

Pinger Handrails HR200

Suggested Specifications

PART 1 – GENERAL

1.01 SUMMARY

- A. Handrail systems for pedestrian safety and wall protection

1.02 SECTIONS INCLUDES

- A. HR200 SERIES Handrail System, round grip handrail with integrated Vinyl bumper cover.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide handrail system with integrated impact bumpers that conform to the following requirements of regulatory agencies and the quality control of and Wall Protection Systems, Pinger.
 - 1. **Fire Performance Characteristics:**Conforms with EN 13501-1 Class B fire rating.Flame Spread and Smoke:Tested in accordance with ASTM E84, Class A. Smoke concentration is fully qualified, non-toxic, and exhibits no dripping during combustion.
 - 2. **Fungal and Bacterial Resistance:**Manufactured with a silver-ion-infused resin matrix that effectively Inhibits surface fungal growth and pathogenic organisms such as *Escherichia coli* and *Staphylococcus aureus*.Tested and certified in accordance with **JIS Z 2801:2010**.
 - 3. **Mould Proof:** Rated as **Excellent** under ASTM G21-15. Provides superior moisture-proof and mildew-proof performance, inhibiting the growth of *Aspergillus brasiliensis*, *Penicillium funiculosum*, *Chaetomium globosum*, and *Trichoderma viride*.
 - 4. **Horizontal Burning:** Tested in accordance with the procedures specified in UL 94HB(Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Self Supporting Plastics in a Horizontal Position).
 - 5. **Impact Strength:** Engineered with rigid vinyl profile materials providing high impact Resistance (tested to 1kg drop impact) in accordance with **ASTM D256-10EL** and **GB 8624-2012**.
 - 6. **LEED, LCA & IAQ Compliance & Green Sustainable**
 - a. **LEED & Green Building Contribution:** Formulated to support sustainable design credits, contributing directly to **LEED (Leadership in Energy and Environmental Design)** certification requirements for low-emitting materials and recycled content.
 - b. **Life Cycle Assessment (LCA):** Evaluated through a comprehensive Life Cycle Assessment to ensure minimized environmental footprints, optimized resource efficiency, and extended durability that prevents premature replacement waste.
 - c. **FSC & Sustainable Sourcing:** Supporting responsible material lifecycle management and eco-friendly manufacturing frameworks.

Guangzhou Pinger Vinyl Material Co.Ltd

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- d. **Zero Toxic Emissions & Formaldehyde-Free:** Contains no hazardous toxic gases; formaldehyde levels meet strict qualification standards with zero off-gassing upon installation.
- e. **Low-VOC Certifications:** Rigorously tested for TVOC compliance under **ISO 16000-3/-6/-9** and **SGS CA CDPH 01350** standards.
- 7. **Chemical Resistance & Stain Proofing:** Features a robust, waterproof, anti-pollution surface that resists staining and is exceptionally easy to clean. Staining test verified in accordance with **EN 423:2001**.
- 8. **ISO Certified Quality Standards:** Manufactured under ISO 9001, ISO 14001, and ISO 45001 certified management systems, meeting international emission and quality standards for low-emitting architectural products.
- 9. **Chemical and Corrosion Resistance:** Tested in accordance with ASTM D543-14, ASTM D2240-15, and ASTM D638-14. Exhibits a low coefficient of thermal expansion and contraction with minimal dimensional change under varying temperatures. Highly resistant to most acids, alkalis, salts, alcohols, iodine, vegetable oil, and commercial disinfectants.
- 10. **Heavy Metal Free:** Guaranteed free from lead, cadmium, and other toxic or hazardous heavy metals. Certified compliant under **California Proposition 65 (CA65)** heavy metal testing.
- 11. **Durability & Easy Installation:** Highly durable, wear-resistant, and scratch-resistant surface that prevents dust and dirt accumulation for low-maintenance upkeep. Designed for flexible, quiet, and efficient installation: can be direct-glued to substrates, mechanically secured via steel sub-framing, or installed using modular assembly techniques.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's printed product data for each product indicated in this section.
- B. Detail Drawings: Mounting details with appropriate fasteners for specific project substrates.
- C. Loaner Samples: Verification samples of handrail, in full size profiles with one return and one mounting bracket of each type and color indicated. Return samples to after review.
- D. Manufacturer's Installation Instructions: Printed installation instructions for each handrail.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in unopened factory packaging to the jobsite.
- B. Inspect materials at delivery to assure that specified products have been received.
- C. Store in original packaging in a climate controlled environment away from direct sunlight.

