

# **SECTION 08765**

## **ASSISTIVE WINDOW ACTUATOR**

### **PART 1 - GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Actuators with hand crank and other features which enable window system to operate within ADAAG, UFAS, and ANSI A117.1 standards. Actuator device to operate vertical or horizontal sliding windows.

#### **1.02 RELATED SECTIONS**

- A. Section {08520} - Aluminum Windows: Window units to accept actuator modification.
- B. Section {08xxx} - {Wood windows, vinyl windows, steel windows, or other type here}
- C. Section {09xxx} - Finishes: Window jambs and header be straight, flat, and square to each other and to window. Straightness, within 1/8" in 4'. Square, within  $\pm 2^\circ$ .

#### **1.03 REFERENCES**

- A. ANSI A117.1-1998 sections 506 and 1002.13; ANSI A117.1-1992 sect's 4.12 and 4.25
- B. Life Safety Code NFPA 10, Emergency Escape and Rescue Openings
- C. Building Codes- SBC, BOCA, and UBC all applicable sections
- D. ADAAG, Section 4.27 Controls and Operating Mechanisms
- E. UFAS Section 4.34.2(9) and 4.27 and Retrofit Manual, Section 4.12, pg. 98-101
- F. AAMA/ANSI 101-93, Voluntary Specifications for Windows and Sliding Doors

#### **1.04 PERFORMANCE REQUIREMENTS**

- A. Window actuating system to be compatible with type and model of window to be modified.
- B. Window actuating system to open, close and latch windows within referenced standards and codes in paragraph 1.03.
- C. Window actuator system to be self-adjusting and essentially maintenance free.

#### **1.05 SUBMITTALS**

- A. Submit manufacturer's product data, and installation instructions under the provisions of Section {01300}. Additionally, submittals to include:
  - 1. Copy of warranty required by Paragraph 1.09 for review by Architect.
  - 2. Shop Drawings, if required, indicating non-standard layout and placement of

actuator.

3. To Window Actuator Manufacturer:
  - Actual field conditions of installed window, on forms provided by manufacturer, which define: jamb depth, window/jamb/head/mullion(s) dimensions and configurations, verification of movable sash attachment area, distance between jambs, distance between head and finished sill, and distance from finished floor to finished sill.
  - Approved floor plan indicating window location(s) within project by discrete number or letter. Indicate preferred control location - right or left handed, and height of sill above finished floor.
  - Scaled or dimensioned window construction drawings (sections) from manufacturer of window provided by {08520} or {08xxx}.

### 1.06 COMPATIBILITY AND LOCATION REQUIREMENTS

- A. Ensure compatibility of actuator with window provided by Section {08520} or {08xxx}.
- B. Window shall be mounted with consideration for actuator control location (refer to ANSI A117.1 for reach requirements). Adjoining walls, cabinets, furniture, and other reach obstructions must be considered.
- C. Coordinate with submittals for Section {08520} or {08xxx} to ensure compatibility of actuator with intended window units. For standard\*\* Window Ease™ window actuator, windows to be modified must:
  1. Be a maximum size of 4060 for hung windows and 6040 for sliders with a maximum ever opening force of 35lbf. Minimum size of xx30 for hung windows and 30xx for sliders.
  2. Have clear area on moveable sash stiles (or rails if slider) to receive tapping screws, for actuator attachment. Clear attachment area to be a minimum of 7/16" between glazing edge (usually pocketed in stile of moveable sash) and window channel/track.
  3. If double-hung, the upper sash must be immobilized (fixed).
  4. Allow for standard\*\* Window Ease™ window actuator operating and installation parameters which:
    - a. Allow a maximum jamb/sill depth of 5 1/2" (\*\*without extensions).
    - b. Locates center of controls 6" or less from face of window into room\*\* and a minimum of 4" up from the top of sill.
    - c. Requires a clear operation radius of 10" from the controls center, (Crank radius from the center of handle to pivot point is 6").
    - d. Needs a minimum jamb depth of 2 3/8" to fully recess actuator covers into window opening\*\*.
    - e. Allows 7/8" maximum for handles or other protrusions from face of moveable sash.

