



Revolving Doors
Comfortline

DORMA

KTC-Y

Revolving doors – the new generation

Buildings used by a large number of people require entrance solutions that ensure maximum convenience and safety. And when the traffic flows become particularly heavy, smooth yet rapid passage is essential.

The building interior also needs to be kept warm and protected from draughts, noise and dirt. The newly developed DORMA KTC-Y revolving door satisfies all these requirements as well as providing the building with a prestigious entrance solution.

Benefits

- 3-wing design with spacious segments for maximum user convenience
- Integrated night shield
- Night shield with 4-point rod-locking
- Suitable for emergency exits and escape routes
- Complies with prEN 12650
- Attractive design with slim profiles
- Touchless safety package

Data and features	DORMA KTC-Y
Inside diameter in mm	4200, 4800 5400, 6000
Outside diameter in mm	4420, 5020 5620, 6220
Clear passage width (LW) in mm	2000, 2300 2600, 2900
Escape passage width in mm	1680, 1940 2200, 2460
Clear passage height in mm	2200 – 2500*
Canopy height in mm	300 – 700
Total height in mm	2500 – 3200
Side wall glazed	○
Side wall with metal panelling	○
Wings – catch and pivot fittings	●
Night shield – manual incl. manual lock – electric, incl. electromechanical lock	● ○
Y-turnstile wings – straight	●
Suitable for emergency exits and escape routes	○
Floor ring	●
Floor mat	○
Lighting	○
Ceiling – upper ceiling non-accessible (dust protection) – upper ceiling man-bearing – upper ceiling prepared for rainproof roof	● ○ ○
German type-approval	●

● Standard ○ Option

*see diagram on page 4

Traffic capacity

Inside diameter (D) in mm	Theoretical capacity ¹⁾ Persons/hour →	Practical capacity ²⁾ → Persons/hour ↔	Maximum capacity ³⁾ Persons/min. →
4200	3312	1104 2208	55
4800	4320	1440 2880	72
5400	4536	1512 3024	75
6000	5184	1728 3456	86

¹⁾ The theoretical capacity value indicates how many people can pass through the revolving door in one (→) direction per hour, assuming that the traffic flow is uniform and the internal segments are constantly occupied.

²⁾ The practical capacity values indicate how many people can actually pass through the revolving door in one (→) and in both (↔) directions.

³⁾ The maximum capacity value indicates how many people can pass through the revolving door in one direction (→) per minute when, for a certain limited period, there is a constant stream of traffic, e.g. in the morning and evening.



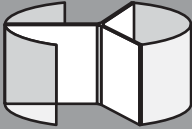

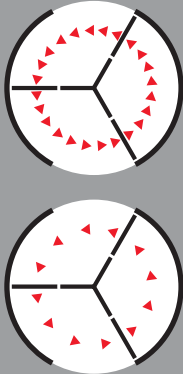
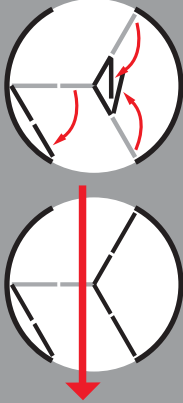
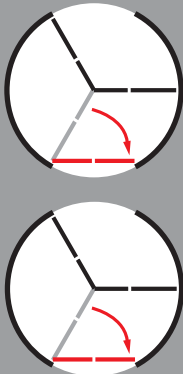
Type-approved by the Technischer Überwachungsverein (TÜV) Hannover to VDE 0700 Part 238 and ZH 1/494 - EN 12650: Code of practice for power-operated windows, doors and gates



Quality assured manufacture to DIN ISO 9001, EN 29001, BS 5750. Certified and verified by BSI Quality Assurance Reg. No. Q.6423, FM 10756



