

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

## This is to certify:

**That the Oxygen analysis and gas detection equipment**

with type designation(s)

**Portable gas analyser RX-8500 & RX-8700**

Issued to

**Riken Keiki Co., Ltd**  
**Itabashi-ku, Tokyo, Japan**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2019/1397,**

**item No. MED/3.30. SOLAS 74, Regulation II-2/4, VI/3, XI-1/7, FSS Code 15 and MSC.1/Circ.1477, IMO MSC.1/Circ.1581.**

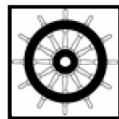
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-01-28.**

Issued at **Hamburg** on **2020-01-29**

DNV GL local station:  
**Yokohama**

Approval Engineer:  
**Didier Girardin**



Notified Body  
No.: **0098**



for **DNV GL SE**  
Digitally Signed By: Mydlak-Röder, Christine

Location: DNV GL Hamburg, Germany  
on behalf of

**Gerhard Aulbert**  
**Head of Notified Body**

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



**Product description**

Portable Multi-Gas Monitor RX-8500/RX-8700 is a gas monitors designed to provide continuous exposure monitoring of combustible gas, Oxygen, toxic gas such as cabaon monoxide carbon Dioxide and hydrogen sulfied in hazardous environments.The gas sampling is suctioned by build-in micro pump. Battery LI-ion battery BUL-8000 for power supply.

<b>[RX-8500]</b>	<b>(CH4)</b>	<b>(O2)</b>	<b>(CO2)</b>	<b>(CO)</b>
Measuring principle	Non-dispersive infrared type	Galvanic cell type	Non-dispersive infrared type	Electrochemical type
Measuring range <Service range>	0 - 100.0% LEL/ 5 - 100.0 vol%	0 - 25.0 vol% <25.1 - 40.0 vol%>	0 - 20.0 vol%	0 - 1000 ppm
Minimum resolution	0.5% LEL (0 - 100.0% LEL) 0.5 vol% (5.0 - 100.0 vol%)	0.1vol%	0.01 vol% (0 - 2.00 vol%) 0.05 vol% (2.00 - 5.00 vol%) 0.1 vol% (5.00 - 20.0 vol%)	1ppm
<b>[RX-8700]</b>	<b>(HC)</b>	<b>(O2)</b>	<b>(H2S)</b>	
Measuring principle	Non-dispersive infrared type	Galvanic cell type	Electrochemical type	
Measuring range <Service range>	0 - 100.0% LEL/ 2 - 100.0 vol%	0 - 25.0 vol% <25.1 - 40.0 vol%>	Low concentration 0 - 30.0 ppm <30.5 - 100.0 ppm>	High concentration 0 - 1000 ppm
Minimum resolution	0.5% LEL (0 - 100.0% LEL) 0.5 vol% (5.0 - 100.0 vol%)	0.1vol%	0.5ppm	1ppm

<b>[RX-8500]/ [RX-8700]</b>	
Suction flow rate	0.75 L/min or more (Open flow rate)
Power supply	Dedicated lithium ion battery unit [BUL-8000]
Dimensions	Approx. 154 (W) x 81 (H) x 163 (D) mm
Weight	About 1.2 kg (with BUL-8000)
Operating Temp.	-20 - +50°C (at a constant condition)
Ingress proof rating	IP65/ IP67

**Place of manufacture**

Riken Keiki Co., Ltd  
 2-3.Minamisakae-cho, Kasukabe  
 SAITAMA, JAPAN 344-0057

### Application/Limitation

- Thermal shock test and Oil resistance test in accordance with IEC 60945 : 2002 (Ed.4) additionally carried out (see report No. 19/073E dated 2019.05.28).
- The equipment is compliant with following DNVGL location Class and application:
  - EMC-A : All locations except bridge and open deck (IEC 60092-504 (2016) table 1 item 15-20)
  - Enclosure B: (IP65/IP67) (Location according ref. IEC 60529:2001)
  - VIB-A : General applications (ref. IEC 60092-504 (2016) table 1 item 10)
  - TEMP-C : Location (-25°C to +45°C) (ref. IEC 60092-504 (2016) table 1 item 6-7),
  - Compliant with IACS UR E10 Rev, 07
- Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/Special Condition for Safe Use listed in valid Excertificate issued by a notified/recognized Certification Body.  
 The following paragraph provided for information only, is based on information received from the manufacturer, but not verified by DNV GL.

Information on Ex-Certification received from manufacturer – Not verified by DNV GL		
Equipment	Certified	Certificate No.
<b>[RX-8500]</b> <b>[RX-8700]</b>	⊕ II 1 G Ex ia IIC T4 Ga, -20°C ≤ Ta ≤ +50°C	Presafe 15 ATEX 6173

- Each Equipment delivery to be provided with installation and user manual.