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1.06 WARRANTY

- A. Standard IPC limited lifetime warranty against material and manufacturing defects.

PART 2 – PRODUCTS

2.01 MANUFACTURED UNITS

- A. *Handrail (Dimensions, Color Options, Series Number)*
 - 1. *7-7/8" (200mm) height x 1-1/2" (38mm) round gripping diameter, system extends 88mm from the wall. Integrated vinyl cover, 5" (127mm) high. Inner impact bumper, 1-7/8" (48mm) high. . Handrail and wall guard shall be a solid color.*
 - a. *Standard: molded returns, corners, bracket with stainless bracket stem.*
 - b. *Optional cast aluminum one-piece bracket*
 - c. *Optional stainless-steel returns and corner*
 - d. *Options: Curved handrail, specify radius. Minimum radius - 3 feet (.91m)*

2.02 MATERIALS

- A. Vinyl
 - 1. Vinyl: Snap-on covers of .080" (2mm) thickness shall be extruded from chemical and stain resistant unplasticized polyvinyl chloride with the addition of impact modifiers. No plasticizers shall be added (plasticizers may aid in bacterial growth. Woodland patterns when used shall be of polyvinyl chloride (PVC).
- B. Aluminum
 - 1. Continuous aluminum retainer of .080" (2mm) thickness shall be fabricated from 6063-T5 aluminum with a mill finish.
 - 2. Cast aluminum brackets shall be fabricated of ADC 12 cast aluminum with a metallic gray powder-coated finish.
- C. Stainless Steel
 - 1. Stainless steel brackets shall be type 304 stainless steel with a #4 satin finish.
 - 2. Stainless steel returns, corners, and brackets shall be made of type 201SS.

2.03 COMPONENTS

- A. Molded handrail returns, corners and brackets shall be made of injection molded thermoplastic.

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- B. Molded wall guard returns, corners and brackets shall be made of injection molded thermoplastic.
- C. Inner Impact Bumper: Continuous impact bumper shall be extruded of black non-vinyl plastic for impact resistance.
- D. Stainless steel bracket shall be fabricated from cast stainless steel with a brushed finish or a solid color powder coat metal tone finish.
- E. One-piece cast aluminum bracket to be finished with a gray metallic powder coat.
- F. Fasteners: All mounting systems accessories appropriate for substrates indicated on the drawings shall be provided.

2.04 FINISHES

- A. Vinyl Covers: Color of the handrail vinyl cover to be selected, by the architect, from the finish selection. Surface shall have a pebblette texture.
- B. Molded Components: Molded handrail returns and corners shall be of a color matching the handrail. Surface shall have a pebblette texture. Molded bracket components shall be a color matching the wall guard. Surface shall have a pebblette texture.
- C. Aluminum bracket: One piece cast bracket to be finished with gray metallic powder coat.
- D. Stainless Steel Brackets (optional: returns and corners)
 - 1. Color of stainless steel brackets shall be #4 satin finish stainless steel.
 - 2. Color of the stainless steel bracket to be selected by the architect from the solid color metal tone color palette.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions in which handrail will be installed.
 - 1. Complete all finishing operations, including painting, before beginning installation of handrail system materials.
 - 2. Wall surface shall be dry and free from dirt, grease and loose paint.

3.02 PREPARATION

- A. Surface Prep: Prior to installation, clean the substrate to remove dust, debris and loose particles. Ensure the substrate is sound and per project plans.
- B. The area of installation must temperature and humidity controlled for at least 48 hours after installation.

3.03 INSTALLATION

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- A. General: Locate the handrail as indicated on the approved detail drawing for the appropriate substrate and in compliance with the installation instructions. Install handrail level and plumb at the height indicated on the drawings.

3.04 CLEANING

- A. At completion of the installation, clean surfaces in accordance with the clean-up and maintenance instructions.

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