

TYPE APPROVAL CERTIFICATE

Certificate no.:
TAP000001F
Revision No:
3

This is to certify:

that the **Ball Valve**

with type designation(s)
ISIS

issued to

EFFEBI S.p.A.
Bovezzo BS, Italy

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: -15 °C to 120 °C
Max. working press.: 20 bar at 20°C (see page 2 for limitations)
Sizes: 1/4", 3/8", 1/2", 3/4", 1", 1-1/2", 1-1/4" & 2"

Issued at **Høvik** on **2024-09-04**

This Certificate is valid until **2029-07-04**.

for **DNV**

DNV local unit: **Italy/Malta CMC**

Approval Engineer: **Thomas Wilhelm Juell**

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

Design:

Full way ball valves, female threaded end couplings, two piece body of hot pressed brass

Material of construction:

Body : Brass, UNI EN 12165 CW602N
 Ball and Stem : Brass, UNI EN 12165 CW602N
 Seat : PTFE
 O-rings : EPDM

Application/Limitation

Valves covered under the certificate are approved to be used in the following ship/ ordinary machinery piping systems - fresh water, sea water, sanitary, compressed air and saturated steam.

Valves shall not be used in systems for conveying toxic or flammable media or services where fatigue, severe erosion or crevice corrosion is expected to occur. Valves with threaded joints with tapered thread are only allowed for:

- Class I, outside connection diameter not more than 33.7 mm
- Class II & class III, outside connection diameter not more than 60.3 mm

Valves comprising of parallel threaded joints (with O-ring sealing) are only allowed for class III applications.

For temperatures below 0 °C and above 20 °C, the pressure rating shall be reduced according to the

Pressure/Temperature ratings as follows:

Temperature range (°C)	-15	-10 to +20	40	80	120
Maximum allowable working pressure (bar)	16.8	20	18.6	16.9	1

Valves covered by this certificate are not fire-safe & shall not be installed in systems where fire safe application is required.

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

This certificate does not cover valves installed in LNG/LPG applications.

Type Approval documentation

Tests carried out

Hydrostatic test, burst pressure test, leakage test, salt spray test

Production testing

All valve bodies shall be subjected by the manufacturer to a hydrostatic test at a pressure equal to 1.5 times the nominal pressure (The nominal pressure is the maximum allowable working pressure at room temperature).

All valve assemblies shall be subjected to seat leakage test at 1.1 times maximum working pressure at closed position.

Production Testing and acceptance criteria shall be in accordance with API 598/EN 12266-1 (leakage rate A).

Certification

Each valve is to be accompanied by Test report for the materials used in the body, ball and stem, indicating mechanical, chemical properties and heat treatment requirements.

No Product certificate is required.

Marking of product

For traceability to this type approval, the final products are to be marked with:

- manufacturer's name or trade mark
- valve type designation
- size
- maximum design pressure and temperature
- arrow to indicate direction of flow on one way flow valves
- material designation

Periodical assessment



Job ID: **262.1-018808-4**
Certificate no.: **TAP000001F**
Revision No: **3**

This certificate is only valid if required periodical assessments are carried out with satisfactory results.

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.

To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>.