



**BUREAU
VERITAS**

*Marine & Offshore
Division*

Certificate number: 02898/G2 BV

File number: ACM 167/2303/01 and 02

Product code: 2237H

*This certificate is not valid when presented without the
full attached schedule composed of 7 sections*

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

WINTEB B.V.

WINSCHOTEN - NETHERLANDS

for the type of product

AUTOMATIC OPEN TANK VENTING SYSTEMS

Air Pipe Heads - Type WIKO 5000 and WIN 2000

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel ships
- IACS UR P3 (Rev. 3 Nov 2012)

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 14 Feb 2020

For BUREAU VERITAS,

At BV GRONINGEN, on 20 Nov 2015,

John Mondt



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Air Pipe Heads - Type WIKO 5000 and WIN 2000

1.1 Design Specifications

WIKO 5000 Type 1

Size (DN)	300	350	400
Wall Thickness (mm)	10	10	10
80% of the max. air flow velocity (m/s)	9.6	7.2	7.2

WIKO 5000 Type 1-A

Size (DN)	50	65	80	100	125	150	200	250	300	350	400
Wall Thickness (mm)	6.5	6.5	7.5	7.5	7.5	8	8.5	10	10	10	10
80% of the max. air flow velocity (m/s)	13.2	8	5.6	8	6.8	11.2	10.4	8.8	12	7.6	8

WIKO 5000 Type Gooseneck 1 / 1B

Size (DN)	50	65	80	100	125	150	200	250	300	350	400
Wall Thickness (mm)	6.5	6.5	6.5	7.5	7.5	8	8.5	8.5	10	10	10
80% of the max. air flow velocity (m/s)	12.8	13.6	17.6	18	18	18	10.8	18	15.6	19.2	17.2

WIN 2000 Type 1

Size (DN)	50	65	80	100	125	150	175	200	250	300	350	400	450
Wall Thickness (mm)	6	6	6	7.5	7.5	7.5	7.5	7.5	8.5	10	10	10	10
80% of the max. air flow velocity (m/s)	8	7.6	8	6.4	7.6	8	6.8	8	7.6	12	15.2	16.4	12.4

WIN 2000 Type 1-B

Size (DN)	50	65	80	100	125
Wall Thickness (mm)	6	6	6	7.5	7.5
80% of the max. air flow velocity (m/s)	7.2	7.6	8.4	5.6	8.6

WIN 2000 Type HIAS

Size (DN)	50	65	80	100	125	150	175	200	250	300	350	400	450	500
Wall Thickness (mm)	6	6	6	7.5	7.5	7.5	7.5	7.5	8.5	10	10	10	10	10
80% of the max. air flow velocity (m/s)	15.8	15	32.7	50.7	48	34.9	32.8	22.4	12.5	32.9	28.8	22	27	24.5

- Ball Diameter (mm): 60, 75, 90, 105, 130, 155, 200, 240, 250, 325, 360, 400 & 480

The Balls are covered by GL Type Approval Certificate n° 83 852-96HH valid until 22/05/2016

- Flange connections according to international standards

1.2 Material specification

Casing	G-ALMg3Si, G-ALMg4Si (UNS A95086), G-ALMg5Si, GG-25, GGG-40, G-CuAl10Ni,CuNi10Fe1Mn, G-CuSn10Zn, G-CuZn33Pb, G-AlSi7Mg
Ball	PE Polyethylene
O-rings	NBR Nitrile Rubber

Options :

- De-icing system, Electric Heat Tracing protection: Ex II 2 G/D EEx e II T3
- Flame screen
- Insect screen: stainless steel

