

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00007G4

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 Nozzles for fixed pressure waterspraying fire-extinguishing systems for cabin balconies

with type designation(s)
Novenco XFlow Cabin Balcony nozzles

Issued to
Survitec Fire Solutions Poland Sp. z o.o.
Doluje, Poland

is found to comply with the requirements in the following Regulations/Standards:
Regulation (EU) 2021/1158,
item No. MED/3.60. SOLAS 74 as amended Regulation II-2/10, FSS Code 7, IMO MSC.1/Circ.1313 and IMO
MSC.1/Circ.1268

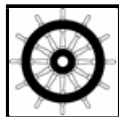
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-09-14**.

Issued at **Høvik** on **2021-09-15**

DNV local station:
Denmark CMC

Approval Engineer:
Tessa Biever



Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"Novenco XFlow Cabin Balcony nozzles",
is an automatic water mist system composed of sprinkler heads, stainless steel piping, section valves and pump unit.

The system is to be designed in accordance with the "Principal Requirements for the System" in IMO MSC.1/Circ.1268.

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

Application/Limitation

Approved for use as an automatic water sprinkler system for cabin balconies.

Installation should be in accordance with the below:

Application	L x W [m ²]	Type	Location	Projection	Spacing [m]	Max. dist. to wall [m]
Cabin balcony ¹⁾	3 x 2	NF18A-CB	Ceiling	Pendant	Single	Centre
Notes:						
1) Heights above 2.5 m are subject to case by case approval.						
2) Sprinkler head is centred along the length and width of the balcony.						

Sprinkler head	k-factor [lpm/bar ^{1/2}]	Min. working pressure [bar]	Min. flow [lpm]	Drawing no.
NF18A-CB	22.9	4.0	45.8	30030323
Sprinkler heads are made of a dezincification-resistant brass EN CW511L (CuZn38As).				

For all applications

- Maximum system working pressure is 16 bar, while the minimum working pressure at the sprinkler heads 4.0 bar.
- All sprinkler heads are fitted with a fast response orange glass bulb which releases at nominal 57 °C. Bulbs with higher temperature ratings, but not more than 30 °C above ambient temperature, are subject to approval in each case.
- The pumps (or pump unit) shall be delivered with product certificate, whereas other system components are to be certified or inspected in accordance with class rules or equivalent standard as specified by the Flag Administration.
- Redundant pump arrangement is to be approved on a case by case basis.
- Only stainless-steel piping or equivalent corrosion resistant pipes are to be applied (to avoid clogging of sprinklers). Primary water supply shall be fresh water of potable quality.
- Pipes, couplings and other components are regarded as "Class III" piping.
- The pump unit and section valves shall be installed in a room having ambient temperature between 4 °C and 45 °C.

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

- System arrangement plans including location of sprinklers, pipes, sections valves, control system and pump-unit.
- Specification of pipes, valves, electrical motor, pumps, pressurised tank(s) and associated components (including water supply specifications).
- Pressure drop calculations and water capacity calculations.
- Arrangement of power supply and control system.
- Manual containing installation, operation and maintenance instructions.

Installation

- Water to be in accordance with manufacturer's specification for water quality. No chemicals shall be added to the water, for the purpose of e.g. cleaning, bacterial control, corrosion inhibition, etc., without the acceptance from the Manufacturer.

Installation testing:

- System to be cleaned in accordance with routines outlined in maker's manual.
- Not less than 2 randomly selected sprinkler heads of each type shall be tested.
- Automatic start and stop of pumps.
- Automatic change over from main to emergency electric supply.
- Pressure testing of all piping to 1.5 times maximum working pressure.
- Other tests according to maker's manual and any required by the authority having jurisdiction

Periodical testing:

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

Type Approval documentation

Doc. No. DIOM-03-03, "Accommodation system design manual", Rev.0, dated 12 April 2010 from maker.

Fire test reports:

Test report No. P900020 dated 25 May 2009 from SP, Borås, Sweden.

Component test reports:

Test report No. 301619 dated 15 April 2005 from FM Approvals, Norwood, USA.

Test report No. P604791 dated 13 December 2006 from SP, Borås, Sweden

Test report No. P605067 dated 21 December 2006 from SP, Borås, Sweden.

Test report No. P801597-03:A dated 18 April 2008 from SP, Borås, Sweden.

Test report No. KMoo P801597-01 dated 28 April 2008 from SP, Borås, Sweden.

Test report No. P801597-02B dated 8 May 2008 from SP, Borås, Sweden.

Drawings:

Drawing No. 30030323 dated 2008-04-28 (general arrangement)

Tests carried out

The system is tested according to IMO MSC.1/Circ.1268 (fire test) and according to IMO Res. A.800(19) (component tests of sprinkler head).

Marking of product

The sprinkler 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.