

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 Fire Doors

with type designation(s)
Door with clamping frame – Type KRT

Issued to
R & M International GmbH
Hamburg, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2020/1170**,
item No. MED/3.16. SOLAS 74 as amended, Regulation II-2/9, IMO 2010 FTP Code and IMO MSC.1/Circ.1511, IMO MSC.1/Circ.1319

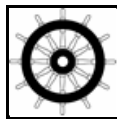
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-12-14**.

Issued at **Hamburg** on **2020-12-15**

DNV GL local station:
Hamburg CMC

Approval Engineer:
Roland Priebe



Notified Body
No.: **0098**

for **DNV GL SE**

Christine Mydlak-Roeder
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 European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004, and amended by Decision No 1/2018 dated February 18th, 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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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 **Door with clamping frame – Type KRT** is a single leaf hinged B-15 fire door equipped with window, ventilation unit and kickout panel.

The door leaf consists of 0.6 mm galv. steel plate + 48.5 mm thick stone wool + 0.6 mm galv. steel plate. The insulation is glued to the steel shell with an adhesive of approved type. Along all edges of the door leaf a steel square bar (20 x 30 x 3 mm) is mounted. In addition, an identical steel square bar is mounted as reinforcement vertically with a 68.5 mm gap to the lock side door frame. A lock case of 1.5 mm steel is mounted 900 mm above the floor between the reinforcement square bar and the lock side door frame. On the opposite side there are three hinges mounted to each other with a distance of 520 mm and 1350 mm.

The door frame (72 mm thick) profile along the vertical sides and the top consists of a hinge frame profile and a contrary frame profile mounted together with self-drilling screws. The bottom of the door frame consists of a 1.5 mm thick steel U-profile. The frame profiles were clamped to the bulkhead. A steel reinforcement profile is mounted in the groove of the adjacent bulkhead panel.

Insulation material:

Tizol-Flot 150 Lamella with a density of 150 kg/m³

The door construction may provide the following optional fitting:

- The door leaf is fitted with a window which is positioned in the upper half of the door leaf. The cut out is 445 x 445 mm and the clear opening 400 x 400 mm. A reinforcement steel U-profile is mounted inside the door leave along the edges of the cut out of the window. The glass pane consists of 11 mm thick Pilkington Pyrodur M 30-203 glass.
- The door leaf is mounted with a kickout panel in the lower part of the door. The exterior dimension is 680 x 680 mm.
- A ventilation unit (grill) is mounted in the kickout panel. It is covered with an intumescent sealing Promat Promaseal PL 1.9 all over the grill surface. The exterior dimension of the grill is 420 x 361 mm. The grill is fixed to the steel sheet with self-drilling screws.

For further details refer to the documentation listed below under "Type Examination documentation".

Application/Limitation

Approved for use as an integrated part of fire retarding division of class B-15.

Size of door leaf: 1075 mm wide x 2205 mm height x 50 mm thick

Max. clear opening: 1050 mm wide x 2198 mm height

This fire door having larger dimensions than the fire-tested fire door may be individually assessed and accepted by the flag administration (or recognized organization acting on its behalf) for a specific project with the same classification, provided documented compliance with IMO MSC.1/Circ.1319

For larger doors exceeding 50% in surface area, a full analysis based on SOLAS Chapter II-2 Reg.17 should be performed to assess the safety of the vessel.

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

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

Job Id: **344.1-011056-1**
Certificate No: **MEDB0000733**

Type Examination documentation

Test report No. PGB10022A dated 2020-07-20 from Danish Institute of Fire and Security Technology, Hvidovre, Denmark.

Tests carried out

Tested according to IMO 2010 FTP Code, Annex 1, Part 3.

Marking of product

The product or packing is to be marked with:

- name and address of manufacturer,
- type designation,
- fire technical rating and
- the MED Mark of Conformity (see page 1)