# BoonAssist TQ Crystal Revolving Door

### Section 08 42 33 – Revolving Doors

## **PART I – GENERAL**

* 1. **SECTION INCLUDES**

1. This section covers the furnishing and installation of a complete All-Glass Manual Revolving Door System. Provide complete system that has been fabricated, assembled, and tested for proper operation at the factory. It includes curved glass sidewalls, glass ceiling, door wings, hardware, speed control and emergency collapsing mechanism as required for installation.
   1. **RELATED SECTIONS**
2. Section 07915 - Sealant, Caulking and Seals
3. Section 08400 - Entrances and Storefronts
4. Section 08710 - Door Hardware
5. Section 08810 - Glass and Glazing
6. Section 09600 - Flooring

# **REFERENCES**

1. ANSI/BHMA A156.27 – American National Standard for Power and Manual Operated Revolving Pedestrian Doors.
2. ANSI Z97.1 - American National Standard for Safety Glazing Materials used in Buildings.
3. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum
4. AAMA 2604 - Voluntary specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
5. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
6. ASTM A 480/A 480M - Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.
7. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
8. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
   1. **QUALITY ASSURANCE**
9. Manufacturer shall be a company specializing in the supply of revolving doors with a minimum of 10 years experience.
10. Installer shall supply a factory-trained supervisor during installation of the door.
    1. **SUBMITTALS**
11. Submit project specific shop drawings and finish samples.
12. Indicate pertinent dimensions, general construction, component connections and locations, anchorage methods and locations, hardware, and installation details.
    1. **DELIVERY, STORAGE AND HANDLING**
13. Deliver materials to job site in manufacturer’s packaging undamaged, complete with installation instructions.
14. Store off ground, under cover, protected from weather and construction activities.
    1. **PROJECT/SITE CONDITIONS**
15. Revolving doors install only in the floor in a factory approved mat well trim. Floor must be dead level at any point within the footprint of the revolving door.
    1. **WARRANTY**

Boon Edam Inc. warranties its products against defects in material and workmanship for a period of twelve (12) months from the date of shipment of the product. This warranty excludes glass breakage, normal wear on finishes or damage that occurs due to abuse, misuse or acts of God.

### PART II – PRODUCTS

* 1. **MANUFACTURER**

BoonAssist TQ Crystal Revolving Door as manufactured by:

Boon Edam, Inc., 402 McKinney Parkway, Lillington, NC 27546.

(910) 814-3800 Fax: (910) 814-3899 Homepage: [www.boonedam.us](http://www.boonedam.us)

* 1. **DOOR CONSTRUCTION**

1. Curved Side Walls : Shall have a standard inside diameter of 6’-6” (only available in 4-wing), 7’-0”, 7’-6”, 8’-0” and be manufactured from 11/16” curved laminated safety glass.
2. Door Wings: Three or four door wings as designed and manufactured from ½” tempered safety glass with stainless steel clad polycarbonate channels and rubber with felt contact weather stripping on three sides. Door wings must be capable of folding forward or backward allowing for emergency egress.
3. Herculite Top & Bottom Rails (Optional depending on door size): Milled aluminum rails (cladded, painted or anodized to match the specified finish), available in sizes of 4.25”, 6”, 8” and 10.”
4. Ceiling: Shall be fabricated from 11/16” tempered laminated safety glass.
5. Stainless Steel Connectors: Polished stainless steel connectors between sidewalls and ceiling.
   1. **EQUIPMENT**
6. BoonAssist drive system: The BoonAssist TQM is in principle a manually operated door. The unique drive system provides a power assist during normal operation. This means that the user of the door only has to push with a low force to operate the door, as about half the necessary force to turn the doorset is provided by the drive unit. The positioning feature turns the doorset to its rest position when nobody is pushing the door anymore. The drive system also functions as a speed-limiting device, preventing the door from speeding up during manual operation.
7. Emergency Collapsing Mechanism: Precision-engineered door hangers and disks to allow the door wings to be collapsed, or folded, and stored in a bookfold position. Hangers and disks are finished in black and provide tension to hold the door wings in position until a strong force, not to exceed 130 pounds, is applied to the outer stile of the door wing to meet NFPA, BOCA code requirements.
8. Surface Applied Slide Bolt Locks: Two (2) standard 1 3/4” x 5 5/8” surface-mounted deadbolt locks with removable, keyed cylinders that lock into the floor on the two interior door wings.
9. Electric Shaft Locking (Optional): A fail-safe shaft lock mechanism with a (2) position post-mounted key switch to activate locking. When engaged, the electric locking will prevent rotation of the door wings. Electric locking is disengaged by loss of power or signal from building/fire/smoke alarm (Requires a a 120 – 230 VAC power service to drive box in floor, by others).
10. Electric Wing Locking (Optional): A wing lock mechanism with a (2) position post-mounted key switch to activate locking. When engaged, the electric locking will prevent the collapsing of the door wings. Electric locking is disengaged by loss of power or signal from building/fire/smoke alarm ((Requires a a 120 – 230 VAC power service to drive box in floor, by others).
    1. **HARDWARE/MATERIALS**
11. Tempered Glass: All flat glass in door wings shall be ½” clear tempered safety glass.
12. Laminated Glass: All curved glass in sidewalls shall be clear 11/16” curved laminated safety glass
13. Ceiling Glass: All flat ceiling glass shall be 11/16” tempered laminated safety glass.
14. Weather Stripping: Rubber with felt contact strip at sidewalls and ceiling. Rubber at floor. Stripping on all required edges of door wings to provide a seal between door wings and drum that meets or exceeds ASTM E-283 standards for air infiltration.
15. Bumpers: rigid, rubber-tipped bumper located on the top upper right hand corner of each door wing to prevent door wings from contacting one another when in the bookfold position.
16. Pivot: Ceiling mounted pivot above the center shaft to provide smooth rotation.
17. Center Shaft: Stainless steel shaft with connections to the speed control and pivot.
18. Push Bars: Provide 1” diameter vertical stainless steel push bars.
19. Drive Cover: Provide square stainless steel floor mounted cover over recessed speed control.(Optional round stainless steel cover available.)
20. Matwell Ring: Stainless Steel tube embed frame required to be installed in floor prior to the installation of the door.

**PART III – EXECUTION**

* 1. **INSTALLATION**

1. Inspection: Installer must examine the location and advise the Contractor of any site conditions unacceptable for proper installation of product. These conditions include but are not limited to the following:
2. Floor must be dead level at any point within the footprint of the door
3. Finished floor matwell trim not yet installed

Installation shall not begin until these unacceptable conditions are met.

1. Erection: Install revolving doors in accordance with manufacturer’s printed instructions. Set units level, plumb, and with uniform hairline joints. Anchor securely into place. Use only factory trained installers.
2. Adjustment: Installer shall adjust door and hardware for smooth operation and proper performance.
3. Instruction: A factory-trained installer shall demonstrate to the owner’s maintenance crew the proper operation of the door and the necessary service requirements such as lubrication, cleaning, and inspection of components upon completion of installation.
4. Cleaning: Clean metal and glass surfaces carefully after installation to remove excess caulk, dirt and labels.

**Boon Edam, Inc. reserves the right to change this specification at any time without notice.**