



BOON EDAM
YOUR **ENTRY** EXPERTS.

ORBIT TRISENS.

SENSE THE SPACE INSIDE WITH A REVOLUTIONARY REVOLVING-SLIDING DOOR



OVERVIEW

The Orbit TriSens is engineered with the flexibility to adapt to its surroundings and provide users with the most welcoming and carefree experience when entering a building.

This substantial entrance solution boasts signature seamless glazed drum walls - fashioned into two iconic entrance portals that have been engineered to reflect and blend with the surrounding aesthetics.

With nearly 150 years of experience designing and crafting revolving doors and having carefully studied the behaviour of people and buildings, we honestly believe that we have developed the next generation entrance solution with the Orbit TriSens revolving-sliding door.

DUAL AESTHETICS

This premium minimalist entrance product takes entrance design to the next level based on trending and future building design. It not only considers the entrance to be seen from one perspective, but takes into account the look and feel of both the exterior and interior of buildings.

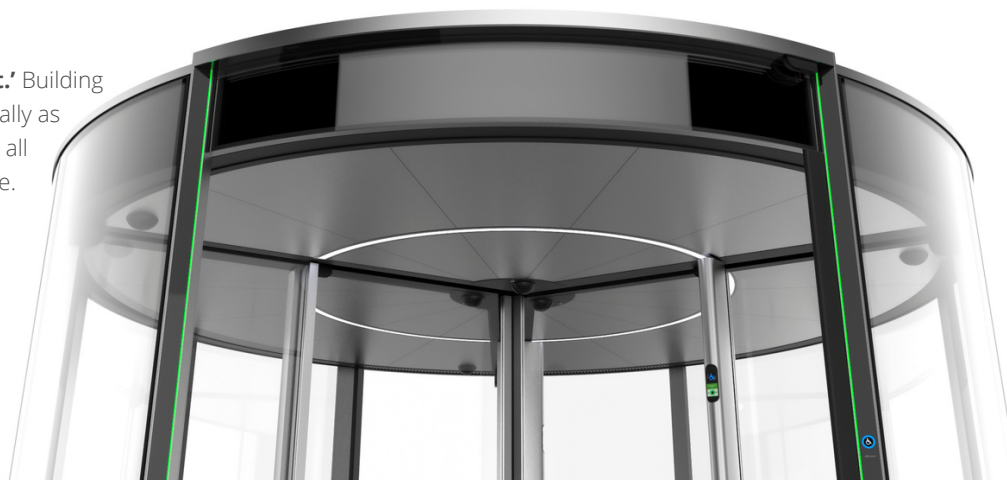
'We believe that entrance design is an art.' Building design has evolved over the years, and especially as design takes a 'green turn', it is important that all elements of that design fit together like a glove. We have partnered with architects and designers and kept an eye on the trends in building and interior design to ensure that the Orbit TriSens will fit seamlessly into the future of building design and remain relevant for years to come.

WAYFINDING TO ENHANCE SAFETY AND USER EXPERIENCE

One of the most distinguishing features of the Orbit TriSens is the entrance portal. This element creates an alluring entrance and intuitive wayfinding for those who are looking to enter or leave the building. The intuitive wayfinding is supported by using different colours of LEDs for the various operating modes. Green is go, red is no-go, blue is for accessibility and white, being a neutral colour, signifies 'standard' operating modes such as sliding or revolving mode.

The LED approach indicators on the side of the portal, both inside and outside, not only work with different colours but are also either static or moving, making wayfinding easy and natural for the user. In addition, inside the door, users receive clues about the current operating status that the door is in. The blue wheelchair symbol lights up when the accessibility mode is switched on, indicating which segment is suitable to use.

The Orbit TriSens not only offers intuitive use, but the design also caters for intuitive operation of the door. By working with the colours, static or moving LED lights, placement of the buttons and an easy-to-use LED touchscreen, an operator can instinctively find what they are looking for.





