AUTOMATIC ENTRANCE SYSTEMS

Revolving doors, security revolving doors
Rovolving doors – a well-rounded concept
Quality from a single source

Modern technology – easy to use, efficient and safe.

Gretsch-Unitas Group
With its forward-thinking innovations, the Gretsch-Unitas Group has long been shaping the market and setting pioneering standards. Convenience and security are given the highest priority when it comes to opening and closing doors.

Quality for over 100 years
For over a century, the Group produces total solutions which focus not just on individual products but on the project as a whole. The elements of perfected mechanics and intelligent electronics complement each other perfectly in automatic entrance systems.

More than just products: planning, implementation, service
We assist you in all phases of implementing your individual entrance solutions. Short distances and fast, reliable service make technical and cost-optimised solutions possible, perfectly in tune with your project-specific requirements.

System solutions as a whole
The latest market requirements are met with our extensive pallet of new mechanical products in unrivalled quality. Our focus, however, is not just on the individual products, but instead on the creation of complete solutions that meet the latest requirements.
Complete range

**GRA standard revolving doors**
With many options and a wide range of applications, a custom-made solution is always the result. With a diameter of up to 3800 mm, most entrance areas can be planned and implemented with the GRA. A crown with a height of 175 mm provides enough space for positioning equipment or the drive unit. The GRA-F version of the standard revolving door is available for use in escape and rescue routes and the GRA RC3 version provides greater burglar protection.

**GGG all-glass revolving doors**
Thanks to slender profiles and a glass roof, maximum transparency is achieved without losing the benefits of a draught-free entrance area. Like the GRA, the GGG type is also available as a manual or fully automatic revolving door. The drive unit of the all-glass revolving door is installed in the floor.

**Large-capacity GGR revolving doors**
For heavy visitor traffic and use in escape and rescue routes, the large-capacity GGR revolving door is the elegant and energy-saving entrance solution. With a diameter of between 3600 mm and 6200 mm, even users with bags, shopping trolleys or pushchairs can comfortably pass through. The GGR is always motor-driven due to its dimensions.

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**Complete range**

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Making a bold statement
A friendly entrance

Revolving doors are used wherever impressive entrances are needed. They are primarily used to provide public buildings, hotels, banks, insurance offices or airports with a striking entrance. One of the key advantages is that the three or four-leaf doors do not create any draughts in the foyer or lobby. A night shield protects revolving doors from being misused outside of operating hours.

We offer an extensive product range so you are bound to be able to find the right entrance solution for your application. GU Automatic provides a wide range of revolving doors with diameters from 1800 to 6200 mm. Furthermore, the TÜV-tested systems provide the necessary level of security that is required for entrance doors.

Security revolving doors are used for any entrance that requires extra security. In particular, they provide banks, insurance offices, government ministry buildings, authorities, data centres, industrial plants or office buildings with extra security and convenience.

Access of individual persons is monitored by an electronic control system. They ensure that access is smoothly controlled in both directions. Despite the tight security measures, the entrance is still spacious and conveys a sense of openness and transparency thanks to the large amount of glass. The use of slender profile systems provides greater design scope in addition to a high degree of personal safety.
Special requirements call for special solutions
Appropriate to the building architecture, the 3-leaf, GRA type revolving door fits perfectly into the façade. For structural reasons, the construction includes a steel frame and a horizontal beam, which projects crosswise into the upper cylinder.

In the narrow 175 mm crown, sophisticated lighting of the upper cylinder and the revolving door is integrated next to the drive unit. Fastening of the glass was realised with no visible fastening points, in line with the requirements.
Translucency with glass
KIA HEADQUARTERS EUROPE | FRANKFURT/M.
GGG type | 2 fully automatic doors | stainless steel panelling | ø 3080 mm

OMV | VIENNA | Architect: Henke und Schreieck
GGG type, as special version | ø 3600 mm

NRW.BANK | MÜNSTER | Architect: Eisfeld Engel
GGG type | on-site ceiling construction

