

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB0000866

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

This is to certify:

that the Echo-sounding equipment

with type designation(s)
F-1000 / NES 4610 / CVR-010 / E-1

issued to

Japan Marina Co., Ltd.
Tokyo, Japan

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

Regulation **(EU) 2024/1975**,

item No. MED/4.6. SOLAS 74 as amended, Regulations V/18, V/19 & X/3, IMO Res. A.224(VII), IMO Res.

A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.74(69), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.302(87)

Manufacturers authorised representative

Wärtsilä Voyage GmbH
Hamburg, Germany

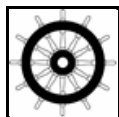
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2029-09-05**.

Issued at **Hamburg** on **2024-09-06**

DNV local unit:
Yokohama

Approval Engineer:
Jörg Rebel



Notified Body
No.: **0098**

for **DNV SE**

Mydlak-Röder, Christine
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

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 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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

The echo-sounding equipment with type designations F-1000 or NES 4610 or, CVR-010 or E-1 for CONSILIUM consists of following components:

Description	Type designation	Software version	Remark
Main unit	F-1000	2.00 Rev. 1.12 and higher	Trade name for JMC
	NES 4610		Trade name for Wärtsilä Voyage
	CVR-010		Trade name for KODEN Electronics
	E-1		Trade name for CONSILIUM
Echo-sounding transducer	ELAC LSE 297		50 kHz
	ELAC LSE 313		200 kHz
	TOKIN TGM 60-50-20L		50 kHz
	TOKIN TGM 50-200-10L		200 kHz
	TOKIN TGM 80-200-20L		200 kHz
Optional digital display	Plath UDR		
	Skipper IR 301		
	Atlas 9205 T / ELAC DAZ 25 / DEBEG 4650 T / FILIA 522		Several trade names
	SAM 4900		
	Consilium SD 2-3		

Application/Limitation

None

Type Examination documentation

DNV No	Document ID	Rev.	Description
23	-	2010-10-06	Statement: Corrosion waiver acc. to IEC 60945, 8.12.1
22	U240222E1	2024-04-05	Report: Phoenix Testlab, Acoustic tests according to IEC 60945, 11.1
21	BSH/454.ESE/002/00005	2024-02-06	Report: BSH, Tests according to IEC 62923-1/-2
20	BSH/454.ESE/002/00002	2024-01-25	Report: BSH, Tests according to IEC 62288 (2021)
19	678	2010-09-30	Certificate: BSH, Compass Safe Distance according to IEC 60945, 11.2
14	UM-F1000-4.0	2024-08-07	Manual: Operating, Maintenance & Installation Instructions for Navigation Echo Sounder Model F-1000
10	BL 9255 T 481	2010-08-18	Report: Atlas Elektronik, Environmental tests for F-1000 with TGM 80-200-20L acc. to IEC 60945, 8.2 to 8.4 and 8.7
8	BL 9255 T 595	2010-12-01	Report: Atlas Elektronik, Dry heat storage test for TGM 60-50-20L according to IEC 60945, 8.2.1
7	06292.155.10	2010-10-18	Report: MTN, EMC tests for F-1000 with TGM 80-200-20L according to IEC 60945, 9 and 10
6	06292.208.10	2010-12-20	Report: MTN, EMC tests for F-1000 with TGM 60-50-20L according to IEC 60945, 9 and 10
2	BSH/4543/001/4062790/15-2	2015-09-17	Report: Report: BSH, Performance tests for NES 4610 with TGM 50-200-10L according to ISO 9875 (2000)
1	4612/4061654/10	2010-10-29	Report: BSH, Performance and interface tests for F-1000 with LSE 297, LSE 313, TGM 60-50-20L and TGM 80-200-20L according to ISO 9875 (2000) and IEC 61162

Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Interface testing: IEC 61162-1 (2016)
- Presentation testing: IEC 62288 (2021)
- Bridge alert management testing: IEC 62923-1 (2018) and IEC 62923-2 (2018)
- Performance testing: ISO 9875 (2000) incl. Corrigendum 1 (2006)

Marking of product

According to IEC 60945, Sect.4.9:

The product to be marked with following information, where practicable:

- Identification of the manufacturer,
- Equipment type number or model identification under which it was type tested,
- Serial number of the unit,
- Compass safe distance.

Alternatively, the marking may be presented on a display at equipment start-up, and in case of fixed equipment compass safe distance may be given in the equipment manual.

END OF CERTIFICATE