



CERTIFICATE OF TYPE APPROVAL

This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer Leaffield Marine Ltd

Address 9 Atworth Business Park
Bath Road
Atworth
Wiltshire, SN12 8SB
United Kingdom (UK)

Product Type GAS INFLATION SYSTEM

Product Description Gas inflation system for inflatable lifesaving appliance - Type "0140000 and 1205005 Servo Operating Head Assembly" in conjunction with operating head 0912101

Specified Standards BS ISO 15738:2002

The attached Design Appraisal Document forms part of this certificate.

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

Date of issue 27 July 2016

Expiry date 26 July 2021

Certificate No. SAS S160088

Signed

Sheet No 1 of 4

Name

L. Thomas
Surveyor to Lloyd's Register EMEA
A Member of the Lloyd's Register Group

Note:

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 Lloyd's Register of any modification or changes to the equipment in order to obtain a valid certificate.

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



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DESIGN APPRAISAL DOCUMENT

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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS S160088

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

EXAMINED DOCUMENTATION

<u>Plan/Doc No.</u>	<u>Rev</u>	<u>Title or Description</u>
0912002	rev 01	GIS Servo system
0201002	rev 01	Servo Operating Head Assembly Type A
0140000	rev 06	Servo Head assembly
17124	rev 02	Piston
17125	rev 01	Collar
17126	rev 02	Spring
17147	rev 04	Cylinder (plated)
17123	rev 04	Cylinder (machined)
0912001	rev 01	Servo Adapter assembly
17167	rev 01	Adapter (plated)
17163	rev 01	Adapter (machined)
0912003	rev 01	Servo Operating Head Assembly Type B
1205005	rev 01	Servo Operating Head Assembly - Thread Mount
18935	rev 01	Collar Servo
18934	rev 01	Piston - Servo
18933	rev 01	Cylinder - Servo (Plated)
19014	rev 01	Label

User manual for gas inflation system with servo operating head system clamp type, Document No M-07-UM-GISSERVO(C) rev. No 2 and dated March 2013.

User manual for gas inflation system with servo operating head system thread mounted type, Document No M-07-UM-GISSERVO(T) Rev. No 5 and dated 17th March 2015.

TEST REPORTS

Report Title or Report Author

Report of the statutory approval testing to M-07-TP-7GIS Rev.02 of Leaffield Marine Limited servo head assembly, Part no: 0140000.

Report of the statutory approval testing to M-07-TR-14GIS of Leaffield Marine Ltd Servo Operating Head Assembly, Part no: 1205005.

Report No.

M-07-TR-7GIS REV.01

M-07-TR-14GIS REV.01

Date

04/05/11

29/05/13



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CONDITIONS OF CERTIFICATION

1. The servo operating head is not to be used as a standalone operating head, but only to be used in conjunction with Leaffield Marine Limited operating head (part no 0912101) as shown in drawing no 0912002 rev 01. The system is approved only for use in inflatable lifesaving arrangements on ships
2. The Servo Heads are only approved for use on inflatable marine lifesaving appliance
3. The Servo Heads are only to be used and maintained in accordance with the user Manual M-07-UM-GISSERVO© for the Head with clamp and M-07-UM-GISSERVO(T) for the Servo head with thread. The Manual will be supplied to each customer and will clearly state limitations
4. If more than 4 servo's are to be used on the system then design advice should be sought form Leaffield Marine Ltd
5. The minimum capacity of the master cylinder to be 2.7 litre water capacities
6. The maximum working pressure for the Servo is 450 bar
7. The final determination of suitability of a system shall be made on the basis of testing the end product in which the system is to be used in accordance with IMO Resolution MSC.81 (70). The suitability of any component covered by this certificate is generally dependent upon its relationship to the size, number and arrangement of the other components of the system in the end product
8. If the specified standards be amended during the validity of this certificate, this product type is to be re-approved prior to it being supplied to vessels to which the amended standards apply
9. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure compliance with SOLAS Regulation III/5
10. Production tests are to be conducted in accordance with the applicable requirements of IMO Resolution MSC.81 (70), Part 2, Paragraph 1.2. This does not preclude any further testing to additional requirements of the Marine Administration of the country where the ship is registered (i.e. the flag state) or those acting on behalf of that Administration
11. Should a change of Place of Production from that stated below be required i.e. where the stages of manufacture/assembly/testing of this product take place, the new Place of Production is to be advised to us prior to the change taking place. This Certificate will require to be updated for Approval to be maintained



Lloyd's
Register

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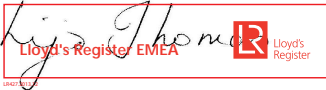
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PLACE OF PRODUCTION

Leaffield Marine Ltd
9, Atworth Business Park
Bath Road
Atworth
Wiltshire, SN12 8SB
United Kingdom (UK)



Lijo Thomas
Senior Specialist
Statutory Fire & Safety
Southampton Technical Support Office, Marine & Offshore
Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).