

WIKK INDUSTRIES, INC.

MasterFormat '95 SECTION 08480

MasterFormat '04 SECTION 08 42 36

FORMED BRONZE **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 mechanism 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 90 00 Joint Sealants (between frame and masonry)
 - 4. Structural members not within jambs, head members, transom bars and mullions.
 - 5. Field applied protective coating 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 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 per customer specifications, if requested.

1.4 WARRANTY

- A. Finished hardware and material not fabricated by Wikk carry manufacturer’s standard warranty.
- B. Wikk manufactured material furnished and installed to these specifications, including the manual door operating mechanisms, 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 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. 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 designed, manufactured and 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 are completely concealed within a minimum size of 5-1 /2 inch by 5-1 /2 inch (137.7 by 137.7mm) 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 and Finish: Naval Bronze CDA alloy 464.

(NOTE TO SPECIFIER ** select one of the following):**

1. Bronze, satin (US4).
2. Bronze, mirror (US3).
3. Custom finish _____ (call factory for availability)

- C. Formed Doors:

1. Material: minimum 12 gage, 0.075 inch (1.90mm) thick.
2. Doors have 0.75 inch (1.90mm) thick continuous channel frame welded into door body. Three tier metal thickness welded into door body as required for hardware reinforcement.
3. Door skins are blanked from one (1) continuous sheet of material without face welding.
4. Door thickness: 2 inch (50.8mm).
5. Stiles: 2-3/4 inch (69.85mm) minimum **or larger as specified.**
6. Top rail: 2-3/4 inch (69.85mm) minimum **or larger as specified.** 3-1/2 inch (88.9mm) preferred.
7. Bottom rail: 4-3/4 inch (120.65mm) minimum **or larger as specified.**
8. Reinforcing material is bronze and welded to door body. Aluminum, plastic or other glued-in reinforcements or stiffeners are unacceptable. Cladding over aluminum or steel constructed doors is not acceptable.

- D. Formed Frames:

1. Material: minimum 12 gage, 0.075 inch (1.90mm) thick.
2. Face dimension: 3 inch (76.2mm) minimum **or larger as specified.**
3. Frame depth: 5 inch (127mm) minimum **or larger as specified.**
4. 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.
5. Consult factory for dimensions less than above.
6. Frames are erected without the use of exposed screws where feasible.

7. Portion of hinge jamb is removable for access to operating hardware.
 8. Exposed Hinge Shaft **option**: If used, exposed hinge shafts are extruded bronze to coordinate with finish on doors, frames and hardware as specified. Cladded tubes are not acceptable.
- E. Weatherstrip:
1. Manufacturer's standard polypropylene pile of size and density appropriate to the function. Occurs:
 - a. Concealed at door top rail.
 - b. At both sides of exposed hinge shaft, if used.
 - c. Vertically at meeting stiles on pairs of doors
 - d. At door stops at both hinge and strike jambs.
 2. Manufacturer's standard nylon bristle. Occurs:
 - a. Concealed at door bottom
- F. Thresholds: furnished at doors unless otherwise detailed.
1. Material: Extruded naval bronze or extruded aluminum. **** NOTE TO SPECIFIER** select one**
 2. Woodscrew and rawl plug type fastenings are approximately 15 inches (381mm) on center.
 3. Thresholds are saddle type, 6 inches (152.4mm) wide and set on the finished floor, adequately caulked against water seepage.
 4. Thresholds of varying widths and types are also available. Consult factory for availability.
- G. 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 are 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 varying wind or building conditions. Top and bottom arms (as specified below) are welded to hinge shaft when applicable. Two-piece arms are not acceptable, except when installed at flush ceilings.
 - c. Hardware includes a spring-cushioned door roller bumper located in the guide channel. The operating mechanism in the head includes ball bearing pivots, manual speed control or Access-A-Matic operator and guide channel. Guide roller is a 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 width is minimum 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 bronze castings, finished as specified.
- ** NOTE TO SPECIFIER ** select one:**
- (1) Cast bronze, satin, (US4) with or without lacquer.
 - (2) Cast bronze, polished, (US3) with or without lacquer.

H. 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. 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 door.
- 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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