# SECTION 08600 – PRIME VINYL WINDOWS

**This section is intended to specify single hung solid vinyl prime windows.**

## PART 1 – GENERAL

### Description of Work:

Definition – Single hung windows are vertically operating windows in which the weight of the sash is offset by a counterbalancing mechanism mounted in the windows. Only the bottom sash is movable for ventilation and will remain in desirable ventilating positions. The top sash shall be glazed in place and non-movable.

Single hung designation (H-R35)

### Quality Assurance:

Field Measurement – Take field measurements prior to preparation of shop drawings and fabrication of window units.
Manufacturer's Qualifications – Windows shall be manufactured by a single manufacturer who must show a history of window manufacturing; and must be in accordance with voluntary specifications of AAMA.
Mock-up – Prepare a mock-up of each type of prime window required, in sizes and at existing window locations indicated, for purposes of demonstrating compliance with the requirements and to serve as standard for judging completed work. Mock-ups may be left in place as part of work if in condition at project completion.

### References:

Standards - Provide prime windows complying with the voluntary specifications of AAMA/NWWDA 101/I.S.2-97 for Vertically Operating Windows.
Air Infiltration – Not more than 0.10 cfm/$ft^2$ at a pressure of 1.57 psf.
Uniform Structural Load – Shall pass a minimum of 52.5 psf to meet requirements for H-R35. Design pressure to be a minimum of 35 psf.

### Submittals:

Product Data – Submit manufacturer's product literature and specifications describing prime windows, including color selections and glazing options.
Shop Drawings – Submit shop drawings showing elevations of units, full size profiles of window frame members, thickness of metal, sizes, types, materials, finishes, and location of operating hardware; mullion details, method and materials for weather-stripping; details of installation, including connection and relationship to other work. Include schedules showing locations of units for each size and type.
Samples – Submit sample of each required vinyl finish, on 12" long sections of typical frame members, plus a corner sample at least 6" long.
Test Reports – Submit certified laboratory test reports showing evidence that prime windows of type indicated complies with requirements.

**Warranty:**

Manufacturer: Shall warrant that the vinyl in their replacement windows will not, under normal atmospheric conditions, chip, crack, blister or peel for a period of 15 years. Window manufacturer shall warrant the insulated glass for full material replacement if under normal atmospheric conditions, material obstruction or vision resulting from film formation, moisture, or dust collection between the interior glass surfaces occur within a period of ten (10) years.
Contractor: Shall guarantee his work for a period of one (1) year. Contractor is responsible for the proper operation of all window units, and shall guarantee no drafts around the replacement windows by using sealant and insulation.

## PART 2 – PRODUCTS

**Manufacturer:**

The specifications and drawings herein are of Kas-Kel's "100 Series" Single Hung as manufactured by Kasson & Keller, Inc., Fonda, New York. The prime windows supplied on this project shall be the "100 Series" or an approved equal. The approval will come from a representative of the building's owner.

**Materials:**

A. PVC Extrusions:

1. The extrusion quality of the profiles shall conform to ASTM D-3678-78. The rigid PVC extrusions shall be certified by the extrusion manufacturer to have had outdoor exposure tests of two or more years duration with no appreciable color, surface finish, or material degradation.

B. Secondary Member:

1. Balance shoes, tilt-in-hardware, filler tracks, weather-stripping, tapes, etc. shall be made of a suitable material compatible with rigid PVC.

2. Fasteners shall be stainless steel, aluminum, or other corrosion-resistance materials compatible with rigid PVC.

C. Weather-stripping:

1. The weather-stripping shall meet the AAMA requirements of publication number AAMA 701.2-1974. All weather-stripping shall be fin-type, dense woven polypropylene pile.

D. Insulated Glass:

1. Sash shall be glazed using 3/4" sealed insulating glass, made of two lites of single strength glass with a 9/16" air space created by a desiccant filled spacer. The spacer must be of warm-edge technology. Structural requirements may substitute double strength glass in place of single strength. Sash shall be held in place by using a thermal glazing tape or wet glazing and snap-in glazing bead.

2. Standard glass shall be two pieces of clear "B" quality, with additional thermal performance by substituting one piece of Low "E" coated glass as an option.

E. Screens:

1. Screens shall be of fiberglass mesh 18 x 16 and charcoal in color.

**Construction:**

A. Master Frame :

1. The master frame miters shall have corners accurately machined to produce hairline joints and shall be securely fastened at the corners with the use of a thermal fusion-welded process. The master frame shall be of multicavity vinyl extrusions; solid rigid hollow PVC extrusion with an overall frame width of 2 3/4" or more. The sill shall be of a sloped nature to allow water to easily run off and to allow easy cleaning of debris at the sill. The sill frame shall have an interlocking member, which interlocks with the bottom sash for the purpose of adding structural strength while not hindering water removal. The master frame shall contain a brickmold design that is an integral part of that master frame.

2. The master frame incorporates a fastened stabilizer bar at the meeting rail. This stabilizer bar shall allow the top sash to be glazed in place to create the single hung window. The stabilizer bar shall have an interlock groove in order to interlock with the bottom sash when closed. The stabilizer bar should be aluminum reinforced to provide maximum strength.

3. The master frame shall contain an extruded nailing fin and "J" channel if the window is to be used for new construction, or installations where existing frames are to be covered. Where normal window replacement is to take place, the master frame shall contain no nailing fin.

A. Sash:

1. Bottom sash frames shall be solid rigid PVC hollow extrusion. Sash shall have mitered corners accurately machined and fastened with a thermal fusion-welded process. The welded seam shall be neatly cleaned to remove rough edges. Glass shall be held in place by using wet glazing process on the interior of the glass and a snap-in glazing bead on the exterior.

2. The bottom sash shall have an extruded lift rail to allow for easy raising and lowering of the sash.

3. The top rail of the bottom sash shall contain an extruded interlock which will automatically interlock with stabilizer bar when the bottom sash is closed. The top rail shall also contain sash tilt mechanisms, which allow the bottom sash to be tilted in for easy cleaning. There shall be a minimum of one meeting rail lock (and two if the window width is greater than 24 1/8").

4. The top sash shall be glazed in place into the master frame. The glass shall be glazed with use of a thermal glazing tape or wet glazing and a PVC snap-in glazing bead.

5. The top rail of the bottom sash shall be reinforced with structural aluminum or steel for the purpose of adding structural strength of the window unit.

C. Counter Balances:

1. The bottom sash shall be lifted with assistance from quality block & tackle balances. The balance tension shall be accurately set to allow the sash to be operated properly. The balance will allow the sash to stay in the desired ventilating position.

D. Screen:

1. The screen frame shall be extruded or rolled aluminum. The screen cloth shall be charcoal fiberglass 18 x 16. The half screen shall be installed under the fixed top sash and shall be weather-stripped to allow maximum insect protection.

E. Finishes:

1. Color shall be throughout the PVC extrusion and shall be warm white or beige (tan).

## PART 3 - EXECUTION

### Installation:

A. Installation shall be in compliance with the manufacturer's installation details.

B. Window units must be stored in a place protected from the weather.

C. Window frames shall be set plumb and square and secured to the surrounding structure according to the manufacturer's instructions.

D. The window sill shall be supported and set level with particular care taken to see that the design level of fall is maintained.

E. Windows shall not be placed as to carry any load other than their own weight.

F. Cavities between window frames and the rough openings shall be filled with insulation.

G. Caulk all joints between the window frame and the existing casing.

H. Sash and hardware shall be adjusted for smooth operation.