



Revolving doors  
Varioline

**DORMA**

**KTV-3**

**KTV-4**

## Revolving doors that combine elegance and functionality:

The main entrance gives a clear statement of your company's image. It is extremely important that it conveys a positive first impression, as well as allowing a smooth flow of traffic. The KTV series of DORMA revolving doors combine these two characteristics perfectly. DORMA KTV revolving doors also hold back noise, dust and dirt, reliably protect employees in the vicinity of the entrances from draughts, and help to keep heating costs down. DORMA KTV doors are exceptionally versatile. Any inside diameter of door can be supplied from 2000 – 3400 mm. Plus, standard fixed diameters of 3600 mm and 3800 mm are

also available. Depending on the diameter, clear passage heights of up to 3000 mm can be achieved. KTV series revolving doors can optionally be fitted with

- 3 or 4 wings
- side walls of glazed or all-metal construction
- additional curved sliding doors in front of the entrance to act as night shields (optional)
- for manual operation (KTV/M),
- with automatic positioning feature (KTV/P)
- with Servomatic drive unit (KTV/S)
- for fully automatic operation (KTV/A)

### Benefits

#### ... for the installer

- Flexible system to suit all requirements.
- Easy installation and rapid commissioning.
- Guaranteed state-of-the-art design.

#### ... for the architect/specifier

- Extensive design flexibility in terms of planning and technical requirements.

- Visually, technically and economically the ideal solution.

#### ... for the user

- Enhanced working conditions.
- Optimisation of the building energy balance.
- Efficient noise protection.
- Tailored integrated solution combining industrial engineering precision and assured quality.

Data and features	DORMA KTV
Inside diameter in mm 3 / 4 wings	all dimensions possible between 2000-3400, also 3600 and 3800
Outside diameter in mm 3 / 4 wings	Inside diameter + 96 mm
Clear passage height in mm 3 / 4 wings	2100–3000*
Canopy height in mm 3 / 4 wings	100–700**
Total height in mm 3 / 4 wings	Clear passage height + canopy height
Side walls glazed (toughened glass)	<input type="radio"/>
Side walls with metal panelling	<input type="radio"/>
For emergency exits and escape routes	<input type="radio"/>
Push handles on the wings KTV/M/P/S, 3 / 4 wings	<input checked="" type="radio"/>
KTV/A, 3 / 4 wings	<input type="radio"/>
Internal or external night shield	<input type="radio"/>
Electrically operated night shield (internal only)	<input type="radio"/>
Mechanical wing locks	<input type="radio"/>
Mechanical night shield locking	<input type="radio"/>
Electric wing locks	<input type="radio"/>
Electric night shield locking	<input type="radio"/>
Midrails in the wings	<input type="radio"/>
Midrails in the side walls (glazed version)	<input type="radio"/>
Floor ring	<input type="radio"/>
Floor mat	<input type="radio"/>
Downlights	<input type="radio"/>
Prepared for rainproof roof	<input type="radio"/>
Anti-vandalism brake	<input type="radio"/>
Wind brake	<input type="radio"/>
Speed limiter	<input type="radio"/>
German type approval (KTV-P/S/A)	<input checked="" type="radio"/>
● Yes      ○ Option	
* See Table 2, Page 6	
** See Table 1, Page 6	

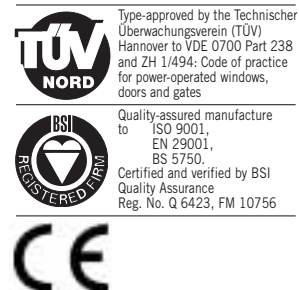
### Traffic capacity

Inside diameter (D) in mm	Theoretical capacity <sup>1)</sup> Persons/hour →	Practical capacity <sup>2)</sup> → Persons/hour ↔	Maximum capacity <sup>3)</sup> Persons/min. →
2000	1440	480      960	24
2400	1800	600      1200	30
2700	2400	800      1600	40
3000	3240	1080      2160	54
3600	3060	1230      2670	69

<sup>1)</sup> 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.

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

<sup>3)</sup> 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.



## Designs, functions, standard equipment, optional extras

Models	KTV-3	KTV-4
<b>Operator types</b>		
<b>Functions, optional</b> Manual operation /M		
<b>Automatic</b>	<p data-bbox="188 748 571 869"><b>Resume-X positioning drive unit /P</b> Door manually activated, after which the automatic drive unit rotates it forward to the stationary home position.</p> <p data-bbox="188 871 571 898"><b>Servomatic /S</b> Door activated by radar motion detector and operated manually with the rotary motion being power-assisted. The automatic resume-X positioning feature is also included in this version.</p> <p data-bbox="188 1048 571 1075"><b>Automatic drive unit /A</b> I: Door starts and stops automatically II: Door rotates continuously at low speed with the speed increasing as a user approaches.</p>	
<b>Configurations</b>	<p data-bbox="188 1263 571 1384"><b>Summer configuration</b> Also ideal for the passage of bulky items or luggage, and for consignment deliveries</p> <p data-bbox="188 1386 571 1442"><b>Emergency escape configuration</b> with breakout fittings (optional)</p>	
<b>Options</b>	<p data-bbox="188 1632 571 1688"><b>Locking mechanism</b> (optional extra)</p> <p data-bbox="188 1794 571 1850"><b>Night shields, internal</b> (optional extra)</p> <p data-bbox="188 1955 571 2011"><b>Night shields, external</b> (optional extra)</p>	

**KTV-3 dimensions**

**3-wing design (without night shield)**

Inside diameter (D)	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800
Outside diameter (B)	2096	2296	2496	2696	2896	3096	3296	3496	3696	3896
Clear passage width (LW)	940	1040	1140	1240	1340	1440	1540	1640	1740	1840
Emergency escape passage width	895	995	1095	1195	1295	1395	1495	1595	1695	1795

**3-wing design (with single-piece external night shield)**

Inside diameter (D)	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800
Outside diameter (B)	2262	2462	2662	2862	3062	3262	3462	3662	3862	4062
Clear passage width (LW)	940	1040	1140	1240	1340	1440	1540	1640	1740	1840
Emergency escape passage width	895	995	1095	1195	1295	1395	1495	1595	1695	1795

**3-wing design (with single-piece internal night shield)**

Inside diameter (D)	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800
Outside diameter (B)	2216	2416	2616	2816	3016	3216	3416	3616	3816	4016
Clear passage width (LW)	940	1040	1140	1240	1340	1440 <td 1540	1640	1740	1840	
Emergency escape passage width	895	995	1095	1195	1295	1395	1495	1595	1695	1795

