

EC Type Examination (Module B) Certificate

USCG-EU MRA

This is to certify that:

LLOYD'S REGISTER Marine Deutschland GmbH (LRMD), designated as a "notified body" based on the notification of the Federal Maritime and Hydrographic Agency of Germany, did undertake the relevant type approval procedures for the type of equipment identified below which was found to be in compliance with the requirements of Marine Equipment Directive (MED) 2014/90/EU and the valid Commission Implementing Regulation (EU) in force indicating design, construction and performance requirements and testing standards for marine equipment, subject to the conditions below and the attached Schedule which also forms part of this Certificate.

Manufacturer	Swegon Air Management Ltd (Actionair)
Address	Joseph Wilson Industrial Estate, South Street, Whitstable, Kent, CT5 3DU, United Kingdom
Reference	Marine Equipment Directive (MED) 2014/90/EU, Regulation (EU) 2021/1158
Regulation Item (No. & Item Designation)	MED/3.22 Fire Dampers
Product Type	FIRE DAMPER (STANDARD FIRE TEST)
Product Description	Single or Multi Bladed Rectangular Fire Damper – Type "A-60 Marine Fire Damper" for use in A Class steel bulkheads and decks
Specified Standard	IMO Res. MSC.307(88) – (FTP Code) Annex 1, Part 3
Trade Name	A-60 Marine Fire Damper

The attached Design Appraisal Document (schedule) forms part of this certificate. This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to and agreed with the notified body named on this certificate. The manufacturer should notify LRMD of any modification or changes to the equipment in order to obtain a valid Certificate.

This equipment is covered by the scope of the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed on 27 February 2004 and amended by Decision No.1/2018 dated 18 February 2019 according to U.S. Coast Guard approval category USCG Module B number:

164.139/EC2923

Lloyd's Register Marine Deutschland GmbH, Überseeallee 10, D-20457 Hamburg, Germany.
A member of the Lloyd's Register group

Saji Abraham

Surveyor
For and on behalf of Lloyd's Register Marine Deutschland GmbH (2923)

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A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production Module certificate (Module D, E or F).

Should the specified regulations or standards be amended during the period of validity of this certificate, the product is to be re-approved prior being placed on the market and on board vessels to which the amended regulations or standards apply.

The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E, or F) of ANNEX II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.

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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. LR22291202MB

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document (schedule) forms part of the Certificate.

Approval Documentation

Test Reports

Test Laboratory of RINA Services SpA, Genoa, Italy, Fire Test Reports No: 2015CS013908/1, 2015CS013908/2, 2015CS013908/3, and 2015CS013908/4, all dated 9 June 2016

Conditions of Certification

- For applications in A-15, A-30 and A-60 Class steel bulkheads and decks, the fire damper and ducting are to be protected by an approved insulation system suitable for the fire rating of the division. Table 1 below shows minimum total duct insulation lengths, which may be interpolated for intermediate sizes based on internal cross-section area of the duct. For use in A-0 divisions, at least the fire dampers should be insulated with the as-tested A-60 insulation arrangements or equivalent and the ductwork need not be insulated.

Table 1: Minimum total duct insulation lengths based on internal cross-sectional area

	100mm x 100mm	400mm x 400mm	1000mm x 1000mm	2080mm wide x 1000mm high (Two rectangular dampers each 1000mm x 1000mm, joined by a mullion and with single duct/coaming)
Bulkhead	750mm	750mm	1150mm	1150mm
Deck	750mm	1050mm	1350mm	1350mm

- Mono or multi blade fire dampers with outer casing composed of either galvanised/zinc carbon steel or 316 grade stainless steel, in thickness options of 1.2mm, 2mm or 3mm. Blades are composed of Stainless Steel of thickness 0.5mm, shaped to double skin hollow profile of 12.7mm thick.
- Minimum permissible clear opening of single unit fire damper: 100mm x 100mm
- Maximum permissible clear opening of single unit fire damper: 1000mm x 1000mm
- Depth of damper casing: 150mm or 210mm
- Maximum permissible clear opening of multiple unit fire damper assembly with mullion: 2080mm wide x 1000mm high. Each fire damper unit to be fitted with an appropriate actuator and associated thermal release mechanism depending on the damper size and torque requirement as per Table 2 below.
- Fire dampers are suitable for use in A-0, A-15, A-30 and A-60 Class steel bulkheads and decks with a spring return, fail safe close actuator of appropriate torque rating depending on the damper size and with associated thermal release mechanisms as described in Table 2 below.

