



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) 2020/1170 of 16 July 2020

This certificate is issued to:

Halton Marine Oy

Lahti - FINLAND

for the type of product

FIRE DAMPERS

A class - Fire damper type FDL (Singleblade and Multiblade Fire Damper)

Requirements:

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

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

IMO Res. MSC.61(67)-(FTP Code) with IMO Res MSC.307(88) (2010 FTP Code) article 8

IMO MSC/Circ.1120

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 is a renewal of certificate N° 09219/D2 MED expiring on 12/06/2021

This certificate will expire on: 26 Jan 2026**For Bureau Veritas Marine & Offshore Notified Body 2690,**

At BV HELSINKI, on 26 Jan 2021,

Tommy Andersson



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 and Multiblade Fire Damper Type "FDL" for use in A-class bulkheads and decks.

Rectangular steel fire dampers, sizes from 100 x 100 to 1300 x 1200 mm.

Coaming length : 900 mm minimum

Coaming thickness : 3 mm (up to a size of 1300 x 1200 mm)

Length of fire damper frame : 210 mm

Minimum thickness of the fire damper frame : 3 mm (up to a size of 1300 x 1200 mm).

The joint between the coaming and the frame of the damper is a flange joint with bolts and nuts.

Class of FDL fire damper:

- **A-0** when the frame of the damper is at least at 150 mm from the structural core : with coaming and fire damper casing need not to be insulated.
- **A-15, A-30** when the frame of the damper is at least at 150 mm from the structural core : with coaming and fire damper casing to be fully insulated over 900 mm.
- **A-60** when the frame of the damper is at least at 450 mm from the structural core : with coaming to be fully insulated
- **A-60** when the frame of the damper is at least at 240 mm from the structural core : with coaming + fire damper casing to be fully insulated over 1100 mm for bulkheads or decks.

Fire damper main characteristics:

Fire Damper Dimensions (width x height)	100x100 mm	1300x1200 mm
Fire Damper Type	singleblade	multiblade (2 or 4 dampers)
Blade thickness (mm)	21	21
Blade shaft diameter (mm)	15	15
Blade frame thickness (mm)	1	1
Maximum height of one blade (mm)	159	259

Types of FDL fire damper:

- electrical (FDL - EL),
- linear pneumatic (FDL-PNL),
- rotating pneumatic (FDL-PNR),
- spring loaded with fusible link (FDL-SP).

Operation of FDL fire damper:

Automatic (with fusible link):

- electrical motor, type BELIMO BF-24-2HL, Schischek In Max-15-F, Belimo BF 230, Siemens GGA 126, BELIMO BFN230T, BELIMO BFL24, Petz Industries Pi QT.Ex-MFD10.
- linear pneumatic, type RODER 71/245,
- rotating pneumatic, type E-0 MATIC ES 40/A/NS or Air Torque AT100 S10 B.

Manual (with fusible link):

- spring loaded.

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

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

Non -combustible insulating mineral wool :

"PAROC Fire slab 110", nominal density 110 kg/m³, thickness 75 mm for deck / 60 mm for bulkhead, manufactured by Paroc.

2. DOCUMENTS AND DRAWINGS :

As per the Manufacturer's drawings:

- N° LH-55050 rev. B dated 27/01/16 (A-60 class), N° LH-55051 rev. C dated 27/01/16 (A-60 class), N° LH-55052 rev. B dated 27/01/16 (A-15, A-30 class),
- N° LH-55060 rev. B dated 12/02/2016,
- N° LH-55053 rev. A dated 27/01/2016 (A-0 class)

3. TEST REPORTS :

3.1- Following test reports as per IMO FTPC, Annex 1, Part 3 [test standard IMO Resolution A.754(18)] :

- n° VTT-S-10161-07, dated 23/11/2007, from VTT, Finland
- n° VTT-S-8566-10, dated 20/09/2010, from VTT, Finland
- n° VTT-S-8567-10, dated 11/10/2010, from VTT, Finland

3.2- Following test reports as per IMO 2010 FTPC, Annex 1, Part 3 :

- n° VTT-S-00480-16, dated 01/02/2016, from VTT, Finland
- n° 570-16TD-IMO, dated 05/02/2016 and n° 712-18TD-IMO, dated 29/03/2018, from TÜV EESTI, Estonia

3.3 - Following statements from VTT Laboratories, Finland

- n° VTT-S-7332-07 dated 31/08/2007 (insulation length)
- n° VTT-S-3542-10, dated 28/04/2010 (4 units installation)
- n° VTT-S-00593-16 dated 05/02/16 (new manual override)
- n° VTT-S-01457-16 dated 05/04/2016 (insulation)

4. APPLICATION / LIMITATION :

4.1 - Approved for use:

- in A-15, A-30, A-60 class steel divisions with fire insulation as described in §1.
- in A-0 class steel divisions without fire insulation.

4.2 - The arrangement of the fire damper (coaming / fire insulation ...) is subject to approval in each case.

4.3 - 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.

4.4 - The tests have been carried out with fire insulating material "PAROC Fire slab 110", nominal density 110 kg/m³; any alternative A-class insulation material, previously proven and approved, giving at least an equivalent insulation performance, can be used.

4.5 - Approved for use as modular assembly up to four units (in accordance with VTT statement N° VTT-S-3542-10, dated 28/04/2010 - installation conditions to be in accordance with the recommendations in this statement, i.e. Halton drawings N° LH-5768 Rev. A dated 23/04/2014 and LH-5772 Rev. A dated 23/04/2014).

4.6 - 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 E "Product Quality Assurance" or 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(s):

Halton Marine Oy
Pulttikatu 2
15700 Lahti
FINLAND

Halton Ventilation (Shanghai) Co., Ltd
Block 10, 600 Xinyuan Road
Lingang New City, Pudong
Shanghai 201306
The People's Republic of China

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 - In pursuance of the EU/US MRA+, and in accordance with the Council Decision 2004/425/EC of 21 April 2004 amended by Decision 1/2018 of 18 February 2019, the product(s) marked as per MED 2014/90/EU may be marked with the USCG conformity marking as authorized by the Notified Body undertaking surveillance module.

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 EC Type Examination Certificate n° 09219/D2 MED issued on 17/01/2019 by the Society.

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