



Certificate no.:
TAP00002TG

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Valve for Liquefied Gas

with type designation(s)
AV-LMF, AV-LMB

issued to

ACE VALVE CO., LTD
Gimhae-si, Gyeongsangnam-do, Korea, Republic of

is found to comply with

DNV rules for classification – Ships Pt.5 Ch.7 Liquefied gas tankers
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.

Issued at **Høvik** on **2025-01-16**

This Certificate is valid until **2030-01-15**.

for **DNV**

DNV local unit: **Busan, CMC Korea**

Approval Engineer: **Maheshraja Venkatesan**

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.



Form code: TA 251

Revision: 2023-09

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Product description

Double eccentric metal seated butterfly valves with Flanged Double offset Butterfly valves with extended bonnet for cryogenic service covering following models and material of construction:

Model	Size	End connection	Material of construction			
			Body, body extension & bottom cover	Disc	Stem	Body top and seat gaskets
AV-LMF	16"	RF Flanged ends	ASTM A351 CF8/ CF8M/ CF3/ CF3M/ CF8C	ASTM A351 CF8M	ASTM A276 T316	SUS+Graphite
AV-LMB	8"	BW ends	ASTM A351 CF8/ CF8M/ CF3/ CF3M/ CF8C	ASTM A351 CF8M	ASTM A276 T316	SUS+Graphite

Design code : ASME B16.34
Valve end construction
- Flanged ends : ASME B16.5 – Class 150
- Butt weld ends : ASME B16.25
Valve inspection and testing : ISO 28921-1/ -2

Application/Limitation

Valves covered by this certificate are approved to be used in ship LNG/LPG applications - Cryogenic Service.

Materials and material protection chosen for the specific system shall be suitable for the intended medium and environmental conditions.

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.

Type Approval documentation

Tests carried out

Cryogenic seat leakage, flow, and burst testing

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 referred in the valve design standard ASME B16.34 in addition to minimum design temperature.

Periodical assessment

This 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>.