint panel
- 06 Posts/bars of the façade construction (on-site)
- 07 Façade glazing (on-site)

# Air curtain system

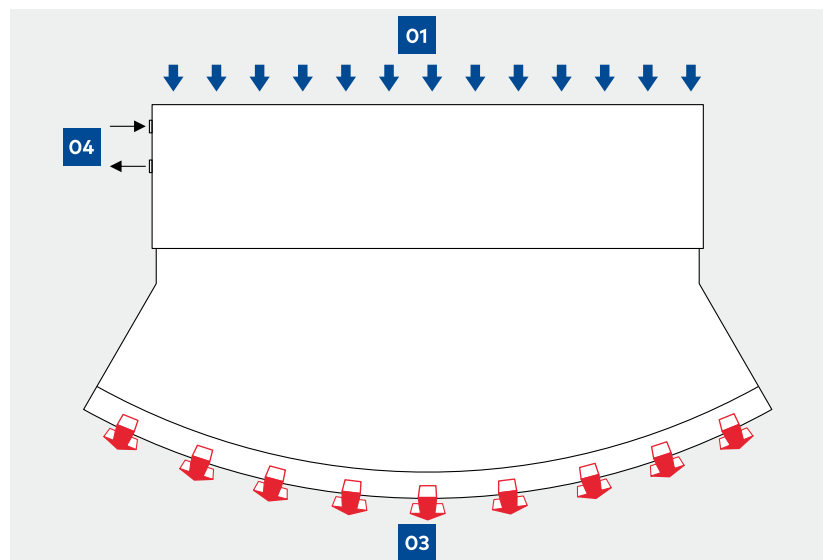
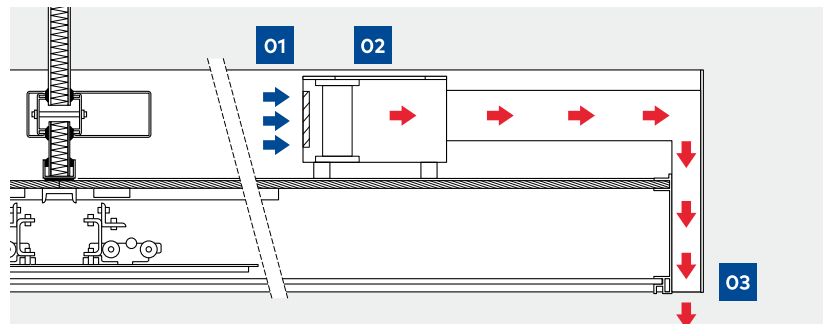
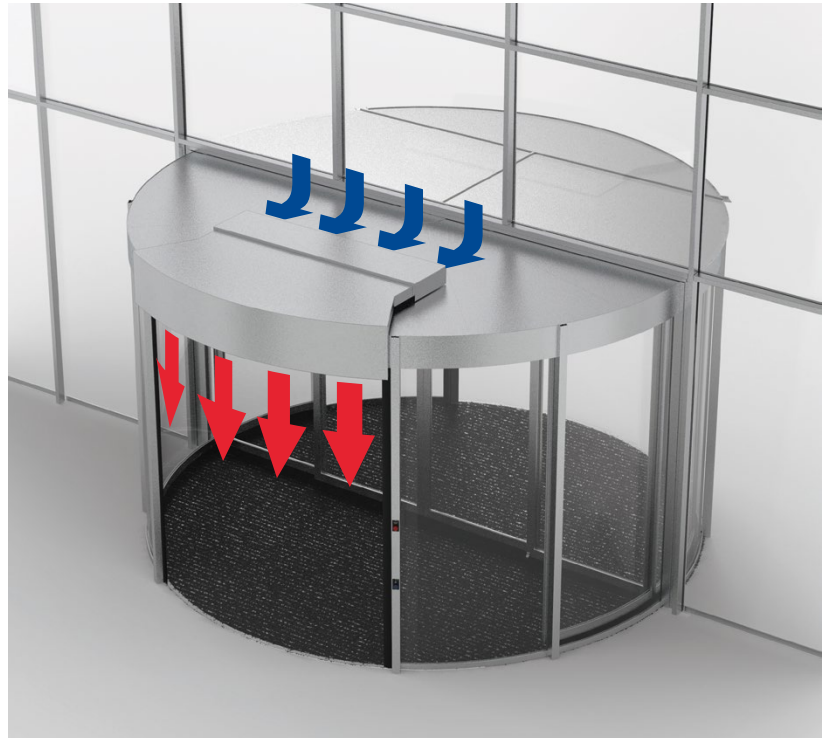
A hot-air curtain in the area of the inner passage opening of the revolving door effectively reduces the unwanted interchange of air masses from the outside and inside of the building, thus minimising heating and cooling costs. Air curtains are available as appliances that are surface-mounted on the upper ceiling, individually co-ordinated with the door or as vertical standing devices for universal use. As an addition to the standard devices proposed ex-works, a professional design may be required and developed in close consultation with the TGA architects and the manufacturer of the air curtain, depending on the individual application.

