



**Upside Innovations, LLC**  
5470 Spellmire Dr.  
West Chester, OH 45246  
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## **PREFABRICATED LOADING DOCK STEP SPECIFICATIONS**

### **PART 1 – GENERAL**

#### **1.1 References**

- 1.1.1 OSHA Safety and Health Regulations for Fixed Industrial Stairs 29 CFR Part 1910.25

#### **1.2 Submittals**

- 1.2.1 Shop Drawings: detailed shop drawings to be submitted upon receipt of purchase order including:
  - 1.2.1.1 Overall layout dimensions
  - 1.2.1.2 Footer layout drawings when requested
- 1.2.2 Warranty Statement must be submitted with bid.
- 1.2.3 Product specifications must be submitted with bid.
- 1.2.4 Engineering: Professional Engineering sealed drawings to be submitted when requested.

#### **1.3 Quality Assurance**

- 1.3.1 Acceptable manufacturer: Upside Innovations, LLC, 5470 Spellmire Dr., West Chester, OH 45246. Phone: (513) 889-2492; Fax: (513) 672-2124 or a contract manufacturer as approved by the Upside Innovations, LLC, Supplier Quality Review process.
- 1.3.2 Aluminum welding will be in accordance with ANSI / AWS D1.2/D1.2M: 2008. Welding must be performed solely with Pulsed Gas Metal Arc Welding (Pulse-MIG) processes or Gas Tungsten Arc Welding (TIG) processes by experienced operators.
- 1.3.3 All exposed surfaces must be free of sharp or jagged surfaces.
- 1.3.4 Warranty: Upside Innovations, LLC warrants its products to be free from defects in material and workmanship for a period of one year beginning at the date of delivery of product. This warranty excludes any defects resulting from abnormal use in installation, service, accidental or intentional damage or any occurrences beyond the manufacturer's control.

#### **1.4 Materials**

- 1.4.1 Platforms, Steps, Legs, and Guardrails are constructed of mill finish aluminum extrusions and mill finish aluminum sheet. Extrusions are either 6061-T6, 6061-T5, 6063-T52, or 6005-T5 aluminum alloy and all aluminum sheet is 5052-H32. Powder coating in custom colors is available upon request.
- 1.4.2 All mechanical fasteners are 18-8 stainless steel. All anchors and lag bolts are galvanized steel.
- 1.4.3 Standard walking surface material is aluminum grip strut.

#### **1.5 Engineering**

- 1.5.1 All footplates should be fastened securely to a concrete surface or 12" minimum diameter footings in order to achieve full structural integrity. Footing depth will depend on local building code. Fastening all platforms to the building with lag screws or concrete wedge anchors is required.

### **PART 2 – PRODUCT COMPONENTS**

#### **2.1 Platforms**

- 2.1.1 Walking surfaces are designed to carry a uniform live load of 100 pounds per square foot and a concentrated vertical load of 300 pounds in an area of one square foot.
- 2.1.2 Walking surfaces are designed to have a coefficient of friction no less than 0.50 in all directions of travel.

#### **2.2 Platform Legs**

- 2.2.1 All legs are designed to support the platforms.

- 2.2.2 Legs must be designed using a minimum of 3" x 3" x 0.125" aluminum square tube that connects to the platform and a telescoping 2.7" x 2.7" x 0.125" aluminum square tube with a 6" x 6" x 0.250" welded foot pad. The telescoping feature allows leg adjustment in order to meet elevation changes.

## **2.3 Guardrails**

- 2.3.1 All platform rails are designed to withstand a concentrated load of 200 pounds applied in any direction of the top of the rail.
- 2.3.2 Platform rails are provided on the open sides of the platform.
- 2.3.3 Platform rails are designed to be 42" high measured vertically from the platform surface to the top of the rail.
- 2.3.4 All platform rails are to be constructed at minimum with 1.750" x 1.750" x .093" aluminum square tube.

## **2.4 Steps**

- 2.4.1 Step treads and stringers are designed to carry a uniform live load of 100 pounds per square foot and a concentrated vertical load of 300 pounds in an area of one square foot.
- 2.4.2 Walking surfaces are designed to have a coefficient of friction no less than 0.50 in the normal direction of travel.
- 2.4.3 Step treads are designed to have a uniform height of either 6", 6-½", or 7" depending on the overall height of the step assembly.
- 2.4.4 Steps are designed to allow a minimum clearance of 56" between handrails.
- 2.4.5 All step treads are designed to have a uniform depth of 11" minimum per step.

## **2.5 Step Rails**

- 2.5.1 All step rails are designed to withstand a concentrated load of 200 pounds applied in any direction on the top of the rail.
- 2.5.2 Step handrails are designed to be 36" high measured vertically from the top of the step nosing to the top of the rail.
- 2.5.3 Step guardrails are designed to be 42" high measured vertically from the leading edge of the stair nosing to the top of the rail.
- 2.5.4 Step handrails are provided on both sides of the step treads.