



EUROPEAN UNION RECOGNISED ORGANISATION (EU RO) MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

Certificate No:
MRP0000004
Revision No:
3

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

Saldus Welding SIA
Saldus, Latvia

for

Air Pipe Automatic Closing Device

with type designation(s)

Hide 1, Hide 2, Hide 3, Hide 6

The product is found to comply with

EU RO Mutual Recognition Technical Requirements for Air Pipe Automatic Closing Device

Intended service

For the water tank or oil tank except cargo tank extending above the freeboard or superstructure decks", as per Reg.20 of ICLL.

Type	Sizes
Hide 1	DN40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, 600
Hide 2	DN40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, 600
Hide 3	DN40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, 600
Hide 6	DN40, 50, 65, 80, 100, 125, 150, 200, 250, 300

This is to certify:

that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

This Certificate is valid until **2028-03-19**.

Issued at **Høvik** on **2023-03-20**

DNV local unit: **Ulsteinvik**

for **DNV**

Approval Engineer: **Andreas Hansen**

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Zeinab Sharifi
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.



Product description

Air Vent Heads types Hide1, Hide2, Hide3 and Hide6 with plastic ABS float (up to 300 mm sizes) and 1.4462 duplex stainless steel float (350 mm up to 600 mm sizes)

Material of body: Al 5083/H111, 1.4462 duplex stainless steel, Galvanized Carbon steel

Manufactured by

Saldus Welding SIA
 Saldus Municipality, LV-3862
 Latvia

Application/Limitation

The certificate covers design assessment of air vent heads. Installation and other additional requirements related to installation are out of scope of this certificate.

The air vent heads are not considered as devices to prevent the passage of flame into cargo tanks. They shall not be installed on cargo tanks of oil or chemical tankers (flash point < 60°C).

For the galvanized steel air pipe heads, the zinc coating shall be applied by the hot method and the thickness shall be 70 to 100 microns.

Flag national authorities may have their own requirements for the products to be installed aboard ships flying their flag. Both the requirements of national authorities and those of the classification Rules must be complied with.

Results of flow characteristics test and discharge/reverse tests:

Size	Hide 1				Hide 2			
	80% of Blocking velocity obtained from discharge/Reverse tests (m/s)		Resistance coefficient (average values)		80% of Blocking velocity obtained from discharge/Reverse tests (m/s)		Resistance coefficient (average values)	
	Without screen	With screen	Without screen	With screen	Without screen	With screen	Without screen	With screen
DN40	21.60	22.56	3.01	3.84	21	22	3.57	4.18
DN50	18.40	20.64	2.44	3.56	19	20	3.63	4.29
DN65	15.68	15.68	3.40	4.75	15	15	4.76	5.51
DN80	20.80	24.56	3.81	6.43	17	16	5.71	7.35
DN100	16.80	16.80	4.03	5.86	13	13	4.83	6.23
DN125	19.20	19.76	3.72	5.15	15	16	4.46	7.47
DN150	17.36	17.20	4.93	6.93	19	20	5.57	7.53
DN200	16.64	18.40	5.56	7.18	18	14	8.06	9.04
DN250	17.52	16.72	5.77	8.32	22	21	9.55	7.69
DN300	17.20	17.20	7.66	9.63	19	19	7.92	8.52
DN350	23.44	23.44	8.05	10.37	15	28	8.69	9.62
DN400	26.56	26.56	8.90	11.37	16	16	12.12	11.72
DN450	22.80	22.80	9.75	12.37	18	19	12.16	14.93
DN500	21.04	21.04	10.60	13.37	21	21	13.64	14.59
DN600	26.72	26.72	12.30	15.37	18	18	24.82	27.70

Size	Hide 3				Hide 6			
	80% of Blocking velocity obtained from discharge/Reverse tests (m/s)		Resistance coefficient (average values)		80% of Blocking velocity obtained from discharge/Reverse tests (m/s)		Resistance coefficient (average values)	
	Without screen	With screen	Without screen	With screen	Without screen	With screen	Without screen	With screen
DN40	27	27	3.01	3.84	67	58	3.84	2.10
DN50	46	42	2.44	3.56	18	19	4.76	1.73
DN65	21	33	3.40	4.75	19	21	5.78	4.47
DN80	20	21	3.81	6.43	20	18	5.81	6.10

Size	Hide 3				Hide 6			
	80% of Blocking velocity obtained from discharge/Reverse tests (m/s)		Resistance coefficient (average values)		80% of Blocking velocity obtained from discharge/Reverse tests (m/s)		Resistance coefficient (average values)	
	Without screen	With screen	Without screen	With screen	Without screen	With screen	Without screen	With screen
DN100	70	91	4.03	5.86	16	16	6.39	5.39
DN125	69	64	3.72	5.15	17	17	5.26	5.81
DN150	48	51	4.93	6.93	22	22	5.48	2.97
DN200	38	38	5.56	7.18	18	19	5.93	6.61
DN250	33	36	5.77	8.32	20	18	5.96	7.81
DN300	29	35	7.66	9.63	22	22	10.77	12.80
DN350	25	39	8.05	10.37	-	-	-	-
DN400	23	21	8.90	11.37	-	-	-	-
DN450	31	29	9.75	12.37	-	-	-	-
DN500	28	27	10.60	13.37	-	-	-	-
DN600	21	20	12.30	15.37	-	-	-	-

Type Approval documentation

Test carried out

Flow characteristics test, impact test on float, compression loading test on float, tightness test, discharge/reverse test

Marking of product

Each air pipe automatic closing device covered by this certificate shall be marked before shipment for identification of approved equipment. In addition, and as a minimum, the following items to be marked at the suitable place:

- Manufacturer's name or logo Manufacturer's name;
- Type designation;
- Nominal Diameter;
- Resistance coefficient.



Job Id: **262.4-000090-4**
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Periodical assessment

The manufacturer shall apply annually for periodical assessment to DNV. A survey will be carried out to confirm that the production under the MR TAC and the quality assurance scheme are being satisfactory maintained.