



Certificate no.:
TAP00002XA

TYPE APPROVAL CERTIFICATE

This is to certify:
that the Butterfly Valves

with type designation(s)
811-372F-150LB; 812-372F-150LB, 831-372F-300LB; 832-372F-300LB, 301-371X-125LB; 302-371X-125LB

issued to
Shanghai Ever Mark Valves Co., Ltd.
Shanghai, 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:

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

Type:	Temperature range:	Max. working press.:	Sizes:
811-372F-150LB; 812-372F-150LB	-50°C ~ 190°C	2MPa	NPS2-NPS24
831-372F-300LB; 832-372F-300LB	-50°C ~ 190°C	5MPa	NPS2-NPS12
301-371X-125LB; 302-371X-125LB	-29°C ~ 130°C	1.0 /1.6MPa	NPS2-NPS24

Issued at **Hamburg** on **2024-09-12**

This Certificate is valid until **2029-09-11**.

for **DNV**

DNV local unit: **Shanghai**

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.



Product description

Valve design:

- Wafer Type Butterfly Valve: 811-372F-150LB, 831-372F-300LB, 301-371X-125LB
- Lug Type Butterfly Valve: 812-372F-150LB, 832-372F-300LB, 302-371X-125LB

Flange connections according to:

- ASME B16.5 Class 150
- ASME B16.5 Class 300

Design Standard: API 609-2021

Flange: ASME B16.1-2020

Face to Face: API 609 Cat A and API 609 Cat B

Testing Standard:

- API 598

Butterfly valve nominal sizes:

811-372F-150LB - DN50~DN600
812-372F-150LB - DN50~DN600
831-372F-300LB - DN50~DN300
832-372F-300LB - DN50~DN300
301-371X-125LB - DN50~DN600
302-371X-125LB - DN50~DN600

Pressure ratings: Class150, Class300, Class125

Design temperature: Depending on seat materials

Sealing material	Temperature range [°C]
NBR	-15 ~ 80
EPDM	-23 ~ 120
RPTFE	-29 ~ 232

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 – Double eccentric butterfly valve:

Valve	Material type	ASTM Standard
Body	Carbon Steel	WCB ASTM A216
	Stainless Steel	CF8M ASTM A351
Disc	Stainless Steel	CF8M ASTM A351
Stem	Stainless Steel	17-4PH ASTM A564
Seat	RPTFE	-

Materials – Center line type butterfly valve:

Valve	Material type	ASTM Standard
Body	Ductile Iron	Gr.65-45-12 ASTM A536
Disc	Stainless Steel	CF8M

		ASTM A351
Stem	Stainless Steel	SS 416 ASTM A582
Seat	EPDM	-
	NBR	-

Application

The type double eccentric butterfly valve: 811-372F-150LB, 831-372F-300LB, 812-372F-150LB, 832-372F-300LB and center line butterfly valve: 301-371X-125LB, 302-371X-125LB are type approved for the following operating media:

Non-flammable gases, seawater, fresh water, oil.²

Note 2:

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

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 Rules Pt.2, Ch.2 – Metallic Materials, Section 10 and 11 and to operating temperatures limits specified in DNV Rules Pt.4, Ch. 6 – Piping Systems, Section 2 – Materials.

Tests carried out

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

Test standard: API 598, 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 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 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

Material certificates (valve bodies)

In accordance with DNV 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 diameter
- Flange standard
- Working -pressure and - temperature
- Body material
- Seat material
- Actuator type
- Max. torque
- Max. temperatur3e
- Rate pressure
- Supply pressure
- Arrow to indicate direction of flow

Production Place

SHANGHAI EVER MARK VALVES CO., LTD
No.28 Jinle Road, Baoshan District, Shanghai, China

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