

# Floating Dock Specifications

#### 1. Standard Modular Floating Dock Sections

1-A. Each AccuDock floating dock section shall be composed of hand welded High Density Polyethylene (HDPE) sheet plastic, using non-rotationally molded floats. AccuDock sections are manufactured using individual sheets for sides, ends, bottoms, and tops. With a 100% guaranteed universal wall thickness of .150 inches (min.), and completely encapsulated expanded polystyrene (EPS) foam. The lid or top surface has a 2-1/2" lip around the entire float.

- 1-A1. HDPE plastic will be white in color, and have a levant non-skid texture. It will incorporate an ultraviolet inhibitor of UV-8 or better. All plastic material meets requirements of ASTM D4976– PE 235 & FDA 21CFR 177.1520.
- 1-A2. The density of an AccuDock section is equal to approximately .950 grams per cubic inch or .058 grams per cubic centimeter per ASTM D4883.
- 1-A3. The tensile strength at yield will be no less than 3800 pounds per square inch, and at break no less than 4400 pounds per square inch, per ASTM D638.
- 1-A4. The material will have a cold brittleness temperature at no less than -103° F.
- 1-B. Completely encapsulated EPS shall be 100% virgin material and be of a closed cell nature allowing no more than 3% water penetration. This specification will ensure all AccuDock sections will never sink. Floatation shall not be accomplished by use of air pockets in any form.
  - 1-B1. All EPS foam block used in the manufacturing process will be pre-cut and hand trimmed to exact size, then hand loaded into each float section to ensure 100% foam filled, air-tight encapsulation.
- 1-C. Sections will have a marine grade aluminum frame surrounding the entire perimeter which will be  $2" \times 2" \times .125"$  square tubing with radius corners made of 6061-T6 series aluminum. Each aluminum frame will be attached to the float section or HDPE top with  $5/16" \times 2-3/4"$  304 series Stainless Steel carriage bolts. However, sections that are designed to be used individually (work floats) will not have an aluminum frame.
- 1-D. Each section shall have a maximum weight of no more than 120 pounds, and shall draft no more than 1" under dead load. Specified live load capabilities of 62 pounds per cubic foot will be supported.



#### 2. Connections of Standard Modular Float Sections

- 2-A. All connectors provided for assembly of adjacent sections are designed for each individual custom configuration. Connectors shall be made from 6061-T6 Marine grade aluminum and typically be of 1.66" x 1.66" x 1.25" square tubing.
- 2-B. Connectors will create a rigid and stable connection between float sections.
- 2-C. Connectors will be bolted into place with a combination of 304 series Stainless Steel carriage bolts and hex cap screws.

### 3. AccuDock Aluminum Floating Dock

- 3-A. AccuDock Aluminum Floating Dock sections are available upon request and by suggestion of an AccuDock team member. These sections are built to any size configuration as needed by the customer, and are built with several different decking options available.
  - 3-A1. Aluminum Floating Dock Systems will be built using an aluminum C-Channel frame system with .125" wall thickness, with height of either 4" or 8" C-Channel. Aluminum will be 6061-T6 marine grade. Spacing of cross member (s) will depend on desired decking, but in no circumstance be greater than 24"center to center. All sections will have corner strength gussets, and sections are pre-drilled for ease of field installation.
  - 3-A2. Floatation of the Aluminum Floating Dock sections will be accomplished using our standard fabrication process as illustrated below.
    - 3-A2.1 Each AccuDock float section shall be composed of hand welded High Density Polyethylene (HDPE) sheet plastic, using non-rotationally molded floats. AccuDock sections are manufactured using individual sheets for sides, ends, bottoms, and tops. With a 100% guaranteed universal wall thickness of .150 inches (min.), and completely encapsulated expanded polystyrene (EPS) foam.
    - 3-A2.2. HDPE plastic will be black in color. All plastic material meets requirements of ASTM D4976 PE 235 & FDA 21CFR 177.1520.
    - 3-A2.3. The density of an AccuDock section is equal to approximately .950 grams per cubic inch or .058 grams per cubic centimeter per ASTM D4883.
    - 3-A2.4. The tensile strength at yield will be no less than 3800 pounds per square inch, and at break no less than 4400 pounds per square inch, per ASTM D638.
    - 3-A2.5. The material will have a cold brittleness temperature at no less than -103° F.

