



Marine & Offshore

Certificate number: 27801/C0 BV

File number: ACM 135/2705/01-02

Product code: 6505I

This certificate is not valid when presented without the full attached schedule
composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

TRU-DESIGN PLASTICS LTD

AUCKLAND - NEW ZEALAND

for the type of product

SEACOCKS / THROUGH-HULL FITTINGS

Thru-Hull Skin Fittings including Ball Valves & Aquavalves

Requirements:

- BUREAU VERITAS Rules for the Classification of Yachts
- ISO 9093-2021

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 29 Apr 2029

For Bureau Veritas Marine & Offshore,

At BV AUCKLAND, on 29 Apr 2024,

Daniel CAEIRO

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Through-hull Skin Fittings, Ball Valves & Aquavalves

1.1 Design

a) Through-hull Skin Fittings

- Can be used on aluminium, steel wood or FRP hulls
- Skin fittings are designed to meet EN ISO 9093-2021 applicable to small crafts
- Working temperature range is -40°C to 110°C (-40°F to 230°F)
- Electrically conductive: composite material not conductive

b) Ball Valves & Aquavalves

- Working temperature range is -40°C to 110°C (-40°F to 230°F)
- Electrically conductive: composite material not conductive

1.2 Size range

Type	inch / mm						
Skin Fittings with tail	3/4" BSP/NPS 19 mm	1" BSP/NPS 25 mm	1" BSP/NPS 28 mm	1-1/4" BSP/NPS 32 mm	1-1/2" BSP/NPS 38 mm	2" BSP/NPS 50 mm	/
Skin Fittings (recessed and flanged)	3/4" BSP/NPS 17 mm	1" BSP/NPS 24 mm	/	1-1/4" BSP/NPS 32 mm	1-1/2" BSP/NPS 37 mm	2" BSP/NPS 48 mm	3" BSP/NPS 75 mm
Manual Ball Valves	3/4" BSP / NPS 20 mm ID	1" BSP / NPS 24 mm ID	1-1/4" BSP / NPS 32 mm ID	1-1/2" BSP / NPS 32 mm ID	2" BSP / NPS 48 mm ID	3" BSP 75 mm ID	/
Manual Aquavalve	BSP 1-1/2"						

1.3 Material specification

- Skin Fittings and Aquavalve components: EMS Grilon BG30/2
- Ball Valve body components: Ultramid B3GK24 (PA6-(GF10+GB20))

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

- Skin Fittings: Details and Product Information Rev.1
- Skin Fittings with Tail: Details and Product Information Rev.F
- Grilon product information sheet dated April 2004
- Ultramid product information sheet dated 02/2017
- Manual Ball Valves: Product information Rev.F
- Manual Aquavalve: Product information Rev.A

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

- Type Tests carried out according to ISO 9093-2021 under witness by BV surveyor dated 28/03/2024.
- Test Report N° 23-010 Ball Valve and Skin Fitting Strength Tests for 3/4" and 1" type tested with a 155Kg load. Strength Tests for 1-1/4" to 3" type tested with a 227Kg load dated 28/03/2024.
- Test Report N° 23-009 Skin Fittings for 3/4" and 1" type tested with 155Kg load and 1-1/4" to 2" type tested with 227K load dated 28/03/2024.
- Test Report N° 23-007 Ball Valve and Skin Fitting Functional Tests for 2" and 3" dated 28/03/2024.
- Test Report N° 23-006 Ball Valve and Skin Fitting Functional Tests for 3/4" to 1-1/2" dated 28/03/2024.
- Test Report N° ACTE202306130 according to ISO 4892-3:2016 including UV exposure test dated 05/11/2023.

4. APPLICATION / LIMITATION

- 4.1 - Approved as hull penetration, seacocks and through-hull fittings and marine sanitary applications.
- 4.2 - Valves and fittings fitted on the yacht side belong to class II according to Pt C, Ch 1, Sec 4 of the Society's rules.
- 4.3 - The location and the mounting to the hull are to be approved for each application on board BV-classed ships. Limit of use of plastic material is given in Pt C, Ch 1, Sec 4, table 7 of the Society's rules. When installed, attachment of through-hull fittings must be watertight and secure to prevent loosening under normal operating conditions.
- 4.4 - The valves are to be located in an accessible area for installation, operation, disassembling and inspection.
- 4.5 - TRU-DESIGN PLASTICS LTD has to inform its clients about proper methods of arrangement, fitting and general maintenance of the products.

5. PRODUCTION SURVEY REQUIREMENTS

- 5.1 - The products are to be supplied by **TRU-DESIGN PLASTICS LTD** in compliance with the type and the requirements described in this certificate.
- 5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.
- 5.3 - BV product certificate is required.
- 5.4 - Materials of valve housings of Class II (DN<100) and for other parts of Class II are to be with Work's certificates.
- 5.5 - Each valve housing for class II is to be subjected to hydrostatic test at 1.5 times the design pressure. Valves and fittings which are secured on the yacht side below the load waterline are to be subjected to hydrostatic test at a pressure test not less than 0.5 MPa. The test can be carried out at the yard or on board.
- 5.6 - For information, **TRU-DESIGN PLASTICS LTD** has declared to Bureau Veritas the following production site:

TRU-DESIGN PLASTICS LTD
47 AINTREE AVENUE
AIRPORT OAKS MANGERE
AUCKLAND NEW ZEALAND

6. MARKING OF PRODUCT

The products is to be marked with at least:

- Manufacturer's name or logo
- Type designation
- Manufacturing data
- Identification data
- Society's brand as relevant

7. OTHERS

It is **TRU-DESIGN PLASTICS LTD** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the Type Approval Certificate No. 27801/B1 BV issued by the Society.

*** END OF CERTIFICATE ***