Designs, functions, standard equipment, optional extras

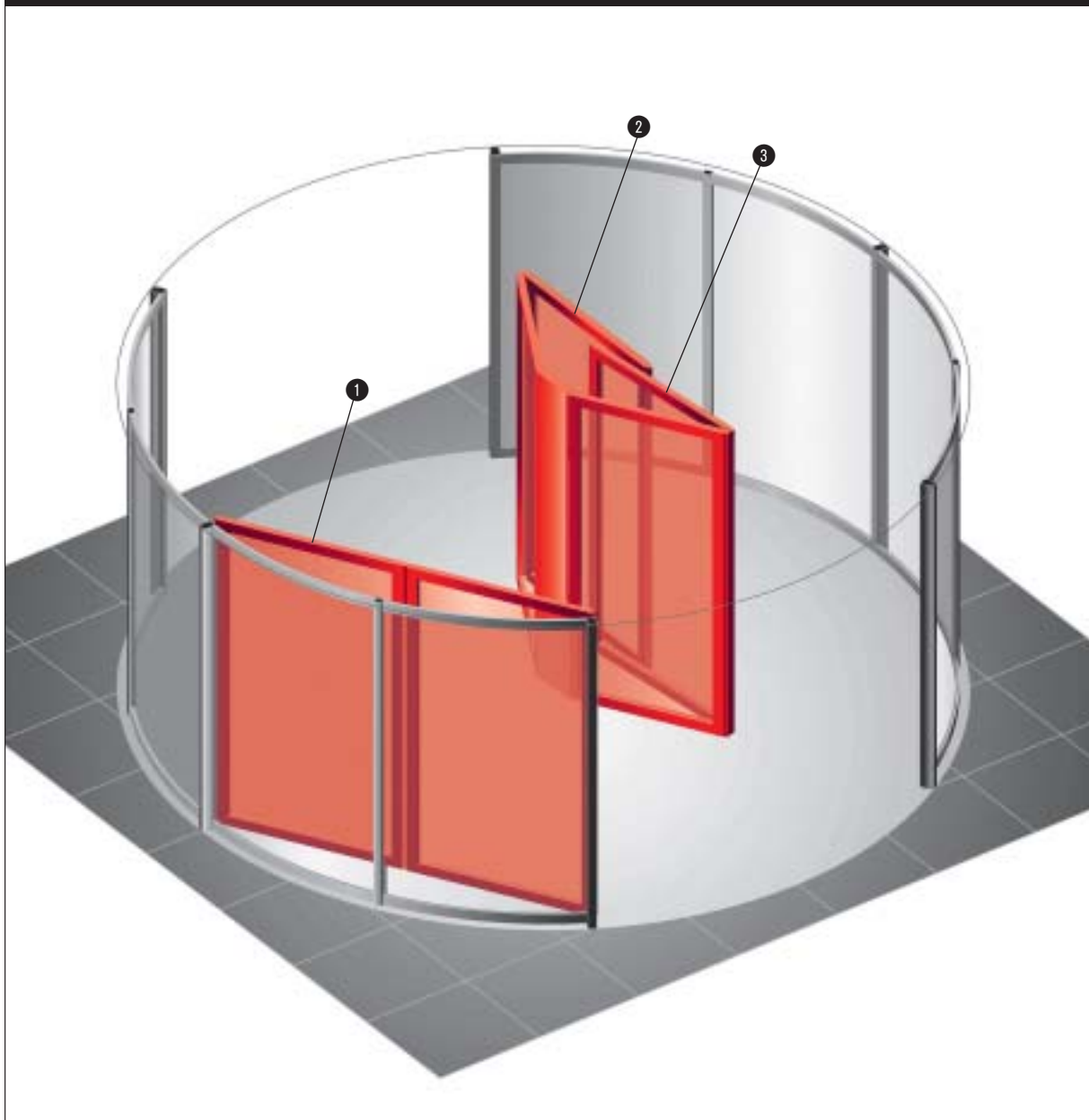
Models	KTC-Y/0, KTC-Y/1
Operator types	
Operator integrated in ceiling structure	
Automatic	
<p>I: Door starts and stops automatically II: Door rotates continuously at low speed which is increased as soon as a user approaches</p>	
<p>Speed reduction feature decreases the speed to 2 rpm (see page 7), e.g. for senior citizens, disabled persons</p>	
Configurations	
<p>Summer configuration Also ideal for the passage of bulky items or luggage, and for consignment deliveries</p>	
Emergency escape configuration	
Night shields	
<p>Manual night shield incl. manual 4-point lock</p>	
<p>Fully automatic night shield (option) incl. electro-mechanical 4-point lock</p>	

Summer configuration

To provide a clear passage left and right next to the central core, in addition to wing ①, which is pivoted into the escape position, wings ② and ③ can also be

folded together and locked as shown.

This configuration is also particularly useful for taking bulky items through the entrance.

