



GEZE TSA 325 NT REVOLVING DOORS
FOR MANUAL AND AUTOMATIC OPERATION



CONTENTS

Introduction. Focal point of the entrance area	4
Advantage for all target groups	5
Types of drives	6
Number of door leaves	8
Product features	9
Passing capacity, dimensions	10
Inner width	11
Use in escape and rescue routes	12
Canopy heights in dependence of the type of drive	13
Operating elements for automatic revolving doors	14
Drawings floor rings, underfloor operator	15
Drawings facade connections	16
Drawings night time locking mechanisms	17
Drawings weather roof	20
Drawings air curtain	21
Explanation of the safety systems and the sensor technology	22
TÜV certificate	24
Wiring plans	26
Tender specifications	28
References	31



Deutsche Bank, Stuttgart · Fully-automatic GEZE revolving doors with 3 leaves and drum walls of sheet metal panels

INTRODUCTION

Focal point of the entrance area

The entrance area is the poster child of your building and thus of your enterprise. Therefore it is imperative to validate the positive optical impression through the faultless function of the door system even in the case of high access frequency. GEZE revolving doors meet these requirements and enthral planners, owners and users of buildings. The practically unlimited freedom of design and the full range of materials and colours fulfil even highest architectural demands. Open and closed at the same time, revolving doors eliminate draught. Owing to an entrance area without draught the area in direct vicinity to the entrance can be used commercially and at the same time noise, dust and dirt are kept outside. The clear physical separation into interior and exterior area and the energy that is saved thereby offer clear cost advantages and makes the use of revolving doors even more advantageous.

The range of application of revolving doors is manifold. They are suited for :

- Business buildings
- Public buildings
- Shopping centres
- Hotels and restaurants
- Administrative buildings
- Car dealerships
- Airports and railway stations

Due to the available optional features with folding leaves, revolving doors are also suitable for the use in escape and rescue routes depending on the required width of the escape route.

GEZE revolving doors are tailor-made for each individual object. They feature a variety of options and versions. Should your desired object vary from the stated dimensions and options please do not hesitate to contact us. We offer a door for each entrance!

ADVANTAGE FOR ALL TARGET GROUPS

Advantages for planners and builders:

- Freedom of design and object-specific individual planning with a variety of optional features
- Commercial use of the entrance area for shops, offices, exhibition areas and reception desk
- Harmonious optical appearance of the facade and the interior
- Representative entrance with an excellent visual effect
- Improvement of the energy balance of the building
- Economic solution due to a high degree of prefabrication ex works

Advantages for the user:

- Faultless and unobstructed operation of the door system even in the case of high access frequency
- Simple adjustment of the desired mode of operation
- Effective protection against noise, dust and dirt
- Draught-proof design of the entrance area

Advantages for the installer:

- Modular and flexible system
- Simple installation due to a high degree of prefabrication ex works
- Pre-defined and programmed control technology for a quick start-up
- Door system and safety devices comply with the actually valid standards and regulations



IBM Ehningen · Fully-automatic GEZE revolving doors with 4 leaves, BO function and automatic night time locking mechanism

TYPES OF DRIVES

The selection of the revolving door with regards to the mode of operation and the diameter depends on the object and its specific use. Please determine the planned type of use and the expected influx of visitors during the planning phase in order to come to a decision on the optimum revolving door system. Furthermore please check whether the entrance will also be used as escape and rescue route and which further special demands are put on the door system, e.g. whether an access control system via a card reader will be required.

Manual revolving door

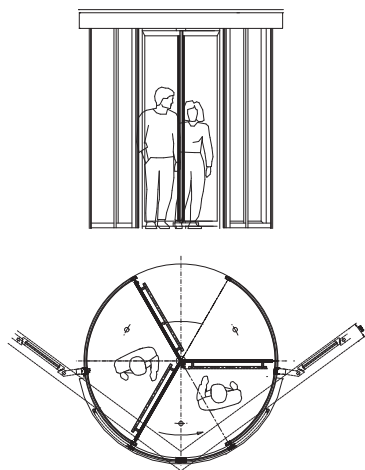
We recommend manual revolving doors with a diameter of approx. 3000 mm for buildings with a limited flow of visitors. Larger manual doors are possible (up to max. 3600 mm), however, the comfort of use is considerably reduced due to the increased exertion of force and the increased friction of the brushes. The doors can be operated by slightly pushing them. The door is spacious but small enough to be operated by everybody without any effort. The door is not equipped with a motor, it has no transmission and no safety devices and is therefore moderately priced.

▪ Option: incl. speed limiter

Combined with a self-regulating speed limiter, which counteracts to a further increase of the peripheral speed as soon as the top limiting speed has been reached.

▪ Option: incl. positioning device

As an alternative a manual revolving door can be equipped with a positioning device. For this purpose a motor and a drive unit is installed into the ceiling or the floor, which returns the turnstile to the final position at low speed and with a minimum of force after manual operation. Thus the next visitor has the possibility to directly enter the revolving door without having to rotate the leaves prior to entering. A further advantage is that the door is always in the final position which leaves a well-ordered optical impression.



Hotel La Casa, Tübingen
Manual GEZE revolving door with 3 leaves and night-time locking mechanism

TYPES OF DRIVES

Automatic revolving door with Push & Go function

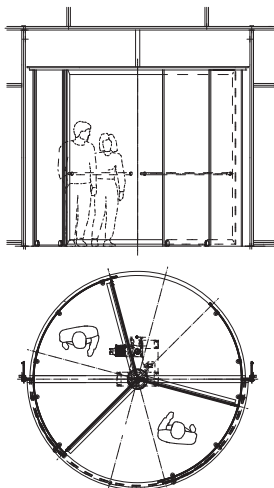
The automatic door with Push & Go function is suited for high access frequency without lack of comfort. An increased capacity is achieved by the greater diameter of the door system (up to max. 3600 mm). The automatic revolving door is activated by shortly pushing the revolving leaf. The automatic door system accelerates and then rotates in an adjustable automatic speed. The door is suited for objects with a constant circle of visitors who are familiar with the activation of the revolving door which is the case in office buildings as well as administrative buildings.

Fully-automatic revolving door

The fully-automatic door with movement detectors is suited for high access frequency. These door systems can be produced up to a maximum internal diameter of 3600 mm. The automatic revolving door is activated via inside and outside movement detectors. Upon activation the door accelerates and rotates in an automatic speed. Thus the revolving door offers high comfort and smooth and trouble-free passage. The automatic speed is adjustable and the after-running function can be freely adjusted for the modes of operation "summer" (elongated after-running) and "winter" (no after-running function). As further option a "button for the disabled" can be installed inside and outside of the door. By operating this switch the revolving speed is reduced in order to allow wheelchair users or hampered persons to pass the revolving door without any problems. This reduced speed can also be adjusted. At the end of the after-running period the revolving door reduces the speed in all modes of operation and stops in the final position, where the door leaf seals tightly against the side walls thus leaving all disturbing environmental determinants such as draught, automobile exhaust, cold and noise outside.

All-glass revolving door

The revolving door with the GEZE all-glass system offers highest transparency. The entire drive and control technology are concealed in the floor. The high-quality surface of the aluminium profiles which are reduced to a minimum with soft edges implies discreet elegance. The drum walls of the all-glass revolving doors are made of curved laminated glass and only the glass edges have narrow cover profiles. The door leaves consist of finely-framed toughened safety glass and two half-shelves of annealed glass form the roof that is fixed by point fittings of stainless. GEZE realises individual, object-related solutions for revolving doors. Door systems with three and four leaves with clear passage heights of up to 3000 mm and freely selectable diameters of 1800 - 3300 mm can be realised as well as all mentioned types of drives.



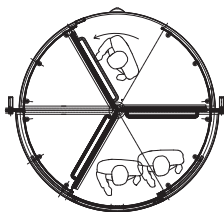
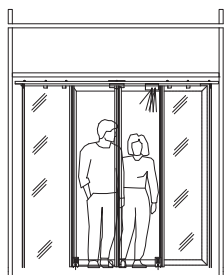
CSC Plönzke, Wiesbaden
Fully-automatic GEZE revolving door with 3 leaves and outside night locking mechanism and movement detectors in the floor

NUMBER OF DOOR LEAVES

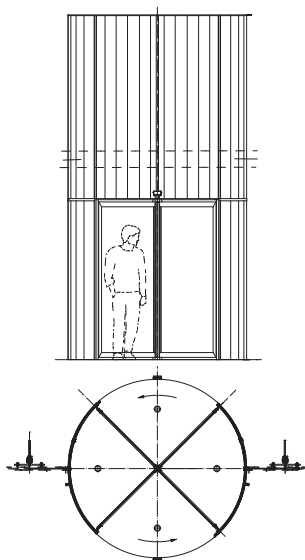
The decision for a revolving door with 3 or 4 leaves

The revolving door with 3 leaves has a slightly reduced passage capacity. However, it offers higher comfort in use, since there is more space between the door leaves. This higher comfort accommodates the elderly or disabled who cannot adapt themselves to the speed of the revolving door. This type of door is also suited for shopping centres where persons with shopping trolleys or families with prams use this type of door. The inner width of the door is smaller than that of a 4-leaves revolving door with the same diameter. This should be taken into account when planning the door system.

The revolving door with 4 leaves is the classic version with the highest capacity, suited for two-way traffic and a large stream of visitors. Due to the symmetric construction the drum of the revolving door is closed by two leaves which results in an improved protection against environmental influences and an improved air-trap effect. This type of door has a larger opening width and is optically very attractive due to its symmetric form.



Hella KGaA HBPO GmbH, Lippstadt
Automatic all-glass revolving door with 3 leaves with underfloor operator and night-locking mechanism



Daresbury Park, Warrington UK -
Fully automatic all-glass revolving door with 4 leaves in sheet metal cylinder, height approx. 4.5 m

REVOLVING DOORS GEZE TSA 325 NT

	TSA 325 NT All modes of operation	TSA 325 NT GG All modes of operation
Dimensions		
Inner diameter (freely selectable) (special dimensions on request)	1800–3600 mm	1800–3300 mm
Number of leaves	3 or 4 leaves	3 or 4 leaves
Clear passage height (special dimensions on request)	2100– max. 3000 mm	2100– max. 3000 mm
Canopy height (depending on drive) (special dimensions on request)	75 mm/200 mm	16-20 mm glass roof
Revolving door for the use in escape and rescue routes	suitable	not possible
Door construction		
Side walls in all-glass panels 16 mm	●	●
Side walls with sheet panels 20 mm	●	not possible
Flat thermally insulated aluminium panels 34 mm	●	not possible
Screwless construction of toughened safety glass (ESG) 10 mm	●	●
Roof construction		
As dust protection roof with wood covering	●	not possible
Optical sheet covering	●	not possible
Waterproof roof with two waterspouts	●	not possible
Surface of the aluminium components		
Powder coating in accordance with RAL	●	●
Anodised	●	●
Colour anodised acc. to sample	●	●
Anodised similar to stainless steel	●	●
Covered with stainless steel, ground (grain size 240) mirror-polished	●	●
Night-time locking mechanisms and locking of the door		
Night-time locking mechanism manual and automatic	●	●
Night-time locking inside and outside running	●	outside running only
Night-time locking of curved laminated glass 10 mm (VSG) or curved aluminium panels	●	●
Manual locking of the door leaf	●	●
Automatic locking of the door leaf	●	not possible
Further options		
Door handles horizontal or vertical	●	●
Illumination with LEDs	●	not possible
Floor ring	●	●
Floor mat	●	●
Underfloor operator	●	●
Button for the disabled	●	●
Air curtain	●	on request

● = Option

REVOLVING DOORS GEZE TSA 325 NT

PASSAGE CAPACITY

Internal diameter (exemplary)	3 leaves		4 leaves	
	Capacity Persons/hour	Persons/minute	Capacity Persons/hour	Persons/minute
2000 mm	1203	20	1604	26
2400 mm	1002	16	1336	22
2800 mm	1718	28	2291	38
3200 mm	2256	37	3008	50
3600 mm	2005	33	2673	44

All stated values refer to the maximum capacity in one direction and a peripheral speed of 0,7 m/s