## Functionality

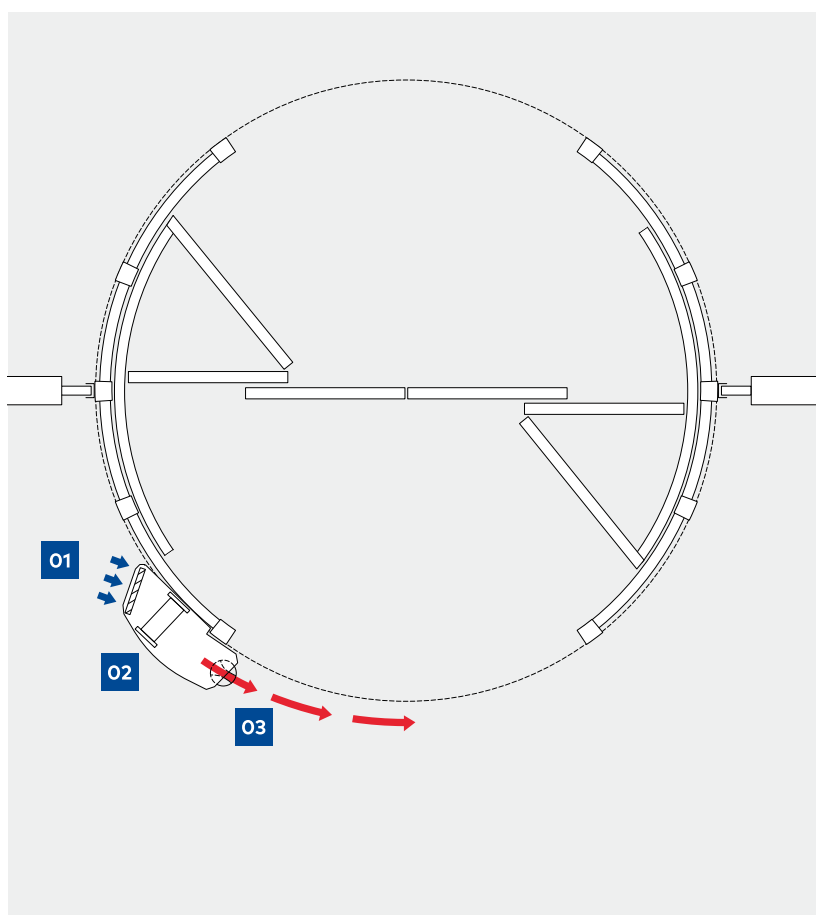
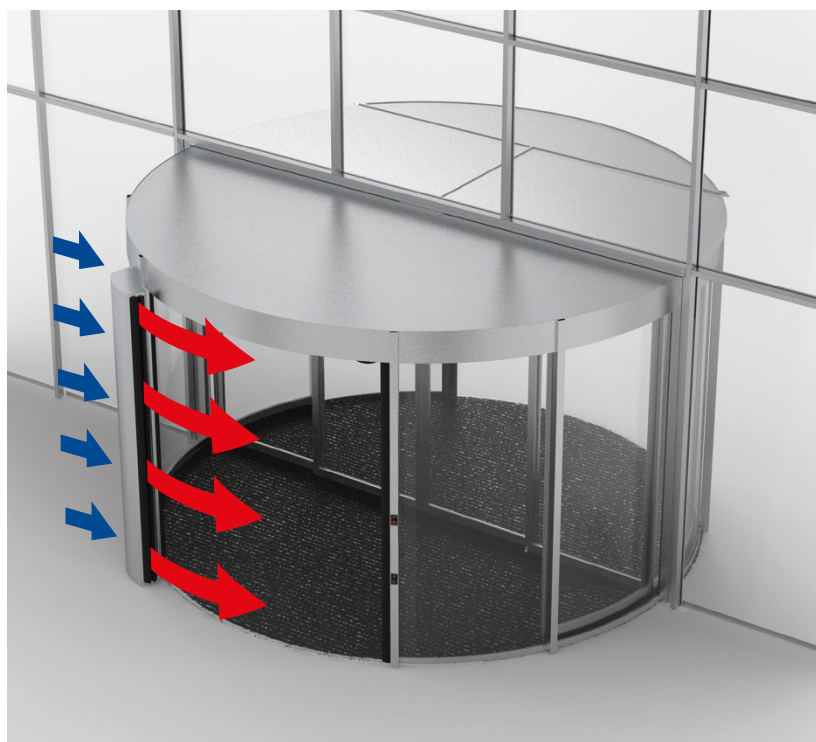
Air curtain devices are either designed as a hot water appliance for integration into the existing heating circuit of the building, or with electrically heated registers. The air is heated in the heating registers. Air volume and speed control is performed via a separate control panel or is integrated into the building technology. To keep the system efficient, the registers are protected against dust through air filters.