DORMA KTC-Y summer configuration

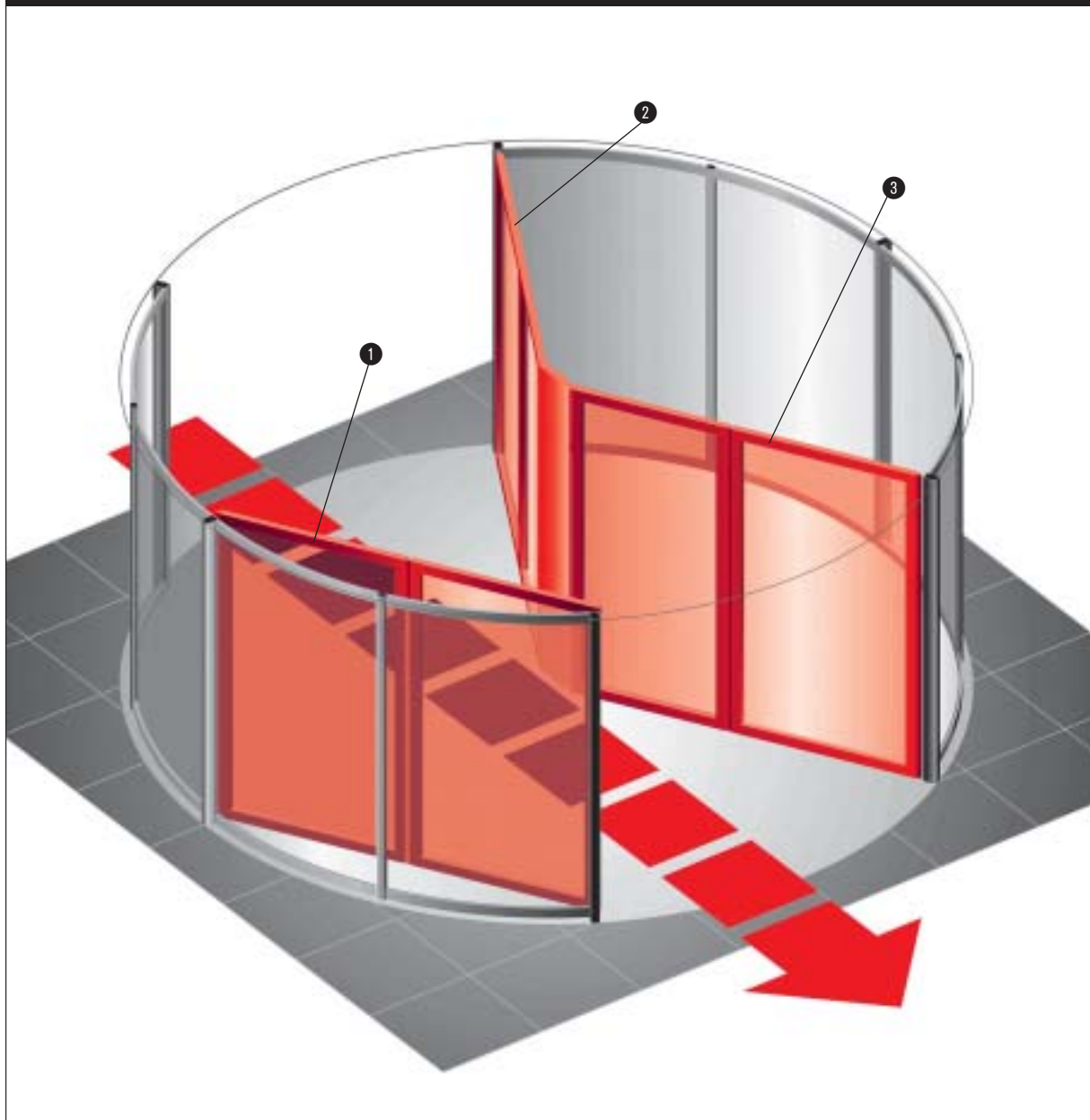
Emergency escape configuration

In the event of an emergency, the KTC-Y – responding to an emergency operating device or an actuation control signal from the fire detection and alarm system – is automatically rotated to the escape position.

The rotor moves the door to the Y-position. Wing ① is then detached from the turnstile core and pivots in the escape direction to provide a clear passage

width of over 2 m in width. This width satisfies, for example, the stringent requirements of Germany's business premises safety regulations. In addition, wings ② and ③ are fitted with catch and pivot fittings. The revolving door control can also be connected to a desmoke system so that the KTC-Y can be used to allow sufficient draught into the building interior.

DORMA KTC-Y emergency escape configuration



Integrated night shield

At the end of business, the revolving door is securely sealed by an integral night shield.

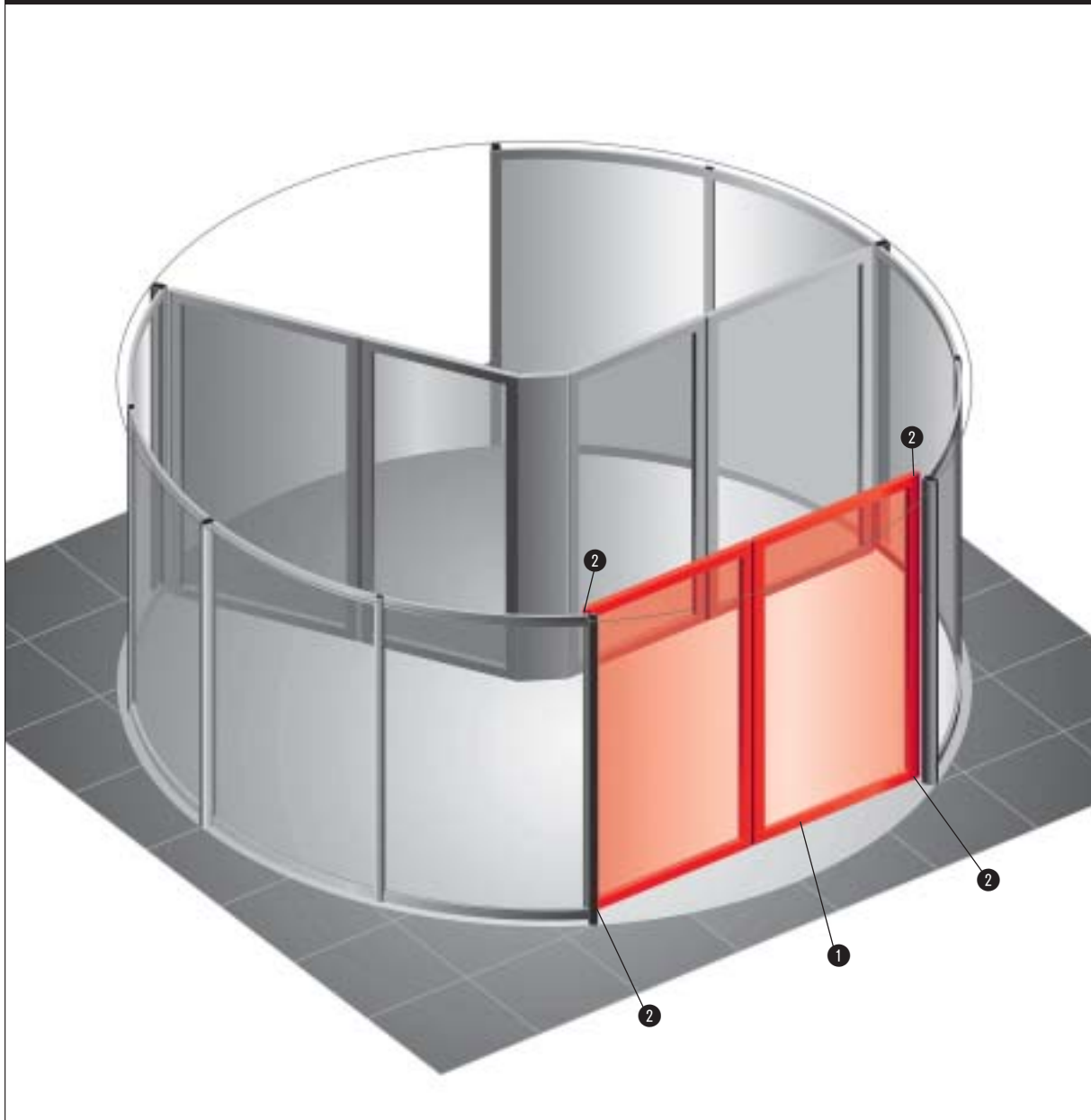
For this, the rotor again travels night shield position and wing ① then pivots out from the turnstile core and closes off the entrance.

A 4-point locking mechanism ② in the night shield ensures that the door is properly secured against intruders.

At the start of business, the revolving door is actuated by key switch to return it to its position.

Wing ① pivots back to the turnstile core and the rotor begins operation.

DORMA KTC-Y with integral night shield



Three-wing design

DORMA KTC-Y Comfortline revolving doors come in 4 standard sizes. And they are available with various accessories. The wings with their catch and pivot fittings are equipped with brush seals in order to ensure the reliable exclusion of draughts in the entrance area.