5. *\*\*Optional crank or controls extension(s) as well as other hardware for accommodating non-standard conditions such as oversize windows, ganged windows, deep jambs or sills, shallow jambs due to retrofit panning, kitchen windows which adjoin cabinets, etc.. See Part 2.02, Section D, Accessories*

### **1.07 SEQUENCING**

- A. Sequence installation of window actuator after completion of finishes surrounding window, and after final cleaning and adjustments have been made to window.

### **1.08 FIELD SAMPLE**

- A. In accordance with Section {01400} - {Quality Control} install actuator on one window unit to demonstrate compatibility and functional operation.
- B. Install on a window unit that can easily be inspected from both sides.
- C. Prepare and test field sample prior to installation of operators on windows installed in building.

### **1.09 WARRANTY**

- A. Provide one year warranty under provisions of {01700} - {Contract Close-out}.
- B. Warranty to cover system installation and all components required to actuate windows. In event of failure, warranty shall provide for replacement parts, removal, installation, and repair.

## **PART 2 - PRODUCTS**

### **2.01 ACCEPTABLE MANUFACTURES**

- A. Southwest Home Products LLC, Albuquerque, New Mexico; 505-856-6632
- B. Manufactures of other products submitted and approved in accordance with Section {01630} - {Product Options and Substitutions}.

### **2.02 WINDOW ACTUATOR**

- A. Window Ease™ window actuator, Southwest Home Products LLC product No. 721.1. Either jamb or sill mounted. Manual hand operation.
- B. Technical features:
  - 1. Actuator maintains inherent operating range of window.
  - 2. All actuator control functions from one location.
  - 3. Internal balance mechanism to ensure tight weather gasket closure.
  - 4. Emergency escape and rescue opening requirement in eight crank revolutions or less.
  - 5. Synchronous two sided pull for jam resistant operation.
  - 6. Clutching or power disengagement capability shall prevent damage to window or window actuator due to occasional excessive operational force.
  - 7. "Free wheeling" emergency egress feature to ensure compliance with Life Safety Code 101.
  - 8. Latching feature capable of infinite number of latched open window positions.
  - 9. Actuator shall not require routine maintenance and shall essentially be self adjusting and maintenance free.

- C. Materials:
  - 1. All parts to be corrosion resistant.
  - 2. Bearings: Self lubricating ball bearings.
- D. Accessories:
  - 1. Special Cover finishes available: Special powder coating, high solid paint, anodized available. Standard covers are powder coated bronze or white. Standard cover corners and controls are black.
  - 2. Side cover closures for surface (wall) mounting, shallow jamb mounting or center ganged or mulled window trim.
  - 3. Special mounting hardware for ganged or mulled window.
  - 4. Alternative crank handles.
  - 5. Custom (non-standard) sash or chassis brackets and adapters.
  - 6. Crank or latch control extension(s) kits.
  - 7. Oversize window kit.
  - 8. Heavy duty drive for windows over 35lbs and up to 55lbs operating force.

## **PART 3 - EXECUTION**

### **3.01 INSTALLATION**

- A. Installer shall have experience installing devices of the type specified.
- B. Preparation: Examine installed windows and determine that installation is complete and that windows are operating smoothly and compatible with all actuator system requirements.
- C. Install actuators according to manufacturer's recommended instructions and approved shop drawings.

### **3.02 FIELD QUALITY CONTROL**

- A. After installation, test all windows and operators. Cycle open and closed a minimum of ten times. Verify:
  - 1. Proper sash alignment in window frame.
  - 2. Full opening and closing.
  - 3. Latching system operation.
  - 4. "Excessive force" clutching system.
  - 5. Emergency "free wheeling" function.
  - 6. Complete and tight gasket closure for weather tight window unit seal.
- B. Correct deficiencies and make required actuator adjustments.

### **3.03 DEMONSTRATION**

Demonstrate operation of window operator(s) to Owner's designated representative(s).  
END OF SECTION 08765, ASSISTIVE WINDOW ACTUATOR