

IRC Criteria Regarding Handrail Graspability

The following criteria was introduced in the 2003 I-Codes and has carried through into the 2015 revisions. CrystaLite's 9039 top rail complies with the Type II criteria. Our 9000 and 9001 top rails have continued to be deemed as providing 'equivalent graspability' in most jurisdictions even though they do not fit either definition of Type I or Type II. This is permitted at the discretion of the local building authority.

If the 9000 or 9001 top rail is desired for your project to act as a handrail, always ensure approval by the local authority prior to purchase and installation.

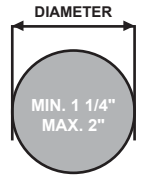
R311.7.8.3 Grip-size. Required handrails shall be of one of the following types or provide equivalent graspability.

- Type I.** Handrails with a circular cross section shall have an outside diameter of not less than 1-1/4 inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of not less than 4 inches (102 mm) and not greater than 6-1/4 inches (160 mm) with a cross section of dimension of not more than 2-1/4 inches (57 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).
- Type II.** Handrails with a perimeter greater than 6-1/4 inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of not less than 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for not less than 3/8 inch (10 mm) to a level that is not less than 1-3/4 inches (45 mm) below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 1-1/4 inches (32 mm) and not more than 2-3/4 inches (70 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).

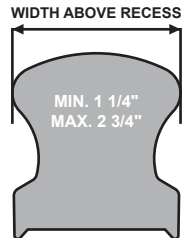
2015 International Residential Code




TYPE I - CIRCULAR



TYPE II - NON CIRCULAR



Stairway Manufacturer's Association Interpretation of IRC

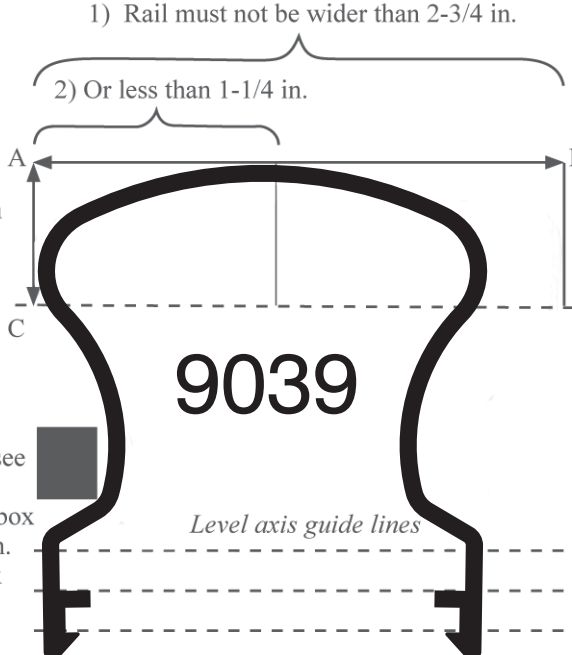


FULL SCALE TYPE II RAIL TEST

Instructions:
Position cross section of rail with highest point touching line AB and left edge touching line AC. Keeping level axis of rail parallel to line AB.

Must complete tests 1) to 4) to pass
R315.2 Hand grip size test.
If rail is not symmetrical both sides must pass.

- Rail must not be wider than 2-3/4 in.
- Or less than 1-1/4 in.
- With in 3/4 in. finger recess
- Must see entire black box 5/16 in. wide x 3/8 in. tall



9039

Level axis guide lines

Reproduction check: solid line measures 2.75 in.