The integral night shield can be equipped with anti-intruder safety glass as an optional extra.

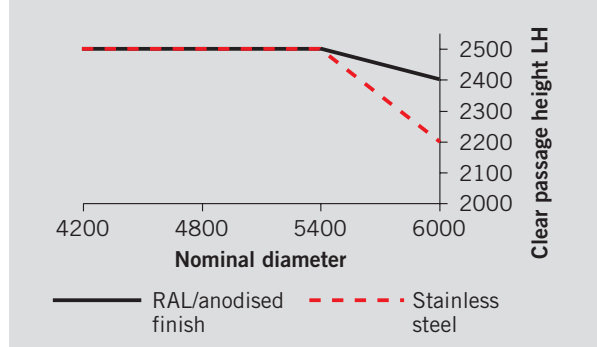
Y-turnstile wings

- Straight safety glass

Drum wall versions

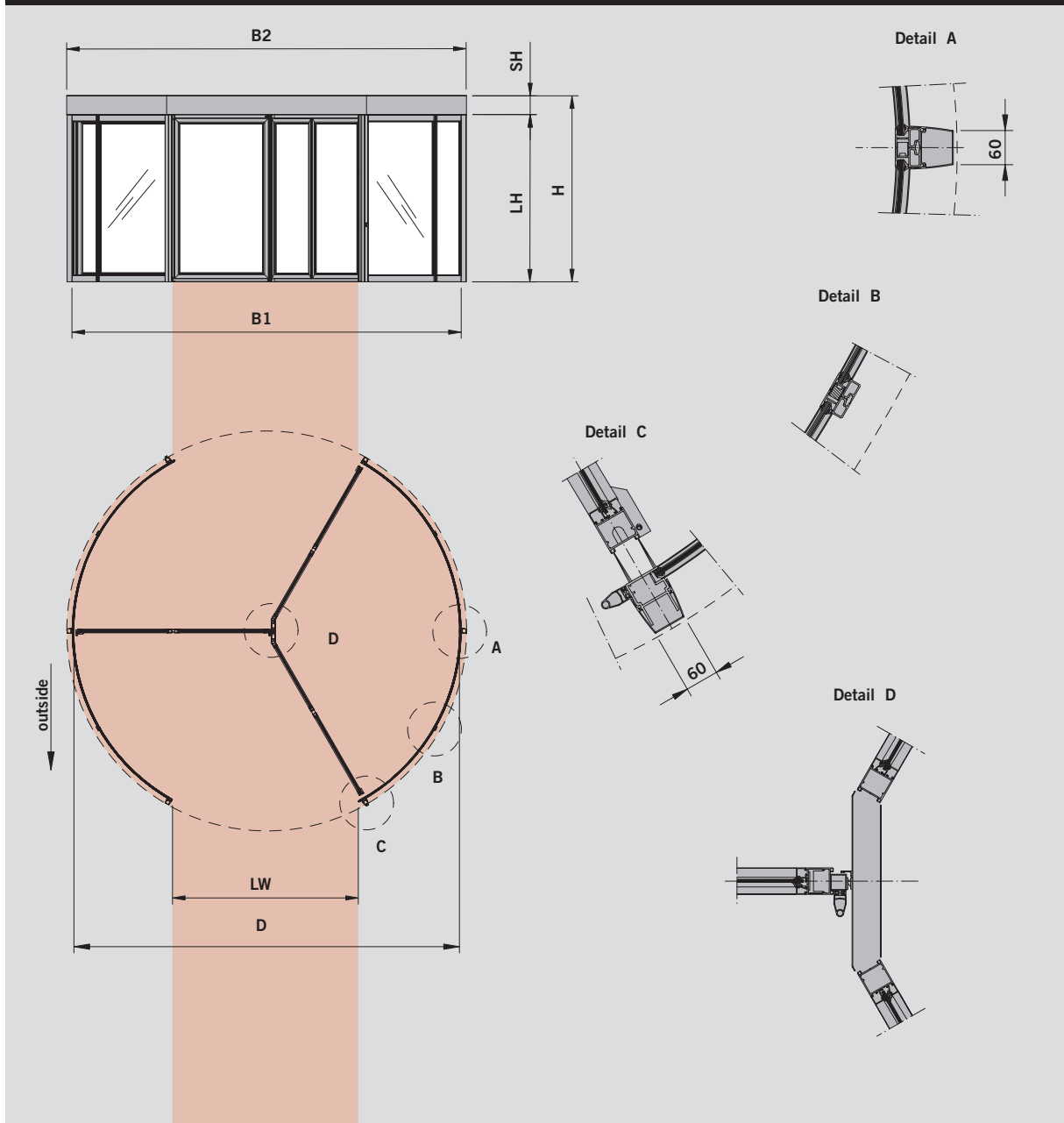
- Curved safety glass
- Metal panelling

Maximum clear passage height -v- diameter



The clear passage heights indicated above comply with the TÜV approval certificates; other heights on application

