Certificate number: 46122/C0 MED
File number: ACI4020/032/011
Item number: MED/3.22
USCG Module B number: 164.139 / EC2690

This certificate is not valid when presented without the full attached schedule composed of 7 sections. Full certificate is to be requested to the manufacturer
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Notified Body 2690 - MARINE EQUIPMENT DIRECTIVE 2014/90/EU

EC TYPE EXAMINATION CERTIFICATE

as per Module B of Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations and Commission Implementing Regulation (EU) 2026/1434 of 30 June 2026

This certificate is issued to:
Halton Marine Oy
Pulttikatu 2, FIN 15700, Lahti, FINLAND

for the type of product
FIRE DAMPERS
A-Class Fire Dampers, type "FDA"

Requirements:
Row 1 of 1 of Regulation (EU) 2026/1434:

SOLAS 74 convention as amended, Regulations II-2/9
IMO Res. MSC.307(88) -(2010 FTP Code)-, as amended
IMO Res. MSC.1/Circ.1655

This certificate is issued on behalf of the French Maritime Authorities to attest that Bureau Veritas Marine & Offshore did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations.

This certificate will expire on: 27 Oct 2031

For Bureau Veritas Marine & Offshore Notified Body 2690,
At BV TURKU (ABO), on 27 Oct 2026,
Miika KOKKO

This certificate was created electronically and is valid without signature

This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module (D, E or F) of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.
This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. Bureau Veritas Marine & Offshore is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 140 Chapter 140-2. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

A-Class Fire Dampers, type "FDA"

Rectangular steel fire dampers with sizes up to: 1200 x 1600 mm, and
2500 x 3000 mm for the modular type damper made up of four dampers with maximum size of 1200 x 1450 mm

The distance between the fire damper center and the deck/bulkhead plating should be at least 225 mm.

Damper frame thickness 3 mm for size up to 1200 x 1600 mm.
Thickness of the fire damper coaming: 3 mm for fire damper size up to 1200 x 1600 mm (except for modular type)

The joint between the coaming and the frame of the damper is a flanged joint with bolts and nuts. The connection is to be sealed with sealant "SealFire W200" **and/or** "Fire Secure Mastic Adhesive 1027". The dampers are to be fitted with "Promaseal PL 1.8" **or** "FF102" (Firefly 102) **or** "Etex PLSK" intumescent seal as blades sealing material.

Coaming and fire damper casing are to be insulated with 60 mm of "**Paroc Marine Fire Slab 100**" (nominal density 100 kg/m³, manufactured by Paroc Oy, Finland) **or** with 38 mm of "**Fyre Wrap LT Blanket**" (nominal density 128 kg/m³, manufactured by Unifrax, China), as shown in referred manufacturer's drawings.

The additional insulation to be installed on damper and coaming with same quality and thickness as the other insulation of damper and casing.

The actuators need not to be insulated.

Types of FDA fire damper:
- electrical (FDA-EL)
- rotating pneumatic (FDA-PNR)
- manual with handle (FDA-MAN)

Operation of FDA fire damper:
- automatic (with fusible link):
  - Electrical motor, type Belimo BF-230-2HL, Belimo BF230-2/1 HL, Elodrive CSQP-15A1E, Schischek InMax-15-SF, Schischek ExMax-15-SF, ExMax 5.10-DF Ex d, PETZ QT.Ex-MFD03, Pi QT.Ex-MFD, QT.EX-MF03 85 250V Ex m, EF230A-S2
  - Pneumatic, type Rotork GTWSM, Rotork GTWNM, Festo DAPS, Air Torque AT104, Air Torque AT301, Air Torque AT351 or Air Torque AT101
- manual (with fusible link): spring loaded.
- manual (without fusible link): operated with a handle.
- remotely operated (with or without fusible link).

The construction of the fire damper itself is the same in these dampers, only the operation is different.

2. DOCUMENTS AND DRAWINGS:

2.1 - Technical data sheet "FDA - A0(A60) Fire and gas damper" Version M02Y2025.