All dimensions in mm

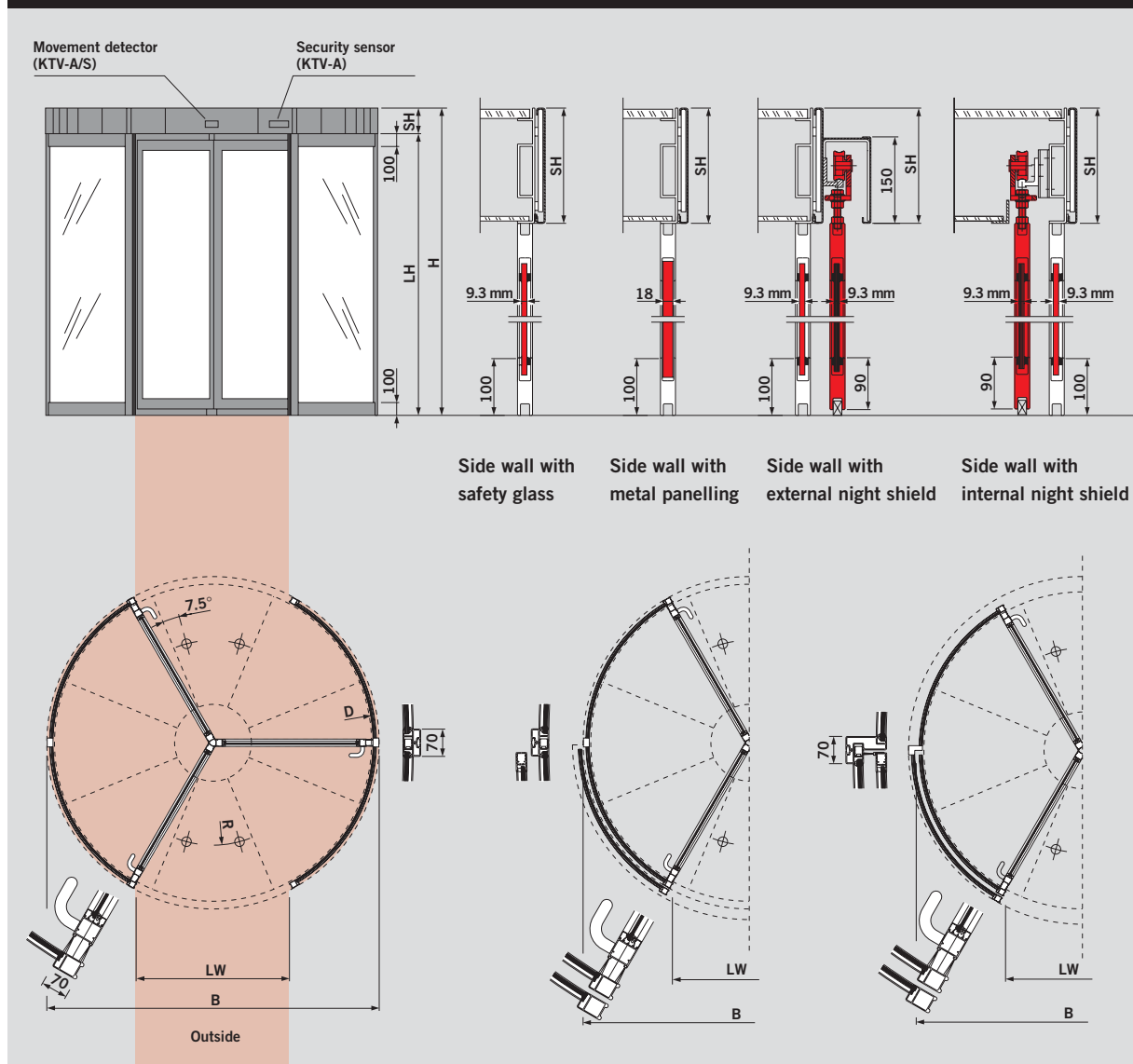
**German type approval  
(KTV-M/P/S/A)**

Rigid wings or with breakout catch and pivot fittings

Side wall options:

- Curved aluminium special profiles, posts 70 x 46 mm, sockets 100 mm high top and bottom with glazing of 9.3 mm laminated safety glass, type GH, clear. Drill attack inhibiting in accordance with Class A 1 as defined in DIN 52290.
- Curved aluminium special profiles, posts 70 x 46 mm, sockets 100 mm high top and bottom, metal panelling, 18 mm thick.

**KTV/M/P/S/A**



3 / 4 wing design with optional internal or external night shield, with glazing of 9.3 mm laminated safety glass, type GH, clear, or provided with 18 mm thick metal panelling.

Drill attack inhibiting in accordance with Class A 1 as defined in DIN 52290.

### KTV-4 dimensions

#### 4-wing design (without night shield)

Inside diameter (D)	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800
Outside diameter (B)	2096	2296	2496	2696	2896	3096	3296	3496	3696	3896
Clear passage width (LW)	1364	1505	1647	1788	1930	2071	2213	2354	2496	2637
Emergency escape passage width	895	995	1095	1195	1295	1395	1495	1595	1695	1795

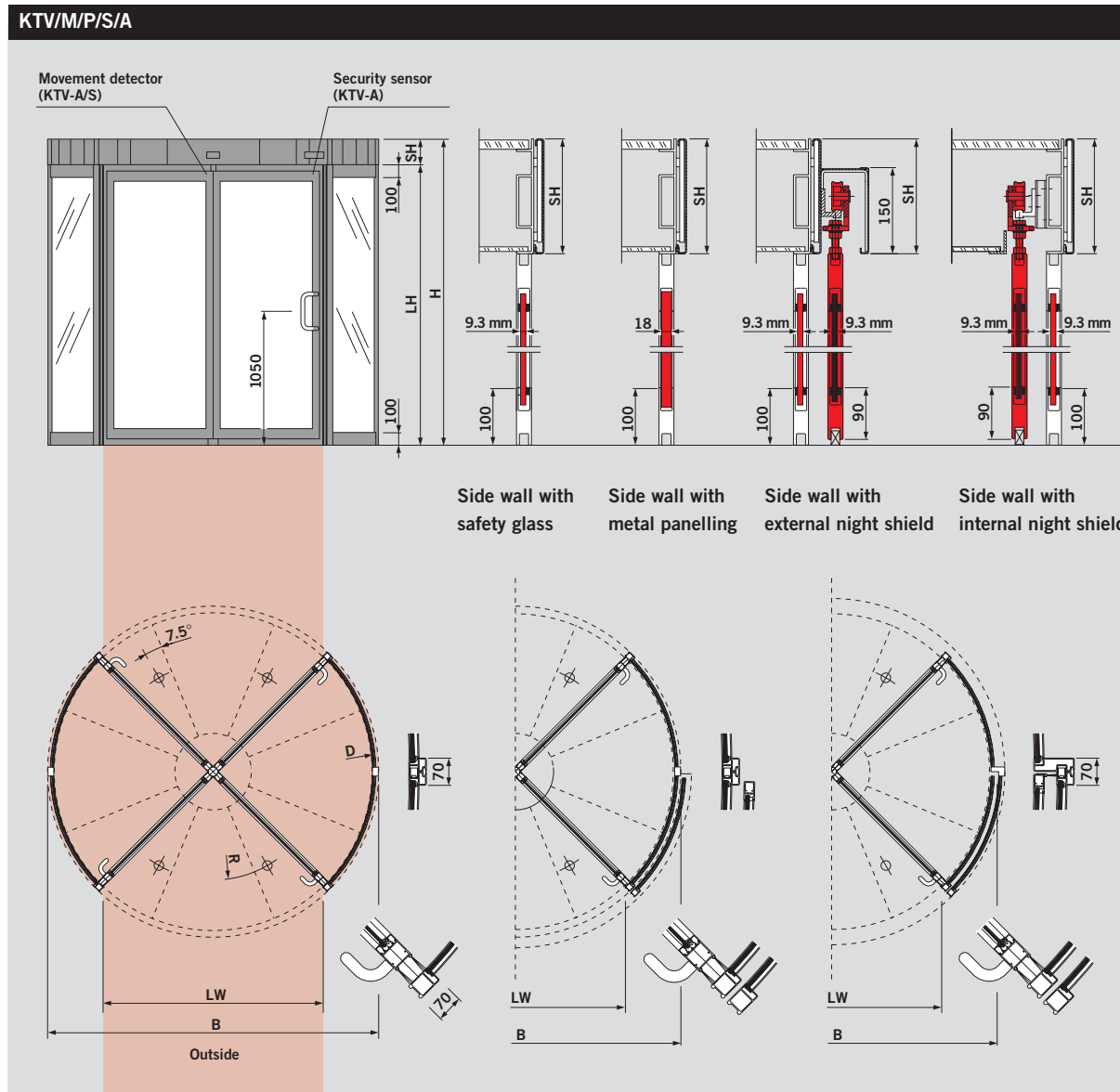
#### 4-wing design (with double leaf external night shield)

Inside diameter (D)	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800
Outside diameter (B)	2262	2462	2662	2862	3062	3262	3462	3662	3862	4062
Clear passage width (LW)	1364	1505	1647	1788	1930	2071	2213	2354	2496	2637
Emergency escape passage width	895	995	1095	1195	1295	1395	1495	1595	1695	1795

#### 4-wing design (with double leaf internal night shield)

Inside diameter (D)	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800
Outside diameter (B)	2216	2416	2616	2816	3016	3216	3416	3616	3816	4016
Clear passage width (LW)	1364	1505	1647	1788	1930	2071	2213	2354	2496	2637
Emergency escape passage width	895	995	1095	1195	1295	1395	1495	1595	1695	1795

