

WIKK INDUSTRIES, INC.

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EXTRUDED ALUMINUM BALANCED DOORS AND ENTRANCES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: Entrance and vestibule doors and frames are integral “Balanced Door” units consisting of doors, jambs, frames (sidelight and transoms where applicable), thresholds, operating mechanisms and all finish hardware as shown on the drawings and specified herein.
- B. Related sections include, but are not limited to:
 - 1. Section 08 70 00 Hardware (master keyed lock cylinders)
 - 2. Section 08 80 00 (Glazing)
 - 3. Section 07 92 00 Joint Sealants (between frame and masonry)
 - 4. Structural members not within jambs, head members, transom bars and mullions.
 - 5. Field-applied protective coatings or oxidizing processes.

1.2 QUALITY ASSURANCE

- A. The manufacturer has been regularly engaged in the manufacture and installation of “Balanced Doors” and “Balanced Door Hardware” for a period of no less than ten (10) years.
- B. Door, frame and balanced hardware is engineered and fabricated by the same manufacturer.
- C. In order to ensure proper coordination between all elements of the balanced entrance system, the balanced hardware (excluding the LCN speed control) is engineered, machined and assembled in the same facility with the engineering and fabrication of the door and frame material.
- D. Automatic balanced door requirement: the operator is designed solely for a balanced door, is an integral part of the system and is a product of the door manufacturer.

1.3 SUBMITTALS

- A. Shop drawings including elevations and plans, full size detail sections of typical composite members, hardware arrangement details and interaction with surrounding material.
- B. Two (2) finish samples for anodized materials per customer specifications, if requested.

1.4 WARRANTY

- A. Finished hardware and material not fabricated by Wikk carry the manufacturer’s standard warranty.
- B. Wikk manufactured material furnished and installed to these specifications (except the automatic components) is warranted against defective material and workmanship for a period of ten (10) years after completion of installation.
 - 1. The manual hydraulic speed control is warranted for ten (10) years by LCN.
 - 2. The Access-A-Matic automatic operator is warranted for three (3) years and the electronic control is warranted for one (1) year or eighteen (18) months from date of substantial completion, whichever is shorter.
- C. This warranty is not intended to cover adjustments made necessary by the shifting or settling of the building structure.
- D. This warranty is not intended to cover the breakdown of protective coatings or oxidation processes when furnished to the Architect’s specifications and applied as directed.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

- A. Wikk Industries, Inc. 6169B Industrial Court, Greendale, Wisconsin 53129 USA
Telephone: 414-421-9490 Fax: 414-421-3158 Website: www.wikk.com

2.2 MATERIALS AND ACCESSORIES

- A. Operation **** NOTE TO SPECIFIER** Choose one of the following paragraphs. If some doors are manual and some automatic, edit to indicate which doors are to be which.**
1. Manual operation: Manual balanced door system. The customized cast iron hydraulic speed control with back checking feature is manufactured by LCN for Wikk Industries, Inc. This unit meets ANSI standards and is designated as a “Grade 1” speed control. The speed control is concealed in the head frame and has latch, general and back check adjustments. The speed control is removable without requiring the removal of the door, head frame or any other structural members of the balanced door system.
 2. Automatic operation: Automatic balanced door system. The operating mechanism is the Access-A-Matic. The Access-A-Matic electro-mechanical operator is overhead concealed, and is designed, manufactured and is a product of the balanced door manufacturer, i.e. Wikk Industries, Inc. Operator consists of a 2 stage gear box, permanent magnet motor and electronic control panel. Hydraulic operators or operators containing closing springs are not acceptable. Operator is capable of normal speed or low speed/low energy operation. The low speed /low energy operation allows opening force within the limits of ANSI Standard A156.19. Control panel selection includes Push & Go with sensitivity adjustments, electric lock release functions and early power stage boost closing. Operator and electronic control box mount directly onto guide box in place of the manual speed control and is completely concealed within a minimum size of 5-1 /2 inch by 5-1 /2 inch (139.7 by 139.7mm) header without a surface applied drive arm. The door can be manually operated (with power on or off) without damage to the operator. The system is furnished complete with Wikk AccessAbility™ activation switch products, or sensors and safety devices as required.
- B. Material: Extruded aluminum alloy 6063-T5 with a minimal wall thickness of 1 /8 inch (3.175mm).
- C. Finish: **** NOTE TO SPECIFIER** Select one of the following**
1. #204R1 Clear Anodized Aluminum.
 2. #215R1 Clear Anodized Aluminum.
 3. #ANO-300 Champagne Anodized Aluminum.
 4. #ANO-302 Medium Bronze Anodized Aluminum.
 5. #ANO-304 Dark Bronze Anodized Aluminum.
 6. #ANO-305 Black Anodized Aluminum.
 7. Painted finish (specify type and color)
- D. Doors: Extruded aluminum doors have bolted and welded corner construction. Glass molding is permanently fixed on exterior side and snap-on type on the interior side. Reinforcing material is aluminum or stainless steel and is welded or mechanically fastened to door body. Plastic or other glued-in reinforcements or stiffeners are unacceptable.
- **NOTE TO SPECIFIER** select from 1-3/4 inch or 2 inch door thickness.**
1. 1–3/4 inches (44.45 mm) door thickness
 - 1.1 Top Rail (select one)
 - a. 3-7/16 inches (87.3mm)
 - b. 3-15/16 inches (100.0mm)
 - c. 4-7/16 inches (112.7mm)
 - d. 5-17/16 inches (138.1mm)
 - e. 6-15/16 inches (176.2mm)
 - f. 9-7/16 inches (239.7mm)
 - 1.2 Bottom Rail (select one)
 - a. 4-1/2 inches (114.3mm)
 - b. 5 inches (127.0mm)

