



Certificate No:
TAP00002SX

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Ball Valve

with type designation(s)
28 Series

Issued to

Habonim Industrial Valves and Actuators Ltd.
Kfar ha-Nasi, Israel

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021
DNV class programme DNV-CP-0186 – Type approval – Valves

Application :

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

Temperature range: -55 °C to +260 °C
Max. working press.: Class 2500 (ASME B16.34)
Sizes: 1/2", 3/4", 1", 1 1/4", 1 1/2", 2" and 2-1/2"

Issued at **Høvik** on **2023-09-04**

This Certificate is valid until **2028-09-03**.

for **DNV**

DNV local unit: **Haifa**

Approval Engineer: **Per Ola Nymoen**

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

Floating ball valves type 28, three-piece design constructed according to ASME B16.34.

End connections	Flanges according to ASME B16.5 Butt welded ends according to ASME B16.25 Socket welded and threaded according to ASME B16.11
Part	Material
Body and ends	ASTM A479 316L/ASTM A105
Stem	ASTM A479 XM-19
Ball	ASTM A479 316L
Bolting	ASTM A193 B8M CL2
Seat	Virgin PEEK, PVDF, PCTFE, Delrin POM-H, Carbon filled PEEK
Body seals	Graphite, PTFE

Application/Limitation

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

Service	General machinery service
Max. working pressure	Class 2500 (ASME B16.34)
Temperature ranges:	
AF801 VIRGIN PEEK	-40°C to 260°C
PVDF - Polyvinylidene fluoride:	-29°C to 150°C
Kel-F (PCTFE):	-55°C to 150°C
Delrin POM-H - polyacetal homopolymer:	-40°C to 80°C
Carbon filled PEEK	-40°C to 260°C
PTFE:	-55°C to 230°C

For elevated temperatures, pressure-temperature rating shall follow relevant parts of design standard, depending on the valve material grade.

This approval does not include actuator and/or other equipment for remote control of the valves.

Valves covered by this certificate are not permitted for use in sea water systems. Material in contact with seawater shall be properly protected. Surface preparation and coating shall be approved by the society.

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 in CO2 systems shall be allowed only inside protected spaces and in CO2 cylinder rooms.

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.

Type Approval documentation



Job Id: **262.1-039208-1**
Certificate No: **TAP00002SX**

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.