

Type Approval Certificate



This is to certify that the undemoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. **60 351 - 09 HH**

Company **Autronica Fire and Security AS**

**Haakon VII's Gt. 4
7483 Trondheim, NORWAY**

Product Description **Automatic Sprinkler, Fire Detection and Fire Alarm System (water mist system acc. to FSS Code Chapter 8, Reg. 2.1.2 and SOLAS II-2, Reg. 10.6.1/10.6.2)**

Type **FlexiFOG micro**

Environmental Category **None**

Technical Data /
Range of Application **RANGE OF APPLICATION:**

Automatic water mist system for fire detection and fire suppression in cabins, corridors, staircases, public and service spaces as well as control stations.

TECHNICAL DATA:

Main components:

Low-pressure pump unit, pressure vessel, section valves, piping, sprinkler nozzles, main control cabinets, operating panel touch screen.

Further details on page 2.

Test Standard **IMO Res. A.800(19), as amended by Res. MSC.265(84)**

Documents **See page 3**

Remarks **None**

Valid until **2019-03-18**

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File No. **II.H.01**

Hamburg, 2014-03-19

Type Approval Symbol



Germanischer Lloyd


Olaf Drews


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TECHNICAL DATA:

Water mist nozzle types (Kv factors in brackets): CA01 (Kv = 14,14), CO01 (Kv = 10,44), PS01 (Kv = 11,00), PS02 (Kv = 11,50), ST01 (Kv = 21,67)
Min. nozzle operating pressure: 10 bar
Nozzle material: naval brass
Glass bulb release temperatures: 57, 93, 141 °C
Nozzle response sensitivity: fast response (RTI < 50)
Nozzle location: ceiling (pendent)

Nozzle type	Application area	Room categories 1)	Max. installation height [m]	Max. spacing [m]	Max. distance to walls [m]	Min. water flux density [ltr/min/m ³]
CA01	Cabins and similar spaces of max. 20 m ²	6, 7, 9	2.5	one nozzle in centre	2.5	0.89
CO01	Corridors and stairs up to 1,5 m width	2, 3	2.5	3.5	2)	2.52
PS01	Public spaces and similar rooms	1, 2, 3, 6, 7, 8, 9, 11, 12	2.5	4.0	1.5	0.87
PS02	Public spaces and similar rooms	1, 2, 3, 6, 7, 8, 9, 11, 12	5.0 3)	4.0	1.5	0.45
ST01	Storage spaces and similar rooms	13, 14	2.5	4.0	2.0	1.71

1) Room categories as per SOLAS II-2, reg. 9.2.2.3.2.2

2) Nozzles in corridor centre, max. distance to end walls 1.75 m.

3) In spaces with ceiling heights more than 5 m, the max. spacing and max. distance to walls are to be reduced accordingly to obtain the min. water flux density.

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DOCUMENTS:

- Autronica type approval documentation reviewed with our ref.-no. 08-182778
- DFL fire test report no. 071004-15 dated 2008-04-21
- DFL fire test report no. 081106-24 dated 2008-12-01
- DFL fire test report no. 080912-22 dated 2008-11-05
- DFL component test report no. 081013-01 dated 2008-11-24

CONDITIONS:

1. Installation of the system on board vessels is subject to acceptance by the competent flag state Administration.
2. The system has to be installed in accordance with the type approval documentation and the principal requirements of IMO Res. A.800(19), as amended by Res. MSC.265(84). Besides, the GL Rules are to be observed.
3. Prior to fitting on board, an approval documentation is to be submitted to DNV GL Maritime Head Office comprising schematic arrangement drawings, pump unit / material specifications and dimensioning / hydraulic calculations.
4. Prior to commissioning, each installation is subject to testing in presence of a Surveyor to DNV GL in accordance with the manufacturers' specification.
5. The nozzles and main components are to be marked with the name of the manufacturer and type coding.
6. DNV GL is to be given the permission to perform periodical production audits at any time during the validity of this certificate.

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