

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Fuel-, Lubricating- and Hydraulic Oil Filters**

with type designation(s)

Pi 210, Pi 210, Pi 2100, Pi 2100, KE 2698, Pi 212, Pi 2120

Issued to

**Filtration Group GmbH
Oehringen, Germany**

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems**DNV GL rules for classification – Ships Pt.4 Ch.7 Pressure equipment****Application :****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.**

Type:	Max. working temp.:	Max. working press.:	Sizes:
Pi 210	120°C	63 bar	50 - 110 liter / min
Pi 210	120°C	32 bar	150 - 600 liter / min
Pi 2100	120°C	63 bar	40 - 100 liter / min
Pi 2100	120°C	32 bar	160 - 400 liter / min
KE 2698	120°C	30 bar	150 - 600 liter / min
Pi 212	120°C	63 bar	50 - 110 liter / min
Pi 2120	120°C	32 bar	40 - 100 liter / min

Issued at **Hamburg** on **2017-10-19**This Certificate is valid until **2022-10-18**.for **DNV GL**DNV GL local station: **Augsburg**Approval Engineer: **Christian Kaemmer**

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Olaf Drews
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.



Job Id: **262.1-026766-1**
Certificate No: **TAP000013H**

Product description

Duplex Filter consisting of two filter housings, covers and switching unit.

Part	Material
Filter head	AC-46200 / EN AC-AISI8Cu3 S
Housing	EN AW-6082/AlMgSi1 – 3.2315
Sealing	NBR, FKM
Media	Diesel fuel oil, Marine diesel fuel oil, Hydraulic- and Lubricating oil
Pressure Equipment Class ¹	Class I, refer to DNVGL-Rules Part 4, Chapter 7, Section 1, Table 2.

Application/Limitation

The duplex filter of types Pi 210, Pi 210, Pi 2100, Pi 2100, KE 2698, Pi 212, Pi 2120 are type approved for application in piping systems arranged:

- outside machinery spaces of category "A".
- Inside machinery spaces of category "A", if the filter is attached to machinery.
Refer to IACS SC 282:2016.

Threaded ports/connections are not permitted on these filters conveying flammable fluids.

For installation, operation and maintenance the instructions of the manufacturer are to be observed.

Production testing

Upon completion, a product certificate (PC) is to be issued for each filter by DNVGL; refer to DNVGL-rules Part 4, Chapter 7, Section 1, Table 5.

Type Approval documentation

Tests carried out

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Marking of product

For traceability to this type approval, each filter is to be marked with:

Manufacturer's name or trade mark
Filter type designation
Operating pressure [bar]
Operating temperature range [°C]
Job No. / Serial No.
Date of manufacture coded

Periodical assessment

For retention of the type approval certificate periodical assessments shall be carried out at production places by local DNVGL Surveyor.

Prior to the expiry date of this certificate a renewal assessment is to be carried out to verify that the conditions for the type approval are complied with and to witness burst pressure testing on select sizes. The objective of the periodical assessment is to verify that the design and production conditions for the type approval have not been altered.

Main scope of the assessment:

- verification of the production and quality control system
- review of quality control documentation of recent deliveries
- review of drawings in production to verify any design changes which may have an impact on data specified in the type approval certificate, performance and range of application
- verification of the product marking.

End of certificate