EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00007NV

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

That the Materials other than steel for pipes conveying oil or fuel oil: flexible pipe assemblies and compensators

with type designation(s)
Alfagomma 1SN Evolution 1SN HT150, Dunlop Hiflex Commander 150 1SN PLUS

Issued to
Alfagomma Hydraulic S.p.A.
Castelnuovo Vomano – Castellalto, TE, Italy

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2021/1158,**
item No. MED/3.15c. SOLAS 74 as amended, Regulation II-2/4 & X/3 and 2000 HSC Code 7 & 10 and IMO MSC/Circ.1120

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-10-25**.

Issued at **Høvik** on **2021-10-26**

DNV local station:
Italy/Malta CMC

Approval Engineer:
Andreas Hansen

Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
Head of Notified Body

NORWEGIAN ACCREDITATION PROD 019

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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

Flexible non-metallic hose assemblies (MED/3.15c):

Alfagomma Evolution 1SN HT150 (Dunlop Hiflex Commander 150 1SN PLUS), designed according to EN 853 1SN and SEA 100 R1AT

Inner tube: Oil resistant synthetic Rubber
Reinforcement: One steel wire-braid
Cover: Abrasion, ozone, and hydrocarbon resistant synthetic rubber

Couplings:

Size			Material: 11SMnPb30 (1.0718) EN 10277	
DASH	DN	Inch	No-Skive Ferrule	Skive Ferrule
4	06	¼	H1200AD1-040000	H1100SK1-040000
6	10	3/8	H1200AD1-060000	H1100SK1-060000
8	13	½	H1200AD1-080000	H1100SK1-080000
10	16	5/8	H1200AD1-100000	H1100SK1-100000
12	19	¾	H1200AD1-120000	H1100SK1-120000
16	25	1	H1200AD1-160000	H1100SK1-160000
20	31	1 ¼	H1200AD1-200000	H1100104-200000
24	38	1 ½	H1200AD1-240000	H1100104-240000
32	51	2	H1200AD1-320000	H1100104-320000

Application/Limitation

Hose assemblies covered by this certificate are tested according to:

1) EN ISO 15540:2016 – Fire resistance of hose assemblies – Test methods
2) EN ISO 15541:2016 – Fire resistance of hose assemblies – Requirements for the test bench

Maximum allowable working pressure:

Size (DN)	06	10	13	16	19	25	31	38	51
Pressure (bar)	225	180	160	130	105	88	63	50	40

Type Examination documentation

Tests carried out

Fire tests according to ISO 15540/15541.

Marking of product

As a minimum, the final products (hoses with couplings) are to be marked with:

- Manufacturer’s name or trademark
- Manufacturer’s address
- Specification or hose name
- Hose size (inside diameter in inches)
- Data code (quarterly and daily production code)
- Mark of conformity according to Article 10 of the Council Directive 2014/90/EU

Mark of Conformity may only be affixed to the product when the corresponding certification related to production-control phase module (D, E, or F) is valid.