



Marine &amp; Offshore

Certificate number: 03049/G2 BV

File number: ACM 145/2314/001

Product code: 2205I

*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*

**BUTTERFLY VALVES**

Wafer Type EVS, EVBS, EVBLS, EVCS, EVTLS, EVMS, EVML, EVUS  
Double Flanged Type EVFS, EVFL

### 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: 29 Nov 2022**

**For Bureau Veritas Marine & Offshore,**  
At BV GRONINGEN, on 14 Aug 2018,  
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](http://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

Butterfly valves wafer type EVS, EVBS, EVBLS, EVCS, EVTLS, EVMS, EVML, EVUS

Butterfly valves double flanged type EVFS, EVFL

#### 1.1 Rating

Range	Body type	Size	Maximum working Pressure (bar)	Class & Pressure rating	Design Temperature (°C)
EVS	Flangeless wafer type	DN 50 - 1400 (2" - 56")	16 20 for DN ≤ 600	PN 6, 10, 16, Class 150	-20°C to 200°C
EVBS	Semi-lug wafer type	DN 50 - 300 (2" - 12")	16	PN 10, 16	-20°C to 200°C
EVBLS	Semi-lug wafer type with long neck	DN 50 - 200 (2" - 8")	16	PN 10, 16	-20°C to 200°C
EVCS	Flangeless wafer type with centring lugs	DN 50 - 300 (2" - 12")	16	Class 150, PN 6	-20°C to 200°C
EVTLS	Tapped lug wafer type	DN 50 - 1200 (2" - 48")	25	PN 6, 10, 16, Class 150	-20°C to 200°C
EVMS	Single flanged wafer type	DN 350 - 1000 (14" - 40")	16	PN 6, 10, 16, Class 150	-20°C to 200°C
EVML	Single flanged wafer type (long)	DN 80 - 800 (3" - 32")	25	PN 6, 10, 16, Class 150	-20°C to 200°C
EVFS	Double flanged type	DN 40 - 2000 (1 1/2" - 80")	16 20 for DN ≤ 600	PN 6, 10, 16, Class 150	-20°C to 200°C
EVFL	Double flanged type (long)	DN 50 - 1500 (2" - 60")	16	PN 6, 10, 16, Class 150	-20°C to 200°C
EVUS	Flanged wafer type	DN 600 - 2400 (24"-96")	16	PN 6, 10, 16, Class 150	-20°C to 200°C

*The maximum service pressure and temperature are not to exceed those specified by the manufacturer.*

#### 1.2 Material specification

Part	Material
Body	Cast Iron: JL1040 EN1561, ASTM A48-40B Nodular Cast Iron: JS1030, 5.3101 / JS 1049, 5.3103 EN1563, ASTM A536 60.40.18, ASTM A395 60-40-18 Carbon Steel: 1.069 EN10213-2, ASTM A216-WCB Bronze: ASTM B584 C83600, 2.1096 DIN1705, CC491K EN1982 / ASTM B584 C90500, 2.1086 DIN1705, CC482K EN1982 / CC493K EN1982, ASTM B584 C93200 Albronz: CC333G EN1982, C95800 ASTM B148 / C95500 ASTM B148 Stainless Steel: 1.4408 EN 10213, ASTM A351 CF8M
Disc	Stainless steel: 1.4057, AISI 431, 1.4408, AISI 316, Duplex 1.4462, 1.4517, Super Duplex 1.4469, ASTM A995 5A Bronze: ASTM B584 C83600, 2.1096 DIN1705, CC491K EN1982 / ASTM B584 C90500, 2.1086 DIN1705, CC482K EN1982 Albronz: CC333G EN1982, C95800 ASTM B148, C95500 ASTM B148 Nodular Cast Iron JS1030 EN 1563, ASTM A536 60.40.18
Sealing	EPDM, NBR, FPM, Silicone

