

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Fuel-, Lubricating- and Hydraulic Oil Filters

with type designation(s)

DU101, DU251, DU401, DU631, DU635, DU1001, DU1950, DU1050, DU2050

Issued to

Eaton Technologies GmbH
Altlußheim, Baden-Württemberg, Germany

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.7 Pressure equipment
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition January 2018

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Type:	Max. working temp.:	Max. working press.:	Sizes:
DU101	-10 °C to 100 °C	32 bar	DN 32
DU251	-10 °C to 100 °C	32 bar	DN 50
DU401	-10 °C to 100 °C	32 bar	DN 50
DU631	-10 °C to 100 °C	32 bar	DN 65
DU635	-10 °C to 100 °C	32 bar	DN 65
DU1001	-10 °C to 100 °C	32 bar	DN 80
DU1950	-10 °C to 100 °C	32 bar	DN 80
DU1050	-10 °C to 100 °C	32 bar	DN 100
DU2050	-10 °C to 100 °C	32 bar	DN 100

Issued at **Hamburg** on **2020-09-20**

This Certificate is valid until **2025-09-19**.

DNV GL local station: **Augsburg**

for **DNV GL**

Approval Engineer: **Astrid Caschube**

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Harald Pauli
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

- 9 sizes of double oil filter with changeover for fuel-, lubricating- and hydraulic oil,
- For details of the filters (e.g. design data, materials, dimensions, etc.) see Application/Limitation and Type Approval documentation listed below.

Application/Limitation

Applied rules and design code is DNVGL-RU-SHIP Pt.4 Ch.7 'Pressure Equipment' (Edition July 2019).

The filters are graded in pressure equipment class I according to DNVGL-RU-SHIP Pt.4 Ch.7 Sec.1 Table 2. The corrosion allowance is 1 mm.

All materials used for pressurized parts shall be delivered with material certificates according to DNVGL-RU-SHIP Pt.4 Ch.7 Sec.1 Table 5.

The components of the filters subject to pressure shall be delivered by manufacturers holding a valid certificate according to DNV GL CP-0346 'DNV GL approval of manufacturing scheme'.

Manufacturing, workmanship and testing shall be done according to DNVGL-RU-SHIP Pt.4 Ch.7 Sec.7. Each filter is to be:

- Subjected to visual and dimensional inspection as well as hydrostatic pressure test with a test pressure of 48 bar (= 1.5 times the design pressure) upon completion in the presence of a DNVGL Surveyor,
- Certified by DNVGL and to be delivered with a product certificate.

Type Approval documentation

Marking of product

For traceability to this type approval the products are at least to be marked with:

- the name and domicile of the manufacturer,
- the manufacturer's type designation and serial number,
- the year of manufacture,
- the design pressure,
- the design temperature,
- the hydraulic test pressure, and
- DNV GL's identifying mark.

Periodical assessment

The objective of the periodical assessment is to verify that the conditions for the type approval (TA) have not been altered.

The main scope of the periodical assessment will normally include:

- verification of the TA applicant's production and quality system w.r.t. ensuring continued consistent production of the TA products at the TA applicant's own premises and at other companies that are given the responsibility for manufacturing of the products,
- review of TA documentation and that this is still used as basis for the production,
- review of possible changes in the design, the materials and the performance of the product, and
- verification of the product marking.

For retention of the TA certificate in its validity period the periodical assessments will be carried out every two years.



Job Id: **262.1-032024-1**
Certificate No: **TAP0000261**

Unscheduled assessments for retention of the certificate may be carried out when there is reason to believe that the type approval applicant has not adhered to the obligations stipulated in the type approval certificate.

End of Certificate