



The first name in entrance technology

4050 South 500 West, Salt Lake City, UT 84123 • (801) 261-8980 • FAX (801) 261-1612

ARCHITECTURAL SPECIFICATION

Tourlock 120 Manual Security Revolving Door

DIVISION 8 – DOORS AND WINDOWS

SECTION 08470 – REVOLVING DOORS

PART I – GENERAL

1.01 SECTION INCLUDES

- A. This section covers the furnishing and installation of a complete Manual Security Revolving Door System. Provide complete system that has been fabricated and tested for proper operation at the factory. It includes curved side walls, canopy, ceiling, ceiling lights, door wings, hardware, glass, positioning system, emergency collapsing mechanism and sensor system as required for installation.

1.02 RELATED SECTIONS

- A. Section 07915 - Sealant, Caulking and Seals
- B. Section 08400 - Entrances and Storefronts
- C. Section 08710 - Door Hardware
- D. Section 08810 - Glass and Glazing
- E. Section 09600 - Flooring
- F. Section 16123 - Electrical Supply and Termination
- G. Section () - Security Systems

1.03 QUALITY ASSURANCE

- A. Manufacturer shall be a company specializing in the supply of security revolving doors with a minimum of 10 years experience.
- B. Installer shall supply a factory trained supervisor during installation of the door.

1.04 SUBMITTALS

- A. Submit project specific shop drawings and finish samples.
- B. Indicate pertinent dimensions, general construction, component connections and locations, anchorage methods and locations.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to job site in manufacturer's packaging undamaged, complete with installation instructions.
- B. Store off ground, under cover, protected from weather and construction activities.

1.06 PROJECT/SITE CONDITIONS

- A. Revolving doors install on finished floor only. Floor must be dead level at any point within the footprint of the revolving door.

1.07 WARRANTY

Boon Edam warrants its products against defects in material and workmanship for a period of one (1) year from the date of substantial completion or one and one half (1 ½) years from date of shipment. This warranty excludes glass breakage, normal wear on finishes or damage that occurs due to abuse, misuse or acts of God.

PART II – PRODUCTS

2.01 MANUFACTURER

Tourlock 120M Manual Security Revolving Door as manufactured by:
Boon Edam, Inc., 4050 South 500 West, Salt Lake City, Utah 84123.
(801) 261-8980 Fax: (801) 261-1612 Homepage: www.boonedam.com

2.02 DOOR CONSTRUCTION

- A. Curved Side Walls and Canopy: Shall have a standard inside diameter of 5'-0" or 5'-6" and be manufactured from six (6) extruded aluminum posts, four (4) 12" high one-piece extruded aluminum canopies and two (2) extruded aluminum bottom rails.
- B. Door Wings: Three doors as designed and manufactured of 1 3/4" wide aluminum extrusions and reinforced with internal aluminum door corners for strength. Door wings must utilize removable horsehair weather stripping on three sides. Door wings must be capable of folding forward or backward allowing for emergency egress.
- C. Ceiling: Shall be fabricated of formed aluminum sheet in a pie-shaped configuration. Each section must be secured in position and removed only by authorized personnel.

2.03 EQUIPMENT.

- A. Positioning System: A system capable of allowing the doorset to be pushed manually 120 degrees in the direction of authorized travel and then re-positioning. The brake unit to provide the following characteristics:
 - 1. Remain locked at all times until unlocked by authorized signal from the access control device or emergency system
 - 2. Locks after a signal from IRS sensor system or other incorporated system.
- B. Braking Assembly: Positive braking and stopping shall be performed by hydraulic damping assembly incorporated within the canopy.
- C. Controls: Must be microprocessor-based electronics utilizing a 2000-step Programmable Logic Controller (PLC) with the following characteristics:
 - 1. RAM & ROM memory
 - 2. Self-diagnostics for quick detection of problem source
 - 3. Visual display of problem source
- D. Emergency Collapsing Mechanism: Precision-engineered door hangers and disks to allow the door wings to be collapsed under pressure and stored in a bookfold position. Hangers and disks are finished in black and provide tension to hold the door wings in position when the electric locking is released. The door wings shall be capable of being collapsed outward under pressure on the outer stile not to exceed 130 pounds.
- E. Pivot: Floor mounted pivot under the center shaft to provide smooth rotation.

