

BLASI K31 three - leaf revolving door



SYSTEM:

Three – leaf automatic or manual revolving door which is available in various design options.

Executions with night shutters in manual or automatic version, with electric or mechanical locks, push bars in different variations or specific glass requirements that can be realized with BLASI.

Every 3-leaf automatic revolving door provides a very comfortable 120° wide compartment for any user and person.

The canopy structure is made of a solid and strong steel structure including thermal insulation and clad in aluminum plates along the pelmet and closed with a standard dust cover. The ceiling underside is closed with segmented aluminum plates that provide a solid and perfect flush view.

Highly engineered and reliable drive components ensure a smooth and safe operation at all times.

- Three – leaf revolving doors provide comfort and ideal for office buildings, airports, train-stations, hospitals, shopping centers, hotels and many more
- 120° three leaf turnstile that provides comfortable space to walk through
- Ground position provides high seal and reduces wind draft into building
- Climate control (temperature, air condition wind-drafts) which reduces costs
- Flexible design options by BLASI provide totally customized solutions for any entrance
- Full glass option available for incredible transparency mainly for glass facades

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INSIDE Diameter "U" (drum wall)		
Minimum diameter	1500 mm	approx. 5'
Maximum diameter	7000 mm	approx. 23'
OUTSIDE Diameter "Q" (canopy pelmet)		
Diameter inside + 58mm ($\approx 2 - 2/8"$) = outside diameter		

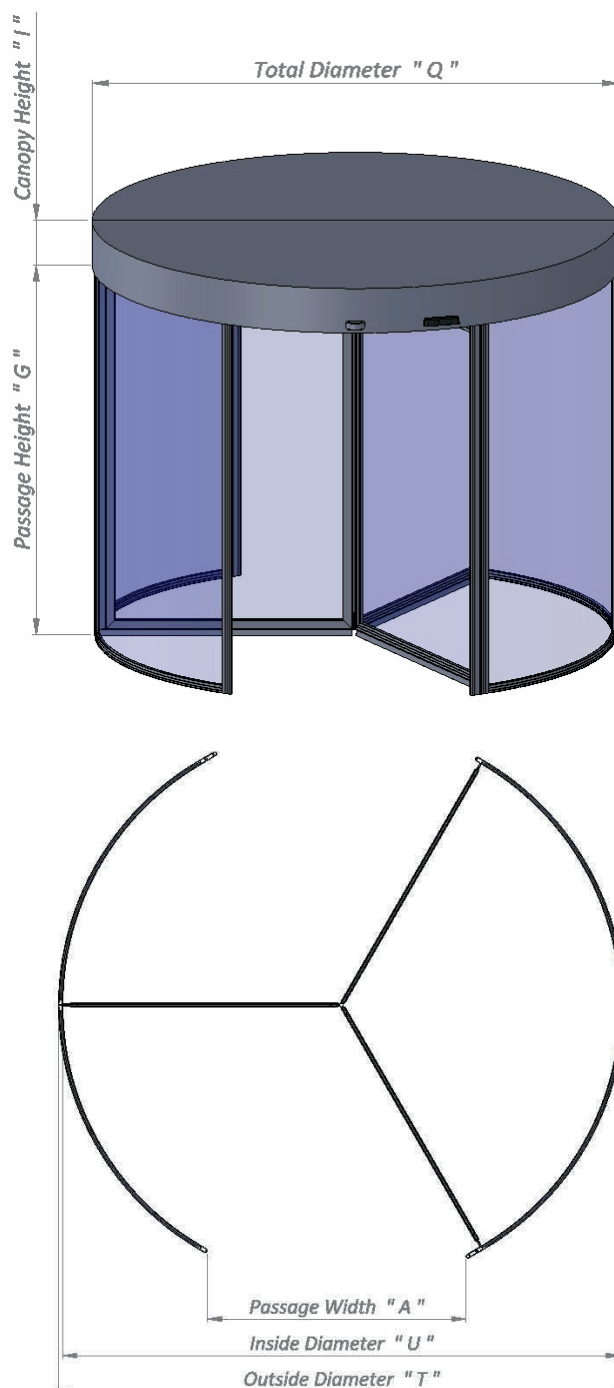
Entrance Opening "A" (between cylinder walls)	
Please calculate with underneath formula: Diameter "Q" x 0,5 – 130 = passage width in mm	