2.2 - As per the Manufacturer's drawings:
- Nº LH-51500 Rev B dated 15/08/2016 (A-15 to A-60 class)
- N° LH-51501 Rev C dated 15/08/2016 (A-15 to A-60 class)
- N° LH-51502 Rev B dated 15/08/2016 (A-0 class) (except modular 2500 x 3000 mm, see §4.1)
- N° LH-51503 Rev C dated 27/01/2020 (A-60 class)

2.3 - As per the Manufacturer's installation, operation & maintenance manuals:
- "Electrical FDA - A0(A60) Fire and gas damper", Rev.10 dated 17/10/2025
- "Pneumatic FDA - A0(A60) Fire and gas damper", Rev.09 dated 17/10/2025
- "Manual FDA - A0(A60) Fire and gas damper", Rev.02 dated 17/10/2025

3. TEST REPORTS:

3.1 - Bulkhead - Size 1200x1600 mm/Actuator Rotork GTWSM: test report N° 575-16TD-IMO dated 08/04/2016, as per IMO 2010 FTP Code Annex 1 Part 3, from TÜV OÜ, Estonia.

3.2 - Bulkhead - Size 1200x1600 mm/Actuator Air Torque AT301, Size 300x300 mm/Actuator Elodrive CSQP-15A1E, Size 200x200 mm/Actuator BELIMO BF-230-2HL: test report N° 561-15TD-IMO dated 19/02/2016, as per IMO 2010 FTP Code Annex 1 Part 3, from TÜV OÜ, Estonia.

3.3 - Bulkhead - Size 1200x1600 mm/Actuator Rotork GTWSM, Size 300x300 mm/Actuator Schischek InMax-15-SF, Size 200x200 mm/Actuator Air Torque AT104: test report N° 552-15TD-IMO dated 03/02/2016, as per IMO 2010 FTP Code Annex 1 Part 3, from TÜV OÜ, Estonia.

3.4 - Bulkhead - Size 1200x1600 mm/Actuator AirTorque AT301: test report N° 573-16TD-IMO dated 06/04/2016, as per IMO 2010 FTP Code Annex 1 Part 3, from TÜV OÜ, Estonia.

3.5 - Bulkhead - Size 2500x2600 mm (modular)/ Actuator Air Torque AT351: test report N° 614-16TD-IMO dated 30/08/2016, as per IMO 2010 FTP Code Annex 1 Part 3, from TÜV OÜ, Estonia.

3.6 - Deck - Size 1200x1600 mm/Actuator Air Torque AT351, Size 300x300 mm/Actuator Elodrive CSQP-15A1E, Size 200x200 mm/Actuators BELIMO BF-230-2HL and Rotork GTWSM: test report N° VTT-S-04567-15 dated 11/02/2016, as per IMO 2010 FTP Code Annex 1 Part 3, from VTT, Finland.

3.7 - Deck - Size 1200x1600 mm/Actuator Rotork GTWNM: test report N° VTT-S-00639-16 dated 10/03/2016, as per IMO 2010 FTP Code Annex 1 Part 3, from VTT, Finland.

3.8 - Deck - Size 1200x1600 mm/Actuator Rotork GTWSM, Size 300x300 mm/Actuator Air Torque AT104, Size 200x200 mm/Actuator Schischek InMax-15-SF: test report N° VTT-S-00798-16 dated 09/05/2016, as per IMO 2010 FTP Code Annex 1 Part 3, from VTT, Finland.

3.9 - Deck - Size 1200x1600 mm/Actuator Rotork GTWSM, Size 300x300 mm/Actuator Festo DAPS, Size 200x200 mm/Actuators Festo DAPS and Air Torque AT101: test report N° VTT-S-04439-15 dated 14/01/2016, as per IMO 2010 FTP Code Annex 1 Part 3, from VTT, Finland.

3.10 - Statement N° VTT-S-00593-16 dated 05/02/2016, fromVTT Expert Services, Finland (new manual override).

3.11 - Bulkhead - Size 1200x1200 mm / Actuator PETZ QT.Ex-MFD03: test report N° RS-18/B-205-E dated 15/06/2018, as per IMO 2010 FTP Code Annex 1 Part 3 by C.T.O. S.A., Poland (new actuator, new sealant and new insulation wool).

3.12 - Bulkhead - Size 1200x1600 mm / Actuator Pi QT.Ex-MFD: test report N° RS-20/B-016/E dated 25/02/2020, as per IMO 2010 FTP Code Annex 1 Part 3, from C.T.O. S.A., Poland.