- c. 6 inches (152.4mm)
- d. 6-1/2 inches (165.1mm)
- e. 7-1/2 inches (190.5)
- f. 10 inches 254.0mm)

- 1.3 Stile (select one)
 - a. 2-1/8 inches (51.9mm)
 - b. 4 inches (101.6mm)
 - c. 5 inches (127.0mm)

2. Inch (50.8mm) door thickness

- 2.1 Top Rail (select one)
 - a. 2-15/16 inches (74.6mm)
 - b. 3-15/16 inches (100.0mm)
 - c. 5-7/16 inches (138.1mm)
 - d. 9-7/16 inches(239.7mm)

- 3. Bottom Rail (select one)
 - a. 4-1/2 inches (114.3mm)
 - b. 6 inches (152.4mm)
 - c. 10 inches (254.0mm)

- 3.1 Stile (select one)
 - a. 3 inches (76.2mm)
 - b. 4-1/2 inches (114.3mm)
 - c. 6 inches (152.4mm)

E. Frames

- 1. Frames for door jambs (sidelights and transom material where applicable) and header are fabricated from aluminum extrusions.
 - **NOTE TO SPECIFIER**select from the following
 - a. 2-3/4 inch face by 5-1/2 inch (69.8 mm by 139.7 mm) deep.
 - b. 2-3/4 inch face by 4-1/2 inch (69.9 mm by 114.3mm) deep header option for manual doors.
 - c. 5-1/2 inch by 5-1/2 inch (139.7mm by 139.7mm) header required for automatic doors using the Access-A-matic operator.
 - d. Custom frame dimensions: consult factory.
- 2. Frames are erected without the use of exposed screws where feasible.
- 3. Portion of hinge jamb is removable for access to operating hardware.
- 4. Curtainwall option: customer-supplied or Wikk-supplied curtainwall can be modified by Wikk to accept Wikk balanced hardware.
- 5. Exposed Hinge Shaft option: if used, exposed hinge shafts are extruded aluminum, stainless or bronze to coordinate with finish on doors, frame and hardware as specified **NOTE TO SPECIFIER** select one
- 6. Cladded aluminum tubes are not acceptable.

F. Weatherstrip:

- 1. Manufacturer's standard replaceable polypropylene pile of size and density appropriate to the function.
 - Occurs:
 - a. Vertically at meeting stiles on pairs of doors.
 - b. Concealed at door top rail.
 - c. At door stops at both hinge and strike jambs.
 - d. At both sides of exposed hinge shaft if used.

2. Manufacturer's standard nylon bristle.

Occurs:

- a. Concealed at door bottom.

G. Thresholds: Furnished at all doors unless otherwise detailed.

1. Materials: **** NOTE TO SPECIFIER **select one**
 - a. Extruded aluminum
 - b. Formed Stainless steel
 - c. Extruded Naval Brass
2. Woodscrew and rawl plug type fastenings are approximately 15 inches (381mm) on center.
3. Thresholds are saddle type, 6 inches (152.4mm) wide, set on the finished floor and adequately caulked against water seepage.
4. Thresholds of varying widths and types are also available; consult factory for availability.