Passage Height "G"		
Minimal	2100 mm	approx. 6'- 11"
Maximal	3000 mm	approx. 9'- 10"

Canopy Height "I"			
Minimal	250 mm	$\approx 10"$	< Ø 3500 mm
Minimal	350 mm	$\approx 14"$	> Ø 3500 mm
Minimal	400 mm	$\approx 16"$	> Ø 4800 mm
Minimal	500 mm	$\approx 20"$	> Ø 6000 mm
Additional	+ 300 mm	+ 12"	with air curtain

Throughput Capacity (based on bi-directional use)			
2500 mm	3000 mm	3500 mm	4000 mm
$\approx 8' - 2"$	$\approx 10"$	$\approx 11" - 6"$	$\approx 13' - 2"$
1800 p/h	2025 p/h	2205 p/h	2232 p/h
Above capacity is based on theoretical calculation with maximum occupancy of persons per segment per hour in both directions (without engagement).			

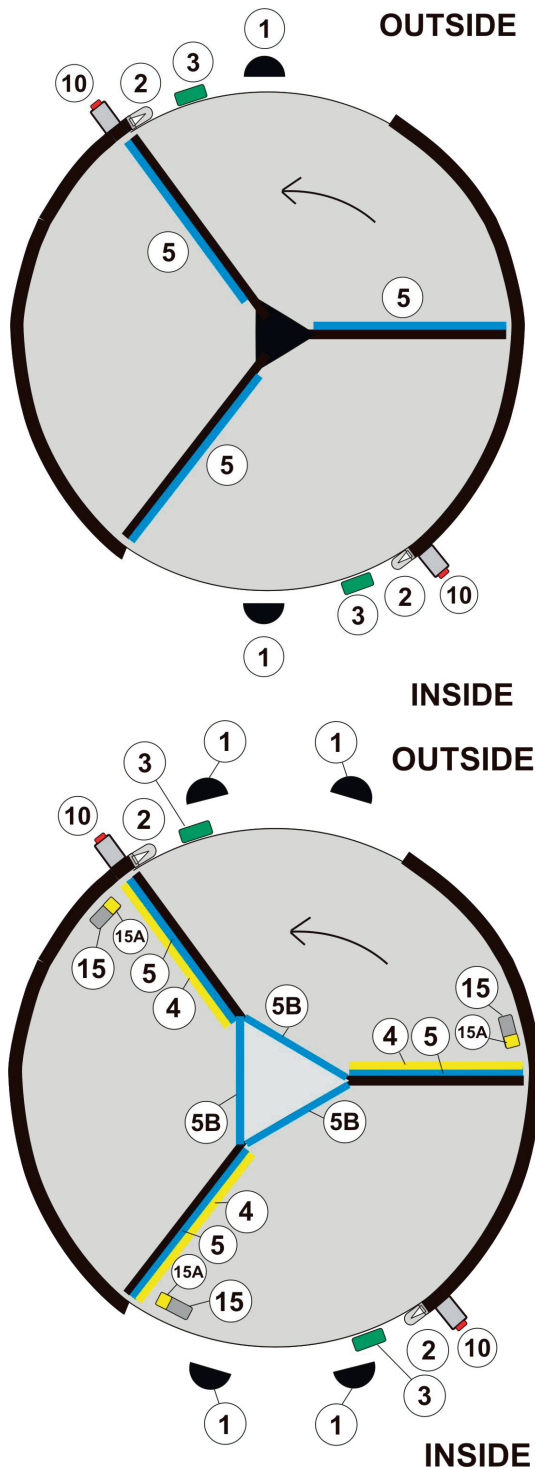
Door Speed in U/min (rpm's) *	
For diameter < 2500 mm	Adjustable, max. 5,8 U/min
For diameter < 3500 mm	Adjustable, max. 4,2 U/min
For diameter < 4800 mm	Adjustable, max. 3,2 U/min



* Please note that the speed needs to be adjusted in accordance to your local codes & requirements

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SAFETY FEATURES:



