



Certificate no.:
TAP00002ZM

TYPE APPROVAL CERTIFICATE

This is to certify:
that the Butterfly Valves

with type designation(s)
DISKFLO

issued to
MASCOT Industrial Technology(Shanghai) Co.,Ltd.
, China

is found to comply with
DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV rules for classification – Ships Pt.5 Ch.7 Liquefied gas tankers
DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021
DNV class programme DNV-CP-0186 – Type approval – Valves

Application:

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

Temperature range: -196°C to 100°C

Max. working press.: Class 150

Sizes: 10" and 12"

Issued at **Høvik** on **2025-10-22**

This Certificate is valid until **2030-10-21**.

for **DNV**

DNV local unit: **Shanghai**

Approval Engineer: **Jane Lozanov**

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 USD 300 000.

Product description

Butterfly valve (DISKFLO) designed according to ASME B16.34.

Description	Three-piece flanged end disc valve
Designation	DISKFLO
Body thickness	ASME B16.34
End connection	Flange acc. to ASME B16.5
Face to face	ASME B16.10
Sizes	10", 12"
Part	Material
Body	ASTM A351/A351M - CF3, CF8, CF3M, CF8M
Seal ring/Seat	ASTM A182/A182M - 304, 316, 316L+STL
Stem	ASTM A276 - XM-19
Extension pipe/Bonnet	ASTM A182 - F316
Bottom cover/Flange	ASTM A276 SS316
Disc	ASTM A351/A351M CF3, CF8, CF3M, CF8M
Packings	SS316 + flexible graphite

Application/Limitation

Valves covered by this certificate may be used in General machinery service and LNG/LPG applications - Cryogenic Service.

Pressure temperature rating shall be according to ASME B16.34.

Materials and material protection chosen for the specific system shall be suitable for the intended medium and environmental conditions. Valves of austenitic stainless steel shall not be used in direct contact with seawater, , reference is made to DNV Rules for Ships Pt.4 Ch.6 Sec.2.

The approval does not include actuator and/or other equipment for remote control of the valves.

The valves covered by this certificate are not to be considered fire safe and therefore shall not be installed wherever fire safe application is required, e.g. as shut off or quick closing valves.

Valves with bodies assembled by bolts shall only be used in piping systems according to limitations in DNV Rules for Ships Pt.4 Ch.6 Sec.9 [3.1.3] and [3.1.4].

Type Approval documentation

Tests carried out

Cryogenic leakage test

Production Testing and Certification

Production Testing and Certification for the actual intended application shall follow the latest applicable edition of the Rules (as mentioned on the front page of this certificate).

Marking of product

Minimum marking requirements shall be as outlined in the valve design standard.

Periodical assessment

The certificate is only valid if required periodical assessments are carried out with satisfactory results.

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 approval are complied with. Reference is made to DNV-CP-0338.

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

Manufactured by:

MASCOT Industrial Technology (Shanghai) Co.,Ltd.
China