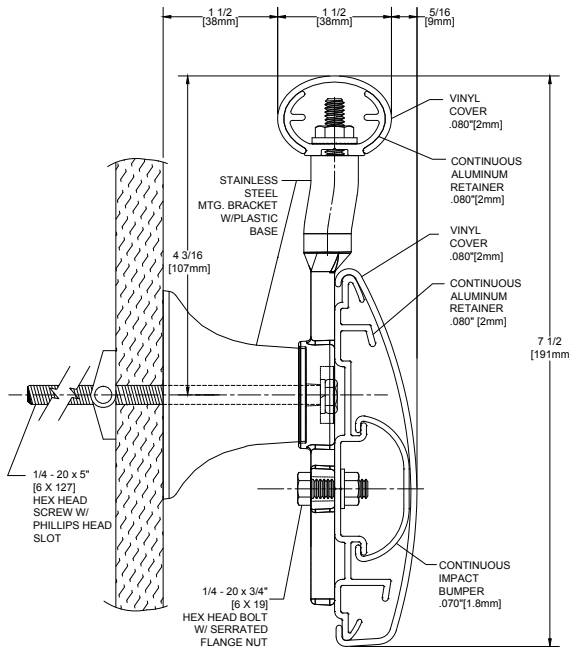
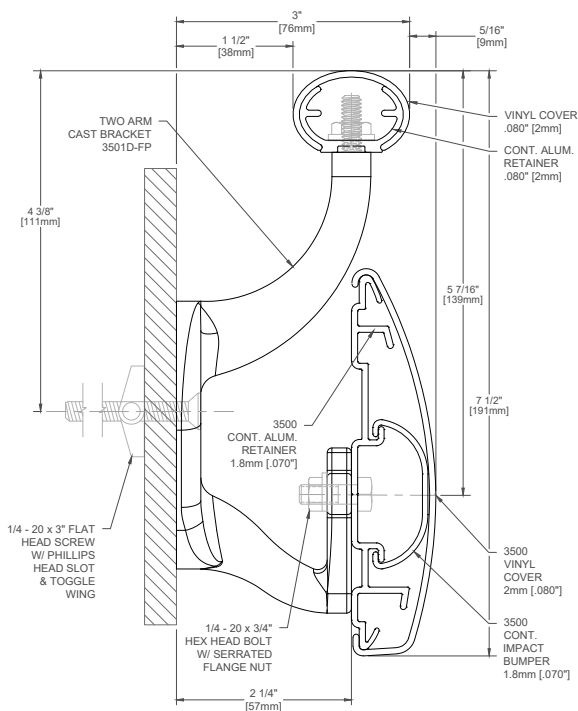


3530VV/3530VFV/3530FVV/3530FVFFV Handrail

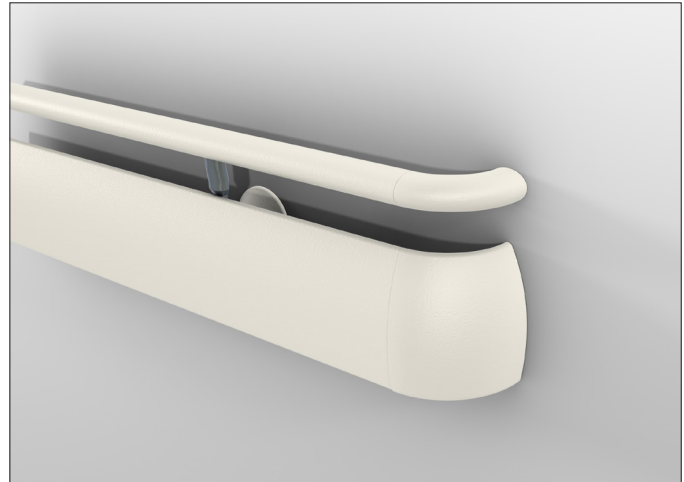
Suggested Specifications



STANDARD 3530VV



3530VV W/ TWO ARM CAST BRACKET
OPTION



- 7-1/2" (191mm) height, 1-1/2" (38mm) x 1-1/16" (27mm) oval gripping diameter, extends 3-5/16" (85mm) from the wall
- 3530VV - Solid color vinyl handrail and integrated vinyl wall guard.
- 3530VFV - Solid color vinyl handrail and Faux-wood pattern integrated wall guard with black reveals for returns and corners.
- 3530FVV - Faux-wood pattern vinyl handrail and solid color integrated vinyl wall guard with black reveals for returns and corners.
- 3530FVFFV - Faux-wood pattern vinyl handrail and faux-wood pattern integrated vinyl wall guard with black reveals for returns and corners.
- Lower wall guard is mounted on a sturdy .080" (2mm) thick, continuous aluminum retainer
- Handrail and wall guard covered with a scratch and stain resistant, .080" (2mm) thick vinyl cover
- .070" (1.8mm) thick continuous impact bumper
- Meets ADA and ANSI criteria
- All mounting fasteners are included with each order
- Meets the most rigorous standards and criteria of chemical emissions as prescribed by the GREENGUARD Environmental Institute
- Has been tested and meets GREENGUARD Environmental Institute's and the state of California's requirements for low emitting products as tested by Air Quality Sciences
- Has been tested and meets the GREENGUARD Children & School chemical emissions levels

IPC.2238/REV.4

3530VV/3530VFFV/3530FVV/3530FVFFV Handrail

Suggested Specifications

PART 1 GENERAL

1.01 SUMMARY

A. Handrail systems for pedestrian safety and wall protection

1.02 SECTIONS INCLUDES

A. 3530VV/3530VFFV/3530FVV Silhouette Round Handrail Systems with integrated wall guard

1.03 REFERENCES

- A. American National Standards Institute (ANSI)
- B. American Society for Testing and Materials (ASTM)
- C. American with Disabilities Act (ADA)
- D. National Building Code of Canada (NBC)
- E. National Fire Protection Association (NFPA)
- F. Society of Automotive Engineers (SAE)
- G. Underwriters Laboratory (UL)
- H. Underwriters Laboratory of Canada (ULC)
- I. Uniform Building Code (UBC)

1.04 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 IPC Door and Wall Protection Systems, InPro Corporation.

