



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAP00000Y6
Revision No:
2

This is to certify:

that the **Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings**

with type designation(s)
Aeroquip FC234 AQP

issued to

Danfoss Power Solutions II, LLC
Van Wert, OH, USA

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021
DNV class programme DNV-CP-0183 – Type approval – Flexible non-metallic hoses

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Temperature range: -40°C to +150°C
Max. working press.: 103 bar / 1500 psi
Sizes: 0.25" to 0.88"

Issued at **Hamburg** on **2024-10-08**

This Certificate is valid until **2027-06-19**.

for **DNV**

DNV local unit: **Certification & Inspection Services**

Approval Engineer: **Christian Kaemmer**

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

Aeroquip FC234-Series:

Flexible non-metallic hose consisting of an chlorinated polyethylene rubber inner tube, brass plated steel wire braid reinforcement, braided refractory insulation and blue chlorinated polyethylene cover.

Fire resistant acc. to ISO 15540.

Inner tube: AQP elastomer
 Reinforcement: brass plated steel wire braid
 Cover: blue AQP cover
 Couplings: crimp-fittings type R5

Size and pressure range:

Hose Part Number	Hose I.D.		Hose O.D. max		Maximum working pressure	
	mm	inch	mm	inch	[bar]	[psi]
FC234-05	6.4	0.25	14.8	0.58	103	1500
FC234-06	7.9	0.31	17.3	0.68	103	1500
FC234-08	10.3	0.41	19.4	0.76	86	1250
FC234-10	12.7	0.50	23.7	0.93	86	1250
FC234-12	15.9	0.62	27.6	1.08	52	750
FC234-16	22.2	0.88	31.6	1.24	28	400

Production places

- Danfoss Power Solutions II LLC, 1225 W. Main Street, Van Wert, Ohio, USA

Responsibility

Danfoss Power Solutions II, Van Wert takes the responsibility that the design and production of the hoses, hose end fittings and manufacturing of hose assemblies are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

Application/Limitation

Hose assemblies covered by this type-approval certificate are type approved for diesel fuel, gasoline, hot lube oil and water.

Flexible hoses are only to be used in short lengths where it is necessary due to vibrations or flexible mounting of the machinery. The hoses shall not replace/be used where permanent piping is possible/required.

Installation

The hose assemblies must only be fitted in places where they are always accessible.

Flexible hoses of these types are not to be used on boiler fronts.

The hoses are to be mounted in accordance with the manufacturer's instructions.

It must be possible to shut off from the system all flexible hoses used in systems for compressed air, fresh water cooling applications, lube oil, fuel oil and petroleum base hydraulic oil.

The hoses are not to be used for suction. The use of hose assemblies is not permitted in permanently pressurized starting air lines of diesel engines.

For temperatures below 0°C the supplementary material requirements acc. to DNV-Rules "Ships /Metallic Materials" part 2, chapter 2, section 5, item 4 are to be observed.

Type Approval documentation

Tests carried out

Production testing

All hose assemblies shall be subject to a pressure test at 1.5 times the maximum working pressure and shall be delivered with the pressure test report with reference to the type approval certificate.

Marking of product

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

Marking	Example
Manufacturer's name	Aeroquip by Danfoss
Type, Name	FC234-12
Maximum working pressure M.A.W.P.	52 bar
Date YYYY-MM-DD	2022-05-01

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNV-CP-0338, Sec.4.

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