TECHNOLOGICALLY ADVANCED

'We believe that entrances should be future-proof.'

Technology, in general, has leapt forward over the past years, which has resulted in the incorporation of many of the latest technologies within the Orbit TriSens, making it the most technologically advanced entrance system.

ACCESSIBILITY WITH ACCESS FOR ALL

'We believe that entrances should be accessible to everyone.'

Whether you want to allow entry for a large footfall of pedestrian traffic, large objects, or to achieve social distancing, the sheer sense of space within the Orbit TriSens provides for the flow of pedestrian traffic to be the most efficient for all traffic types.

The Orbit TriSens offers flexibility via the onboard settings, allowing you to choose two types of modes for access for all. These are:

- **Slow Revolving:** the doorset turns with a lower speed for a set period of time.
- **Sliding Door:** the doorset is in the rest position, and the outer sliding door of one door wing slides open towards the centre of the door for a set period of time, creating a barrier-friendly passage.

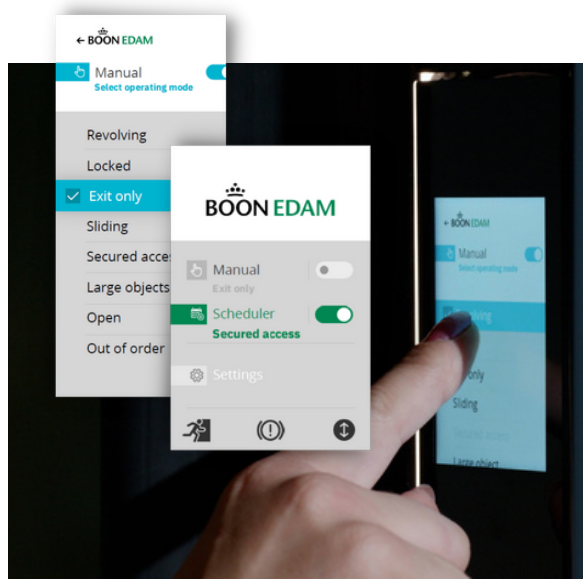
Visually impaired users can rely on the traffic signalling in the entrance portal, the tactile buttons and sound support to pass conveniently. The circular lighting illuminates any disruptive reflections and shows the path to follow when inside the door.

TOUCHSCREEN CONTROL PANEL

The Orbit TriSens uses an integrated touchscreen control panel to make operating the door simple, effective and give you the flexibility to adjust the settings to fit your building's needs in the best way.

Logging in with a secure code allows you to navigate through the entrance's diverse options, including the ability to change the door modes and schedule various modes to suit your peak or out of hour operation - saving energy in the process. The touchscreen control panel allows you to log in to access important information about upcoming service and maintenance timings and software details.

Lighting and sound settings such as intensity can be fine-tuned to suit your environment and preferences via this modern control panel.



INTUITIVE ESCAPE ROUTE

The EN 16005 Safety standard prescribes that for a door to be suitable as an escape route, it must offer the possibility to be opened to create a free egress path at all times. The Orbit TriSens contributes to a safe building as part of an intuitive egress plan by offering the ultimate automated escape route that provides intuitive, easy and quick egress in an evacuation situation.

The advanced escape route function is activated by the BMS, or by pushing the escape button, camera surveillance, a system malfunction or a power outage. Extra buttons can be accessed from within the door itself as an additional safety measure.

In the event of the escape route function being activated, the outer sliding doors move to the centre of the door, maximising the free movement area. At the same time, the doorset rotates to a preferred position where it stops. Dynamic green LED approach lights around the throat opening (on the interior side) are activated, giving clear guidance as to the location of the exit and indicating that it is safe to go through. The lights on the outside turn red to signal no entry to the interior of the building.

BENEFIT OF A THREE-WING DOOR

The choice of three door wings, which both revolve and slide, gives a more balanced performance in this respect; the footprint of the door itself is small, but within that footprint, a feeling of spaciousness is created.

