



Certificate no.:  
**TAS000046H**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**  
**that the Watertight Door**

with type designation(s)  
**NV1 Watertight Door**

issued to  
**NVL B.V. & Co. KG**  
**Bremen, Germany**

is found to comply with

**DNV rules for classification – Ships**  
**DNV rules for classification – High speed and light craft**

## Application:

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.**

Issued at **Høvik** on **2025-07-24**

This Certificate is valid until **2030-07-23**.

for **DNV**

DNV local unit: **Hamburg – CMC North/East**

Approval Engineer: **Grzegorz Wolski**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.  
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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 USD 300 000.

## Product description

### Product description

#### NV1 Watertight Door

Is a door fabricated from a 4.0 mm thick steel main plate. Plate is reinforced by up to four stiffeners welded to the main plate by double continuous welding. Edge of door is stiffened by gasket rim welded at 81.5-degree angle to the main plate. Door is of single acting type with up to twelve linked toggles and handle mounted centrally or close to non-hinged edge of door.

### Standard watertight door

The following table describes the standard sizes.

| Light opening width [mm] | Light opening height [mm] | Leaf cover thickness [mm] | Toggle and hinge [pcs+pcs] | Number of stiffeners [pcs] | Gasket rim [mm] | Stiffener | Pressure [kN/m <sup>2</sup> ] |
|--------------------------|---------------------------|---------------------------|----------------------------|----------------------------|-----------------|-----------|-------------------------------|
| 600                      | 800                       | 4                         | 6+2                        | 2                          | 50x4            | 50x50x6   | 150                           |
|                          | 1500                      | 4                         | 8+3                        | 3                          | 50x4            | 50x50x6   | 140                           |
|                          | 2000                      | 4                         | 10+3                       | 4                          | 50x4            | 50x50x6   | 140                           |
| 700                      | 800                       | 4                         | 8+2                        | 2                          | 50x4            | 50x50x6   | 150                           |
|                          | 1500                      | 4                         | 10+3                       | 3                          | 50x4            | 50x50x6   | 120                           |
|                          | 2000                      | 4                         | 12+3                       | 4                          | 50x4            | 50x50x6   | 120                           |
| 800                      | 800                       | 4                         | 8+2                        | 2                          | 50x4            | 50x50x6   | 150                           |
|                          | 1500                      | 4                         | 10+3                       | 3                          | 50x4            | 50x50x6   | 110                           |
|                          | 2000                      | 4                         | 12+3                       | 4                          | 50x4            | 50x50x6   | 110                           |
| 900                      | 1500                      | 4                         | 10+3                       | 3                          | 50x4            | 50x50x6   | 100                           |
|                          | 2000                      | 4                         | 12+3                       | 4                          | 50x4            | 50x50x6   | 100                           |
| 1000                     | 1500                      | 4                         | 10+3                       | 3                          | 50x4            | 50x50x6   | 95                            |
|                          | 2000                      | 4                         | 12+3                       | 4                          | 50x4            | 50x50x6   | 95                            |

For further details see the drawings listed under Type Approval documentation below.

### Application/Limitation

The doors have been Type Approved with respect to watertightness only, i.e. fire integrity has not been considered.

The watertight doors are found to comply with DNV-RU-SHIP July 2021 Pt.3 Ch.12 Sec.3 [4.3] and Sec. 6 for doors with installed window or side scuttle.

The door leaf may be fitted with side scuttle, Ø192 mm with glass thickness of 2 x 7 mm and total thickness including frame 38 mm, in the upper part of the door leaf. Only to be used on position 2 or above as per SOLAS.

The door leaf may be fitted with side scuttle, Ø192 with glass thickness of 8 mm and total thickness including frame 34 mm, in the upper part of the door leaf.

The door leaf may be fitted with side scuttle, Ø200 with glass thickness of 12 mm and total thickness including frame 60 mm, in the upper part of the door leaf.

The design pressure at the location where the doors without window/side scuttle are to be fitted shall be equal or less than the pressure above.

The 250x250mm side scuttle, with 8 mm toughened safety glass, is approved for a max design pressure of 125 kN/m<sup>2</sup>.

For doors with window/side scuttle, the maximum pressure rating is to be taken as the lowest value of the applicable door and window/side scuttle design pressure based on the above values.

Window and side scuttle may not be fitted in watertight doors that are located below the freeboard deck.

The Type Approval does not cover the supporting structure of the doors, which is subject to approval. Interface showing door frame and bulkhead shall be submitted for case-by-case approval by yard/end user.

Consideration shall be given if located in highly stressed areas or in areas critical to fatigue from global hull loads.

The door frame may be welded or bolted to the bulkhead.

Indication open/closed for the watertight door shall be fitted on the bridge.

### Type Approval documentation

**Door Variant WD L-800x1800-A60-F-S**

Drawing No. R6795-GL1 dated 18 May 2022 from Wigo.  
Drawing No. 510011-1611-K-992-003/00 from manufacturer.  
Drawing No. 510011-1611-K-713-019/00 from manufacturer.  
Drawing No. 510011-1611-K-713-010/00 from manufacturer.  
Drawing No. 510011-1611-K-713-021/00 from manufacturer.  
Drawing No. 510011-1611-K-713-118/00 from manufacturer.

**Door Variant WD L-900x1750-F**

Drawing No. R6795-GL1 dated 18 May 2022 from Wigo.  
Drawing No. 510011-1611-K-992-001/02 from manufacturer.  
Drawing No. 510011-1611-K-713-010/02 from manufacturer.  
Drawing No. 510011-1611-K-133-001/00 from manufacturer.  
Drawing No. 510011-1611-K-132-006/03 from manufacturer.  
Drawing No. 510011-1611-K-713-017/03 from manufacturer.

**Tests carried out**

Each door is to be tested for tightness through hydrostatic testing to design pressure.

**Marking of product**

The product is to be marked with the following info:

- Manufacturer's name or brand
- DNV Type Approval Certificate No. TAS000046H
- The specific type designation:

**Periodical assessment**

DNV surveyor has the permission to perform Certification Retention Survey at any time during the validity period of this certificate. Periodical assessment will be required after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

**Manufactured by:**

**Blohm+Voss**, Hamburg, Germany

Manufacturers/production sites not listed here shall be assessed by DNV in accordance with DNV CP-0338 prior to manufacturing of products to this TA certificate, and a request for update of the TA certificate shall be submitted to DNV for addition/change of production sites as relevant.