



Certificate no.:
TAP0000302

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Filter

with type designation(s)

Methanol Filters: 606-25, 606-32, 608-40, 612-50, 618-65 & 630-80

issued to

Filtrex S.r.l.

Milano, MI, Italy

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.7 Pressure equipment

DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021

Application:

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

Issued at **Høvik** on **2025-05-15**

This Certificate is valid until **2030-05-14**.

for **DNV**

DNV local unit: **Italy/Malta CMC**

Approval Engineer: **Maheshraja Venkatesan**

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 USD 300 000.

Product description

Six types of filters listed below with bolted end covers designed according to DNV Rules for classification of ships Pt.4 Ch.7 Pressure equipment.

Parts not covered by Pt.4 Ch.7 are designed in accordance with ASME Sec. VIII Div. 1

Flanges: PN 16 flat face, EN 1092-1.

Product details:

Type	Size – OD mm	Nozzle size mm
DSX 606-25	128	25
DSX 606-32	128	32
DSX 608-40	128	40
DSX 612-50	168	50
DSX 618-65	174	65
DSX 630-80	204	80

Material of construction:

Body & Flanges	ASTM A351/315M CF3M
Cover	ASTM A182/182M F316/316L ASTM A276 Gr.316/316L ASTM A479/479M F316/316L
Gasket	NBR
Bolts	ISO 3506-1, A4-70

Application/Limitation

These filters are approved to be used in Methanol applications with below design conditions:

Design Pressure:	16 bar / FV
Test Pressure:	24 bar
Design Temperature (Min/ Max):	- 20 °C / 60°C
Corrosion allowance:	0 mm
DNV Class:	I

Type Approval documentation

Production testing

Each filter shall be subjected to hydrostatic pressure test upon completion to at least 1.5 times the design pressure. The test shall be witnessed by a DNV Surveyor, if a product certificate is required by DNV Rules or purchaser.

Certification

The manufacturer shall select appropriate metallic and non-metallic materials, ensuring compatibility and material protection for the specific system, its intended service including medium and long-term exposure and environmental conditions.

Materials for pressure retaining parts are to be delivered with material certificates according to DNV-RU-SHIP Pt. 4 Ch. 7 Sec. 1 Table 5 and shall meet the requirements of relevant parts of DNV-RU-SHIP Pt. 2 Ch. 2. Approval of manufacturer is required for NV and W material certificates.

Manufacturer of Class I pressure vessels shall be DNV approved manufacturer.

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 of the filter 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
- design temperature range.



Job ID: **262.1-043038-1**
Certificate no.: **TAP0000302**

Periodical assessment

This certificate is only valid if required periodical assessments are carried out with satisfactory results.

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 DNV-CP-0338.

To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>.

Manufacturing location

Filtrex S.r.l.
Milano, MI, Italy