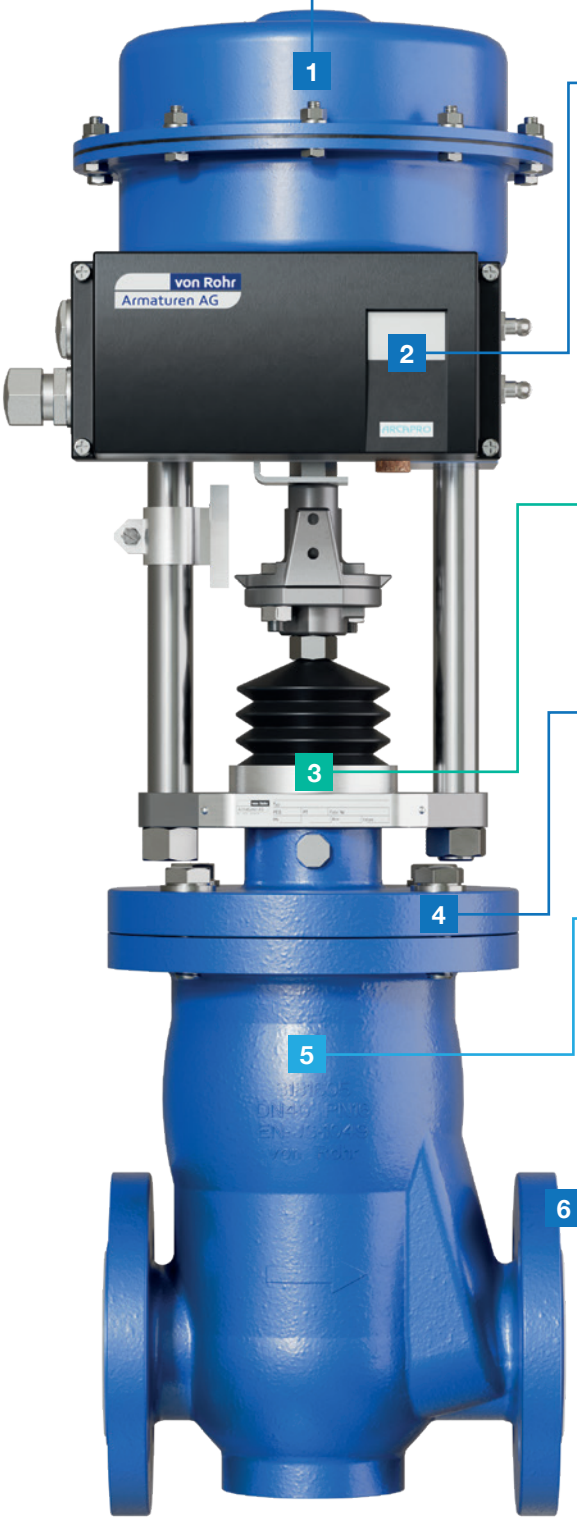
von Rohr
Armaturen AG

Series 94

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. The von Rohr 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 friction, corrosion, or emission limit values will not cause any issues.

Removable bonnet

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 von Rohr control valves are equipped with inner parts specially designed for the prevailing flow conditions in your plant. The replaceable seat and plug of 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