DIMENSIONS

Illustration: manual version, 3 leaves

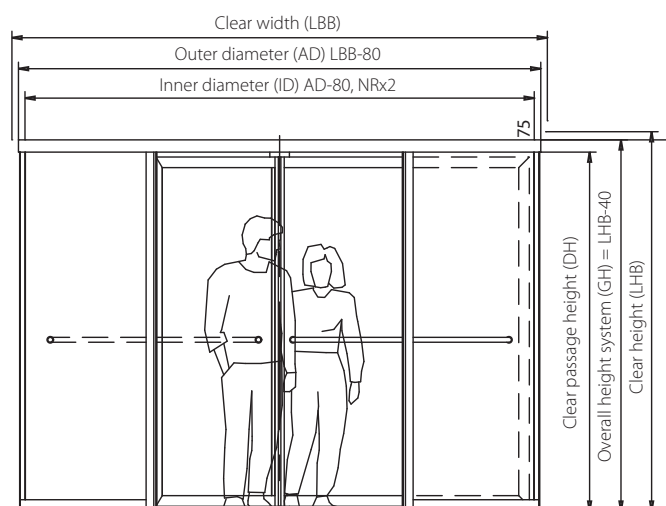
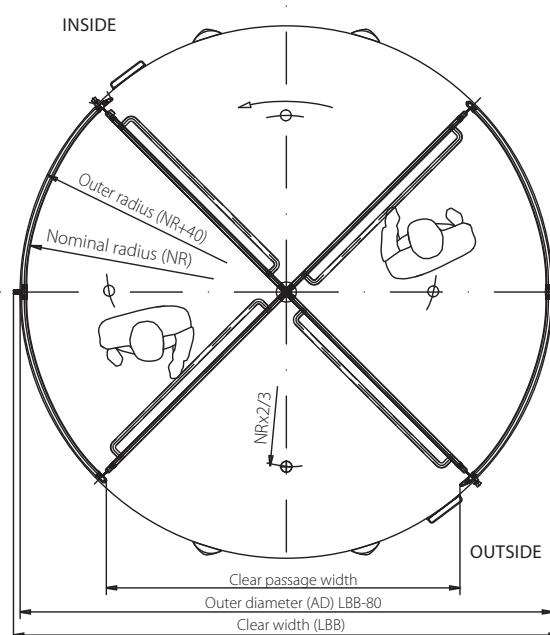
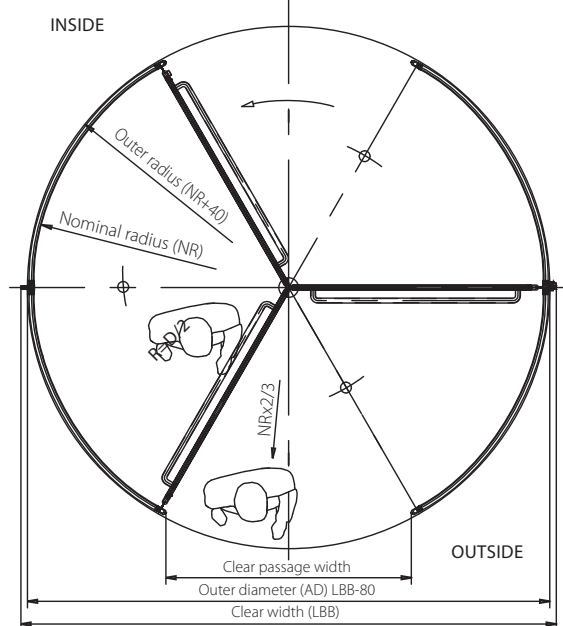
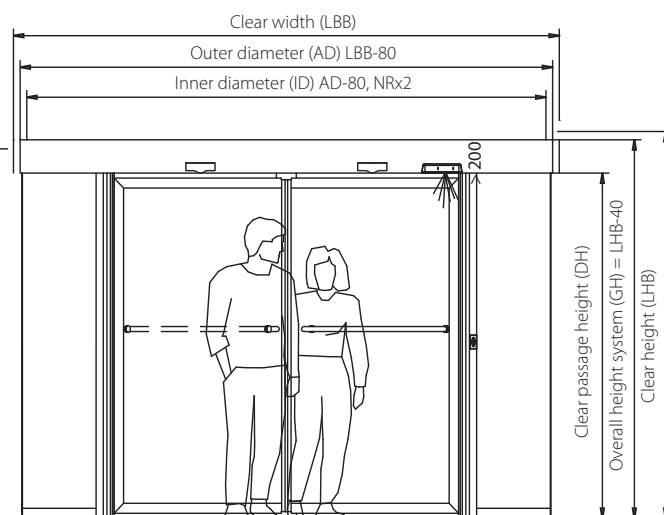
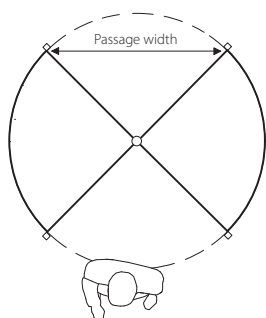


Illustration: actuated version, 4 leaves



PASSAGE WIDTHS



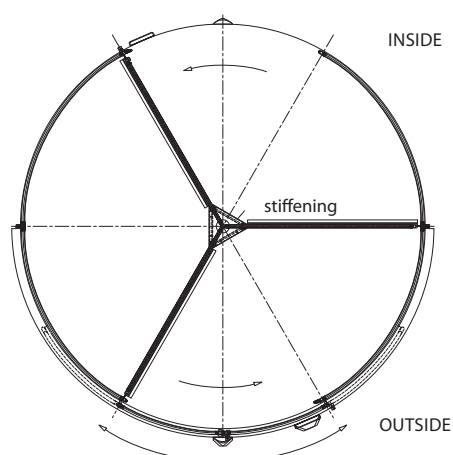
for manual revolving doors

	3 leaves	3 leaves	4 leaves	4 leaves
Inner diameter (exemplary)	Inner diameter (exemplary)	All-glass	Glass in frame	All-glass
2000 mm	945 mm	930 mm	1370 mm	1356 mm
2400 mm	1145 mm	1130 mm	1652 mm	1640 mm
2800 mm	1345 mm	1330 mm	1934 mm	1924 mm
3200 mm	1545 mm	1530 mm	2216 mm	2208 mm
3600 mm	1745 mm	1730 mm	2498 mm	2492 mm

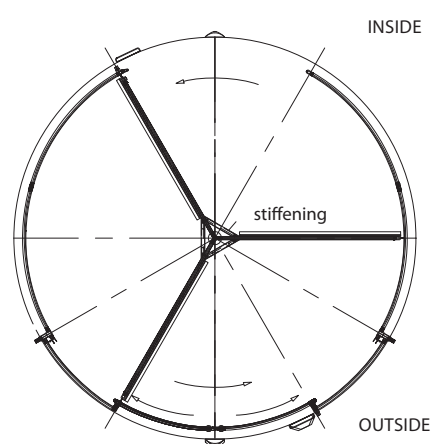
for automatic revolving doors

	3 leaves	3 leaves	4 leaves	4 leaves
Inner diameter (exemplary)	Glass in frame	All-glass	Glass in frame	All-glass
2000 mm	895 mm	883 mm	1325 mm	1323 mm
2400 mm	1097 mm	1083 mm	1609 mm	1607 mm
2800 mm	1297 mm	1283 mm	1893 mm	1891 mm
3200 mm	1497 mm	1483 mm	2177 mm	2175 mm
3600 mm	1697 mm	1683 mm	2461 mm	2459 mm

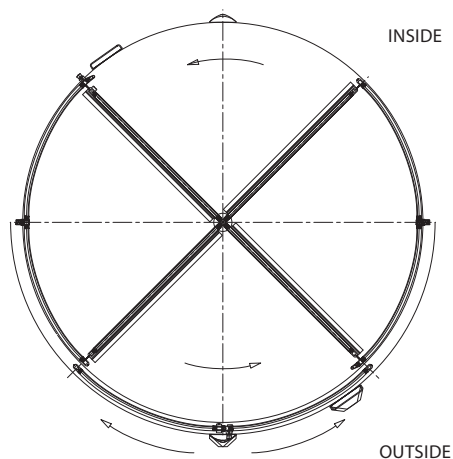
3 leaves with outside running night locking mechanism



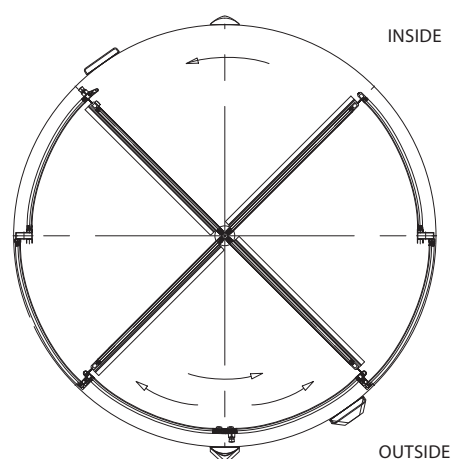
3 leaves with inside running night locking mechanism



4 leaves with outside running night locking mechanism



4 leaves with inside running night locking mechanism



REVOLVING DOORS GEZE TSA 325 NT

BREAK-OUT FUNKTION

GEZE revolving doors for the use in escape and rescue routes

The GEZE revolving door with BO function (Break-out function) is suited for the use in escape and rescue routes. All leaves are pivoted and are mechanically held.

Breaking out is possible at approx. 220 N (default for breakout force in accordance with DIN 18650 and AutSchR). The force can be adjusted at each individual leaf using customary tools. The adjustment can be made without the necessity of dismantling any components.

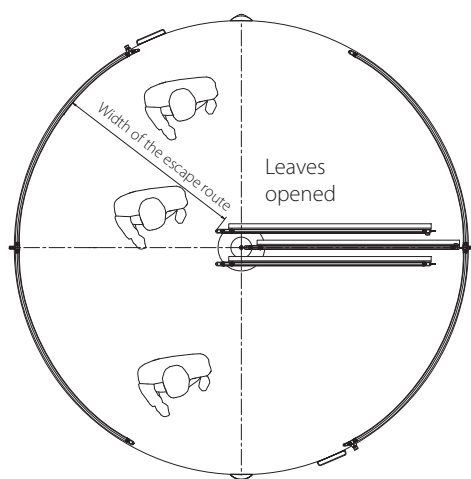
The revolving door with BO function can be realised as door with 3 or 4 leaves, either as manual, push & go or automatic door, however, not as all-glass revolving door (IGG). The minimum canopy height is 200 mm, a floor ring is required in any case.

Maximum diameter: 3600 mm

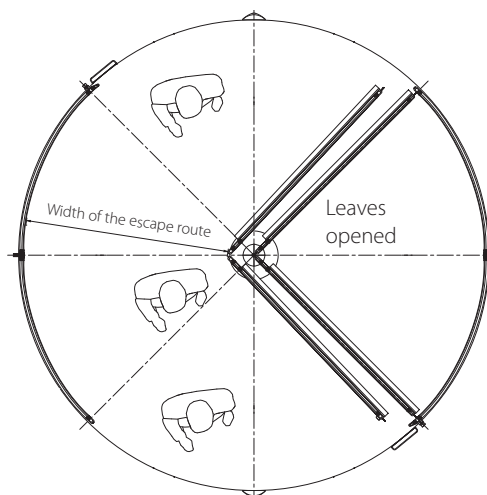
Minimum diameter for a "reasonable" width of rescue route: 2600 mm.

The width of the escape way depends on the number of leaves and the drum diameter. It must be taken into account that the maximum width of the escape route can only be accomplished if the leaves are folded away to form a package and put aside.













TSA 325 NT BO version with 3 leaves



TSA 325 NT BO version with 4 leaves



WIDTH OF THE ESCAPE ROUTE

	3 leaves	4 leaves
	Width of the escape route (FWB)	Width of the escape route (FWB)
Internal diameter		
1800 mm	650 mm	660 mm
2000 mm	750 mm	760 mm
2200 mm	850 mm	860 mm
2400 mm	950 mm	960 mm
2600 mm	1050 mm 	1060 mm 
2800 mm	1150 mm 	1160 mm 
3000 mm	1250 mm 	1260 mm 
3200 mm	1350 mm 	1360 mm 
3400 mm	1450 mm 	1460 mm 
3600 mm	1550 mm 	1560 mm 

Breaking out of a leaf will result in immediate disconnection of the drive. Afterwards it is possible to rotate the leaves manually (even when broken out).

Due to the manual breaking out function the use of TSA 325 NT BO is limited to max. 220 N in areas with increased wind load. Depending on the diameter and the clear height, GEZE revolving doors can be used up to a wind speed of max. 6 Beaufort (Bft). This is equal to approx. 49 km/h. If the leaves are only used for ventilation and transport purposes, the break-out force can be increased, which will result in an increased break-out safety in the case of wind pressure.

To prevent people from entering the building through the folding leaves, two leaves must be locked at the minimum. This can be done as follows:

- Two electromechanical locking devices
- or
- Night locking mechanism (automatic or manual)

MINIMUM CANOPY HEIGHTS

in dependence of the type of drive

	Minimum canopy height
Manual revolving door	75 mm
Manual revolving door with speed limiter	200 mm
Manual revolving door with positioning device	200 mm
Automatic revolving door with push & go function	200 mm
Automatic revolving door	200 mm
Automatic revolving door with BO function	200 mm
Automatic revolving door with underfloor actuator	75 mm
Manual all-glass revolving door	16 mm
Manual all-glass revolving door with positioning device	16 mm
Automatic all-glass revolving door with push & go function	16 mm
Automatic all-glass revolving door	16 mm

Operating elements



for automatic revolving doors

Mode of operation OFF

In the mode of operation "OFF" the motor is switched off and the door can be opened manually. This mode of operation is particularly suited for maintenance and cleaning of the door. All actuation elements are switched off.

Mode of operation Night

In the mode of operation "Night" the most different types of locking options can be selected for the revolving door.

- No locking
- Manual locking of the door leaves via a bar lock
- Locking with the electromechanical disk brake
- Electromechanical locking of the door leaves
- Locking with manual night locking
- Locking with automatic night locking

Mode of operation shop closing time

In the mode of operation "shop closing time" the door is actuated by the internal movement detectors only. It moves a preset number of sectors in automatic speed and will then stop in the target position.

