DNV·GL

TYPE APPROVAL CERTIFICATE

Certificate No:
TAP0000032
Revision No:
1

This is to certify:

That the Globe Valve

with type designation(s)
Quick Closing Valves

Issued to
Göpfert AG
Weddingstedt, Germany

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

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Temperature range:	**Max 150 °C**
Max. working press.:	**PN16**
Sizes:	**DN15 - DN200**

This Certificate is valid until **2024-09-22**.
Issued at **Hamburg** on **2019-09-23**

DNV GL local station: **Hamburg**

Approval Engineer: **Guido Friederich**

for **DNV GL**
Digitally Signed By: Drews, Olaf
Location: DNV GL SE Hamburg, Germany
Signing Date: 2019-10-01

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.

Job Id: **262.1-009624-4**
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PRODUCT DESCRIPTION

Globe valves for quick closing and quick opening on tanks and fuel lines.[1]

Valve design styles:
Globe and 90° angle type, with or without release cylinder, with or without bellow, with or without thermo release.

Flange connections:
EN 1092 PN16
ASME B16.5 Class 150
JIS 10K, 16K

Materials:

Detail	Material name	Material acc. DIN/EN	Standard
Body	Nodular Cast Iron	0.7043 / EN-GJS-400-18-LT	EN 1563
	Cast steel	1.0619 / GP240GH	EN 10213
	Copper alloy	Rg5 CC491k / CuSn5Zn5Pb5-C, Gbz10 CC480k / CuSn10-C	EN 1982
Bonnet	Nodular Cast Iron	0.7043 / EN-GJS-400-18-LT	EN 1563
	Copper alloy	Rg5 CC491k / CuSn5Zn5Pb5-C, Gbz10 CC480k / CuSn10-C	EN 1982
Bonnet seal	KLINGERSIL® C-4400	--	--
	Graphite	--	--
Body bolting	Austenitic stainless	1.4301 / X5CrNi18-10	EN 10088
Disc	Martensitic stainless	1.4104 / X14CrMoS17, 1.4006 / X12Cr13	EN 10088
Seat	Austenitic stainless	1.4301 / X5CrNi18-10, 1.4305 / X8CrNiS18-9	EN 10088
	Martensitic stainless	1.4006 / X12Cr13	

[1] Actuators, remote operating control devices, thermo release and additional mountings are not included in this type approval.

APPLICATION

Valves for use in machinery piping systems, ship piping systems and cargo handling piping systems
Operating media are e.g.: Fuel oil, lubrication oil, hydraulic oil and thermal oil [2]

[2] Fuel oil, lubrication oil, hydraulic oil and thermal oil are in this context regarded as "Flammable liquids".
See DNV GL Rules, Pt. 4 Ch. 1, Section 3 – Design principles

LIMITATION

- Valves with KlingerSil gaskets are not permitted in systems that require fire safe certification.
- 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.
- Nodular cast iron shall not be used for media having a temperature exceeding 350°C or below 0 °C.
- Valves fabricated of grey cast iron and nodular cast iron with specified elongation (A5) of < 12% are not permitted for the following installations and service conditions:
  - Media having temperature below 0 °C and a temperature exceeding 120°C
  - Class I and II piping systems
  - At the ship's side and bottom, on sea chest and on collision bulkheads
  - Valves under static head fitted on external wall of fuel oil tanks and tanks for other flammable liquids

TYPE APPROVAL DOCUMENTATION

The approval is based on the following:

