Certificate No: LR26294782TA
Issue Date: 30/06/2026
Expiry Date: 29/06/2031

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**Zhejiang Zhongxin Valve Co., Ltd.**
Address	No. A201, 2nd Road, 1st Lane, Binhai Industrial Park, Binhai Economic and, Technological Development Park, Wenzhou City, 325000, China
Type	Butterfly Valves
Description	Wafer type Concentric Butterfly Valve and Lug type Concentric Butterfly Valve
Trade Name	ZXBU-CO-WF and ZXBU-CO-LG
Application	Marine piping systems. For Installation on ships and offshore installations classed or intended for classification with Lloyd's Register allowable systems including: 1. Sea and freshwater systems including shipside valves 2. Ballast Water 3. Cargo Lines as "in-line" valves on oil and chemical tankers and on liquefied gas carriers (depending on pressure, temperature, medium and material) 4. As "in-line" valves in lubricating or oil fuel piping systems in low fire risk compartments of cargo vessels 5. As suction valves on double bottom oil fuel tanks (only when located in a closed pipe tunnel or duct keel) 6. Bilge suctions (in association with a metal non return valve) in low fire risk compartments of cargo vessels only 7. As pump suction valves from the main bilge line only where the valve is located in the immediate vicinity of the pump. The valve is to be fitted in conjunction with a metal non-return valve, which is to be on the bilge main side of the butterfly valve.

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Mandar Ojale

Engineering Piping - Specialist to Lloyd's Register Marine and Offshore India LLP
A member of the Lloyd's Register group

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8. Sanitary black and grey water
9. As "in-line" valves in oil piping systems of hydraulic deck machinery
10. In inert gas systems
11. Air piping (Except as stop valves for air receivers) having working pressure not greater than 7 bar.

Specified Standard

Lloyd's Register Rules and Regulations for the Classification of Ships (July 2025)
EN 593:2017
API 609 2021
API 598 2023

Ratings

Wafer type (ZXBU-CO-WF)
Sizes: DN50-DN600
Pressure rating: PN6, PN10, PN16, CL150
Sizes: DN700-DN1200
Pressure rating: PN10, PN16, CL150

Lug type (ZXBU-CO-LG)
Sizes: DN50-DN600
Pressure rating: PN6, PN10, PN16, CL150
Sizes: DN700-DN1200
Pressure rating: PN10, PN16, CL150

Working Temperature (°C):
NBR: (-25 ~ 90°C)
EPDM: (-35 ~ 120°C)
VITON: (-20 ~ 200°C)

Body material: Ductile Iron (Cr-65-45-12)
Shaft & Disc material: Stainless steel (CF8/CF8M)
Seat material: NBR/EPDM/Viton

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Other Conditions

For application on a Lloyds Register classed vessel, the following conditions are to be complied with: -

1) The materials used for valves are to be suitable for the medium and the service for which the piping is intended on-board. The application limitation to valves of cast iron is to be in accordance with the requirements of Rules Part 5, Chapter 12, Section 4.

2) Valves are to be selected and installed in accordance with the manufacturer's instructions and recommendations and to the attending Surveyor's satisfaction.

3) Materials for castings and forgings of Class II piping systems are to be produced at a works approved by LR and are in general to be tested in accordance with the Rules for Materials.

4) Where valves intended for installation in pressure piping systems having working pressures exceeding 7 bar, the valves are to be surveyed at the manufacturer's work and to the attending Surveyor's satisfaction.

5) Valves are not to be used in spaces where leakage or failure caused by fire could result in fire spread, flooding or the loss of an essential service.

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

7) The approval of the butterfly valves for use as shipside valves is limited to those in machinery spaces and is not applicable to scuppers or similar fittings. proposals to use butterfly valves as shipside valves, outside machinery spaces, will be specially considered.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Marine and Offshore India LLP of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document LR26294782TA_DAD and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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