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Table 2: Approved closing mechanisms based on damper size and required torque

Damper size range	Actuator	Thermal release mechanism	Torque
100mmx100mm up to 400mm x 400mm	Actionair Compact Version 1 (24v, 120v, 230v)	Electrical Thermal Release (ETR)	6Nm spring return
100mm x100mm up to 400mm x 400mm	Actionair Compact Version 2 (24v, 120v, 230v)	Electrical Thermal Release (ETR)	7Nm spring return
401mm x 401mm up to 1000mm x 1000mm	Actionair Universal (24v, 120v, 230v)	Electrical Thermal Release (ETR)	20Nm spring return
100mm x100mm up to 1000mm x 1000mm	Festo DFPB 20 S F05 Pneumatic	Pneumatic Thermal Release (PTR)	20Nm @5bar
100mm x100mm up to 1000mm x 1000mm	Hytork XL071 (S-90) Pneumatic	Pneumatic Thermal Release PTR)	20Nm @5.5bar
100mm x100mm up to 400mm x 400mm	Schischek 5.10 BF (BF-A-45.9Lb) ExMax, RedMax, InMax, VAS, CTS, BF1	ExPro-TT Thermal Trigger	5 or 10Nm
401mm x 401mm up to 1000mm x 1000mm	Schischek 15 BF (BF-A-Schischek 15 BF (BF-A-5.9Lb) ExMax, RedMax, InMax, VAS, CTS, BF2	ExPro-TT Thermal Trigger	15Nm

8. Actuators and corresponding thermal triggers/fusible links are restricted for use with up to the maximum size of each type fire damper tested, in the tested orientation only. The following variations of fire tested actuators described in this certificate may also be accepted on a case-by-case basis, subject to final approval from the project authority:
 - (a) Derivations of fire tested actuators, such as in different voltage supplies, different electric connection specifications (European/American etc.) and with higher performance ratings such as IP ratings, Explosive ratings etc. may be accepted on a case-by-case basis, subject to formal confirmation from the actuator manufacturer provided to the final project authorities that such changes do not adversely affect their functionality and performance or reduce damper closure times. Tested actuators in alternative material options cannot be accepted under this certificate.
9. Damper and coaming installation arrangements to be as-tested. Any additional requirements specified by the project surveyors (for example weld requirements for installations in high stress locations etc.) must also be complied with.
10. The certificate holder is solely responsible for the products supplied under this Certificate and to ensure that their products are fully compliant with the relevant statutory regulations and designed, manufactured and installed to the same quality and specifications as the prototype tested, including components that are designed and manufactured by third parties.
11. Production items of the subject equipment are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D), a Product-Quality assurance system (Module E) or a Product Verification Process (Module F). The wheelmark cannot be affixed to the product until a conformity assessment module is in place.
12. Each item, batch or lot of the equipment is to be issued with a "Declaration of Conformity" and have the "Mark of Conformity" affixed after a conformity assessment module is in place.
13. The manufacturer shall keep a copy of the EC type-examination certificate, its annexes and additions together with the technical documentation at the disposal of the national authorities for at least 10 years after the wheel mark has been affixed on the last product manufactured and in no case for a period shorter than the expected life of the marine equipment concerned.

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Place of Production

Swegon Air Management Ltd (Actionair)
Joseph Wilson Industrial Estate
South Street, Whitstable
Kent, CT5 3DU
United Kingdom (UK)



Saji Abraham
Senior Specialist
Fire & Safety, Statutory Discipline Team
UK&I Technical Support Office, Marine & Offshore
For and on behalf of Lloyd's Register Marine Deutschland
LRMD EC Distinguishing No. 2923

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