Long Skin Fittings (Thru Hulls)

Designed for larger hull-thickness vessels TruDesign Long Skin Fittings (Thru Hulls) are precision moulded from glass-reinforced Nylon composite.

- Comply to ISO 9093-2 and ABYC H27

TruDesign Skin Fittings (Thru Hulls) eliminate all corrosion and bonding problems associated with electrolysis. Giving peace of mind with respect to the safety of your vessel.

Features:

- Extra-long length as required for larger hull-thickness vessels.
- Manufactured from a glass-reinforced Nylon composite – High strength, tough and light weight.
- Compatible with all hull types – Can be used on aluminium, steel, wood, composite & GRP hulls.
- Immune to corrosion & electrolysis – No corrosion breakages, increased safety.
- Chemical resistant – Unaffected by diesel, petrol, chemicals, and antifouling paints.
- U.V resistant – Will not degrade or discolour from the sun's ultraviolet rays.
- Paintable – Paintable with all types of antifoul.
- Fits TruDesign Ball Valves and other parallel BSP threads.
- Large operating range – Suitable for all marine conditions from -40°C to +110°C

TRUDESIGN

PRODUCT INFORMATION

Part Numbers and Description.

Part #	Description
91077	Skin Fitting (Thru Hull) Long ¾" BSP Black
91078	Skin Fitting (Thru Hull) Long 1" BSP Black
91079	Skin Fitting (Thru Hull) Long 1¼" BSP Black
91080	Skin Fitting (Thru Hull) Long 1½" BSP Black
91081	2" available mid 2019

Part #	Description
91148	Skin Fitting (Thru Hull) Long ¾" BSP White
91149	Skin Fitting (Thru Hull) Long 1" BSP White
91150	Skin Fitting (Thru Hull) Long 1¼" BSP Wht
91151	Skin Fitting (Thru Hull) Long 1½" BSP Wht
91152	2" available mid 2019

Standards and approvals

Certification by the International Marine Certification Institute (IMCI), Bureau Veritas to meet; ISO 9093-2 is in process. Compliance with ABYC H-27 Standard when installed in combination with TruDesign Ball Valves & Load Bearing Collars is in process as of November 18.

ISO 9093-2 Standard requirements;

ABYC H-27 Standard requirements;

In accordance with ISO 9093-2 standards, Skin Fittings (Thru Hulls) are subjected to a 155kg (341.7lb) load, applied to the threaded section for a minimum of 30 seconds, without any damage occurring. TruDesign Skin Fittings (Thru Hulls) meet this standard.

Skin Fittings (Thru Hulls), when assembled together with TruDesign Ball Valves and Load Bearing Collars, will comply with ABYC H-27 standards. This allows the entire assembly to withstand a 500lb (226.8kg) load applied to the inboard end of the assembly for a minimum of 30 seconds without any damage occurring.

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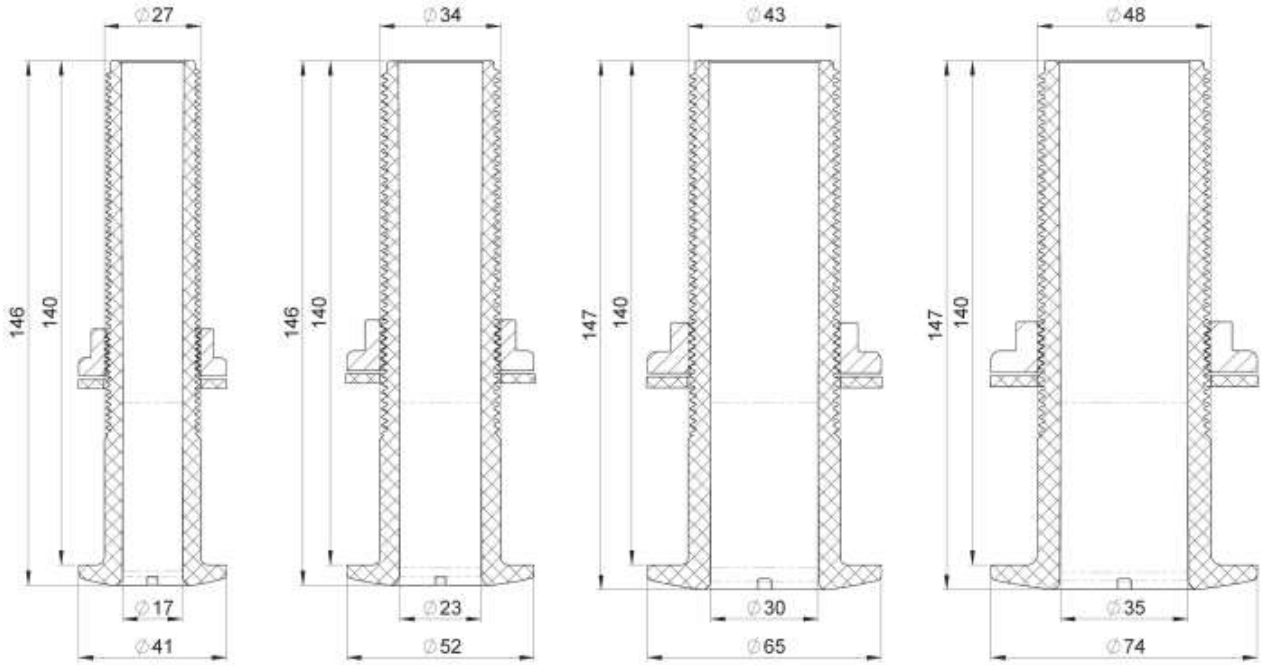
Available in 4 sizes; ¾", 1", 1 ¼", 1 ½" (2" available mid 2019)