2.04 SECURITY EQUIPMENT

- A. IRS Infrared Sensor System: Ceiling mounted infrared sensors capable of performing the following functions:
 - 1. Detecting the presence of a person within the restricted zone of the door and preventing unauthorized entry by stopping the door and sounding the alarm.
- B. Activation: Activation of the Tourlock by external card reader or other access control device that can provide a one (1) second momentary pulse dry contact to the control box of the door. Card reader or other activation device not by Boon Edam.

2.05 HARDWARE/MATERIALS

- A. Tempered Glass: All flat glass in door wings shall be 1/4" clear tempered safety glass, all curved glass shall be 1/4" clear bent tempered safety glass. All glass shall meet ANSI standard Z 97.1.
- B. Laminated Glass (Optional): 7/16" clear curved laminated safety glass is available as an option. All glass shall meet ANSI standard Z 97.1.
- C. Aluminum Extrusions: All commercial grade extrusions shall be of aluminum alloy 6063-T6 per ASTM B-221.
- D. Aluminum Sheets: Shall meet ASTM B-209 and be of .063 minimum thickness.

- E. Weather Stripping: Genuine horsehair weather stripping on all required edges of door wings to provide a seal between door wings and drum that meets ASTM E-283.
- F. Glazing Seal: All glass to be sealed with push in glazing vinyl.
- G. Pivot: Floor mounted pivot under the center shaft to provide smooth rotation.
- H. Center Shaft: Extruded center shaft shall be of aluminum alloy 6061-T6 per ASTM B-221 with connections to the speed control and pivot.
- I. Push Bars: Provide 1" round aluminum push bar (2) per door wing (one on each side of wing) finished to match door. (1" diameter stainless steel, or architectural bronze push bar is optional.)

2.06 FINISH

The following finishes are available for the enclosure walls, rotating door wings and ceiling.

- A. Anodized Coatings
 - 1. AAMA 611 Architectural Class 1 Clear anodized Type AA-M10C22 A41
 - 2. AAMA 611 Architectural Class 1 anodized Type AA-M10C22 A42: Light, Medium and Dark Bronze, Black and Champagne.
- B. Painted Coatings
 - 1. AAMA 2605 Superior Performing Organic Coatings (e.g.: Duranar, Fluoropon; 70% Kynar Fluoropolymers).
 - 2. AAMA 2604 High Performance Organic Coatings (e.g.: Powder Coating).
- C. Stainless Steel Clad Type 304
 - 1. #4 Brushed Satin
 - 2. #6 Brushed Satin Fine-Lined
 - 3. #8 Highly Polished (mirror finish)
- D. Bronze Clad Alloy #280 (Muntz Metal)
 - 1. #4 Brushed Satin
 - 2. #8 Highly Polished (mirror finish)

PART III – EXECUTION

3.01 INSTALLATION

- E. 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:
 - 3. Door must be installed on finished floor.
 - 4. Finished floor must be dead level at any point within the footprint of the door.
 - 5. Power supply must be installed.Installation shall not begin until these unacceptable conditions are rectified.
- F. 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.
- G. Adjustment: Installer shall adjust door, hardware and sensors for smooth operation and proper performance.
- H. 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.
- I. 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.

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PART I – GENERAL

1.01 SECTION INCLUDES

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1.02 RELATED SECTIONS

- A. Section 07915 - Sealant, Caulking and Seals
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- C. Section 08710 - Door Hardware
- D. Section 08810 - Glass and Glazing
- E. Section 09600 - Flooring
- F. Section 16123 - Electrical Supply and Termination
- G. Section () - Security Systems

1.03 QUALITY ASSURANCE

- A. Manufacturer shall be a company specializing in the supply of security revolving doors with a minimum of 10 years experience.
- B. Installer shall supply a factory trained supervisor during installation of the door.

