

Marine & Offshore

Certificate number: 58421/A0 BV File number: LSA 6337/01 Product code: 6030H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to CMHAMMAR AB

V:a Frölunda - SWEDEN

for the type of product HYDROSTATIC RELEASE UNITS FOR LIFERAFTS

Hammar H20RX & Hammar H20RX-ERU

Requirements:

SOLAS 74 Convention as amended, Regulations III/4, X/3, III/13.4.2, III/26.2.2 and III/34 IMO Res. MSC.48(66) -(LSA Code)- amended by MSC.207(81), MSC.218(82), MSC.272(85), MSC.293(87), MSC.320(89), MSC.368(93) and MSC.425(98) IMO MSC/Circ.811 IMO Resolution MSC.97(73) -(2000 HSC Code)- as amended, 8.1 and 8.6 IMO Res. MSC.81(70) amended by MSC.200(80), MSC.226(82), MSC.274(85), MSC.295(87), MSC.321(89), MSC.323(89), MSC.378(93) and MSC.427(98)

Transport Canada Requirements: Transport Canada Life Saving Equipment Regulations, TP14475 and TP14612

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 02 Sep 2024

For Bureau Veritas Marine & Offshore,

At BV GOTHENBURG, on 02 Sep 2019, Magne MOLLER

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This certificate is recognized by Transport Canada

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

<u>1. PRODUCT DESCRIPTION :</u>

The HAMMAR H20RX Hydrostatic release unit is intended for fitting float free arrangements for liferafts.

- It is not fitted with a manual operation device.
- It does not need to be periodically serviced (it is of "disposable sealed unit" type).
- Set for a release depth not less than 1,5 and not greater than 4 meters.
- It is not part of the painter system (It is not subjected to the painter system strength).

H20RX - Operational lifetime of a total of 30 months installed onboard

The version **HAMMAR H20RX-ERU** (Hydrostatic release Unit) is intended for use together with an Electric Remote Release system designated under trade name "Hammar ERRS", i.e liferafts can launch from one or more remote positions.

- The ERRS system is powered by the ship's Emergency Power Supply and by a back-up battery at every Control Panel.
- The ERRS system may be activated from one or several remote release positions.
- The ERRS system does not affect the hydrostatic function of the HAMMAR H20

H20RX-ERU - Operational life time of total of 30 months installed on board

This EC Type Examination Certificate only covers the hydrostatic function of the HRU version HAMMAR H20, as per requirements stated of front page of this certificate, and does not cover the additional ERRS system, although its design was addressed by the Society.

2. DOCUMENTS AND DRAWINGS :

•	Specific Drawings
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- Speeme L	nuwings				
Number	Revision	Date	De	escription	
A001074	1	22/05/2012	Hydrostatic Release Unit H20X		
 Detailed d 	lrawings and	specifications a	re contained in the following document		
		Doc	ument	Issue	Date
CM HAMMAR AB - DRAWING AND SPECIFICATIONS			SPECIFICATIONS	8	2019-03-28
 Markings 					
		Doc	ument	Issue	Date
006 Top Lab	el H20RX &	ERU T.C		1	2019-04-03
0002 Expiry	Label			1	2014-01-15
	C .1 1			• .	

No departure from these documents is permitted without the prior consent of the Society

• Manual for installation, use and maintenance (Electronic format)

Document	Issue
HAMMAR H20 Manual HT-0019	11.02

3. TEST REPORTS :

As per test reports listed in the following document:

Hydrostatic Release Units

Number	Date	Description
31.309.78.212 31.309.78.212 Encl. 31.309.78.212 Encl.	01/03/1985 15/03/1985 01/10/1985	Initial type tests Submergence Tests Tests on Membranes
85M51019 85M51019 Encl.2 85M51019 Encl.4	29/08/1985 28/08/1985 29/08/1985	Type tests on the membranes
21.99-90 34084	24/01/1990	Corrosion tests on the blades

Hydrostatic Realease Units (Continued)

Number	Date	Description
M51400 04/09/1990 Corrosion tests on the blades and HRU		Corrosion tests on the blades and HRU
	10/12/1993	Reassessed by the Swedish National Maritime Administration - Maritime Safety Inspectorate
KMyP203085b	06/08/2002	Type tests : Corrosion resistance, Temperature cycling, and release test
N° KMyP03765	05/09/2002	Type tests : Corrosion resistance, Temperature cycling, and release test
P801304	2008/03/13	Solar radiation test
	2009/06/22	H20X, Disposable hydrostatic release unit
8P03320-01	2018/04/09	Corrosion resistance test of knife sets
	2019/04/26	Type tests : Temperature cycling, and release test

Weak Link

Number	Date	Description	
	14/10/2009	Weak link test	

Rope Sling

Kope Shing			
Number	Date	Description	
96H30094B	05/06/1995	Breaking load test of rope sling with fisherman's knot	
99H50846 b	18/11/1999	Tensile strength test of link/single point metal connector	
KMp I-2013	2002/10/28	Strength test of the rope slings, liferaft for more than 25 persons	
169GTB19	2019/04/26	Strength test of the rope slings fishermans knot	

Additional Rubbing test - Transport Canada

ſ	Number	Date	Description
		2016/02/22	CM Hammar Rubbing test for Transport Canada

4. APPLICATION / LIMITATION :

- As per requirements stated on front page of this Certificate.
- Where the weak link is part of the supply, it shall comply with items N° 18, 19, 21, 22 & 23 on drawing N° A001074 Rev.
 1.
- Since not submitted to the painter strain there is no limitation in respect to the liferaft capacity (the "Rope sling", which is part of the device was strength tested at 15 KN, liferaft for more than 25 persons)
- The onboard installation and the maintenance of the Hydrostatic Release Unit shall be carried out according to manufacturer's instructions.
- It needs no annual service, maintenance or spare parts, but must be replaced after 30 months.
- It shall be provided with a simple system of recording the expiry date (month/year) at which the unit must be replaced.
- If marked with more than a single expiry date (month/year), the unit will be invalid and must be replaced.
- In addition of the Electronic version of the "manual for installation, use and maintenance", a paper version of the manual should always be available free of charge for the consumers who request it.

5. PRODUCTION SURVEY REQUIREMENTS :

The **HAMMAR H20** Hydrostatic Release Unit are to be supplied by **CM HAMMAR AB** in compliance with the type described in this certificate.

This type of product is within the category HBV of Bureau Veritas Rule Note NR320.

CM HAMMAR AB has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

CM HAMMAR AB

August Barks Gata 15 S-42132 V:a Frölunda SWEDEN

6. MARKING OF PRODUCT :

Instructions, Diagrams, Markings illustrating the use of the Hydrostatic Release Unit shall be printed indelibly (to be both in English and in French);

To be permanently marked on the unit or identification plate securely attached to the unit, as follows:

- · "HAMMAR H20RX " or "HAMMAR H20RX-ERU"
- \cdot Serial number
- \cdot Expiry date
- · BV TAC number : 58421/A0 BV
- \cdot The notation: "DO NOT PAINT"

7. OTHERS :

It is **CM HAMMAR AB** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*** END OF CERTIFICATE ***