DNV·GL

Certificate No:
TAS00001DK

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Weathertight Door

with type designation(s)
Weathertight WR100/WR300 Steel doors

Issued to
Libra-Plast A/S
HAREID, Norway

is found to comply with
DNV GL rules for classification – Ships
DNVGL-OS-C301 – Stability and watertight integrity

Application :

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

Issued at **Høvik** on **2018-04-10**
This Certificate is valid until **2023-04-09**.
DNV GL local station: **Ulsteinvik**

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.

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Product description

Weathertight steel doors with 6mm plate thickness.

H x B (mm)	Minimum Toggles + Hinges		Max design pressure (kPa)	
	Pos. 1	Pos. 2	No stiffener	80x8mm stiffener
1200 x 600	2 + 2	2 + 2	44	119
1400 x 600	2 + 2	2 + 2	41	98
1400 x 750	2 + 2	2 + 2	29	83
1400 x 850	4 + 2	4 + 2	25	63
1400 x 900	4 + 2	4 + 2	23	56
1400 x 1000	4 + 2	4 + 2	20	45
1600 x 600	4 + 2	2 + 2	40	85
1600 x 750	4 + 2	2 + 2	27	70
1600 x 850	5 + 3	4 + 2	23	55
1600 x 900	5 + 3	4 + 2	21	49
1600 x 1000	5 + 3	4 + 2	18	40
1800 x 600	4 + 2	4 + 2	40	77
1800 x 750	4 + 2	4 + 2	26	61
1800 x 850	5 + 3	4 + 2	21	49
1800 x 900	5 + 3	4 + 2	20	44
1800 x 1000	5 + 3	4 + 2	17	35
1900 x 600	4 + 2	4 + 2	40	72
1900 x 750	4 + 2	4 + 2	26	58
1900 x 850	5 + 3	4 + 2	21	46
1900 x 900	5 + 3	4 + 2	19	41
1900 x 1000	5 + 3	4 + 2	16	34
2000 x 600	4 + 2	4 + 2	40	68
2000 x 750	4 + 2	4 + 2	26	55
2000 x 850	5 + 3	4 + 2	20	44
2000 x 900	5 + 3	4 + 2	19	39
2000 x 1000	5 + 3	4 + 2	16	32
1360 x 580	2 + 2	2 + 2	44	105
1460 x 660	2 + 2	2 + 2	35	87
1460 x 810	4 + 2	4 + 2	26	70
1660 x 660	4 + 2	2 + 2	33	75
1660 x 810	4 + 2	4 + 2	24	62
1860 x 660	4 + 2	4 + 2	33	67
1860 x 810	5 + 3	4 + 2	23	55

Application/Limitation

The weathertight doors are found to comply with:

- DNVGL-RU-SHIP January 2018 Pt.3 Ch.12 Sec.2 [4] for Weathertight doors and Sec. 6 for doors with installed windows or side scuttles.
- DNVGL-OS-C301 January 2018 Ch.2 Sec.2 [4] for Weathertight closing appliances.

Doors without windows are approved for the maximum design pressures as specified in the table above.

The 650x450mm window, with 10mm toughened safety glass, is approved for a max design pressure of 42 kN/m².

The 550x350mm window, with 10mm toughened safety glass, is approved for a max design pressure of 60 kN/m².

The 450x300mm window, with 10mm toughened safety glass, is approved for a max design pressure of 93 kN/m².

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

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

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 design 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 or DNVGL-OS-C301 Ch.2 Sec.2 [9] January 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.

The side scuttle Ø250 with dead light as indicated on the drawing may be fitted on any of the doors without imposing any additional limitations to the use of the door.

Type Approval documentation

- T-1-0167 (Issue D)
- T-1-0165 (Issue C)

Marking of product

The product is to be marked with the following info:

- Manufacturer’s name or brand
- DNVGL Type Approval Certificate No. TAS00001DK
- Type designation
- Max allowable design pressure as specified above

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 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.