

# TYPE APPROVAL CERTIFICATE

**This is to certify:  
That the Fire Damper**

with type designation(s)  
**LFD & MFD Dampers**

Issued to  
**Wozair Limited**  
**GILLINGHAM KENT, United Kingdom**

is found to comply with  
**Det Norske Veritas' Interpretation of SOLAS 1974 Convention as Amended**  
**Det Norske Veritas' Rules for Classification of Ships**  
**Det Norske Veritas' Offshore Standards**

**Application :**  
**Approved for use in ducts penetrating class A bulkheads and decks.**

This Certificate is valid until **2018-12-31**.  
Issued at **Høvik** on **2015-05-08**

DNV GL local station: **London**

Approval Engineer: **Silje Helene Waagaard**

for **DNV GL**



Digitally Signed By: Langnes, Petter  
Location: DNV GL Høvik, Norway  
Signing Date: 2015-05-12

**Petter Langnes**  
**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.

Certificate No: **F-21132**  
File No: **472.22**  
Job Id: **262.1-002357-11**

## Product description

### "LFD Damper"

composed of single or multi-bladed rectangular fire damper with manual/automatic/pneumatic actuation. Damper blades made from 1.5 mm mild steel and damper casing made from min. 1.5 mm mild steel (\*see application/ limitation below).

### "MFD Damper"

composed of single or multi-bladed rectangular fire damper with manual/automatic/pneumatic actuation. Damper blades made from 1.2 mm mild steel and damper casing made from min. 2.0 mm mild steel (\*see application/ limitation below).

The fire dampers can be manufactured at the following locations:

- Wozair Ltd., Gillingham, UK
- Nam Hoe Metal Industries Pte. Ltd., Singapore
- Matromatic Holding Systems (M) Sdn. Bhd. Johor, Malaysia
- Wozair (USA) Ltd, Houston, Texas, USA
- Garfam Industries Inc, Houston, Texas, USA
- SAE-A HVAC IND, Gyeongju, Korea.

For further details see application/limitation below and test reports given under type approval documentation.

## Application/Limitation

Approved for use in ventilation ducts penetrating A-class bulkheads/decks. The damper satisfies for 60 min. the requirements to stability and integrity according to Chapter II-2, regulation 3 of the SOLAS Convention.

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.

Size of LFD damper:

	A-class (H x W)	
Size	Deck [mm]	Bulkhead [mm]
Min.	100 x 100	100 x 100
Max.	800 x 800	800 x 800

Size of MFD damper:

	A-class (H x W)	
Size	Deck [mm]	Bulkhead [mm]
Min.	100 x 100	100 x 100
Max.	1000 x 2500 1200 x 1200	1200 x 1200

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

\*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.

## Type Approval documentation

Certification in accordance with Standard for Certification No. 1.2, Type Approval, January 2013.

Test reports Nos. 122471 dated 15th April 2002, 143263 (A-60 bulkhead) and 143264 (A-60 bulkhead) dated 21 December 2004, 143265 (A-60 deck) and 143453 (A-60 bulkhead) dated 22 December 2004 and 144277 (A-60 deck) dated 14 March 2005 from Warrington Fire Research Centre, Warrington, UK.

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### **Tests carried out**

Tested according to IMO FTPC Part 3 and in compliance with IMO 2010 FTP Code Ch. 8.

### **Marking of product**

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

### **Periodical assessment**

DNV GL'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 Standard for certification No. 1.2 Type Approval Item 4.

SAMPLE