Certificate No:
TAF00001NZ

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Fire Damper

with type designation(s)
EUSD and EUSDX (fire dampers for bulkhead)

Issued to
EUROPAIR S.R.L
Cormano MI, MI, Italy

is found to comply with
DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021
DNV rules for classification – Ships
DNV rules for classification – Offshore units
TP14612E Ed.4 (2019-02) Procedures for approval of life-saving appliances and fire safety systems, equipment and products

Application :

The damper is approved for use in ducts penetrating A-class steel bulkheads.

Max. fire damper size: 1000 x 1150 mm (W x H).

This certificate is recognized by Transport Canada.

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

Issued at **Høvik** on **2022-04-27**
This Certificate is valid until **2027-04-26**.
DNV local station: **Italy/Malta CMC**

Approval Engineer: **Lars Erik Hallbeck Parelius**

for **DNV**

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

"EUSD and EUSDX (fire dampers for bulkhead)",
are automatically operated multi bladed rectangular fire dampers. The damper casing is made of 2 mm thick upper and bottom frame of one profile with blade stop and two C-shaped lateral frames. These elements which conform the frame is fixed together by means of rivets (⌀ 6.5 x 12 mm) and spot welding of an L-shaped connecting corner profile. The 1.5 mm thick damper blades are shaped to a double skin hollow profile and are fastened to the shaft by means of two rivets (⌀ 6.5 x 30 mm) per end of each blade and one welded point at 60 mm at the end of each blade.

The coaming is made of 5 mm thick galvanized steel and is fixed to the bulkhead by means of welding and to the damper by means of bolts and nuts (M8 x 25 mm). The outer surface of the coaming is insulated with one layer of 60 mm thick semi-rigid slab of stone wool of type SeaRox SL 620 with density 100 kg/m^3 (manufactured by Rockwool International A/S). The contact surface between each damper and coaming is insulated with 30 x 3 mm mineral fibre sealant of type PAPERSEAL ECO with density 190 kg/m^3 (manufactured by BIFIRE S.r.l.).

EUSD is made of galvanized steel (material Z200).
EUSDX is made of stainless steel (material AISI 316L).

For further details, see drawings listed under Type Approval documentation below.

Application/Limitation

Approved for use in ducts penetrating A-class steel bulkheads. Other applications are subject to case-by-case approval.

Table 1. Approved fire dampers

Type designation	Material	Fire rating
EUSD	Galvanized steel (material Z200)	A-60
EUSDX	Stainless steel (material AISI 316L)	A-30

Max. fire damper size: 1000 x 1150 mm (W x H)
Max. blade size: 994 x 148mm (W x H)
Max. number of blades: 8

Actuators to be used:
- BF230-C232 (manufactured by Belimo)*
- InMax 15-BF (manufactured by Schischek GmbH)*

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

The arrangement of the fire damper and necessary insulation of damper frame and ducting in the vicinity of the partition is subject to approval in each case.

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.

The damper shall be capable of being closed from both sides of the bulkhead.

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

Type Approval documentation

Test Report No. 21/25268-1563 dated 30 November 2021 from APPLUS, Barcelona, Spain.

Drawing No. 075_21 (4 sheets) dated 20 May 2021 from manufacturer.
Drawing No. 076_21 (4 sheets) dated 20 May 2021 from manufacturer.

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Marking of product

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

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Procedures for Approval of Life-Saving Appliances, Fire Safety Systems, and Products (TP 14612E)", DNV confirms that the product listed in this certificate is in accordance with Transport Canada's requirements.

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.