- 1) 2x infrared detector type: **F**
4x when entrance opening is > 2000mm
or
2x motion detector type **RAD290**
4x when entrance opening is > 2000mm
- 2) 2x electro safety strips drum edge "77mm"
- 3) 2x vertical sensors type **I-ON-C**
clear passage height < 3000mm
- 4) 4x sensors strips type: **TOPSAFE (TS)**
mounted at top turnstile door leaf to slow down door
mounting height must be < 3000mm
OPTION for doors < 3000 mm (9' - 10")
STANDARD for doors > 3000 mm (9' - 10")
- 5) 4x electro safety strips heel protection "45mm"
- 15) 4x presence detector vertically in front of leading door leaf
type: **TOPSAFE-TS**
- 15a) 4x forward sensor type: **W-LP** if passage height > 3000mm
- 10) 1x emergency stop switch (behind glass) mounted in the
vertical support tube 1x inside mounting height 1200mm
 - operating switch with standard key, mounting height 1200mm (OFF - AUTO - CONTINUOUS - HAND)
 - 4x label (decal mandatory signs) "mother and child / dog"
 - 2x slow down push button mounting height 800mm
(**OPTIONAL 1x outside & 1x inside**)
 - 1x emergency operating key switch mounted in the tube
(**OPTIONAL 1x inside**)
 - 1x IBS - "digital error and program display system"
(**OPTIONAL 1x inside**)
 - electromechanical bistable locking 24V DC
(**OPTIONAL 1x inside the canopy**)



key operating switch
inside as standard



emergency stop switch
inside as standard



slow down push button
inside and outside **optionally**

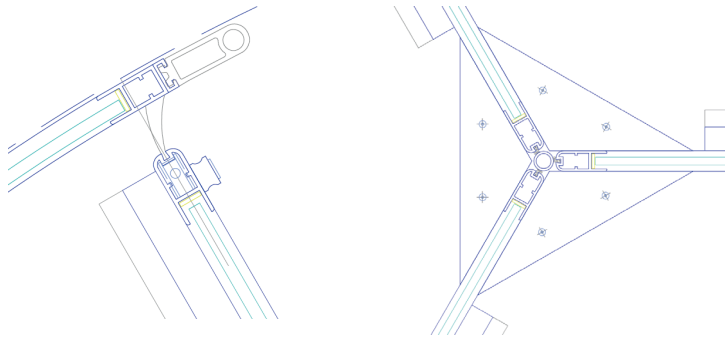


emergency operating key switch
inside **optionally**

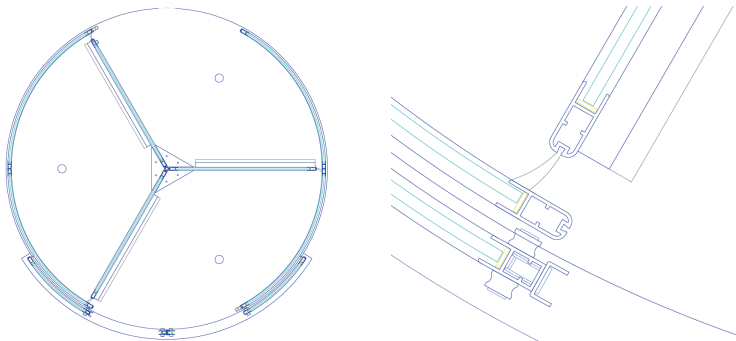
NOTE: Above diagrams show only basic location of safety features without obligation.

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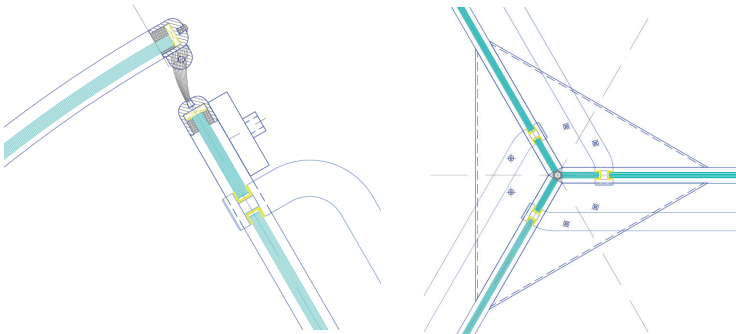
DESIGN FEATURES:



