



Marine &amp; Offshore

Certificate number: 27801/B0 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*

www.veristar.com

## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**TRUDESIGN**

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 9093-2:2002

*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: 12 Mar 2023**

**For Bureau Veritas Marine & Offshore,**

At BV AUCKLAND, on 12 Mar 2018,

Sam NARIMAN

*A. S. Nariman*



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.

The electronic version is available at: <http://www.veristarnb.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=tbddar3m24>

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 including Ball Valves & Aquavalves**

##### 1.1 Design

- Can be used on aluminium, steel wood or FRP hulls
- Skin fittings are designed to meet EN ISO 9093-2 applicable to small crafts
- Ball valves are designed for use in marine applications above and below the water line
- Aquavalves are designed for use in marine toilet applications where the need to control effluent discharge is required
- Aquavalve skin fittings and ball valves are designed to a max. working pressure of 1 bar
- Pressure tested at 300 psi for Aquavalves and 600 psi for Ball valves, and 100% leak tested at the end of assembly
- Working temperature range is -40° to 80°C (-40° to 176°F)
- Electrically conductive: composite material not conductive

##### 1.2 Size range

Type	inch / mm						
Skin Fittings with tail	1/2" BSP 13 mm	3/4" BSP 19 mm	1" BSP 25 mm	1" BSP 28 mm	1-1/4" BSP 32 mm	1-1/2" BSP 38 mm	2" BSP 50 mm
Skin Fittings (recessed and flanged)	1/2" BSP 13 mm	3/4" BSP 19 mm	1" BSP 24 mm	/	1-1/4" BSP 32 mm	1-1/2" BSP 37 mm	2" BSP 48 mm
Manual Ball Valves	1/2" BSP 1/2" NPS 19 mm ID	3/4" BSP 3/4" NPS 19 mm ID	1" BSP 1" NPS 19 mm ID	/	1-1/4" BSP 1-1/4" NPS 32 mm ID	1-1/2" BSP 1-1/2" NPS 32 mm ID	2" BSP 2" NPS 52 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 Doc PIS - Skin Fittings 3.0.doc
- Skin Fittings with Tail : Details and Product Information Doc PIS - Skin Fittings with Tail 3.1.doc & Tail Long Thread 3.0.doc
- Ultramid product information sheet dated 02/2017
- Grilon product information sheet dated April 2004
- Manual Ball Valves : Details and Product Information Doc PIS - Ball Valve 4.1.docx
- Manual Aquavalve : Details and Product Information Doc PIS - Aquavalve 3.0.doc & SIS - Aquavalve 1.0.doc

*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

#### 3.1 Tests carried out: visual inspection, hydrostatic pressure test, assembly test

- Type tested with a 155 kg load hanging off a ball valve and hose fitting
- Test report N° 4301.11 dated 21/01/2014
- Not carried out acc. to the Society's rules : Low flame spread characteristics and fire endurance test

#### 3.2 Type tests carried according to ISO 9093-2 under witness of a BV surveyor.

- Test report dated 31/10/2017 & 23/02/2018

### 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 table 7 - Pt C, Ch 1, Sec 4 of the Society's rules. When installed, attachment of valves and 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 TRUDESIGN 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 TRUDESIGN 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.

For information, TRUDESIGN has declared to Bureau Veritas the following production site:

**TRUDESIGN: 243 TI RAKAU DRIVE, EAST TAMAKI, 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**

This approval is given with the understanding that the manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper method of fitting and general maintenance of the products and of the conditions of this approval.

*This certificate supersedes the Type Approval Certificate No. 27801/A0 BV issued by the Society.*

**\*\*\* END OF CERTIFICATE \*\*\***