Schott AG | MAINZ | S • K Architekten
GGG type | fully automatic | 4-leaf | stainless steel panelling | night shield | in-floor drive
Traditional and modern styles in harmony
KONTORHAUS GEBR. HEINEMANN KG | HAMBURG | type GGG, as special version | fully automatic | door leaf panelling with titanium-coated stainless steel | mirror polished | cover constructed from sheet metal | ø 2860 mm

HOTEL GRAND TIROLIA | KITZBÜHEL | Peter Weber Architekten | GRA type | fully-automatic | with integrated warm air curtain | continuous crown | panel height 450 mm | ø 3000 mm
Stainless steel examples
AIRPORT MÜNSTER-OSNABRÜCK | GREVEN | GGR large-capacity revolving door
fully automatic | 3-leaf | stainless steel panelling | leaf can be swung out for escape and rescue routes | ø 4800 mm

WELSER PROFILE GMBH | BÖNEN | GRA type | fully automatic | 4-leaf | leaf can be swung out for summer ventilation | stainless steel panelling | ø 2780 mm
Advantages of GU revolving doors

Revolving doors provide:

■ Impressive entrance areas
■ Draughts are prevented, even when entering the building. Revolving doors also provide protection against cold and heat.
■ High degree of creative freedom regarding architecture with various surfaces combined with different glass designs
■ Flexible selection of drives. Smaller revolving doors can be operated manually.
■ The drive type for smaller revolving doors can be selected individually (manual, manual with positioning drive, automatic with Push&Go or radar control)
■ Burglar protection thanks to a night shield and lock on the turnstile
■ Suitability for escape and rescue routes grants planning flexibility
■ Large capacity revolving doors offer passage convenience where there is a large amount of pedestrian traffic

Advantages for you with revolving doors from GU Automatic:

■ A complete range of revolving doors with diameters from 1800 – 6200 mm and many options
■ Competency in consultation, planning, manufacturing and installation so that individual solutions can be reliably implemented
■ Use in escape and rescue routes from a diameter of 2400 mm, to provide functional reliability with practical escape route widths
■ Simple revolving door operation with key program selection switch
■ Many years of experience and high vertical range of manufacture
■ Short installation times at the construction site thanks to a high degree of prefabrication ex factory
■ Safety thanks to type-tested revolving doors that are in compliance with standards and directives
■ Extensive service network with in-house service employees
■ Made in Germany

*Please observe the guidelines of the particular country.
Manual revolving doors

- As standard construction or with a glass roof
- Recommended for diameters up to 3000 mm
- 3- or 4-leaf
- Low-cost solution because drive and safety sensors are unnecessary

Optional: manual revolving door with speed limiter

- To prevent vandalism and reduce the risk that a revolving door rotates too quickly
- At a set maximum circumferential speed, brakes are applied to the revolving door

Optional: manual revolving door with automatic positioning

- The positioning equipment rotates the revolving door to the initial position after manual rotation
- The clear opening is available for subsequent pedestrians and the leaves are in the optimum position
- Sensor coverage is not required (low-energy)
- The positioning equipment is installed in the ceiling or, in the glass version, in the floor (in-floor)

Automatic revolving doors

Automatic revolving doors with Push&Go (semi-automatic)

- By pushing a door leaf, automatic turning is activated
- Use: if a radar motion detector causes a control error (e.g. cases of cross traffic)
- After an adjustable follow-up time, the door stops in the initial position
- Comprehensive safety package in compliance with DIN 18650 / EN 16005

Automatic revolving door with motion detectors (fully automatic)

- Automatic turning is activated by radar motion detectors (internal/external)
- After an adjustable follow-up time, the door stops in the initial position
- Large capacity revolving doors are always implemented as fully automatic versions
- Comprehensive safety package in compliance with DIN 18650 / EN 16005
### Products at a glance

#### Options and variants

<table>
<thead>
<tr>
<th>Description</th>
<th>Standard revolving door</th>
<th>All-glass revolving door</th>
<th>Large-capacity revolving door</th>
<th>Security revolving door</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRA</td>
<td>GRA RC3</td>
<td>GRA-F</td>
<td>GGG</td>
<td>GGR</td>
</tr>
</tbody>
</table>

