



Certificate No:
TAP00002DA

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Butterfly Valves**

with type designation(s)
Flanged/Wafer

Issued to

Jiangsu Tongda Marine Valve and Pump Co., Ltd.
JIANGYAN, JIANGSU, China

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV GL class programme DNVGL-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.: 10 bar
Sizes: DN50-DN650

Issued at **Hamburg** on **2021-07-06**

This Certificate is valid until **2026-07-05**.

DNV local station: **Nantong**

for **DNV**

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

Olaf Drews
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.



Form code: TA 251

Revision: 2021-03

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Product description

Butterfly Central Valve: for installations in piping systems.

Valve design:

- Wafer Type Butterfly Valve
- Flange Type Butterfly Valve

Design Face to Face:

- GB/T 3036-2017
- GB/T 9119-2010
- GB/T12221-2005

Testing Standard:

- GB/T 600-2008

Butterfly valve nominal sizes: DN50 – DN650

Pressure ratings: PN 10/Class 150

Design temperature: Depending on seat materials

Seat design type	Temperature range [°C]
NBR	0° to 80°
FPM	0° to 170°

Butterfly valves may be equipped with manual, pneumatic or electric actuator hydraulic¹.

Note 1:

Actuators, remote operating control devices and additional mountings are not included in this type approval.

Materials:

Valve	Material type	EN Standard	China Standard	ASTM Standard
Body	Ductile Iron	-	QT400-15 GB1348-88	-
	Carbon Steel	-	-	WCB ASTM A216
Disc	Aluminium Bronze	-	CuAl9Mn2 QA19-2	-
Stem	Stainless Steel	1.4122 EN 10088-3	-	ASTM A240
Seat	NBR	-	-	-
	FPM	-	-	-

Application

The butterfly central valves of type flanged, and wafer are type approved for the following operating media:

Non-flammable gases, sea water, fresh water, air, oil.²

Note 2:

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

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

Limitation

Butterfly valves may not be used for flammable gases and applications with flowing media specified as dangerous and toxic fluids.

Body material of copper and copper alloys are subjected to requirements according to DNV GL Rules Pt.2, Ch.2 – Metallic Materials, Section 10 and 11 and to operating temperatures limits specified in DNV GL Rules Pt.4, Ch. 6 – Piping Systems, Section 2 – Materials.

Valves fabricated of copper and copper alloy shall not be used for media having temperature above the following limits:

- Copper and aluminum brass: 200°C
- Copper Nickel: 300°C

Tests carried out

The butterfly valves have been tested in accordance with the following standards:

Test standard: GB/T 600-2008 DNVGL Pt.4 Ch.6 DNV GL 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 At the manufacture In the direction(s) for which the valve is designed No visible leakage.
Functional test	Valve assembly	Function test of completed assembled valve.

Type Approval documentation

Certification

Application in machinery and piping systems

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

Ship side valves DN > 100 mm
regardless of pressure rating

Type of Product Certificate (PC) / Issued by

VL Certificate / DNV GL

W Works Certificate / Manufacturer

VL Certificate / DNV GL

Material certificates (valve bodies)

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

Marking of product

For traceability to this type approval the products are to be marked in particular with:

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



Job Id: 262.1-033849-1
Certificate No: TAP00002DA

Production Place

Jiangsu Tongda Marine Valve and Pump Co., Ltd.
Jiangsu, Jiangsu, P.R.C.

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 DNVGL-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