

BRISTOL INDUSTRIES OF PENNSYLVANIA, INC.,
FLOATING DOCK & GANGWAY SYSTEM
MINIMUM SPECIFICATIONS AND DRAWINGS

The Floating Dock/Gangway system shall be manufactured by **Bristol Industries Of Pennsylvania, Inc. Bristol Industries of Pennsylvania, Inc.** may be reached by phone at (215) 493 - 7230 **Bristol Industries of Pennsylvania, Inc.** will assist you with the pricing on the plan(s) and shall be a heavy duty type system which shall meet or exceed the following design requirements and be constructed as recommended by the Manufacturer to meet the following criteria:

I. DESIGN STANDARDS

The Floating Dock and Gangway systems shall be of the sizes specified to facilitate interchangeability, flexibility of design, and maintainability. All sizes and weights are nominal.

II. DESIGN LOAD CONDITIONS

A. Vertical Loads:

DEAD LOAD shall consist of the entire weight of the floating structure.

FLOTATION shall consist of the entire weight of the floating structure.

FREEBOARD FLOTATION shall provide the maximum freeboard under dead load of the dock sections. The dock shall float level under dead load.

DECK SURFACE shall be made of 2" x 5 1/2" Dock Plank with Rotex® no-slip surface connected to the mainframe with stainless steel fasteners.

FLOTATION STRUCTURE shall be "drums" to meet all Army Corps of Engineers and Coast Guard regulations. Drum sizes shall vary to meet flotation and freeboard requirements.

B. Horizontal Loads:

A uniform horizontal wind, loading from any direction, shall be equal to 150 plf. with safety factor.

III. MATERIAL AND CONSTRUCTION MINIMUM REQUIREMENTS

A. Connections:

Connections shall be designed so units may be disconnected and moved.

Materials shall be aluminum, stainless steel or equal. Frame shall be fastened to the floatation with stainless steel bolts, washers and nuts of the required sizes and lengths to connect the floatation to the frame tracks.

B. Decking:

Decking is 2" x 5 1/2" Dock Plank with "Rotex" no-slip surface. Under the direct rays of the sun, Bristol Industries of Pennsylvania, Inc. decks are much cooler than wood. The decking shall be connected to the mainframe by means of MIG/TIG welding and/or stainless steel fasteners depending on material used. Alternate decking, as required, could be Titan Deck, Trex, Fiberon, Trimax, other types of lumber as specified.

C. Frame:

Framing shall be salt resistant Series 6000 aluminum alloy, 6 1/2" high, specially designed for extra strength. The extruded side slots house 2" resilient (non-marking) rubber bumper and/or hinge assembly for continuous bumper protection on open sides. The bottom of the frame shall have a custom extruded bolt track for ease of floatation attachment and adjustments as required to meet floatation requirements. The dock end corners have heavy gauge reinforced corner keys. The shore end corners have reinforced angle outside TIG/MIG welded for additional strength.

D. Diagonals:

Diagonals shall be a 2 1/4" x 7/8" channel and be designed as a Pratt Truss design

E. Cross Supports

Cross supports shall be a 1 3/4" x 1" channel and placed under deck inside framing at every upright.

F. Weight:

3' wide gangways are approximately 25 lbs. a running foot, 4' wide gangways are approximately 28 lbs. a running foot. The dock system without floats, weighs approximately 5 pounds per square foot. With floatation, approximately 8 pounds per square foot.

IV. RAMP AND GANGWAY MINIMUM REQUIREMENTS**A. Standard Sizes:**

Standard ramp sizes are 3' & 4' wide. They can be from 9' to 54' long. Standard dock sizes are 6' & 8' wide x 20' long. Custom sizes can be made with and under strict engineering.

B. Materials:

The materials shall be salt resistant Series 6000 aluminum alloy and stainless steel fasteners.

C. Bulkhead Mounting Brackets:

3"x7" Piano hinge will be used as the mounting bracket with a 1 1/2" Sch. 40 removable pin for easy installation and removal made from 6000 series aluminum alloy. Custom mounting brackets can be made upon request.

D. Handrail and Vertical Supports:

Gangway handrail - 1 1/2" Sch. 40 or 2" Sch. 40 round pipe. Pier handrail is a 2 1/2" semi-circle hand railing. The vertical supports are a 5" wide x 2" deep hat section main vertical supports truss members.

E. Ramp Rollers:

Segmented Ultra High Molecular Weight (UHMW) roller system with (2) - 2" x 6" roller and 1/2" stainless steel pin.

F. Live Load Design:

The ramp shall meet/exceed 100 Pounds per square foot minimum up to 30 feet in length. Lengths over 30' reduce in psf. to a minimum of 50 psf. at 54' long. Although we can maintain 100 psf. if requested.

G. Decking:

Decking shall be Dock Plank 2" x 5 1/2" with "Rotex®" no-slip surface. The decking shall be connected to the mainframe by means of MIG/TIG welding and/or stainless steel fasteners depending on material used. Alternate decking, as required, could be Titan Deck, Trex, Fiberon, Trimax, other types of lumber as specified.

H. Deflection:

Maximum deflection shall be limited to L/180, where "L" is the length of the gangway in inches.

V. RAMP AND GANGWAY ACCESSORIES**A. Transition Plate**

Transition plate if necessary to be made out of 2" x 2" x 1/4" angle, MIG welded with Dock Plank and a sequential hinge in order to provide smooth transition from deck to dock. The Transition plate shall have 6" of aluminum diamond plate and a UHMW slide on the bottom to prevent scoring of deck surfaces.

B. I-beam

The optional I-Beam Superstructure consists of a custom, heavy gauge extrusion with a bolt track on the bottom, for extra rigidity in the event of a cantilever situation.

C. Toe Kick

3"x1"x1/8" Angle to be bolted to uprights to provide safety for ADA

D. Center Rail

1 1/2" Sch. 40 continuous pipe to be welded to custom extruded handrail bracket that returns back into the top rail 36" above deck.

E. Square Tubing Handrail

Square tubing hand railing can be added for extra strength and stability for certain applications as required by engineer.

F. Rub-Rail

1/8" x 3" aluminum flat bar 18" above deck.

V. INSTALLATION

Installation shall be by others in accordance to the manufacturer's recommendations.

VI. WARRANTY FLOATATION

The floats have a 15 year limited warranty against cracking, peeling, sloughing, and excessive deterioration from ultraviolet rays while retaining resiliency under normal usage. Defects in workmanship are warranted for a period of 1 year.

VII. WARRANTY DOCK & RAMP STRUCTURE

Decking other than aluminum Dock Plank is covered by the manufacturer's warranty. All aluminum products carry a limited lifetime warranty of the aluminum that meets or exceeds Aluminum Association guidelines. The warranty would not apply to abuse or any use other than its original intention.

VIII. BRISTOL DRAWINGS

As Requested.