

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAF00000CJ**  
Revision No:  
**3**

## This is to certify:

**That the Fire Damper**

with type designation(s)  
**FDA Fire Damper**

Issued to

**Halton Marine Oy**  
**Lahti, Finland**

is found to comply with

**DNV offshore standards**  
**DNV rules for classification – Ships**  
**DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021**

## Application :

**Approved for use in ducts penetrating bulkheads and decks of Class A-0 to A-60.**

**Maximum size of the damper 2500 x 2600 mm (W x H)**

**Products approved by this certificate are accepted for installation on all vessels classed by DNV.**

Issued at **Høvik** on **2021-10-04**

for **DNV**

This Certificate is valid until **2026-10-03**.

DNV local station: **Helsinki FIS**

Approval Engineer: **Grzegorz Wolski**

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**Helene David-Andersen**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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

### “FDA Fire Damper”

is a single/multi-bladed, rectangular fire damper with manual and/or automatic (electric/pneumatic) actuation intended to use in bulkheads and decks.

The fire damper consists of steel 3 mm thick casing bolted to the 3/5 mm thick coaming by means of M10 bolts and nuts and sealed with Pyrocril acrylic sealant (manufacturer: Den Braven) or Sealfire W200 (manufacturer: Neutron Fire Technologies Ltd.). Coaming is welded to the bulkhead/deck.

The blades are made of 1 mm thick steel bolted to shaft.

Total blade thickness: 21 mm  
 Maximum number of blades: 6  
 Maximum blade height: 250 mm  
 Maximum blade length: 1200 mm

The minimum distance between the fire damper and bulkhead/deck is 225 mm.

The coaming/casing is insulated with 60 mm thick Paroc Marine Fire Slab 100 (nominal density: 100 kg/m<sup>3</sup>) on unexposed and exposed side of bulkhead/deck. For details, please see table below.

Size (W x H)	Installation on bulkheads	Installation on decks
1200 x 1600 mm	A-0 – as per dwg. LH-51502 A-60 – as per dwg. LH-51500 & LH-51501	A-0 – as per dwg. LH-51502 A-60 – as per dwg. LH-51500 & LH-51501
200 x 200 mm	A-60 – as per dwg. LH-51500	A-30 – as per dwg. LH-51501 A-60 – as per dwg. LH-51500
300 x 300 mm	A-60 – as per dwg. LH-51500	A-30 – as per dwg. LH-51501 A-60 – as per dwg. LH-51500

For A-60 class bulkhead can be used modular type damper with up to four A-60 class dampers with maximum size of 1200 x 1250 mm (W x H) with the total size of installation up to 2500 x 2600 mm (W x H).

For further details see drawings attached to the approved test reports listed under Type Approval documentation below.

The fire damper may be manufactured at the premises of:

- Halton Marine Oy, Lahti, Finland,

## Application/Limitation

The fire damper is approved for installation in steel bulkheads. Other applications are subject to case-by-case approval.

The fire dampers to be automatic operated with fusible link by actuators of following type:

- Air Torque AT301
- Air Torque AT104
- Air Torque AT101U S12B
- Air Torque AT351U S12B
- Rotork GTWSM.63x90
- Rotork GTWNM.110x90
- Schischek ExMax-15-SF
- Festo DAPS-0030-090-RS4-F0305-CR
- Elodrive CSQP-15A1E
- Belimo BF-230
- Belimo BF-230-2 HL
- Belimo NF24A-SR

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

The insulation used is to be regarded as minimum insulations for all fire rating and is not to be removed if the fire damper is to be used in division with lower fire ratings.

Damper can be fitted with manual override accessory.

The fire dampers shall be capable of being closed from both sides of the bulkhead/deck.

The fire dampers are to be operated automatically and manually according to SOLAS II-2, Reg. 9.7.

Each product is to be supplied with its manual for installation use and maintenance.

### **Type Approval documentation**

Certification in accordance with Class Program DNV-CP-0338, September 2021.

Test Report No. 575-16TD-IMO dated 08 April 2016 from TÜV Eesti OÜ, Estonia  
Test Report No. 561-15TD-IMO dated 19 February 2016 from TÜV Eesti OÜ, Estonia  
Test Report No. 552-15TD-IMO dated 03 February 2016 from TÜV Eesti OÜ, Estonia  
Test Report No. 573-16TD-IMO dated 06 April 2016 from TÜV Eesti OÜ, Estonia  
Test Report No. 614-16TD-IMO dated 30 August 2016 from TÜV Eesti OÜ, Estonia

Test Report No. VTT-S-04567-15 dated 11 February 2016 from VTT Expert Services Ltd, Finland  
Test Report No. VTT-S-00639-16 dated 10 March 2016 from VTT Expert Services Ltd, Finland  
Test Report No. VTT-S-00798-16 dated 09 May 2016 from VTT Expert Services Ltd, Finland  
Test Report No. VTT-S-04439-15 dated 14 January 2016 from VTT Expert Services Ltd, Finland  
Test Report No. VTT-S-00593-16 dated 05 February 2016 from VTT Expert Services Ltd, Finland

Drawing No LH-51500 dated 15 of August 2016 from the manufacturer  
Drawing No LH-51501 dated 15 of August 2016 from the manufacturer  
Drawing No LH-51502 dated 15 of August 2016 from the manufacturer

### **Tests carried out**

Tested according to IMO 2010 FTP Code part 3.

### **Marking of product**

The product is to be marked with name of manufacturer, type designation and fire-technical rating.

### **Periodical assessment**

DNV's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNV-CP-0338, Section 4.