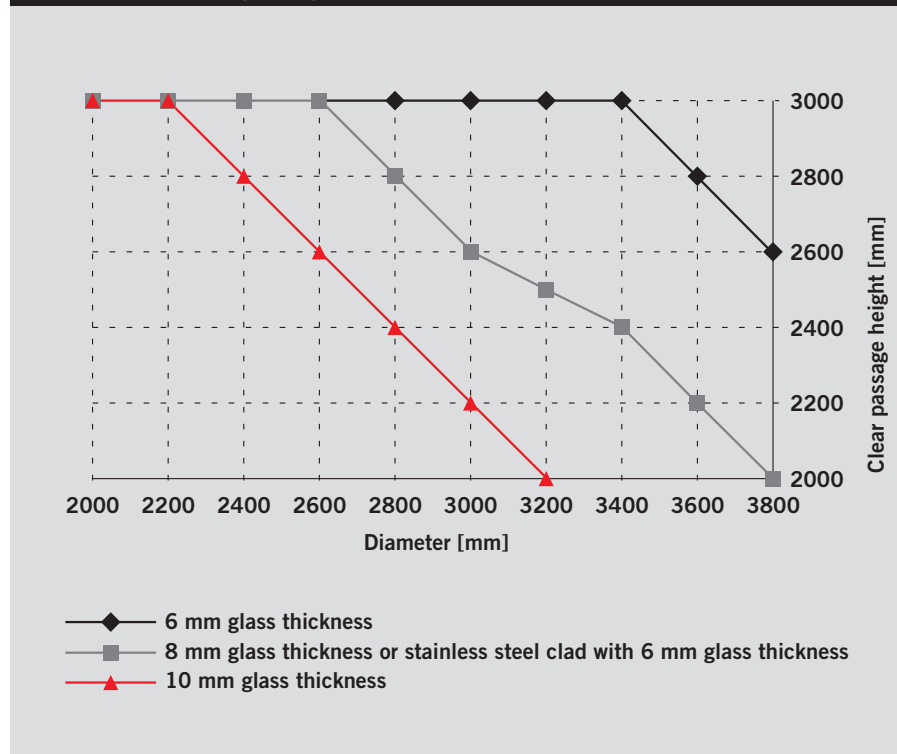
All dimensions in mm



**1. KTV-A canopy heights depending on function and installation features**

Function	Canopy height	
Manual	100	The largest specified figure determines the actual height.
Resume-X positioning	200	
Servomatic	200	
Automatic	200	
Manual night shield	200	The canopy can be increased to a maximum height of 700 mm. The upper ceiling/roof remains fixed at the minimum height specified in the table.
Electrically operated night shield	300	
Speed limiter	200	
Shock-Stop anti-vandalism brake	200	
Wind brake	300	
Overhead warm-air curtain system	500/600	

**2. Graph showing relationship between diameter and clear passage height for KTV 3 / 4 with rigid wings**

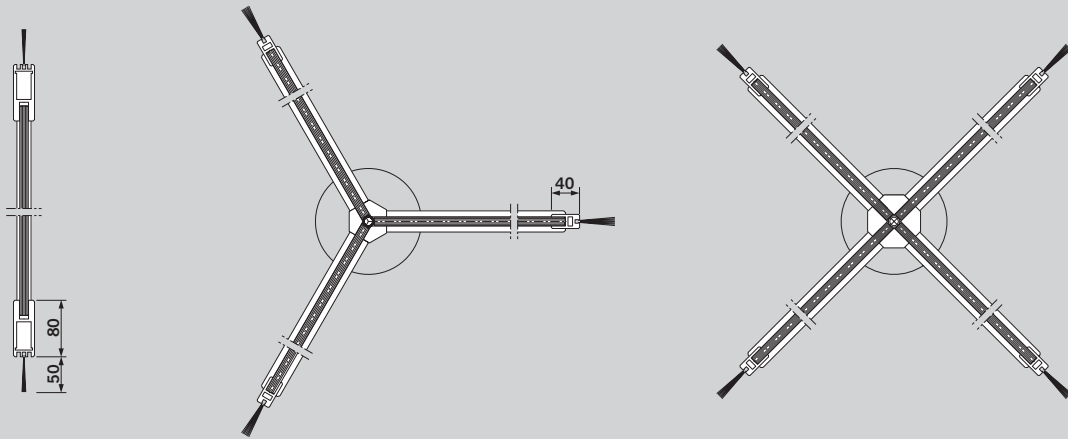


**3. Table showing relationship between diameter and clear passage height for KTV 3 / 4 with rigid wings**

Clear passage height (mm)	Diameter (mm)										
	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	
2000	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ +	X ○ +	X ○ +	pr EN 12650 for KTV M/P/S/A
2200	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ +	X ○ +	X ○ +	X	
2400	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ +	X ○ +	X ○ +	X	X	
2500	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ +	X ○ +	X ○ +	X	X	X	pr EN 12650 for KTV M/P/S
2600	X ○ □ +	X ○ □ +	X ○ □ +	X ○ □ +	X ○ +	X ○ +	X	X	X	X	
2800	X ○ □ +	X ○ □ +	X ○ □ +	X ○ +	X ○ +	X	X	X	X	-	
3000	X ○ □ +	X ○ □ +	X ○ +	X ○ +	X	X	X	X	-	-	

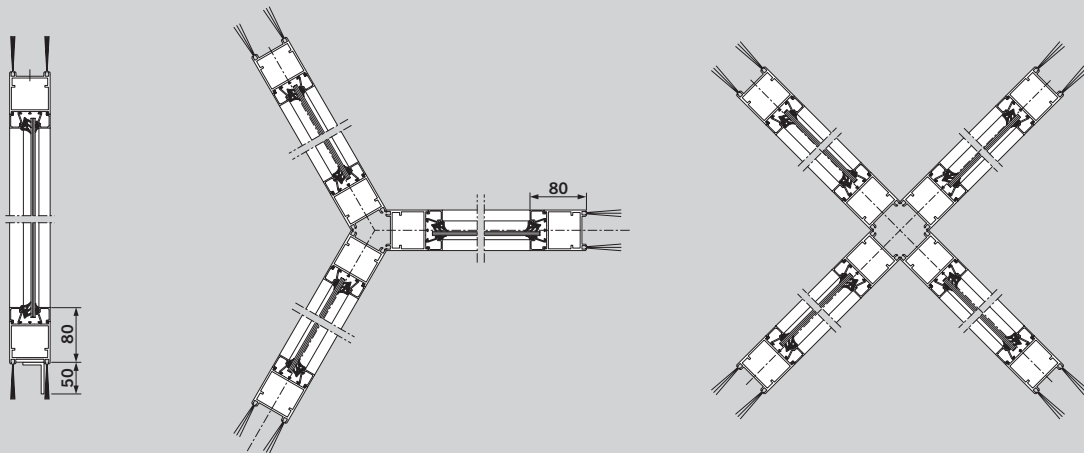
**Note:** X = 6 mm glass thickness    ○ = 8 mm glass thickness    □ = 10 mm glass thickness  
+ = Stainless steel clad with 6 mm glass thickness