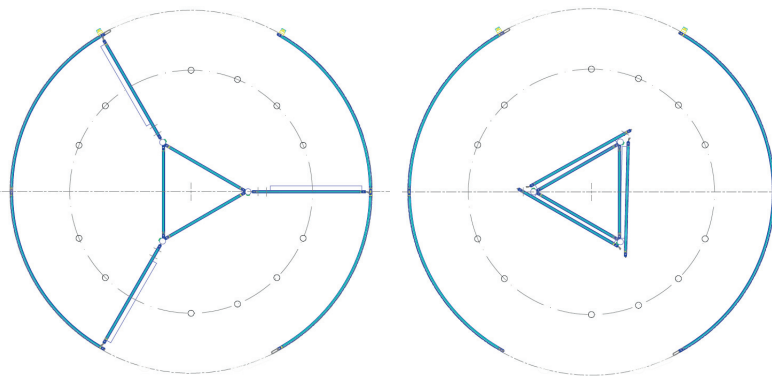
- basic design with slim 26mm x 65mm profiles for automatic and manual revolving doors
- robust and self supporting steel or aluminium structure
- natural horse-hair brush seals
- wet glazing (silicone) that provides a high durability



- night-shutter available in manual or automatic version
- outside or inside of cylinder walls (drum) possible
- in glass or panel construction
- with full or half profile cylinder lock available
- keeps entrance clean at night
- and provides higher security



- vitro design for manual revolving doors
- super slim Blasi profiles with 26mm x 27mm
- horizontal stainless steel handles for stability
- middle of turnstile without any profiles



- middle show-case (display) for larger revolving doors with lockable accessible leaf
- straight, concave- or convex-curved show case executions possible
- allows the handling of large goods through the door and supports escape routes as all leaves are collapsible

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BASIC EQUIPMENT:

The door is supplied including the following basic parts and features:

1 no. Operating switch with following modes:
(OFF– Automatic – Continuous – Hand)

1 no. Emergency Stop Switch

OPTIONAL:

1 no. Digital status and error display

2 no. Slow down push buttons

Including all necessary safety features as required by latest standards (refer to page 3).

SURFACE:

The surface can be provided in any standard RAL powder coating or standard anodizing where BLASI provides and uses the highest quality. Stainless steel clad surface in quality 304 or 316, bronze or brass are also possible on a totally bespoke execution.

BASIC OPTIONS:

- Floor Ring (substructure) in stainless steel to receive matting for 17, 22 or 25mm
- PURUS floor-mat by BLASI with felt strips in anthracite or other colors, height 22mm
- 3, 6 or 9 pc. LED spot lights integrated in the rotation ceiling ; 12 V DC and 1,2 Watt
- 3, 6 or 9 pc. Halogen spot lights integrated in the rotation ceiling ; 12 V DC and 20 Watt
- 3 pc. Horizontal or vertical push bars in different design options available. Standard push bars in stainless steel 304 diameter 30mm
- Watertight roof at outside (180°) including two water spouts to drain the water
- Dust roof 180° or 360° in aluminum raw, RAL, anodized, stainless steel etc.....
- Air curtain (heater) including air duct and air outtake for electrical or warm water supplies
- • Monitoring contacts for door position and lock
- status (low voltage, NO)

GLAZING:

The drum walls are made of special slim BLASI aluminum extrusions with a size of only 65mm x 26mm (height x width) and glazed with clear 10,76mm curved laminated safety glass and 8mm clear straight single toughened safety glass. Typical is a single sheet tempered safety glass with 10mm used.

DESIGN OPTIONS:

- Low iron glass (White-Glass); tinted glass and special glasses on request
- Drum walls solid panel construction, framed or flush instead of drum walls with glass
- Night shutter (2x 30° leaves) outside or inside available in various options
- Mid-rails (muntin) at drum walls or rotating centerpiece, impact protection from trolleys
- Individual design executions possible on request such as signage, special illumination etc.
- 3 manually foldable door leafs for transportation purposes or supporting escape routes (break-out) with book fold design
- Middle show-case (display) in straight, concave or convex design that starts from diameters with 3200mm (approx. 10'), all three door leaves will be manually collapsible and during normal operation hold with electromagnets
- VITRO – design (full glass execution) available for up to 3000mm in diameter (9' - 9'') with a maximum total height of 4000mm (13'), this design requires horizontal push bars to stabilize the turnstile
- Column – drive that will allow to build the door around a structural existing steel or concrete column (pillar), provides solutions even for narrow spaces where revolvers can be used
- Individually design option always possible, please contact your local BLASI sales partner