*When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.*

### 2. DOCUMENTS AND DRAWINGS

- Manufacturer's technical documentation TD/E/1997/1.
- Product Data Sheet Wouter Witzel - EVS N° PDS01.01.001 dated 07/08/2018
- Product Data Sheet Wouter Witzel - EVCS N° PDS01.03.001 dated 15/07/2018
- Product Data Sheet Wouter Witzel - EVBLS N° PDS01.04.001 dated 15/07/2018

- Product Data Sheet Wouter Witzel - EVBS N° PDS01.05.001 dated 15/07/2018
- Product Data Sheet Wouter Witzel - EVTLS N° PDS01.06.001 dated 07/08/2018
- Product Data Sheet Wouter Witzel - EVUS N° PDS01.07.001 dated 12/02/2018
- Product Data Sheet Wouter Witzel - EVMS N° PDS01.08.001 dated 15/07/2018
- Product Data Sheet Wouter Witzel - EVML N° PDS01.09.001 dated 15/07/2018
- Product Data Sheet Wouter Witzel - EVFS N° PDS01.10.001 dated 07/08/2018
- Product Data Sheet Wouter Witzel - EVFL N° PDS01.11.001 dated 15/07/2018

*No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings*

### **3. TEST REPORTS**

- Certificate of inspection N° 0485 RTD 12 dated 12/03/2012
- Certificate of inspection N° 1563 RTD 12 dated 09/07/2012
- Certificate of inspection N° 0417 RTD 09 dated 09/06/2009
- Certificate of inspection N° 0507A RTD 08 dated 10/11/2008
- Certificate of inspection N° 0420 RTD 09 dated 11/08/2009
- Fire resistance tests N° IBB 1344, IBB 1342, IBB 1340 dated 19/12/2014 (EVLTS DN50, 125, 300), N° IBB 1356 dated 04/02/2015 (EVUS DN600), N° IBB 1346 dated 22/12/2014 (EVFS DN125) according to ISO 19921:2005.

### **4. APPLICATION / LIMITATION**

4.1 May be used for the following services on board:

- Shiplside valves, bilge and ballast, washing and fire extinguishing, deck foam systems, sea water and fresh water cooling, fuel oil and lubricating oil transfer, hydraulic oil, inert gas, compressed air, cargo oil for tankers and non essential systems

4.2 The valves belong to class I, class II or class III according to the relevant requirements stated in Part C, Ch 1, Sec 10 of the Bureau Veritas Rules. Valves fitted on the ship side and collision bulkhead, valves fitted on fuel oil and lub oil tanks under static pressure belong to class II.

4.3 The use of ordinary cast iron and stainless steel is to be restricted as per the Rules.

4.4 The use of Copper and aluminium brass is to be restricted as per the Rules.

4.5 The butterfly valve body, disc and sealing should be suitable for the intended service. In particular the nature of materials, joints included, is to be selected according to the fluid to be conveyed.

4.6 The following types may be used when fire resistance test is required : EVS, EVTLS, EVFS, EVUS up to and including DN 1200.

4.7 The approval does not include any operating gear for remote control of the valves.

4.8 The valve is to be installed according to manufacturer instructions and Bureau Veritas Rules.

4.9 When the butterfly valves are not fitted with flanges their use may be accepted as shiplside valves provided that arrangement are made to allow a possible disassembling at sea of the pipes immediately inboard without any risk of flooding.

4.10 Bilge valves will be fitted in association with a non return valve.

### **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 BV product certificate is required.

5.4 Bureau Veritas Certificates are required for materials of valve housings of Class I (DN≥50) and Class II (DN≥100). Materials of valve housings of Class I (DN<50) and Class II (DN<100) and for other parts of Class I and Class II are to be with Work's certificates.

5.5 Each valve housing for Class I and Class II is to be hydraulically pressure tested to 1.5 times the design pressure.

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 valve shall be permanently marked with at least:

- 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° 03049/G1 BV issued by the Society.*

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