Certificate No:
TAP00002D3

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Filter housing for hydraulic and lubricating oil

with type designation(s)
180 HFO, 180 HCO

Issued to
ALFA LAVAL MOATTI SAS
Elancourt, Yvelines, France

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 vessels classed by DNV.

Type:	Max. working temp.:	Working media:	Design pressure:
180 HFO	150 °C	Fuel Oil	16 bar
180 HCO	60 °C	Control Oil	7 bar

Issued at **Høvik** on **2021-09-14**
This Certificate is valid until **2026-09-13**.
DNV local station: **France CMC**

Approval Engineer: **Mehdi Rowshan**

for **DNV**

Zeinab Sharifi
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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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

The filters 180 Series are made from different combinations of standard parts with 8 models:

- 180 HFO Fuel oil Filters range: 180DM12/8, 180DM18/8, 180DM24/12, 180DM30/12, 180DM36/12
- 180 HCO control oil Filters range: 180DM24/8, 180DM30/8, 180DM36/12

Pressure class:
- 180 HFO: II
- 180 HCO: III

Design Standard: ASME VIII Div.1/2

Corrosion allowance: 0 mm
Housing material: duplex

Application/Limitation

The certificate does not cover internals.

Type Approval documentation

Reference	Document type	Designation	Revision
1801203-00	Drawing&nomenclature	180 HFO filters range	0
1801204-00	Drawing&nomenclature	180 HCO filters range	0
1800-04531	Part drawing	Filter duplex housing	0
1800-04541	Part drawing	Head 8 elts	0
1800-04543	Part drawing	Head 12 elts	0
1800-04533	Part drawing	Raiser 6 elts	0
1800-04535	Part drawing	Raiser 12 elts	0
1800-04537	Part drawing	Raiser 18 elts	0
1800-04539	Part drawing	Raiser 24 elts	0
1800-04547	Part drawing	Manual cover	0
1800-04545	Part drawing	ME support	0
1800-04552	Part drawing	Top cover COV DN65	0
1800-04553	Part drawing	Bottom cover COV DN65	0
1800-01495	Part drawing	Counter flange DN25	0
1800-04078	Part drawing	Counter flange DN40	0
1800-04048	Part drawing	Counter flange DN50	0
1800-04046	Part drawing	Counter flange DN65	1
180202093	Calculation note	180 Calculations note	0
180202179	BOM	For drawing 1801203-00 (180 HFO filters)	0
180202180	BOM	For drawing 1801204-00 (180 HCO filters)	0

Production Testing

Each filter shall be tested upon completion to at least 1.5 times the design pressure in the presence of a DNV Surveyor.

Certification

Materials for pressure retaining parts are to be delivered with material certificates according to DNVGL-RU-SHIP Pt. 4 Ch. 7 Sec. 2 Tables 6 or 7, and shall meet the requirements of relevant parts of DNVGL-RU-SHIP Pt. 2 Ch. 2

Each filter shall be certified by a DNV surveyor and to be delivered with a DNV product certificate when it is required by DNV GL Rules or by purchaser.

Marking of product

Each filter shall be permanently and legibly marked on the pressure part or on a nameplate permanently attached to a principal pressure part to show its identity and origin. The marking shall show at least the following particulars:
- manufacturer's name and address
- type designation and serial number
- year of manufacture
- maximum allowable working pressure
- hydrostatic test pressure.

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.