



KLEAR™ Glass Railing

PRODUCT DATA SHEET

Hollaender's **KLEAR™** railing offers architects another option when specifying or designing glass railing systems.

OVERALL DIMENSIONS:

- This system uses 3/8" glass infill up to the 42 inch height requirement and does not have a top cap on the glass.
- Posts are attached with a grabrail or handrail at 36 inches above the walking surface on level, ramp, and stair railings.
- Made from clear anodized aluminum, resulting in a railing that is 25-50% less costly per linear foot than stainless steel.
- No drill holes are required in the glass, resulting in a much lower cost per foot than other systems.



MATERIALS:

Posts: Aluminum 6005-T5, 1 ½" IPS (48.2 mm O.D.) Schedule 80 Wall (clear anodized)

Rails: Aluminum 6063-T6, 1 ½" IPS (48.2 mm O.D.) Schedule 40 Wall (clear anodized)

Fittings: Aluminum 6063-T6 (clear anodized)

Base Flanges: Cast Aluminum

Fasteners: Stainless Steel 304 Alloy

CODE COMPLIANCE:

U.S. International Building Code 2009/2012/2015/2018 standards specific to guardrails, handrails and infill panel materials including glass.

PERFORMANCE REQUIREMENTS:

All railings shall be supplied to conform to applicable sections of the following codes:

- International Building Code
- ADAAG

STRUCTURAL PERFORMANCE:

Provide railings capable of withstanding the effects of gravity and the following loads and stresses within limits and under conditions indicated:

Top Rails of Guards:

- Uniform load of 50 lb/ft. applied in any direction.
- Concentrated load of 200 lb/lf. applied in any direction.
- Uniform and concentrated loads need not be assumed to act concurrently.

Infill Area of Guards:

- Horizontal concentrated load of 50 lbf. applied to 1 sq. ft. at any point in system, including panels, intermediate rails, balusters, or other elements composing infill area. Load on infill area need not be assumed to act concurrently with loads on top rails.
 - ◆ For states on IBC 2009/2012:
 - * Tempered Glass: ASTM C1048, Fully Tempered, Condition A, Type 1 (Transparent Flat Glass), Quality Q3. Products shall comply with properties indicated for class, thickness, and manufacturing process that have been tested for surface and edge compression according to ASTM C1048 and for impact strength according to 16 CFR 1201 for Category 2 materials.
 - * Glass infill panel to be 3/8" thickness with maximum spacing between posts to be 4 ft.
 - * Glass to be monolithic or laminated tempered.
 - ◆ For states on IBC 2015/2018 (Laminated glass is required):
 - * Tempered Glass: ASTM C1048, Fully Tempered, Condition A, Type 1 (Transparent Flat Glass), Quality Q3. Products shall comply with properties indicated for class, thickness, and manufacturing process that have been tested for surface and edge compression according to ASTM C1048 and for impact strength according to 16 CFR 1201 for Category 2 materials.
 - * Glass infill panel to be 3/16" lite, .060" lamination, 3/16" lite for a total thickness of 7/16" with maximum spacing between posts to be 4 ft.
 - * Glass to be laminated tempered.
 - ◆ Resin panels to be acrylic 3/8" thickness, from Lumicor® or other architect approved vendor.

Handrails:

- Uniform load of 50 lb/ft. applied in any direction.
- Concentrated load of 200 lb/lf. applied in any direction.
- Uniform and concentrated loads need not be assumed to act concurrently.