Details



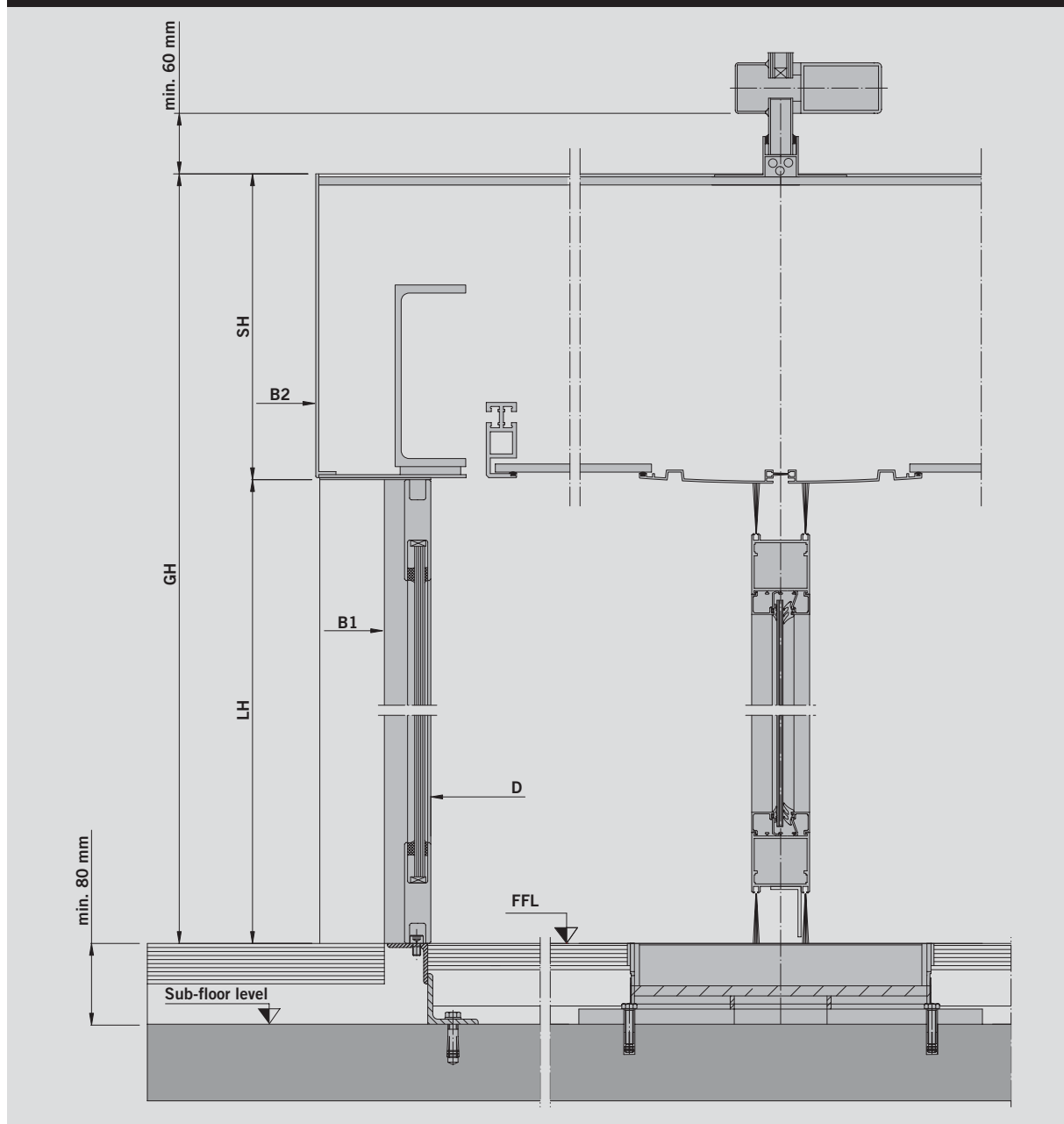
Dimensions

Inside diameter (D)	4200	4800	5400	6000
Outside diameter (B1)	4292	4892	5492	6092
Outside diameter (B2)	4420	5020	5620	6220
Clear passage width (LW)	2000	2300	2600	2900
Escape passage width	1680	1940	2200	2460
Clear passage height (LH)	2200 bis 2500*			
Total height (H)	2500 bis 3200*			
Canopy height (SH)	300 bis 700*			