#### Version

<table>
<thead>
<tr>
<th>Inner diameter D (mm)</th>
<th>1800-3800</th>
<th>1800-3800</th>
<th>2400-3800</th>
<th>1800-3000</th>
<th>3600-6200</th>
<th>1800-2200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearance height A (mm)</td>
<td>2100-3000</td>
<td>2100-3000</td>
<td>2100-3000</td>
<td>2100-3000</td>
<td>2100-2500</td>
<td>2100-3000</td>
</tr>
<tr>
<td>Crown height B (mm)</td>
<td>≥ 175</td>
<td>≥ 275</td>
<td>≥ 350</td>
<td>≥ 16 glass roof 2 parts</td>
<td>≥ 410</td>
<td>≥ 350</td>
</tr>
<tr>
<td>Clearance C (mm) / 3-leaf</td>
<td>approx. 830 - 1650</td>
<td>approx. 830 - 1650</td>
<td>approx. 1200 - 1650</td>
<td>approx. 850 - 1370</td>
<td>approx. 1630 - 2930</td>
<td>approx. 740 - 1050</td>
</tr>
<tr>
<td>Clearance C (mm) / 4-leaf</td>
<td>approx. 1220 - 2450</td>
<td>approx. 1220 - 2450</td>
<td>approx. 1620 - 2450</td>
<td>approx. 1220 - 2000</td>
<td>approx. 2400 - 4045</td>
<td>approx. 1239 - 1514</td>
</tr>
<tr>
<td>E (mm)</td>
<td>&gt; D + 60</td>
<td>&gt; D + 60</td>
<td>&gt; D + 60</td>
<td>&gt; D + 60</td>
<td>&gt; D + 120</td>
<td>&gt; D + 60</td>
</tr>
<tr>
<td>Drum walls, curved LSG 10 mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Drum walls, sheet metal paneling, thermally insulated</td>
<td>○</td>
<td>○</td>
<td>-</td>
<td>-</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Toughened safety glass door leaf 10 mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Operation modes

- Manual
- Manual with automatic positioning
- Manual with speed limiter
- Semi-automatic (Push&Go)
- Fully automatic (radar motion sensor)
- Impulse transmitter / access

#### Characteristics, options

- In-floor drive
- Movable leaf (summer position)
- For use in escape and rescue routes
- Button for the disabled on both sides
- Cleaning switch
- Horizontal or vertical door handles
- LED lamps in the ceiling

- V2A floor ring (recommended)
- Release-secure flange
- Floor pan
- Entrance mat

All dimensions are guide values. Special dimensions and versions are available upon request.

- = standard | ○ = option | – = not available for this version
<table>
<thead>
<tr>
<th>Description</th>
<th>Standard revolving door</th>
<th>All-glass revolving door</th>
<th>Large-capacity revolving door</th>
<th>Security revolving door</th>
</tr>
</thead>
<tbody>
<tr>
<td>Night locking sliding door</td>
<td>GRA</td>
<td>GRA RC3</td>
<td>GGG</td>
<td>GRR</td>
</tr>
<tr>
<td>Active leaf on outside, manual</td>
<td>○</td>
<td>–</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Active leaf on outside, automatic</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○ (in-floor)</td>
</tr>
<tr>
<td>Active leaf on inside, manual</td>
<td>○</td>
<td>■</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Filling: glass</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Filling: steel panel</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Locking</td>
<td>GRA</td>
<td>GRA RC3</td>
<td>GGG</td>
<td>GRR</td>
</tr>
<tr>
<td>Shoot-bolt lock on the leaf, manual</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Electrical centre-lock on the turnstile (fully automatic)</td>
<td>○</td>
<td>○</td>
<td>–</td>
<td>○</td>
</tr>
<tr>
<td>Shoot-bolt lock in the night locking sliding door</td>
<td>○</td>
<td>■</td>
<td>–</td>
<td>－</td>
</tr>
<tr>
<td>Locking via motor-driven brake system</td>
<td>－</td>
<td>－</td>
<td>－</td>
<td>－</td>
</tr>
<tr>
<td>Roof construction</td>
<td>GRA</td>
<td>GRA RC3</td>
<td>GGG</td>
<td>GRR</td>
</tr>
<tr>
<td>Dust roof</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Dust roof with visual shield</td>
<td>○</td>
<td>○</td>
<td>–</td>
<td>－</td>
</tr>
<tr>
<td>Ceiling in system colour</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Exterior roof waterproof with 2 spouts</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>－</td>
</tr>
<tr>
<td>Glass roof</td>
<td>－</td>
<td>－</td>
<td>－</td>
<td>－</td>
</tr>
<tr>
<td>Air curtain system</td>
<td>GRA</td>
<td>GRA RC3</td>
<td>GGG</td>
<td>GRR</td>
</tr>
<tr>
<td>Installation variant, hot water or electrical</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Design variant, hot water or electrical</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Vertical air curtain</td>
<td>○</td>
<td>○</td>
<td>－</td>
<td>－</td>
</tr>
<tr>
<td>Surfaces</td>
<td>GRA</td>
<td>GRA RC3</td>
<td>GGG</td>
<td>GRR</td>
</tr>
<tr>
<td>Choice of RAL colour</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Anodised</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>－</td>
</tr>
<tr>
<td>Anodised stainless steel effect</td>
<td>○</td>
<td>○</td>
<td>□</td>
<td>－</td>
</tr>
<tr>
<td>Polished V2A stainless steel</td>
<td>○</td>
<td>－</td>
<td>□</td>
<td>－</td>
</tr>
<tr>
<td>Polished V2A stainless steel</td>
<td>○</td>
<td>－</td>
<td>□</td>
<td>－</td>
</tr>
<tr>
<td>Tests</td>
<td>GRA</td>
<td>GRA RC3</td>
<td>GGG</td>
<td>GRR</td>
</tr>
<tr>
<td>Type-tested according to DIN 18650 / EN 16005</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
</tbody>
</table>

