



## EC TYPE EXAMINATION (MODULE B) CERTIFICATE

This is to certify that:

LLOYD'S REGISTER VERIFICATION LIMITED (LRV), designated as a "notified body" under the terms of the Merchant Shipping (Marine Equipment) Regulations 2016 (S.I. 2016 No. 1025) did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the essential Fire protection requirements of Marine Equipment Directive (MED) 2014/90/EU subject to any conditions in the Design Appraisal Document attached

<b>Manufacturer (Applicant)</b>	Swegon Air Management LTD (Actionair)
<b>Address</b>	Joseph Wilson Industrial estate South Street, Whitstable Kent, CT53DU United Kingdom
<b>Reference/Regulation Item (No &amp; Item designation)</b>	MED/3.22 - FIRE DAMPERS
<b>USCG Category Number</b>	164.139 - FIRE DAMPERS
<b>Product Type</b>	FIRE DAMPER (STANDARD FIRE TEST)
<b>Product Description</b>	Single or Multi Bladed Rectangular Fire Damper - Type "A-60 Marine Fire Damper" for use in steel bulkheads and decks
<b>Specified Standard</b>	IMO Res. MSC.307(88) - (FTP Code) Annex 1, Part 3 IMO Res. MSC.61 (67) - (FTP Code) Annex 1 Part 3 IMO MSC/Circ.1120 IMO Res. MSC.307 (88)-(2010 FTP Code) Section 8

The attached Design Appraisal Document (schedule) forms part of this certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

Date of issue 13 April 2017 Expiry date 12 April 2022

Certificate No. MED 1750068

Signed



Sheet No 1 of 4

Name

S. Abraham  
For and on behalf of Lloyd's Register Verification  
LRV EC Distinguishing No. 0038

Note:

This certificate is issued under the authority of the MCA.

This certificate is not valid for equipment; the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify the notified body named on this certificate of any modification or changes to the equipment in order to obtain a valid Certificate.

USCG-EU MRA - This product has been assigned a U.S. Coast Guard Module B number: USCG Module B number: 164.139/EC0038 to note type approval to Module B only as it pertains to obtaining U. S. Coast Guard approval as allowed by the "Corrigendum to Council Decision 2004/425/EC of 21 April 2004 on the conclusion of an Agreement between the European Community and the United States of America on the mutual recognition of certificates of conformity for marine equipment."

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## Lloyd's Register Verification Limited

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### DESIGN APPRAISAL DOCUMENT

Date 13 April 2017	Quote this reference on all future communications SOUTSO/SFS/TA/FF/SA/WP26418253&WP28369168
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#### ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1750068

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

Tests conducted to the new 2010 FTP Code [IMO Res. MSC.307(88)] Annex 1, Part 3

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

Tests conducted to the previous FTP Code [IMO Res. MSC.61(67)] Annex 1 Part 3

BRE Research Station, Hertfordshire, UK, Fire Test Report No: 208147A, dated 17 May 2002. Fire Protection Research Laboratory (RINA), Genoa, Italy, Report No. 2005CS013898 and 2006S013874, dated 13 October 2005 and 11 October 2006 respectively

#### 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

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

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

- For applications in A-0 Class steel bulkheads and decks, multiple damper assemblies of cross-sectional areas above 1000mm x 1000mm are to be fitted with the same or equivalent A-60 Class insulation arrangements as-tested, on the fire damper only and the ductwork need not be insulated. All smaller dampers including single dampers up to a maximum approved size of 1000mmx1000mm need not be insulated when used in A-0 Class divisions
- 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

**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



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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-5.9Lb) ExMax, RedMax, InMax, VAS, CTS, BF2	ExPro-TT Thermal Trigger	15Nm

4. 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
5. Minimum permissible clear opening of single unit fire damper: 100mm x 100mm
6. Maximum permissible clear opening of single unit fire damper: 1000mm x 1000mm
7. 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 above
8. Depth of damper casing: 150mm or 210mm
9. 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
10. This product has been assigned a **U.S. Coast Guard Module B number USCG Approval Category 164.139/EC0038** to note type approval to Module B only as it pertains to obtaining U. S. Coast Guard approval as allowed by the "Corrigendum to Council Decision 2004/425/EC of 21 April 2004 on the conclusion of an Agreement between the European Community and the United States of America on the mutual recognition of certificates of conformity for marine equipment"

In those instances where the Notified Body conducting the conformity assessment in accordance with either Module D, E or F of the Marine Equipment Directive is not Lloyd's Register Verification Ltd., such Notified Body would use the above U.S. Coast Guard Module B number to provide the manufacturer with the U.S. Coast Guard approval number by noting it on the Certificate of Conformity, thereby authorizing the manufacturer to mark the product accordingly

Note: For products placed on board U.S. flagged ships there is no declaration of conformity required to meet U.S. Coast Guard requirements

11. 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.



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##### PLACE OF PRODUCTION

Swegon Air Management LTD (Actionair)  
Joseph Wilson Industrial Estate  
South Street,  
Whitstable,  
Kent, CT15 3DU  
United Kingdom (UK)



Saji Abraham  
Senior Specialist  
Statutory Fire & Safety  
Southampton Technical Support Office  
Marine & Offshore Lloyd's Register  
For and on behalf of Lloyd's Register Verification  
**LRV EC Distinguishing No. 0038**