

EC-Type Examination Certificate (Module B)



This is to certify that:

TÜV NORD Systems GmbH & Co.KG, notified by the Federal Maritime and Hydrographic Agency of Germany (BSH), did undertake the relevant type approval procedures for the type of equipment identified below which was found to be in compliance with the essential fire protection equipment requirements of Marine Equipment Directive (MED) 2014/90/EU, subject to any conditions in the details of appraisal attached hereto.

Recognized acc. to 2014/90/EU
by the BSH
BSH-Reference No.:
0800511/4822/005



Certificate No.: M19014

Manufacturer: Jansen Systembau GmbH & Co. KG
Am Wattberg 51
26903 Surwold, Germany

Product Name: A0 Roller Shutter

Product Description: Class A-0 bulkhead

Regulation Item: MED/3.11a

Specified Standards: SOLAS 74 as amended, Regulation II-2/3.2 & II-2/9,
IMO Res, MSC.307 (88)-(2010 FTP Code)
IMO MSC/Circ. 1120
IMO MSC/Circ. 1434
IMO MSC/Circ. 1435
IMO MSC.1/Circ. 1319


Related Directive: 2014/90/EU – in conjunction with 2020/1170/EU

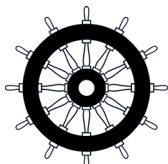
The attached annex (details of appraisal) is part of this certificate.

Date of Issue: 2021-05-20

Expiry Date: 2026-05-20

Tobias Nelke
Head of certification body SEECERT
(Notified Body No.: 0045)

The mark of conformity (wheelmark ) may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E, or F) of ANNEX II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body. This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached annex (details of appraisal) are complied with. This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the notified body SEECERT. Should the specified regulations or standards be amended during the period of validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on the market and on board vessels to which the amended regulations or standards apply.



XXXX/(YY)YY

The marking of approved marine equipment must take place under Article 9, Article 10 and if applicable Article 11 in conjunction with Annex I of the Marine Equipment Directive 2014/90/EU. In addition to the marking, the identification number of the notified body performing the conformity assessment procedure and the year in which the conformity mark was affixed shall be indicated.

XXXX Number of the Notified Body responsible for quality surveillance module.
(YY)YY The year (last two or four digits) in which the mark is affixed.

DETAILS OF APPRAISAL

Appraisal documentation:

Test report no. GV07/5736.1 dated 2009-04-19 issued by TÜV Nord Bauqualität GmbH & Co. KG, Germany
Fire technical assessment AS-10-02-Jansen(1.3) dated 25.10.2010 issued by TÜV Nord Bauqualität GmbH & Co. KG, Germany and fire technical assessment JA-0 RFS no. 8117243784-20 dated 2019-07-15 issued by DMT GmbH & Co. KG, Germany, fire technical assessment JA-0 RFS no. 8117243784-10 issued by DMT GmbH & Co. KG, Germany

Test report no. DMT-DO-53-011 dated 2013-05-24 issued by DMT GmbH & Co. KG, Germany, and Thermal-mechanical analysis no. 8116687788 rev. 1 dated 2019-05-22 issued by TÜV NORD EnSys GmbH & Co. KG, Germany

(TNS Ref.no: MED3_20181109.081439)

Tests carried out:

Tested according to IMO Res. MSC.307 (88)-(2010 FTP Code), Annex 1, Part 3

Technical principles:

Version 1 (according to GV07/5736.1)

The A0 Roller Shutter assembly for the closure of a steel Class A-0 bulkhead is mounted on the bulkhead side exposed to fire and consists of a door leaf composed by single slat steel profiles "No.: 1.1530 and No.: 1.1240" from Braselmann GmbH. Guide pieces are placed laterally on both side profiles to guide the door leaf. Each of the two guide pieces is a combination of a steel rectangular hollow section (80 x 40 x 3 mm) for fixing to the bulkhead with M8 bolts and a flanged L-shaped profile (80 x 58 mm) formed from 3 mm thick steel sheet, which acts as the guide for the roller shutter.

A thermoglass-canvas supported by a round steel (20mm) provides the contact and closure of the roller shutter on the deck.

The A0 Roller Shutter is wound around a tubular roller powered by a drive unit, covered with a top cover.

Maximum clear opening size of the above described A0 Roller Shutter is as tested 7240mm x 2500mm (W x H).

Variation a of version 1 (according assessment AS-10-02-Jansen(1.3))

For version 1 of the A0 roller shutter, the following variations exist:

- For A0 Roller Shutter with a clear opening width exceeding 3735 mm supportive holding profiles for the tubular roller has to be located in the middle of the tubular roller at a maximum spacing of 3.6 m.
- For A0 Roller Shutter with a clear opening height of 3200mm the width has to be limited to 4400mm.
- Alternative the complete A0 Roller Shutter may be manufactured in stainless steel.
- Alternative, to provide the contact and closure of the roller shutter on the deck a compressible thermoglass-canvas tube may be used.
- Sliding rails alternative to the above mentioned guide pieces might be fixed with M8 bolts or welded to the bulkhead.