MINIMUM HULL THICKNESS 33mm

Installation - location & drilling

- Ensure there is enough room on the inside of the boat to allow the Ball Valve to be screwed on without hitting the bulkhead or other part of the hull. Note; A "T" handle Ball Valve is available for smaller area locations
- Ensure the location will not cause the valve handle to be knocked open or closed.
- Mark the location and drill from the inside a pilot hole 3mm in diameter. Select a hole-saw 1 mm larger than the outside thread diameter of the Skin Fitting (Thru Hull). From the inside, use the pilot hole as a centre and drill through the hull with the selected hole-saw.
- It is recommended to "dry fit" the Ball Valve Skin fitting assembly and then trim the skin fitting (with a hacksaw) to allow a 2mm to 10mm gap between Skin Fitting Nut and Ball Valve to minimise overhang.

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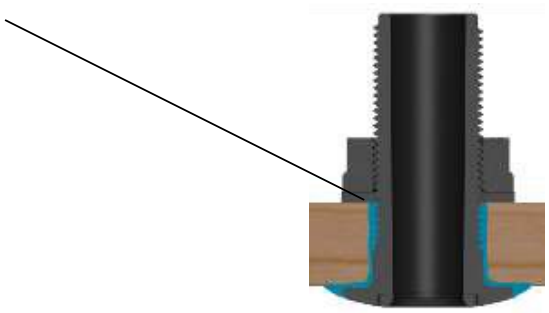
Recommended Hull "Adhesive Sealants" & Glues:

First clean all surfaces to be sealed with a general-purpose cleaner.

- 3M™ Marine Adhesive Sealant Fast Cure 5200. A one-part polyurethane adhesive/sealant. Starts to cure (tack-free) in approximately 2 hours, after which hoses can be attached. Full cure takes 24 hours – refer to manufacturer's product literature.
- SIKAFLEX® 291i Marine Sealant. A one-part polyurethane adhesive/sealant. Starts to cure (tack-free) in approx. 2 hours, after which hoses can be attached. Full cure takes 24 hours – refer to manufacturer's product literature.
- Bostik® 920 Marine Sealant. A one-part urethane adhesive/sealant. Starts to cure (tack-free) in approx. 2 hours, after which hoses can be attached. Full cure takes 1.5 – 3 days – refer to manufacturer's product literature.
- West System® (or similar) two-pot epoxy that mixes to a paste. Tip – adding filler to the West System® will increase the viscosity and help minimise "running" of the epoxy. Visit http://www.westsystem.com/ss/filler-selection-guide/ for more details.

Epoxy or Marine adhesive sealant area shown in blue



Fitting & sealing:

Smear the adhesive or glue on the underside of the Skin Fitting (Thru Hull) flange and a small way up the thread, but no further than the thickness of the hull. It is important not to have any adhesive on the exposed thread area as this could prevent the Nut or Ball Valve from turning.
Insert the Skin Fitting (Thru Hull) through the hull from the outside.
If necessary, place two strips of masking tape over the flange and attach to the hull to temporarily hold in place. Go inside the hull to fit the Nut. Note it is good practice to have a backing plate to spread the load especially if there is excessive curvature in the hull or the hull is very thin.
Hold the thread down near the washer and screw on the Nut. Once the nut is screwed down far enough that you can hold the fitting above the nut do so and continue to screw the nut down onto the washer ensuring it is only finger tight.
On the outside of the hull clean off any excess adhesive. Tip – use an angled tool or putty knife to 'blend' adhesive around the Skin Fitting (Thru Hull) flange and the hull so it is easier to clean when sanding and antifouling in the future.
After recommended curing times, tighten the nut to no more than 15 ft.lb. There is no need to over-tighten the nut, especially if epoxy has been used, as the Skin Fitting (Thru Hull) is now an integral part of the hull.

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Thread Sealing: - Ball Valve to Skin Fitting (Thru Hull)

All the sealants mentioned above under “Hull Adhesive Sealants” can be used for thread sealing. These adhesive sealants allow the Ball valve to be “set in position” to suit handle operation with no risk of turning when in use. If in the unlikely event the Ball Valve has to be removed this will require significant force.

- 3M™ Marine Adhesive Sealant Fast Cure 4200 is approximately half the strength (once cured) of 3M 5200 which allows for eventual disassembly of the ball valve from the skin fitting if required.
- LOCTITE® 5331 is a one-part acetoxy silicone sealant. Starts to cure (tack-free) in approx. 10 minutes, after which hoses can be attached. Full cure is achieved within 12 hours (at min. 40% atmospheric humidity) – refer to product literature. Creates a permanent seal for threaded connections.
- PTFE (Teflon) Thread Tape is a traditional thread sealing method which provides a good seal when applied correctly. However, in some cases if the position or tightness of the Ball Valve is incorrect, it will need to be unscrewed and more tape applied, slowing the assembly process. Additionally, the fittings can sometimes be turned by hand after being installed.
- LOCTITE® 55 Pipe Sealing Cord is a coated multi-filament cord. The main advantage is that a component, for example a Ball Valve, could be screwed down then screwed back a turn to suit positioning whilst still maintaining a tight seal. This eliminates the need to remove the entire Ball Valve and apply more tape as with traditional Teflon tape.
- Traditional Hemp pipe sealing. When combined with thread sealing pastes such as neo-fermit universal thread sealing paste can also be used as a thread seal.

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