

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Fuel Oil Separators**with type designation(s)
S949, S9410

Issued to

Alfa Laval Tumba AB
Tumba Stockholms Län, Sweden

is found to comply with

DNV GL class programme DNVGL-CP-0210 – Type approval – Fuel oil separators**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2018-04-17**This Certificate is valid until **2023-04-16**.for **DNV GL**DNV GL local station: **Stockholm**Approval Engineer: **Ole Henrik Kverndal Pedersen****Torill Grimstad Osberg**
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.



Product description

Separators for cleaning of fuel oil intended for marine- and land-installations.

Application/Limitation

Feed temperature: ± 0 to $+100^{\circ}\text{C}$
Ambient temperature: ± 5 to $+55^{\circ}\text{C}$
Viscosity max: 700cSt at $+50^{\circ}\text{C}$
Discharge intervals: Min. 2minutes, Max. 4 hours.

Not to be used for liquids with flashpoint below $+60^{\circ}\text{C}$.
Risk for corrosion and erosion must be investigated in each case.

Certified flow rate (CFR):

Model:	Bowl speed (rpm):	CFR l/h (380cSt at 50°C):	CFR l/h (700cSt at 50°C):
S949	9000	6240	4000
S9410	9000	6880	4410

To be used with DNV GL type approved Alfa Laval EPC control system intended for CFR separators.

As the configuration of the instrumentation and control systems may be different from case to case, this is to be tested after installation.

Type Approval documentation

Tests carried out

Marking of product

For traceability and compliance with DNV GL Type Approval Program DNVGL-CP-0210 "Fuel Oil Separators", the following marking is to be carried out on each product:

- Manufacturers name or mark
- Separator type designation
- Certified Flow Rate (CFR)

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform a periodical assessment after two years, after three and a half year and before the expiry date of this certificate to verify that the conditions for the type approval are complied with. The main elements of the certificate retention survey are:

- Review of Type Approval documentation
- Review of possible changes in design, materials and performance
- Ensure traceability between manufacturer's product type marking and Type Approval Certificate.