

TIP SHEET

THE ARCHITECT'S GUIDE TO SPECIFYING REVOLVING DOORS

7 PLANNING, PERFORMANCE, AND SECURITY CONSIDERATIONS

Specifying the right revolving door requires balancing traffic flow, energy performance, user experience, life safety, security, and physical building conditions. The entrance should also be considered as part of a layered strategy that may include adjacent swing doors, access control, lockdown capabilities, protective glazing, or higher-security entrance solutions. The following seven considerations can help architects make the right selection for each project.

1. DEFINE PROJECT GOALS AND PERFORMANCE OBJECTIVES: DESIGNING A SMARTER LOBBY

- **Conserve Energy:** Reduce drafts, noise, dirt, stack-effect air infiltration.
- **Pick the Right Size:** Select for peak conditions, not average daily use.
- **Communicate Early:** Façade layout, egress strategy, floor conditions, sightlines.
- **Improve the User Experience:** Optimize interactions for employees, visitors/customers, service providers, and suppliers.
- **Plan for Layered Security and Safety:** Determine how the revolving door will work with adjacent swing doors, access control, lockdown capabilities, life safety requirements, and any higher-security entrance needs.

Boon Edam Insight:

Speak with all stakeholders about their expectations for entry solutions and flow management, including the C-suite, operations and maintenance, security, life safety, and risk mitigation teams. Each group may bring a different perspective to the project's performance objectives.

2. MANUAL VS. AUTOMATIC: DOOR TYPE

When to choose manual:

- Moderate amount of traffic.
- An adjacent accessible swing door will still be required for Americans with Disabilities Act (ADA) compliance.
- Simpler specification and coordination requirements.
- Verify whether power assist is available. This can be a beneficial upgrade to improve ease of use and traffic flow. On Boon Edam manual revolving doors, this option is known as BoonAssist.

BoonAssist Advantage: BoonAssist includes automatic positioning, which returns the door wings to the correct end-post location after use. This helps create a more effective seal between indoors and outdoors when the door is at rest, which can:

- Reduce the effort needed to operate the door by using a low-energy motor that turns the user's initial push into smooth rotation.
- Reduce uncontrolled air leakage.
- Limit conditioned air loss.
- Improve protection from wind-driven infiltration.
- Support better entrance performance during off-peak traffic periods.

When to choose automatic:

- Heavy or continuous use.
- Frequent luggage, carts, wheelchairs, etc.
- Hands-free operation supports faster traffic flow.

Boon Edam Insight:

Usage patterns, user expectations, budget, brand perception, and integration requirements all influence the choice between manual and automatic operation. For an existing facility, observe how people use current entry points. For a new building, develop user profiles that reflect expected traffic volumes, mobility needs, and the frequency of luggage or carts.

3. DIAMETER DRIVES PERFORMANCE

- Larger diameters improve pedestrian comfort and flow.
- Support higher throughput during peak traffic.
- Better accommodate carts, luggage, and accessibility needs.

Boon Edam Insight:

Door diameter directly affects user comfort and traffic efficiency. Work with your Boon Edam consultant to evaluate peak traffic, user mix, and the frequency of carts, luggage, or mobility devices before selecting a diameter.

4. 3-WING VS. 4-WING CONFIGURATIONS: BALANCING COMFORT, CAPACITY, AND PERFORMANCE

- Three-wing configurations feature equal-sized compartments and a larger throat opening, making it easier for people carrying bags, carts, luggage, or packages to pass through comfortably. Four-wing configurations have larger compartments but a smaller throat opening, which helps retain conditioned air more effectively and regulate pedestrian movement.

Choose a 3-wing door when:

- Traffic volumes are lower, or the entrance serves a smaller building.
- Occupants frequently carry luggage, bags, carts, or packages.
- A larger entry compartment is important for user comfort and spaciousness.
- The project is a smaller hotel, healthcare facility, mixed-use building, or premium office space.

Choose a 4-wing door when:

- Maximizing pedestrian throughput is the priority.
- The entrance experiences heavy or continuous pedestrian traffic.
- Available space is limited.
- The project is a transit hub, office tower, university, or high-volume public building.

Boon Edam Insight:

Do not base the wing configuration solely on compartment size. Evaluate projected traffic volume, building type, available space, and what users will regularly carry through the entrance.

5. EGRESS PLANNING SHOULDN'T BE AN AFTERTHOUGHT

- Revolving doors are not approved by the International Building Code (IBC) to serve as a required means of egress, so an adjacent swing door must be provided for compliance. Safety is a priority at Boon Edam, and Boon Edam architectural revolving doors are equipped as standard with door wings that can be pushed into a book-fold position in an emergency.
- Confirm breakout door requirements and all applicable Authority Having Jurisdiction (AHJ) mandates.
- Coordinate swing door height and sightlines.

Boon Edam Insight:

Plan for both everyday traffic flow and emergency conditions. Confirm how the revolving door's book-fold capability, the adjacent swing door, and the required egress path will function together.



6. OPTIONAL SECURITY ENHANCEMENTS

- **Does the project require remote locking or emergency lockdown capability to stop access when needed?** Boon Edam architectural revolving doors can be equipped with remote locking, emergency lockdown capability, and access control integration for after-hours security. Consult your Boon Edam consultant to review the available options and determine which features are appropriate for the project.
- **Should the client's chosen access control credential be used full time or only during designated hours?** If the entrance will be open to the public during the day and secured after hours, configure an access control schedule so credentials are required during the designated secure period.
- **Does the client have concerns about tailgating or piggybacking at the main entrance?** If so, an architectural revolving door may not be the best choice. Speak with a Boon Edam consultant to identify the entrance solution that best supports the project's security goals.
- **Would vandal-resistant or bullet-resistant glazing provide an additional layer of protection?** A revolving door is more robust than a swinging door because two door wings must be compromised before entry, potentially delaying forced entry during an emergency. Protective glazing adds another layer of protection for people and property.

Boon Edam Insight:

Architectural revolving doors can support access control, lockdown, and protective glazing, but they are not designed to be security doors. Consider the entrance as one layer within the facility's broader security strategy and select a higher-security solution when unauthorized-entry prevention is a primary objective.

7. COORDINATE KEY DETAILS EARLY

- Size and locate façade opening and connection points.
- Match heights, rails, and finishes with the storefront system.
- Provide a dead-level floor for optimal performance.
- Determine whether two different floor materials will meet within the door footprint. If so, plan early for Boon Edam's optional matwell ring, which helps provide the dead-level surface needed for proper door performance.
- Address weather protection details.

Boon Edam Insight:

Coordinate façade openings, storefront finishes, floor conditions, weather protection, and connection points early. Resolving these details before fabrication helps prevent costly field changes and supports proper door performance.



PLAN THE ENTRANCE AS PART OF A LAYERED STRATEGY

Evaluate traffic type, peak volume, user needs, egress, access control, lockdown requirements, and any concerns about tailgating or piggybacking. Then coordinate the appropriate door type, diameter, wing configuration, adjacent swing door, storefront integration, and floor conditions.

Engage a Boon Edam consultant early to help align the entrance solution with the project's operational, life safety, security, and performance goals.



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