



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 | GOMOTEC Co., Ltd. |
| Address | 279, Mieumsandan-ro, Gangseo-gu, Busan, 46744, South Korea |
| Type | Butterfly Valves |
| Description | Concentric type Resilient seated Butterfly valve Double offset Resilient seated Butterfly valves Wafer type/Lug type /Flange type |
| Trade Name | COB Series, HPB Series, FSB Series |
| Application | Marine Piping Systems:- <ul style="list-style-type: none">· Cargo oil systems· Bilge systems· Sea water systems· Fresh water systems· Inert gas systems· Fuel oil systems· Lubricating systems· Tank cleaning systems· Cooling water systems Note : see OTHER CONDITIONS below. |
| Specified Standard | Lloyd's Register Rules and Regulations for Classification of Ships, Part 5, |

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Chapter 12, Section 5, July 2024

Ratings

Nominal Pipe Diameter (inch): 2, 2½, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24
Max. working pressure:
12.1bar for Grey Cast Iron(A126 Class A)
13.8 bar (2"-12"), 10.3 bar(14"-24") for Grey Cast Iron (A126 Class B)
17 bar for Ductile cast iron (A536 Gr.65-45-12)
19.6 bar for Carbon steel casting (A216 WCB)
19 bar for stainless steel(A351 CF8)

Specified Pipe Flange Design : DIN PN10, PN 16,
ANSI CLASS 125, 150
JIS 5K, 10K, 16K, 20K

Temperature range (°C): Teflon (RTFE or PTFE) -40 to 190
EPDM -35 to 120
NBR -18 to 100
FKM -20 to 180
Teflon (RTFE or PTFE)
+ Stainless Steel -40 to 230

Additional Tests

The following tests carried out on representative samples:

- 1) Shell test
- 2) Seat test
- 3) Burst test
- 4) Disc and stem endurance test
- 5) Operating test
- 6) Disc deflection test
- 7) Fire test (FSB Series)

Other Conditions

Where the valves are intended to be installed on a ship classed with LR, their positions are to be indicated on any plans of piping systems and arrangements which are required to be submitted for classification approval and final

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acceptance of their applications of their applications to be confirmed thereon, and the following conditions should also be observed: -

- 1) The valves are to be made, installed and tested in accordance with Part 5, Chapter 12 of the Rules and Regulations for the Classification of Ships.
- 2) In all cases the materials are to be suitable for their intended service conditions.
- 3) The valves may be used for ship-side applications but not including scuppers or similar fittings.
- 4) Wafer type vales or grey cast iron are not to be used for shipside valve.
- 5) Grey cast iron is not to be used for valves handling media having temperatures above 220°C or piping subject to pressure shock, excessive strains or vibrations.
- 6) Grey cast iron is not to be used for valves in flammable oil systems where design pressure exceed 7bar or the design operating temperature is greater than 60°C.
- 7) FSB series valves, in addition to the basic tests required by Lloyd's Register Rules, were also tested in accordance with the fire-safe valve test requirement of API 607.

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: LR2004090TA

The Design Appraisal Document LR2629674TA_DAD and its supplementary Type Approval Terms and Conditions form part of this Certificate.



LLOYD'S REGISTER TYPE APPROVAL
Issue by: GLOBAL TECHNICAL SUPPORT OFFICE
Issued to: GOMOTEC CO., LTD
For: DUAL PLATE CHECK VALVE

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure dated 01/01/2025 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

| <u>Document Ref.</u> | <u>Title</u> | <u>Date</u> |
|----------------------|---|-------------|
| Form 2502 | Request for marine services – Type Approval | 02.01.2025 |
| Form LR2502TA | Type Approval Application Checklist | 04.02.2025 |
| LR2004051TA-01 | Previous Type Approval Certificate | 14.12.2022 |
| QI004525 | ISO 9001:2015 Certificate | 19.01.2024 |
| - | No change Statement | 25.11.2024 |
| - | Type Approval Product Information Documents including Desing Specification, Valve Drawings, etc | 29.10.2014 |
| - | Type Approval Product Information Documents including Desing Specification, Valve Drawings, etc | 28.11.2025 |

TEST REPORTS

| <u>Document Ref.</u> | <u>Title</u> | <u>Date</u> |
|----------------------|--|-------------|
| BUS2413591 | Production Quality Assessment at GOMOTEC Co., Ltd | 03.12.2025 |
| - | Dual Plate Check Valve Data Package - Including Material, Visual, Dimensional, Hydrostatic test, Seat Leak, Burst Test and Operating Tests, Material Test and inspection reports, Heat Treatment Reports, Magnetic Particle examination report, etc | - |
| - | Dual Plate Check Valve Data Package - Including Material, Visual, Dimensional, Hydraulic Shell test (Before & after Assembly), Seat closure, Burst Test, Disc Deflection, Endurance of Disc and stem and Operating Tests, Material Test and inspection reports, Heat Treatment Reports, Magnetic Particle examination report | 29.09.2025 |


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Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.