

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Gas Valve Unit**

with type designation(s)

Issued to

**Schubert & Salzer Control Systems GmbH
Ingolstadt, Germany**

is found to comply with

DNV GL rules for classification – Ships**DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Hamburg** on **2020-10-12**This Certificate is valid until **2025-10-11**.for **DNV GL**DNV GL local station: **Augsburg**Approval Engineer: **Frank Poetsch**

**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 Valve 8020 GS1 and GS3 series - Pneumatic Control Valve for the control and switching of neutral through to highly aggressive media (Sliding gate control valves)

Application/Limitation

Body design:	Wafer type
Size range:	DN 15 to DN 100
Nominal pressure:	PN 40, ANSI 150, ANSI 300
Fluid temperature/Body temperature:	1.4404 (for body, GS3 type)/1.0619: -10°C to +300°C 1.4404 (for body, GS3 type)/1.4408: -55°C to +350°C
Ambient temperature:	-10°C to +80°C

The reduction of the working pressure due to the service temperature as well as material compatibility specified by the manufacturer is to be considered.

Rangeability:	40 : 1
Leakage rate:	< 0,0001% of Kvs-value (disc pair: carbon stainless steel) < 0,0005% of Kvs-value (disc pair: SFC or HMC) < 0,001 % of Kvs-value (disc pair: STN2)

The pneumatic operated control valve of type 8020 is type approved for application in ship piping systems of pipes of class I, II and III piping (Pt4 Ch6 Sec1, table 1). Requirements on final inspection and material certificates as specified by the DNVGL Rule set applicable is to be observed.

Type Approval documentation

Tests carried out

Marking of product

The product to be marked with manufacturer's name/trademark and type number identification.

Periodical assessment

For retention of the Type Approval, DNV GL surveyor shall perform a survey every second year and before expiry date of this certificate in order to verify that the conditions of the type approval are complied with.

END OF CERTIFICATE