

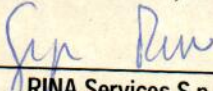


TYPE APPROVAL CERTIFICATE
No. MAC083215XG/001

This is to certify that the product identified below is in compliance with the regulations herewith specified.

<i>Description</i>	AIR PIPE AUTOMATIC CLOSING DEVICES
<i>Type</i>	WIN2000 and WIKO5000
<i>Applicant</i>	WINTEB B.V. PARALLELWEG 1 9672 AW WINSCHOTEN NETHERLANDS
<i>Manufacturer</i>	WINTEB B.V.
<i>Place of manufacture</i>	PARALLELWEG 1 9672 AW WINSCHOTEN NETHERLANDS
<i>Reference standards</i>	Par 9.1, Sec 10, Ch 1, Pt C of RINA Rules for the Classification of Ships and RINA Rules for the Type Approval and Testing of Air Pipe Automatic Closing Devices, ed 2009.
<i>Reference documents</i>	RINA TYPE APPROVAL SYSTEM

Issued in **HAMBURG** on **June 24, 2015**. This Certificate is valid until **June 23, 2020**



RINA Services S.p.A.
Giuseppe Russo

This certificate consists of this page and 1 enclosure



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WIN2000 & WIKO5000

Reference documents

Manufacturer's brochure WIN2000 , WIN2000 HEATED and WIN2000HIAS technical data sheets.

Manufacturer's drawings:

- WIN2000 and WIKO5000 series Assembly Drawings Booklet approved with no. HMMC-2156 on 22 June 2011.
- HIAS Assembly Drawing Approved with HMMC 5639 on 24 June 2015

Test reports:

- Hochschule Bremen-Test report no. Winteb 2005/1, dated 31.05.2005 ;
- Pentair Nijhuis Test report 4145336, dated 12/05/2014;
- Hochschule Bremen-Test report no. Winteb 2014/IR1, dated 18/06/2014;
- Hochschule Bremen-Test report no. Winteb 2014/3, dated 13/04/2015;
- Technische Universität Dresden : Experimental Investigation on Aluminium Valves WIN 2000 HIAS;
- Annex 1 to Test report no. Winteb 2005/1, Results of pressure drop test: Plots, dated 31.05.2005
- Annex 2 to Test report no. Winteb 2005/1, Results of tightness tests, dated 31.05.2005 ;
- Annex 3 to Test report no. WINTEB 2005/1, Results of pressure drop tests: Tables, dated 31.05.2005 ;
- MPA NRW test report nos. 22 0440 5 96-01, -02 and - 03 dated 26 April 1996 (Impact and compression test on ball floats);
- RINA Test certificate N. 06/XN/1452 issued on 15/11/2006 for air vent heads installed on NB 818 RI 82338 of WIN2000 type1: Sizes:DN50/DN65/DN100/DN125 (screen) and DN80/DN150/DN200.
- RINA reports of water tightness test performed on 5/08/2008, 21/10/2008, 30/10/2008 and 28/05/2013.
- Flow Curves Test Reports of WIN2000 DN300, DN350, DN400 DN450 dated 27.11.2009, 1.12.2009 and 18.10.2012.

Materials/Components

- As per the above mentioned approved drawings.

Technical characteristics

- Air vent heads with Polyethylene (PE) ball floats.
size ranges:

- WIN2000	Type 1	DN50, 65, 80,100, 125,150, 175, 200, 250, 300, 350, 400, 450, 500
	Type 1-B	DN50, 65, 80,100, 125
- WIN 2000 HIAS		DN50, 65, 80,100, 125,150, 175, 200, 250, 300, 350, 400, 450, 500
- WIKO5000	Type 1-A	DN50, 65, 80,100, 125,150, 200, 250, 300, 350, 400
	Type 1	DN300, 350, 400
	Gooseneck	DN50, 65, 80,100, 125,150, 200, 250, 300, 350, 400

- Water tightness design draught: 1 bar WIN2000 DN50 up to DN250,
WIKO5000 DN50 up to DN400

- Gooseneck Type 1 is without lower connecting flange while type 1-B is with lower connecting flange.



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WIN2000 & WIKO5000

The vent heads can be delivered with heating mechanisms:

1. "WIN2000 HIAS HEATED" & "WIN2000 HEATED" & WIKO50001A HEATED "
WIN2000 HEATED & WIN2000 HIAS HEATED sizes DN50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500.
WIKO5000 type 1-A sizes DN50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400.

2. "WIN2000 HIAS HEATED with control box" & "WIN2000 HEATED with control box" & WIKO50001A HEATED with control box"

Fields of application

- The Air Pipe Closing Devices may be used on air and overflows pipes which terminate above the open deck

Limitations of use

- The air pipe closing devices are not to be used for ventilation of tanker cargo tanks.

- The air pipe closing devices are to be fitted with manufacturer's specified flame screens when used in air pipes for fuel oil and flammable oil tanks.

- The requirements regarding the actual arrangements on board as stated in Paragraphs 9.1.9 and 9.1.10, including Table 24, of Part C Chapter 1, Section 10 of the RINA Rules are to be fully complied with. These requirements apply to strength checks of air pipes and their closing devices located within the forward quarter length of the ship, for ships of length L 80 m or greater, where the height of the exposed deck in way of the item is less than 0.1L or 22 m above the summer load waterline, whichever is the lesser.

- The requirements in Paragraph 9.1.10 are additional to those specified in Paragraphs 9.1.6 a), in 20.2.2 and 9.1.8 a) of the a.m. RINA Rules.

- Use of heated air pipe heads in hazardous area is not possible otherwise evidence is to be given that heating elements, power supply cables and monitoring/control unit are in compliance with requirements stated in Paragraph 10 Part C Chapter 2 Section 3 of RINA Rules.

Remarks

- For mass produced closing devices, dimensional checks and tightness tests (according to 4.2 and 4.3.2 of the current Rules in reference) are to be performed on sample of closing devices selected from batch which is to be homogeneous as regard material and dimensions.

- For mass produced closing devices WIN2000 type 1, WIKO5000 Type 1A and Gooseneck (see "Technical characteristics"), besides the a.m. dimensional checks and tightness tests, water tightness tests (according to 4.3.5 of RINA Rules for the Type Approval and Testing of Air Pipe Closing Devices, edition 2009) are to be performed on sample of closing devices selected from batch which is to be homogeneous as regard material and dimensions.

- Verification of marking for identification and proper installation on board are to be to the satisfaction of the RINA Surveyor.

- This Certificate replaces the previous one n° MAC046413XG issued on 28.06.2013.

HAMBURG June 24, 2015



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