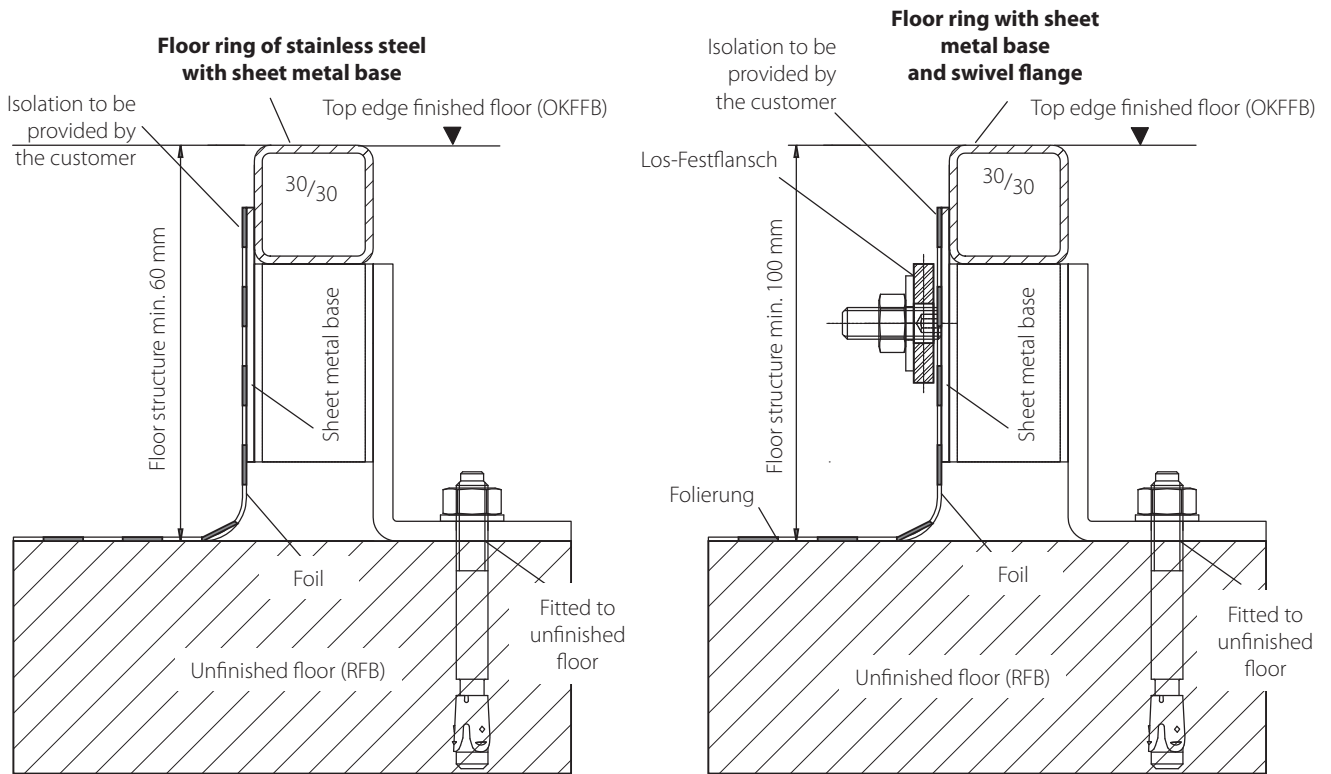
Mode of operation Automatic

In the mode of operation „Automatic“ all connected pulse generators are active. After actuation the door accelerates to a preset automatic speed, rotates the preset number of sectors and then changes over to a reduced speed. The slower revolving speed and the after-running period can be preset. By simultaneously pressing the arrow keys you can change over to "winter operation". The after-running period will be omitted and the revolving door will slide to the end position. As an option it is possible to connect a button for the disabled. By operating this button the revolving speed is reduced, allowing older or hampered persons to pass through the door without any problems. The revolving speed and the overtravel time can also be preset.

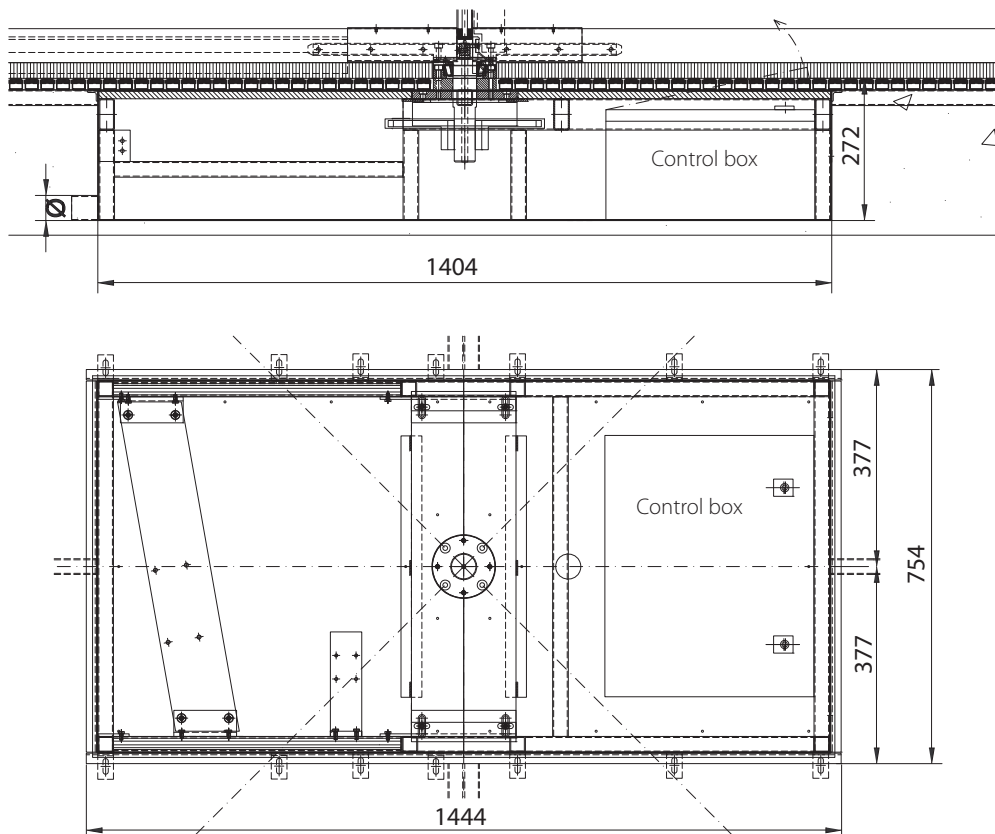
Mode of operation manual

In the mode of operation "manual" the revolving door can be freely rotated. If no further functions are set, the mode of operation "manual" is identical with the mode of operation "OFF". The following options can be set: a positioning device returns the door to the target position at a slower speed after people have passed through the door. Safety functions can be deactivated.

Types of floor rings



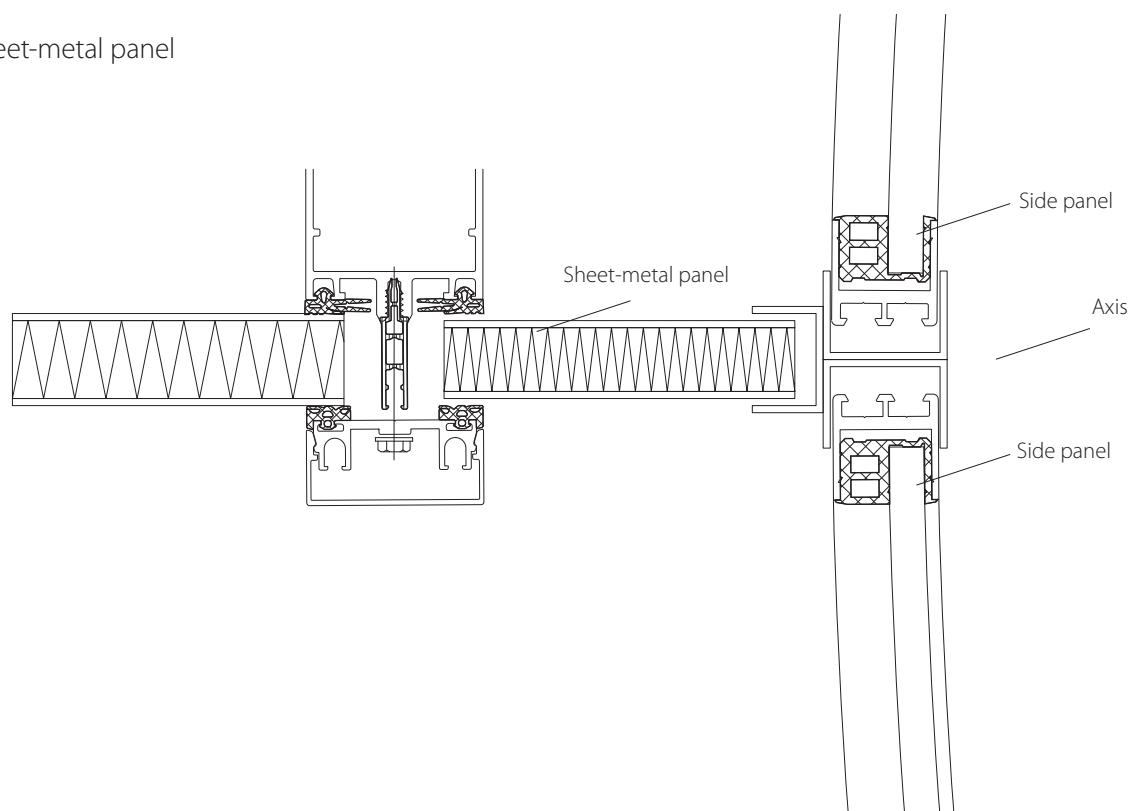
Underfloor operator



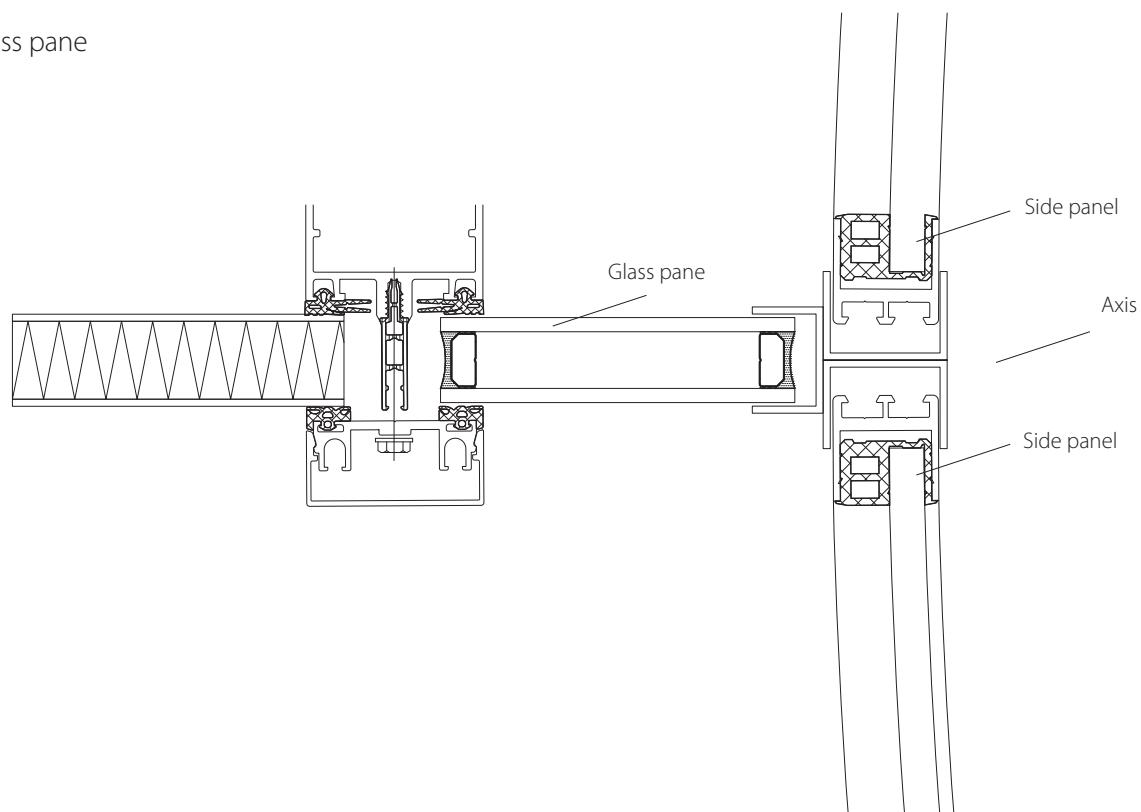
Note: If an external control is housed in a control cabinet (dimensions: approx. 500 x 600 x 170 mm) at a distance of max. 20 m a small drive box (dimensions: approx. 714 x 900 x 280 mm) can be installed as well.

