

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Blind Flange Valve**

with type designation(s)

**MBF125-10 to 200-10, MBF80-16 to 400-16, MBF125-25 to 200-25, MBF125-40, MBF150-40**

Issued to

**Tiangong Valve Group Co., Ltd.****Wenzhou, 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****DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition January 2018****Application :****Blind flange valves approved for use in fresh water, fuel oil, lube oil and steam systems that do not require a fire safe certificate.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Max. working temp.: up to 150 °C****Max. working press.: up to 40 bar - Refer to Certificate****Sizes: DN80 to DN400 - Refer to Certificate**This Certificate is valid until **2025-09-09**.Issued at **Hamburg** on **2020-09-10**DNV GL local station: **Ningbo FIS**for **DNV GL**Approval Engineer: **Thilo Pabst**

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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.

Certificate No: **TAP000022H**  
File No: **794.31**  
Job Id: **262.1-016465-2**

## PRODUCT DESCRIPTION

Blind flange valve type TG-MBF featuring a rectangular top cover.

- Connecting flanges to EN1092-1, Design & construction of valve ends
- Wall thickness according EN12516-2, Design of pressure components – Top cover & bolting
- Material certificates are required in line with the requirements of:  
DNVGL-OS-D101 Ch.2 Sec.2 - 2.8 Material Certificates  
DNVGL Pt.4 Ch.6 Sec.2 – 1.8 Material Certificates

The valves shall be delivered with a DNVGL product certificate when required by the rules or purchaser.

### Scope

The following valve sizes, pressure and temperatures are covered by this approval:

| Type<br>(xxx = DN size) | Sizes<br>DN                                   | Maximum pressure<br>PN [MPa] / [bar] | Design temperature<br>[°C] |
|-------------------------|-----------------------------------------------|--------------------------------------|----------------------------|
| MBFxxx-10               | 125, 150, 200                                 | 1.0 MPa / 10 bar                     | -29°C up to +150 °C        |
| MBFxxx-16               | 80, 100, 125, 150, 200,<br>250, 300, 350, 400 | 1.6 MPa / 16 bar                     |                            |
| MBFxxx-25               | 125, 150, 200                                 | 2.5 MPa / 25 bar                     |                            |
| MBFxxx-40               | 125, 150                                      | 4.0 MPa / 40 bar                     |                            |

### Materials and Standards

|                 |                                 |                                                                                                        |
|-----------------|---------------------------------|--------------------------------------------------------------------------------------------------------|
| Body and cover: | Carbon steel<br>Stainless steel | ASTM A216 grade WCB / AISI 1030<br>ASTM A351 grade CF8M / AISI 316<br>ASTM A351 grade CF3M / AISI 316L |
| Disc:           | Stainless steel                 | ASTM A351 grade CF8M / AISI 316<br>ASTM A351 grade CF3M / AISI 316L                                    |
| Bolts:          | Stainless steel                 | ISO 3506-1 grade A2-70                                                                                 |
| Seal materials: | PTFE                            |                                                                                                        |

## APPLICATION/LIMITATION

Valves covered by this certificate are approved to be use in ship piping, machinery piping and cargo piping systems.

All valve components in contact with fluid shall be suitable for intended medium and temperature.

### Limitation

The valves have not been fired tested - they are not to be used in systems or locations where a fire safe certificate is required.

The valves shall not be used for liquefied gases and applications with flowing media specified as dangerous and/or toxic fluids.

Components made of stainless steel are not sea water resistant and therefore not suitable for seawater applications like Marine atmospheric environment, flowing sea water and stagnant sea water.

Following exceptions: AISI 316L - suitable for Marine atmospheric environment, flowing seawater  
AISI 316 - identical to AISI 316L but not allowed after welding

### Assembling and Installation

For assembling and installation, the instructions specified in the Tiangong Valve Group Co., Ltd., Technical Product and Installation Information in the actual valid version are to be observed.

This certificate is valid for Blind Flange Valves manufactured by Tiangong Valve Group Co., Ltd.

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## **TYPE APPROVAL DOCUMENTATION**

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## TESTS CARRIED OUT

Hydrostatic test and Burst/Blasting test on various products and sizes.

### Production testing

Each valve shall be subject to hydrostatic testing of the valve body at 1.5 times the design pressure.

Holding time: DN80 – DN100 valves – 2 minutes  
DN125 – DN400 valves – 5 minutes

Acceptance criteria: No leakage

Each valve shall also be subject to seat leakage/closure testing at 1.1 times the design pressure.

Holding time: All sizes: 5 minutes

Acceptance criteria: Drop tight.

## MARKING OF PRODUCT

Each valve shall be clearly marked for identification. The identification marking may be performed on the body or on a plate of non-corrosive material. When a metallic plate is used, the plate shall be permanently fixed to the body.

Identification marking on the body shall be located to non-stressed areas and shall be clearly legible. The identification marking shall as a minimum include the following:

- manufacturer's name or trade mark
- valve type designation
- size
- maximum design pressure or pressure class
- arrow to indicate direction of flow on one way flow valves

Marking sample:



## PERIODICAL ASSESSMENT

A condition for retention of the type approval certificate in its validity period is that periodical assessments are successfully carried out.

The objective of the periodical assessment is to verify that the conditions for the type approval have not been altered.

Regulations for the periodical assessment of the type approval certificate are to be found in the DNVGL Class Programme CP-0338.

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

It is further to be noted that the Society shall be informed of any:

- Modifications to the product which are liable to affect its characteristics and functions, as originally specified and tested;
- Shifting of the production site and additional production site.

If such notifications are not made, the validity of the type approval certificate terminates.

## END OF CERTIFICATE