



Marine & Offshore

Certificate number: 07439/E0 BV

File number: ACM 145/0412/001

Product code: 7232I

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
DENNIS NAKAKITA S.A.
 CIUDAD REAL - SPAIN

for the type of product
BUTTERFLY VALVES FOR OIL/PRODUCT/CHEMICAL TANKERS
 L - Series and R - 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
- IBC Code

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: 12 Feb 2023

For Bureau Veritas Marine & Offshore,
 At BV MADRID, on 12 Feb 2018,
 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 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

Butterfly valves L - Series and R - Series

1.1 Technical specification

Models	L Serie	R Serie
Size range (mm)	DN 40 to DN 1000	DN 40 to DN 1000
Design pressure (bar)	PN 10	PN 25
End connections	Wafer, lug and double-flanged type	Wafer, lug and double-flanged type
Flange rating	DIN, ASA, ISO, FN, BS, JIS	DIN, ASA, ISO, FN, BS, JIS

1.2 Temperature range depending on the seat material

Seat	°C	Seat	°C
Natural rubber	-40 / 60	Hypalon	-20 / 130
Ethylene Propylene	-40 / 120	Silicon	0 / 220
Neoprene	-40 / 110	Viton fluorade	0 / 120
Nitrile (Buna-N)	-15 / 120	Teflon (PTFE)	-100 / 200
Butile	-30 / 100		

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

1.3 Material specification depending on type

Body and disc	Cast iron ASTM A126 class B / Nodular cast iron ASTM A536 / Carbon steel ASTM A216 Gr. WCB Alloy steel ASTM A352 Gr. LCB, LC2, LC3 / Cast stainless steel ASTM A351 CA-15, CF8, CF8M Forged stainless steel ASTM A182 Gr. F6, F316, F304 and AISI 431 / Monel 400 / Stellite Hastelloy B, C / Bronze ASTM B62 / Aluminium bronze ASTM B148 9A, ASTM B 148 52 AL 9D
Stem	Stainless Steel AISI 304 / AISI 316 / AISI 316L / AISI 420 / AISI 431, Monel K500 / Monel K400, Duplex / Superduplex
Seat	Natural rubber, ethylene propylene, neoprene, nitrile, butile, hypalon, silicon, viton, teflon (PTFE)

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

2. DOCUMENTS AND DRAWINGS

2.1 Manufacturer's drawings:

- N° I.T.-8-L - Butterfly valve wafer-lug Serie L
- N° I.T.-8-L-DB - Butterfly valve double flanged Serie L
- N° I.T.-8-R - Butterfly valve wafer-lug Serie R
- N° I.T.-8-R-DB - Butterfly valve double flanged Serie R
- N° I.T.-8-GD - Butterfly valve big diameter

2.2 Manual of installation, use and maintenance N°17.003

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.

Fire resistance test not performed.

4. APPLICATION / LIMITATION

4.1 May be used for the following services on board:

- Cargo oil transfer of oil tankers and chemical tankers
- Shipside valves, bilge and ballast, washing and fire extinguishing, sea water and fresh water cooling, fuel oil and lubricating oil, hydraulic oil, inert gas, compressed air, domestic and sanitary systems

4.2 The butterfly valves belong to class I, class II and class III according to the relevant requirements stated in Pt C, Ch 1, Sec 10 and Pt D, Ch 7, Sec 4 and Ch 8, Sec 5 of the Bureau Veritas Rules. Valves under static pressure on fuel oil tanks and lubricating oil tanks, valves fitted on the ship side and collision bulkhead belong to Class II.

4.3 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.

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

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

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

4.7 The valves intended to be used for handling of Propylene Oxide or Ethylene Oxide/ Propylene Oxide mixtures shall be of a fire safe design.

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

4.9 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.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be supplied by **DENNIS NAKAKITA S.A.** 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 BV Certificate is required for materials of valve housings of class I (DN ≥ 50) or class II (DN ≥ 100). Materials of valve housings of class I (DN < 50) or class II (DN < 100) and for other parts 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. 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

For information, **DENNIS NAKAKITA S.A** has declared to Bureau Veritas the following production site:

DENNIS NAKAKITA S.A: Pol Ind Alces, C: Juan Carlos I. S/N, 13600 Alcazar de San Juan CIUDAD REAL, SPAIN

6. MARKING OF PRODUCT

Each valve shall be permanently marked with at least:

- Manufacturer's name or logo
- Type designation
- Maximum working Pressure and Test Pressure
- Society's brand as relevant

7. OTHERS

It is **DENNIS NAKAKITA 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 the Type Approval Certificate N° 07439/D0 BV issued by the Society.

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