DNV·GL

Certificate No:
**TAS00001DJ**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Weathertight Door**

with type designation(s)
**HSC.DC/DCR - GRP double leaf weathertight door**

Issued to
**Libra-Plast A/S**
**HAREID, Norway**

is found to comply with
**DNV GL rules for classification – Ships**
**DNV GL 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 GL.**

Issued at **Høvik** on **2018-06-07**
This Certificate is valid until **2023-06-06**.
DNV GL local station: **Ulsteinvik**

Approval Engineer: **Alessandro Russo**

for **DNV GL**

**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 double leaf door available in different sizes with straight or 110 mm radiused corners.

Closing by single operated quick-acting systems on each door leaf. Main door leaf operable from both sides.

Secondary door leaf operable from inside only. Numbers of toggles and hinges as listed below.

The centre toggle on the main door leaf enters into the secondary door leaf thus connecting the two door leafs.

Door leafs made from GRP sandwich.

Coaming made from aluminium, steel or stainless steel.

Removable mid-post made from stainless steel.

Hinges made from aluminium.

Toggles and quick-acting closing system made from stainless steel.

Seals made from neoprene rubber.

Optional portlight with diameter Ø = 250 mm or square / rectangular window as listed.

Glazing material of toughened safety glass with thickness 10 mm fitted in an aluminium frame.

Optional deadlight may be fitted.

| Sizes | | Nos of toggles [ *t* ] and hinges [ *h* ] | | | | Max window size | Max design pressure |
|---|---|---|---|---|---|---|---|
| Total light opening | Door leafs | Main door leaf | | Secondary door leaf | | Light opening | |
| Width x Height *[mm x mm]* | Max width *[mm]* | *t* | *h* | *t* | *h* | Width x Height *[mm x mm]* | *[kN/m² ]* |
| 1000 x 1400 | 500 | 3 | 2 | 2 | 2 | n/a | 22 |
| 1200 x 1400 | 600 | 3 | 2 | 2 | 2 | 300 x 450 | 20 |
| 1500 x 1400 | 750 | 3 | 2 | 2 | 2 | 400 x 450 | 17,8 |
| 1800 x 1400 | 900 | 3 | 2 | 2 | 2 | 450 x 450 | 14,4 |
| 2000 x 1400 | 1000 | 3 | 2 | 2 | 2 | 450 x 450 | 13,5 |
| | | | | | | | |
| 1000 x 1600 | 500 | 3 | 3 | 2 | 3 | n/a | 18 |
| 1200 x 1600 | 600 | 3 | 3 | 2 | 3 | 300 x 450 | 15 |
| 1500 x 1600 | 750 | 3 | 3 | 2 | 3 | 400 x 550 | 12,7 |
| 1800 x 1600 | 900 | 3 | 3 | 2 | 3 | 450 x 650 | 10,5 |
| 2000 x 1600 | 1000 | 3 | 3 | 2 | 3 | 450 x 650 | 10 |
| | | | | | | | |
| 1000 x 1800 | 500 | 3 | 3 | 2 | 3 | n/a | 14,4 |
| 1200 x 1800 | 600 | 3 | 3 | 2 | 3 | 300 x 450 | 12 |
| 1500 x 1800 | 750 | 3 | 3 | 2 | 3 | 400 x 550 | 10 |
| 1800 x 1800 | 900 | 3 | 3 | 2 | 3 | 450 x 650 | 8,3 |
| 2000 x 1800 | 1000 | 3 | 3 | 2 | 3 | 450 x 650 | 7,5 |
| | | | | | | | |
| 1000 x 2000 | 500 | 3 | 3 | 2 | 3 | n/a | 11,4 |
| 1200 x 2000 | 600 | 3 | 3 | 2 | 3 | 300 x 450 | 9,7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1500 x 2000 | 750 | 3 | 3 | 2 | 3 | 400 x 550 | 8 |
| 1800 x 2000 | 900 | 3 | 3 | 2 | 3 | 450 x 650 | 6,9 |
| 2000 x 2000 | 1000 | 3 | 3 | 2 | 3 | 450 x 650 | 6 |
| | | | | | | | |
| 1200 x 2200 | 600 | 3 | 3 | 2 | 3 | 300 x 450 | 8 |
| 1500 x 2200 | 750 | 3 | 3 | 2 | 3 | 400 x 550 | 6,5 |
| 1800 x 2200 | 900 | 3 | 3 | 2 | 3 | 450 x 650 | 5,5 |
| 2000 x 2200 | 1000 | 3 | 3 | 2 | 3 | 450 x 650 | 5 |

n/a = not applicable

## 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 scuttles.
- DNVGL-RU-HSLC December 2015 Pt.3 Ch.6 Sec.3.

for the maximum design pressures as specified above.

The doors may be fitted to access openings in position 2 according to the ILLC, 1966 Ch.II Reg.12.

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

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.

From the strength and tightness point of view cylinder locks may fitted in the door. Depending on the location there could be restrictions preventing the use of locks in the doors, to be evaluated for the specific cases.

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.

## Type Approval documentation

## Tests carried out

Hydraulic pressure testing door type HSC-C, dated 1999-09-21
Hydraulic pressure testing door type HSC-T, dated 1999-09-22

## Marking of product

The product is to be marked with the following info:

- Manufacturer's name or brand
- DNVGL Type Approval Certificate No. TAS00001DJ
- 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.