High capacity revolving doors tend to favour a three-wing configuration. This provides the largest and most comfortable compartment space for the users. Space consuming showcases are no longer required which ensures that the door is constantly accessible, leading to efficient segment filling and the most continuous user flow. Additionally, this configuration allows for larger clear passage heights - facilitating a streamlined aesthetic.

KEY FEATURES

- Premium minimalist design
- Seamless joints and small trims around the glass
- Integrated internal shield door (night-locking)
- Full-height curved glazed walls
- "Floating" canopy
- Concealed doorset top rails
- Integrated sliding doors offering multiple operating modes
- Mesh laser technology
- LED illuminated recognisable entrance portal
- Traffic signalling to influence user flow
- Seamlessly integrated touchscreen control panel
- Adjustable circular ceiling lighting
- Air curtain preparation with a veiled grid in the ceiling *(coming soon)*

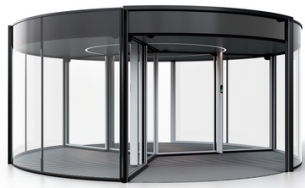
KEY BENEFITS

- Flexible positioning in the façade
- Glazed walls blends-in in any environment
- Handles very high capacity throughput
- Proactive safety due to evading door wings (non-contact operation and maintaining throughput)
- Comfort-of-use (non contact operation, large segments, spacious feel)
- Effectively reduces congestion
- Efficient segment filling
- Suitable for simultaneous mixed traffic (trolleys / individuals / large objects)
- Safety and security in a welcoming entrance
- Easy to navigate for untrained users

SUGGESTED SEGMENTS

- Retail
- Airports
- Hospitals
- Hotels

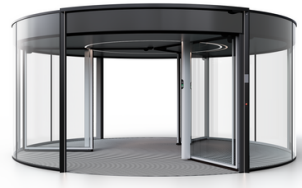




Revolving Door Mode



Escape and Open Mode



Large Object Mode



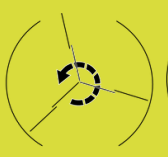
Night Mode



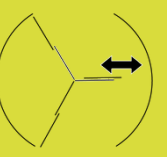
Revolving Door Mode



Sliding Door Mode



Accessibility Modes



Escape and Open Mode



Large Object Mode



Night Mode

FLEXIBLE DOOR WING CONFIGURATIONS

The Orbit TriSens is the most flexible building entrance on the market, offering many door modes. After years of research and listening to our customer's needs, we are proud to bring you the door of the future - one that indeed can do it all.

The three-winged iconic door provides vast compartment spaces, making it comfortable to use and suitable for high traffic areas. Each of the three wings is engineered from two seamless sliding doors. It is this revolutionary patented concept that allows for numerous operating functions.

REVOLVING DOOR MODE:

All three door wings extend from the central area in the standard revolving mode position, providing a safe exit. Thanks to advanced sensors and innovative safety measures, injuries from direct contact with the door are avoided. The door is programmed to retract the outer sliding door inwards - creating a safe zone for users who may be lingering on the threshold. The door resets to the standard, extended position as soon as the wing reaches the throat opening, and a safe exit is again provided.

SLIDING DOOR MODE:

In sliding door mode, the sliding doors on each door wing open and close for every person. The door wings do not rotate in this mode.

ACCESSIBILITY MODES:

Accessibility is important to us, and we have taken on board all of the feedback we received from a large research group to offer two options for our end-users.

The first option works by pressing the blue accessibility button; the Orbit TriSens then starts to rotate at a slower speed for a set period.

The second option is to use the Orbit TriSens' sliding door mode whereby the outer three sliding doors retract inwards to offer a barrier-free passage to the visitor.

The time frame of both modes can be adjusted to the convenience of you and your visitors via a service tool.