Turnstile variants



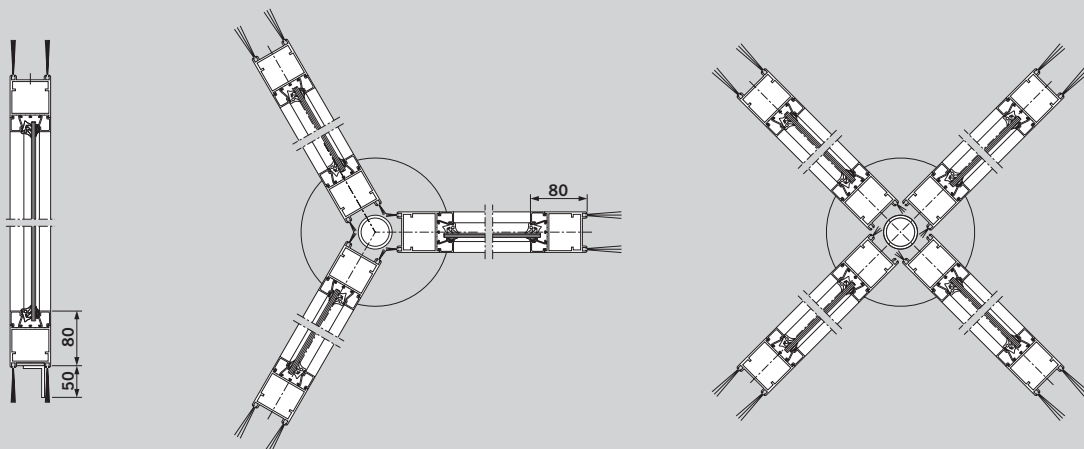
up to max. 2800 mm inside diameter

Turnstile frame, rigid



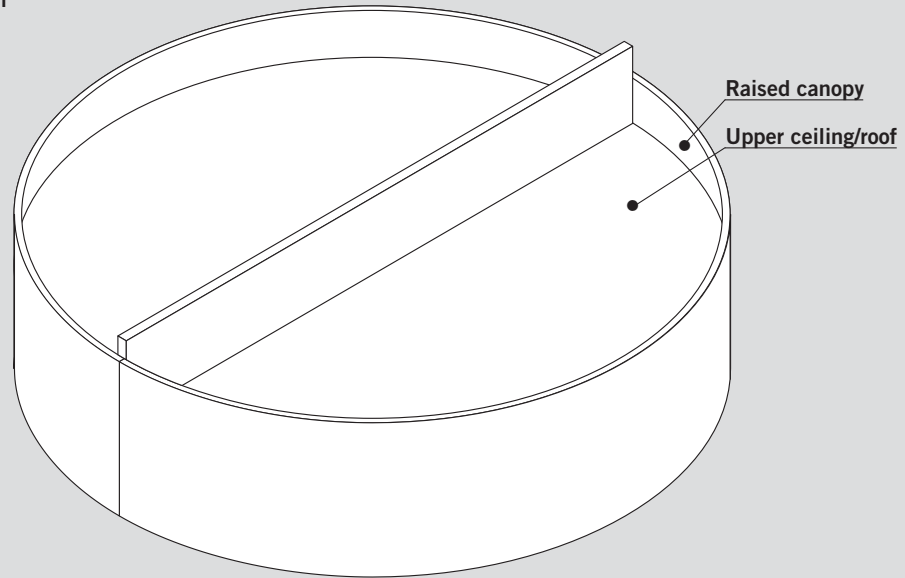
up to max. 3800 mm inside diameter

Turnstile frame with breakout catch and pivot fittings



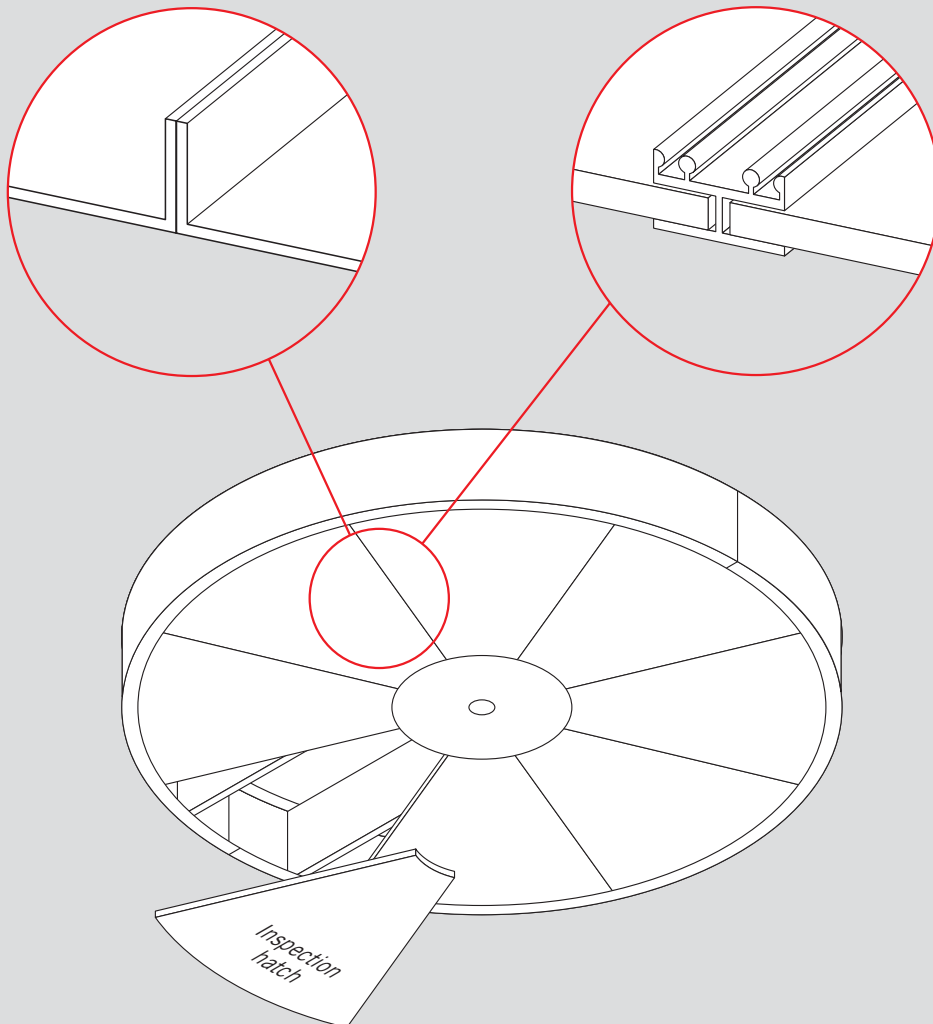
up to max. 3800 mm inside diameter

View of upper ceiling/roof:  
Remains fixed even with  
higher canopies

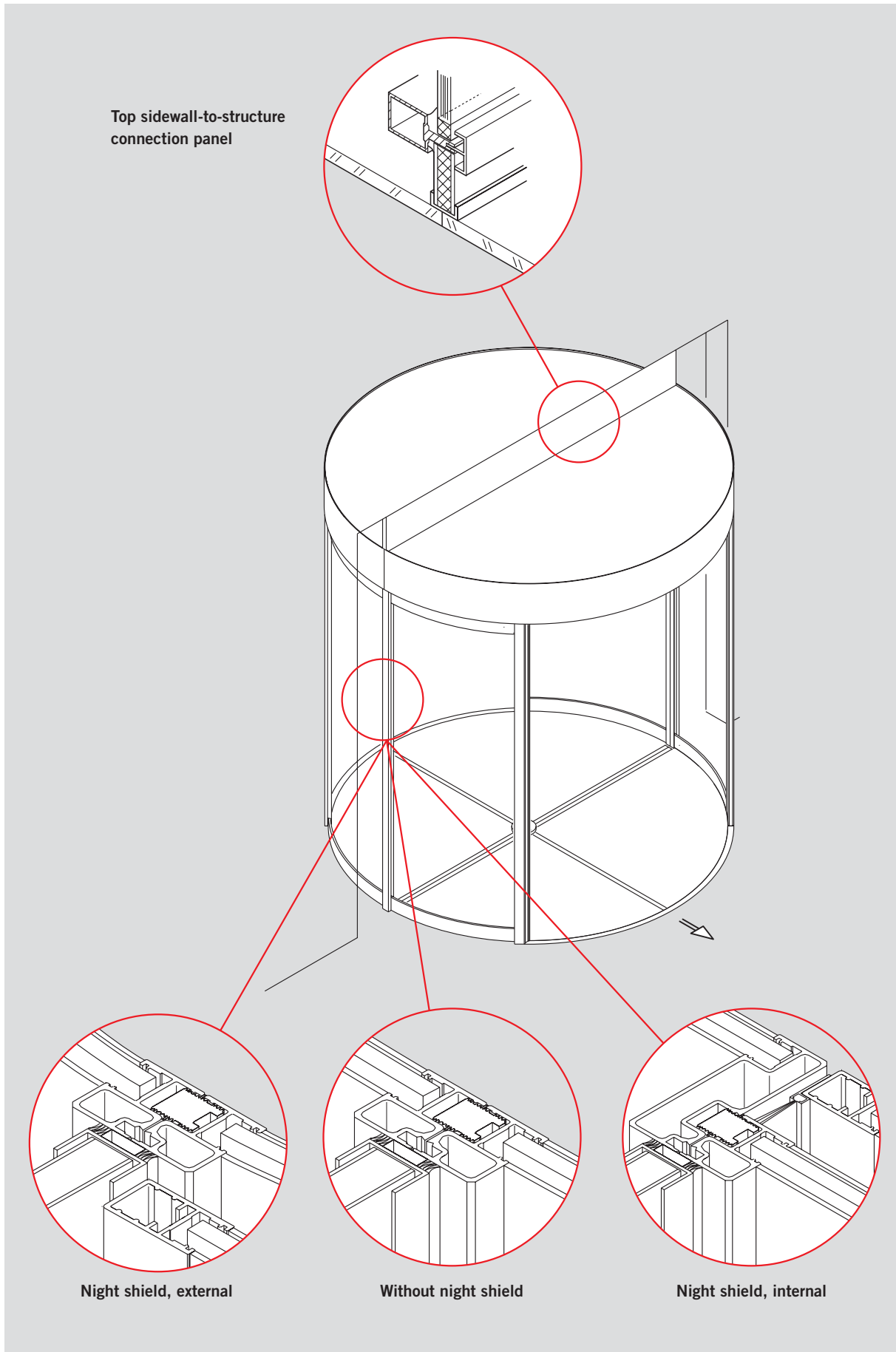


Lower ceiling of metal

