



Certificate no.:
TAP00002U6

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Pneumatic actuated 2/2, 3/2 Angle and Globe Valve**

with type designation(s)

2000, 2012, 2712, 2100, 2300, 2101, 2060, 2301, 2006 and 2106

issued to

Bürkert Werke GmbH & Co. KG
Ingelfingen, Germany

is found to comply with

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

Application:

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

Temperature range: see certificate
Max. working press.: see certificate
Sizes: DN 10 - DN 100

Issued at **Hamburg** on **2024-01-15**

This Certificate is valid until **2029-01-14**.

for **DNV**

DNV local unit: **Augsburg**

Approval Engineer: **Ana Cristina Do Carmo Insfran**

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.



Form code: TA 251

Revision: 2023-09

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Page 1 of 4

Product description

The Pneumatic actuated 2/2, 3/2 Angle and Globe Valve type 2000, 2012, 2712, 2100, 2300, 2101, 2060, 2301, 2006 and 2106 for installations in piping systems.

Temperature D
Humidity B
Vibration B
EMV – not applicable

Nominal Size: DN 10 – DN 100

Housing materials: Gun Metal / Stainless Steel (CF3M / 316L)

Sealing material: Stainless Steel; PTFE; PEEK; FKM; EPDM; NBR.

Graphite depends on variant

Additional versions food / Explosion proof version

Technical Data:

Operating data (according to housing and drive material)	Stainless steel housing with PPS actuator	Stainless steel housing with PA actuator	Gunmetal housing design with PA actuator	Gunmetal housing design with PPS actuator
Temperature range (Depending on disc sealing material)	-40 bis 230°C	-40 bis 185°C	-40 bis 180°C	-40 bis 180°C
Temperature ambient	-40 bis 140°C	-40 bis 60°C	-40 bis 60°C	-40 bis 140°C
Working pressure	0 bis 25 bar(g)	0 bis 25 bar(g)	0 bis 16 bar (g)	0 bis 16 bar (g)
Pilot pressure (Depending on actuator material and size)	max. 10 [bar]			
Pilot medium	Air, neutral gases			

Application/Limitation

The globe and angle seat valves of the tested type 2000, 2012, 2712, 2100, 2300, 2101, 2060, 2301, 2006 and 2106 are type approved for the following operating media:

Non-flammable gases, sea water, fresh water, air, oil.¹

Note 1:

Fuel oil, lubrication oil, hydraulic oil and thermal oil are in this context regarded as "Flammable liquids".

See DNV Rules, Pt. 4 Ch. 1, Section 3 – Design principles

The valves are type approved 2000, 2012, 2712, 2100, 2300, 2101, 2060, 2301, 2006 and 2106 for the use in pipe class III piping systems.

For selection of the valves the performance data specified by the manufacturer are to be observed.

Type Approval documentation

Tests carried out

The valves Type 2000, 2012, 2712, 2100, 2300, 2060, 2101, 2301, 2006 and 2106 have been tested in accordance with the following standards:

Test standard: EN 12266-1 DNV Pt.4 Ch.6 DNV CP-0186		Purpose
Title	Test reference	
Hydrostatic Pressure Test	Valve Body	To confirm the pressure containing capability of the shell against internal pressure Test pressure = 1,5 times the design pressure No leakage is permitted.
Hydrostatic/Pneumatic Seat tightness	Valve seat	To confirm the capability of the seats to comply with the specified leakage rate In the direction(s) for which the valve is designed No visible leakage.
Functional test	Valve assembly	Function test of completed assembled valve.

Production testing

Valves intended to be installed in piping system listed in DNV Rules Pt.4, Ch.6 – Section 1 shall be certified according to DNV Rules Pt.4 Ch.6 – Piping systems, Section 9

Valve nominal size / Pressure rating
DN > 100 mm / PN > 16 bar
DN ≤ 100 mm / PN ≤ 16 bar

Type of certificate / Issued by
PC (Product Certificate) / DNV
PD (Product Declaration) / Manufacturer

Ship side valves DN > 100 mm
regardless of pressure rating

PC (Product Certificate)/ DNV

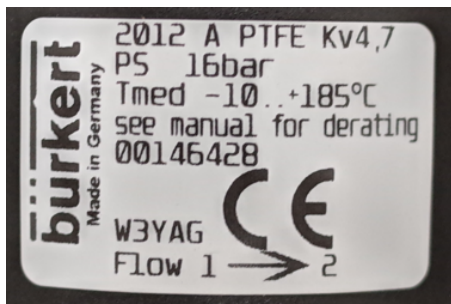
Material certificates (valve bodies)

In accordance with DNV Rules Pt.4 Ch.6 – Piping systems, Section 2 – Table 3.

Marking of product

Each valve shall be clearly marked for identification as an example below.
The identification marking shall as a minimum include the following:

- Manufacturer's name or trademark
- Valve type designation
- Maximum design pressure and temperature
- Arrow to indicate direction of flow on one way flow valves



Production Place

Bürkert Werke GmbH & Co. KG
Schleifbachweg 40,
74613 Oehringen, Baden-Württemberg, Germany

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 Type Approval are complied with Refer to DNV-CP-0338, Sec.4.

The certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

END OF CERTIFICATE