ESCAPE MODE:

In the event of an emergency, you need to evacuate the building as quickly as possible safely. The door stops in its most efficient rest position by pushing the easily located escape button. All three door wings retract inwards creating a free egress along the sides. The streamlined position of the mid section in combination with the running green traffic indicators help to guide people out of the building intuitively, even in the event of low visibility.

OPEN MODE:

In the open position, the outer door wings slide to the centre of the door (as per the sliding door accessibility mode). This mode is useful to allow a lot of fresh air into a building when the climate allows it, while maintaining a split passage for inbound and outbound traffic - keeping the space healthy for all.

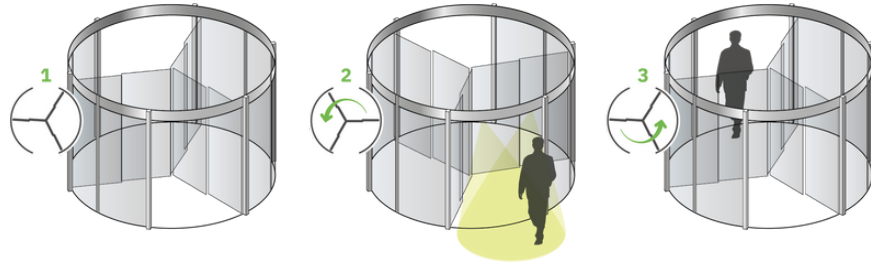
LARGE OBJECT MODE:

In this mode, the doorset is moved into the rest position, the inner sliding doors unlock, and they can be manually moved to the outside of the door's portal - creating the largest possible barrier-free opening.

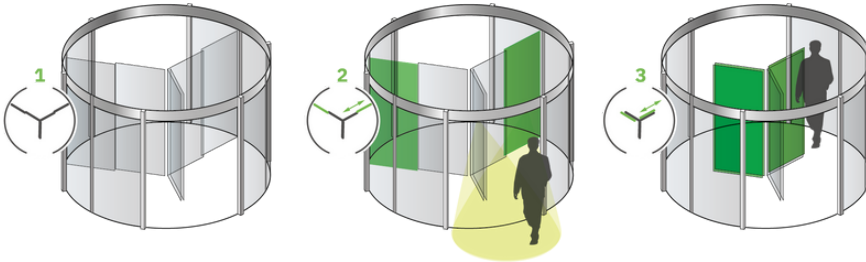
NIGHT MODE:

Security during out-of-hours use is an important feature of the Orbit TriSens' night mode. The internally integrated shield door provides slick and secure protection during these times. For more information on this mode and the shield door, please see page 7.