All dimensions are guide values. Special dimensions and versions are available upon request.

■ = standard | ○ = option | – = not available for this version
3- or 4-leaf revolving door versions

Arguments in favour of a 3-leaf revolving door:

- With the same diameter, there is more space between the leaves
- The larger chambers also provide enough space for shopping trolleys and pushchairs, even with smaller diameters
- A smaller clearance (C) prevents the segment becoming overfull and activation of safety sensors
- Within the larger chamber, persons can move faster or slower than the revolving door. This is considered convenient
- The smaller opening (C) reduces the wind load on door leaf
- Due to minimal total leaf weight and brush friction, a manual door is easier to operate

Arguments in favour of a 4-leaf revolving door:

- A large clearance (C) exists at the same diameter. This is an advantage for pedestrian traffic in opposite directions
- There are more chambers available per rotation. If it is assumed that only one person will enter each segment, the result is increased passage capacity
- Less time is spent in the chamber as a result of smaller fixed panels, i.e. smaller drum walls
- Two leaves act as a seal at the circumference in the initial position
- Visually symmetrical appearance
The current standard EN 16005 (4.7.1.1) specifies a maximum circumferential speed ($V_{circumference}$) for automatic revolving doors as follows:

- Diameter up to 3000 mm: max. 1.0 m/s
- Diameter larger than 3000 mm: max. 0.75 m/s

$$n \text{[rotations/min]} = \frac{V_{circumference} \text{[m/s]} \times 60}{\text{Diameter [m]} \times \pi \text{[3.14...]} \times 60}$$

**Assumptions/requirements:**
- There is a constant flow of people
- There is no delay due to activation of pre-sensors or contact strips
- One person per segment
- Number of persons in one direction

**Calculation example:**

A 4-leaf revolving door with a diameter of 2800 mm rotates with a practicable circumferential speed of 0.75 m per second:

$$\text{Revolutions/hour} = \frac{0.75 \text{[m/s]} \times 60}{2.8 \text{[m]} \times 3.14 \times 60} = 307$$

307 rev./hr. x 4 chambers = **1228 chambers per hour**

If each of the individual chambers is entered by several persons, the passage capacity is as follows:

1228 chambers/hour x 2 persons = **2456 persons/hour**

Maximum passage capacity can be estimated based on the following:

Shopping trolleys and bags should be taken into account when calculating the real achievable number of persons per chamber, as well as delays due to sensor activation or a greater rush of people at certain peak times.