Façade connection

with sheet-metal panel

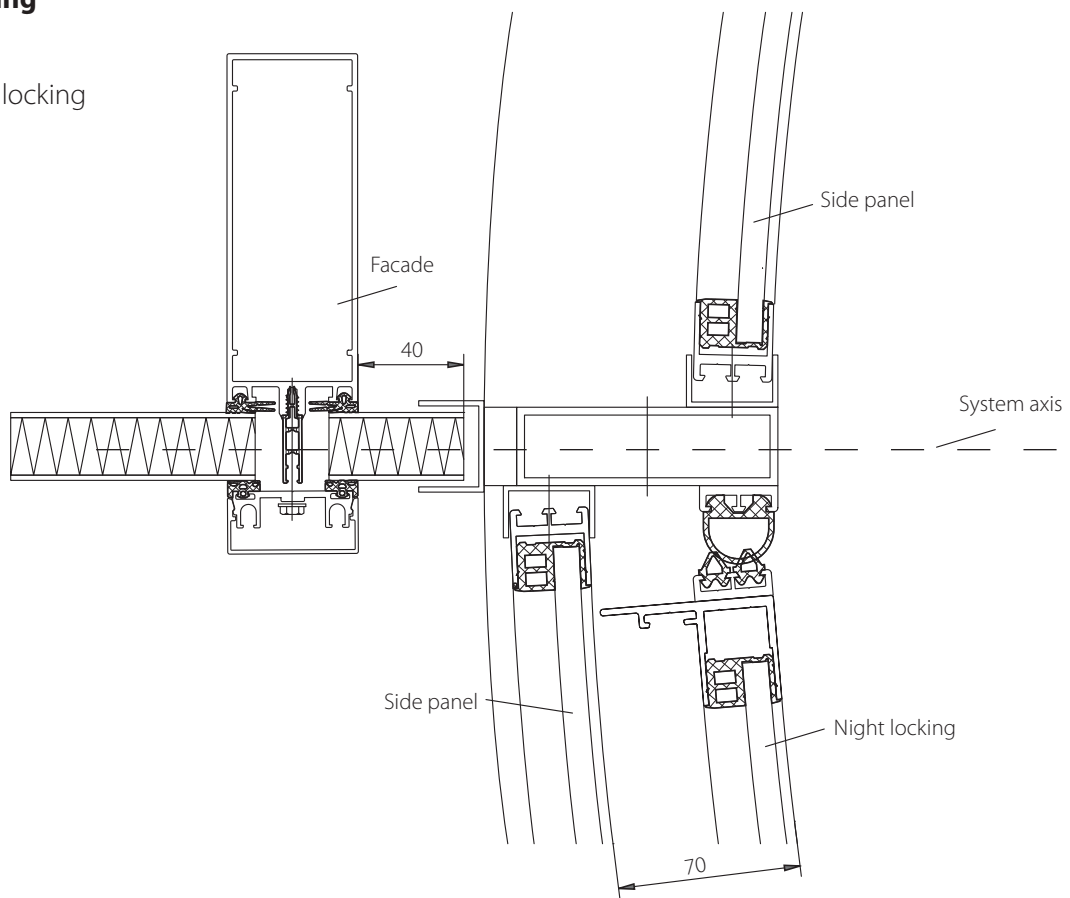
**Façade connection**

with glass pane



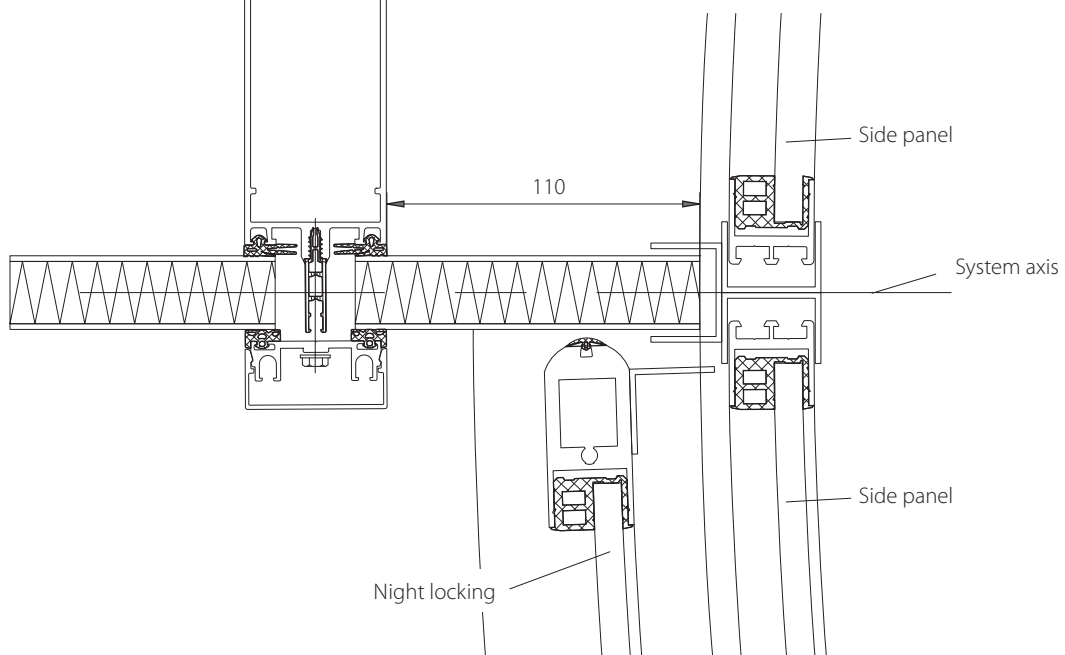
Night locking

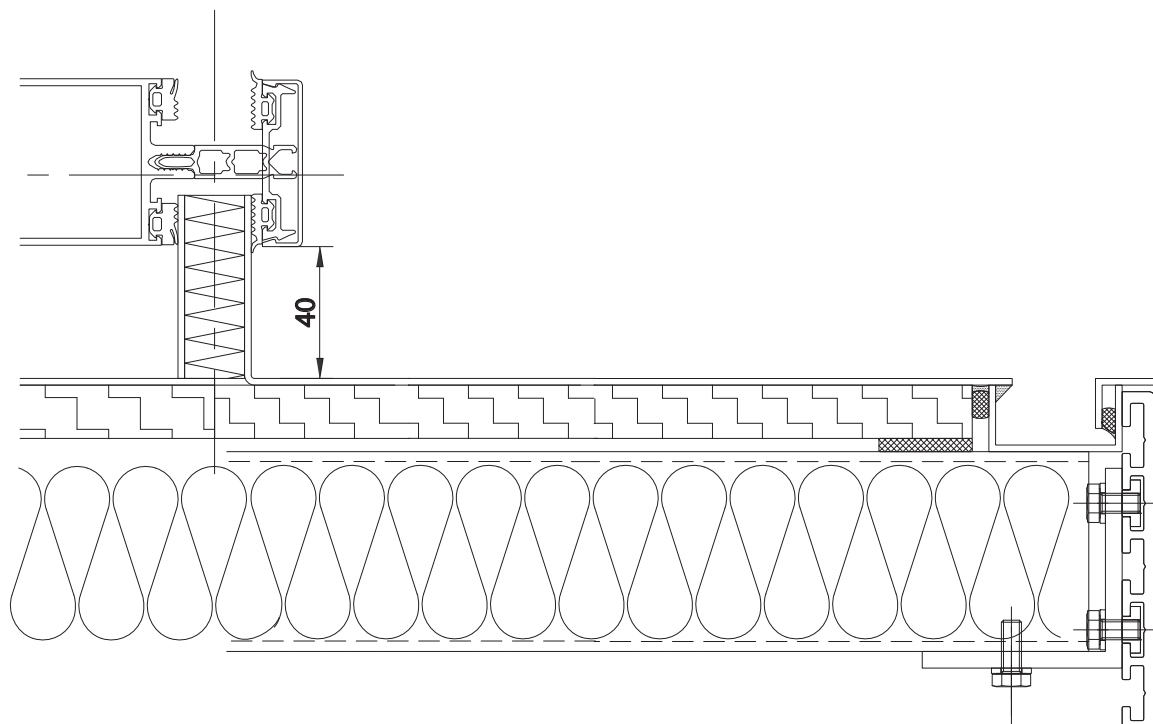
Detail
inside night locking



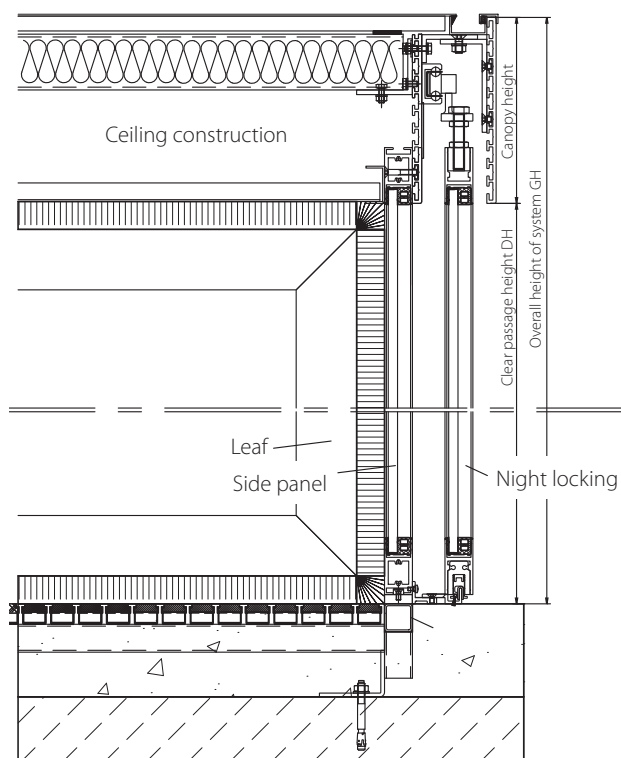
Night locking

Horizontal section
connection night locking

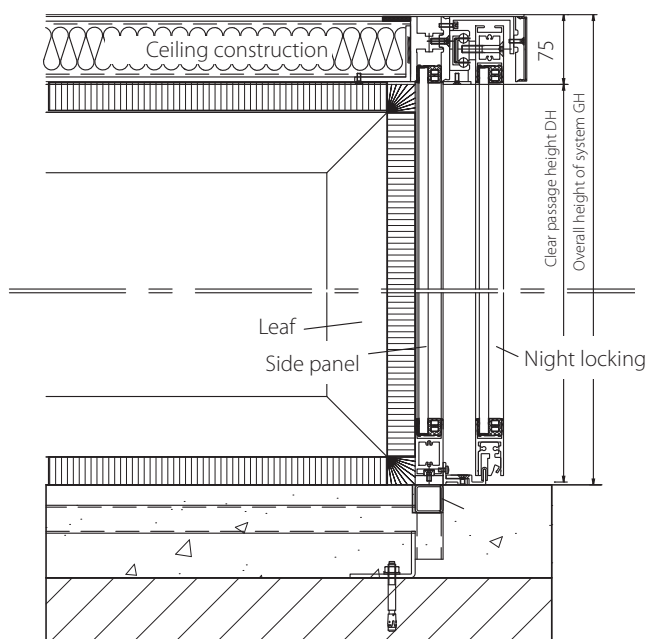


Connection roof TOP**Night locking**

Vertical section night locking
Automatic door

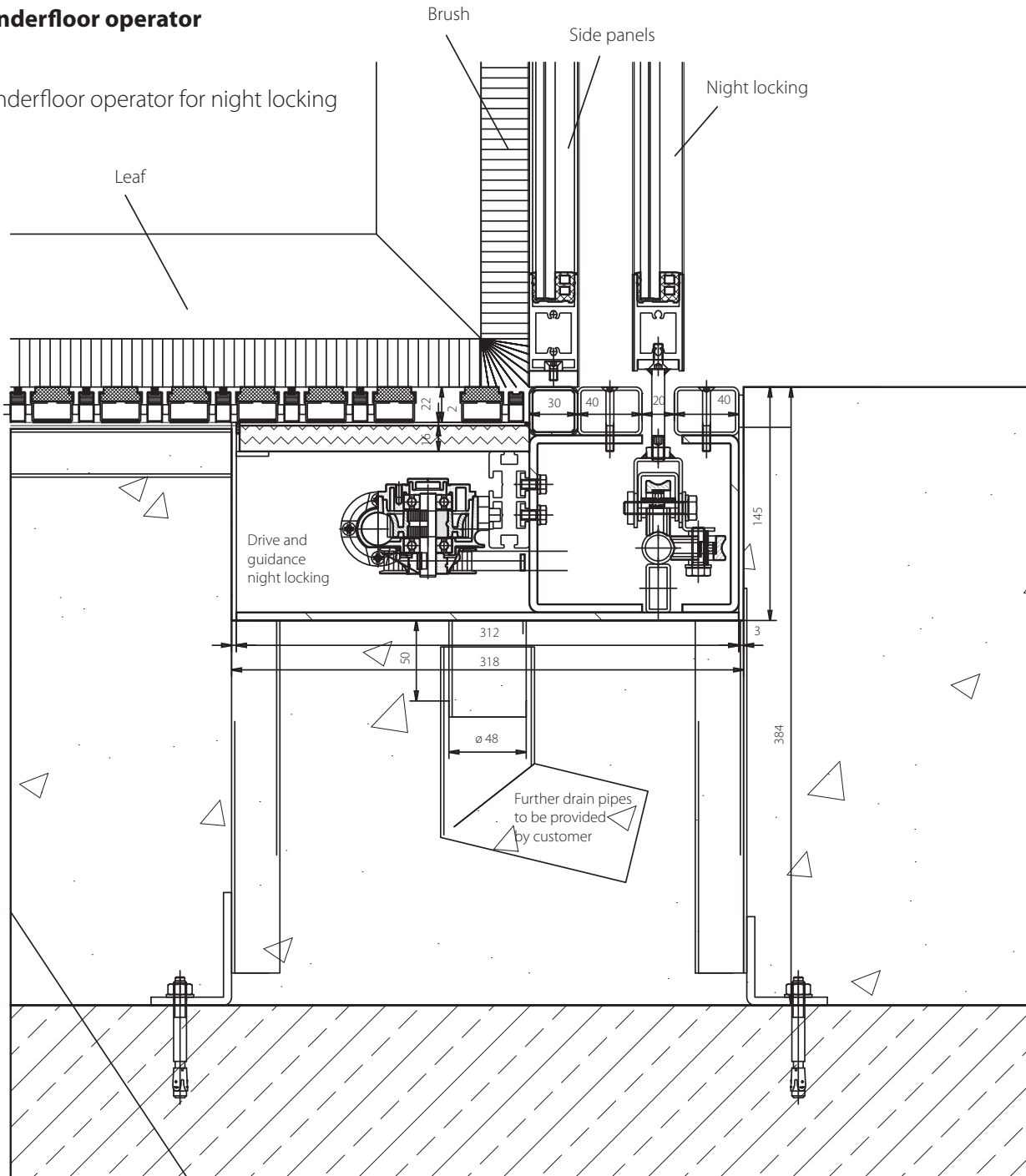


Vertical section night locking
Manual door



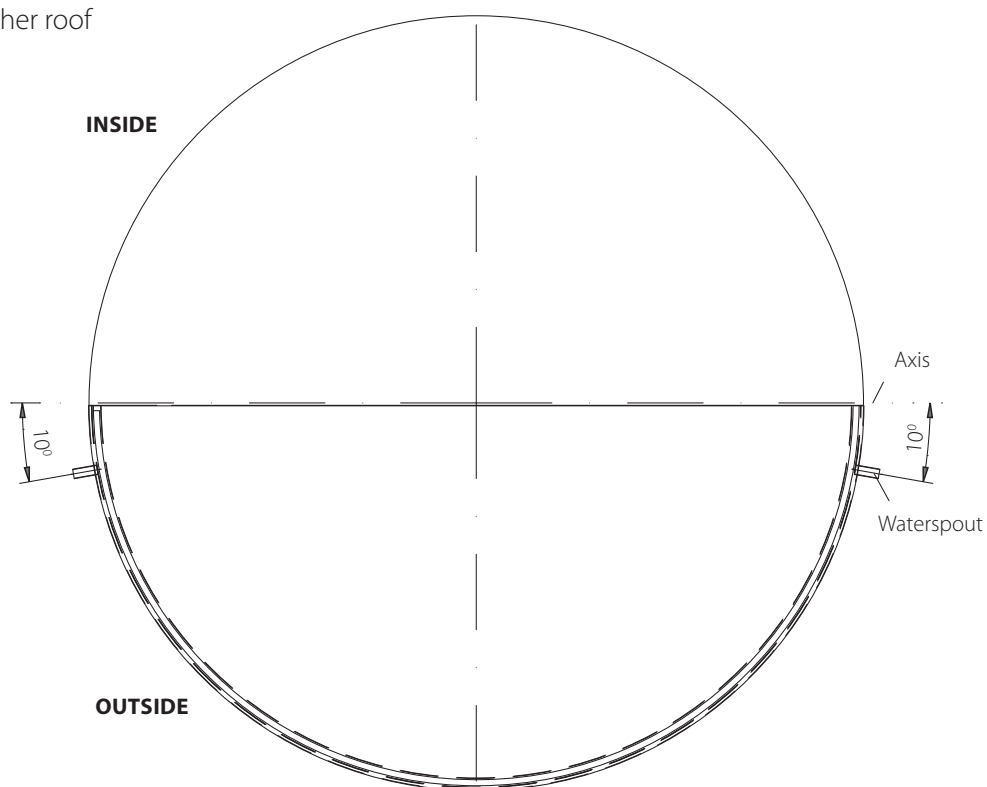
Underfloor operator

Underfloor operator for night locking

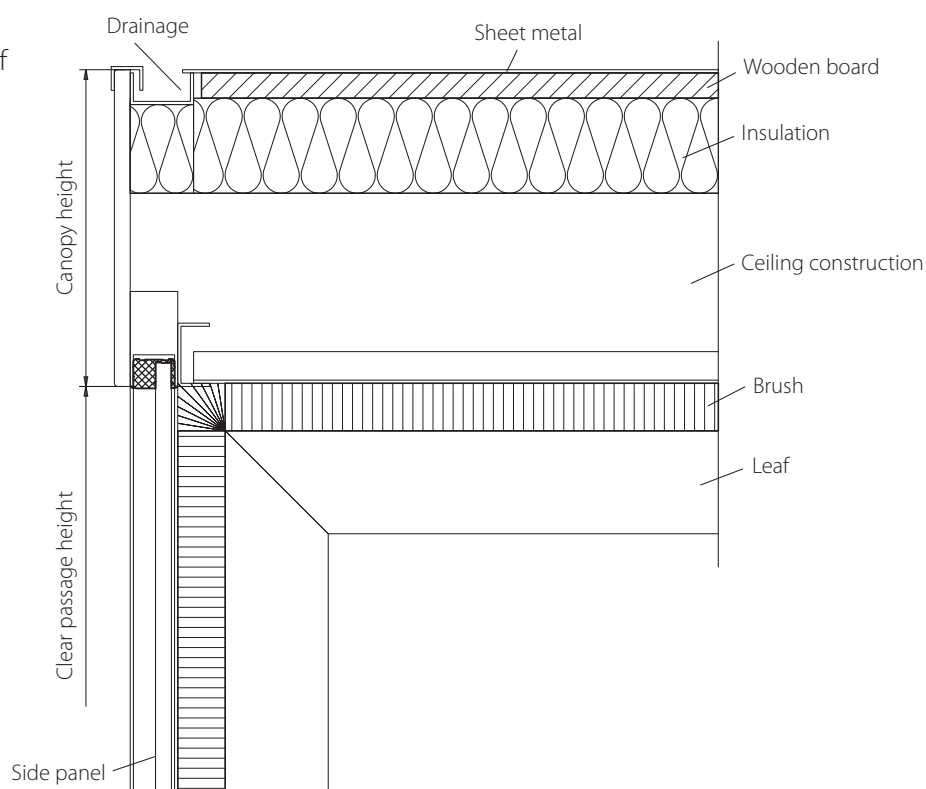