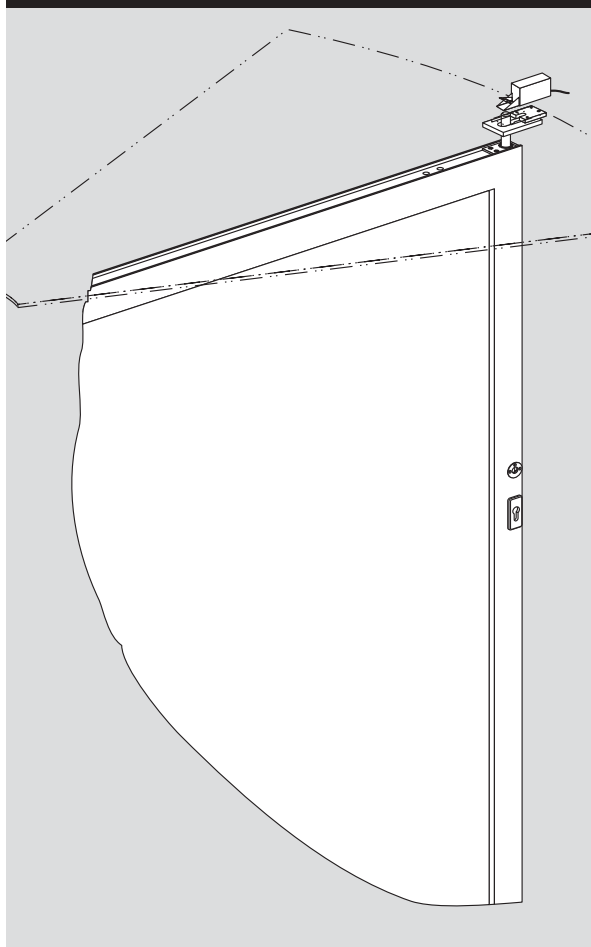
Lower ceiling of melamine (standard)



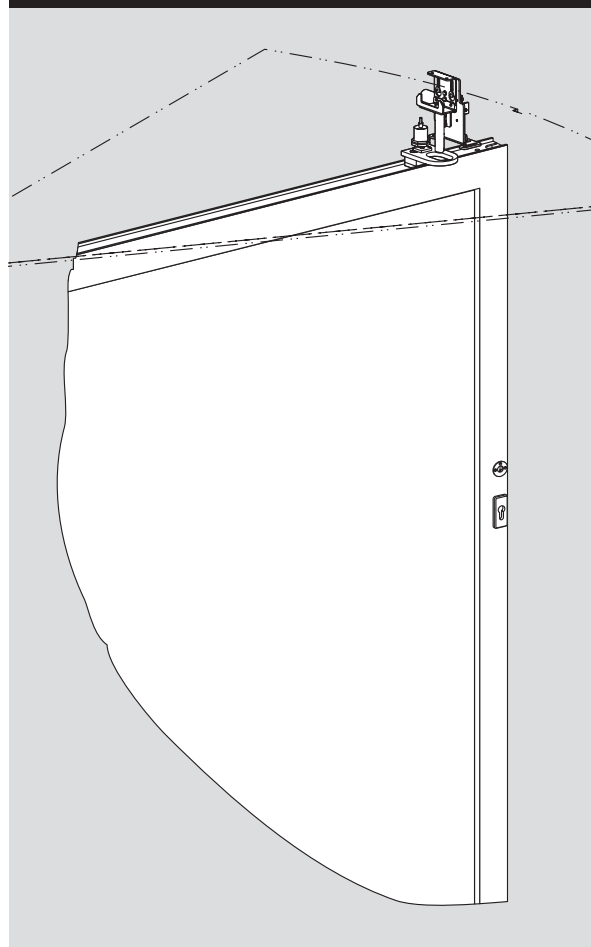




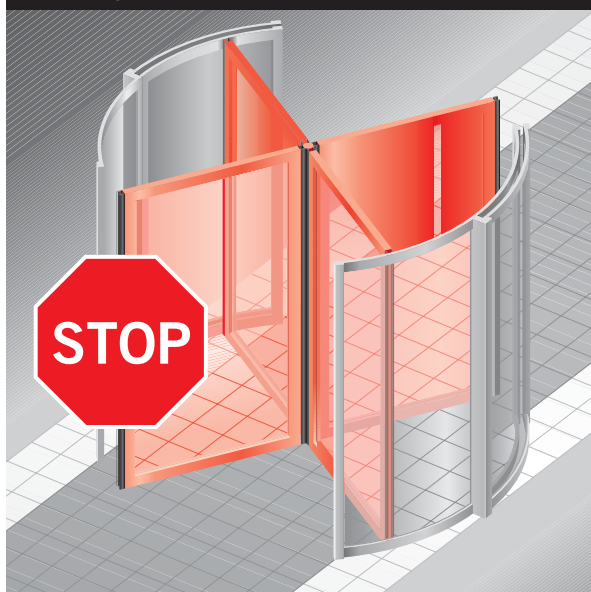
Manual locking



Electro-mechanical locking



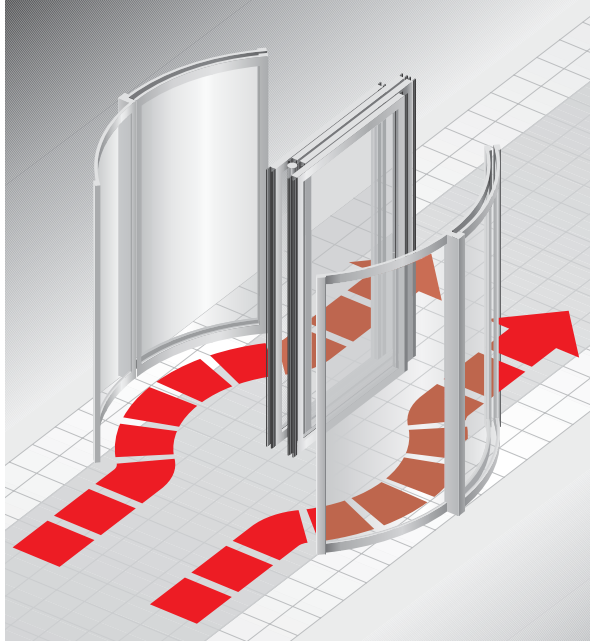
Shock-Stop



The Shock-Stop function is able to lock the turnstile in any position. In the event of a power cut the turnstile is released and can be rotated in either direction (fail-safe mechanism).

