

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00007YM

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

That the Penetrations through "B" class divisions: pipe, duct, trunk, etc penetrations

with type designation(s)

Ventilation units - MCU, MCU-S, MCU-U, MCU-WA, MPB, MPB-D - B-15 class ceiling

Issued to

UAB Malcon
Klaipeda, Lithuania

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

Regulation (EU) 2021/1158,

item No. MED/3.27b. SOLAS 74 as amended, Regulation II-2/9 and IMO 2010 FTP Code.

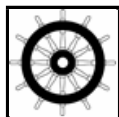
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2027-03-14**.

Issued at **Høvik** on **2022-03-15**

DNV local station:
Klaipeda CMC

Approval Engineer:
Marcin Tobiasz



Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
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 AS 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

„Ventilation units MCU, MCU-S, MCU-U, MCU-WA, MPB, MPB-D”, can be installed with the ceiling panel composed of 20 mm thick insulation core of Rockwool SeaRox SL440 mineral wool of 150 kg/m³ density (Rockwool Technical Insulation) covered on both sides with galvanized 0.6 mm thick steel sheets, profiled along edges. The mineral wool is glued to the sheathing with the adhesive of Loctite UR 7226 type, from Beele Engineering, in amount of approximately 120 g/m². Details about each unit are assembled in the table below.

Cabin unit model	Casing dimensions (W x H x D) [mm]	Nominal thickness of casing insulation [mm] *	Air outlets dimensions [mm]
MCU	400 x 500 x 142	20	Ø102 / Ø203
MCU-S	400 x 600 x 148	20	Ø102 / Ø203
MCU-U	500 x 600 x 142	20	Ø102 / Ø203 / 30 x 20
MCU-WA	420 x 720 x 170	20	Ø102 / Ø203 / Ø20.4 / Ø20.4
MPB	400 x 500 x 200	20	Ø162 / Ø254
MPB-D	400 x 500 x 200	20	Ø102 / Ø162 / Ø252

* Mineral wool, type Paroc Marine Fire Slab of 150 kg/m³ (manufactured by Paroc Group Oy) glued with Nofirno, usage 120 g/m².

All AC units are suspended by 4 galvanized steel hangers (threaded rod M8) connected to the 100 mm x 50 mm x 5 mm galvanized steel L profiles (perpendicularly to the ceiling panels) and the 40 mm x 40 mm x 4 mm galvanized steel L profiles, placed at 336 mm above the ceiling.

For further details, see the drawing mentioned under Type Examination documentation.

Application/Limitation

Approved for use in MED approved B-15 class ceilings when mounted as per manufacturer's drawing. The ceiling cut-outs shall not cross the boundary of a joint between two ceiling plates.

Manufacturer of the ceiling is responsible to document that the structural and thermal integrity is maintained after fitting light fixtures into the ceiling. The arrangement is subject for approval in each case.

Maximum mass of each unit:

- MCU 6 kg
- MCU-S 8 kg
- MCU-U 8 kg
- MCU-WA 12 kg
- MPB 7.5 kg
- MPB-D 7 kg

Maximum panel width: 500 mm

The insulation material used has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

Each product is to be supplied with its manual for installation and maintenance.

Type Examination documentation

Test Report No. RS-21/B-453/E dated 17 November 2021 from Centrum Techniki Okrętowej S.A., Gdańsk, Poland.
Drawing No. MCU-SUWAD20210730 from the manufacturer.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire technical rating, the MED Mark of Conformity and USCG approval number if applicable (see first page).