WORKING PRINCIPLE - REVOLVING DOOR MODE

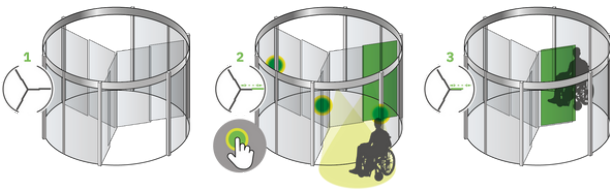


WORKING PRINCIPLE - SLIDING DOOR MODE



WORKING PRINCIPLE - ACCESSIBILITY MODES

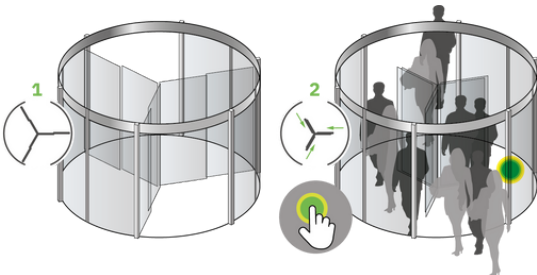
[1] Sliding Door



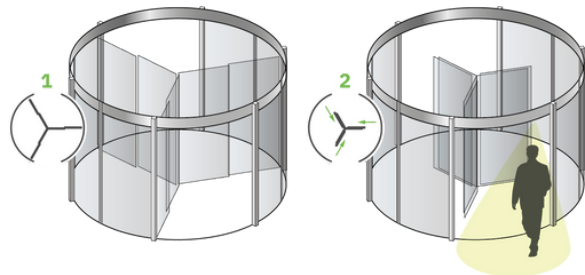
[2] Slow Revolving



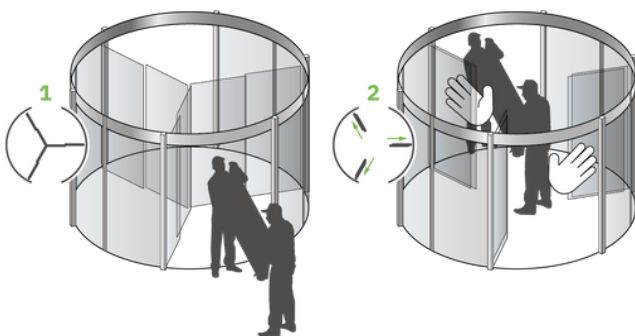
WORKING PRINCIPLE - ESCAPE MODE



WORKING PRINCIPLE - OPEN MODE



WORKING PRINCIPLE - LARGE OBJECT MODE





SECURITY THAT DOES NOT COMPROMISE ON A WARM WELCOME

When access needs to be controlled, the mode of the entrance can be adjusted to serve off-peak and out-of-hours users. For off-peak hours the door can operate as one-directional or as a sliding entrance, giving the impression that the building is about to be closed.

Stepping up to out-of-hour operation, the door is prepared to operate as a secured entry whereby users can present a credential to allow access to the building. A space claim inside the entrance portal is prepared for the integration of a tag or card reader.

When accessibility needs to be halted entirely, the mode of the entrance can be adjusted to closed or locked mode. This will activate the integrated shield door to close off the entrance completely. Acting as a deterrent for abuse and burglary attempts, this mode ensures that the building remains protected and that no unauthorised visitors can enter.

Security is further supported in the event of a power failure. If the shield door has been closed, and there is a loss of power - the entrance will remain secured and the

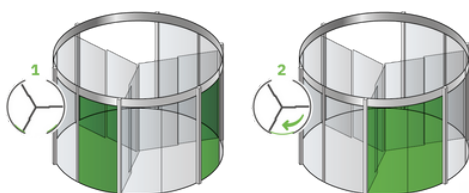
shield door will stay closed. However, if the shield door was set or scheduled to be open, it will remain so and will need to be shut manually.

PROTECTION PACKAGE

If the security of your building is an important value driver for you - the Orbit TriSens can be ordered with additional features to support that need. Talk to your entry expert about the burglar-resistant package or the insulation package comprising of insulated glass, profiles and roof.

NIGHT MODE

An automated shield door, positioned on the inside of the curved walls, is lockable via a bi-stable lock that engages multiple locking points in the ceiling and the floor. A unique bottom guide and reinforced profiles are available to guarantee the integrity of the construction during burglar attempts. The internal shield door provides design freedom regarding the positioning of the door, which can be either entirely inside, halfway or entirely outside. The shield door improves the insulation, air permeability and security properties. Alternatively, a remote controllable bi-stable lock can only be applied to the doorset.



