

# TYPE APPROVAL CERTIFICATE

## This is to certify:

that the **Globe and angle valve, screw down check valves, galte valve, compressed air valves, stom vlaves and screw or union end valves**

with type designation(s)

**JIS F 7311, 7312, 7319, 7320, 7313, 7314, JIS F 7311C, 7312C, 7471, 7472, 7473, 7474, JIS F 7363C, 7366, 7340, 7475, 7317, 7318, JIS F 3060, 3060R, 7421, 7422, JIS F 7336, 7337, 7329, 7330**

issued to

**Qingdao Goodwill Marine Valve Manufacturing Co., Ltd.**  
**Qingdao, Shandong, 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:
JIS F 7311, 7312, 7319, 7320, 7313, 7314	see certificate	see certificate	see certificate
JIS F 7311C, 7312C, 7471, 7472, 7473, 7474	see certificate	see certificate	see certificate
JIS F 7363C, 7366, 7340, 7475, 7317, 7318	see certificate	see certificate	see certificate
JIS F 3060, 3060R, 7421, 7422	see certificate	see certificate	see certificate
JIS F 7336, 7337, 7329, 7330	see certificate	see certificate	see certificate

Issued at **Hamburg** on **2024-05-14**

This Certificate is valid until **2029-05-13**.

for **DNV**

DNV local unit: **Qingdao NB & CMC**

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

Globe and Angle Valve, screw down check valves, galte valve, compressed air valves, stom vlaves and screw or union end valves for installations in piping systems.

Material	JIS code	Nominal Pressure [MPa]	Nominal diameter	Body material
Cast steel globe valve/ angle valves	F7311	0.5	DN50~DN400	ZG230- 450
	F7312	0.5	DN50~DN400	ZG230- 450
	F7319	1.0	DN50~DN450	ZG230- 450
	F7320	1.0	DN50~DN400	ZG230- 450
	F7313	2.0	DN32~DN250	ZG230- 450
	F7314	2.0	DN32~DN250	ZG230- 450
	F7317	4.0	DN32~DN150	ZG230- 450
	F7318	4.0	DN32~DN150	ZG230- 450
Cast steel Screw down check valves	F7311C	0.5	DN50~DN300	ZG230- 450
	F7312C	0.5	DN50~DN350	ZG230- 450
	F7471	1.0	DN50~DN450	ZG230- 450
	F7472	1.0	DN50~DN300	ZG230- 450
	F7473	2.0	DN32~DN250	ZG230- 450
	F7474	2.0	DN32~DN300	ZG230- 450
Cast steel gate valves	F7363C	0.5	DN50~DN400	ZG230- 450
	F7366	1.0	DN50~DN400	ZG230- 450
Cast steel compressed air valves	F7340	4.5	DN32~DN150	ZG230- 450
	F7475	4.5	DN32~DN200	ZG230- 450
Cast forged compressed air valves	F7336	4.5	DN6~DN25	SF440A/S25C
	F7337	4.5	DN6~DN25	SF440A/S25C
Cast steel storm valves	F3060	0.5	DN50~DN200	ZG230- 450
	F3060R	0.5	DN50~DN200	ZG230- 450
Cast forged screw or union end valves	F7421	2.0	DN6~DN25	SF440A/S25C
	F7422	2.0	DN6~DN25	SF440A/S25C

Testing Standard: JIS F7400

Design Standard: JIS 7400

Face to Face: JIS F7480, EN 558, API 609

Design temperature: Depending on seat materials

Seat design type	Product	Temperature range [°C]
NBR	F3060	-25°C~100°C
PTFE		-60°C ~190°C

NBR / PTFE	F7314, F7311, F7320, F7471, F7472, F7363C, F7340, F7336, F7421, F7422	≤400°C
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## Application

The JIS Standard valves of type JIS F 7311, JIS F 7312, JIS F 7319, JIS F 7320, JIS F 7313, JIS F 7314, JIS F 7311C, JIS F 7312C, JIS F 7471, JIS F 7472, JIS F 7473, JIS F 7474, JIS F 7363C, JIS F 7366, JIS F 7340, JIS F 7475, JIS F 7317, 7318, JIS F 3060, 3060R, JIS F 7421, JIS F 7422, JIS F 7336, JIS F 7337, JIS F 7329, JIS F 7330 are type approved for the following operating media:

Non-flammable gases, sea water, steam, fresh water, air, oil.<sup>2</sup>

### 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

Globe and Angle Valve, screw down check valves, galte valve, compressed air valves, stom valves and screw or union end valves may not be used for flammable gases and applications with flowing media specified as dangerous and toxic fluids.

Screwed-on valve bonnets shall not used for valves with nominal diameter exceeding 40 mm in class I piping systems, for valves on ship's side and bottom and for valves in systems for flammable fluids.  
Bolted bonnets having bonnet secured to body by less than four bolts and/or having secured bonnet by U-bolts shall only be accepted for class III service.

Valves with bodies that are assembled by bolts, are only allowed in class III piping systems. Such valves shall not be used on ship's side or bottom or in systems for flammable fluids. Valve body with bolted maintenance hatch or cover may be accepted if it is only used for maintenance and any leakage collection and hazardous zone is well considered as per applicable rule and regulation. The bolted hatch shall be designed for the design pressure of the valve.

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

Globe and Angle Valve, screw down check valves, gate valve, compressed air valves, stem valves and screw or union end valves have been tested in accordance with the following standards:

Test standard: JIS F74000-1996 DNV Pt.4 Ch.6 Sec. 9 Valves DNV CP-0186 - Valves		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	Type of Product Certificate (PC) / Issued by
DN > 100 mm / PN > 16 bar	Product Certificate (PC) / DNV
DN ≤ 100 mm / PN ≤ 16 bar	Product Declaration (PD) / 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 type designation
- Size
- Maximum design pressure and temperature
- Arrow to indicate direction of flow

## Production Place

**Qingdao Goodwill Marine Valve Manufacturing Co., Ltd.**  
No.8 Lingtong Road, Lingshan Town, Qingdao, 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**