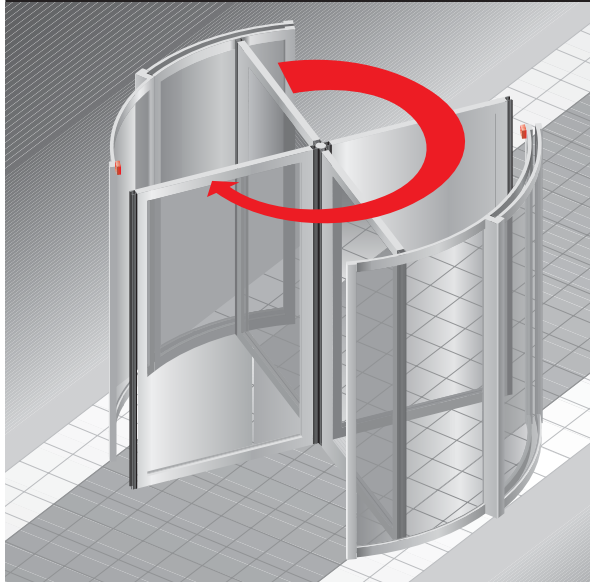
The Shock-Stop function can only be used with rigid turnstile wings and has a holding torque of 1200 Nm. The control button for the Shock-Stop function must be positioned within sight of the door.

**Emergency exit**



The bookfold mechanism for the door wings offers a special folding function. The folding mechanism enables the wings to be folded together almost parallel, thereby giving the largest possible width of passage. This folding capability of the wings makes these doors suitable for installation in emergency exits and escape routes.

**Speed limiter**



The speed limiter prevents the wings from rotating above a preset speed. The triggering speed can be preset and is normally set to 6 rpm.

When this preset speed is reached or exceeded, the turnstile is automatically slowed, while still allowing passage through the door.

**Warm-air curtain**

The warm-air curtain unit consists of a self-supporting housing of zinc-plated steel. The surfaces of the visible parts are plastic-coated. The exhaust duct – with nozzle matched to the radius of the revolving door – is provided at the opening with permanently fitted blades.

The air volume and speed are controlled by means of a remote control unit with switch and indicator light. The device is mounted on the upper ceiling/roof. The exhaust duct is located in front of the inner canopy (in the through-passage area).

Technical data for a 4-wing revolving door with 3000 mm diameter and clear passage height of 2400 mm.

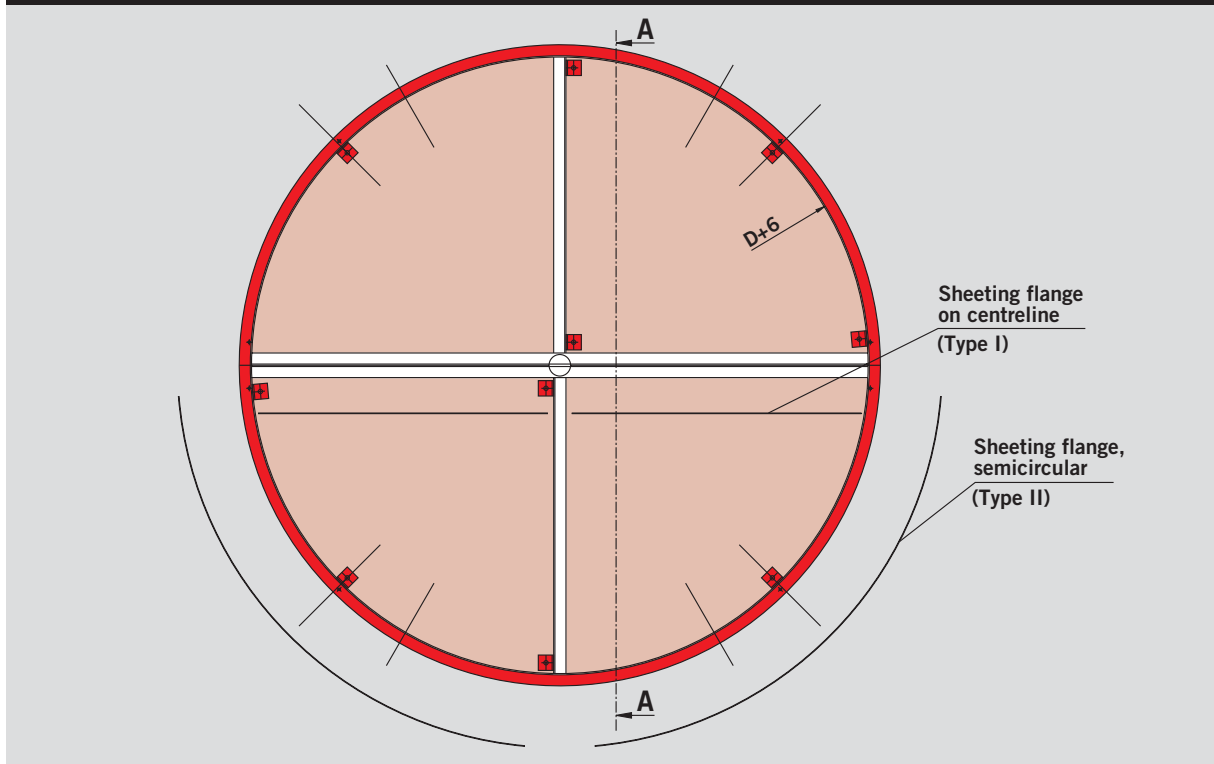
Air flow	3600 m <sup>3</sup> /h
Thermal output	25.8 kW
Heating medium	PWW 70/50 °C
Water resistance	2.44 kPa
Total current consumption	4.8 A
Motor capacity	1.1 kW
Voltage	230 V, 50 Hz
Max. sound level at 3 m distance	55 db(A)

Floor ring without night shield

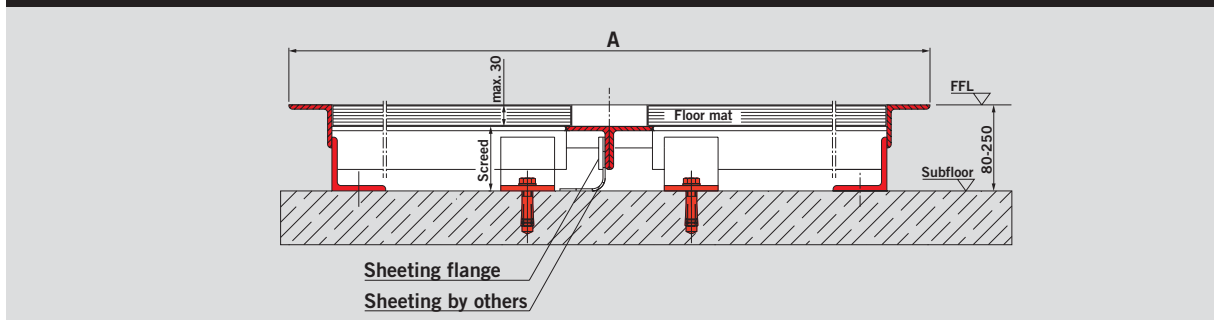
D	A	D	A
∅ 2000	2086	∅ 3000	3086
∅ 2200	2286	∅ 3200	3286
∅ 2400	2486	∅ 3400	3486
∅ 2600	2686	∅ 3600	3686
∅ 2800	2886	∅ 3800	3886