## Ceiling design for horizontal air curtain

The device is surface-mounted on the reinforced upper ceiling. The discharge manifold is located in front of the inner canopy. For maintenance purposes (e.g. filter replacement) sufficient working space should be provided above the door system.



- 01 Air supply
- 02 Air curtain with dust filter and heating register
- 03 Discharge manifold
- 04 Flow/return connection to existing heating circuit for hot water appliance



### Standing version for vertical air curtain

In the case of standing devices, the low canopy height of the revolving door is retained. A connection to a heating circuit can be made via floor lines. Alternatively, electrically heated devices are also available in this design. Standing devices are particularly maintenance-friendly, as the components are easily accessible. Depending on the power requirement, two devices can also be combined. The exact dimensions depend on the power requirement.

- 01 Air supply
- 02 Air curtain with dust filter and heating register
- 03 Discharge opening

# Electrical connection



Depending on the equipment, various leads for the power supply and control unit must be provided on site for the electrical connection of the system. All leads must be able to be routed into the cover. You must therefore allow for sufficient lead lengths.

## Connections

<b>01</b> Drive unit power supply	3 x 1.5 mm <sup>2</sup>
(200–240 VAC, 50/60 Hz with support 16 A fuse)	
Equipotential bonding	min. 6 mm <sup>2</sup>

If the system is not to be controlled from the post, the following leads must be provided on site:

<b>02</b> Emergency stop switch	4 x 0.5 mm <sup>2</sup>
<b>03</b> Disabled button (slow traverse)	4 x 0.5 mm <sup>2</sup>
<b>04</b> Revolving door program selector	4 x 0.5 mm <sup>2</sup>
<b>05</b> Sliding door program selector	4 x 0.5 mm <sup>2</sup>
<b>06</b> Status display	7 x 0.5 mm <sup>2</sup>

**07** Connections for on-site technical building equipment or control elements:

### Outputs

• KT rotates at walking speed	2 x 0.75 mm <sup>2</sup>
• KT rotates at slow traverse	2 x 0.75 mm <sup>2</sup>
• KT rotates at positioning speed	2 x 0.75 mm <sup>2</sup>
• Safety sensor activated	2 x 0.75 mm <sup>2</sup>

