

1. Product Name

Integrated™ Railing Post 3-1/2"

2. Manufacturer

Formulated Materials, LLC
3010 NW 149th St., SUITE 100
Oklahoma City, OK 73134
Tech Services : (844) 405-3676
www.formulatedmaterials.com
www.formulated.info

3. Product Description

The Integrated™ Railing Post 3 1/2" is a powder-coated extruded 6063-T6 aluminum flangeless post designed for installation over a pre-installed Integrated™ Stanchion. The post features a 3-1/2" square profile with 0.125" wall thickness. The stanchion mount configuration is designed for concrete-topped balcony and deck structures where a concrete topping is poured over a waterproofing membrane. The post slides over the exposed stanchion after the concrete has cured and is locked in place with set screws. The post is engineered to meet 2021 IBC design load performance requirements when properly installed with the Integrated™ Stanchion.

Key Features

- Extruded 6063-T6 aluminum construction for strength and corrosion resistance
- 3-1/2" square flangeless profile with 0.125" wall thickness
- Set screw locking mechanism prevents uplift and lateral movement
- AAMA 2604 powder-coated finish for long-lasting color retention
- Meets 2021 IBC design load performance requirements (Intertek Report P2566.01-119-19 R0)
- Accepts top and bottom rail level brackets via pre-drilled pilot holes
- Includes pilot hole tool for accurate bracket positioning
- Allows post installation after concrete pour and cure
- Compatible with all Integrated™ Railing System components
- Designed for use in conjunction with the Integrated™ waterproofing system

Where to Use

- Concrete-topped balconies with waterproofing membrane systems
- Multifamily balconies and walkways
- Hotel and condominium balconies
- Commercial exterior decks and terraces
- Apartment complexes
- Any application where railing posts are installed after concrete placement



Product Composition

Extruded 6063-T6 aluminum

Product Limitations

- Install per current published instructions only.
- Must be used with Integrated™ Stanchion — do not install without stanchion anchor.
- Concrete topping must be fully cured before post installation.
- Do not modify, cut, or weld posts in the field without written authorization from Formulated Materials.
- Not intended for use as a structural building support.
- Post must be installed plumb. Verify alignment before securing set screws.
- Do not overtighten set screws — screws should be firm and secure without stripping.
- Applying paint other than Formulated Materials' authorized touch-up paint will void the product warranty.
- Limitations not to be construed as all-inclusive.

Packaging

100/pallet

4. Technical Data

Applicable Standards

Standard	Description
2021 IBC	International Building Code®, International Code Council
2021 IRC	International Residential Code®, International Code Council
IBC Ch. 17	Structural Tests and Special Inspections

Structural Performance — 3-1/2" Post (Stand-Alone Test)

Test	Design Load	Result
Concentrated Load at Top of Post	315 lb	Achieved 2.5x (787 lb) without failure
Ultimate Load	857 lb	Post failure above weld
Recovery from 2.0x Design Load	—	73%

3-1/2 in post tested as stand-alone (conservatively without railing attached). Post meets 2021 IBC design load performance requirements.

Structural performance testing was conducted by Intertek Building & Construction (Report No. P2566.01-119-19 R0, dated 11/16/22) in accordance with the 2021 IBC on the Integrated™ Railing System. The 72 in wide by 42 in high guardrail assembly with 3-1/2 in post mount met the 2021 IBC design load performance requirements. All tested components achieved 2.5 times design load without failure. Anchorage of support posts to the supporting structure was not included in the scope of testing and must be evaluated separately per project requirements.

5. Instructions

Tools Required

- Safety glasses
- Tape measure and pencil
- Power drill with T25 Torx bit
- 1/8" drill bit for pilot holes
- Level (minimum 24")
- Allen wrench / hex key for set screws
- File (for deburring any cut edges)
- Pilot hole tool (included in stanchion kit)

Jobsite Conditions

- Stanchion must be properly installed, plumb, and concrete must be fully cured before post installation.
- Stanchion surface must be clean and free of concrete residue to allow post to slide freely.
- Inspect concrete surface around each stanchion for cracks or voids; repair before proceeding.
- Verify all components are present before beginning: flangeless post, set screws, post cap, post skirt, pilot hole tool.

Surface Prep

Remove any protective wrapping or sleeves from stanchions. Clean each stanchion of concrete residue, dust, and debris. Inspect the concrete surface around each stanchion for cracks or voids and repair any deficiencies before proceeding.

Installation of Product

1. Using the pilot hole tool (included in stanchion kit), mark the flangeless post for top and bottom bracket height positions.
2. Using a 1/8" drill bit, drill pilot holes at the marked locations. Drill pilot holes before installing the post onto the stanchion for easier handling.
3. Align top and bottom rail level brackets with the pre-drilled pilot holes.
4. Using a drill driver with a T25 Torx bit, fasten brackets to the top and bottom of the post using the provided Torx head self-tapping screws. Do not fully tighten the first screw in each bracket — leave slightly loose to allow for adjustment when installing the second screw. After both screws are in place, tighten all screws fully.
5. Ensure all brackets are tightly secured to the post before proceeding.
6. Slide the flangeless post over the stanchion protruding from the finished concrete surface. The post should slide down until it is resting on or near the concrete surface.
7. Using a level, verify the post is plumb. Minor rotational adjustments can be made before set screws are tightened.
8. Locate the set screw access points on the flangeless post. Using the appropriate Allen wrench or hex key, tighten the set screws firmly to lock the post to the stanchion. Set screws prevent uplift and lateral movement. Tighten set screws evenly, alternating between screws to maintain alignment. Do not overtighten.
9. Re-check plumb after set screws are tightened. Make final adjustments if needed before fully securing.

Storage & Protection

- Store in a dry, covered area to prevent damage to the powder-coated finish.
- Do not stack posts directly on concrete or abrasive surfaces without protective padding.
- Avoid prolonged contact with dissimilar metals to prevent galvanic corrosion.

Health Precautions

- Follow all local safety regulations, including OSHA Section V: Chapter 4 for Fall Protection in Construction.
- Always wear safety glasses when cutting, drilling, and assembling the product. Use hearing protection when operating power saws.
- Always review the full label and Safety Data Sheet (SDS) for detailed precautionary instructions before use.

Conformance to Building Codes

Installation must comply with all applicable local, state, and federal codes, regulations, and industry standards. The installer is solely responsible for ensuring compliance with all local building codes and safety requirements, and for obtaining all required building permits.

6. Availability

Item	Description	Size	Qty/Unit	Per Pallet
10600	Railing Post 3 1/2" (Stanchion Mount)	3-1/2 x 3-1/2 x 44"	100/pallet	100

7. Product Warranty

For details and complete warranty information, visit www.formulatedmaterials.com.

8. Product Maintenance

Properly installed products do not require ongoing maintenance. For coastal installations (within one mile of saltwater coastline), clean railing surfaces quarterly with mild soap and water to maintain finish warranty coverage. Refer to the Integrated™ Railing System Limited Warranty for complete care and maintenance requirements.

9. Technical Services Information

For Technical Services, contact Formulated Materials at (844) 405-3676.

10. Filing System

Additional product information is available from Formulated Materials upon request.



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