



TYPE APPROVAL CERTIFICATE

Certificate No:
TAP0000124
Revision No:
1

This is to certify:

That the **Ball Valve**

with type designation(s)
115 Series

Issued to

Hy-Lok Corporation
Busan, Korea, Republic of

is found to comply with

DNV class programme DNV-CP-0186 – Type approval – Valves
DNV rules for classification – Ships Pt.4 Ch.6 Piping systems

Application :

Product(s) approved by this certificate is/are accepted for installation on vessels classed by DNV.

Temperature range: **See certificate**
Max. working press.: **500 bar, see certificate**
Sizes: **DN: 4 to 25**

Issued at **Høvik** on **2022-07-01**

for **DNV**

This Certificate is valid until **2027-06-30**.

DNV local station: **Gimhae Station**

Approval Engineer: **Jane Lozanov**

Zeinab Sharifi
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

Manually operated floating ball valves with three piece design.

End connections: Threaded tube connections acc. to DIN 2353 / ISO 8434-1 – Light Series (L) and Heavy Series (S)
 Female threaded connections acc. to ASME B1.20.1 series NPT
 Female threaded connections acc. to DIN ISO 228 - BSP Standard Pipe Thread

Sizes:

End connection type	DN Orifice opening (mm)	Basic part No.	PB Max. working press. (bar)
DIN 2353 / ISO 8434-1 Light Series Tube (L)	4	BVDT – 6L	315
	6	BVDT – 8L	315
	6	BVDT – 10L	315
	10	BVDT – 12L	315
	13	BVDT – 15L	315
	13	BVDT – 18L	315
	20	BVDT – 22L	160
	25	BVDT – 28L	160
DIN 2353 / ISO 8434-1 Heavy Series Tube (S)	25	BVDT – 35L	160
	4	BVDT – 8S	500
	6	BVDT – 10S	500
	6	BVDT – 12S	500
	10	BVDT – 14S	500
	13	BVDT – 16S	400
	13	BVDT – 20S	400
	20	BVDT – 25S	315
Female BSP - DIN ISO 228	25	BVDT – 30S	315
	25	BVDT – 38S	315
	6	BVDF -2G	500
	6	BVDF -4G	500
	10	BVDF -6G	500
	13	BVDF -8G	500
	20	BVDF -12G	315
Female NPT - ASME B1.20.1	25	BVDF -16G	315
	25	BVDF -20G	315
	6	BVDF-4N	500
	10	BVDF-6N	500
	13	BVDF-8N	500
	20	BVDF-12N	315
	25	BVDF-16N	315
	25	BVDF-20N	315

Materials:

Body ASTM A479 316; EN 10028-7/1.4571; ASTM A108/AISI 12L14; EN 10277-3/1.0715
 Ends ASTM A479 316; EN 10028-7/1.4571; ASTM A108/AISI 12L14; EN 10277-3/1.0715
 Stem ASTM A479 316; EN 10028-7/1.4571; ASTM A108/AISI 12L14; EN 10277-3/1.0715
 Ball SS 316
 Seat POM – MoS₂; PTFE
 Seals NBR (Buna N); Viton; EPDM

Application/Limitation

Valves covered by this certificate may be used under the following design conditions:

Service : Compressed air and water based hydraulic fluids
 Temperature range : -20 °C to +100 °C (for seats made of POM – MoS₂);
 -20 °C to +65 °C (for seats made of PTFE)

Max. working pressure : As given in Product Description
Sizes and types : As given in Product Description

Threaded joints may not be used for piping systems conveying toxic or flammable media or services where fatigue, severe erosion or crevice corrosion is expected to occur.

Threaded joints with tapered thread are only be allowed for:

- class I piping system, when outside diameter not more than 33.7 mm
- class II and class III piping systems, when outside diameter not more than 60.3 mm.

Threaded joints with parallel thread are only allowed for class III piping class systems when outside diameter is not more than 60.3 mm.

Materials and material protection chosen for the specific system shall be suitable for the intended medium and environmental conditions. Valves of austenitic stainless steel shall not be used in direct contact with seawater.

Fire safe valves are marked with FS after the basic part No., e.g., BVDT-16S-FS.

Type Approval documentation

Design plan document no.: 115BV-DP, Rev.1
Design specification data sheet, document no.: 115BV-DS, Rev.1
Design input review checklist, document no.: 115BV-IRC, Rev. 1
Drawing overview with attached drawings, document no.: 115BV-DWG, Rev.1
Design calculation sheet, document no.: 115BV-DR, Rev.1
Design calculation verification sheet, document no.: 115BV-CVS, Rev.1
Design verification checklist, document no.: 115BV-VCH, Rev. 1
Test report, document no.: 04T-H115BV
Fire test report, document no.: FSTR-081107-01
Test report, document no.: PTR-17F-S01
Hy-Lok 115 Series Catalogue

Tests carried out

Fire test (Valve BVDF-16N-FS)

Production Testing and Certification

Production Testing and Certification for the actual intended application shall follow the latest applicable edition of the Rules (as mentioned on the front page of this certificate).

Marking of product

Minimum marking requirements shall be as outlined in the valve design standard.

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.