Weather roof

Top view weather roof

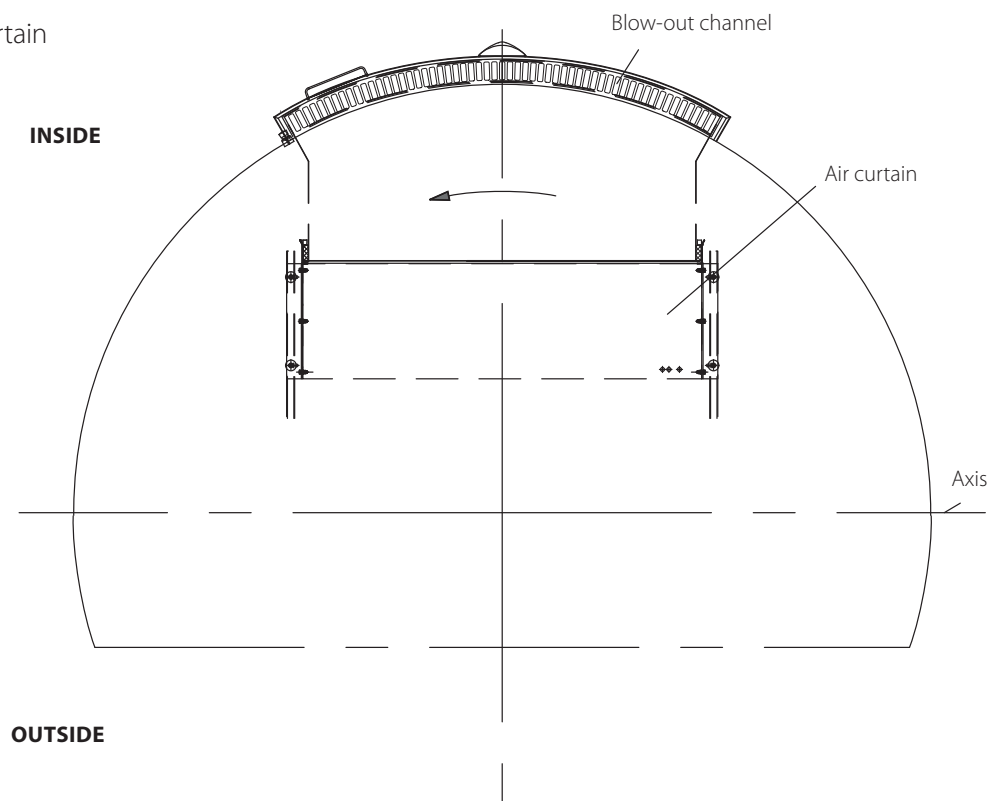
**Weather roof**

Vertical section weather roof

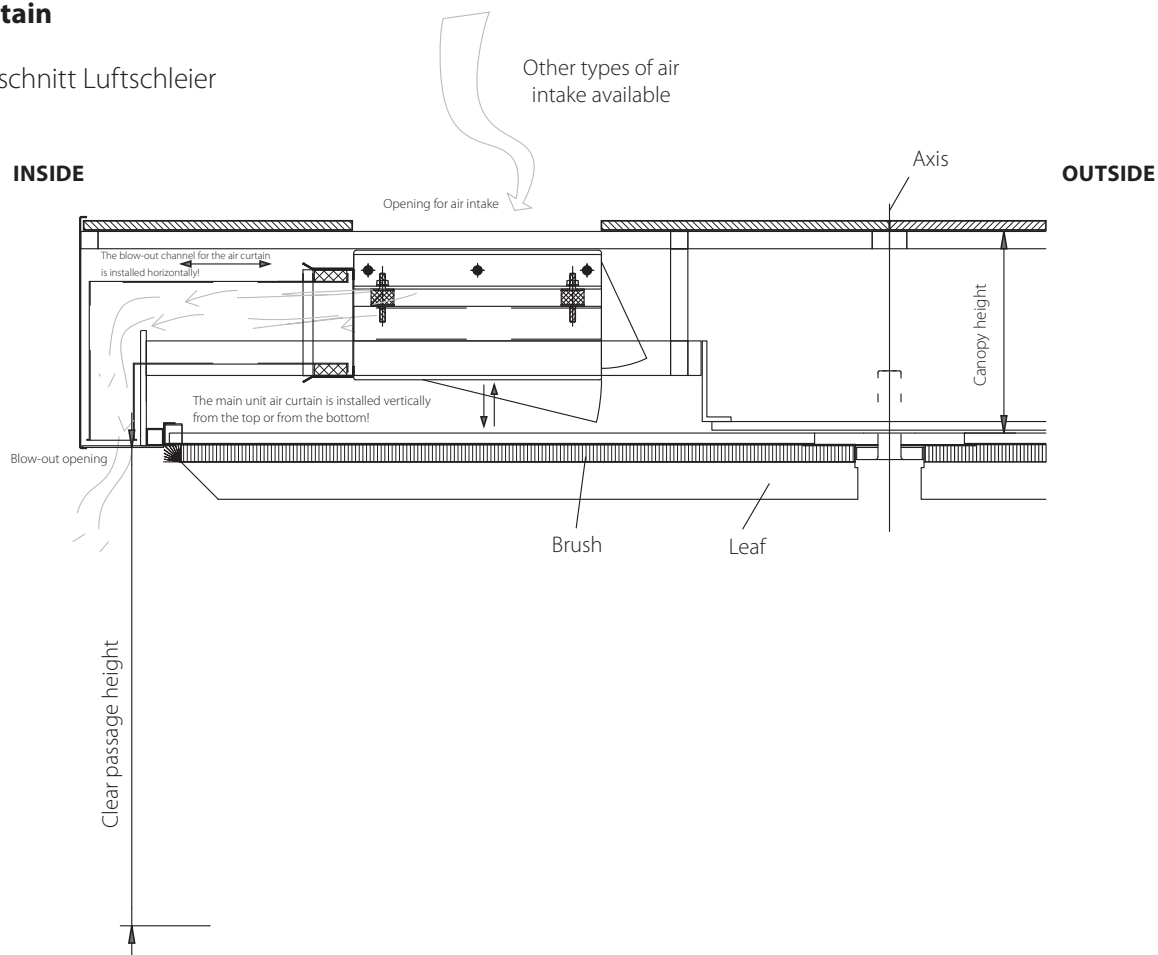


Air curtain

Top view air curtain

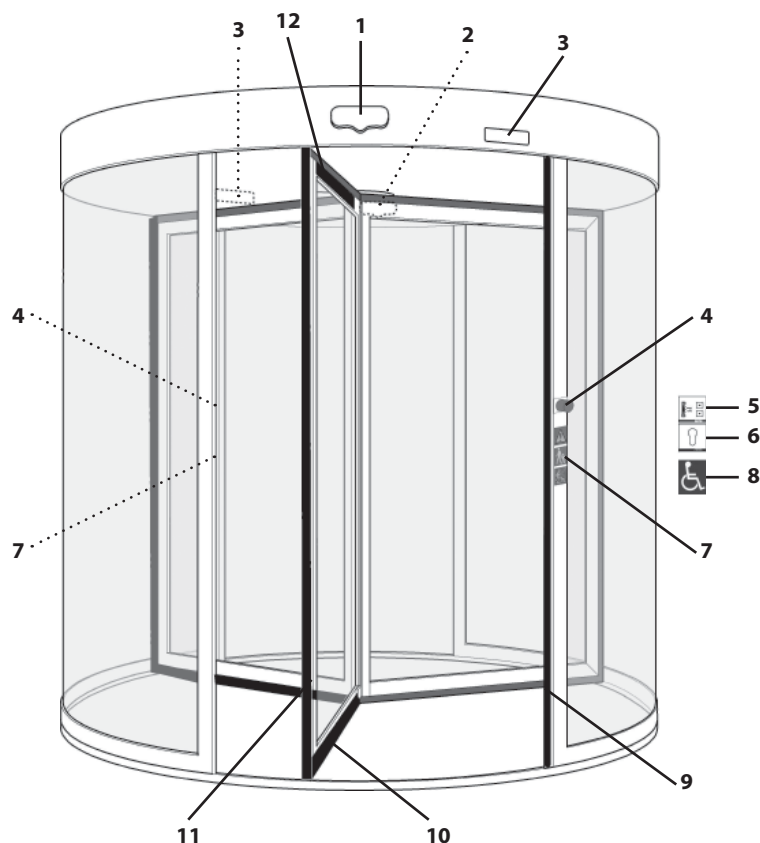
**Air curtain**

Vertikalschnitt Luftschleier



REVOLVING DOORS GEZE TSA 325 NT

- 1 Movement detector inside
- 2 Movement detector outside
- 3 Anterpost safety sensor
- 4 Emergency Off button inside and outside
- 5 Programming keypad
- 6 Key-operated switch
- 7 Warning label inside and outside
- 8 Button for the handicapped (optional)
- 9 Post safety device
- 10 Heel protecting strip
- 11 Safety contact strip vertical
- 12 Mobile safeguarding device (optional)