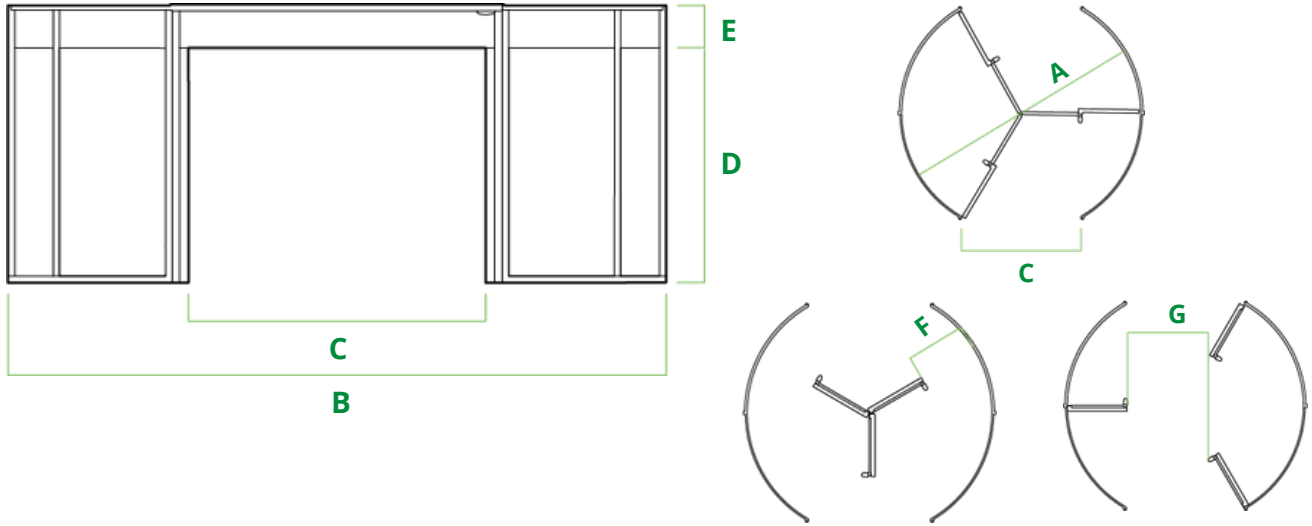
[Right] Integrated shield door in the closed position



DIMENSIONS

The diameter of the door, the height of the door opening and numerous other physical measurements can all be optimised to create your desired look and

complement surrounding building elements and location. A fluid and harmonious aesthetic can be created by fine-tuning your entrance to suit these.



A	B	Capacity / Minute	Number of Door Wings	Disabled Access	User Type	Escape Route*	C	D	E	F	G
Internal Diameter (mm)	External Diameter (mm)						Throat Opening (mm)	Height Under Canopy (HUC) **	Canopy Height (mm)	Passage Width (Open Mode)	Passage Width (Large Object mode)
4800	4969	2 x 54	3			✓	2251	2200 - 3000	400	1110	1519
6000	6169	2 x 72	3			✓	2851	2200 - 3000	400	1410	1969

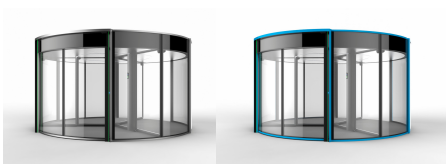
* Escape route requirements are subject to local regulations

** In increments of 100 mm

SO MUCH MORE

The Orbit TriSens offers many ways to be fine-tuned to fit your project. The above table is merely an overview of what is possible with this flexible high capacity

revolving door. Please speak to your entry expert to find out more about putting your stamp on your revolving-sliding entrance solution.



[Above] You can fine-tune your Orbit TriSens in various degrees to blend in or stand out - depending on your specific project.

[Right] Standard model.



Option SELECTOR

A building's entrance is its calling card and the point at which a first impression is made and remembered. The design is therefore critical. We work hard to help our architects and contractors make the best choices possible to suit every unique specification. You can fine-tune your entrance in the areas that matter most to your entrance and building goals.

PUT YOUR STAMP ON IT

The Orbit TriSens is available in a wide variety of colours and finishes and can be designed to either blend in with your building or stand out in contrast - the options are endless.

This large revolving door comes in two diameters and an array of clear heights up to 3 meters. The junctions are flexible regarding making a solid connection to the building.

NOTE: Several option combinations can impact the throughput capabilities and integration with the building's structure. Therefore, we recommend discussing your needs with a Boon Edam entry expert.