All dimensions in mm

* See diagram on page 7; other heights on application

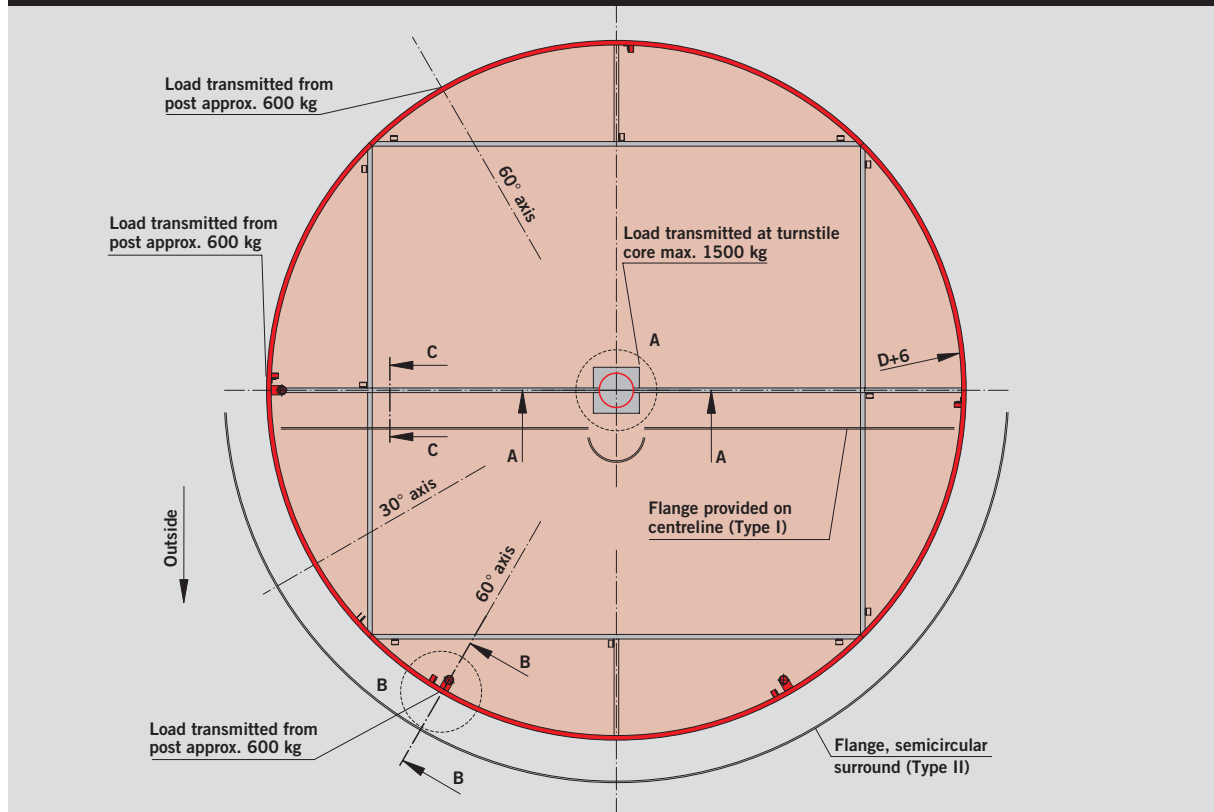
Vertical section



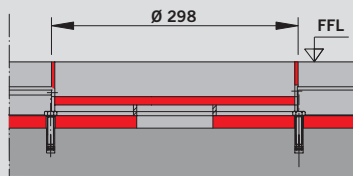
Floor rings

Diameter in mm	4200	4800	5400	6000
Sub-floor to FFL (A) in mm	80 – 250			
Nominal radius (R) in mm	2100	2400	2700	3000
Floor mat (C) in mm	up to 30			

