



**TYPE APPROVAL CERTIFICATE**  
No. FPE136820WS

**This is to certify that the product identified below satisfies the requirements of the standard quoted under "Reference standard"**

<i>Description</i>	<b>INFLATABLE LIFERAFT</b>
<i>Type</i>	<b>KHY-4, KHY-6, KHY-8, KHY-10, KHY-12</b>
<i>Applicant</i>	[REDACTED]
<i>Manufacturer</i>	[REDACTED]
<i>Place of manufacture</i>	[REDACTED]
<i>Reference standards</i>	<b>ISO 9650-1:2005 (E), ISO 9650-3:2009(E)</b>
<i>Reference documents</i>	<b>Rules for Testing and Certification of Marine Materials and Equipment</b>

Issued in **Shanghai** on **August 1, 2020**. This Certificate is valid until **July 31, 2025**



*Zhang Hai Wen*  
RINA Services S.p.A.  
Hai Wen Zhang

This certificate consists of this page and 1 enclosure



**TYPE APPROVAL CERTIFICATE**  
 No. FPE136820WS  
 Enclosure - Page 1 of 2  
 KHY-4, KHY-6, KHY-8, KHY-10, KHY-12

**Product Description**

Throwing Overboard Type Inflatable Liferaft with the following main characteristics and dimension:

Type	KHY-4	KHY-6	KHY-8	KHY-10	KHY-12
Liferaft Shape	Octagonal				
Main Diameter (mm) Length x Width x Height	1700 x 1700 x 1200	1990 x 1990 x 1250	2255 x 2255 x 1400	2490 x 2490 x 1400	2730 x 2730 x 1400
Upper Buoyancy Tube Diameter (mm)	215	240	255	270	290
Lower Buoyancy Tube Diameter (mm)	215	240	255	270	290
Floor Area (m <sup>2</sup> )	1.573	2.236	2.996	3.749	4.567
Volume of Tube (m <sup>3</sup> )	0.406	0.600	0.778	0.972	1.227
Canopy Arch Diameter (mm)	140	160	160	160	160
Working Pressure (KPa)	13.3				
Required Towing Force (3 KN)	850 N	890 N	910 N	1000 N	1090 N
Temperature Range	-15°C / +65°C				

Inflation System:

Type	Cylinder Quantity	Cylinder Capacity (L)	Quantity of CO <sub>2</sub> (g)	Quantity of N <sub>2</sub> (g)
KHY-4	1	3	1500	150
KHY-6	1	5	2100	210
KHY-8	1	5	2700	180
KHY-10	1	6	3300	240
KHY-12	1	7	3700	370

Packing Weight and Dimension:

Type	Capacity (75 Kg/P)	Weight (Kg)		Packing Dimension (mm)			
		Container	Valise	Container			Valise
				L	B	H	L x D
KHY-4	4	≤ 36	≤ 29	760	485	275	710 x Φ360
KHY-6	6	≤ 44	≤ 36	760	485	320	720 x Φ410
KHY-8	8	≤ 49	≤ 40	760	525	330	720 x Φ410
KHY-10	10	≤ 54	≤ 45	850	520	310	820 x Φ410
KHY-12	12	≤ 61	≤ 50	850	520	310	870 x Φ440

The liferaft is manufactured in a vacuum-packed system.

Rubber Fabric Used for the Construction of the Liferaft:

- Tensile Strength in Warp Direction: ≥1500 N/50mm
- Tensile Strength in Weft Direction: ≥1300 N/50mm
- Tear Strength in Warp and Weft Direction: ≥80 N
- Thickness: 0.40±0.05 mm

Max. Storage Height: 6 m.



*Handwritten signature*

**TYPE APPROVAL CERTIFICATE**  
**No. FPE136820WS**  
**Enclosure - Page 2 of 2**  
**KHY-4, KHY-6, KHY-8, KHY-10, KHY-12**

**Reference Documents**

- Design Instruction & Calculation (Ref No.: YL/QI/091011-DI), filed by RINA with No.: SHFP-15807;
- KHY Technical Specification, approved by RINA with No.: SHFP-15817;
- Technical Drawing (Components), approved by RINA with No.: SHFP-15811;
- Technical Drawing (KHY-4), approved by RINA with No.: SHFP-15812;
- Technical Drawing (KHY-6), approved by RINA with No.: SHFP-15813;
- Technical Drawing (KHY-8), approved by RINA with No.: SHFP-15814;
- Technical Drawing (KHY-10), approved by RINA with No.: SHFP-15815;
- Technical Drawing (KHY-12), approved by RINA with No.: SHFP-15816;
- Floor include Thermal Insulation Drawing, approved by RINA with No.: SHFP-15818;
- Marking Details, filed by RINA with No.: SHFP-15819 & 15820;
- Materials of Valise and Container, approved by RINA with No.: SHFP-15821;
- Service and Maintenance Instruction, filed by RINA with No.: SHFP-15822;
- Equipment List, filed by RINA with No.: SHFP-15823.

**Tests Carried Out**

Evaluation and Inspection Test Report of KHY (Type: KHY-4/6/8/10/12) (Ref No.: YL/TR-KHY-2019), witnessed by RINA Shanghai Office, and Inspection Report (Ref No.: 2019YW023) issued by The National Supervision and Testing Center of Fishery Machinery and Instrument, filed with No.: SHFP-15808;

Test Report of Main Fabric & Fabric of Canopies (Ref No.: W(X)2010-1190) issued by Testing Center of Shanghai Institute of Rubber Products, and Testing Report of 300D Rubberized Fabric (Ref No.: 10072725-013-1) issued by Pony Testing International Group and filed by RINA with SHFP-15810.

**Application/Limitation of Use**

- Application of the Product:  
Leisure yacht and small craft of hull length up to 24m equipped with inflatable liferafts which applicable to ISO 9650-1:2005 (E) is required.
- Restriction for Application of Product:  
Not apply to liferafts required for ships under the International Maritime Organization (IMO) Safety of Life At Sea (SOLAS) Convention.
- The compliance of each manufactured product with the prototype which underwent the type approval tests, shall be stated by the Manufacturer.
- Mass produced liferafts are to be marked or labelled in accordance with para 5.2.9.5 of ISO 9650-1:2005 (E).
- The validity of this Certificate ceases in the case of amendments to the rules on the basis of which the Certificate has been issued.
- Liferafts servicing shall be carried out in accordance with para 5.2.11 of ISO 9650-1:2005 (E).

***General conditions for the approval***

- a) The initial conditions verified by RINA at the time of the approval are to be maintained.
- b) Any changes to the initial conditions are to be promptly communicated to RINA, which reserves the right to repeat the relevant assessment.
- c) This certificate will no be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with RINA.
- d) Should the specified regulations or standards be amended during the validity of this certificate, the product is to be reapproved prior to it being placed on board vessels to which the amended regulations or standards apply.

**Shanghai July 19, 2020**

RINA Services S.p.A.  
Via Corsica, 12 - 16128 Genova  
Tel +39 010 53851  
Fax +39 010 5351000



*1 MWZ*