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TECHNICAL DATA:

Power supply	230V AC or 120 V AC, 50 - 60Hz
Power connection	single phase alternative current, fused 16 Ampere
Power consumption	250 Watt (Ø 2000mm); 1600 Watt (Ø 6000mm)

Control Unit	24V DC (short-circuit-proof)
Motor Current	48V DC (pulsed)

- all cables and conduits has to be supplied by others (as per wiring diagram by Blasi)
- optionally monitoring contacts for status of lock and door position (potential free, NO)
- optionally monitoring contacts for door interruptions and status (potential free, NO)

ENVIRONMENTAL CONDITIONS:

Temperature Range	-15°C (45°F) up to + 50°C (105°F)
Humidity Range	up to 85% relative humidity
Case Protection	IP 20

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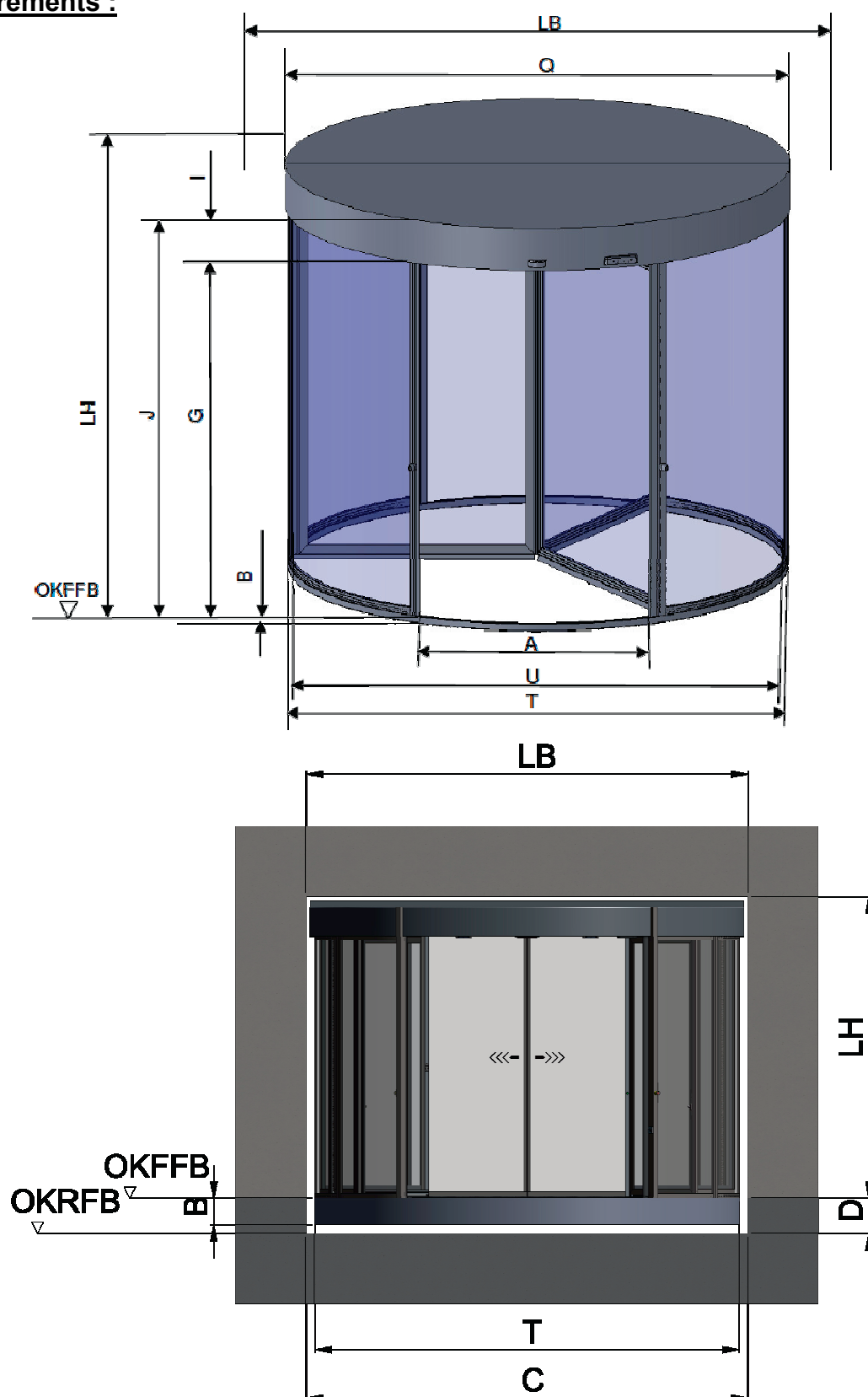