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3-A2.6. Completely encapsulated EPS shall be 100% virgin material and be of a closed cell nature allowing no more than 3% water penetration. This specification will ensure all AccuDock sections will never sink. Floatation shall not be accomplished by use of air pockets in any form.

3-A2.7. All EPS foam blocks used in the manufacturing process will be pre-cut and hand trimmed to exact size, then hand loaded into each float section to ensure 100% foam filled, air-tight encapsulation.

3-A3. Floatation will be lag bolted into the bottom of the C-Channel with 3/8" x 1-1/2" stainless steel lag bolts. All heavy duty sections are bolted together with 3/8" x 5"stainless steel 304 series hardware. Several decking options are available to which Phillips oval-head deck screws are provided at time of shipment, so that the decking can be bolted down into the C-Channel.

3-A4. The percentage of the footprint of floatation to the overall footprint of the dock surface area will be no less than 75% to maximize overall stability.

#### 4. Attachments

4-A. Attachments will be specific to each customer, however all approved sales will have an AccuDock recommended attachment method which will be covered under warranty. All attachment methods shall have the ability to bolt directly into the framing system on every float section. There will be no set area where an attachment must take place. All Attachments will bolt into the framing system with 304 series Stainless Steel hardware.

4-B. Attachment methods include all of the following, as well as custom brackets not mentioned: Anchoring to pilings, seawalls, bulkheads, existing floating docks, spud poles, cross anchoring underneath dock, anchor chains, eco-mooring rodes with helix anchors, gangway hinge points, control arm hinges, standoffs. All attachment methods will not have a specified location where they must be attached. During field installation, the installer will have the ability to move the ability to move the location of the attachment method on the AccuDock Floating Dock as needed.

4-C. AccuDock approved attachment methods often rely on correct information provided by the customer. Drawings and/or Engineered stamped plans can be supplied upon request.

#### 5. Accessories

5-A. All AccuDock accessories will bolt directly into the framing system on every float section. There will be no set area where an accessory must be positioned. All accessories will bolt in the framing system with 304 series Stainless Steel hardware.



- 5-B. Common accessories include but are not limited to:
  - 5-B1. 8" Cleats Plastic black cleats measuring no more than 1-1/2" wide with a height of 1-5/8" above the surface of the dock section. 2" x 2" x .125" Framing system will allow cleats to be installed anywhere along the perimeter of the floating dock system.
  - 5-B2. **Aluminum S Cleats -** Supplied with ½" mounting hardware. 2" x 2" x .125" Framing system will allow cleats to be installed anywhere along the perimeter of the floating dock system.
  - 5-B3. **Bumpstrip** Will be installed with 5/16" carriage bolts and a double sided adhesive tape on the exterior wall of the 2" x 2" x .125" aluminum frame on specified float sections prior to shipment. Bumpstrip will have a P Profile with either a clay tone or beige color.
  - 5-B4. Safe Launch Feature Will be provided upon customer request in proper dock configurations that incorporate a drive in slip. Safe Launches are made out of 1.66°x 1.66° x 1.25° aluminum tubing with .150° thick white non-skid plastic sheet surface. Safe Launches have a double adjustment. The inside end utilizes hinge pins that will have the ability to be placed into one of four pre-drilled locations. The outside end is a single rope adjustment which is the main adjustment point and will be tied off to two cleats which come pre-installed with a triangular aluminum diamond plate finish. Safe Launch adjustment is designed to be easily accomplished regardless of age or gender. Typical sizes of an AccuDock Safe Launch are either 30° x 8° or 30° x 12°.
  - 5-B5. Overhead Assist Bars, Side Assist Railing, Paddleboard Railing Will be field installed at customer's desired location. Materials used will be 1-1/4" schedule 40 aluminum pipe, attaching to the surface of each float with 304 series Stainless Steel hardware, being bolted through the 2" x 2" x .125" aluminum framing system on each float section.
  - 5-B6. **Miscellaneous Accessories** Will have the ability to attach to the 2" x 2" x .125" aluminum framing system on each float section with 304 series Stainless Steel hardware. This feature will allow the customer to place any accessory where the desire along the perimeter of each float section.

