

TORRANCE STEEL WINDOW CO., INC.

MANUFACTURER OF STEEL WINDOWS AND DOORS

CENTURY 2000 SERIES HEAVY INTERMEDIATE STEEL WINDOWS AND DOORS FOR NON-RATED AND ¾ HOUR RATED WINDOWS

GENERAL- All Century 2000 Series steel windows and doors shall be 1-½" Heavy Intermediate fabricated by Torrance Steel Windows Co., Inc. and shall be furnished in the sizes as set forth in the contract drawings and these specifications, including all necessary hardware, screens (if specified) and related materials as herein specified.

Horizontal & Vertical Bars shall be 1-¼" X 1-½" for single or insulated glass and 7/8" X 1-½" for max ¼" glass.

NOTES: Glass, glazing, glazing materials, caulking materials, screws, shields, plugs, or fastenings to the structure are not to be furnished by the window manufacturer.

GLASS THICKNESS- ¼", ½", 5/8", ¾" or 1" Maximum or ¼" or 5/16" Glazing for rated frames.

SCOPE OF WORK- The work under this section shall include all labor and materials required to furnish the steel sash, casement doors, and related items as indicated on the drawings and as herein specified.

CONSTRUCTION- Corners of the frame and ventilators shall be coped or mitered and electrically welded; exposed surfaces dressed smooth. Muntin bars shall be attached to frame or ventilator members by means of mortise and tenon joints, with intersections interlocked and welded with flush interior surfaces. Vents shall be prepared for screens, unless otherwise noted.

HARDWARE- Casement window operators will be heavy-duty roto operators (medium bronze-baked enamel) or cam type operators in solid bronze, US-10 Finish. If sash is to have factory finish paint, roto operators and roto locking handles shall be painted to match sash, unless otherwise specified.

Project-in or Project-out operators will be cam type operators, or snap locks in solid bronze, US-10 Finish.

Door hardware will be Omnia mortise lock set with #762 levers or #560 for handicap, keyed out & in, or keyed out thumb turn in, US-10 Finish, with Pemko 2005DV or 142D thresholds.

OPERATIONS- Projected ventilators (Awnings/Hoppers) shall be balanced on two heavy steel supporting arms completely concealed when ventilator is closed. Friction shall be provided by solid bronze, non-ferrous shoes, spring-loaded and mounted in housing at the top rail of each ventilator. Stops to limit the amount of opening are available, and are recommended for large and/or heavy vents. (Specify degree) Our two bar hinging system is attached to frame and ventilator. (Maximum weight of glazed vent not in excess of 75 pounds.) Projection in and projected out ventilators will have



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adjustable screws in top of ventilators, applying pressure to the solid bronze shoes, sliding up and down, in web frame, on each side.

Project-out (Awning type) ventilators shall have a cam type locking and handle engaging a lead strike. (A pole ring at head when not screened will be furnished when specified.) Project-out ventilators should not be screened when pole operation is required. Consult factory for details. Dual arm rotos are available for project-out vents with fixed screens, at an additional cost.)

Project-in (Hopper Type) ventilators within reach of the door shall have a cam type locking handle engaging a concealed keeper. Project-in ventilators out of reach from floor shall be furnished with spring catch for pole operation. (Specify number of poles required.)

Project-out (Casement Type) ventilators shall have heavy duty roto operators or a #116 cam lock with the tongue engaging a lead strike. Slide hinged ventilators up to 5'-4" high shall be hung on two heavy steel extension or (close-up, specify which) hinges, and shall be arranged to swing out. Vents over 5'-4" high shall have an English Type steel hinges and two (2) locking handles, (Simplex only, in-or- out-swing.) Drips shall be attached to frame at head of out-swing ventilators. On in swing, welded to vent at sill.

WEATHER STRIPPING- Windows shall be continuously weatherstripped around the entire perimeter of the ventilators. Joints or intersections of the weatherstripping shall be tightly and securely closed to provide full pressure equalization in the ventilator chamber. All weatherstripping shall be in the same plane. Ventilators that provide weatherstripping in different planes will not be accepted. Weatherstripping shall be Bulb-Type, Thermo-plastic with Vinyl/Rubber Compound. On primed only sash & doors, weatherstripping will be furnished loose to be applied after installation and glazing by the glazer, and field painted by others. On factory finished sash & doors, weatherstripping will be factory applied. All windows shall meet or exceed the following performance requirements: **(integral groove shall be provided on both ventilator and fixed section for double weatherstripping.)**

AIR INFILTRATION- When tested in accordance with ASTM E-283-86, the total air infiltration shall not exceed 0.06 c.f.m. per square foot of fixed wall area or 0.37 c.f.m per linear foot of vent crack length.

WATER PENETRATION- When tested in accordance with ASTM E-331-86, there shall be no water leakage at a static pressure of 6.00 psf.

STRUCTURAL PERFORMANCE- When tested in accordance with ASTM E-330, there shall be no failure of locks, hinges or other parts, at a positive pressure or negative pressure of 60.0 psf. (150% Design Load)



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GLAZING- Select putty or bead glazing as follows:

1. Windows and doors shall be designed for glazing from outside or inside, (select one), with spring wire glazing clips and glazing compound.
2. Windows and doors shall be designed for glazing from outside or inside with continuous snap in glazing beads. Specify thickness of glass, panels or other material. Note: (glass, panels or other material(s), glazing compound, tape, shims, setting blocks and glazing by others.)

SCREENS- Upon request, shall be opened frame type design especially for use with these windows, and arranged for attachment and removal from the inside (casement & awning vents). All screens shall have aluminum frames with fiber mesh or aluminum screen cloth. Fixed screens shall be furnished for Roto-type side-hinged. Hinged-wicket type shall be furnished for project-out, (Awning Type) cam handle or snap lock operation. Wicket type shall be furnished for simplex side-hinged. Long leg with no wicket shall be furnished for project-in vents (Hopper Type). Screens for hopper type are attached to the exterior and must be removed from the exterior only. Screen frames to be mill finished or color of windows when paint specified.

ERECTION- All windows shall be installed in openings properly prepared by others. Mastic, provided by window installer, shall be used in sufficient quantity to provide weathertight seal wherever metal to metal to metal joinery within the window use. (Caulking shall be by other trades.) Installer shall provide all screws, shields, plugs and/or fasteners required for installation. Erector shall seal all screw heads and unused fixings holes around entire perimeter. Mullions shall be buttered full length with mastic and properly struck. All windows shall be set plumb, square and true, properly aligned, securely anchored in place and properly adjusted with hardware installed before glazing.

FINISHES-

- * Dip prime coat of red iron oxide for field brush paint.
- * Electro galvanizing.
- * Hot dip galvanizing.
- * Bond and prime for Electro and Hot Dip Galvanized finish.
- * Tnemec (Polyurethane) over Epoxy-primer.

Matthew's PPG Paint (Polyurethane)