Doc. ref.	Description
26.01.01.04-10	Quick closing valve PN16 straight type with release cylinder DN15 to DN32
26.01.01.04-10_10	Quick closing valve PN16 straight type with auto. Thermo release DN15 to DN32
26.01.01.04-10/A	Quick closing valve PN16 – fire safe – straight type with release cylinder DN15 to DN32
26.01.01.12-18	Quick closing valve PN16 straight type with release cylinder DN40 to DN80
26.01.01.12-18_10	Quick closing valve PN16 straight type with auto. Thermo release DN40 to DN80
26.01.01.12-18/A	Quick closing valve PN16 – fire safe – straight type with release cylinder DN40 to DN80
26.01.01.22-29	Quick closing valve straight type with release cylinder DN100-125 PN16/DN150-200 PN10
26.01.01.22-29/A	Quick closing valve PN10/16 – fire safe – straight type with release cylinder (DN100-125, PN16 / DN150-200, PN10
26.01.02.04-10	Quick closing valve PN16 angle type with release cylinder DN15 to DN32
26.01.02.04-10_10	Quick closing valve PN16 angle type with auto thermo release DN15 to DN32
26.01.02.04-10/A	Quick closing valve PN16 – fire safe – angle type with release cylinder DN15 to DN32
26.01.02.12-18	Quick closing valve PN16 angle type with release cylinder DN40 to DN80
26.01.02.12-18_10	Quick closing valve PN16 angle type with auto thermo release DN40 to DN80
26.01.02.12-18/A	Quick closing valve PN16 – fire safe – angle type with release cylinder DN40 to DN80
26.01.02.22-29	Quick closing valve PN10/16 angle type with release cylinder (DN100-125, PN16 / DN150-200, PN10)
26.01.02.22-29/A	Quick closing valve PN10/16 – fire safe – angle type with release cylinder (DN100-125, PN16 / DN150-200, PN10)
26.01.11	Quick closing valve PN16 – with bellow – straight type with release cylinder DN15 – DN125
26.01.12	Quick closing valve PN16 – with bellow – angle type with release cylinder DN15 – DN125

26.05.01	Quick opening valve PN16 – with bellow – straight type with release cylinder DN15 to DN125
26.05.01_01	Quick opening valve PN16 straight type with release cylinder DN15 to DN125
26.05.02	Quick opening valve PN16 – with bellow – angle type with release cylinder DN15 to DN125
26.05.02_01	Quick opening valve PN16 angle type with release cylinder DN15 to DN125
	Burst test report no. ESN-04-7863 dated 2006-11-13
	Burst test report no.201501, dated 2015-07-07.
	Manufacturers brochure: "Schnellschlussventile"
572-05	Vibration test report no. 572-05, dated 2005-02-14, Paconsult GmbH
--	Confirmation Asbestos free, dated 208-09-17, Rich. Klinger GmbH
--	TA Assessment Report Renewal, dated 2019-07-29, DNV GL

TESTS CARRIED OUT

Test standard	Type of test
DNVGL Pt.4 Ch.6 DNV GL CP 0186	Burst test, vibration test

Test documentation provided as reference for this type approval.

PRODUCTION TESTING

The valves are subjected to the following scope of tests:

Test standard: DNVGL Pt.4 Ch.6 Title	Test reference	Purpose
Hydrostatic pressure test	Valve body	To confirm the pressure containing capability of the valve body against internal pressure Test pressure = 1,5 times the design pressure Holding time: 2 minutes for sizes ≤ DN 100 5 minutes for sizes DN 125 – DN 20 No leakage is permitted.
Seat tightness	Valve seat	To confirm the capability of the seats to comply with the specified leakage rate Test pressure to be equal to the design pressure. Holding time: 2 minutes for sizes ≤ DN 100 5 minutes for sizes DN 125 – DN 200 Leakage permitted: Drop tight

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CERTIFICATION

Application in machinery and piping systems
Valves intended to be installed in piping system listed in DNVGL Rules Pt.4,Ch. 6 – Section 1 shall be certified according to DNV GL Rules Pt.4 Ch.6 – Piping systems, Section 9

Valve nominal size / Pressure rating	Type of Product Certificate (PC) / Issued by
DN > 100 mm and PN > 16 bar	VL Certificate / DNV GL
DN ≤ 100 mm or PN ≤ 16 bar	W Works Certificate / Manufacturer

Material certificates (valve bodies)
In accordance with DNV GL Rules Pt.4 Ch.6 – Piping systems, Section 2

MARKING OF PRODUCT

For traceability of products, marking shall be legible and indelible. Products are to be marked as follows:

- Manufacturers name or trade mark
- Type designation (nominal diameter
- Nominal size DN,
- Nominal pressure PN
- Arrow to indicate direction of flow on one-way flow valves.

Marking sample:

Göp
DN20
PN16
→

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 Type Approval are complied with. Refer to DNVGL-CP-0338, Sec.4.

The main scope of the periodical assessment will normally include:
Verification of the TA applicant's production and quality system w.r.t ensuring continued consistent production of the type approved products at the TA applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
Review of the TA documentation and that this is still used as a basis for the production
Review of possible changes to the design, the material and the performance of the product
Verification of the product marking

END OF CERTIFICATE