



Marine & Offshore

Certificate number: 14087/D0 BV

File number: ACM 145/2016/02

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

TTV-JC VALVE GROUP

LEGANES (Madrid) - SPAIN

for the type of product

BUTTERFLY VALVES

Series Wafer, Lug and Double Flanged type

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: 02 Jul 2025

For Bureau Veritas Marine & Offshore,

At BV BILBAO, on 02 Jul 2020,

Juan Jose GUTIERREZ GARCIA



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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Series Wafer, Lug and Double Flanged type

1.1 Design Specifications

Wafer and Lug type size range	DN 32 - DN 1000
Flanged type size range	DN 150 - DN 1000
Pressure rating	PN 10, PN 16

Seat lining	Design Temperature related to elastomers (°C)
EPDM	- 5 to + 90
EPDM-H.T	- 10 to + 110
NBR (Nitrile)	- 10 to + 80
CSM (Hypalon)	- 10 to + 80
FPM (Viton)	- 5 to + 180
NR (Polysopreno)	- 10 to + 60
MVW (Silicone)	- 30 to + 150
Silicone-HT	- 50 to + 160

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

1.2 Materials

Body	EN 1561 EN GJL-250 / EN 1563 EN-GJS-400.15/15U / EN 1563 EN-GJS-500.7/7U Ductile Iron / ASTM A351 CF-8M Stainless Steel / AISI 316L CF3M / EN 1982 CC33G/ Aluminium Bronze / ASTM B62 C83600 Bronze / ASTM A216 WCB Carbon Steel
Disc	EN 1561 EN GJL-250 / EN 1563 EN-GJS-400.15/15U / EN 1563 EN-GJS-500.7/7U Ductile Iron / ASTM A351 CF-8M Stainless Steel / AISI 316L CF3M / EN 1982 CC33G Aluminium Bronze / ASTM B62 C83600 Bronze / ASTM B148-9D C95500, ASTM A216 WCB Carbon Steel, Uranus B6, Monel K500, ASTM A329 Duplex 1.4460, Hastelloy C
Shaft	Stainless steel AISI 303/304/316/316L / Hastelloy C, AISI 318 Duplex 1.4462, Monel K500
Seat	EPDM, EPDM H.T., NBR, CSM (Hypalon), FPM (Viton), NR (Polysopreno), MVQ (Silicone), SILICONE-HT

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

2. DOCUMENTS AND DRAWINGS

- Manufacturer's catalogue and technical specifications Ref.D.L.M.-20831-2004 dated 2004
- Drawings of butterfly valves:
- N° 4327-5077-010-A3 Rev. A Wafer valve DN 32-200 PN 10/16 dated 13/03/2020
- N° 4330-5080-010-A3 Rev. A Wafer valve DN 250-400 PN 10/16 dated 13/03/2020
- N° 4331-5081-010-A3 Rev. A Wafer valve DN 450-1000 PN 10 dated 13/03/2020
- N° 4341-5091-010-A3 Rev. A Wafer valve DN 450-1000 PN 16 dated 13/03/2020
- N° 4342-5092-010-A3 Rev. A Flanged valve DN 150-200 PN 10/16 dated 16/03/2020
- N° 4343-5093-010-A3 Rev. A Flanged valve DN 250-400 PN 10/16 dated 16/03/2020
- N° 4344-5094-010-A3 Rev. A Flanged valve DN 450-1000 PN 10 dated 16/03/2020
- N° 4345-5095-010-A3 Rev. A Flanged valve DN 450-1000 PN16 dated 16/03/2020
- N° 4347-5097-010-A3 Rev. A Lug valve DN 32-200 PN 10 dated 16/03/2020
- N° 4353-5103-010-A3 Rev. A Lug valve DN 250-400 PN 10/16 dated 16/03/2020
- N° 4354-5104-010-A3 Rev. A Lug valve DN 450-1000 PN 10 dated 16/03/2020
- N° 4355-5105-010-A3 Rev. A Lug valve DN 450-1000 PN 16 dated 16/03/2020
- Installation instructions dated 01/01/1999

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

Not required.

4. APPLICATION / LIMITATION

4.1 May be used for the following services on board:

- Shipside valves, fuel oil and lubricating oil, ballast and bilge, washing and fire extinguishing, sea water and fresh water, cargo systems for tankers, domestic and sanitary systems, inert gas and non essential systems.

4.2 The butterfly 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 for the Classification of Steel Ships.
- Part C, Chapter 1, Sec 7 of BUREAU VERITAS Rules for the Classification of Offshore Units.

Valves under static pressure on oil fuel tanks or lubricating oil tanks and valves fitted on the ship side and collision bulkhead belong to Class II.

4.3 Use of grey cast iron is restricted according to Pt C, Ch 1, Sec 10 Table 5 of the BUREAU VERITAS Rules, can be used for class III and class II system (only when the design pressure does not exceed 1,3 MPa). The use of stainless steel and aluminium is restricted as per BUREAU VERITAS rules.

4.4 The butterfly valve body, disc and sealing shall 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.

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

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

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

4.8 The valves are to be installed according to the manufacturer's instructions and Society's Rule requirements.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be supplied by **TTV-JC VALVE GROUP** in compliance with the type and the requirements described in this certificate. This type of product is within the category IBV of BUREAU VERITAS Rule Note NR320.

5.2 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 with Work's certificates.

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

5.4 BV Product certificate is required.

5.5 For information, **TTV-JC VALVE GROUP** has declared to Bureau Veritas the following production site(s):

TTV-JC VALVE GROUP: Pol. Ind. Ntra. Sra. de Butarque, C/ Severo Ochoa, 11, 28914 LEGANES (Madrid), SPAIN

6. MARKING OF PRODUCT

The product shall be marked with at least:

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

7. OTHERS

It is **TTV-JC VALVE GROUP'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 No. 14087/C0 BV issued by the Society.

*** END OF CERTIFICATE ***