

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Valve for Liquefied Gas

with type designation(s)
ZRK 3, ZRD 3, SR 30.40, SR 50.40, SR 55.40, SR99

Issued to

**RITAG Ritterhuder Armaturen GmbH & Co. Armaturenwerk
KG
Osterholz-Scharmbeck, Germany**

is found to comply with

**GL Rules for Classification and Construction VI - Additional Rules and Guidelines Part 7 -
Guidelines for the Performance of Type Approvals Chapter 8 - Test Requirements for
Components and Systems of Mechanical Engineering and Offshore Technology**

Application :

This Certificate is valid until **2019-01-23**.

Issued at **Hamburg** on **2016-05-24**

DNV GL local station: **Bremerhaven**

Approval Engineer: **Christian Kaemmer**

for **DNV GL**

**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.

Product description

Cryogenic Check Valves, Cryogenic Dual Plate Check Valves

Materials:

Body	1.4404, 1.4408, 1.4571
Plate	1.4404, 1.4408, 1.4571
Spring	1.4571
Seal	NBR, EPDM, FKM, PTFE, metallic

Production Place

RITAG Ritterhuder Armaturen GmbH & Co.
Armaturenwerk KG
Industriepark Heilshorn
Sachsenring 30
D-27711 Osterholz-Scharmbeck
Germany

Application/Limitation

The above mentioned type of check valve is type approved for the use in liquefied gas systems as follows:

Type	ZRK 3, ZRD 3, SR 30.40, SR 50.40, SR 55.40, SR99
Size range	DN50-DN200; ZRK 3, ZRD 3 DN15-DN100; SR30.40, SR50.40, SR55.40, SR99
Pressure range	PN 16 – PN 40
Temperature range	-190°C to +20°C

Each valve is subject to final inspection at manufacturer's workshop in the presence of a DNV-GL Surveyor.

Type Approval documentation

General drawings:

99211035, dated: 12.07.2006 / 99211006, dated: 28.12.2005 / 99214006, dated: 06.12.2005 / 99213026, dated: 17.12.2013

Tests carried out

Marking of product

For traceability to this type approval, each check valve is to be marked with:

- Manufacturer's name or trade mark
- Type designation
- Size
- Max. design pressure(s) or pressure class