NOTE: Blasi reserves the right for technical or content alterations without pre-notification at any time.

K31 Revolving door with 3 leafs

Technical data sheet of dimensions

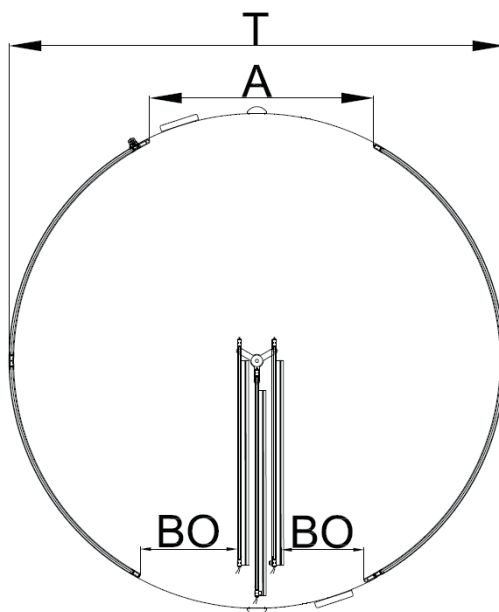
Measurements :



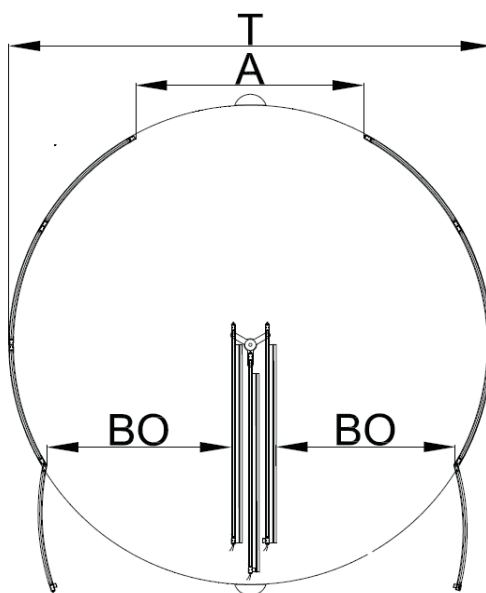
K31 Revolving door with 3 leafs

Technical data sheet of dimensions

Revolving door with foldable door leafs (additional escape route) :



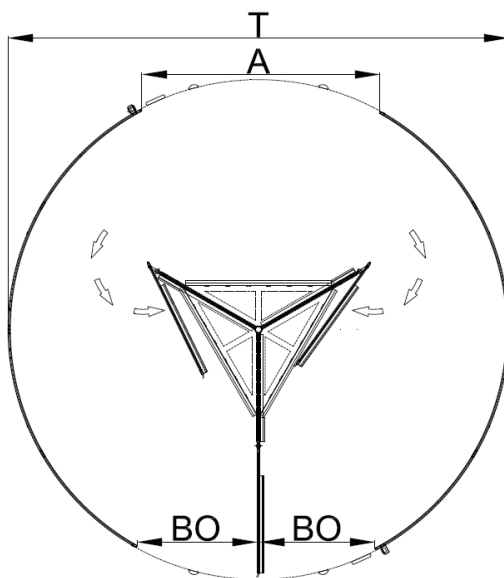
Revolving door with foldable door leafs and foldable drum walls for higher passenger flow (additional escape route) :



