

## SECTION 08677 - STEEL SINGLE HUNG 3/4 HOUR FIRE WINDOW - IGU

### 1.01 SUMMARY

- A. WORK INCLUDES:
  - 1. Steel single hung windows with 45 minute fire rating.
- B. RELATED SECTIONS:
  - 1. Section 08100: Hollow steel doors and frames.
  - 2. Section 08800: Glazing.

### 1.02 REFERENCES

- A. American National Standards Institute (ANSI) Z97.1- Safety Glazing Materials Used in Building-Safety Performance Specifications and Methods of Test.
- B. American Society for Testing and Materials (ASTM):
  - 1. ASTM A366-Specification for Steel, Sheet, Carbon, Cold-rolled, Commercial Quality.
  - 2. ASTM C1036-Specification for Flat Glass.
  - 3. ASTM E163-Fire Tests of Window Assemblies.
- C. National Fire Protection Agency (NFPA) NFPA 257-Fire Tests of Window Assemblies.

### 1.03 SYSTEM DESCRIPTION

- A. DESIGN REQUIREMENTS: Provide 45 minute fire rated steel single hung windows complying with the requirements of Underwriters Laboratories File #R19270, when tested in accordance with UL 10C and UBC 7-4.

### 1.04 SUBMITTALS

- A. PRODUCT DATA: Submit manufacturer's specifications, recommendations and standard details, including details on fabrication, finishing, glazing, accessories and other components of work.
- B. SHOP DRAWINGS: Submit shop drawings indicating opening dimensions, framed opening tolerances, affected related work, and installation requirements of window units and components.
- C. CERTIFICATES: Submit certification reports prepared by independent testing agency indicating that system complies with specified requirements.

### 1.05 DELIVERY, STORAGE AND HANDLING

- A. All materials shall be unloaded and stored off the ground in a protected area designated by the general contractor, which is secured and convenient to the area of installation.
- B. Avoid uses of plastic or canvas coverings which could trap moisture.

### 2.01 MANUFACTURER

- A. For function and quality, the Drawings and Specifications are based on the Series 425 Steel Single Hung Window as manufactured by:
  - 1. **Fire Windows & Doors:** 22850 Perry Street, Perris, CA 92570  
Phone (951) 943-1780, Fax (951) 943-2894.

### 2.02 MATERIALS

- A. Cold-rolled steel sheets: ASTM 366, commercial quality carbon steel.
- B. PRIMER: Manufacturer's standard rust inhibiting primer, compatible with finish painting specified in Section 09900.
- C. GLASS: Provide labeled glass complying with the requirements of Section 08800. Each piece of glass to carry certification agency label.
- D. FASTENERS:
  - 1. Manufacturer's standard fasteners, compatible with steel window members, trim hardware and other components of window units.
    - I. Provide concealed fasteners wherever possible.
    - II. Provide exposed fasteners which match finish of member or hardware being fastened.

### E. HARDWARE:

- 1. Manufacturer's standard chrome sweep latch at interlock.
- 2. Provide spring balances capable of holding sash in any open position.
- 3. Attach one of the spring balances to the window frame through a 165 degree fusible link so that upon release the window vent will close from any open position.

- F. WEATHER-STRIPPING: The vent shall be fully weather-stripped with manufacturer's standard weather-stripping.

### 2.03 MANUFACTURED UNITS

- A. Provide units containing vertical sliding sash, with interlocking stiles.
- B. FRAME
  - 1. 16 gauge cold rolled steel head, jambs, and sill.
  - 2. Frame depth to be a minimum of 4 3/4".
- C. MUNTINS: 16 gauge cold rolled steel sheet.
- D. CORNERS: Corners of frames and ventilators shall be coped or mitered and electrically welded; exposed welds shall be dressed smooth.
- E. Provide gasketed side rails in the window vents to assure a smooth vertical sliding section.
- F. GLAZING GASKETS: As required for fire resistance ratings.

### 2.04 FABRICATION

- A. GENERAL:
  - 1. Provide manufacturer's standard fabrication and accessories that comply with specification requirements.
  - 2. Fabricate metal work neat in appearance and free from defects, warp or buckle.
  - 3. Accurately form metal to required sizes and profiles.
  - 4. Fabricate frames, concealed stiffeners, reinforcing, edge channels and other components from cold rolled steel.
  - 5. Prepare sash for pre-glazing at factory or field glazing.
  - 6. Identify each assembly with factory applied labels indicating fire rating, company name, address, evaluation report number, serial number and inspection agency name and logo.
  - 7. Maximum Glass Lite Size: 2354 square inches.
  - 8. Provide fixed and sliding panel with overlapped joints to prevent cracking and provide positive seal.
  - 9. Anchors, attachments, and shims supplied by others.

### 2.05 FINISH

- A. Clean, treat and prime surfaces of fabricated units.
- B. Clean steel surfaces free of mill scale, rust, oil, grease, dirt and other foreign materials before application of factory baked powder coat finish.

### 3.01 INSTALLATION

- A. Comply with manufacturer's specifications and recommendations for installation of units, hardware, operators and other components of work.
- B. Do not install until finishing of concrete, masonry, or other operations harmful to glass are complete.
- C. Set units plumb, level and true to line without warp or rack of frames or sash.
- D. Anchor securely in place in accordance with manufacturer's requirements to maintain fire rated barrier.

### 3.02 ADJUSTING

- A. Adjust operating sash and hardware to provide tight fit at contact points, sill and at the interlock.
- B. Lubricate hardware and moving parts, if necessary.
- C. Touch-up marred or abraded surfaces to match original finish.

- 3.03 CLEANING: Clean steel and glass surfaces promptly after installation of windows.

**Fire Windows & Doors**

**22850 Perry Street  
Perris, CA 92570  
866-347-3946 Fax 951-943-2894**

**Dealer:**