



Marine & Offshore

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This certificate is not valid when presented without the full attached schedule
composed of 7 sections
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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) 2024/1975 of 19 July 2024

This certificate is issued to:

Halton Marine Oy

Pulttikatu 2, FIN 15700, Lahti, FINLAND

for the type of product

FIRE DAMPERS

Single or multi-blade A-Class Fire Dampers, type "FDH"

Requirements:

SOLAS 74 convention as amended, Regulations II-2/9

IMO Res. MSC.307(88) (2010 FTP Code)

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: 28 Nov 2029


For Bureau Veritas Marine & Offshore Notified Body 2690,

At BV TURKU (ABO), on 28 Nov 2024,

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:

Single or multi-blade A-Class Fire Dampers, type "FDH"

Multi-blades rectangular fire dampers with automatic mechanical release with dimensions from 250x250 mm up to 1200x1200 mm. The distance between the fire damper center and the bulkhead/deck plating is to be respectively at least 322.5 mm and 277.5 mm.

Minimum coaming length: 650 mm for bulkhead and 900 mm for deck.

Minimum damper frame and steel coaming thickness from 3 mm to 5 mm depending on the size of the fire damper.

Insulation is made with "**Insulfrax LT**" blanket (nominal density 128 kg/m³; manufactured by Unifrax) with thickness and arrangement as described in table below and shown in manufacturer's drawings referenced in §2.

Dimensions	Insulation arrangement on Damper Side	Insulation arrangement on Opposite Side
250x250 mm	Bulkhead: - 1x38 mm thick on top of damper frame. - 2x38 mm thick between damper frame and bulkhead structural steel core. - prolongation of insulation on bulkhead with 176 mm length. Deck: 1x38 mm thick on top of damper frame and until deck insulation	Bulkhead: - 2x38 mm thick until 714 mm from bulkhead. - H-120: 1x38 mm thick up to 1500 mm from bulkhead. - H-60 and H-30: 1x38 mm thick up to 1000 mm from bulkhead. Deck: - prolongation of insulation on deck with 250 mm length and 25 mm thick. - 2x25 mm thick until 600 mm from deck. - H-120 : 1x25 mm thick up to 1200 mm from deck. - H-60 and H-30: 1x25 mm thick up to 600 mm from deck.
300x300 mm	Deck: 1x38 mm thick on top of damper frame and until deck insulation.	Deck: - prolongation of insulation on deck with 250 mm length and 25 mm thick - 2x25 mm thick until 600 mm from deck. - H-120: 1x25 mm thick up to 1200 mm from deck. - H-60 and H-30: 1x25 mm thick up to 600 mm from deck.
600x600 mm	Bulkhead: - 1x38 mm thick on top of damper frame - 2x38 mm thick between damper frame and bulkhead structural steel core. - prolongation of insulation on bulkhead with 176 mm length. Deck: 1x38 mm thick on top of damper frame and until deck insulation	Bulkhead: - 2x38 mm thick until 714 mm from bulkhead. - H-120 and H-60: 1x38 mm thick up to 1980 mm from bulkhead. - H-30: 1x38 mm thick up to 1000 mm from bulkhead. Deck: - prolongation of insulation on deck with 250 mm length and 25 mm thick. - 2x25 mm thick until 600 mm from deck. - H-120 and H-60: 1x25 mm thick up to 1600 mm from deck. - H-30: 1x25 mm thick up to 600 mm from deck
1200x1200 mm	Bulkhead: - 1x38 mm thick on top of damper frame. 2x38 mm thick between damper frame and bulkhead structural steel core. - prolongation of insulation on bulkhead with 176 mm length. Deck: 1x38 mm thick on top of damper frame and until deck insulation	Bulkhead: - 2x38 mm thick until 714 mm from bulkhead. - H-120 : 1x38 mm thick up to 2700 mm from bulkhead. - H-60 : 1x38 mm thick up to 2000 mm from bulkhead. - H-30 : 1x38 mm thick up to 1000 mm from bulkhead. Deck: - prolongation of insulation on deck with 250 mm length and 25 mm thick. - 2x25 mm thick until 600 mm from deck. - H-120: 1x25 mm thick up to 1600 mm from deck. - H-60 and H-30: 1x25 mm thick up to 600 mm from deck.

The dampers shall be used with one of the following actuators:

Actuator Type	Actuator Name	Manufacturer
Pneumatic	- Air Torque FA SB AT304 S12 - Air Torque AT101U S12 B LLT2 - Air Torque FA SB AT304 - Air Torque AT104	Air Torque S.p.A.
Electric	- Schischek InMax-15-SF-VAS - Schischek InMax-15-F1 - Schischek InMax-15-SF	Schischek GmbH

Actuators of same make but with different size as mentioned above may also be used, provided that they have similar installation arrangement and equivalent fire technical and functional properties.

2. DOCUMENTS AND DRAWINGS:

As per the Manufacturer's drawings:

- bulkhead installation: N° LH-51359 Rev.B dated 17/09/2019
- deck installation: N° LH-51360 Rev.B dated 17/09/2019

3. TEST REPORTS:

Test reports, as per IMO 2010 FTP Code Annex 1 Part 3 with Hydrocarbon Fire Curve:

Damper dimensions	Division	Test report
250x250 mm, 600x600 mm 1200 x1200 mm	bulkhead	N° 688-17TD-IMO dated 03/11/2017, from TUV, Finland N° 682-17TD-IMO dated 03/11/2017, from TUV, Finland
250x250 mm, 300x300 mm, 600x600 mm 800x1200 mm 1200x1200 mm	deck	N° VTT-S-06330-17 dated 20/12/2017, from VTT, Finland N° VTT-S-01115-17 dated 26/10/2017, from VTT, Finland N° VTT-S-03190-17 dated 20/11/2017, from VTT, Finland

4. APPLICATION / LIMITATION:

4.1 - Approved for use in A-30 (when originally tested for use in H-30), A-60 (when originally tested for use in H-60 and H-120) class steel divisions with fire insulation as described in §1.

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 type "**Insulfrax LT**" blanket (density 128 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 - The fitting aboard to be the same as used for the test.

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 site:

Halton Marine Oy
Pulttikatu 2
Lahti
FINLAND

5.3 - The insulating material "**Insulfrax LT**" and alternatives (see §4.4) 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 EC Type Examination Certificate N° 59421/A0 MED dated 14/11/2019 issued by the Society.

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