

## CERTIFICATE OF TYPE APPROVAL

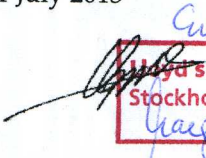

This is to certify that

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.

<b>Manufacturer</b>	C.M Hammar AB
<b>Address</b>	August Barksgata 15 SE-421 32 Vastra Frolunda Sweden
<b>Product Type</b>	HYDROSTATIC RELEASE UNITS
<b>Product Description</b>	Disposable automatic hydrostatic release unit forming part of liferaft lashing, with optional electrically initiated remote operation - Types: "H20" and "H20 ERU"
<b>Specified Standards</b>	IMO Resolution MSC.81 (70) Part 1, as amended by MSC. 226 (82)

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	2 July 2008	Expiry date	1 July 2013
Certificate No.	SAS S080074	Signed	  <i>Endorsed 2008-07-03</i>
Sheet No	1 of 3	Name	K. Gupta 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, 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 Group'. The Lloyd's Register Group 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 Group 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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Issue number 2

**DESIGN APPRAISAL DOCUMENT**

Date 15 April 2011	Quote this reference on all future communications LDSO/TA/SFS/TCD/PG
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**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS S080074**

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>Drawing No.</u>	<u>Rev No</u>	<u>Issue Date</u>	<u>Drawing Title</u>
A000163	1	16-09-2002	Hydrostatic release unit Hammar H20 for liferafts
A000165	1	18-09-2002	Hydrostatic/electric release unit Hammar H20 ERU for liferafts
A001044	1	16-10-2009	Weak Link 2,2 kN

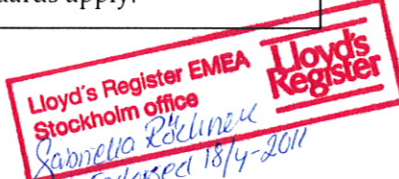
**TEST REPORTS**

<u>Report Author &amp; description</u>	<u>Report Nos.</u>	<u>Dates</u>
<i>SP Sveriges Provnings-och Forskningsinstitut:</i>	-	-
<b>Rope sling:</b> Artificial ageing/salt spray water test/temperature cycling test/15 kN breaking load test (without failure).	KMp I-2013	2002-10-28
<b>Weak links:</b> Tensile tests to break (mean = 2.39kN)	F2 14946	2002-09-05
<b>Complete units:</b> Corrosion resistance tests / temperature cycling test / release test at +65°C.	KmyP03765	2002-09-05
<b>Complete units:</b> Corrosion resistance tests / temperature cycling test / release test at -1°C.	KmyP203085b	2002-08-06
<b>Original Tests:</b> Conducted under the auspices of the National Swedish Administration of Shipping and Navigation	Gothenburg	1985-10-01
<b>Solar Radiation Test:</b> Conducted at SP Technical Research Institute of Sweden	P801304	2008-03-13
<b>Hydrostatic Release Units:</b> Weak link for H20, Disposable hydrostatic release unit, witnessed by a surveyor acceptable to Lloyd's Register	-	2009-10-14

*Note: The basic design of this HRU was first Approved by LR in December 1994 under Certificate No. SEQ/94/152, the release unit itself is not under load from the liferaft's lashing or its painter at any time.*

**CONDITIONS OF CERTIFICATION**

1. The Hammar H20 HRU is disposable with an 'in-service' life of not more than 2 years, the expiry date being markable on the body of the unit when first put into service. This Approval is only valid when units installed on ships are marked with their expiry date.
2. Every Hammar H20 HRU is to be removed from service on or before its expiry date and replaced.
3. If the specified standards are 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.

  
 Sabina Röllin  
 Endorsed 18/4-2011

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4. 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.
5. Production tests are to be conducted in accordance with the applicable requirements of IMO Resolution MSC.81(70), Part 2 and each item, batch, or lot be delivered with an LR Certificate of SOLAS Production Testing issued by the attending LR Surveyors following their witness of the tests. 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.
6. 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.

**PLACE OF PRODUCTION**

CM Hammar AB  
August Barks gata 15  
SE-421 32 Västra Frölunda  
Sweden



Paul Galbraith  
Lead Specialist  
Statutory Fire & Safety  
London Design Support Office  
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).*

**Lloyd's Register EMEA**  
Stockholm office  
*Sabina Rödner*  
Endorsed 18/4-2011