## 6. Railings

- 6-A. Standard railings will be 1-1/4" schedule 40 aluminum pipe, attaching to the surface of each float with 304 series Stainless Steel hardware, being bolted through the 2" x 2" x .125" aluminum framing system on each float section. Railings typically are single, double, or ADA specified triple railing based on customer's request and requirements.
- 6-B. Railing fabrication has the ability to make sockets if customers require easily removable railings. 1-1/4" schedule 40 aluminum railings will sit in 1-1/2" schedule 40 aluminum pockets and be held into position with a 5/16" x 2-1/2" Stainless Steel quick release pin.
- 6-C. Railing design also includes the ability to add custom size hinging gates upon request. Hinging gates will incorporate a Stainless Steel quick release locking pin.

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6-D. All railing configurations can be built in accordance with OSHA standards.

#### 7. Low Profile Decked Docks

7-A. All Decked floating dock systems incorporate the same standard AccuDock fabrication processes for float sections and framing systems as outlined above in Specifications 1 & 2. The design of the decked system is customer specific, and dimensions of overall layouts will vary, with the basic specifications below remaining constant.

7-A1. The independent framing system is constructed of 6063-T5 1-1/4" x 1-1/4" x 1/8" aluminum channel. The frame system will cover the entire surface area of the standard AccuDock system, as well as incorporate spacing members on 16" centers as required for decking support. The frame is built in smaller sections for ease of installation, and is bolted to adjoining sections with 304 series Stainless Steel hardware. The entire frame system is through bolted with 304 series Stainless Steel hardware to the standard AccuDock 2" square aluminum tube framing.

7-A2. The walking surface utilizes Wolf PVC deck boards measuring 1-inch-thick x 5.5 inches wide with a solid cross section and an embossed simulated wood grain non-skid pattern surface on both sides of each individual deck board. Wolf PVC deck boards are ICC code approved - CCRR - 0141, and are rated for a uniform live load of 100 lbs./ft² where structural performance has been demonstrated for a temperature range from -20°F to 125°F. Wolf PVC Decking is currently available in ten different color options, however other decking options are available upon request. The deck boards are coated with an ASA cap stock resin which helps retain its original color under prolonged exposure to sun and weather. Additionally, Wolf PVC Decking has a 25-year stain and fade warranty.

7-A3. Side skirt boards will be suggested and included on all decked systems for a complete and finished look. Skirt boards will be screwed into both the AccuDock standard frame system, as well as the specific framing. Skirt boards will use the same deck boards as the surface.

7-A4. The additional weight of the decked system will result in additional draft of 1 inch from the standard AccuDock system. The additional height of the system will result in an additional total freeboard of 1-1/4".

#### 7-B. Low Profile Rowing Docks

7-B1. AccuDock float sections to be used underneath a decked system for rowing purposes will be built to different specifications. Standard AccuDock float section will be 5' x 8' x 5-1/4" height, with a footprint of floatation to surface area at no less than 87%. The high footprint of floatation percentage maximizes necessary stability for the rowing dock applications. Resulting freeboard for rowing specific uses will be no greater (higher) than 6" at dead load.

7-B2. Side Skirt boards on decked rowing docks are designed to match freeboard height. Skirting will drop down to water level height which will prevent any damage to the rowing shells.

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7-B3. The entire Rowing Dock design should allow for an easy reconfiguration into numerous different dock systems for rowing applications to meet exact FISA standards. Including but not limited to: Start Docks, Pod Docks, Official's Platforms, and additional Launch Docks. Reconfiguration will be accomplished by an AccuDock designed quick-disconnect system to allow for easy separation.

7-B4. Decked Rowing Docks will allow for the addition of accessories, including but not limited to: rub rail/bumpstrip, pop-up cleats, solar lighting, reflectors, additional platforms for awards ceremonies, etc.