



Marine & Offshore  
Division

Certificate number: 40156/A1 BV

File number: ACM 196/2603/1

Product code: 1510I

*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*

**DUAP AG**

Herzogenbuchsee - SWITZERLAND

*for the type of product*

**OIL, FUEL CONDITIONING SYSTEMS**

FUEL FILTRATION SYSTEM EFICLEAN 2100

### Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships  
BUREAU VERITAS Rules for the Classification of Offshore Units  
BUREAU VERITAS Rules for the Classification of Naval Ships  
BUREAU VERITAS Rules for the Classification of Yachts

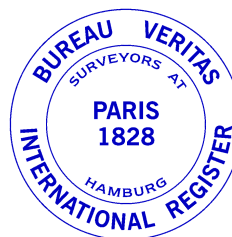
*This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 17 Jun 2021**

**For BUREAU VERITAS,**

At BV HAMBURG, on 22 Jun 2016,

Adama Diene



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. 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 Division 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 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 October 2014

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

#### Fuel Filtration System **EFICLEAN 2100**

Based on the filtration of dirt particles as small as  $\geq 4\mu\text{m}$  and a separation of water out of the fuel.

#### **1.1 Design:**

The system is composed of the following main components:

an Automatic Filter, a Sludge Tank, a Fine Filter (coalescer element) and a Water Tank.

The system works automatically and the various operating modes in the fuel area and the sludge/water area can be easily set including choosing between automatic or manual operation.

#### **1.2 Technical data:**

<b>Maximum operating pressure</b>	6 bar
<b>Temperature range</b>	+10 °C to +80 °C
<b>Flow rate</b>	1.5 m <sup>3</sup> /h at $\geq 4\mu\text{m}$ filtering and water separation 2.5 m <sup>3</sup> /h at $\geq 10\mu\text{m}$ filtering

### 2. DOCUMENTS AND DRAWINGS:

#### **2.1 Drawings:**

<b>Drawing Number</b>	<b>Revision</b>	<b>Designation</b>
280-280170	-	Fuel Treatment System EFICLEAN 2100
280-280183 & -184	-	Schmutztank
280-280193 & -194	-	Wassertank
280-280288	-	Coalescerfilter
280-280147 up to -184	-	Verrohrung

#### **2.2 Documents:**

- Operating Manual: Self-Contained Fuel Treatment System EFICLEAN 2100, Last updated: 08/06/2016.
- Exhaust gas Measurement report Type I, according to EG-Regulations 715/2007/EG and 692/2008A/EG.

### 3. TEST REPORTS:

Nil.

### 4. APPLICATION / LIMITATION:

4.1 The Fuel Filtration System could be installed on board ship on the fuel piping system where safeguards for reducing leakage possibility and limiting its consequences are provided.

4.2 When mounted on a fuel feeding system of essential service equipment, a temporary or permanent unavailability of the Fuel Filtration System is not to lead to the unavailability of the essential service.

4.3 The system may be fitted on ship granted with an automation notation provided that the requirements stated in the BUREAU VERITAS Rules are complied with.

4.4 The electrical components have to be approved according BUREAU VERITAS Rules NR 467 Part C, Ch 2, Sec 15.

4.5 The present certificate does not cover any performance of the system in fuel treatment.

4.6 This Certificate applies to the described system. If required by the Rules, each attached piece of equipment is to be either type-approved or design-appraised on a case by case basis.

4.7 The system shall be equipped with the parts listed in the manufacturer's Part List exclusively.

4.8 The used of the Fuel Filtration System is to be considered on case by case ship basis.

4.9 The system is to be installed according BUREAU VERITAS Rules requirements and the Manufacturer's instruction.

**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 The Fuel Filtration System is to be supplied by the manufacturer 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 BUREAU VERITAS product certificate is required.

5.4 **DUAP AG** has declared to BUREAU VERITAS that the product detailed in this certificate is manufactured at:

**DUAP AG**

**Waldgasse 19**

**CH - 33600 Herzogenbuchsee**

**SWITZERLAND**

5.5 The Fuel Filtration System must be tested with all its final equipment accessories.

**6. MARKING OF PRODUCT:**

The product shall be marked with:

- Manufacturer's name or trade mark
- Dealer/manufacturer
- Type and Size,
- Society's Brand as relevant.

**7. OTHERS:**

7.1 The system will be delivered with the relevant documentation for their maintenance and their operation.

7.2 This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the unit at any time and that the manufacturer will accept full responsibility for informing shipbuilders, ship owners or their subcontractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.3 This certificate supersedes the Type Approval Certificate N° 40156/A0 BV issued on 17/06/2016 by the Society.

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