All dimensions in mm

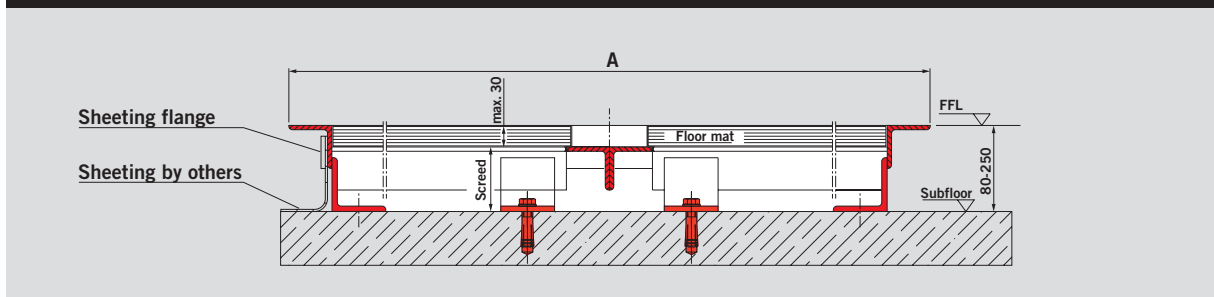
Floor ring without night shield

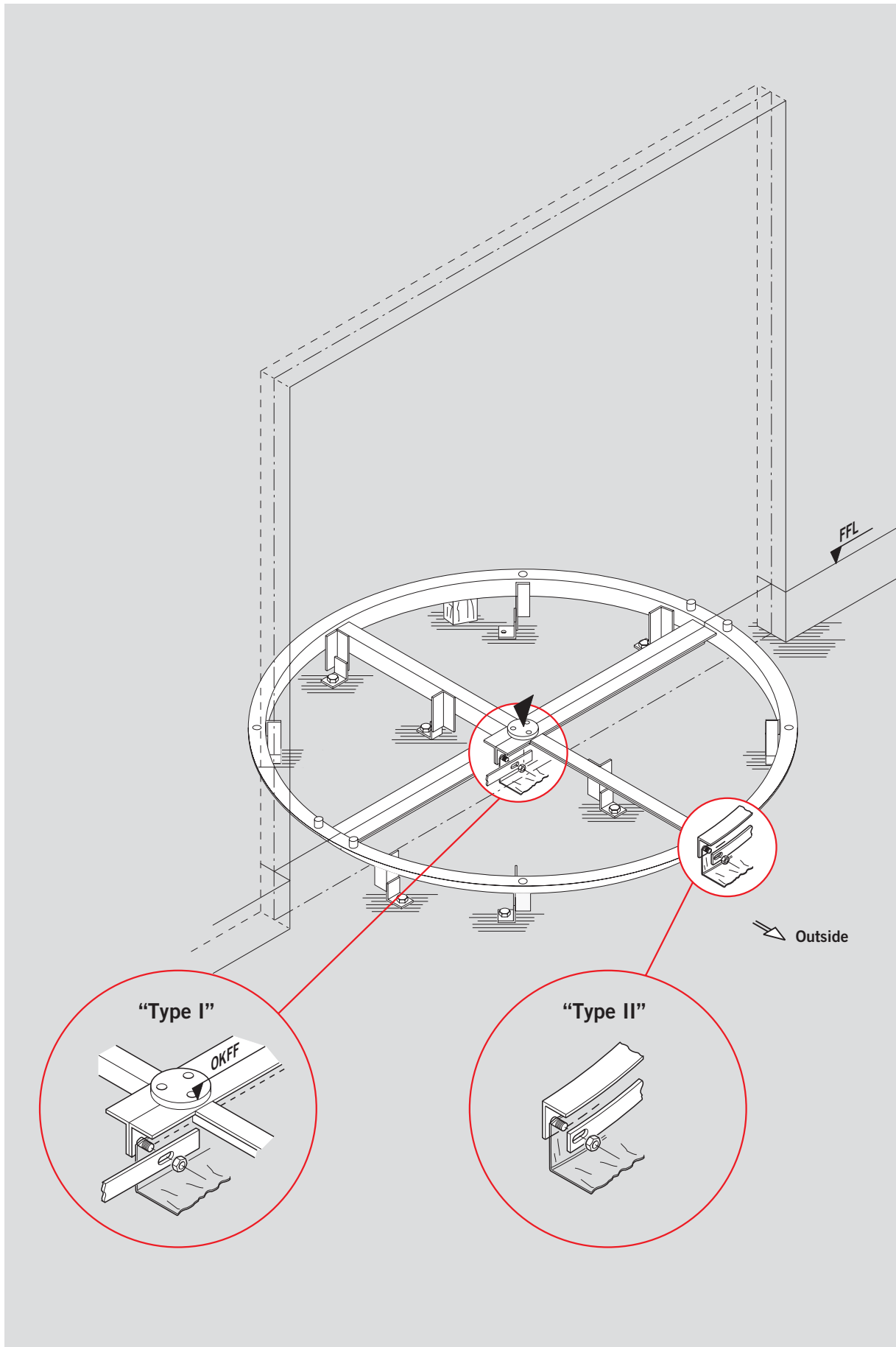


Cross-section A – A with sheeting flange on centreline (Type I)



Cross-section A – A with sheeting flange, semicircular (Type II)





## Functions

### Manual operation /M

The door is activated by hand.

### Resume-X positioning drive unit /P

The door is activated by hand. After each usage, it is automatically rotated forward to its stationary home position by a variable-speed positioning motor.

### Servomatic /S

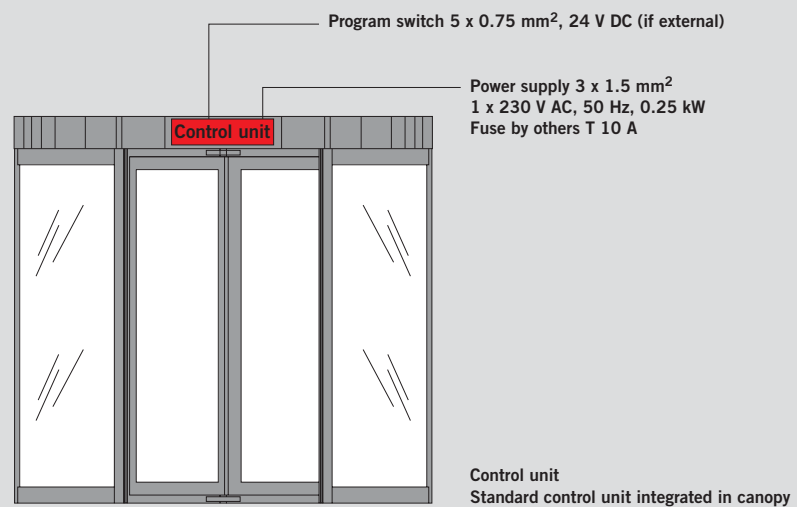
The door is activated by a radar motion detector. As a user comes within range of the radar motion detector, the door turns slowly and can be accelerated manually if required. After the user leaves the door area, the door stops in its stationary home position.

After each usage, the motor automatically rotates the door forward to its stationary home position.

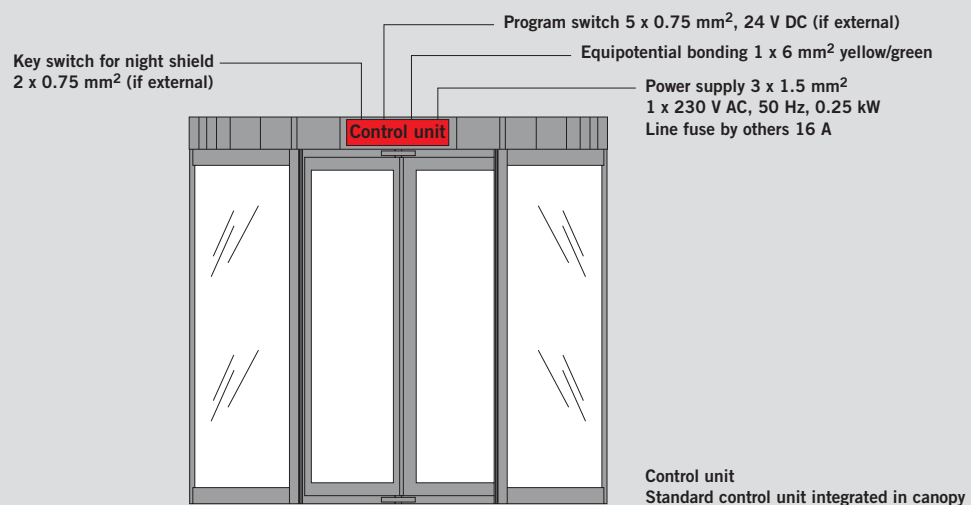
- “Automatic I”: The stationary door is activated as a user approaches. After a preset continuation time it stops again at its home position.
- “Automatic II”: The door rotates continuously at approx. 1 rpm. As a user enters the detection range,

the speed increases to 3 rpm. Once the user has left the detection range, the door slows to 1 rpm again.

