



**Marine & Offshore
Division**

Certificate number: 09574/D0 BV

File number: ACM 145/1936/002

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

SIGEVAL S.A.

Torrejón de Ardoz (Madrid) - SPAIN

for the type of product

BUTTERFLY VALVES

Models FL(w), FA(wM)-FI(wM) & KL Wafer

Models LUG(w), LUG A(wM) & LUG BZ(w) Lug

Models FG(w) & BBV(w) Double Flanged

Requirements:

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

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: 11 Nov 2021

For BUREAU VERITAS,
At BV MADRID, on 11 Nov 2016,
Montserrat Espin



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

Butterfly Valves

Models FL(w), FA(wM)-FI(wM) & KL Wafer

Models LUG(w), LUG A(wM) & LUG BZ(w) Lug

Models FG(w) & BBV(w) Double Flanged

1.1 Design Specifications

Model	End Connection	Nominal Size Range DN (mm)	Pressure Rating (PN)
FL(w)	Wafer	25 to 800	16 for DN 25-150 10 for DN 200-800
FA(wM)-FI(wM)	Wafer	25 to 300	16 for DN 25-150 10 for DN 200-300
KL	Wafer	50 to 200	10 for DN 50-100 6 for DN 125-200
LUG(w)	Lugged	25 to 600	16 for DN 25-150 10 for DN 200-600
LUGA(wM)	Lugged	25 to 600	16 for DN 25-150 10 for DN 200-600
LUG BZ(w)	Lugged	300	10
FG(w)	Double Flanged	150 to 800	10
BBV(w)	Double Flanged	40 to 1200	16 for DN 40-150 10 for DN 200-1200

1.2 Temperature range (°C) according to manufacturer's recommendations

EPDM	-20/110	Flucast AF FPM	0/200
NBR	-10/90	EPDM High Temperature	80/130
Silicone MVQ	-60/200	Flucast AB/P	-10/70
Silicone Steam MVQ	-60/140	Silicone Food Products MVQ	-60/200
Hypalon CSM	-25/125	Viton FPM	-15/210
Butylic IIR	-10/95	Flucas t AB/E	-20/95
Neoprene CR	-25/80		

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

1.3 Materials

Body	Cast Iron GG-25 , Nodular Cast iron GGG-40, Carbon Steel WCB, EN 10025 S 275 JR (Laminated) Casting Aluminium, Bronze casting CuAl10Fe5Ni5
Disc	Nodular Cast Iron GGG-40, Stainless Steel CF8/CF8M, Bronze-Aluminium
Seat	see 1.2 above

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

2. DOCUMENTS AND DRAWINGS

- Manufacturer's catalogue and technical specifications dated 2014
- Technical brochure (Edition 00) including installation instructions dated 2012
- General dimension Drawings: N° FL(w)-0001-DT Rev 06, N° KL-001-DT Rev 02, N° FA(wM)/FI(wM)-001-DT Rev 04, N° LUG(w)-001-DT Rev 04, N° LUGA(wM)-001-DT Rev 01, N° FG(w)-001-DT Rev 06
- N° ARMON-0029/30/31/32-DT Rev 01 dated 22/02/2013 for LUG A(wM)

- N° ARMON-0033/30/31/32-DT Rev 01 dated 17/05/2013 for LUG Bz(wM)
 - Drawings N° BBV(w)-001-DT Rev 03, N° BBV(w)-010-DT Rev 01, N° BBV(w)-011-DT Rev 01 and N° BBV(w)-012-DT Rev 01 dated 15/05/2015 for Butterfly Valves BBV(w)
- 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

- SIGEVAL butterfly valves tested and witnessed by a Society's Surveyor: shell strength test (max. working pressure x 1,5).
- Certificates of Inspection issued by the Society N° 51210000002 dated 13/01/2000 (tightness test valve according to note DT2/PRI/NF dated November 1985) and N° 0054/MDD/03 (wafer Type FN/FG DN400 PN 10, tightness test at 1,1 times the max. working pressure).
- SIGEVAL Quality Certificate N° 13/0244 dated 19/04/2013 witnessed by a Society's Surveyor.
- Report of pressure test N° 0036MDD13 dated 09/04/2013.
- Hydrostatic pressure test at 1.5 times the max. working pressure, tightness test at 1.1 times the max. working pressure, opening/closing test, report N° 0029MDD16 witnessed by a Society's Surveyor dated 12/07/2016.

4. APPLICATION / LIMITATION

4.1 May be used for the following services on board:

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

4.2 The butterfly valves belong to class II and class III according to the relevant requirements stated in NR 467, Part C, Chapter 1, Sec 10 of the Bureau Veritas Rules. Valves under static pressure on fuel oil tanks or lubricating oil tanks and valves fitted on the ship side and collision bulkhead belong to Class II.

4.3 The use of grey cast iron and stainless steel is to be restricted as per the 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 The valve is to be installed according to manufacturer's instructions.

4.8 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 **SIGEVAL S.A.** 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 Certificate is required for materials of valve housings of class II (DN≥100). Materials of valve housings of class II (DN<100) and for other parts 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. Valves intended to be fitted on the shipside below the load waterline are to be tested by hydraulic pressure not less than 0,5 MPa.

5.4 BV product is required

SIGEVAL S.A. has declared to Bureau Veritas the following production site:

SIGEVAL S.A.: Calle Sauce, 49 - Polígono Industrial, 28850 Torrejón de Ardoz (Madrid), SPAIN

6. MARKING OF PRODUCT

Each valve shall be permanently marked with at least:

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

7. OTHERS

It is **SIGEVAL S.A.** '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 Type Approval Certificate N° 09574/C1 BV issued by the Society.

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