

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Globe Valve

with type designation(s)

467002, 467102, 901002, 901102, 921002, 921102, 901062, 901162

Issued to

Meson AB

Laholm, Hallands Län, Sweden

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems

DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition January 2018

DNV GL class programme DNVGL-CP-0186 – Type approval – Valves

Application :

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

Type:	Temperature range:	Max. working press.:	Sizes:
467002, 467102	0 – 180°C	10 bar / 16 bar	DN15-250
901002, 901102	0 – 180°C	10 bar / 16 bar	DN15-250
921002, 921102	0 – 180°C	10 bar	DN15-100
901062, 901162	0 – 180°C	10 bar / 16 bar	DN15-250

Issued at **Høvik** on **2020-10-26**

for **DNV GL**

This Certificate is valid until **2025-10-25**.

DNV GL local station: **Malmö**

Approval Engineer: **Sarah Miller**

Zeinab Sharifi
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **262.1-005852-6**
Certificate No: **TAP000010M**
Revision No: **1**

Product description

Globe valves with following types:

Type no	Description	Size (DN)	Material
467002	Globe Valve Straight	15-250 ⁽³⁾	EN-GJS-400-15
467102	Globe Valve Angle	15-250 ⁽³⁾	
901002	Quick Closing Valve, Straight	15-250 ⁽³⁾	EN-GJS-400-15
901102	Quick Closing Valve, Angle	15-250 ⁽³⁾	
921002	Self Closing Valve, Straight	15-100 ⁽⁴⁾	EN-GJS-400-15
921102	Self Closing Valve, Angle	15-100 ⁽⁴⁾	
901062	Quick Closing valve, Straight	15-250 ⁽³⁾	GS-C25 (1.0619)
901162	Quick Closing valve, Angle	15-250 ⁽³⁾	

- (1) Trim of the valve are in standard execution AISI 304, 316, 316L and RG5 depending on application.
(2) Disc types can be Fixed disc, SDNR, Regulating discs
(3) DN15-20-25-32-40-50-65-80-100-125-150-200-250
(4) DN15-20-25-32-40-50-65-80-100

Manufacturing locations:

- (1) Meson AB,
Laholm, Hallands Län, Sweden
- (2) Changzhou LK valves Co., Ltd.,
Building No 16, Xin Yu Logistics Park,
Renmin Road No 8, YaoGuan, Wujin
Changzhou, Jiangsu Province
Peoples Republic of China

Application/Limitation

Valves covered by this certificate are approved to be use in ship and machinery piping systems in temperature range of 0°C to +180°C and below maximum working pressure ranges:

Size	Design pressure
DN<200	16 bar
DN≥200	10 bar

The approval does not include any operating gear for remote control of the valves.

Valves covered by this certificate are not fire safe and shall not be installed in systems where fire safe application is required.

Austenitic stainless steels (e.g. 304, 316 & 316L) are not seawater resistant and shall not be used in direct contact with seawater.

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

This certificate does not cover valves to be installed in LNG/LPG applications.

EN-GJS-400-15 (Nodular cast Iron of the ferritic type with specified minimum elongation of 12%) may be used in class II and III piping and in valves located on the ship's side and bottom and valves on the collision bulkhead. (for media having a temperature not less than 0°C)

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Type Approval documentation

Drawing No.	Rev./Date	Drawing No.	Rev.	Drawing No.	Rev.
Master	0	75158	D	75674	0
75262	B	75666	A	75983	A
75266	C	75971	B	75995	B

Manufacturer's burst test report witnessed by DNV surveyor dated 2008-11-06.
Acquisition letter from Meson acquiring LK valves
Authorization letter dated 2020-03-31 from LK Valves authorizing Meson AB

Tests carried out

Burst test

Production Tests

Each valve body shall be subjected to:

- hydrostatic pressure test at 1.5 times the maximum working pressure at room temperature.
- seat leakage testing at 1.1 times the maximum working pressure in the valve flow direction.

Production Testing and acceptance criteria shall be in accordance with API 598.

Certification

DNV GL product certificates are required for valves with DN > 100 mm and design pressure \geq 16 bar, and for ship side valves where DN > 100 mm regardless of pressure. For other valves a manufacturer's product certificate may be accepted.

Valve bodies shall be delivered with material certificates in accordance with DNV GL Ship Pt.4 Ch.6 Sec.2 Table 3. Materials with VL and W certificates shall be manufactured in a foundry approved by the society.

Marking of product

For traceability to this type approval the valves are to be marked as a minimum with:

- manufacturer's name or trade mark
- valve type designation
- size
- maximum design pressure and temperature
- arrow to indicate direction of flow

Periodical assessment

For retention of the Type Approval, a DNV GL 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 DNVGL-CP-0338.