2. DOCUMENTS AND DRAWINGS

2.1 Manufacturer's brochure

2.2 Drawings:

- N° 50-150-01-A Rev.D1 dated 04/08/2005 for WIKO 5000 type 1-A DN 50 to 150
- N° 200-400-01-A Rev.03 dated 10/08/2005 for WIKO 5000 type 1-A DN 200 to 400 and type 1 DN 300 to 400
- N° WIKOHEATED-01 Rev.D dated 07/01/2014 for WIKO 5000 Heated General Drawing
- N° W5GN Rev.B dated 10/01/2011 for WIKO 5000 type Gooseneck 1 / 1B DN 50 to 400
- N° WIN2000-01 Rev.T for WIN 2000 General Drawing
- N° WIN2000HEATED-01 Rev.J dated 22/12/2010 for WIN 2000 Heated General Drawing

2.3 EC Declaration of conformity for KSR Self-Regulating Trace Heaters N° DEMKO 04ATEX136794X dated 18/04/2012

3. TEST REPORTS

3.1 Type WIKO 5000

- Tightness test and flow characteristics test report for WIKO 5000 type 1 / 1-A N° WINTEB 2005/1 dated 31/05/2005
- Tightness test and flow characteristics test report for WIKO 5000 type Gooseneck 1 / 1B N° WINTEB 2009/1 dated 18/12/2009
- Reverse flow test report for WIKO 5000 type 1 / 1-A and Gooseneck type 1B performed at Dresden University dated 03/2011

3.2 Type WIN 2000

- Tightness test and flow characteristics test report for WIN 2000 type 1 / 1B N° WINTEB 2005/1 dated 31/05/2005 & N° WINTEB 2010/1 dated 07/06/2010
- Flow characteristics test report for WIN 2000 type HIAS N° Winteb 4145336 dated 12/05/2014
- Reverse flow test report for WIN 2000 type 1 / 1B performed at Dresden University dated 03/2011
- Reverse flow test report for WIN 2000 type HIAS performed at Dresden University dated 04/2014

4. APPLICATION / LIMITATION

4.1 May be used on air pipes from tanks intended for ballast water, fresh water and oil fuel fluids.

4.2 Approved as air pipes from tanks for ships intended to be granted with the additional POLAR Class notations when the de-icing device is installed.

4.3 Ex certification is not covered by this certificate, application in hazardous areas are to be approved in each case according to the rules and conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.

4.4 As automatic closing devices on air and overflow pipes which terminate above the open deck.

4.5 The use of air pipes for cargo tanks of tankers and for ballast water management by flushing the ballast water through an air pipe head is not part of this type approval. Winteb aluminium air heads are acceptable for the ballast tanks in open deck cargo area's of tankers as defined in Solas.

4.6 The height of air pipes above deck is to be in accordance with the Bureau Veritas Rules.

4.7 The additional strength requirements to resist green sea forces shall be considered for ships having to comply with Bureau Veritas Rules Pt C, Ch 1, Sec 10 [9.1.9].

4.8 Gooseneck types may only be fitted as tank air pipes.

4.9 Aluminium airheads other than gooseneck types may be accepted as vent pipes if mounted on steel pipes of minimum required scantlings and provided with a steel closing device within the steel part of the vent pipe.

4.10 When the De-icing system is installed, the cable installation onboard is to be carried out to the attending surveyor's satisfaction.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be supplied by **WINTEB B.V.** in compliance with the type described in this certificate and in compliance with the requirements stated on the front page of this certificate. This type of product is within the category HBV of BUREAU VERITAS Rule Note NR 320.

5.2 **WINTEB B.V.** has to make the necessary arrangements to have its works recognized by BUREAU VERITAS in compliance with the requirements of NR 320 for HBV products.

5.3 No BUREAU VERITAS Certificate is required.

Place of production

**WINTEB B.V.
Parallelweg 1
9672 AD WINSCHOTEN
NETHERLANDS**

6. MARKING OF PRODUCT

Air pipe heads shall be marked with:

- Manufacturer's name or logo
- Model
- Size
- Ex marking, as relevant

7. OTHERS

This approval is given on the understanding that the manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper methods of fitting and general maintenance of the products and of the conditions of this approval.

This certificate supersedes the Type Approval Certificate N° 02898/G1 BV issued on 30/09/2015 by the Society.

***** END OF CERTIFICATE *****