

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Globe Valve

with type designation(s)
JRG LegioTherm 2T, JRG LegioTherm K

Issued to

Georg Fischer JRG AG
Sissach, BL, Switzerland

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 :

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

Type:	Temperature range:	Max. working press.:	Sizes:
JRG LegioTherm 2T	max. 90°C	10bar	DN15, DN20, DN25
JRG LegioTherm K	max. 90°C	10bar	DN15, DN20

Issued at **Hamburg** on **2020-12-17**

This Certificate is valid until **2025-12-16**.

for **DNV GL**

DNV GL local station: **Essen**

Approval Engineer: **Hagen Markus**

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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.

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.



Product description

Control valves with electric actuator, sensors and controllers of types JRGLegioTherm K (flushing) and JRGLegioTherm 2T (circulation). The valve body is covered by thermo insulation.

Reference, product brochure "Hycleen Automation System".

Materials	
Valve body	Gunmetal, Cu Sn5 Zn5 Pb2-C (CC499K)
Valve stem, Temperature sensor	1.4404
Valve seat	1.4305
O-rings, sealings	EPDM
Actuator housing ¹	PC , ABS
Valve body thermo insulation	EPP

Note

1 PC=Polycarbonate, ABS=Acryl Butadiene Styrol, EPP=Expanded Polypropylene

Design parameter	
Nominal pressure	PN10
Temperature range	
Valve	Up to 90°C
Actuator	5°C up to 45°C

JRG LegioTherm 2T - Circulation valve

Catalog no.	Design	DN	Drawings
9910.015	JRG LegioStop Y-type valve, with circulation pipe connection and outer thread on both side	15	1147435 1185099
9910.020		20	1164098
9910.025		25	1177886

JRG LegioTherm K - Flushing valve

Catalog no.	Design	DN	Drawings
9920.015	JRG LegioStop Y-type valve, with circulation pipe connection and outer thread on both side	15	1166542
9920.020		20	1166550

Electric actuator

Model part number	Drawings
1203499	1203500

Job Id: **262.1-032996-1**
Certificate No: **TAP000028E**

Application/Limitation

Electric actuator operated control valve for drinking water for the use in +GF+ Hycleen Automation Systems.

For installation and operation, the instructions "Hycleen Automation System - JRG LegioTherm K (JRG Code 9920)" and "JRG LegioTherm 2T (JRG Code 9910)" are to be observed.

Type Approval documentation

Tests carried out

Tightness test, Pressure and Burst pressure test witnessed by DNVGL surveyor.

Product test according to DVGW W 554 and W270, SVGW ZW165, DIN EN 1213, IEC 607030-1/2 and IEC6100-6-2/3

Production testing

Each product will be tested according to JRG Directives and Working sheets.

Appropriate Test Report according to EN 10204-2.2 will be issued on request.

Marking of product

For traceability of the product to this type approval certificate each packaging unit and the product is to be marked at least with the scope specified in below table.

Scope	Examples			Actuator name plate  Hycleen Automation System JRG LegioTherm 2T DN15 Prod No.: Serial No.: 36V 6W 5°C...45°C IP44 351110550  JRG LegioTherm 2T DN15 Serial No.:  COMPLIANT 
	Packaging unit	Valve body	Thermal insulation	
Manufacturers mark	+GF+	JRG	+GF+	
Valve type	JRG LegioTherm K	n.a.	n.a.	
Nominal diameter	DN20	DN20		
Nominal pressure	PN16	PN16		
Design standard reference	SVGW ZW 102/1 SVGW ZW 102/	DVGW, PA-I, DIN		
Housing material	CC499K	n.a.		
Voltage	36V			
Catalog no.	9920.020			
Serial No.:	121219			

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNVGL-CP-0338, Sec.4.

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

End of certificate