<table>
<thead>
<tr>
<th>Inner diameter</th>
<th>3 panel Chamber/hour</th>
<th>4 panel Chamber/hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800 mm</td>
<td>1433</td>
<td>1910</td>
</tr>
<tr>
<td>2800 mm</td>
<td>921</td>
<td>1228</td>
</tr>
<tr>
<td>3600 mm</td>
<td>716</td>
<td>955</td>
</tr>
<tr>
<td>4800 mm</td>
<td>537</td>
<td>716</td>
</tr>
<tr>
<td>6000 mm</td>
<td>429</td>
<td>573</td>
</tr>
</tbody>
</table>

The values are based on a circumferential speed of 0.75 m/s and passage in one direction.
Rovolving doors in escape and rescue routes*

Practical escape route function

GU GGR and GRA-F revolving doors feature hinged leaves, which make them suitable for use in escape and rescue routes*. These are tested and certified as a part of a TÜV type test. During normal operation, the leaves are immobilised with electromagnets, preventing unintentional folding due to pushing or wind load.

They can only be released by activating an EMERGENCY-STOP switch, in the case of power failure or if triggered by the building control system. Afterwards, the leaves can easily be folded back so that an escape route such as the one shown above is opened.

---

<table>
<thead>
<tr>
<th>Diameter</th>
<th>GGR/3-leaf</th>
<th>GGR/4-leaf</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600 mm</td>
<td>1630</td>
<td>1980</td>
</tr>
<tr>
<td>4800 mm</td>
<td>2230</td>
<td>2700</td>
</tr>
<tr>
<td>5400 mm</td>
<td>2530</td>
<td>3060</td>
</tr>
<tr>
<td>6000 mm</td>
<td>2830</td>
<td>3420</td>
</tr>
</tbody>
</table>

*Please observe the guidelines of the particular country.
The leaves in the GRA-F revolving door variant are hinged at the centre axis. The leaves are immobilised by electromagnets and released when the EMERGENCY-STOP switch is pressed or in the event of a power failure. A crown height of at least 350 mm is required for these additional components.

In practice, the door leaves are also swivelled out for ventilation purposes or for summer opening.
Secure access control and attractive appearance
GSI security revolving doors

Access to buildings with stricter security requirements is ideally controlled by security revolving doors. Alongside the functionality, the client’s wishes with regard to the building architecture must also be considered, so the solution we offer is consistently tailor-made.

The Gretsch-Unitas Group offers a wide selection of access control systems for access authorisation. Of course, access control provided by the customer, which is already installed in the project, can also be integrated.
Functional principle

In the initial position, the security revolving door is locked by means of a motor-driven brake system. After access authorisation has been granted via transponder, key pad, fingerprint, etc., the door is opened. The door begins to turn when the contact mats are stepped on.

The functional principles of 3- or 4-leaf versions are different.

Functional principle of a 3-leaf security revolving door:
- The 3-leaf door rotates clockwise or anticlockwise, depending on the pass-through direction
- The third segment contains the exclusion field (EF) and is never used
- First, access authorisation is granted
- The person stands on the foot field (FF)
- An automatic 120° rotation takes place
- Afterwards, the door locks again
- If the security field (SF) or exclusion field (EF) is stepped on, the door immediately stops and rotates to the initial position. The unauthorised person can exit the door.
- In the case of power failure, the door can be turned to the Y-position and all segments disengage. The door is mechanically locked in this position.
- Advantageous for through-traffic in one direction

Functional principle of a 4-leaf security revolving door:
- The 4-leaf door rotates anticlockwise
- First, access authorisation is granted
- The person stands on the foot field (FF). The passive field (P) can be active at the same time.
- An automatic 180° rotation takes place
- Afterwards, the door locks again
- If someone steps on the exclusion field (EF) or security field (SF) on the opposite side, the door immediately stops and rotates to the + position. The unauthorised person can exit the door.
- Once this has taken place, the authorised person can walk through the door
- In the case of power failure, the door can be turned to the X-position and all segments disengage. The door is mechanically locked in this position.
- Trained persons can be authorised and can pass through the door simultaneously from both sides. This results in a higher pass-through rate.
Security elements

- Optical safety sensor
- Radar motion sensor
- Safety contact edge

Diagram showing fields of view 1, 2, 3, 4, 5, and 6.
Safety mullion:

| safety contact edge |

Shear point protection at the entrance mullion is a flexible rubber safety contact edge that is attached to the mullion. Actuation of the safety contact edge results in immediate emergency braking. To achieve optimal safety with minimum disruption, the safety contact edge is only activated if the adjustable distance between the approaching leaf and the mullion is undercut.

