



Certificate No:
TAF00001J6

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Fire Damper

with type designation(s)
A-0 class - FGD

Issued to

Baramintec Co., Ltd.
Busan, Republic of Korea

is found to comply with

DNV GL rules for classification – Ships
DNV GL offshore standards
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations

Application :

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

This certificate is recognized by Transport Canada.

Product approved by this certificate is accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2021-06-10**

This Certificate is valid until **2026-06-09**.

for **DNV**

DNV local station: **Busan**

Approval Engineer: **Karolina Kuśmider**

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Sverre Olav Bergli
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.



Form code: TA 251

Revision: 2021-03

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Product description

"A-0 class - FGD"

Is a pneumatically or electrically operated single or multi bladed fire damper. The blades are made of 2 mm thick stainless steel and galvanized steel (double skin), retardant silicon and bolted or welded to the steel shaft.

The stainless / carbon / galvanized steel fire damper consists of 3 mm x 300 mm x 1400 mm (T x L x H) casing, bolted to the 5 mm thick coaming which has length of 600 mm for deck.

The coaming is welded to the steel deck.

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

Application/Limitation

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

Max. size of fire damper: 1400 mm x 1400 mm (W x H)
Max. number of blades: 7
Max. blade size: 200 mm x 1400 mm (H x W)

The fire dampers are operated with thermo fuse (type BR-FB-1 from Baramintec or type F3 from JOB) or thermoelectric tripping device (type BAE72-S from Belimo).

The fire damper may be operated by actuators of following types:

- Pneumatic actuators:
 - o Type: HP050~HP200-S from HKC
 - o EPR052~EPR210-SR from FLOWBUS
 - o ETKS045SR~160SR from G.T.Attuatori Europe GmbH
- Electric actuators:
 - o BF24-T, BF230-T, SFU-S2 from Belimo
 - o IN,Red,ExMax 5.10SF~50SF from Schischenk

Actuators of the same make but of 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 fire damper is approved for installation in steel decks. Other applications are subject to case-by-case approval.

The minimum distance between fire damper and deck is 150 mm.

Steel thickness of damper casing to be equal to or greater than thickness of duct/sleeve required by the rules if the damper casing is part of the duct/sleeve.

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

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, September 2018.

Test report No. AK2015-0466R dated 21 September 2015 from "FILK" Fire Insurers Laboratories of Korea.

Drawing No. FGD-IND-01, FGD-STD-1, FGD-P-1, FGD-EX-1, FGD-E-1, FGD-DK-1, FGD-DK-2, dated 10 June 2015 from BARAMINTEC Co., Ltd.

Tests carried out

Tested according to IMO FTP Code Part 3.

Marking of product

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

Transport Canada approval

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



Job Id: 262.1-019979-2
Certificate No: TAF00001J6

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 Program DNVGL-CP-0338, Section 4