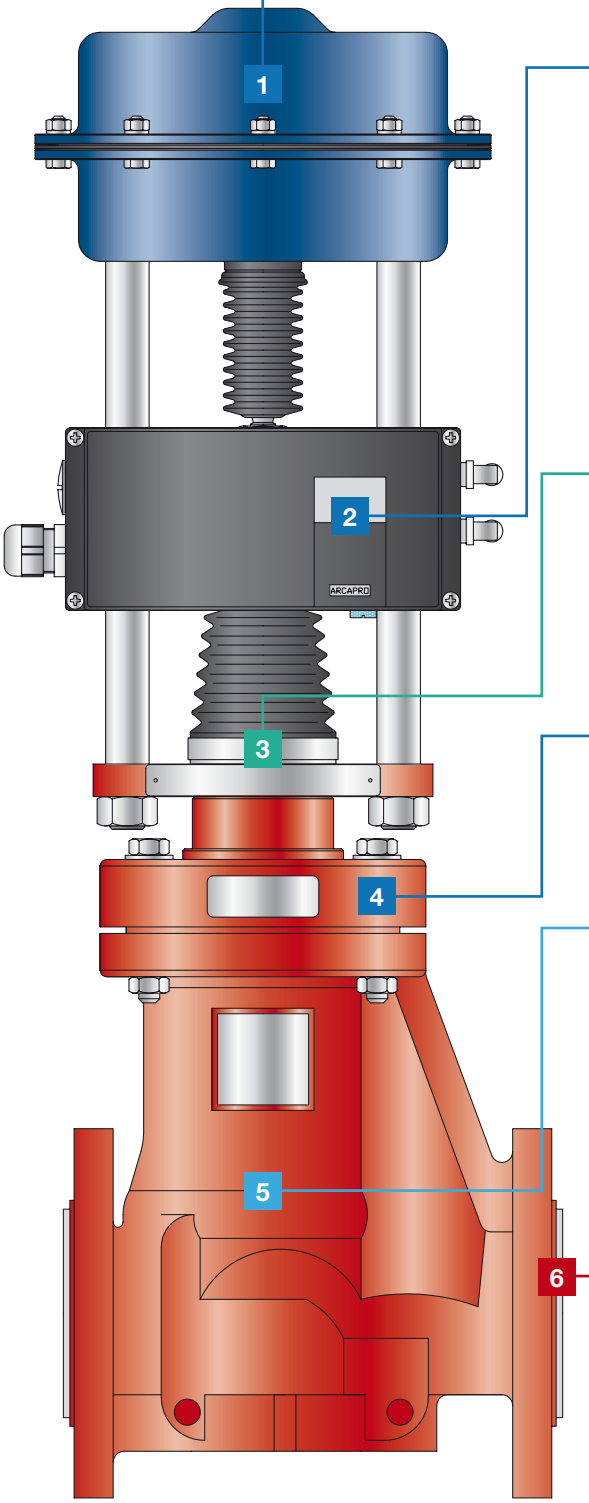
von Rohr
Armaturen AG

Series RSS

Every component precisely matched



Powerful valve actuator

Most commonly used is the pneumatic multi-spring actuator series MA as shown here. It is robust, ex-proof, features low actuating times, provides a constant seating force and is cost effective. Different sizes, strokes and materials can be manufactured according to your requirements. RSS control valves are optional also available with electric actuators. For more details, see the von Rohr brochures MA actuators or SHE actuators.

Multi-functional positioner

The ARCAPRO® digital positioner is a multi-functional interface with the controller or process control system and operates as standard with 4 to 20 mA. HART, Profibus (PA), and Foundation Fieldbus (FF) communication are used to establish a digital interface with bidirectional data exchange (including status messages). It can be parameterized on site or via the communications system. An open mechanical interface concept that our mother company ARCA helped elaborate complies with VDI/VDE 3847 and is used for mounting and mechanically connecting the positioner to the actuator. For more details about this see the von Rohr brochure ARCAPRO® positioner.

Reliable stem seal

We ensure that you will not have to worry about the tightness. Stem surface, packing material and design are finely matched so that neither friction, corrosion nor emission limit values will cause you any issues. The valve design is also TA-Luft (Clean Air Act) compliant.

Removable bonnet (Top entry)

The bolted bonnet enables an easy dismounting of the wetted internal parts. The high-quality external corrosion protection, the stainless steel screws and the stainless steel stem ensure longevity of the critical parts.

Robust, high-precision trims

The RSS control valves are equipped with inner parts specially designed for the prevailing flow conditions in your plant. The replaceable seat and plug of TFM-PTFE allow an easy exchange-service of the inner parts. So, seat, plug and bellows can be optimally adapted to changes in the operating data.