3.13 - Bulkhead - Size 1200x1600 mm / Actuator BF230-2.1 HL , Size 200x400 mm / Actuator QT.EX-MF03 85 250V Ex m and ExMax 5.10-DF Ex d: test report N° RS-25/B-183/E dated 18/08/2025, as per IMO 2010 FTP Code Annex 1 Part 3, from C.T.O. S.A., Poland.

3.14 - Deck - Size 1200x1600 mm / Actuators: two Belimo BF230-2/1 HL, Size 200x400 mm / Actuator QT.EX-MF03 85 250V Ex m and ExMax 5.10-DF Ex d: test report N° RS-25/B-184/E dated 18/08/2025, as per IMO 2010 FTP Code Annex 1 Part 3, from C.T.O. S.A., Poland.

3.15 - Bulkhead - Size 4 modules of 1200x1450 mm / Actuators: two Belimo EF230A-S2: test report N° RS-25/B-261/E dated 26/08/2025, as per IMO 2010 FTP Code Annex 1 Part 3, from C.T.O. S.A., Poland.

3.16 - Deck - Size 4 modulesof 1200x1450 mm / Actuators: two Belimo EF230A-S2: test report N° RS-25/B-262/E dated 26/08/2025, as per IMO 2010 FTP Code Annex 1 Part 3, from C.T.O. S.A., Poland.

4. APPLICATION / LIMITATION:

4.1 - Approved for use:
- in A-15, A-30, A-60 class steel division with fire insulation as described in §1,
- in A-0 class steel division without fire insulation for size up to 1200x1600 mm and modular size up to 2500x2600 mm,
- in A-0 class steel division with with local fire insulation arrangement (on the damper itself as described in §1 and 200 mm around) for modular size up to 2500x3000 mm,

4.2 - The damper is to be:
- provided with an indicator which shows whether the damper is open or closed. This indicator is to be fitted on the damper out of the insulation coating, if any.
- capable of being closed manually from both sides of the division.

4.3 - The tests have been carried out with fire insulating material "**Paroc Marine Wired Mat 100**" (nominal density 100 kg/m³) or "**Fyre Wrap LT Blanket**" (nominal density 128 kg/m³) or "**U SeaProtect Slab 66 Alu1**" (50 mm thick; nominal density 66 kg/m³); any alternative insulation material is subject to case by case approval providing that it has been approved as giving at least an equivalent insulation performance.

4.4 - Actuators of same mode (pneumatic, manual or electric) and manufacturer as tested ones but with different size may also be used, provided that they have sufficient torque, a similar installation arrangement and equivalent fire technical and functional properties.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - This certificate alone does not allow the applicant to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module D Production Quality Assurance or module E Product Quality Assurance or module F Product Verification of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a Notified Body.

5.2 - For information concerning the production phase modules, **Halton Marine Oy** has declared the following manufacturing sites:

Halton Marine Oy
Pulttikatu 2
15700 Lahti
FINLAND

Halton MarineMEI USA, Inc.
120 Exchange Logistics Park Drive
Unit D (Box #4)
29673 Piedmont, SC
USA

Halton Ventilation (Shanghai) Co., Ltd.
Building 7, No. 55 Feidu Road, Lingang New Area
China (Shanghai) Pilot Free Trade Zone
201306 Shanghai
CHINA

5.3 - The insulating materials (see §4.3) shall comply with the requirements of MED 2014/90/EU, as amended, and be wheelmarked.

6. MARKING OF PRODUCT:

6.1 - Reference is made to MED 2014/90/EU chapter 2.
In particular Article 10.3 specifies that the wheelmark shall be followed by the identification number of the Notified Body involved in the production control phase (module D, E or F) and by the year in which the mark is affixed (4 digits or last 2 digits).

6.2 - This equipment is covered by the scope of the Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment signed February 27th, 2004 and amended by Decision No.1/2023 dated 26 May 2023 according to U.S. Coast Guard approval category indicated on front page of this certificate.
A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F) as allowed by the MED.

7. OTHERS:

7.1 - It is **Halton Marine Oy**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This Certificate supersedes the Type Approval Certificate N° 46122/B1 MED issued on 21/10/2024 by the Society.

***** END OF CERTIFICATE *****