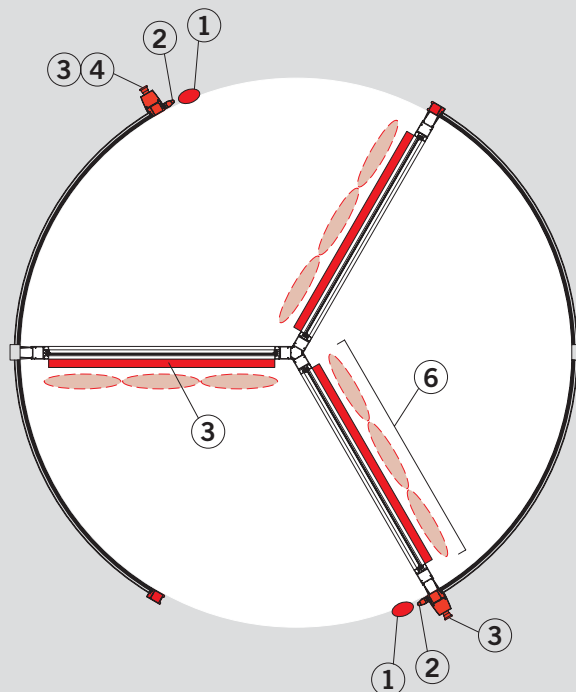
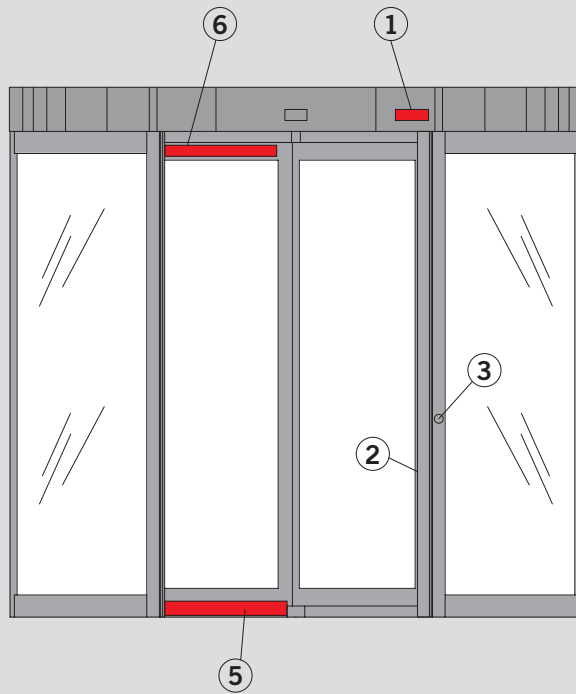
### Cable diagram for DORMA KTV/P/S



### Cable diagram for DORMA KTV/A



Safety equipment for KTV/A, 3 and 4-wing designs



- ① Canopy-integrated sensor (slow speed mode, stop)
- ② Safety contact strip (stop)
- ③ Disabled access button, inside and outside (option)
- ④ Emergency stop pushbutton, inside
- ⑤ Safety contact strip, bottom of wing, horizontal (stop)
- ⑥ Photosensor, top of wing, horizontal (option)

DORMA KTV Varioline revolving doors equipped with automatic drive operators offer a comprehensive range of safety equipment.

**Safety equipment for KTV/A, 3 and 4-wing designs**

The posts at the drum side walls are provided with safety contact strips to protect the main closing edges. Further safety contact strips on the bottom edges of the wings protect the secondary closing edges. The primary closing edges are also protected by infra-red sensors, which are activated when the wing approaches the upright post. The activation range can be preselected. An emergency stop pushbutton on the inside drum wall post is provided for immediate shutdown of the door operator.

**Free-rotation function**

After the emergency control device is activated, the wings are disengaged from the drive unit and are then able to rotate freely.

**EN 12650**

All safety-relevant components are of redundant and self-monitoring design. If a special security sensor is installed, EN 12650 is satisfied.

### Specification text

DORMA KTV Varioline revolving door system, suitable for installation in emergency exits and escape routes with "bookfold" mechanism (optional).

### Test specifications

TÜV type approval to VDE 0700, Part 238, Code of Practice for Power-Operated Windows, Doors and Gates, ZH 1/494, latest edition, and other DIN, UVV (Accident Prevention) and VDE (German Association of Engineers) specifications and regulations and prDIN 12650.

.... Nos. DORMA KTV Revolving Door(s) Type:

KTV/M (manual)	3-wing	4-wing
KTV/P (resume-X positioning)	3-wing	4-wing
KTV/S (Servomatic)	3-wing	4-wing
KTV/A (Automatic)	3-wing	4-wing
Outside diameter (B) ... mm	Inside diameter (D) ... mm	
Clear passage height (LH) ... mm	Total height (H) .....	mm

### Constructional description

#### Side walls

Curved side walls, 46 mm thick, posts 70 x 46 mm, sockets 100 mm high top and bottom. Prepared for 24 mm wide sidewall-to-structure connection panel in door axis.

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

#### Ceiling

All-aluminium support structure, welded. Upper and lower ceiling sections of white melamine-laminated chipboard. Canopy of U-profile aluminium sections.

#### Turnstile

Revolving door frame turnstile of special profile frames, 57 mm deep, fair face width 80 mm, with replaceable horse-hair brushes. 6 mm toughened safety glass, locking by top shoot bolt, designed for Europrofile cylinder by others.

- Rigid turnstile wings
- Turnstile with bookfold mechanism for folding the wings (suitable for emergency exits and escape routes)

#### Function

##### DORMA KTV/M

For manual operation

##### DORMA KTV/P

With automatic resume-X positioning drive: The door has to be operated by hand. A variable-speed positioning motor installed in the ceiling unit automatically rotates the door through to its stationary home (X) position after each usage.

##### DORMA KTV/S

With Servomatic drive unit: The door is activated by a radar motion detector, which starts the door at low rpm. The door can be accelerated by hand to achieve walking speed. A variable-speed positioning motor installed in the ceiling unit automatically rotates the door through to its stationary home (X) position after each usage.

##### DORMA KTV/A

The door is equipped with an automatic drive unit and micro-processor control which allows two modes of operation.

"Automatic I": The stationary door is activated as soon as a user approaches. After a preset continuation time it stops again at its home 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.

Once the user has left the detection range, the speed of the door is reduced again.

#### Options

##### Speed reduction feature for DORMA KTV/A

Activation of the disabled access pushbutton decreases the door speed during passage to 2 rpm. After a preset continuation time the speed increases again to approx. 3 rpm.

##### External night shield

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

##### Internal night shield

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

##### Electrically operated night shield

(internal night shield only)

##### Mechanical wing locks

##### Mechanical night shield locking

##### Electric wing locks

(not for internal night shield)

##### Electric night shield locking

(only for electric night shield)

##### Bookfold mechanism for folding the wings

##### Speed limiter for all manual doors (M/P/S)

Wings cannot be accelerated above speeds of 6 rpm

##### Shock-Stop locking device enables locking of the turnstile in any position (360°). In the event of an emergency stop, the turnstile is released and can be rotated in either direction (fail-safe).

##### Midrails in the wings

##### Midrails in the side walls (glazed version)

##### Floor ring

##### Floor mat

##### ARWEI 020/72 C1

##### ARWEI 020/72 B1

##### EMCO 522-5R

##### EMCO 522-5G

##### By others, max. 30 mm thick

##### Downlights (max. 4)

##### Prepared for rainproof roof

#### Surface finish:

##### PU-coated to RAL .....

##### Anodised in shade E6/ ..... (as in EURAS Colour Guide)

##### Stainless steel 1.4301, 240 grit

##### Stainless steel 1.4301 polished

##### Brass MS 63, mill bright, without protective coating

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