

Ladder Defender Specifications

Part 1. GENERAL

1.1 SECTION INCLUDES

- A. Specialty custom designed Ladder Defender for Access Ladder egress and ingress.
(1) Ladder Defender - Model Numbers: 500945, 500946, 500947, 500948, 500949

1.2 RELATED SECTIONS

- A. Section 055213 – Pipe and Tube Railings
- B. Section 05120 – Structural Steel

1.3 REFERENCES

- A. AISC M016 Manual of Steel Construction, Allowed Stress Design
- B. ASTM A 36/A 36M Standard Specification for Structural Steel
- C. ASTM A123 (Standard Specification for Zinc coating – Hot Dip Galvanizing of Iron and Steel Products)
- D. ASTM B633 – 15 (Standard Specifications for Electrodeposited Zinc coatings)
- E. Joint Surface Preparation, SSPC-3, Power Tool Cleaning
- F. American Society for Testing and Materials (ASTM) - ASTM A36 Standard Specification for Carbon Structural Steel
- G. American Iron and Steel Institute (AISI) - AISI CL 304.
- H. American Welding Society Structural Welding Code (AWS) - AWS D1.1, D1.2

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. The Ladder Defender provides a permanent, controlled access walkway with an optional self-closing gate to access ladders.
- B. Ladder Defender meets applicable OSHA Standards to include 1910.23, 1910.27, 1910.28 & 1910.29

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300 or 07720.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - (1) Preparation instructions and recommendations.
 - (2) Storage and handling requirements and recommendations.
 - (3) Installation instructions.
- C. Shop Drawings: Provide shop drawings showing layout, profiles, and product components, including anchorage, hardware, and finishes. Include dimensional plans, applicable material specifications, elevations and sections detailing mounting and connections.
- D. Closeout Submittals: Provide Operation and Maintenance data to include methods for maintaining installed products, precautions against cleaning materials and methods detrimental to finishes and performance.

1.6 QUALITY ASSURANCE

- A. Experience: Manufacturer must demonstrate a minimum of Five (5) years successful experience in design and manufacture of similar related products.
- B. Provide evidence to the effect, including list of installations, descriptions, name and method of contact shall be provided, upon request.

1.7 DELIVER, STORAGE, AND HANDLING

- A. Delivery
 - (1) Deliver materials in manufacturer's original, unopened, undamaged shipping container with identification labels intact.
- B. Storage
 - (1) Store all materials in a dry, controlled area to protect from elements and damage. If outdoor storage is required, block materials to store at an incline, to prevent pooling of any moisture and promote runoff.
 - (2) Do not tarp tightly, as this will entrap moisture. Instead, tarp materials in a tent-like arrangement, elevated above the product with open sides to allow airflow.
 - (3) For additional questions on delivery, storage, or handling, contact the manufacturer at (866) 933-2935 or (952) 448-2935 or email to info@bluewater-mfg.com.
- C. Handling
 - (1) Use caution when unloading and handling product to avoid bending, denting, crushing, or other damage to the product.
 - (2) When using forklifts, use forks of proper length to fully support product being moved.

1.8 WARRANTY

- A. Special Warranty
 - (1) The manufacturer warrants this product and components to be free from manufacturing defects for a period of one (2) years from ship date.

1.9 MAINTENANCE

- A. Routine inspections and maintenance (Determined by owner).

- B. General housekeeping of immediate area.
- C. Immediate replacement or repair of damaged or missing components.

Part 2. PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: BlueWater Manufacturing – 4064 Peavey Rd; Chaska, MN 55318 Phone Toll Free: (866)-933-2935. Phone: (952) 448-2935. Fax: (952) 448-3685. Web Site: www.bluewater-mfg.com Email: info@bluewater-mfg.com
- B. Substitutions: Not permitted.
- C. Obtain all Ladder Defenders assemblies from single manufacturer.

2.2 EQUIPMENT

- A. Products Details:
 - (1) Ladder Defender is a full railing system providing a controlled access zone to access ladders. Optional self closing safety gate at entry to ensure no openings are left unprotected. Ladder Defender consists of a top rail, mid-rail, optional self-closing swing gate, and two mount bars.
 - (2) Model/Operation Options:

Ladder Defender Kits - Powder Coated Yellow		
(Includes: 2ea Finish Rails, 4ea Pins, 2ea Bracket Kits, 1ea Long Mount Bar and 1ea Short Mount Bar)		
Part #	Description	Weight
500472	4' Ladder Defender Kit	109 lbs.
500473	5' Ladder Defender Kit	112 lbs.
500474	7.5' Ladder Defender Kit	118 lbs.
500475	10' Ladder Defender Kit	125 lbs.
500481	15' Ladder Defender Kit	200 lbs.
500638	Bracket Round to Round	4 lbs.
500644	Bracket Round to Angle	5 lbs.
500645	Bracket Round to Flat	4 lbs.

Ladder Defender Kits - Galvanized		
(Includes: 2ea Finish Rails, 4ea Pins, 2ea Bracket Kits, 1ea Long Mount Bar and 1ea Short Mount Bar)		
Part #	Description	Weight
500476	4' Ladder Defender Kit	112 lbs.
500477	5' Ladder Defender Kit	116 lbs.
500478	7.5' Ladder Defender Kit	124 lbs.
500479	10' Ladder Defender Kit	131 lbs.
500482	15' Ladder Defender Kit	206 lbs.
500646	Bracket Round to Round	4 lbs.
500673	Bracket Round to Angle	5 lbs.
500680	Bracket Round to Flat	4 lbs.

(3) Material requirements: See Section 2.3 MATERIALS.

2.3 MATERIALS

A. Attributes

- (1) Ladder Defender to be fabricated from structural or formed steel shapes, tubing - ASTM A513; formatting- ASTM-A-556 Grade B; bar/plate -ASTM-A-36, of appropriate size and strength, welded construction.
- (2) Mount Bars are electroplated zinc.
- (3) Specify Finish for Rail and Brackets
- (4) :Hot Dipped Galvanized or Powder Coat

2.4 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

Part 3. EXECUTION

3.1 EXAMINATION

- A. Compliance: Comply with all manufacturer's product data, including installations instructions, Operation and Maintenance manuals, reference drawings, shipping and handling, and storage instructions.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION/APPLICATION

- A. Ladder Defender Installation
 - (1) Install in accordance with manufacturer's installation instructions, shop drawings, and details.
 - (2) All bolted connections must be tight with no fewer than two threads exposed and the nuts are to be positively locked by provide Nylock lock nuts.
- B. Tolerances
 - (1) All dimensional requirements must be in accordance with manufacturer's installation instructions and shop drawings.

3.4 FIELD QUALITY CONTROL

- A. Installation: Product to be installed using good general construction methods and practices, in accordance with manufacturer's instructions and drawings.
- B. Field Tests/Installation Verification:

- (1) Verify all anchorage is in accordance with manufacture's installation instructions and applicable data sheets.

3.5 CLEANING

- A. Repair or replace damaged installed products or components.

3.6 PROTECTION

- A. Protect installed product and finish surfaces from damage during handling, storage, and installation.
- B. Protect installed product and finish surfaces during normal and general use.

END OF SECTION