1. Fire Performance Characteristics: Provide UL Classified impact bumper conforming with NFPA Class A fire rating. Surface burning characteristics, as determined by UL-723 (ASTM E-84), shall be flame spread of 10 and smoke development of 350 - 450. Provide ULC (Canada) listed impact bumper conforming to the requirements of the National Building Code of Canada 2010, Subsection 3.1.13. Surface burning characteristics, as determined by CAN/ULC-S102.2, shall be flame spread of 15 and smoke developed of 35.
2. Self-Extinguishing: Provide impact bumpers with a CC1 classification, as tested in accordance with the procedures specified in ASTM D-635-74, Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position, as referenced in UBC 52-4-1988.
3. Impact Strength: Provide rigid vinyl profile materials that have an impact strength of 30.2 ft-lbs/inch of thickness as tested in accordance with the procedures specified in ASTM D-256-90b, Impact Resistance of Plastics.
4. Chemical and Stain Resistance: Provide impact bumpers that show resistance to stain when tested in accordance with applicable provisions of ASTM D-543.
5. GREENGUARD Certified: Provide GREENGUARD Certified material. Profiles shall meet the requirements of GREENGUARD Certification Standards for Low-Emitting Products and GREENGUARD Product Emission Standard for Children & Schools.
6. Fungal and Bacterial Resistance: Provide rigid vinyl that does not support fungal or bacterial growth as tested in accordance with ASTM G-21 and ASTM G-22.
7. Color Consistency: Provide components matched in accordance with SAE J-1545 - (Delta E) with a color difference no greater than 1.0 units using CIE Lab, CIE CMC, CIE LCh, Hunter Lab or similar color space scale systems.

1.05 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, 15" (381mm) long, in full size profiles with one return and one mounting bracket of each type and color indicated. Return samples to IPC after review.
- D. Manufacturer's Installation Instructions: Printed installation instructions for each handrail.

1.06 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.

1.07 WARRANTY

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

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer: IPC Door and Wall Protection Systems, InPro Corporation, PO Box 406, Muskego, WI 53150 USA Telephone 800-222-5556, Fax: 888-715-8407 Internet address: www.inprocorp.com
- B. Substitutions: Not permitted
- C. Provide all handrails and wall protection from a single manufacturer.

2.02 MANUFACTURED UNITS

A. Handrail

1. 3530VV Silhouette Handrail, 7-1/2" (191mm) height, 1-1/2" (38mm) x 1-1/16" (27mm) oval gripping diameter, system extends 3-5/16" (85mm) from the wall. Integrated vinyl cover, 5" (127mm) high. Inner impact bumper, 1-7/8" (48mm) high.
 - 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. 3530VFFV Silhouette Handrail, 7-1/2" (191mm) height, 1-1/2" (38mm) x 1-1/16" (27mm) oval gripping diameter, system extends 3-5/16" (85mm) from the wall. Integrated vinyl cover, 5" (127mm) high. Inner impact bumper, 1-7/8" (48mm) high. Wall guard shall have a full wrap faux-wood pattern. Returns and corners include reveals.
 - 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)
3. 3530FVV Silhouette Handrail, 7-1/2" (191mm) height, 1-1/2" (38mm) x 1-1/16" (27mm) oval gripping diameter, system extends 3-5/16" (85mm) from the wall. Integrated vinyl cover, 5" (127mm) high. Inner impact bumper, 1-7/8" (48mm) high. Handrail shall have a full wrap faux-wood pattern. Returns and corners include reveals.
 - 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)
4. 3530FVFFV Silhouette Handrail, 7-1/2" (191mm) height, 1-1/2" (38mm) x 1-1/16" (27mm) oval gripping diameter, system extends 3-5/16" (85mm) from the wall. Integrated vinyl cover, 5" (127mm) high. Inner impact bumper, 1-7/8" (48mm) high. Handrail and wall guard shall have a full wrap faux-wood pattern. Returns and corners include reveals.
 - 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)

2.03 MATERIALS

A. Vinyl

1. Vinyl: Snap-on covers of .080" (2mm) thickness shall be extruded from chemical and stain resistant unplasticized polyvinyl chloride (uPVC) 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).

2. Molded Vinyl: Returns and corners shall be made of injection mold grade, chemical and stain resistant polyvinyl chloride.

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.
- D. Zinc: Bracket adapters shall be cast from zinc.

2.04 COMPONENTS

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

2.05 FINISHES

- A. Vinyl Covers: Color of the handrail vinyl cover to be selected, by the architect, from the Inpro 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. General: Prior to installation, clean substrate to remove dust, debris and loose particles.

3.03 INSTALLATION

- A. General: Locate the handrail as indicated on the approved detail drawing for the appropriate substrate and in compliance with the IPC 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 IPC clean-up and maintenance instructions.