Body and lining

The one-piece body is available in spheroidal cast iron or cast steel. The outer epoxy coating of the valve offers a high-quality corrosion protection. The inner PFA-lining protects against corrosive, hazardous and slightly solids-containing media.

Valve design

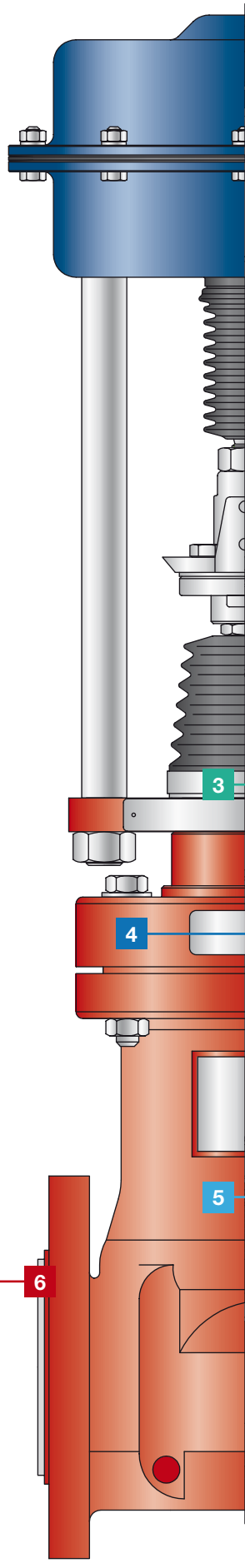
In order to fulfill its function properly within an installation, the valve has to be designed to the particular operating conditions such as flow rate, operating pressure difference, tightness and noise requirements. This is realised thanks to the numerous combinations that the modular design allows.

Bellows

The type of the bellows is dependent on both, the medium as well as on the operating conditions such as temperature and pressure. It also, however, has decisive influence on the operational safety, the maintenance and, last not least, on the availability of the valve.

Valve trims

A number of different valve trims are available for series RSS in order to fulfill the specific valve requirements in terms of kvs-value, valve characteristic, Z-value, permissible leakage rate as well as allowed noise level. In order to avoid cavitation related damages, U-plugs have been proven for liquid and compressible media. This increases the durability and thus the efficiency of heavily used control valves for high differential pressure conditions.

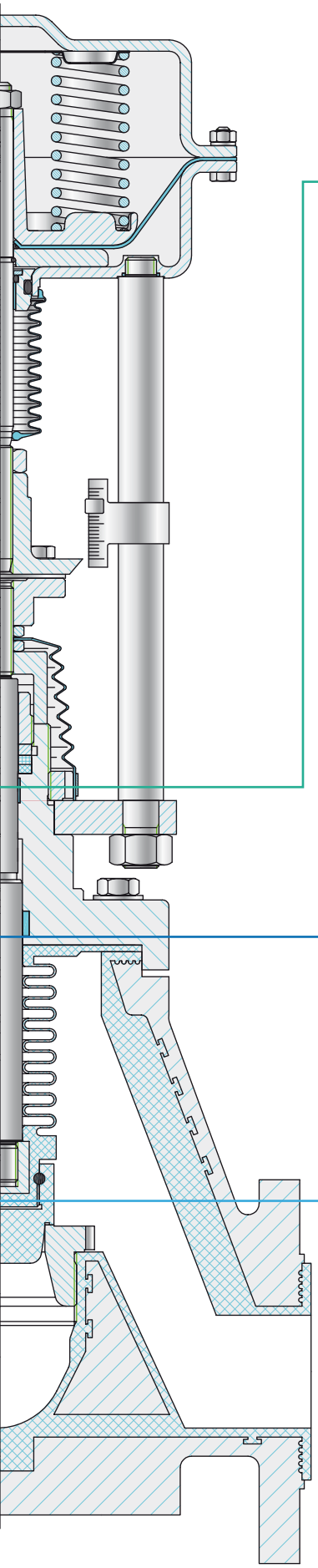


Thick-walled and vacuumproof PFA-lining

- Optional antistatic lining
- Liner thickness: 5 to 6 mm
  DN 15+20 (½“+¾“): 3.5 to 4 mm

One-piece body

- Available in spheroidal cast iron or cast steel
- Optional with heating jacket
- Corrosion protection by outer epoxy coating



Safety packing, stroke limitation and monitoring connection

- Safety packing comes as standard adjustable from the outside and is TA-Luft (Clean Air Act) compliant
- Stroke limitation protects the plug and seat from high closing forces
- Monitoring connection can be used as an option for crucial media