You can select options in any of these areas:



THROUGHPUT



SAFETY



AESTHETICS



SECURITY



TECHNOLOGY



COMFORT



SERVICE



THROUGHPUT

- Diameter (mm)
- Integration for tag/card reader for large objects mode



SAFETY

- Escape route package
- Accessibility push buttons and indicators
- Front and rear Ceiling Sensors (FCS-C, RCS-E)
- Extra emergency stop button outside
- Contrasting stickers curved walls



AESTHETICS

- Height under canopy (mm)
- Inside and outside material and finish variation
- Coating in RAL, NCS or Anodic colours
- Position in facade (mid-post / interior / exterior)
- Glass decals and / or branding



SECURITY

- Burglar-resistance package (certificate pending)
- Electro-mechanical bi-stable lock (electric wing locking)
- Remote night-locking
- Glass protection strips
- Integration of card or tag reader



TECHNOLOGY

- External touchscreen control panel
- Standard building integration with I/O contacts
- TCP/IP preparation for advanced building integration



COMFORT

- Insulation package
- LED lights high intensity
- Sound module
- Weather proofing - watertight prepared cover (exterior), water trim and drain pipes
- Roof reinforcements (snow, treading)
- Floor mat
- Space claim and reinforcement for air curtain



SERVICE AND MAINTENANCE

- Remote monitoring dashboard
- Service agreements and maintenance
- Technical training, support and spare parts
- Retrofit and upgrades to existing doors
- Condition assessment
- Revitalisation of finish

CLIMATE CONTROL

'We believe that entrances can contribute to sustainable and healthy buildings.' The always open, always closed concept of revolving doors makes them unique and therefore able to assist in controlling the airflow of buildings.

Incorporating advanced technology, with research on the behaviour of people and the building environment, we know that this entrance product will contribute to sustainable and healthy buildings more than any other entrance product on the market.

EPD

When we talk about sustainability, we are also concerned with the material value of the products that we craft. The Orbit TriSens comes with a detailed Environmental Product Declaration describing the environmental impact per life cycle stage. Utilising the latest techniques in the manufacturing process, we reduced the impact in numerous places. Components are no longer bonded with adhesives but with clicking systems or tape. This way, the volatile emissions are reduced to a bare minimum, and the product can be dismantled and processed in reusable mono streams. The certification for this is currently pending.



U-VALUES AND GREEN BUILDINGS

The entrance may be a minor element in the whole building, but it is an essential element that needs to be controlled. Through intelligent sensors, adaptable working modes, and connectivity, we can ensure that every building can make a difference and contribute to the future of green buildings.

The U-value and air permeability of products and solutions are also crucial when designing buildings with a favourable Energy Performance Coefficient. For the Orbit TriSens this value is, on average, 60% better than other revolving doors. This is a result of the concealed top construction with scalable insulation panels and thermally insulated extrusions and glazing. The Orbit TriSens has superior 24-hour energy savings due to the revolving door having both stationary and dynamic u-value.

REVOLVING MEANS CIRCULAR TOO

The Orbit TriSens is modular, enabling a quick plug and play replacement of components. Further still, the product's lifetime can be extended by swapping out parts to revitalise the product and give it a fresh, clean look. The circularity and recyclability of the Orbit TriSens are taken into consideration, and a dismantling service is offered. As part of this offering, high-value electronic components are returned to the factory for a quality inspection and, when possible, reused.





YOU ARE SAFE WITH US

The safety of users is of utmost importance, and together with the most advanced technology, we can achieve safety levels beyond that of any other revolving door product. This is achieved by adopting the latest highly accurate laser technology.

The Orbit TriSens is integrated with mesh sensor fields that anticipate the user's movement, ensuring smooth non-contact operation in the swiped area. Additional breakthrough safety is also integrated into the threshold area whereby the door wings are retracted to bypass lingering users, keeping the flow of pedestrian traffic intact, without the need to stop the door. These retractable sliding door wings also make the entrapment of objects avoidable.