As soon as the safety contact edge is free again, the revolving door rotates at a slower speed until it reaches the mullion. Afterwards, the revolving door accelerates to normal speed again.

Heel protection:

| safety contact edge |

Protection of the floor is ensured with rubber safety contact edges, attached to the underside of the leaves. The unit stops immediately if pressure is applied to one of the safety contact edges.

As soon as the safety contact edge is free again, the revolving door rotates for one second at reduced speed and then accelerates to normal speed.

Front edge of leaf:

| safety contact edge |

For protection in the dangerous area of the leaf drum wall, the entire height of each revolving door leaf is equipped with a safety contact edge. The unit stops immediately if pressure is applied to one of the safety contact edges.

As soon as the safety contact edge is free again, the revolving door rotates for one second at reduced speed and then accelerates to normal speed.

If a security contact edge is pressed constantly for longer than 10 seconds, normal operation can only begin again after performing a reset.

Collision protection:

| optical safety sensor |

The collision protection sensors are used from a diameter of 3000 mm (DIN 18650 compliant) and are located at the upper edge of the door leaf. If a person or object is recognised by the collision protection sensor, the door slows down. If the field of detection becomes free, the revolving door returns to normal speed after one second.

Pre-sensor | Pre-post protection:

| optical safety sensor |

The pre-sensor is only used as of a diameter of 2400 mm (DIN 18650 compliant) and is only active if the distance between the approaching leaf and mullion falls below the adjustable distance.

If a person or object is recognised by a pre-sensor and, simultaneously, the distance between the door leaf and mullion that is considered safe becomes too small, the door brakes – coming to a stop, if necessary.

If both pre-sensors in the danger zone become inactive again, the revolving door rotates to the mullion and then accelerates to normal speed.

Activation:

| radar motion sensor |

An automatic revolving door is activated by internal or external radar motion detectors. When a person or object approaches, the revolving door begins operation.
Operating elements

FWS manual programme switch

«EXIT» operation mode
The revolving door is in the initial position. An impulse from the internal radar motion detector or the external button for the disabled initiates the rotation. After two rotations, the revolving door comes to a stop again in the initial position.

«OFF» operation mode
The revolving door is in the initial position. It is locked with an optional electromechanical lock.

«CONSTANT ROTATION» operation mode
The revolving door is in constant rotation at a reduced speed. An impulse from the internal or external radar motion sensor or button for the disabled automatically adjusts the rotational speed for two revolutions. The rotation then returns to the slower speed.

The button for the disabled is located on the interior and exterior areas of the revolving door mullion. If the button for the disabled is pressed, the revolving door slows to a speed appropriate for the disabled. After a set number of rotations, the revolving door returns to normal rotational speed for two rotations. The revolving door then reduces the rotational speed (operating mode: constant rotation) or stops in the initial position.

Button for the disabled

EMERGENCY-STOP switch

The EMERGENCY-STOP switch is located in the interior and exterior area of the revolving door mullion.

Once it has been pressed, emergency breaking commences immediately.

The leaves of the GGR and GRA-F revolving doors can be swung open.

Resetting the EMERGENCY-STOP safety function is done by releasing the EMERGENCY-STOP switch, closing the leaves (for GGR and GRA-F) and then pressing the RESET push-button.
The RESET push-button is located in the upper area of the interior mullion. This is how to reset after power failure, after activating the EMERGENCY-STOP switch or after other relevant errors.

After a qualified person actuates the Reset push-button, the revolving door resumes operation.