Explanation

of the safety devices and the sensor technology

Movement detectors inside and outside

The inside and outside movement detectors are fixed to the ceiling canopy and work on a radar basis. The movement detectors are used for automatic revolving doors as actuating element. The detection zone of the sensor can be adjusted.

Anterpost safety sensor

The anteropost safety sensor is a presence sensor that works on an active infrared basis. It detects the area in front of the post by means of a light curtain which is activated, as soon as one of the leaves of the revolving door approaches the post. The detection zone of the sensor is adjustable. As an option a less complex sensor can be installed into the ceiling canopy. This simple sensor does not comply with DIN 18650 and is not approved for use in Germany.

Emergency OFF button inside and outside

The emergency OFF button inside and outside is mounted to the stationary side panel and releases an emergency stop if operated which brings the revolving door to an immediate standstill. After braking the door can be manually operated or opened into both directions.

Programming keypad

The different modes of operation of an automatic revolving door can be set using the programming keypad.

Key-operated switch

The operation of the programming keypad by unauthorised persons can be prevented by installing a key-operated switch.

Explanation

of the safety devices and the sensor technology

Warning labels inside and outside

Warning labels must be attached to each revolving door to make parents aware of their obligation to take care. A revolving door is no playground.

Buttons for the handicapped

The button for the handicapped is attached at the inside and outside of the stationary side panel or near a wall or façade. When operating the button for disabled the revolving speed of the door is reduced in order to allow older or hampered persons to pass through the door. The speed and duration of activation can be adjusted.

Post safety device

The post safety device is a rubber safety strip that is attached to the main closing edge of the fixed side panel of the revolving door. Upon operation this safety strip releases an emergency stop of the door. Upon release of the emergency stop the revolving door is brought to a standstill, the door stops for an adjustable period of time and will then continue closing in the preset mode of operation and speed.

Heel protecting strip

The heel protecting strip is a rubber safety strip, which is attached horizontally at the bottom of one of the leaves of the revolving door. The safety strip prevents that an obstacle or a person is seized by the moving leaves. As soon as the safety strip gets in contact with an obstacle or a person, an emergency stop is released and the revolving door stops immediately.

Upon release of the emergency stop the revolving door is brought to a standstill, the door stops for an adjustable period of time and will then continue closing in the preset mode of operation and speed.

Safety contact strip vertical

The safety contact strip is a rubber safety strip that is attached vertically at the outer edge of the leaves and that prevents persons from being drawn in. As soon as a person or a part of the body gets in contact with the safety strip, an emergency stop is released and the revolving door is stopped immediately. Upon release of the emergency stop the revolving door is brought to a standstill, the door stops for an adjustable period of time and will then continue closing in the preset mode of operation and speed.

Mobile safeguarding device

"Mobile safeguarding devices" are optical sensors, which are attached to the top edge of the leaves. They work after the infrared principle and optically scan the area in front of the moving leaves of a revolving door. As soon as the sensor detects an obstacle or a person, the revolving door is stopped. If the obstacle remains within the detection zone of the sensor the speed of the revolving door is reduced until the moving leaf stops in front of the obstacle. The sensitivity and the detection zone are adjustable.



Product Service

CERTIFICATE

No. Z2 08 08 62010 003

Holder of Certificate: **GEZE Sonderkonstruktionen GmbH**

Planken 1
97944 Boxberg-Schweigern
GERMANY

Production
Facility(ies):

62010

Certification Mark:



Product:

**powered pedestrian doors
revolving door**

Model(s):

TSA325NT, version key see page 2

Parameters:

Electomechanical door system
for use in pedestrian areas

rated voltage:	230 V
rated frequency:	50 Hz
rated power:	input 350 W (without lighting) lighting with max 60 W (max. 1 W per lamp)
protection class:	I
degree of protection:	IP44 (exterior impulse transmitter IP54)

Construction with rotatable/fold-away wings suitable
for rescue and escape routes according to AutSchR

Where the door carries with it non-contact sensors
it is suitable for persons specially in need of
protection.

for further parameters see page 2

Tested according to: DIN 18650-1:2005
DIN 18650-2:2005

The listed product was tested on a voluntary basis and complies with the essential requirements.
The certification mark shown above can be affixed on the product. The certification mark must
not be altered in any way. See also notes overleaf.

Test report no.: 71324968A

Date, 2008-09-10

Page 1 of 2



TÜV SÜD Product Service GmbH · Zertifizierstelle · Ridlerstrasse 65 · 80339 München · Germany

Certificate No. Z2 08 08 62010 003



Product Service

Version key

TSA325NT- A3-GG-NV

NV without night lock
 ANV manual night lock
 INV automatic night lock
 IANV interior located automatic night lock

GG standard construction
 all-glass construction

3 leaf
 4 leaf

A automatic
 S servo
 P positioning automat
 M manual

Revolving door

Parameters

Nominal rev. count	Adjustable to less than 1 m/s outer measurement
Safety distance	Finger safe greater 25 mm brush width
Safety sensors	Safety edge post - / hand - / heel protection
Power limitation	Adjustable to norm values, calibration of each sample by impulse measurement (with safety edge post safety and hand safety). Documented power measurement is necessary for each door.

Key Number / Classification

1 Drive type
 2 Durability
 3 Door leaf construction
 4 Fire protection door
 5 Safety installation of drive

6 Special requirements
 7 Safety of door leaf
 (Attachment B revolving doors)

8 Ambient temperature

Class

5 Revolving door drive
 3 1 000 000 test cycles
 5 Revolving door
 0 Not suitable
 1 Power limitation
 2 Connector for safety system
 3 Low energy
 0 None
 1 Sufficient safety distances:
 2 Finger protection: safety edge B=HS/IW
 3 Break Out, Optional
 4 Presence sensors: A=HS/GS
 2 -15 °C to +50 °C

page 2 of 2

Wiring diagram revolving door ceiling mounted

LS	Light switch (by customer)
NSI	Emergency stop button inside ¹⁾
NSA	Emergency stop button outside ¹⁾
PS	Programme switch
ZU	Timer
BTI	Button for disabled inside
BTA	Button for disabled outside
KIR	Contactor inside (KI) radar
KAR	Contactor outside (KA) radar
KIT	Contactor inside (KI) button ²⁾
KIA	Contactor outside (KI) button ³⁾
KB	Contactor authorised (KB) ⁴⁾
LSG	Switchgear for air curtain
RTI	Room thermostat in the interior

¹⁾ Install emergency stop switches at all access points

²⁾ Several contactors inside (K) may be installed

³⁾ Several contactors outside (K) may be installed

⁴⁾ Several contactors authorised (KB) may be installed

Notes :

Wiring in accordance with VDE 0100

Wiring, connection and start-up must only be carried out by authorised electricians.

GEZE will not assume any warranty or provide service if GEZE products are combined with third-party products.

Additional actuation elements for the revolving door drive are installed within the profile located outside or within the door drum.

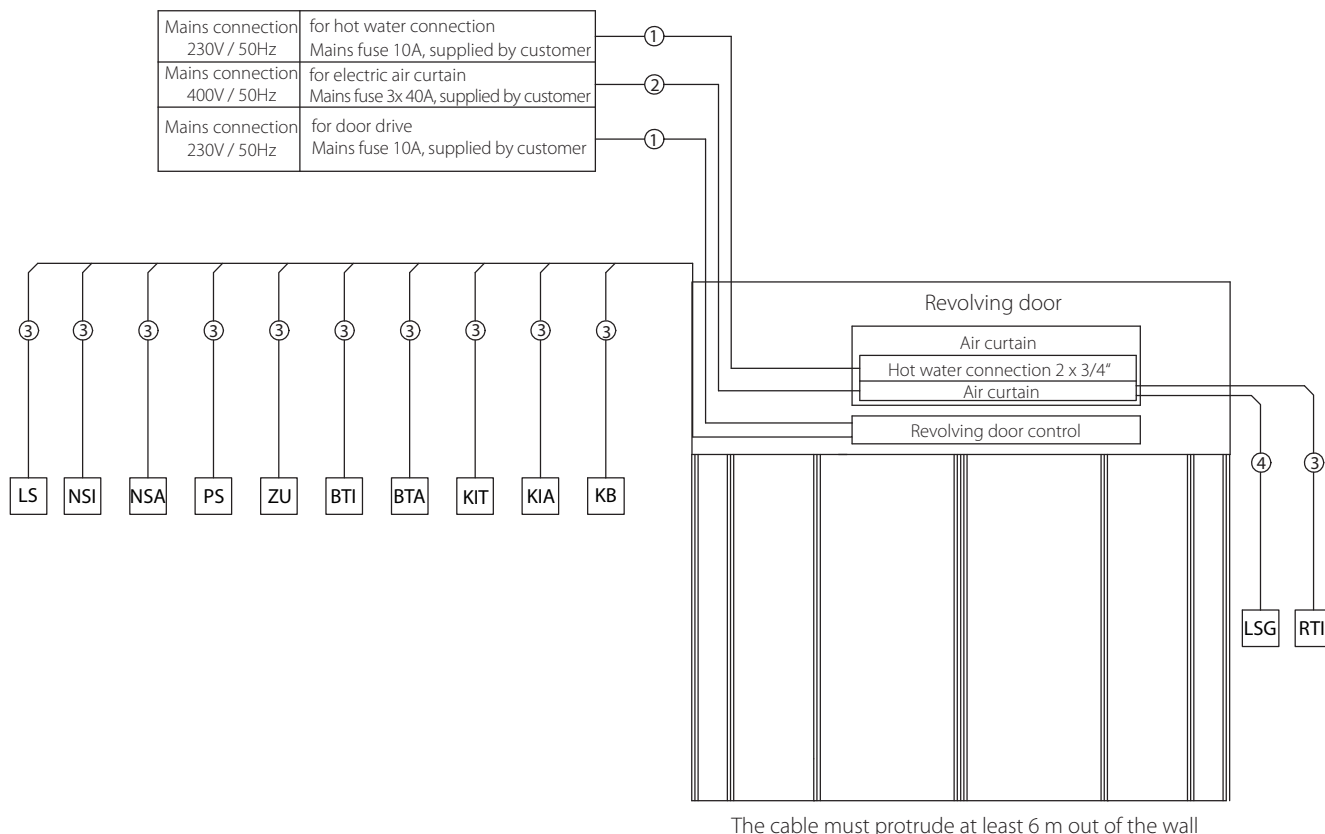
The cables stated in this wiring diagram must be laid by the customer.

The wiring diagram is only a schematic representation. The exact routing of the cables must be determined on site.

Cable and water connections must be made by a specialist company commissioned by the customer.

Cable :

- ① NYM-J 3 x 1,5 mm²
- ② NYM-J 5 x 1,5 mm²
- ③ JE-Y(ST)Y 2 x 2 x 0,8 mm
- ④ JE-Y(ST)Y 10 x 0,8 mm max. 20 m



Wiring diagram revolving door under floor installation

LS	Light switch (by customer)
NSI	Emergency stop button inside ¹⁾
NSA	Emergency stop button outside ¹⁾
PS	Programme switch
ZU	Timer
BTI	Button for disabled inside
BTA	Button for disabled outside
KIR	Contactor inside (KI) radar
KAR	Contactor outside (KA) radar
KIT	Contactor inside (KI) button ²⁾
KIA	Contactor outside (KI) button ³⁾
KB	Contactor authorised (KB) ⁴⁾
LSG	Switchgear for air curtain
RTI	Room thermostat in the interior

¹⁾ Install emergency stop switches at all access points

²⁾ Several contactors inside (K) may be installed

³⁾ Several contactors outside (K) may be installed

⁴⁾ Several contactors authorised (KB) may be installed

Notes :

Wiring in accordance with VDE 0100

Wiring, connection and start-up must only be carried out by authorised electricians.