Removable bonnet (top entry)

- Allows easy and quick maintenance of the inner parts

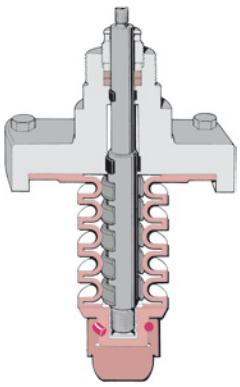
PTFE-bellows (DN 25 to 100)

- Standard PTFE-bellows up to 10 bar operating pressure
- Protects the valve stem from corrosion and hermetically seals the product chamber from the atmosphere

Optional Heavy duty-PTFE-bellows for DN 25 to 100 (1“ to 4“)

Standard bellows for DN 150 (6“)

- For highly diffusing media, high temperatures and pressures up to 16 bar the large spacing of the crinkles of the bellows facilitates purge and sterilizing. Therefore, this execution is suitable for pure media (Biotechnology) also available in Hastelloy
- The wall thickness of 2.5 mm provides high permeation resistance



Heavy duty-PTFE-bellows

Interchangeable plug and seat

- Seat and plug of TFM-PTFE
- Modification of the kv-value through exchange of seat and plug possible

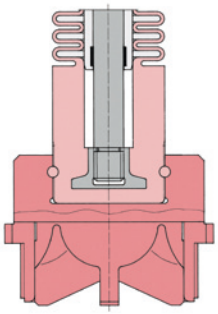
Special V-plug for DN 15 to 25

- For the smallest kv-values from 0.01 m^3/h to 1.2 m^3/h (1.2 m^3/h only DN 25, 1“)
- Plug is constantly guided in the seat and provides a high quality control even at high temperatures and pressure differentials

Special U-plug for DN 80 to 150

- Is used in risk of cavitation
- Due to permanent guiding in the valve seat, high loads can be handled safely

V-plug



U-plug

Series RSS

Manual valve HV/HRV

Features	Advantages
Body designed to meet flow path criteria	● Less noise ● Less wear ● Less maintenance
Lined body	● Control of corrosive, hazardous and/ or slightly solids-containing media
Highly accurate stem guiding	● Precise plug guiding ● Minimum wear of packing
Easy interchangeability of components	● Low operating expenses
Guided plug available	● Less wear
Heavy duty bellows	● High loading capacity
Optionally available with manual, pneumatic or electric actuator	● Wide range of choice
Pillars comply with NAMUR	● Simple mounting of positioners, limit switches etc.
Integrated pipeless mounting of position regulators possible	● High availability ● Retrofitting possible
Interchangeable trim	● Changes in kv-value possible

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Series RSS

General data

Series	RSS
Nominal bore DN/NPS	15 to 150 / ½“ to 6“
Nominal pressure PN/ANSI	16 / class 150 to 300 RF
Characteristics	equal percentage, linear, On/Off
Rangeability	1:25, V-plug 1:100 (kvs-value 0.01 m^3/h to 1.2 m^3/h)
Plug guide	stem guided, optional: seat guided (V-plug, U-plug)
Leakage rate	leakage rate class VI
Flanges	according to DIN EN 1092-2, ANSI B16.5
Bellows	standard PTFE-bellows, Heavy duty-PTFE-bellows, hastelloy-bellows
Heating jacket	available on request
Range of application	– 60° C to +180° C operating temperature 0.1 mbar vacuum to 16 bar operating pressure (requires special bellows)
Minimal kvs-values	0.01 m^3/h to 1.2 m^3/h with V-plug
U-plug	from DN 80 to DN 150

Materials

Body material	**EN**	**for temperatures**	**ASTM**	**for temperatures**
	0.7043 EN-JS 1049	– 60 to 180° C	A395	– 60 to 180° C
	1.0619 GP240GH	– 60 to 180° C	A216WCB	– 60 to 180° C
Lining	standard: PFA Perfluoralkoxy F optional: PFA-L antistatic F-L			

Trim materials

Var.	**Plug**	**V-plug**	**U-plug**	**Seat**	**Bellows**	**Max. permissible medium temperatur ° C**
1	TFM-PTFE	–	–	TFM-PTFE	standard PTFE	– 60 to 180° C
2	–	TFM-PTFE	–	TFM-PTFE	standard PTFE	– 60 to 180° C
3	–	–	TFM-PTFE	TFM-PTFE	standard PTFE	– 60 to 180° C
optional for higher pressures and temperatures, Heavy duty-PTFE-bellows or Hastelloy bellows available						

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