**RESET push-button**

The switch enables cleaning personnel to turn the door to the desired position. In the «OFF» operating mode, the cleaning switch is activated using the operating key. Adjustments can be made by turning the key switch to the CLEANING position. Now the revolving door can be controlled using the interior button for the disabled. As long as the interior button for the disabled is pressed, the revolving door rotates slowly. If the cleaning switch is deactivated, the revolving door rotates again slowly into the X or Y position.

**Cleaning switch**

The display module signals various system statuses to the user.

- RED = passage not authorised
- RED, flashing = oncoming foot traffic, please wait
- GREEN = authorised passage
- ORANGE = error

**Display module – GSI security revolving door**
**Warm air curtain**

**Functional principle**

Diagram showing the components and flow of warm air in a vertical air curtain system. The diagram illustrates the **Cover**, **Supply air**, **Ventilation grille**, **Supply air**, **Warm air curtain system**, **Warm air**, **Discharge channel**, **Rotational direction**, **Inside**, **Outside**, **Air channel**, and **Turn-Only leaf**.
Floor ring / release-secure flange

Standard floor ring

Floor ring with in-floor drive

Floor covering

Release and secure flange construction

Foil
Foil guide plate
Rough concrete
Hollow space filled with screed

Release-secure flange
Night lock

Detailed view

- Night shield, outside – open
- Night shield, outside – closed

- Watertight roof
- Crown panel
- Drum wall
- Turnstile
- Guide carriage
- Sliding panel夜 shield
- Floor covering
- Floor ring
- Clearance height
- Direction of motion
- Rotational direction
- Finished floor level
- Curved guide track
- Guide carriage mounting
- Min. 175
- Crown panel
- Sliding panel night shield
- Drum wall
- Turnstile
- Watertight roof
Vertical views

Night shield, bottom-running

- Bogie
- Curved roller track
- Night shield leaf
- Top guide

Night shield, top-running – point-fixed glass leaf
The GU pledge
Tested safety

Safety: successfully certified

Through a type test, the TÜV confirms that the requirements from the relevant standards and directives are met.

But it does not take into account the hazards resulting from local conditions or the specific building use.

And so before installation and commissioning of the system, a risk analysis that takes the local conditions into account must be performed.

Ideally, the safety concept will be co-ordinated with the client or operator as early as the planning phase.

The Gretsch-Unitas Group offers:
- Individual advice
- Qualified project handling
- Professional installation
- Reliable service

This ensures that commissioning takes place without unpleasant surprises. All required safety components are taken into account and need only be tested for proper functioning at start-up.

DIN 18650 – Safety requirements for automatic door systems

DIN 18650 regulates safety for automatic door systems in Germany, Austria and Switzerland.

Besides product and safety requirements, it describes the acceptance inspection at the installation location, as well as maintenance and regular checks.
The GU service
The Gretsch-Unitas Group – your modern partner

Safety check and maintenance
Regular, professional maintenance is the best guarantee of maintaining the value and functional safety of automatic doors over the years.

In Germany, GU Service GmbH & Co. KG on behalf of GU Automatic GmbH installs automatic sliding doors, swing-door drives, revolving doors, all-glass sliding walls and security doors.

Aftersales service directly from the manufacturer with its own personnel, optimal product knowledge and use of original spare parts ensures the greatest functional availability of automatic door systems. Short travel times are ensured through a comprehensive network of service installers.

An automatic door system must also be tested at least once per year by an expert. Besides this safety check, maintenance according to the manufacturer’s specifications must be performed. Ideally, this takes place at the same appointment.

The service contract
A service contract for automatic door systems offers many advantages:

■ Early recognition of wear ensures operational and personal safety
■ Unplanned service work is markedly reduced
■ Regular inspection of safety components minimises the operator’s potential liability risk
■ Provision and updating of a system-specific inspection book
■ Possible hazards resulting from a change in use are recognised and can be eliminated
■ Service customers receive discounts on parts prices and pay fixed travel fees

Special solutions development
Modular system technology
Products in stock around the globe
Professional installation
Logistics – just-in-time wherever you are
Service and maintenance
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Publisher
Gretsch-Unitas GmbH
Baubeschläge
Johann-Maus-Str. 3
71254 Ditzingen, Germany
Tel. +49 (0) 71 56 3 01-0
Fax +49 (0) 71 56 3 01-2 93
www.g-u.com