Certificate No: LR2675179TA
Issue Date: 08/05/2025
Expiry Date: 07/05/2030

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	**Bac Valves S A**
Address	C/ Tapis, 126, Figueres-Gerona, 17600, Spain
Place of Production	Bac Valves S A C/ Tapis, 126, Figueres-Gerona, 17600, Spain
Place of Production	BAC VALVES (DALIAN) Co., Ltd 1F, No. 30-2 Huaihe West Road, Dalian Development Area, Dalian, Liaoning, 116600, China
Type	Low Temperature Valves
Description	Cryogenic floating ball and butterfly valves with anti-static design. The valves are additionally fire safe tested in accordance with EN ISO 10497: 2004 Testing of valves - Fire type-testing requirements. TYPES: Floating Ball Valve with end connection raised face (FB) Floating Ball Valve with screwed or socked weld end connection (FR) High Performance Butterfly Valve (HPBFV)
Trade Name	Floating ball valves FB and FR, High performance butterfly valve HPBFV
Application	For the use in piping systems in the marine environment.

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Torsten Schroeder
Engineering - Piping/ Decarbonisation - Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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Specified Standard

Lloyd's Register Rules and Regulations for the Classification of Ships, 2025;
Lloyd's Register Rules and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk, 2025;
ISO 17292: 2004 Metal ball valves for petroleum, petrochemical and allied industries (for FB valves);
API609 7th Edition 2009 Butterfly Valves: Double-Flanged and Wafer-Type (for HPBFV)

Ratings

Type	Size [DN]	Temperature Range [°C]	Max. Design Pressure [bar]
FB& FR	15, 20, 25, 40, 50, 80, 100, 150	-196 to +200	50
HPBFV	100,150, 200, 250, 300	-110 to +200	50

All sizes are available in PN10, PN16, PN25, PN40, Class 150 and Class 300

Other Conditions

Selection and installation of valves have to be in accordance with the manufacture's recommendations.
Only fire safe design to be used for emergency shut down or terminal (end of pipe) applications for flammable fluids.

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 EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR2172706TA-02, LR2172649TA, LR2072482TA, 15/20038(E1)

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The Design Appraisal Document TSO/25-036522, (prev. TSO/24-013825; HTS/ENS 32602-15, Issue No. 2) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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