1.04 SUBMITTALS

- A. Submit project specific shop drawings and finish samples.
- B. Indicate pertinent dimensions, general construction, component connections and locations, anchorage methods and locations.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to job site in manufacturer's packaging undamaged, complete with installation instructions.
- B. Store off ground, under cover, protected from weather and construction activities.

1.06 PROJECT/SITE CONDITIONS

- A. Revolving doors install on finished floor only. Floor must be dead level at any point within the footprint of the revolving door.

1.07 WARRANTY

Boon Edam warrants its products against defects in material and workmanship for a period of one (1) year from the date of substantial completion or one and one half (1 ½) years from date of shipment. This warranty excludes glass breakage, normal wear on finishes or damage that occurs due to abuse, misuse or acts of God.

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2.02 DOOR CONSTRUCTION

- A. Curved Side Walls and Canopy: Shall have a standard inside diameter of 7'-0" and be manufactured from six (6) extruded aluminum posts, four (4) 12" high one-piece extruded aluminum canopies and two (2) extruded aluminum bottom rails.
- B. Door Wings: Three doors as designed and manufactured of 1 3/4" wide aluminum extrusions and reinforced with internal aluminum door corners for strength. Door wings must utilize removable horsehair weather stripping on three sides. Door wings must be capable of folding forward or backward allowing for emergency egress.
- C. Ceiling: Shall be fabricated of formed aluminum sheet in a pie-shaped configuration. Each section must be secured in position and removed only by authorized personnel.

2.03 EQUIPMENT.

- A. Drive System: Overhead drive system with one 1/4 HP AC motor attached to the internal structural framing. The door shall be powered by a 208-230 VAC, 1-phase service. The motor shall utilize an internal angle encoder for constant monitoring of door position and a Frequency Controller to provide for the following characteristics:
 - 1. Adjustment of rotation speed through a digital setting.
 - 2. Constant regulation of rotation speed.
 - 3. Adjustment of startup/run torque through a digital setting to minimize force required to stop door.
 - 4. Adjustment of stopping distance through a digital setting.
 - 5. Password-protected Security over Frequency Control settings.
- B. Drive Assembly: Positive braking and stopping shall be performed by electromagnetic brake assembly incorporated within the drive unit. The drive unit to provide the following characteristics:
 - 1. Remain locked at all times until unlocked by authorized signal from the access control device or emergency system.
 - 2. Lock immediately after an unauthorized signal from IRS sensor system or other incorporated system.
 - 3. Doorset will lock immediately if the doorset is pushed in the opposite direction of travel and the sound the alarm.
- C. Controls: Must be microprocessor-based electronics utilizing a 2000-step Programmable Logic Controller (PLC) with the following characteristics:
 - 1. RAM & ROM memory
 - 2. Self-diagnostics for quick detection of problem source
 - 3. Visual display of problem source
- D. Emergency Collapsing Mechanism: Precision-engineered door hangers and disks to allow the door wings to be collapsed under pressure and stored in a bookfold position. Hangers and disks are finished in black and provide tension to hold the door wings in position when the electric locking is released. The door wings shall be capable of being collapsed outward under pressure on the outer stile not to exceed 130 pounds.
- E. Pivot: Floor mounted pivot under the center shaft to provide smooth rotation.
- F. Center Shaft: Extruded aluminum shaft with multi-point connections to the positioning system and pivot.

2.04 SECURITY EQUIPMENT

- A. IRS Infrared Sensor System: Ceiling mounted infrared sensors capable of performing the following functions:
 - 1. Detecting the presence of a person within the restricted zone of the door and preventing unauthorized entry by stopping the door and sounding the alarm.
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 - 1. AAMA 2605 Superior Performing Organic Coatings (e.g.: Duranar, Fluoropon; 70% Kynar Fluoropolymers).
 - 2. AAMA 2604 High Performance Organic Coatings (e.g.: Powder Coating).
- C. Stainless Steel Clad Type 304
 - 1. #4 Brushed Satin
 - 2. #6 Brushed Satin Fine-Lined
 - 3. #8 Highly Polished (mirror finish)
- D. Bronze Clad Alloy #280 (Muntz Metal)
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