### Inputs

• "Winter configuration" input	2 x 0.75 mm <sup>2</sup>
• "Fire alarm" input	2 x 0.75 mm <sup>2</sup>
• "Smoke extraction" input	2 x 0.75 mm <sup>2</sup>
• "Safety sensor activated"	2 x 0.75 mm <sup>2</sup>

## Technical specifications

Operating power consumption	175 W
Stationary power consumption	80 W
Ambient temperature:	–20 °C to +50 °C

## Uninterruptible power supply UPS

The optional UPS enables the system to continue to operate for several minutes in the event of a power failure, independent of the mains voltage. The door wings are turned to the central position and the sliding door is opened permanently. In this way, the building can also be exited through the stationary revolving door, or the door can be used as a ventilation opening in the event of a fire. Due to normative restrictions, it is not, however, suitable as an official escape route.

## Connections for air curtain systems

The exact connections are documented during the planning process. Depending on the design, a power supply, hot water supply (flow/return) for integration in the heating circuit of the building services as well as a control cable for connection to the control technology are required.



# KTC 2 equipment and combinations at a glance

<b>Diameter without showcase</b>	3,000 – 4,800 mm
<b>Diameter with showcase</b>	3,000 – 5,400 mm
<b>Clear passage height</b>	2,100 – 3,000 mm
<b>Canopy height</b>	300 – 1,000 mm
<b>Total height</b>	2,400 – 4,000 mm

## Body and revolving system part

Aluminium profile frame system, filling with curved non-splinter safety glass (laminated safety glass, P4A, clear glass) or sandwich metal panelling.

## Ceiling assembly

Aluminium canopy profile with sheet-metal lagging in system-coordinated finish; upper ceiling with dust protection cover, decorative metal sheet on top, rain-proof metal sheet on top or prepared for on-site sealing with (bituminous) sheeting; lower ceiling made of sheet-metal segments coated with system-coordinated finish.

## Internal sliding door

Aluminium profile frame systems with circumferential frame, filling made of non-splinter safety glass (toughened safety glass, laminated safety glass, P4A, clear glass)

## Surfaces

Powder-coating in glossy or matt RAL shades, NCS or DB. Anodised tones according to EURAS colour grades, e.g. E6-C0/EV1.

Alternative: covered with stainless steel sheets with brushed or polished finish, increased corrosion protection or special surfaces.

## Floor ring

Stainless-steel floor ring, can be fitted on site without welding, optionally with clamping flange, foil guide plate or cleaning mat. Panels supplied ex-works for professional casting on the construction site. Alternative: installation without floor ring on finished floor.

Functions/Features	
Start rotation	automatic
Acceleration to walking speed	automatic
Automatic speed control	●
Automatic positioning in rest position	●
Winter control (rest position with closed night shield)	○
Sliding door operation	●
Sliding door operation: permanent open	●
Sliding door operation: partial open	●
Safety sensors acc. to EN 16005	●
Emergency stop switch (inside/outside)	●
Disabled button (slow traverse) (inside/outside)	●
Electro-mechanical bolt locking device (for revolving door)	●
Automatic night shield	●
Electro-mechanical return pulley locking device (for sliding door)	●
Night/bank function	○
Smoke extraction function	○
Air curtain system	○
Locking feedback contacts	●
Interface for door status signals	○
External interface (diagnostics and parameter setting)	●
Lighting	14 LED recessed spotlights
Approval certificates	EN 16005, German Technical Inspectorate initial type testing
Proven durability (cycles)	1 million
● = standard equipment    ○ = optional equipment	



Door Hardware



Electronic  
Access & Data



Mechanical  
Key Systems



Lodging  
Systems



Entrance  
Systems



Service

## Our commitment to sustainability

At dormakaba, we are committed to sustainable development along our entire value chain.

To give quantified data on the environmental effects of a product and its ecological footprint, dormakaba provides Environmental Product Declarations (EPD). You can find our EPDs and further information on our commitment to sustainability here or by scanning the QR code.

[www.dormakaba.com/sustainability](http://www.dormakaba.com/sustainability)



WN 05400251532, 12/22, KTC 2, EN  
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