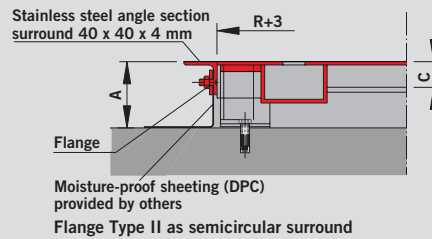
Floor ring details



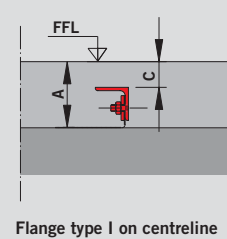
Section A – A



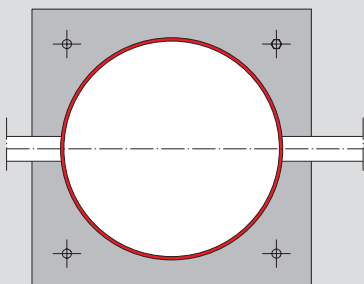
Section B – B



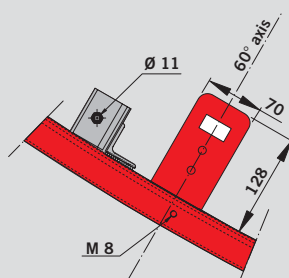
Section C – C



Detail A



Detail B

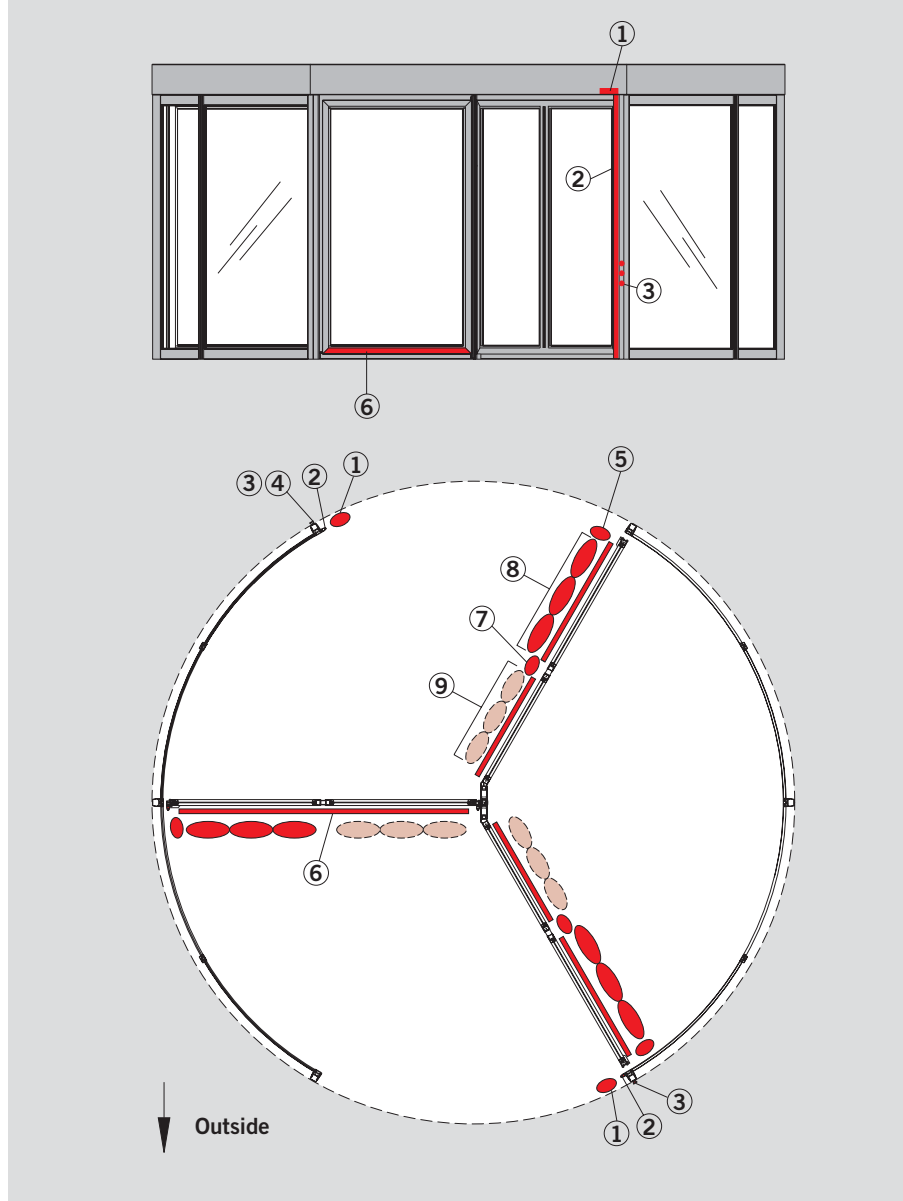


Sensor package 1

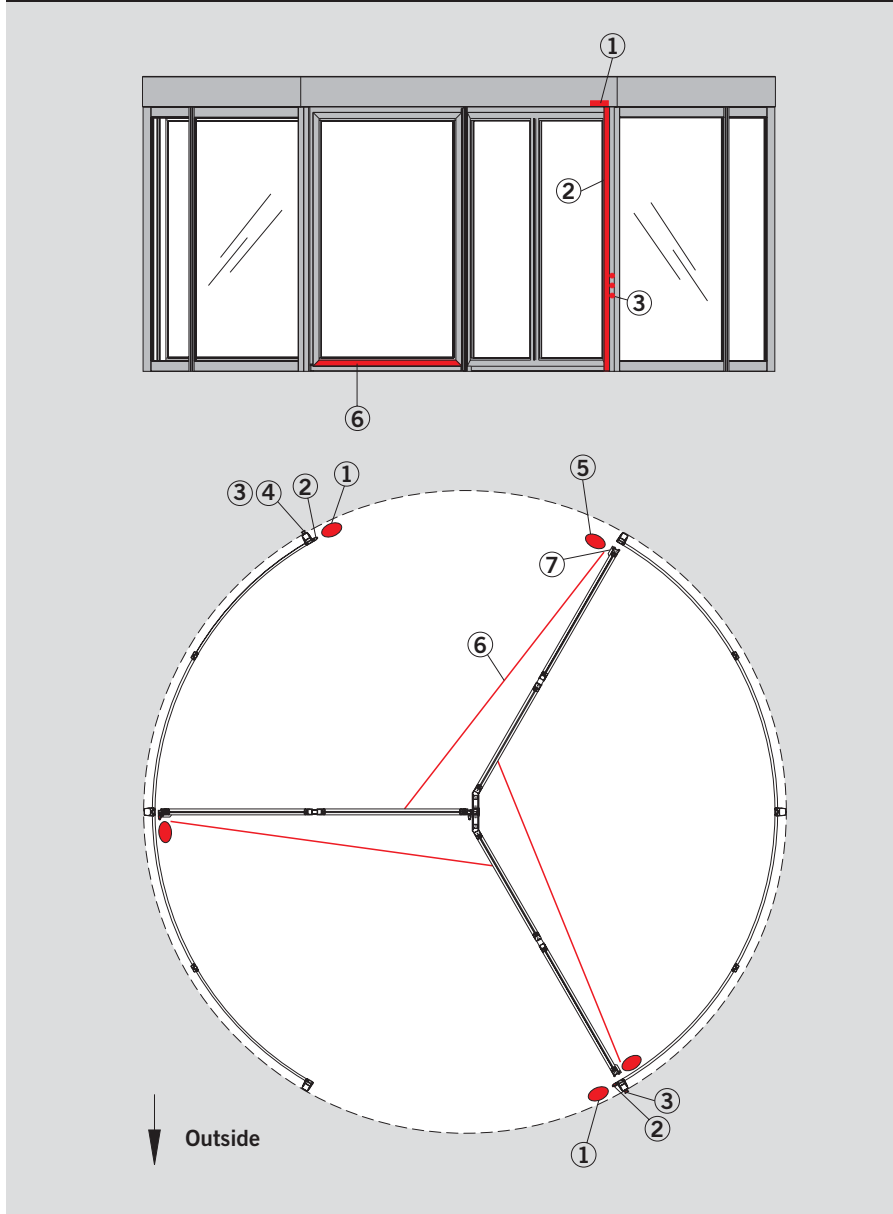
DORMA KTC-Y revolving doors are equipped with a comprehensive safety system to ensure the best possible protection.

Sensor package 1, which is used in standard installations, consists of a combination of proven safety contact strips and photosensors. The primary closing/shear edges are protected by infra-red sensors ① and safety contact strips ②. These are activated as the wing approaches to within 500 mm of the upright post. The outside edge of the wing is protected with photosensors ⑤, and the bottom edge of the wing with safety contact strips ⑥. In addition, there are photosensors ⑧ on the upper edge of the outside wing segments which slow down the door operator when an obstruction is detected.

- ① Canopy sensor (stop)
- ② Safety contact strip (stop)
- ③ Disabled access button, inside and outside (option)
- ④ Emergency stop push-button, inside
- ⑤ Edge sensor, wing-mounted, vertical (slow speed mode)
- ⑥ Safety contact strip, wing-mounted, bottom horizontal (stop)
- ⑦ Photosensor mounted on wing strap (stop)
- ⑧ Photosensor, horizontal, mounted on outside top wing segment (slow speed mode)
- ⑨ Photosensor, horizontal, optionally mounted on inside top wing segment (slow speed mode)



Sensor package 2 (to pr EN 12650)



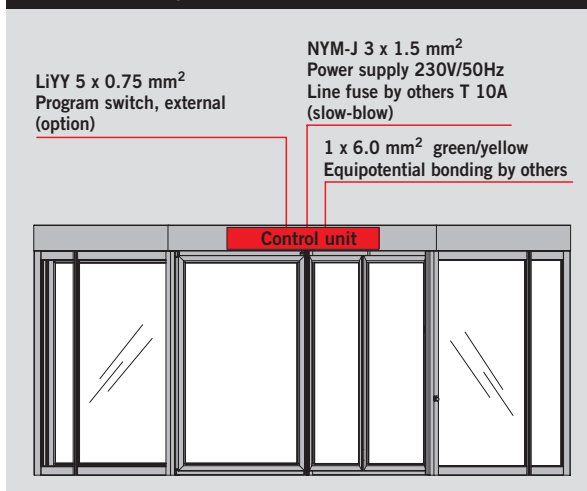
DORMA revolving doors KTC-Y are equipped with a comprehensive safety system to ensure the best possible protection. The primary closing/shear edges are protected by infra-red sensors. These are activated as the wing approaches to within 500 mm of the upright post. The outer and bottom edges of the wings are likewise protected by photosensors.