Variation b of version 1 (according assessment JA-0 RFS no. 8117243784-10)

For version 1 of the A0 roller shutter, the following variations exist:

- A tubular casing, consisting of two 1.5mm thick edged steel sheets attached to a supporting structure may be installed instead of the tubular roller top cover.
- Additionally the above mentioned tubular casing may be equipped with a stainless steel sheet ("USPH cover").
- The A0 roller shutter may be mounted on the bulkhead side unexposed to fire.

Variation c of version 1 (according assessment JA-0 RFS no. 8117243784-20)

For usage in kitchenettes:

- For kitchenettes separated by class A-60 bulkheads, the clear openings of the installed A0 roller shutter cannot exceed the size of 7240 x 2500 mm (W x H). The A0 roller shutter has to be installed facing away from the fire; based on that, it can be installed without the holding profile for the tubular roller. For further information, see fire technical assessment JA-0 RFS no. 8117243784-20 dated 2019-07-15 issued by DMT GmbH & Co. KG, Germany.

Version 2 (according DMT-DO-53-011)

The A0 Roller Shutter assembly for the closure of a steel Class A-0 bulkhead is mounted on the bulkhead side exposed to fire and consists of a door leaf composed by single slat steel profiles "BRP 7010" from Braselmann GmbH. Guide pieces are placed laterally on both side profiles to guide the door leaf. Each of the two guide pieces is a combination of a steel rectangular hollow section (80 x 40 x 3 mm) for fixing to the bulkhead with M8 bolts and a flanged L-shaped profile (80 x 58 mm) formed from 3 mm thick steel sheet, which acts as the guide for the roller shutter.

The A0 Roller Shutter is wound around a tubular roller with a diameter of 159 mm x 5 mm powered by a drive unit. The tubular casing consists of two 1.5mm thick edged steel sheets attached to a supporting structure. The steel casing is mounted above the bulkhead opening.

A contact strip "GE 225 TK" from ASO GmbH detects the contact and closure of the roller shutter on the deck. Maximum clear opening size of the above described A0 Roller Shutter is as tested 3380mm x 3240mm (W x H).

Variation a of version 2 (according thermal-mechanical analysis no. 8116687788 rev. 1)

For larger dimensions of version 2 of the A0 roller shutter:

The thermal-mechanical analysis no. 8116687788 rev. 1 determines the dimensions for A0 roller shutters larger than fire tested (DMT-DO53-011). The thermal-mechanical analysis no. 8116687788 rev. 1 has been carried out acc. to IMO MSC.1/Circ. 1319 Para 3 and is part of the documentation mentioned above under "Appraisal documents". According to the thermal-mechanical analysis no. 8116687788 rev. 1 the following parameters/ limitations apply:

- The door height (clear height) is limited to a maximum of 7.3 m. The durability of the lowest slat cannot be guaranteed for a door higher than 7.3m.
- The materials used for the slat profile have to be 1.4301 or 1.4404.
- The roller shutter width of 18 m can be confirmed, if the tubular roller measures D 660 x 7.1 mm.
- For A0 Roller Shutter with a clear opening width exceeding 3735 mm a holding profile for the tubular roller has to be located in the middle of the tubular roller at a maximum spacing of 3.6 m.
- The holding profile must have a square hollow section with a minimum cross-section of 40 mm x 3 mm for a roller shutter with a clear opening width up to 7240 mm.
- The holding profile must have a square hollow section with a minimum cross-section of 100 mm x 4 mm for a roller shutter with a clear opening width up to 18 m.
- The holding profile must be insulated with 2x12mm "Promatec".

A A0 Roller Shutter larger than fire-tested may have a maximum clear opening size up to 18000mm x7300 mm (W x H). A maximum of 50% enlargement ($A_{(+50\% \text{ max.})} = 16,42 \text{ m}$) permitted.

For an A0 roller shutter exceeding 50% enlargement in surface area than tested, a full analysis based on SOLAS Ch.II-2 Reg.17 has to be performed to assess the safety of the vessel. This procedure may be individually assessed and accepted by the relevant 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.

Applied materials:

Insulation: "rex-thermoglas-Gewebe" (nominal basis weight: 660 g/m²),

Manufacturer: Graf von Rex GmbH, Germany

The approval is only valid for materials and construction that have been tested or underwent a thermal-mechanical analysis. Any additionally used surface materials have to be certified according to the Marine Equipment Directive, if required by relevant rules and regulations

Installation and product documentation:

Assembly procedure, usage and maintenance on board as per manufacturer's instruction, which has to be supplied together with the product.

Marking:

The product shall be permanently marked in accordance with Article 10 of the Council Directive 2014/90/EC of 23rd of July 2014 on marine equipment, e.g. certificate (approval) number, fire rating, etc.

Remarks:

None

Limitations / Acceptance on use of the product:

See under "Technical principles"