EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00007MN

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 "A" class divisions: pipe, duct, trunk, etc penetrations

with type designation(s)
BLÜCHER Class A Group Penetration

Issued to
Blücher Metal A/S
Vildbjerg, Midtjylland, Denmark

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2021/1158,**
item No. MED/3.26b. SOLAS 74 as amended, Regulation II-2/9, IMO MSC.1/Circ.1276, IMO 2010 FTP Code and IMO MSC.1/1488

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

This Certificate is valid until **2026-10-26**.

Issued at **Høvik** on **2021-10-27**

DNV local station:
Denmark CMC

Approval Engineer:
Kristin Grønnæss

Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
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), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2019 dated February 22nd, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"BLÜCHER Class A Group Penetration"
is a multi-penetration system of type 499 consisting of one - three pipe penetrations (sizes Ø40 - Ø75 mm), and one drain penetration (outlet size Ø50 - Ø75 mm) installed in a steel plate. The pipe- and drain penetrations are sealed with SI and CR sealing, respectively. The drain is composed of a plug on top of an upper part with max. 4 outlets and a removable water trap. Steel pipes are fixed to the penetration system on the underside by means of safety clamps with EPDM sealing. The penetration system is fully welded to the deck.

For further details, see drawings listed under Type Examination documentation below.

Application/Limitation

Approved for use as multi-penetration system in class A-0, A-30 and A-60 steel decks as follows:

Table 1: Approved pipe penetration in A-60 steel deck.

Type	Size [mm]	Pipe/drain material	Pipe diameter (OD) [mm]	Drain outlet size [mm]	Penetration length [mm]	Penetration thickness [mm]	Penetration position	Penetration insulation
499	320 x 220 (oval)	Stainless steel	Ø40 – Ø75	Ø50 – Ø75	216	5 (plate/flange) 1 (pipe/drain)	Underside	M-0021-301[1)]

1) Insulated with PAROC Marine Wired Mat 100 (manufactured by PAROC with density 100 kg/m^3) or fully insulated on the underside and 700 mm along pipe with A-60 approved deck insulation.

Table 2: Approved pipe penetration in A-30 steel deck.

Type	Size [mm]	Pipe/drain material	Pipe diameter (OD) [mm]	Drain outlet size [mm]	Penetration length [mm]	Penetration thickness [mm]	Penetration position	Penetration insulation
499	320 x 220 (oval)	Stainless steel	Ø40 – Ø75	Ø50 – Ø75	216	5 (plate/flange) 1 (pipe/drain)	Underside	M-0021-301[2)]

2) Insulated with PAROC Marine Wired Mat 100 (manufactured by PAROC with density 100 kg/m^3) or fully insulated on the underside and 450 mm along pipe with A-60 approved deck insulation.

Table 3: Approved pipe penetration in A-0 steel deck.

Type	Size [mm]	Pipe/drain material	Pipe diameter (OD) [mm]	Drain outlet size [mm]	Penetration length [mm]	Penetration thickness [mm]	Penetration position	Penetration insulation
499	320 x 220 (oval)	Stainless steel	Ø40 – Ø75	Ø50 – Ø75	216	5 (plate/flange) 1 (pipe/drain)	Underside	M-0021-302, Option A[3)]
499	320 x 220 (oval)	Stainless steel	Ø40 – Ø75	Ø50 – Ø75	216	5 (plate/flange) 1 (pipe/drain)	Underside	M-0021-302, Option B[3)]

3) Insulated with PAROC Marine Wired Mat 100 (manufactured by PAROC with density 100 kg/m^3) or approved A-60 deck insulation at least 200 mm around the penetration or 500 mm along pipe.

Other applications are subject to case-by-case approval.

The insulation materials used have 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. PGB10129A dated 8 July 2021 from DBI, Hvidovre, Denmark.
Test report No. PGB10130A dated 8 July 2021 from DBI, Hvidovre, Denmark.

Insulation drawings:
Drawing No. M-0021-301 dated 18 August 2021 from manufacturer.
Drawing No. M-0021-302 dated 18 August 2021 from manufacturer.

Covered products:
Drawing No. M-0021-305 dated 18 August 2021 from manufacturer.
Drawing No. M-0021-306 dated 18 August 2021 from manufacturer.
Drawing No. M-0021-307 dated 18 August 2021 from 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, MED Mark of Conformity and USCG approval if applicable (see first page).