The smart edge sensor monitors the outer wing edge and is only activated at the openings. Range adjustable up to 200 mm.

The control system and all the safety-relevant components are of redundant and self-monitoring design in accordance with pr EN 12650.

- ① Canopy sensor (stop)
- ② Safety contact strip (stop)
- ③ Disabled access button, inside and outside (option)
- ④ Emergency stop push-button, inside
- ⑤ Edge sensor, wing-mounted, vertical (stop)
- ⑥ Photosensor, wing-mounted, bottom horizontal (stop)
- ⑦ Photosensor, wing-mounted, vertical (stop)

Electrical cabling



Automatic modes / Speed reduction feature

- The automatic control system offers two operating modes:

“Automatic I” - The stationary door is activated as soon as a user approaches. Following an adjustable time it stops again at its starting position.

“Automatic II” - The door rotates continuously at approx. 1 rpm.

As a user enters the detection range, the speed is increased to approx. 3 rpm.

The speed is reduced again after an adjustable time.

- The speed reduction feature is activated by means of a special push-button to reduce the speed of the door during passage to 2 rpm.

Specification text

DORMA Comfortline KTC-Y automatic revolving door suitable for use in emergency exits and escape routes

Type KTC-Y, 3-wing, with integrated night shield

Outside diameter	(B2) mm
Inside diameter	(D) mm
Clear passage height	(LH) mm
Canopy height	(SH) mm
Overall height	(H) mm
Emergency escape passage width	(FB) mm (min. 1680 mm)

Surface finish

- PU-coated to RAL
- Anodised in shade E6/
- Stainless steel 1.4301, 240 grit
- Stainless steel 1.4301 polished
- Brass MS 63, mill bright

Constructional description

Side walls

Curved side walls of special aluminium profiles, posts 60 x 106 mm, sockets 100 mm high top and bottom. Prepared for 24 mm wide sidewall-to-structure connection panel at door centreline.

- Glazing of 9.3 mm laminated safety glass, type GH, clear.
- Metal panelling, 18 mm thick, matching surface finish

Ceiling

Rotating lower ceiling of aluminium support structure, lower ceiling with melamine covering, white, upper ceiling laminated board for dust protection (standard).

- Upper ceiling of aluminium panelling, thermally insulated, man-bearing
- Upper ceiling of aluminium panelling, thermally insulated, prepared for rainproof roof

Operator

2 geared motors integrated in ceiling structure, variable-speed.

Rotor (turnstile) system

3-wing aluminium frame structure with integral night shield, with transparent toughened 6 mm safety glass and with all-round brush seals. Night shield closes off the entire passageway and is secured by 4-point locking.

- Integral night shield manually operated
- Integral night shield automatically operated

Wings/Night shield

Special profile frames, 57 mm deep, fair face width 80 mm, with replaceable horse-hair brushes. Toughened safety glass, 6 mm thick Wings/night shield attached via breakout catch and pivot fittings.

Functional description

Automatic I

The stationary door is accelerated to walking speed by an activator/detector on detection of a user approaching. After a preset continuation time the Y-turnstile stops again at its home position.

Automatic II

The door rotates at approx. 1 rpm and is accelerated to walking speed by an activator/detector on detection of a user approaching.

Stop

The door stops at its home position unless the activators/detectors have been initiated anew. The activators are not active.

Locked

With the door in its home position, the night shield pivots to the closed position and is secured by the 4-point locking mechanism. The lighting is also switched off.

Speed reduction feature

Activation of the disabled access pushbutton decreases the door speed by approx. half. After a certain time, the door returns to normal speed.

Escape/desmoke/ventilation configuration (option)

In the event of a power failure, operation of the emergency control device or a signal from a fire alarm contact, a safety module rotates the Y-turnstile to its emergency position and opens up the door to the full escape passage width. The door system is suitable for integration within a desmoke/ventilation system.

Control unit

Integrated in the ceiling construction.

Safety equipment

- Sensor package 1
- Sensor package 2

Sensor package 1

The safety elements on the wings ensure optimum user protection and convenience. The photosensors attached at the top of the outside wing segments reduce the speed when an obstruction is detected. If the safety contact strips attached to the bottom edges of the wings are touched, the door operator stops. Appropriate sensors are also activated as the wings approach to within 500 mm of the primary closing edges. Vertical safety contact strips on the right-hand posts offer additional protection from nip or crush hazards. These detect the presence of a nip or crush hazard and shut down the operator.

Sensor package 2 (to pr EN 12650 – optional)

The safety elements on the wings ensure optimum user protection and convenience. The photosensors attached to the wings stop them moving when an obstruction is detected. Moreover, the outer edges of the wings are externally monitored as they pass the openings by auxiliary sensors over a range of 200 mm. Appropriate sensors are also activated as the wings approach to within 500 mm of the primary closing edges. These detect the presence of a nip or crush hazard and shut down the operator.

Summer configuration

All three wings can be folded and locked to provide a free passage width to the left and right of the central core.

Floor ring

Stainless steel angle section surround 40x40x4 mm for secure anchorage of the door set and defined load transmission.

Options

- Wind brake wings
- Electrically operated night shield incl. drive and locking mechanism
- Emergency power supply module
- Midrails in the wings
- Midrails in the side walls
- Floor mat
 - ARWEI 020/72 C1
 - ARWEI 020/72 B1
 - EMCO 522-5R
 - By others, max. 30 mm thick
- Downlights
- Prepared for rainproof roof

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