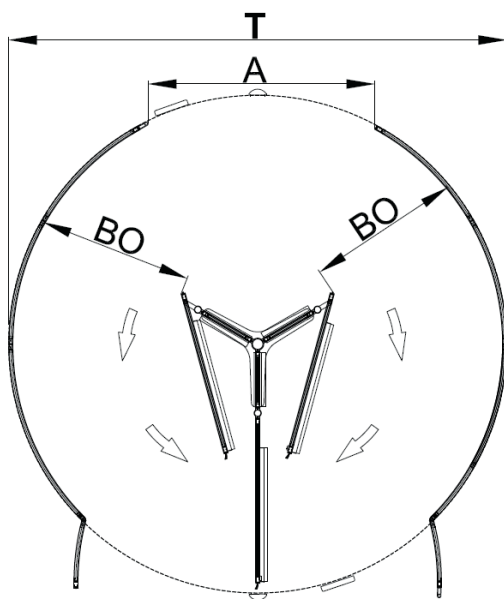
K31 Revolving door with 3 leafs

Technical data sheet of dimensions

Revolving door with foldable door leaves (additional escape route) :



Revolving door with foldable door leaves and foldable drum walls for higher passenger flow (additional escape route) :



K31 Revolving door with 3 leafs

Technical data sheet of dimensions

Abbreviation	Denomination
A	Passage width
B	Height of floor frame
C	External dimension of the floor frame
D	Depth of the recess for the floor frame
G	Passage height
I	Canopy height
J	Total height
LB	Recess width
LH	Recess height
OKFFB	Top edge finished floor
OKRFB	Top edge unfinished floor
Q	Total diameter
T	Outside diameter
U	Inside diameter
BO	Emergency opening width

Please note: Revolving doors with 3 leafs always refer the total diameter „Q“ to the exterior diameter of the canopy (example: 3600mm or 4800mm) contrary to the revolving doors with 2 leafs.

Calculation chart :

Denomination	Formula
« A » Passage width [mm]	$Q * 0,5 - 130$
« C » External dimension of the floor frame [mm]	$Q + 194$
« D » Depth of the recess floor frame [mm]	$B + 15$
« J » Total height [mm]	$G + I$
« LB » Recess width [mm]	$Q + 100$
« LH » Recess height [mm]	$J + 50$
« T » Outside diameter [mm]	$Q - 6$
« U » Inside diameter [mm]	$Q - 58$

K31 Revolving door with 3 leafs

Technical data sheet of dimensions

Belt pulley drive

Minimal and maximal dimensions :

« Q » Total diameter [mm]	« G » Passage height [mm]
1800 up to 3000	2000 up to 3000
1800 up to 4000 *	2000 up to 4000 *

* not available if confirm to DIN 18 650

The foldable door leave system is only available for diameters from 1800 up to 3300 mm.
Beyond this dimensions the drive system is different.

Canopy height with dust roof :

« Q » Total diameter [mm]	« I » Canopy height min. [mm]	« I » Canopy height max. [mm]
1800 up to 3000	250	1000
3001 up to 4000 *	250	1000

* not available if confirm to DIN 18 650

Canopy height with rain tray :

« Q » » Total diameter [mm]	« I » Canopy height min [mm]	« I » Canopy height max [mm]
1800 up to 3000	250	1000
3001 up to 4000 *	250	1000

* not available if confirm to DIN 18 650

Canopy height with air curtain :

« Q » » Total diameter [mm]	« I » Canopy height min [mm]	« I » Canopy height max [mm]
1800 up to 3000	550	1000
3001 up to 4000 *	550	1000

* not available if confirm to DIN 18 650

K31 Revolving door with 3 leafs

Technical data sheet of dimensions

Belt pulley drive with inside turning ceiling

Minimal und maximal dimensions :

« Q » Total diameter [mm]	« G » Passage height [mm]
3301 up to 5000 *	2000 up to 4000 *

* not available if confirm to DIN 18 650

The foldable door leave system is available for all door dimensions.

