

# TYPE APPROVAL CERTIFICATE

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**This is to certify:**

**That the Weathertight Door**

with type designation(s)

Issued to

**Schoenrock Hydraulik Marine Systems GmbH**  
**Tornesch, Germany**

is found to comply with

**DNV GL rules for classification – Ships**

**Application :**

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL. See on page 2 limitations.**

Issued at **Hamburg** on **2019-10-21**

This Certificate is valid until **2024-10-20**.

DNV GL local station: **Magdeburg, Germany**

for **DNV GL**

Approval Engineer: **Aadil Wafdi**

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**Andree Orth**  
**Head of Section**

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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.



## Product description

These watertight doors are made of corrugated steel plate, and are sliding doors.

The watertight doors are described in the table below:

| Door                 | Door Size               |                         | Plate Thickness | Edge Stiffeners |         |         |         | Design Pressure        | Max toggle distance |
|----------------------|-------------------------|-------------------------|-----------------|-----------------|---------|---------|---------|------------------------|---------------------|
| #                    | Width [mm]              | Height [mm]             | t [mm]          | Hw [mm]         | Tw [mm] | Bf [mm] | Tf [mm] | P [kN/m <sup>2</sup> ] | e [mm]              |
| <b>OLD DOOR TYPE</b> |                         |                         |                 |                 |         |         |         |                        |                     |
| 1                    | Min. 600,<br>Max. 1200  | Min. 1600,<br>Max. 2000 | 6               | 45              | 10      | 70      | 20      | 100                    | 375                 |
| 2                    |                         |                         |                 |                 |         |         |         |                        |                     |
| 3                    |                         |                         |                 |                 |         |         |         |                        |                     |
| 4                    |                         |                         |                 |                 |         |         |         |                        |                     |
| 5                    |                         |                         |                 |                 |         |         |         |                        |                     |
| 6                    |                         |                         |                 |                 |         |         |         |                        |                     |
| 7                    |                         |                         |                 |                 |         |         |         |                        |                     |
| 8                    | Min. 1000,<br>Max. 1200 | 2000                    | 6               | 45              | 10      | 70      | 20      | 100                    | 350                 |
| 9                    |                         |                         |                 |                 |         |         |         |                        |                     |
| 10                   | 1000                    | 2100                    | 10              | 45              | 10      | 70      | 20      | 220                    | 273                 |
| 11                   | 1000                    | 2100                    | 10              | 150             | 20      | 0       | 0       | 530                    | 191                 |
| <b>NEW DOOR TYPE</b> |                         |                         |                 |                 |         |         |         |                        |                     |
| 12                   | Min. 600,<br>Max. 1200  | Min. 1600,<br>Max. 2000 | 6               | 45              | 10      | 70      | 20      | 100                    | 470                 |
| 13                   |                         |                         |                 |                 |         |         |         |                        |                     |
| 14                   |                         |                         |                 |                 |         |         |         |                        |                     |
| 15                   |                         |                         |                 |                 |         |         |         |                        |                     |
| 16                   |                         |                         |                 |                 |         |         |         |                        |                     |
| 17                   |                         |                         |                 |                 |         |         |         |                        |                     |
| 18                   |                         |                         |                 |                 |         |         |         |                        |                     |

Material: Min. Yield Strength door blade and frame: 355 N/mm<sup>2</sup>

## Application/Limitation

These doors may be fitted in watertight bulkheads where the use of watertight doors is accepted. The watertight door may be used in positions where the water pressure is equal to or less than the design pressure. The design pressure is stated in the table above.

Dimensions of the watertight doors can be smaller than shown on the drawings, as long as the distance between the cleats and the spacing of the stiffeners is equal to or less than values shown on provided drawings.

Job Id: **262.1-008123-10**  
Certificate No: **TAS000029B**

The type approval does not cover the support of the door in the hull structure; this support is subject to approval for the vessel in which the door is fitted.

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

## **Type Approval documentation**

### **Tests carried out**

Test report dated 2009-02-18 witnessed by DNV GL surveyor.

### **Comments**

Each door is to be hydraulically tested from the side which is most prone to leakage to design pressure at the manufacturer.

The tests are to be witnessed by a DNV GL surveyor.

## **Marking of product**

- Manufacturer`s name or brand
- DNV GL Type Approval Certificate No. TAS000029B
- Product Certificate Number
- Maximum Allowable Pressure

## **Certificate retention survey**

DNV GL's surveyor is to be given permission to perform Certification Retention Survey at any time during the validity period of this certificate.

END OF CERTIFICATE