

SKIN FITTINGS (Thru Hull) with TAIL



Designed and made in New Zealand, TruDesign Skin Fittings (Thru Hulls) with tail are precision moulded from glass-reinforced Nylon composite.

- Certified to ISO 9093-2 by the International Marine Certification Institute, Belgium (not including ½").
- Type Approved by Bureau Veritas to ISO 9093-2. (Not including ½")

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

Note: not to be used for below water line applications.

Features:

- Manufactured from glass-reinforced Nylon composite, resulting in high strength properties, tough yet light in 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.
- Long Tail – allows for two hose clips as per ISO and ABYC Standards
- Large operating range – Suitable for all marine conditions from -40°C to +110°C



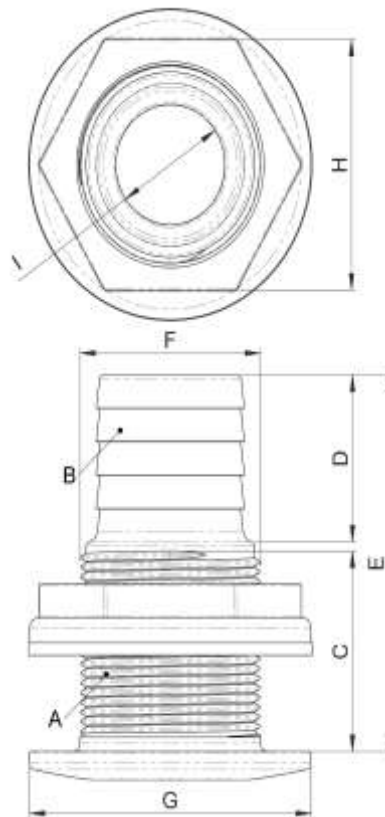
Technical

TruDesign Skin Fittings (Thru Hulls) with tail are suitable for installation in all types of hull construction; steel, aluminium, composite, fibreglass – cored and solid, wood, wooden sandwich and caulked solid wood hulls. Ensure fittings are always installed in the centre of individual planks. Skin Fittings **with Tail are not allowed for below water applications or below the heel line**. For below the water line only use a Skin Fitting with Ball Valve attached (Seacock).

Dimensions

All dimensions in mm. All dimensions nominal.

A	B		C		D		E		F		G		H		I	
Thread Size	Tail Size		Thread Length		Tail Length		Overall Length		Cutout Size		Head Diameter		Hex Size AF		Minimum Internal \varnothing	
½"	13mm	½"	47mm	1 6/7"	40mm	1 4/7"	90mm	3 1/2"	22mm	6/7"	36mm	1 3/7"	28mm	1 1/9"	8mm	1/3"
¾"	19mm	¾"	47mm	1 6/7"	40mm	1 4/7"	90mm	3 1/2"	27mm	1"	41mm	1 3/5"	34mm	1 1/3"	12mm	1/2"
1"	25mm	1"	47mm	1 6/7"	40mm	1 4/7"	90mm	3 1/2"	34mm	1 1/3"	53mm	2"	42mm	1 2/3"	18mm	5/7"
1¼"	32mm	1¼"	47mm	1 6/7"	40mm	1 4/7"	90mm	3 1/2"	42mm	1 2/3"	66mm	2 3/5"	52mm	2"	24mm	1"
1½"	38mm	1½"	47mm	1 6/7"	40mm	1 4/7"	90mm	3 1/2"	48mm	1 8/9"	75mm	3"	60mm	2 1/3"	29mm	1 1/7"
2"	50mm	2"	70mm	2 3/4"	40mm	1 4/7"	113mm	4 4/9"	60mm	2 1/3"	93mm	3 2/3"	75mm	3"	41mm	1 3/5"
½"	16mm	¾"	47mm	1 6/7"	40mm	1 4/7"	90mm	3 1/2"	22mm	6/7"	36mm	1 3/7"	28mm	1 1/9"	10mm	2/5"
1"	28mm	1½"	47mm	1 6/7"	40mm	1 4/7"	90mm	3 1/2"	34mm	1 1/3"	53mm	2"	42mm	1 2/3"	22mm	6/7"



Maximum hull thickness

Tail Size	Maximum Hull Thickness
13mm	30mm
19mm	30mm
25mm	30mm
32mm	30mm
38mm	30mm
50mm	45mm
28mm	30mm
16mm	30mm

Part Numbers

Part # Black	Part # White	SKIN FITTING / THRU HULLS TAILS
90522	90426	Skin Fitting Tail 13mm ½" BSP PKG
91138	91109	Skin Fitting Tail 13mm ½" BSP Tagged
90523	90427	Skin Fitting Tail 19mm ¾" BSP PKG
91139	91110	Skin Fitting Tail 19mm ¾" BSP Tagged
90524	90430	Skin Fitting Tail 25mm 1" BSP PKG
91120	91113	Skin Fitting Tail 25mm 1" BSP Tagged
90526	90433	Skin Fitting Tail 32mm 1¼" BSP PKG
91122	91116	Skin Fitting Tail 32mm 1¼" BSP Tagged
90527	90434	Skin Fitting Tail 38mm 1½" BSP PKG
91123	91117	Skin Fitting Tail 38mm 1½" BSP Tagged
90528	90435	Skin Fitting Tail 50mm 2" BSP PKG
91124	91118	Skin Fitting Tail 50mm 2" BSP Tagged
90811	90810	Skin Fitting Tail 16mm ½" BSP PKG
91137	91136	Skin Fitting Tail 16mm ½" BSP Tagged
90525	90436	Skin Fitting Tail 28mm 1" BSP PKG
91121	91119	Skin Fitting Tail 28mm 1" BSP Tagged



Location & Drilling

- Skin Fittings with Tail are **not allowed for below water applications or below the heal line**. For below the water line only use a Skin Fitting with Ball Valve attached (Seacock).
- Ensure there is enough room on the inside of the boat to allow the fitting of hoses.
- 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 locate in protected location to minimize the chance of inadvertent damage.
- Dual hose clamps should be fitted to ensure the hose does not become disengaged from the tail.
- There is no need to tie or bond TruDesign Skin Fittings with Tail electrically together as there are no corrosion or electrolysis problems as can be experienced when using ferrous fittings.

Recommended Hull Adhesive Sealants & Glues:

First clean all surfaces to be bonded 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 and 591 Marine Sealants. 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.

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.
- 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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