Premium rubber safety rails (active and passive) respond appropriately and accurately to either physical force or obstacles or blockages in the path of operation. Both these SRB and SRS sensors stop the door within a swift time, ensuring little impact even in case of a last moment entry.

SERVICE AND MAINTENANCE

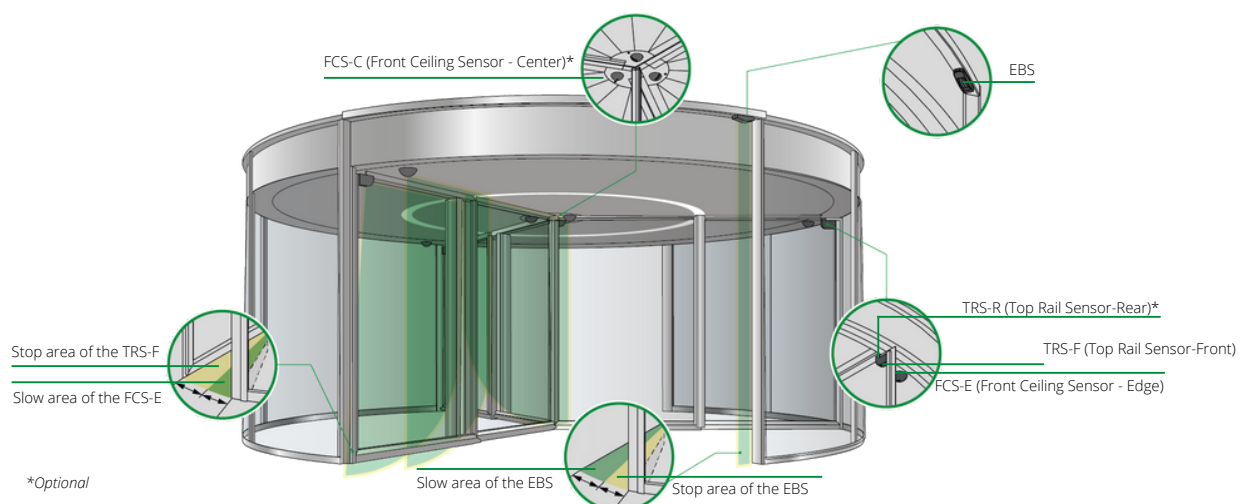
Our service and maintenance teams worldwide are experienced in the effects the local conditions have on the wear and tear of your entry solutions and can offer specialised service and maintenance contracts that correspond to those conditions perfectly. As a connected product, there is always backup on hand, and uptime is guaranteed with the support of our service and maintenance offerings.

The Orbit Trisens is prepared for TCP/IP communication in order to retrieve detailed data from the product. There is always backup on hand when connected to our remote monitoring dashboard. Service activities can be planned in time to ensure high uptime. Secondly, an advanced BACnet connection can also be established with the Building Management System.

COMPLIANCE

The Orbit TriSens complies with the following European standards:

- 2006/42/EU: Machine Directive, Annex II-1A
- 2014/30/EU: EMC Directive
- 2011/65/EU: RoHS Directive
- EN16005 - Safety in use for power pedestrian doors
- EN1627 - Burglar-resistant package
- EN356 - Glass specification



OUR REACH IS GLOBAL.

We have been in business for 150 years, manufacturing premium aesthetic and security entrance solutions in The Netherlands, the United States of America and China. We can confidently say that we cover every corner of the globe with subsidiary companies in major cities across the globe. Furthermore our global export division not only partner with our distributors, but also offer direct sales and service to every territory. This wide net allows us to have a strong global footprint and a personal grasp of local markets and their unique entry requirements.

To find your closest Boon Edam expert, please go to:
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