



TYPE APPROVAL CERTIFICATE

Certificate No:
TAP00000JS
Revision No:
1

This is to certify:

That the Butterfly Valves

with type designation(s)
ARITA-D71X-10; D71X-16; D71X-25

Issued to
Arita Valve (Tianjin) Co., Ltd.
Tianjin, China

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 :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Temperature range: 0 °C to 100 °C
Max. working press.: 10 bar, 16 bar, 25 bar
Sizes: DN 50 -DN 600

Issued at **Hamburg** on **2022-02-18**

for **DNV**

This Certificate is valid until **2027-02-17**.

DNV local station: **Tianjin NB & CMC**

Approval Engineer: **Christian Kaemmer**

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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.



Product description

Wafer type butterfly valves.

Materials

Part	Material
Body	EN-GJS-400-15 (GGG40); EN-GJL-200
Disc	C95400, CF8, CF8M
Seat	EPDM
Stem	0Cr17Ni12Mo2

Maximum working pressure

Type	Sizes	Working pressure
D71X-10	DN250 to DN600	10 bar
D71X-16	DN50 to DN600	16 bar
D71X-25	DN50 to DN200	25 bar

Application/Limitation

Butterfly valves covered by this certificate are Type-approved to be used in ship piping, machinery - and cargo piping.

Butterfly valves of grey cast iron may be used for class III piping but shall not be used for class I and II piping.
Butterfly valves of nodular cast iron shall not be used for class I piping systems.

The butterfly valves are not type-approved for fire safe application, for quick closing/opening application and for LNG/LPG applications.
They are not type approved to be installed on the shipside, bottom, sea chest or on the collision bulkhead.

The butterfly valves can be installed for bilge suction when fitted in connection with a non-return valve.
This type approval certificate does not cover operating gear for remote control.

Type Approval documentation

Drawing:

250D7A1X-10-01
 250D7A1X-16-02
 250D7A1X-16-03
 250D7A1X-16-04
 250D7A1X-16-05
 250D7A1X-16-06
 250D7A1X-16-07
 250D7A1X-16-08
 250D7A1X-16-09
 300D7A1X-10-01
 300D7A1X-16-02
 300D7A1X-16-03
 300D7A1X-16-04
 300D7A1X-16-05
 300D7A1X-16-06
 300D7A1X-16-07
 300D7A1X-16-08
 300D7A1X-16-09
 350D7A1X-10-01
 350D7A1X-16-02
 350D7A1X-16-03
 350D7A1X-16-04
 350D7A1X-16-05
 400-500D7A1X-10-00
 400D7A1X-10-01
 400D7A1X-10-02
 400D7A1X-10-03
 400D7A1X-10-04
 400D7A1X-10-05
 400D7A1X-10-06
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 400D7A1X-10-10
 450D7A1X-10-01
 450D7A1X-10-02
 450D7A1X-10-03
 450D7A1X-10-04
 450D7A1X-10-05
 450D7A1X-10-06
 450D7A1X-10-07
 450D7A1X-10-08
 450D7A1X-10-09
 500D7A1X-10-01
 500D7A1X-10-02
 500D7A1X-10-03
 500D7A1X-10-04
 500D7A1X-10-05
 500D7A1X-10-06
 500D7A1X-10-07
 500D7A1X-10-08
 500D7A1X-10-09
 500D7A1X-10-10
 600D7A1X-10-00
 600D7A1X-10-01
 600D7A1X-10-02
 600D7A1X-10-03
 600D7A1X-10-04
 600D7A1X-10-05

Drawing:

600D7A1X-10-06
 600D7A1X-10-07
 600D7A1X-10-08
 600D7A1X-10-09
 600D7A1X-10-10
 50D7A1X-25-01
 50D7A1X-16-02
 50D7A1X-16-03
 50D7A1X-25-04
 50D7A1X-16-05
 50D7A1X-16-06
 50D7A1X-16-07
 50D7A1X-25-08
 50D7A1X-16-09
 65D7A1X-25-01
 65D7A1X-16-02
 65D7A1X-16-03
 65D7A1X-25-04
 80D7A1X-25-01
 80D7A1X-16-02
 80D7A1X-16-03
 80D7A1X-25-04
 100D7A1X-25-01
 100D7A1X-25-04
 100D7A1X-25-08
 100D7A1X-16-02
 100D7A1X-16-03
 100D7A1X-16-05
 100D7A1X-16-06
 100D7A1X-16-09
 100D7A1X-16-07
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 125D7A1X-25-04
 125D7A1X-25-08
 125D7A1X-16-03
 125D7A1X-16-02
 125D7A1X-16-09
 125D7A1X-16-05
 125D7A1X-16-07
 125D7A1X-16-06
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 150D7A1X-25-04
 200D7A1X-25-01
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 200D7A1X-16-09
 (50-350)D7A1X-10/16-00
 (50-200)D7A1X-25-00
 50D7A1X-16-01
 50D7A1X-16-04
 50D7A1X-16-08

Drawing:

65D7A1X-16-01
 65D7A1X-16-04
 80D7A1X-16-01
 80D7A1X-16-04
 100D7A1X-16-01
 100D7A1X-16-04
 100D7A1X-16-08
 125D7A1X-16-01
 125D7A1X-16-04
 125D7A1X-16-08
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 150D7A1X-16-04
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 200D7A1X-16-02
 200D7A1X-16-04
 200D7A1X-16-08
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 300D7A1X-16-01
 350D7A1X-16-01
 (400-500)D7A1X-16-00
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 400D7A1X-16-02
 400D7A1X-16-03
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 600D7A1X-16-07
 600D7A1X-16-08

Further documents:

Manufacturer's test reports Annex 9 and 10 dated 2007-06-13, witnessed by DNV
 Retention survey report/checklist from DNV Tanjin, dated 2016-04-27
 Type Approval Assessment Report dated 2022-02-15.
 Manufacturer's catalogue.
 Legacy DNV-Certificate P-12513 ; P-14007

Production Tests

All valve bodies shall be subject to a hydrostatic pressure test equal to 1.5 times the nominal pressure. The nominal pressure is the maximum allowable working pressure at room temperatures. All valve assemblies shall be subjected to a seat leakage test at closed position after assembly on board.

Certification

Valve bodies shall be delivered with material certificates in accordance with DNV Ship Pt.4 Ch.6 Sec.2 Table 3.

DNV product certificates (PC) are required for

- valves with DN > 100 mm and design pressure \geq 16 bar
- for ship side valves where DN > 100 mm regardless of the pressure.

For all other valves a manufacturer's product declaration PD ~ (works certificate) is accepted. Each valve is to be accompanied by an instruction manual / specification sheet.

Tests carried out

Function test, Hydrostatic test, Seat leakage test

Marking of product

For traceability to this type approval, each valve is to be marked with:

- Manufacturer's name
- Type designation
- Size
- Design pressure
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Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNV-CP-0338, Sec.4.

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