

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Weathertight Door**with type designation(s)
Weathertight steel door WR100/WR30- A60.80

Issued to

Libra-Plast A/S
HAREID, Norwayis 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 **2019-03-18**This Certificate is valid until **2024-02-03**.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.



Job Id: **262.1-009323-4**
 Certificate No: **TAS00001TE**

Product description

Light opening		Toggles	Toggles	True	Stiffen.	Stiffen.	Stiffen.	Gasket-	Door	Pressure
Width	Height	+ hinges	dist.	length	NO	dim.	dist	rim dim.	Thickn.	kN/m2
mm	mm	T+H	mm	mm		mm	mm	mm	mm	
600	600	2+2	391	408,6	3	50x10	175	80x8	6	88
600	800	4+2	591	408,6	3	50x10	275	80x8	6	78
800	800	4+2	591	508,6	3	50x10	275	80x8	6	53
900	800	4+2	591	558,6	3	50x10	275	80x8	6	43

600	1000	4+2	791	408,6	3	50x10	375	80x8	6	75
800	1000	4+2	791	508,6	3	50x10	375	80x8	6	48
900	1000	4+2	791	558,6	3	50x10	375	80x8	6	38
						50x10				
600	1200	4+2	991	408,6	4	50x10	316,7	80x8	6	78
800	1200	4+2	991	508,6	4	50x10	316,7	80x8	6	55
900	1200	4+2	991	558,6	4	50x10	316,7	80x8	6	46

600	1400	5+3	595,5	408,6	4	50x10	383,3	80x8	6	75
700	1400	5+3	595,5	458,6	4	50x10	383,3	80x8	6	50
800	1400	5+3	595,5	508,6	4	50x10	383,3	80x8	6	37
900	1400	5+3	595,5	558,6	4	50x10	383,3	80x8	6	33
1000	1400	7+3	595,5	453	6	50x10	230,0	80x8	6	36
1100	1400	7+3	595,5	453	6	50x10	230,0	80x8	6	33
1200	1400	7+3	595,5	453	6	50x10	230,0	80x8	6	30

600	1600	5+3	695,5	408,6	5	50x10	337,5	80x8	6	78
700	1600	5+3	695,5	458,6	5	50x10	337,5	80x8	6	51
800	1600	5+3	695,5	508,6	5	50x10	337,5	80x8	6	40
900	1600	5+3	695,5	558,6	5	50x10	337,5	80x8	6	36
1000	1600	7+3	695,5	453	6	50x10	270,0	80x8	6	38
1100	1600	7+3	695,5	453	6	50x10	270,0	80x8	6	32
1200	1600	7+3	695,5	453	6	50x10	270,0	80x8	6	30

600	1800	5+4	795,5	408,6	5	50x10	387,5	80x8	6	70
700	1800	5+4	795,5	458,6	5	50x10	387,5	80x8	6	46
800	1800	5+4	795,5	508,6	5	50x10	387,5	80x8	6	36
900	1800	5+4	795,5	558,6	5	50x10	387,5	80x8	6	32
1000	1800	7+4	795,5	453	7	50x10	258,3	80x8	6	38
1100	1800	7+4	795,5	453	7	50x10	258,3	80x8	6	32
1200	1800	7+4	795,5	453	7	50x10	258,3	80x8	6	30

600	1900	5+4	845,5	408,6	5	50x10	412,5	80x8	6	66
700	1900	5+4	845,5	458,6	5	50x10	412,5	80x8	6	43
800	1900	5+4	845,5	508,6	5	50x10	412,5	80x8	6	34
900	1900	5+4	845,5	558,6	5	50x10	412,5	80x8	6	30
1000	1900	7+4	845,5	453	7	50x10	275,0	80x8	6	35
1100	1900	7+4	845,5	453	7	50x10	275,0	80x8	6	29
1200	1900	7+4	845,5	453	7	50x10	275,0	80x8	6	27

600	2050	5+4	920,5	408,6	6	50x10	360,0	80x8	6	70
700	2050	5+4	920,5	458,6	6	50x10	360,0	80x8	6	46
800	2050	5+4	920,5	508,6	6	50x10	360,0	80x8	6	36
900	2050	5+4	920,5	558,6	6	50x10	360,0	80x8	6	32
1000	2050	7+4	920,5	453	8	50x10	300,0	80x8	6	33
1100	2050	7+4	920,5	453	8	50x10	300,0	80x8	6	28
1200	2050	7+4	920,5	453	8	50x10	300,0	80x8	6	25

Application/Limitation

The weathertight doors are found to comply with DNVGL-RU-SHIP July 2018 Pt.3 Ch.12 Sec.2 [6] for Weathertight doors.

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

If the door is installed with a 600x 600 window, with 10 mm safety glass, the design pressure for the door shall be less than 30kN/m².

Doors with side scuttles is to be fitted with a dead light if located in a position where dead light is required for sides scuttles.

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 door frame may be welded or bolted to the bulkhead (ref. drawing no. LG-3-00142 rev. B).

Fire safety:

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With respect to fire safety properties please see separate DNV GL certificate MEDB00003BS (expiring 03-02-2024) for these doors.

Type Approval documentation

Tests to be carried out

The complete installation shall be function and leak tested according to DNVGL-RU-SHIP-Pt2 Ch4 Sec.8 July 2018.

Marking of product

The product is to be marked with the following info:

- Manufacturer's name or brand
- DNVGL Type Approval Certificate No. TAS00001TE
- The specific 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.