

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL AS under the authority of the Government of Norway.

This is to certify:

That the Galley exhaust duct fixed fire extinguishing systems components

with type designation(s)
Ultra Fog Galley Duct System

Issued to
ULTRA FOG S.R.L.
VIAREGGIO, LU, Italy

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2020/1170**,
item No. MED/3.68. SOLAS 74 as amended, Regulation II-2/9

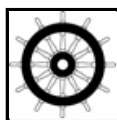
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-09-02**.

Issued at **Høvik** on **2020-09-03**

DNV GL local station:
Italy/Malta CMC

Approval Engineer:
Helge Bjørnara



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
Head of Notified Body



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 GL 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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

"Ultra Fog Galley Duct System",

is a manually operated water mist system composed of spray heads, stainless steel piping, section valves, filter, control system and water supply pumps.

The galley duct protection system should be designed according to new SOLAS Ch.II-2, Reg.9.7.5.1.1 or 9.7.5.2. This certificate addresses only item 9.7.5.1.1.3 and 9.7.5.2.4.

Only the spray heads are type approved by this certificate. Pumps, pipes, valves, couplings and other systems components are subject to case by case approval.

Application/Limitation

Approved for use as a fixed fire extinguishing system for exhaust ducts with perimeter of duct not exceeding 4.72 m from galley ranges.

The spray heads are to be installed in the ducts according to the following specifications:

Spray heads in ducts	
Maximum spray head spacing:	6 m
Maximum duct dimensions ¹⁾ :	1.5 x 0.86 m (W x H) (4.72 m perimeter) Ø 1.5 m
Minimum pressure at spray head:	95 bar
Spray head type:	202-073-O-G
The spray heads are to be installed perpendicular to the duct wall.	
Note:	
1) Larger ducts can be assessed case by case (reduced spacing).	

Spray head information:

Spray head	k-factor [lpm/bar ^{1/2}]	Flow [lpm]	Pressure [bar]	Drawing no.
202-073-O-G	0.73	7.1	95	931028-202 A
Spray heads are to be made of stainless steel. Maximum rated pressure is 160 bar.				

Spray heads shall be provided with caps or other suitable devices to prevent the entrance of grease vapours, moisture, or other foreign materials into the piping.

The system shall cover the duct between the lower damper and the closing appliance on open deck (SOLAS Ch.II-2, Reg.9.7.5).

For all systems:

- The pumps shall be delivered with product certificate, whereas other system components are to be inspected in accordance with Class Rules (or equivalent standard as specified by the Flag Administration).
- Only stainless steel piping, or equivalent corrosion resistant pipes, is to be applied (to avoid clogging of spray heads). Primary water supply shall be fresh water of potable quality.
- Pipes, couplings and other components are regarded as "Class I" piping.
- The pump unit and section valves shall be installed in a room having ambient temperature between 4 °C and 45 °C.

The following documents are to be approved and filed by the Flag State Administration for each project:

- System arrangement plans including location of spray heads, sections valves, release stations and pressure equipment.
- Specification of pipes, cylinders, valves and associated components.
- Capacity of pressure vessel system.
- Pressure drop calculations and water capacity calculations.
- Manual with operating, test and maintenance instructions.

Installation testing:

Job Id: **344.1-010537-1**
Certificate No: **MEDB00006KT**

- Function testing of the system.
- Pressure testing of water pipe system to at least 1.5 times maximum working pressure.
- Other tests according to maker's manual.

Periodical testing:

- The periodical testing shall comply with instructions from flag administration, statutory interpretations and maker's maintenance manual.

Each system is to be supplied with a manual for installation, operation and maintenance according to ISO 15371:2015, Chapter 6.

Type Examination documentation

Design manual Galley duct fire protection system dated 14 June 2018 from manufacturer.

Fire test reports:

Test Report No. 170406-201 dated 24 August 2017 by DFL, Svendborg, Denmark.

Component test reports:

Test report no. Ex5204 dated 23 July 1999 from UL, Northbrook, USA.

Test report no. 3045656 dated 23 April 2013 from FM Approvals, USA.

Drawing No. 931028-202 A from manufacturer.

Tests carried out

Fire tested according to ISO 15371:2015.

Component tested according IMO MSC/Circ.1165 and IMO Res. A.800(19).

Marking of product

The spray heads are to be marked with type designation, the MED Mark of Conformity, Notified Body No. and the year of manufacturing (see first page) whereas the pump unit is to be marked with name and address of manufacturer and type designation.