



Marine & Offshore

Certificate number: 08223/E0 BV

File number: ACM 145/2314/003

Product code: 2223I

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

WOUTER WITZEL EUROVALVE B.V.
LOSSER - NETHERLANDS

for the type of product

CHECK VALVES, NON-RETURN VALVES
Check Valve ECV Wafer type without flanges

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units

This certificate is issued to attest that Bureau Veritas Marine & Offshore 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: 10 Jul 2024

For Bureau Veritas Marine & Offshore,
At BV GRONINGEN, on 10 Jul 2019,
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 Marine & Offshore. 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 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 Marine & Offshore 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

Check Valve ECV wafer type without flanges, rubber seated

The check valve ECV is self acting pivoting double valve discs, used to avoid unwanted back flow in a pipe, designed for steady flow conditions and can be installed in horizontal and vertical pipelines.

1.1 Ratings

Size	DN 50 to DN 600
Maximum design pressure	16 bar
Temperature range	-30 °C +110 °C / EPDM 0 °C +90 °C / NBR 0 °C + 110 °C / FPM

1.2 Material specification

Body	Grey cast iron (DN 50 - 200/2" to 8") GG 25 DIN 1691/JL 1040 EN 1561 Ductile cast iron (DN 250 - 600/10" to 24") GGG 40 DIN 1693/JS 1030 EN 1563 Al-Bronze casting DIN 1714/CC331G EN 1982 Stainless Steel 1.4408 / ASTM A351, CF8M
Disc	Al-Bronze casting DIN 1714/CC331G EN 1982/CC333G EN 1982 Stainless Steel 1.4408 / ASTM A351, CF8M
Seat	NBR / EPDM / FPM

2. DOCUMENTS AND DRAWINGS

- Product data sheet PDS02.01.001 dated 12/01/2017
- Instruction, Installation and Maintenance Manual N° 100.03.06.300 dated 15/06/2019

3. TEST REPORTS

Not required

4. APPLICATION / LIMITATION

4.1 - May be used for the following services on board:

Sea water and fresh water / Bilge and ballast transfer / Fuel-oil and lubricating oil transfer / Washing and fire extinguishing Deck foam systems / Domestic and sanitary systems / Non essential systems

4.2 - The check valves belong to Class II and Class III according to the relevant requirements stated in Part C, Chapter 1, Sec 10 of BUREAU VERITAS Rules.

4.3 - The valves are not to be used as shipside valves.

4.4 - The use of stainless steel is restricted as per BUREAU VERITAS rules.

4.5 - The use of ordinary cast iron is to be restricted as per BUREAU VERITAS Rules.

4.6 - The check valve body, disc and seat should be suitable for the intended service.

4.7 - The valve is to be installed according to manufacturer instructions and BUREAU VERITAS Rules.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 - The products are to be supplied by **WOUTER WITZEL EUROVALVE B.V.** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of BUREAU VERITAS Rule Note NR320.

5.3 - BUREAU VERITAS Certificates are required for materials of valve housings of Class II (DN≥100). Materials of valve housings of Class II (DN<100) and for other parts of Class II are to be provided with Work's certificates.

5.4 - Each valve housing for Class II is to be hydraulically pressure tested to 1.5 times the design pressure.

5.5 - For information, **WOUTER WITZEL EUROVALVE B.V.** has declared to Bureau Veritas the following production site:

WOUTER WITZEL EUROVALVE B.V.

**Industrieterrein De Pol 12
7581 CZ LOSSER
NETHERLANDS**

6. MARKING OF PRODUCT

The check valve shall be marked with:

- Manufacturer's name or logo
- Type designation
- Size
- Society's brand as relevant

7. OTHERS

It is **WOUTER WITZEL EUROVALVE B.V.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the Type Approval Certificate N° 08223/D0 BV issued by the Society.

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