



Certificate No:
TAS000032H

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Weathertight Door

with type designation(s)
Seaglaze Series 24 - DHA

Issued to

Seaglaze Marine Windows Limited
Norwich, Norfolk, United Kingdom

is found to comply with

DNV GL rules for classification – High speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all high speed and light craft vessels classed by DNV.

Issued at **Høvik** on **2021-06-29**

This Certificate is valid until **2026-06-28**.

DNV local station: **Great Yarmouth**

for **DNV**

Approval Engineer: **Xiaolu Wu**

.....
Arild Rogne
Head of Section

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 300,000 USD.



Form code: TA 251

Revision: 2021-03

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Product description

Weathertight single leaf, single action doors available in different sizes up to the maximum aperture size as listed. Corners may be either rounded with a radius of 110 or 150 mm, right angled or a combination of both. As an option either a porthole (Ø250mm) or a window with the largest aperture size as listed, may be fitted to the door panes by an aluminum frame. A deadlight made from aluminum with thickness as for the door panes shall be provided if required by DNVGL-RU-HSLC Pt.3 Ch.6 Sec.3 "7. Windows, for doors with installed windows or scuttles".

Frames and door panes made from aluminum. Inner door panes thickness 2 mm, outer door panes thickness as listed.

Hinges made from stainless steel with phosphor bronze hinge pin, attached by 10 x M6 stainless steel machine screws.

Toggles made from cast stainless steel are fitted to the end opposite to the hinges, additionally to the shorter ends, top and bottom, at a number as listed.

Handles and link systems made from stainless steel.

Seals made from closed cell neoprene rubber fitted in a groove in the door leaf frames.

Optional porthole with dia. 250 mm. Glazing material with thickness 8 mm made from toughened safety glass.

Optional single or double pane window with rounded corners or half drop shaped top and bottom ends. Glazing material with thickness 8 mm made from toughened safety glass. Largest available aperture sizes as listed.

Max door aperture height and width [mm]	Door pane thickness [mm]	Max window aperture height and width [mm]	Hinges [nos]	Toggles [nos]		Max design pressure [kN/m ²]
				Longer end	Shorter ends, each	
1200 x 450	5	N/A	2	3	N/A	29
1200 x 600	4	400 x 250	2	3	N/A	12
1850 x 450	4	N/A	3	3	N/A	19
1850 x 600	5	600 x 250	3	3	N/A	16.5
1850 x 700	5	650 x 450	3	3	N/A	12
1850 x 800	5	650 x 450	4	3	1	9.5
1980 x 876	5	650 x 525	4	3	1	8

Application/Limitation

The door has been Type Approved with respect to weathertightness only, i.e. fire integrity has not been considered.

The weathertight doors are found to comply with DNVGL-RU-HSLC Pt.3 Ch.6 Sec. 3, [3] Edition July 2020 for Weathertight doors and Sec. 3, [7] for doors with installed windows.

The design pressure at the location where the door is to be fitted shall be equal or less than the design pressure above.

A door with window on the freeboard deck may not protect openings leading below freeboard deck or openings into enclosed superstructures or deckhouses that are considered buoyant.

A door with window/side scuttle is to be fitted with a dead light if located in a position where dead light is required for window/side scuttle. The deadlight is not covered in this type approval and shall be submitted for case-by-case approval.

Dimensions of the light opening of the doors can be smaller than shown on the drawings, provided that scantlings, maximum distance between the cleats and fabrication method and material are maintained.

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.

Due consideration to installation shall be given if located in highly stressed areas or in areas critical to fatigue.

Type Approval documentation

The following drawings are used as a basis for certification:

- Double channel "11 FIX 010" Rev. 1

- Mitred Corner "24 DHA 018" Rev. 1
- Frame detail "24 DHA 017" Rev. 1
- Handle detail "24 DHA 014" Rev. 2
- Dog detail "24 DHA 013" Rev. 1
- Hinge detail "24 DHA 012" Rev. 1
- Frame detail "24 DHA 011" Rev. 1
- Ring angled corners "24 DHA 009" Rev. 1
- 150 mm Radius corners "24 DHA 005" Rev. 1
- Window aperture "24 DHA 002" Rev. 1
- Tog material "FT HND 655" Rev. 1

Tests carried out

The complete installation onboard shall be function and leak tested according to DNVGL-RU-SHIP Pt.2 Ch.4 Sec.8 Edition July 2020.

Marking of product

The product is to be marked with the following info:

- Manufacturer's name or brand
- DNV Type Approval Certificate No. **TAS000032H**
- Type designation
- Max allowable design pressure as specified above

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 DNVGL-CP-0338.