

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Weathertight Door**with type designation(s)
MO4 & MO6 - GRP door

Issued to

Winel B.V.
Assen, Netherlandsis 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.**Issued at **Høvik** on **2018-02-13**This Certificate is valid until **2023-02-12**.DNV GL local station: **Rotterdam, Offshore & Newbuilding**for **DNV GL**Approval Engineer: **Alessandro Russo**

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.



Job Id: **262.1-007740-5**
Certificate No: **TAS000019K**

Product description

Model	Max Size (H x W)	Number of toggles	Number of adjustable hinges	Max design pressure (kN/m ²)
MO4	1850mm x 750mm	4	2	25 *)
MO6	1850mm x 750mm	6	2	25 *)

The door may be fitted with a side scuttle of Ø250mm or a window of 600x400mm with 12mm toughened glass.

*) The max design pressure for a door with a window fitted is 20 kN/m².

Application/Limitation

The weathertight doors are found to comply with:

- DNVGL-RU-SHIP July 2016 Pt.3 Ch.12 Sec.2 [3] for *Weathertight doors* and Sec. 6 for doors with installed windows or scuttles.

for the maximum design pressures as specified above.

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

MO4 door may only be used in access openings located in Position 2 (as defined in Reg. 13 of the International Convention on Load Lines).

The doors may not be fitted in bulkheads where it is required that steel doors shall be used i.e. in galley, engine casing, etc. which may be considered as a space of greater fire risk.

The door may not be fitted in a bulkhead where the design pressure is higher than indicated in the table above.

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.

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

The complete installation shall be function and leak tested according to DNVGL-RU-SHIP-Pt2 Ch4 Sec.8 July 2017.

A door with window may not protect openings into enclosed superstructures or below freeboard deck.

A door with side scuttle/window is to be fitted with a dead light if located in a position where dead light is required for windows and side scuttles.

Job Id: **262.1-007740-5**
Certificate No: **TAS000019K**

Type Approval documentation

Drawing no:	Title
9542-30-04-0020 (Rev. B)	MO4 - "GRP Door 4 CL RH"
9542-30-06-0020 (Rev. A)	MO6 - "GRP Door 6 CL RH"
GRP-200-0009	"Real Laminate Construction"
GRP-200-0007	"Laminate Detail Bulls Eye 250"
GRP-200-0006	"Laminate Detail Window 600x400mm"
GRP-200-0005	"Hinge Construction"
GRP-275-MB50-T0	"Assembly Elongated Hinge"
GRP-270-MA20 (Rev A)	"Assembly Corner Piece"
GRP-273-MOLB	"Assembly Handle"
GRP-270-MA10-0D (Rev A)	"Assembly Cleat"

Product Data	M8610 Continuous strand Mat for press molding
Technical Data Sheet	Poliplast R 96.02
Product Data	Neogel NPG Isonopentyl Gelcoat
Data Sheet	Herex C70 Universally structural foam
DNV Survey Report	Hydrostatic test of GRP Door with window

Tests carried out

1850x750mm GRP door with window has been hydrostatic pressure tested to 50kN/m².

Marking of product

The product is to be marked with the following info:

- Manufacturer's name or brand
- DNVGL Type Approval Certificate No. TAS000019K
- Type designation
- Max allowable design pressure as specified above

In addition:

- (S) – If sidescuttle is fitted
- (W) – If window is fitted

Periodical assessment

DNV GL surveyor has the permission to perform Certification Retention Survey at any time during the validity period of this certificate.

Periodical assessment shall be done bi-yearly with a time window of +/- 3 months.