### Type Examination documentation

Hidden

Report	Issuing date
No.19-275	2019.10.04
No.19-276	2019.10.04
No. 382-150009-2	2015.05.22
No. 400-180164-1	2019.06.19
No. 400-180165-1	2019.06.24
No.41501319P	2019.12.06
No 320-16158 T	2016.08.30
No. 18-195 (J) & (E) /301186	2018.08.24
No. 19/079E	2019.07.11
No. 19/076E	2019.07.11
No. 190204-2-4	2019.03.27
No. 190204-2-5	2019.03.27

Operating Manual (PT0E-1361)

#### Drawings

E3-6991-4894-10-01K  
 E3-6991-5405-00-01K  
 E3-6991-5406-70-01K  
 E3-6991-4867-60-01K  
 E3-6991-5364-30-01K  
 E3-6991-5400-30-01K  
 E3-6991-5469-30-01K  
 M2-4777-05-01K  
 M2-4777-06-01K  
 M3-4775-92-01K  
 M3-4777-05-03K  
 M3-4777-06-01K

Job Id: **344.1-008792-1**  
Certificate No: **MEDB00004SX**

### **Tests carried out**

IEC 60945:2002 incl. IEC 60945 Corr. 1: 2008,  
IEC 60092-504:2016,  
IEC 60533:2015,

Category 2: (explosive gas atmospheres):

- EN 50104:2010,
- EN 60079-29-1:2016,
- EN 60079-0:2012 incl. A11:2013,
- EN 60079-11:2012,

### **Marking of product**

For identification to this type examination certificate the products shall be marked with:

- Manufacturer's name or trade mark
- Type designation
- Mark of Conformity (see front page)

END OF CERTIFICATE



Marine &amp; Offshore

Certificate number: SMS.MED2.D/643/E.2

Notified Body N° 2690

www.veristar.com

## MED 2014/90/EU QUALITY SYSTEM MODULE D CERTIFICATE

*This certificate is issued under the French Maritime Authority, in compliance with the Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations and Commission Implementing Regulation (EU) 2019/1397 of 06 Aug. 2019, to:*

**RIKEN KEIKI CO., LTD.**  
Tokyo - JAPAN

**Summary of the range of the recognition which is detailed in the subsequent page(s):**

FIXED OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT  
PORTABLE OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT

*This certificate is issued to attest that Bureau Veritas Marine & Offshore, notified body number 2690, did undertake, at the above company's request, an assessment of the quality system for production quality assurance related to the equipment of the type described in EC type-examination (Module B) certificate(s) listed in the subsequent page(s). Bureau Veritas Marine & Offshore, notified body number 2690, has considered that the quality system operated was satisfying the applicable requirements of the Marine Equipment Directive 2014/90/EU as amended.*

**This certificate will expire on: 26 Aug 2022**

For Bureau Veritas Marine & Offshore,  
At BV KOBE, on 19 Feb 2020,  
Shinichi Takemoto



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. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site [www.veristar.com](http://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 electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfRecognition.jsp?id=hdwzuyyjkh>

BV Mod. Ad.E 618-D June 2017

This certificate consists of 3 page(s)

## ANNEX

### 1. SCOPE

#### Products

App. number	Sign date	Validity date	Item designation	Trade name	Comment
20988/D0 MED	06 Jun 2019	06 Jun 2024	PORTABLE OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT - MED/3.30	GX-2009	
23502/C0 MED	12 Jun 2019	12 Jun 2024	PORTABLE OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT - MED/3.30	Portable Multi Gas Monitor Model: GX-8000	
38435/B0 MED	06 Jun 2019	06 Jun 2024	FIXED OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT - MED/3.54	Smart transmitter / gas detector, model SD-1 (type GP)	
39093/B0 MED	12 Jun 2019	12 Jun 2024	PORTABLE OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT - MED/3.30	Portable gas detector, RX-8000	

App. number	Date of issue	Validity date	Item designation	Trade name	Comment
MEDB00004SX	29 Jan 2020	28 Jan 2025	PORTABLE OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT - MED/3.30	RX-8500 & RX-8700	
MEDB00004SY	27 Nov 2019	26 Nov 2024	FIXED OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT - MED/3.54	SD-10X/1DOX & SD-1RI/1DRI	

### 2. LIMITATIONS

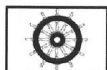
The EC type-examination certificates listed in the scope are to be valid.

Bureau Veritas Marine & Offshore is to be informed immediately of any modification to the quality system in order to agree on appropriate actions.

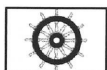
RIKEN KEIKI CO., LTD. has to apply for the periodical audits as agreed with Bureau Veritas Marine & Offshore.

RIKEN KEIKI CO., LTD. must draw up a written EC declaration of conformity to type in compliance with the article 16 of the MED 2014/90/EU.

RIKEN KEIKI CO., LTD. must affix the mark of conformity in compliance with the articles 9 and 10 of the MED 2014/90/EU taking into consideration the 2 following examples:



**2690/XXXX** Where XXXX is the year in which the mark is affixed or



**2690/ZZ** Where ZZ are the two last digits of the year in which the mark is affixed.

### 3. PERIMETER OF CERTIFICATION

Quality system of following site(s) has been assessed:

RIKEN KEIKI CO., LTD. - Tokyo - JAPAN

RIKEN KEIKI CO., LTD. Development Center - Kasukabe - JAPAN

#### **4. REMARKS**

The certificate supersedes certificate No.SMS.MED2.D/643/E.1.

**\*\*\* END OF CERTIFICATE \*\*\***