GEZE will not assume any warranty or provide service if GEZE products are combined with third-party products.

Additional actuation elements for the revolving door drive are installed within the profiles located outside or within the door drum.

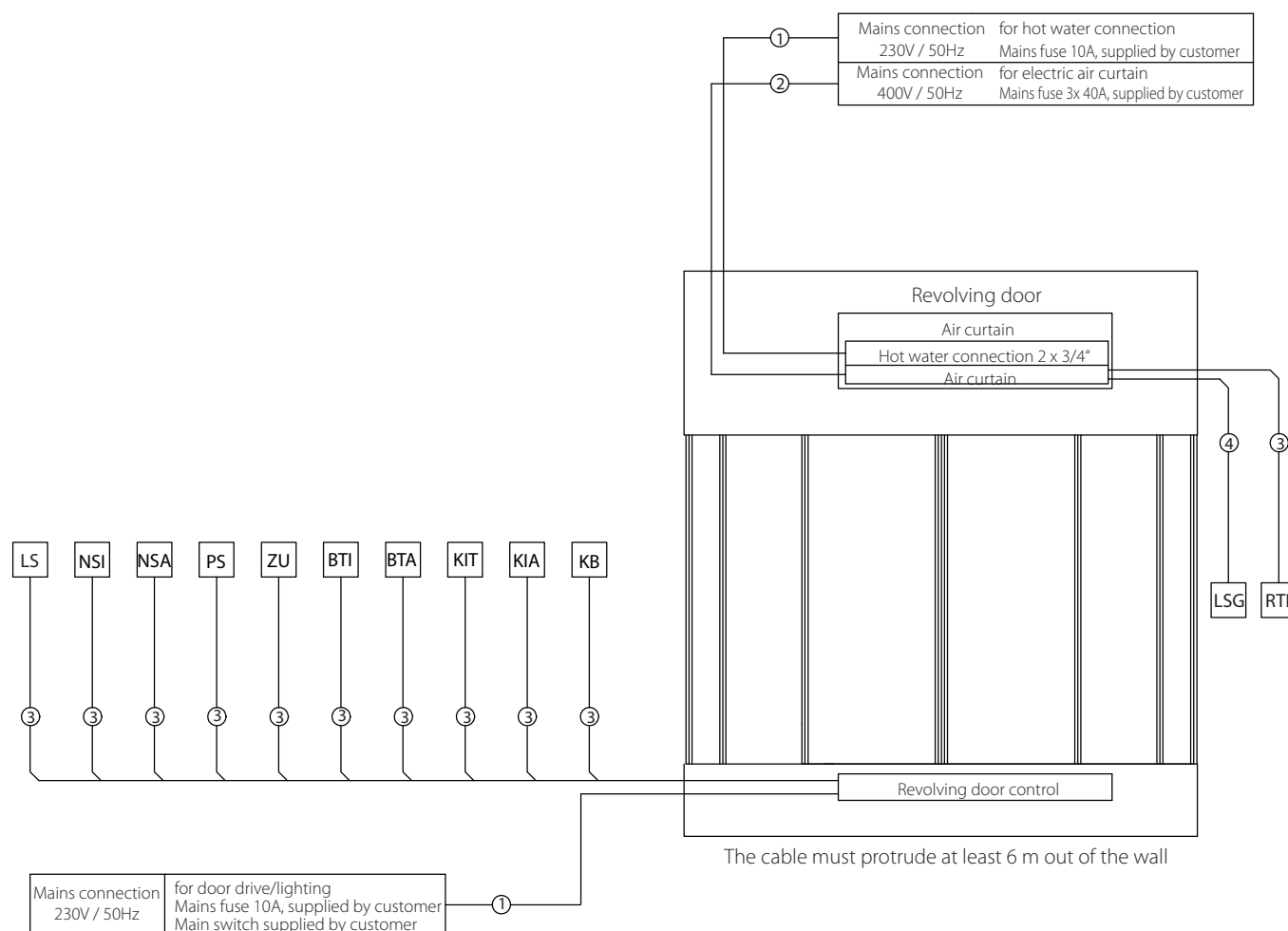
The cables stated in this wiring diagram must be laid by the customer.

The wiring diagram is only a schematic representation. The exact routing of the cables must be determined on site.

Cable and water connections must be made by a specialist company commissioned by the customer.

Cable :

- ① NYM-J 3 x 1,5 mm²
- ② NYM-J 5 x 1,5 mm²
- ③ JE-Y(ST)Y 2 x 2 x 0,8 mm
- ④ JE-Y(ST)Y 10 x 0,8 mm max. 20 m



REVOLVING DOORS GEZE TSA 325 NT

GEZE TSA 325 NT: Revolving door system with 3 or 4 leaves

with freely selectable inner diameter of max. 3600 mm, TÜV type tested in accordance with DIN 18650, with fine frame, with different types of drive and a variety of features

Types of drive

() Manual operation of the door

or

() Manually operated door with GEZE speed limiter, i.e. the max. speed of the revolving door is limited by a safety mechanism installed in the door.

or

() Manually operated door with GEZE positioning device, i.e. the manual door is returned to the initial position / final position at a very low speed.

or

() Half-automatic GEZE drive / Push&Go (Activation of the drive by slightly pressing against the door leaf):

microprocessor-controlled, electromechanical drive with infinitely variable speed,

Drive with two adjustable speeds.

Complete drive with control in the interior.

Control of category 2 or 3 in accordance with DIN EN 954-1;

Power supply: 230 V / 50 Hz / 350 W / 10 A,

Programming keypad to set the modes of operation.

Sensors in accordance with DIN 18650 (TÜV type-tested and certified) consisting of:

- Post safety sensor
- Anterpost safety sensor (contactless)
- Safety contact strip horizontally attached to the leaf (heel protection)
- Safety contact strip vertically attached to the leaf (hand protection)
- Mobile safeguarding device attached to the leaf (contactless, as of diameter > 3000 mm)

or

() Fully-automatic GEZE revolving door system (actuation via movement detector)

Microprocessor-controlled, electromechanical drive with infinitely variable speed, drive with two adjustable speeds.

Complete drive with control in the interior,

Control of category 2 or 3 in accordance with DIN EN 954-1;

Power supply: 230 V / 50 Hz / 350 W / 10 A,

Programming keypad to set the modes of operation.

Sensors in accordance with DIN 18650 (TÜV type-tested and certified) consisting of:

- Post safety sensor
- Anterpost safety sensor (contactless)
- Safety contact strip horizontally attached to the leaf (heel protection)
- Safety contact strip vertically attached to the leaf (hand protection)
- Mobile safeguarding device attached to the leaf (contactless, as of diameter > 3000 mm)

Dimensions:

() Inner diameter: ... mm (freely selectable between 1800 and 3600 mm)

() Outer diameter: ... mm (freely selectable between 1880 and 3680 mm)

() Clear passage height DH: ... mm (up to 3000 mm, higher on request)

() Overall height of door system: ... mm

() Floor recess: ... mm (min. 60 mm)

Note: Variant dimensions on request!

Version:

() 3 leaves

() 4 leaves

Turnstile:

() Rigid door leaves finely framed to hold toughened safety glass 8 mm **or**

() Folding / swivelling leaves suited for the use in escape and rescue routes and for ventilation purposes with a canopy height of only 200 mm

Note: A suitable escape and rescue route must have an inner diameter of at least 2600 mm. Max. wind load 6 Beaufort.

Drum walls finely framed of GEZE aluminium profiles to hold:

() curved laminated glass 10 mm, clear **or**

() curved thermally insulated panel filling, thickness 22 mm **or**

() flat thermally insulated panels, thickness approx. 34 mm

Ceiling construction of aluminium:

() Standard height 200 mm, 70 mm for manual door and doors with underfloor operator **or**

() Raised ceiling canopy ... mm, with all-around canopy cover of curved aluminium sheet

Roof covering outside the building:

() as dust-proof roof with wooden board **or**

() optical sheet-metal covering **or**

() waterproof with 2 waterspouts (flat roof without descent)

Roof covering inside the building:

() as dust-proof roof with wooden board **or**

() optical sheet-metal covering

Soffit:

() consisting of aluminium circle segments in system colour including inspection opening **or**

() consisting of stainless steel aluminium circle segments grain 240, including inspection opening

Surface of aluminium parts:

() Powder-coated RAL-/DB-/NCS colours **or**

() LM anodised E6/EV1 **or**

() Colour anodised **or**

() Stainless steel like anodised (like polished), up to max. d = 3000 mm system diameter **or**

REVOLVING DOORS GEZE TSA 325 NT

- () Covered with stainless steel polished, grain 240 **or**
- () Covered with stainless steel polished

Floor ring:

- () GEZE 360° stainless steel (V2A) Floor ring of rectangular tube 30x30x2 mm. The floor rings simultaneously serves as bordering of the floor covering.
- () Sheet-metal base 100 mm **and/or**
- () Swivel flange (30x5 mm) **and/or**
- () Base plate with discharge nozzle **or**
- () Direct mounting of the self-supporting drum construction to the top edge of the finished floor.

Information: Only possible with load-bearing and plane finished floor. Not suited for versions with folding/ swivelling leaves.

Note: The insulation of the building is an outside service and has to be carried out by the customer.

Floor covering:

- () GEZE floor mat, colour anthracite, 22 mm, other colours on request! **or**
- () 18 mm coco mat in natural colours (delivery only, laying by the technical crew of floor fitters) **or**
- () 4 mm black rubber nap mat (delivery only, laying by the technical crew of floor fitters) **or**
- () Floor covering to be laid by customer

Delivery and installation:

Electric wiring to be carried out by electric company commissioned by the customer in accordance with the project-related GEZE wiring diagram, delivery, installation and start-up by GEZE fitters or service partner. Preparation of a safety analysis and handover of this safety analysis to the user. Briefing of the user of the door system. Handover of the user manual and test manual. Affixing of test sticker badge.

Possible item: Night locking

- GEZE night locking sliding doors, sliding on outside, manual, locking from inside and outside.
- Revolving doors with a canopy of 70 mm and 4 leaves are only available up to a max inner diameter of 3000 mm.
- () Finely framed laminated glass 10 mm, clear **or**
- () with aluminium panels

Locking of the sliding doors with night locking mechanism with:

- () snap lock **or**
- () bar lock

or:

- () **GEZE automatic sliding doors with night locking mechanism**, incl. dead man's control and power pack for emergency opening in the case of power failure. Manual night locking mechanism sliding on the inside upon request!

Possible item: Locking of the turnstile

- () no locking **or**
- () manual locking with GEZE extended bolt lock in the leaf, prepared for profile half-cylinder to be provided by customer **or**
- () locking by means of electrically operated GEZE disk brake. Note: Canopy height at least 200 mm **or**
- () electromechanical locking (bi-stable); in the case of power failure the previous door status of the door is maintained. Min. canopy height 200 mm.

Note: If sliding doors with night locking mechanisms are used the turnstile must not be equipped with a locking mechanism.

Possible item: Handles

- () polished, vertical push bar of stainless steel, Ø 30 mm, fitted directly onto the glass **or**
- () polished, horizontal push bar of stainless steel, Ø 30 mm, fitted directly onto the glass

Possible item: off-centre façade connections

- () Connections and fitting of the revolving door to the façade off centre

Possible item: Key-operated switch in connection with programming keypad

- () GEZE key-operated switch in connection with GEZE programming keypad TPS to avoid unauthorised changeover of the mode of operation

Possible item: Key-operated switch

- () GEZE key operated switch, outside, prepared for profile half-cylinder to be provided by customer for opening the door from the closed position as well as key-operated switch inside for opening the door from inside. Upon operation from inside or outside an adjustable number of sectors moves from the locked position and then locks again.

Possible item: Button for the handicapped

- () Delivery and installation of two GEZE buttons with wheelchair symbol in direct vicinity of the revolving door. When operating these buttons the revolving speed of the door is reduced by a pre-adjustable value in order to offer hampered persons greater comfort in use and more safety. The duration of activation can be adjusted as well. The installation of the empty conduits towards the point of installation must be executed by the customer.

Note: can only be used for the version Push&Go and fully automatic.

Possible item: Lighting

- () pcs. LED spots (max. 1 W per LED) integrated in the soffit **or**
- () pcs. Recesses for lighting to be installed by the customer (diameter = ... mm)

Possible item: underfloor operator

- () GEZE drive as underfloor operator, dimensions of drive box in the floor: 720 x 1430 x 280 mm, prepared for drainage to be provided by the customer, canopy height: 75 mm, floor recess min. 300 mm. Suitable for all types of drive.

Possible item: Air curtain

- () Air curtain integrated in the ceiling construction of the revolving door including blow-out channel within the canopy area.

Execution of the air curtain including:

- () Electric connection: Heat output: ... KW/ amount of air ... m³/h
- () Hot-water connection: Heat output: ... KW/ amount of air ... m³/h

REVOLVING DOORS GEZE TSA 325 NT

GEZE TSA 325 NT GG All-glass revolving door with 3 or 4 leaves,

with outstanding transparent optical appearance, with freely selectable inner diameter of up to 3300 mm, TÜV type-tested in accordance with DIN 18650 with different types of drives and various optional features

Types of drives:

() Manual operation of the door

or

() Manually operated door with GEZE speed limiter. Floor recess min. 300 mm

or

() Manually operated door with GEZE positioner. Floor recess min. 300 mm

or

() Semi-automatic GEZE drive/ Push&Go

Drive as underfloor operator, dimensions of drive box in the floor: 720 x 1430 x 280 mm, prepared for drainage to be provided, by the customer, power supply: 230 V / 50 Hz / 350 W / 10 A, programming keypad to set all modes of operation.