Canopy height with dust roof :

« Q » Total diameter [mm]	« I » Canopy height min [mm]	« I » Canopy height max [mm]
3301 up to 5000 *	350	1000

* not available if confirm to DIN 18 650

Canopy height with rain tray :

« Q » Total diameter [mm]	« I » Canopy height min [mm]	« I » Canopy height max [mm]
3301 up to 5000 *	350	1000

* not available if confirm to DIN 18 650

Canopy height with air curtain :

« Q » Total diameter [mm]	« I » Canopy height min [mm]	« I » Canopy height max [mm]
3301 up to 5000 *	650	1000

* not available if confirm to DIN 18 650

K31 Revolving door with 3 leafs

Technical data sheet of dimensions

External rotor drive

Minimal und maximal dimensions :

« Q » Total diameter [mm]	« G » Passage height [mm]
3001 up to 6500	2000 up to 3000
3001 up to 8000 *	2000 up to 4000 *

* not available if confirm to DIN 18 650

The foldable door leave system is available for all door dimensions.

Canopy height with dust roof :

« Q » Total diameter [mm]	« I » Canopy height min [mm]	« I » Canopy height max [mm]
3001 up to 4800	350	1000
4801 up to 6000	400	1000
6001 up to 6500	500	1000
6501 up to 7200 *	500	1000
7201 up to 8000 *	600	1000

* not available if confirm to DIN 18 650

Canopy height with rain tray :

« Q » Total diameter [mm]	« I » Canopy height min [mm]	« I » Canopy height max [mm]
3001 up to 4800	350	1000
4801 up to 6000	400	1000
6001 up to 6500	500	1000
6501 up to 7200 *	500	1000
7201 up to 8000 *	600	1000

* not available if confirm to DIN 18 650

K31 Revolving door with 3 leafs

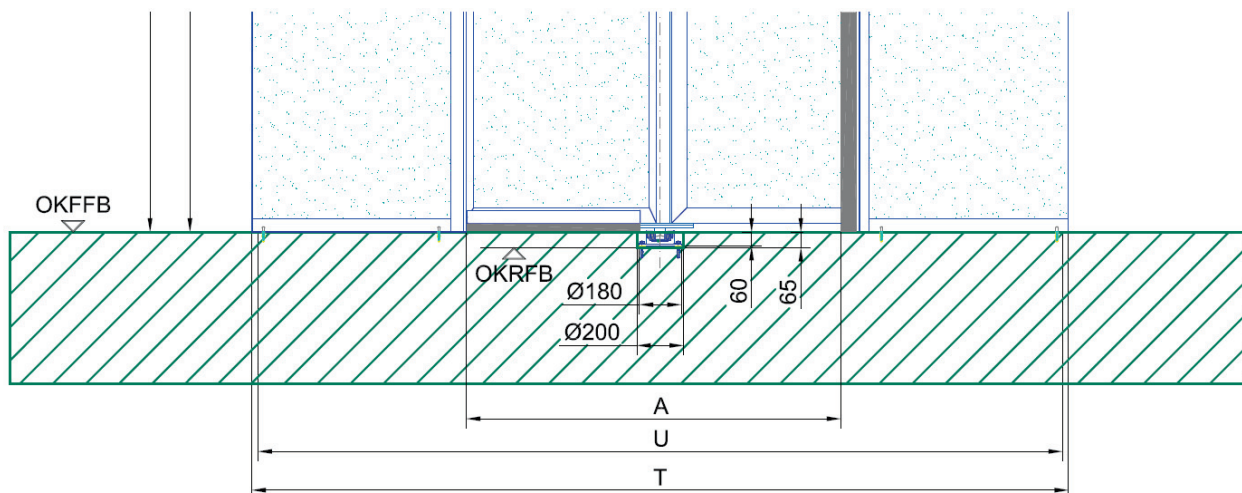
Technical data sheet of dimensions

Canopy height with air curtain :

« Q » Total diameter [mm]	« I » Canopy height min [mm]	« I » Canopy height max [mm]
3001 up to 6500	650	1000
6501 up to 8000 *	650	1000

* not available if confirm to DIN 18 650

Recess for finished floor installation :



K31 Revolving door with 3 leafs

Technical data sheet of dimensions

Floor frame :

Diameter of floor frame [mm]	« B » Floor frame heights min [mm]	« B » Floor frame heights max [mm]
T + 4	50	300

Floor frame with joint connection :

Diameter of floor frame [mm]	« B » Floor frame heights min [mm]	« B » Floor frame heights max [mm]
T + 4	150	500

Note:

Special diameters are available as special design. Please ask BLASI for details.

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Note: Blasi claims the right to possibly modification in drawing, construction and dimensions.