H. Balanced hardware:

1. Balanced door hardware is machined and assembled by the door and frame fabricator. Exposed hardware is of material and finish as specified below in "g".
2. Cast iron hydraulic speed control and other integral parts are heavy duty and designed to allow variation in adjustments to meet this particular job with respect to door size, door weight and varying or internal building pressures.
3. Balanced hardware consists of the following items:
 - a. Manual speed control or automatic operator is concealed in the head frame. The unit is removable without requiring the removal of the door, head frame or any other hardware.
 - b. Heavy-duty steel tube hinge shaft is 1-3/4 inch (44mm) diameter with 3/16 inch (4.8mm) minimum wall thickness. Hinge shaft is furnished complete with integral closing force spring; adjustments are made with a cast worm gear at the floor to meet ambient wind or building pressure conditions. Top and bottom arms (as specified below) are bolted to hinge shaft with expanding hardened steel wedges. When door leaf exceeds 350 pounds (158.8kg), arms shall be welded to hinge shaft. Two-piece arms will not be acceptable except when installed at flush ceilings.
 - c. Hardware includes a spring-cushioned door roller bumper located in the guide channel. The operating mechanisms in the head include ball bearing pivots, manual speed control or Access-A-matic operator and guide channel. Guide roller is of self-aligning design with no lubrication needed.
 - d. Means are provided which make possible field adjustment for proper perimeter clearance of each door leaf in relation to its finished framework to accommodate on-site conditions.
 - e. Manual doors have a semi-automatic hold open device located in the bottom rail.
 - f. ADA compliant openings: doors designated as handicapped entrances have a maximum of 8 lbs.(3.63kg) spring tension adjustment at pull handle. The clear opening is a minimum of 32 inches (812mm) (or greater depending on local codes). The Wikk hydraulic speed control shall be adjusted so that from an open position of 70 degrees, the door will take at least three seconds to move to a point 3 inches (76.2mm) from the latch, measured to the leading edge of the door (optional time delay closer is available if desired; consult factory).
 - g. Exposed balanced hardware: pivot points in top and bottom arms contain self-aligning radial bearings and thrust bearings where applicable. Arms and pivots are one-piece stainless or bronze castings or aluminum extrusions, finished as specified.
**** NOTE TO SPECIFIER ** select one**
 - (1) Cast stainless steel, satin. (US32D)
 - (2) Cast stainless steel, polished. (US32)
 - (3) Cast bronze, satin (US4), with or without lacquer.
 - (4) Cast bronze, polished (US3), with or without lacquer.
 - (5) Extruded Aluminum (**SPECIFY COLOR OF ANODIZING**)

- I. Finish hardware by door manufacturer:
 1. Standard locking: Adams-Rite deadlocks (or deadlatches with lever handles or push paddles) and flushbolts at pair of doors. Master keyed cylinders, if required, will be furnished by others. (Most other types of mechanical locking and electronic locking also available – consult factory for compatibility.)
 2. Standard push-pull hardware: 1inch (25mm) diameter solid bars with radiused bends. Material and finish as specified. (Custom push-pull hardware also available – consult factory for compatibility.)
 - a. Push: full width bar.
 - b. Pull: vertical pull, 10 inches (254mm) high.
 3. Panic hardware (if required) is furnished by the door supplier. Concealed type exit device for pairs of doors, rim type exit devices for single doors of matching material and finish.
 4. All hardware is finished to match doors or as specified.

2.3 SOURCE QUALITY CONTROL

- A. Prior to leaving factory, balanced doors and immediate framing is assembled and “hung”. At this time, adjustments are made to provide proper perimeter clearance between door and frame, and all coordination between door, frame and finish hardware is tested.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify rough openings are ready to receive balanced door frames, hardware and doors.
- B. Verify that electrical service is available, properly located and of proper type, if automatic operators are being installed.

3.2 INSTALLATION

- A. Materials are installed by experienced erectors in strict accordance to installation instructions provided by the factory and specifications.

3.3 ADJUSTING

- A. Adjust doors to proper operation after glazing installation and re-adjust when necessary prior to owner’s acquisition of the building.

3.4 ERECTION

- A. Materials are installed by experienced erectors in strict accordance to installation data provided by factory and these specifications.
Doors are adjusted after glazing contractor completes his work and re-adjusted when necessary prior to owner’s acquisition of the building.

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