Fusing in accordance with DIN 18650 (TÜV type-tested and certified) consisting of:

- Post safety sensor
- Anterpost safety sensor (contactless)
- Safety contact strip fitted horizontally to the leaf (heel protection)
- Safety contact strip fitted vertically to the leaf (hand protection)
- Mobile safeguarding device attached to the leaf (contactless, min. diameter > 3000 mm)

or

() Fully-automatic GEZE revolving door system

Drive as underfloor operator, dimensions of drive box in the floor: 720 x 1430 x 280 mm, prepared for drainage to be provided, by the customer, power supply: 230 V / 50 Hz / 350 W / 10 A, programming keypad to set all modes of operation.

Fusing in accordance with

- Post safety sensor
- Anterpost safety sensor (contactless)
- Safety contact strip fitted horizontally to the leaf (heel protection)
- Safety contact strip fitted vertically to the leaf (hand protection)
- Mobile safeguarding device attached to the leaf (contactless, min. diameter > 3000 mm)

Dimensions:

() Inner diameter ... mm (from 1800 mm to 3300)

() Outer diameter: mm (from 1890 to 3390 mm)

() Clear passage height DH: ... mm (up to 2600 mm); other heights on demand !

() Overall height of door system: ... mm

() Canopy height: 1752 mm (height of glass roof);

() Floor recess (minimum): 60 mm for manual door only

or

() Floor recess (minimum): 300 mm for door with speed limiter, positioner, semi-automatic or fully-automatic. Other dimensions on request!

Versions:

() 3 leaves

() 4 leaves

Turnstile:

() Rigid leaves, finely framed, without centre post to hold toughened safety glass 10 mm

Note: An all-glass system cannot be equipped with folding leaves (Break-out)

Drum walls:

() Drum walls of curved 16 mm laminated glass, clear, with vertical edge protecting profiles

Ceiling construction:

() Glass ceiling of flat 1752 mm laminated clear glass (2 x annealed glass). Outer edges with edge protection. The 2 half-shelves of glass are spot-held and equipped with a recess to hold the pivot axle bearing.

Surface of the aluminium parts: see GEZE TSA 325 NT

Floor ring: see GEZE TSA 325 NT (no direct fitting!)

Floor covering: see GEZE TSA 325 NT

Delivery and installation: see GEZE TSA 325 NT

Possible item: Night locking

Possible item: () **Night locking**

Possible item: () **Locking**

Possible item: () **Handles**

Possible item: () **Off-centre façade connection**

Possible item: () **Key-operated button with programming keypad**

Possible item: () **Key-operated switch**

Possible item: () **Button for the handicapped**

For the complete tender specifications with download please refer to www.geze.com

REVOLVING DOORS GEZE TSA 325 NT

References



Manually operated GEZE revolving door with 3 leaves



Hitachi Power, Duisburg



VGH Versicherungen, Hannover



Automatic GEZE revolving door with 4 leaves



Manually operated GEZE revolving door with 4 leaves



BayArena, Leverkusen

GEZE GmbH
P.O. Box 1363
71226 Leonberg
Germany

GEZE GmbH
Reinhold-Vöster-Straße 21-29
71229 Leonberg
Germany

Telefon +49 (0) 7152-203-0
Telefax +49 (0) 7152-203-310

www.geze.com

Germany

GEZE Sonderkonstruktionen GmbH
 Planken 1
 97944 Boxberg-Schweigern
 Tel. +49 (0) 7930-9294-0
 Fax +49 (0) 7930-9294-10
 E-Mail: sk.de@geze.com

GEZE GmbH
 Niederlassung Nord/Ost
 Bühringstraße 8
 13086 Berlin (Weissensee)
 Tel. +49 (0) 30-47 89 90-0
 Fax +49 (0) 30-47 89 90-17
 E-Mail: berlin.de@geze.com

GEZE GmbH
 Niederlassung West
 Nordsternstraße 65
 45329 Essen
 Tel. +49 (0) 201-83082-0
 Fax +49 (0) 201-83082-20
 E-Mail: essen.de@geze.com

GEZE GmbH
 Niederlassung Mitte
 Adenauerallee 2
 61440 Oberursel (b. Frankfurt)
 Tel. +49 (0) 6171-63610-0
 Fax +49 (0) 6171-63610-1
 E-Mail: frankfurt.de@geze.com

GEZE GmbH
 Niederlassung Süd
 Reinhold-Vöster-Straße 21-29
 71229 Leonberg
 Tel. +49 (0) 7152-203-594
 Fax +49 (0) 7152-203-438
 E-Mail: leonberg.de@geze.com

GEZE Service GmbH NL Südwest
 Reinhold-Vöster-Straße 25
 71229 Leonberg
 Tel. +49 (0) 7152-92 33 34

GEZE Service GmbH NL Nord-Ost
 Bühringstraße 8
 13086 Berlin (Weissensee)
 Tel. +49 (0) 30-47 02 17 32

GEZE Service GmbH NL West
 Nordsternstraße 65
 45329 Essen
 Tel. +49 (0) 201-8 30 82 16

GEZE Service GmbH NL Mitte
 Adenauerallee 2
 61440 Oberursel
 Tel. +49 (0) 6171-63 61 03

GEZE Service GmbH NL Süd
 Keltenring 10
 85658 Eggening
 Tel. +49 (0) 8095-87 13 61

Austria

GEZE Austria GmbH
 Mayrwiesstraße 12
 5300 Hallwang b. Salzburg
 Tel. +43-(0)662-663142
 Fax +43-(0)662-663142-15
 E-Mail: austria.at@geze.com

Baltic States

GEZE GmbH Baltic States office
 Dzelzavas iela 120 S
 1021 Riga
 Tel. +371 (0) 67 89 60 35
 Fax +371 (0) 67 89 60 36
 E-Mail: office-latvia@geze.com

Benelux

GEZE Benelux B.V.
 Leemkuil 1
 Industrieterrein Kapelbeemd
 5626 EA Eindhoven
 Tel. +31-(0)40-26290-80
 Fax +31-(0)40-26 290-85
 E-Mail: benelux.nl@geze.com

Bulgaria

GEZE Bulgaria - Trade
 Representative Office
 61 Pirinski Prohod, entrance „B“,
 4th floor, office 5,
 1680 Sofia
 Tel. +359 (0) 24 70 43 73
 Fax +359 (0) 24 70 62 62
 E-Mail: office-bulgaria@geze.com

China

GEZE Industries (Tianjin) Co., Ltd.
 Shuangchenzhong Road
 Beichen Economic Development
 Area (BEDA)
 Tianjin 300400, P.R. China
 Tel. +86(0)22-26973995-0
 Fax +86(0)22-26972702
 E-Mail: Sales-info@geze.com.cn

GEZE Industries (Tianjin) Co., Ltd.
 Branch Office Shanghai
 Unit 25N, Cross Region Plaza
 No 899, Ling Ling Road,
 XuHui District
 200030 Shanghai, P.R. China
 Tel. +86 (0)21-523 40 960
 Fax +86 (0)21-644 72 007
 E-Mail: chinasales@geze.com.cn

GEZE Industries (Tianjin) Co., Ltd.
 Branch Office Guangzhou
 Room 17C3
 Everbright Bank Building, No.689
 Tian He Bei Road
 510630 Guangzhou
 P.R. China
 Tel. +86(0)20-38731842
 Fax +86(0)20-38731834
 E-Mail: chinasales@geze.com.cn

GEZE Industries (Tianjin) Co., Ltd.
 Branch Office Beijing
 Rm3A02, Building 3
 ZhuBang 2000 Business Plaza
 No.98, Balizhuang xili
 Chaoyang District
 100025 Beijing, P.R.China
 Tel. +86 (0)10-8797 5177 -/78
 Fax +86 (0)10-8797 5171
 E-Mail: chinasales@geze.com.cn

France

GEZE France S.A.R.L.
 ZAC de l'Orme Rond
 RN 19
 77170 Servon
 Tel. +33-(0)1-606260-70
 Fax +33-(0)1-606260-71
 E-Mail: france.fr@geze.com

Hungary

GEZE Hungary Kft.
 Bartók Béla út 105-113.
 Budapest
 H-1115
 Tel. +36 (1) 481 4670
 Fax +36 (1) 481 4671
 E-Mail: office-hungary@geze.com

Iberia

GEZE Iberia S.R.L.
 Pol. Ind. El Pla
 C/Comerc, 2-22, Nave 12
 08980 Sant Feliu de Llobregat
 (Barcelona)
 Tel. +34(0)9-02194036
 Fax +34(0)9-02194035
 E-Mail: info@geze.es

India

GEZE India Private Ltd.
 MF 2 & 3, Guindy Industrial Estate
 Ekkattuthangal
 Chennai 600 097
 Tamilnadu
 Tel. +91 44 3061 6900
 Fax +91 44 3061 6901
 E-Mail: office-india@geze.com

Italy

GEZE Italia Srl
 Via Giotto, 4
 20040 Cambiago (MI)
 Tel. +3902950695-11
 Fax +3902950695-33
 E-Mail: italia.it@geze.com

GEZE Engineering Roma Srl
 Via Lucrezia Romana, 91
 00178 Roma
 Tel. +3906-7265311
 Fax +3906-72653136
 E-Mail: roma@geze.biz

Poland

GEZE Polska Sp.z o.o.
 ul. Annapol 21
 03-236 Warszawa
 Tel. +48 (0)22 440 4 440
 Fax +48 (0)22 440 4 400
 E-Mail: geze.pl@geze.com

Romania

GEZE Romania s.r.l.
 IRIDE Business Park,
 Str. Dimitrie Pompeiu nr. 9-9a,
 Building 10, Level 2, Sector 2,
 020335 Bucharest
 Tel.: +40 (0) 21 25 07 750
 Fax: +40 (0) 21 25 07 750
 E-Mail: office-romania@geze.com

Russian Federation

GEZE GmbH Representative
 Office Russia
 Kolodesnij pereulok3, str. 25
 Office Nr. 5201-5203
 107076 Moskau
 Tel. +7 (0) 49 55 89 90 52
 Fax +7 (0) 49 55 89 90 51
 E-Mail: office-russia@geze.com

Scandinavia – Sweden

GEZE Scandinavia AB
 Mallslingan 10
 Box 7060
 18711 Täby, Sweden
 Tel. +46(0)8-7323-400
 Fax +46(0)8-7323-499
 E-Mail: sverige.se@geze.com

Scandinavia – Norway

GEZE Scandinavia AB avd. Norge
 Industriveien 34 B
 2073 Dal
 Tel. +47(0)639-57200
 Fax +47(0)639-57173
 E-Mail: norge.se@geze.com

Scandinavia – Finland

Branch office of GEZE Scandinavia AB
 Herrlantie 824
 Postbox 20
 15871 Hollola
 Tel. +358(0)10-4005100
 Fax +358(0)10-4005120
 E-Mail: finland.se@geze.com

Scandinavia – Denmark

GEZE Danmark
 Branch office of GEZE Scandinavia AB
 Høje Taastrup Boulevard 53
 2630 Taastrup
 Tel. +45(0)46-323324
 Fax +45(0)46-323326
 E-Mail: danmark.se@geze.com

South Africa

DCLSA Distributors (Pty.) Ltd.
 118 Richards Drive, Halfway House,
 Ext 111
 P.O. Box 7934, Midrand 1685
 Tel. +27(0)113158286
 Fax +27(0)113158261
 E-Mail: info@dclsa.co.za

Switzerland

GEZE Schweiz AG
 Bodenackerstrasse 79
 4657 Dulliken
 Tel. +41-(0)62-2855400
 Fax +41-(0)62-2855401
 E-Mail: schweiz.ch@geze.com

Turkey

GEZE GmbH Türkiye - İstanbul
 İrtibat Bürosu
 Ataşehir Bulvarı, Ata 2/3
 Plaza Kat: 9 D: 84 Ataşehir
 Kadıköy / İstanbul
 Tel. + 90 (0) 21 64 55 43 15
 Fax + 90 (0) 21 64 55 82 15
 E-Mail: office-turkey@geze.com

Ukraine

Repräsentanz GEZE GmbH Ukraine
 ul. Vikentija Hvoyki, 21,
 office 151
 04080 Kiev
 Tel. +38 (0) 44 49 97 725
 Fax +38 (0) 44 49 97 725
 E-Mail: office-ukraine@geze.com

United Arab Emirates/GCC

GEZE Middle East
 P.O. Box 17903
 Jebel Ali Free Zone
 Dubai
 Tel. +971(0)4-8833112
 Fax +971(0)4-8833240
 E-Mail: geze@emirates.net.ae

United Kingdom

GEZE UK Ltd.
 Blenheim Way
 Fradley Park
 Lichfield
 Staffordshire WS13 8SY
 Tel. +44(0)1543443000
 Fax +44(0)1543443001
 E-Mail: info.uk@geze.com

GEZE REPRESENTATIVE