

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)
A-60 single door (new concept)

Issued to

R & M International GmbH
Hamburg, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/3.16. SOLAS 74 as amended, Regulation II-2/9, IMO 2010 FTP Code and IMO MSC.1/Circ.1511

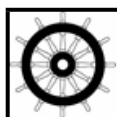
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-03-24**.

Issued at **Hamburg** on **2019-03-25**

DNV GL local station:
Rostock

Approval Engineer:
Pavel Golyshev



Notified Body
No.: **0098**

for **DNV GL SE**

Gerhard Aulbert
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.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"A-60 single door (new concept)"

A single leaf hinged fire door composed of door leaf and frame and various fittings.

The door leaf is manufactured from 1.5 mm thick steel sheet and is 1328 mm wide and 2235 mm high in external size. The steel sheet on the unexposed side was bent forming an overlap of 20 mm along the top and 18 mm along the vertical edges. The insulation inside the door leaf consists of two layers of 19 mm thick stone wool of type Tizol-Flot 150 (manufactured by Tizol, nominal density: 150 kg/m³) and with a 12 mm thick fire board of type Promarine PX1 (provided by Promat International NV, nominal density: 885 kg/m³) mounted between them. The three layers are glued together as well as to the steel sheets with an adhesive of approved type.

The door frame is made by Z-profile of specification 60 mm x 56 mm x 29 mm x 4 mm and is fixed to the steel bulkhead with M10 bolts (c/c approx. 270 mm along the vertical door frames and approx. 250 mm along the top of the door frame). This type of door frame may also be tack- and fully welded to the steel bulkhead.

Alternative frame acc. to supplement to test report: U-profile with an extra flange of specification 65 mm x 65 mm x 56 mm x 34 mm and a thickness of 4 mm. This type of frame shall be continuously welded to the steel bulkhead and insulation of the bulkhead shall fill out the hollow frame, acc. to the drawing no. "A-60-SINGLE(NEW-CONCEPT)_FRAME-TYPES_01-01" of the supplement.

The door leaf is connected to the frame by three steel hinges at one of its vertical edge and is fitted with a latch/bolt lock at the other edge. Part of the lock casing is insulated along the edges by 12 mm thick Promarine PX1 (of the same type as above) and the rest is insulated with stone wool (of the same type as above).

The door may be optionally fitted with fireproof rectangular glass window of one of the following types:

- Type "Pilkington Pyrosop 60-201" (provided by Pilkington Deutschland AG Gelsenkirchen, Germany) of multilayer construction (with the exterior dimensions of 425 mm x 425 mm and total glass pane thickness of 27 mm). Window frame and fixing details acc. to drawing no. A-60-SINGLE_FIRETEST_09.2018_02-04 of the test report;
- "Type A-60" (provided by Yuehua Industrial And Technical Glass Factory, Qinghuangdao, P.R. China.), with the exterior dimensions of 425 mm x 425 mm and total glass pane thickness of 32 mm and composed (from the side exposed to fire) of 6 mm toughened glass layer + 20 mm fireproof liquid + 6 mm toughened glass layer. Window frame and fixing details acc. to the 2nd supplement to test report PGA11283A with the enclosed drawing no. A-60-SINGLE(NEW CONCEPT)_ASSESSMENT-WINDOW-TYPE_01-01;

The door may also be optionally fitted with fireproof circular glass window of one of the following types:

- Type "Pilkington Pyrosop 60-201" (provided by Pilkington Deutschland AG Gelsenkirchen, Germany) of multilayer construction (with the exterior diameter of 425 mm and total glass pane thickness of 27 mm). Window frame and fixing details acc. to the 2nd supplement to test report PGA11283A with the enclosed drawing no. A-60-SINGLE(NEW CONCEPT)_ASSESSMENT-WINDOW-SHAPE_01-01;
- "Type A-60" (provided by Yuehua Industrial And Technical Glass Factory, Qinghuangdao, P.R. China.), with the exterior diameter of 425 mm and total glass pane thickness of 32 mm and composed (from the side exposed to fire) of 6 mm toughened glass layer + 20 mm fireproof liquid + 6 mm toughened glass layer. Window frame and fixing details acc. to drawing no. A-60-SINGLE(NEW CONCEPT)_ASSESSMENT-WINDOW-SHAPE_02-02 from manufacturer.

The door may be also optionally fitted with self-closing (fitted with chain spring "18") hose port with approx. 150 mm square clear opening (with the door closed), further details acc. to drawing no. "A-60-SINGLE_FIRETEST_09.2018_03-04" of the test report. Further fitting: magnetic sensor of type DC124.

The door leaf is mounted with a 1.9 mm x 20 mm intumescent strip of type Promaseal PL (provided by Promat GmbH, Germany) adhered along the bottom edge of both the door leaf as well as along the top above the hose port and along the hose port vertical edge facing the lock side. Additionally a 1.9 mm x

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Certificate No: **MEDB00004VD**

20 mm intumescent strip of same type is adhered along the top and the vertical flanges of the door frame profiles.

Total door leaf thickness (excluding window fixing frame): 53.5 mm.

For further details, see test report and supplements to test report (all with included drawings) listed under Type Examination documentation below.

Application/Limitation

The door is approved for installation in steel bulkheads of class A-60. Installation of the door in bulkheads made of other materials (aluminium, FRP, etc.) are subject to case-by-case approval.

Max. clear opening door size: 1250 mm x 2200 mm (width x height).

Max. clear view opening size of window:

Rectangular window: 400 mm x 400 mm (width x height).

Circular window: 400 mm in diameter.

Doors with windows shall not be fitted in the boundaries of machinery spaces of category A.

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 and maintenance.

Type Examination documentation

Test report No. PGA11283A (revision 1) dated 24th of September 2018, supplement to test report PGA11283A dated 15th of November 2018 and 2nd supplement (revision 1) to test report PGA11283A dated 28th of February 2019 all issued by Danish Institute of Fire and Security Technology, Denmark.

Drawing no. A-60-SINGLE(NEW CONCEPT)_ASSESSMENT-WINDOW-SHAPE_02-02 from manufacturer.

Tests carried out

Tested according to IMO Resolution MSC.307(88) – 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, MED Mark of Conformity and USCG approval number if applicable (see first page).

USCG approval limitations

The approval is limited to fire doors without windows and doors with total window area of 645 cm², or less, in each door leaf. Doors with a window area exceeding 645 cm² are not part of this certificate and need direct USCG approval.

USCG Approval Category (Module B) number

This product has been assigned a U.S. Coast Guard Module B number 164.136/EC0098 to note type approval to Module B only as it pertains to obtaining US Coast Guard approval 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.