



Marine & Offshore

Certificate number: 01592/J0 BV

File number: ACM 145/1935/001

Product code: 22021

This certificate is not valid when presented without the full attached schedule composed of 7 sections

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

Meson AB

Laholm - SWEDEN

for the type of product

GLOBE & ANGLE VALVES

Globe Valves Type 462002, 462102, 467002, 467102, 901002, 901102, 901022, 901122, 901062, 901162, 901092, 901192, 902002, 902102, 902062, 902162, 921002 and 921102

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 10 Dec 2024

For Bureau Veritas Marine & Offshore,
At BV GOTHENBURG, on 10 Dec 2019,
Magne MOLLER



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarp.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=qdygq8lqjb>

BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Globe Valves Type 462002, 462102, 467002, 467102, 901002, 901102, 901022, 901122, 901062, 901162, 901092, 901192, 902002, 902102, 902062, 902162, 921002 and 921102

1.1 Design Specifications

- Execution: straight and angle valve body
- Release system: mechanical (wire release), hydraulic or pneumatic and manually
- Max. working temperature: 340 °C

Group	Type	Size (mm)	Pressure Class	Material Body/bonnet
462002, 462102	Globe Valve, bellow sealed	DN 15 - DN 250	PN 16: DN 15 ~ DN 150 PN 10: DN 200 ~ DN 250	Nodular cast iron
467002, 467102	Globe Valve	DN 15 - DN 250	PN 16: DN 15 ~ DN 150 PN 10: DN 200 ~ DN 250	Nodular cast iron
901002, 901102 901022, 901122 901062, 901162 901092, 901192	Quick Closing Valve	DN 15 - DN 250	PN 16: DN 15 ~ DN 150 PN 10: DN 200 ~ DN 250	Nodular cast iron Bronze Cast steel Stainless steel
902002, 902102 902062, 902162	Quick Closing Valve, bellow sealed	DN 15 - DN 250	PN 16: DN 15 ~ DN 200 PN 10: DN 200 ~ DN 250	Nodular cast iron Cast steel
921002, 921102	Self Closing Valve	DN 15 - DN 80	PN 16: DN 15 ~ DN 80	Nodular cast iron

1.2 Materials

Parts	Materials
Valve body / Bonnet	Nodular cast iron GGG40 / EN GJS 400-15 / EN 1563 Nodular cast iron GGG40.3 / EN GJS 400-18 / EN 1563 Cast steel GS-C25 Gun metal RG 5 Stainless steel AISI 316
Stem and disc	Stainless steel AISI 304 / EN 10088-3 / 1.4301 Option: RG5
Seat ring	Stainless steel AISI 304 / EN 10088-3 / 1.4301 Option: RG5
Spring	AISI 301 / 1084 (EN 10270-1:2001/SH)
Bellow	Stainless steel EN 10088 X6CrNiMoTi 17122 (1.4571)

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

- Assembly Drawings:

N° 33075 rev. 0	Bellow Sealed Globe Valve	462002, 462102
N° 33092 rev. 0	Globe Valve	467002, 467102
N° 33074 rev. 0	QCV	901002, 901102, 901022, 901122, 901062, 901162, 901092, 901192
N° 37085 rev. A	Bellow Sealed QCV	902002, 902102, 902062, 902162
N° 33076 rev. 0	Self Closing Valve	921002 and 921102
N° 76103 rev. D	Release Cylinder	-

- Document "Melting Ring Analysis" 76103 dated 10/03/2010
- Document "Release Cylinder Stress Analysis" dated 15/04/2010

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

Tests carried out according to BUREAU VERITAS Rules.

- Burst test report of valve bodies for LK Valves Globe Valves dated 06/11/2008, testing according to type approval program N° 5-794.40

4. APPLICATION / LIMITATION

4.1 - Valves are fitted as quick closing valves and self closing valves in fuel oil, lubricating oil, hydraulic oil, thermal oil (type 902002, 902102, 902062, 902162) tanks and other flammable oil tanks, and piping systems.

4.2 - Piping and associated components are not part of this approval.

4.3 - The valves belong to Class I, Class II and Class III according to the relevant requirements stated in Part C, Ch 1, Sec 10. Valves fitted on the ship side and collision bulkhead, and valves fitted on fuel oil and lub oil tanks under static pressure belong to Class II.

4.4 - The valve body, disc and seat should be suitable for the intended service. In particular the nature of materials, joints included, is to be selected according to the fluid to be conveyed and the temperature.

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

4.6 - Bilge valves will be fitted in association with a non-return valve.

4.7 - The valves are to be installed according to the manufacturer's instructions and Society's Rule requirements

4.8 - The use of stainless steel is to be restricted as per the BUREAU VERITAS Rules.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 - The products are to be supplied by **Meson AB** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of BUREAU VERITAS Rule Note NR320.

5.3 - BV product certificate is required.

5.4 - BV Certificate is required for materials of valve housings of Class I (DN \geq 50) and Class II (DN \geq 100). Materials of valve housings of Class I (DN $<$ 50) and Class II (DN $<$ 100) and for other parts of Class I and Class II are to be with Work's certificates.

5.5 - Each valve housing for class I and class II is to be hydraulically pressure tested to 1.5 times the design pressure. Valves intended to be fitted on the ship side below the load waterline are to be subjected to hydrostatic testes under a pressure not less than 0.5 MPa.

5.6 - For information, **Meson AB** has declared to Bureau Veritas the following production sites:

Meson AB
Kullsgårdsvägen 27,
31234 Laholm
SWEDEN

Changzhou LK Valves Co. Ltd
Renmin Road No 8, YaoGuan, Wujin
Building No 16, Xin Yu Logistics Park
Changzhou, Jiangsu Province
CHINA

6. MARKING OF PRODUCT

Each valve shall be marked with at least:

- Manufacturer's name or logo
- Type designation
- Maximum working pressure and test pressure
- Society's brand as relevant

7. OTHERS

It is **Meson AB**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This Certificate supersedes the Type Approval Certificate N° 01592/I2 BV issued by the Society.

***** END OF CERTIFICATE *****