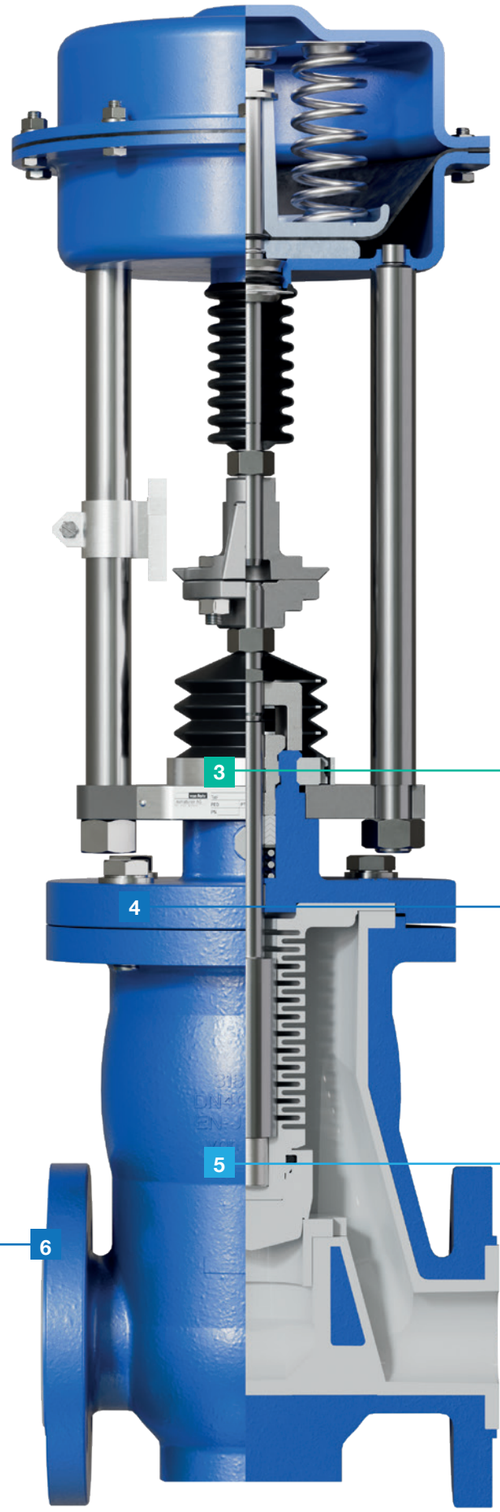
The one-piece body is available in spheroidal cast iron. The outer epoxy coating of the valve offers a high-quality corrosion protection. The inner PFA-lining protects against corrosive, hazardous and slightly solids-containing media.

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 94 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, V-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.



Safety packing, stroke limitation and monitoring connection

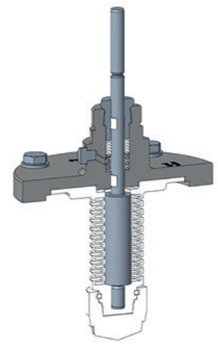
- Safety packing comes as standard maintenance-free
- The stroke limitation protects the plug and seat from high closing forces
- Monitoring connection is standard

Removable bonnet

- Allows easy and quick maintenance of the inner parts

PTFE-bellows

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



PTFE-bellows

Interchangeable plug and seat

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

Special K-plug
- For the smallest kv-values from 0.1 m^3/h to 1.0 m^3/h less than 0.1 m^3/h possible from Hastelloy
- Plug is constantly guided in the seat and provides a high quality control even at high temperatures and pressure differentials

Special V-plug
- Used in applications with a risk of cavitation
- Due to permanent guiding in the valve seat, high loads can be handled safely

K-plug

Thick-walled and vacuumproof PFA-lining

- Optional antistatic lining
- Liner thickness: 4 to 6 mm
- Low surface roughness

One-piece body

- In spheroidal cast iron
- Corrosion protection by two-component coating system

Series 94

Standard version

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
PTFE-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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General data

Series	94
Nominal bore DN	25, 40, 50
Nominal pressure PN	16 / 10
Characteristics	equal percentage, linear, On / Off
Rangeability	50:1 (kvs-value > 4 to ≤ 63), 30:1 (kvs-value ≤ 4 and > 63)
Plug guide	stem guided, optional: seat guided (K- and V-plug)
Leakage rate	IEC 60534-4 leakage rate VI
Flanges	according to DIN EN 1092-2, form B
Bellows	standard PTFE or antistatic
Seat and plug	standard PTFE or antistatic, hastelloy upon request
Range of application	–10° C to +180° C operating temperature 10 bar operating pressure
Certificates	ATEX, SIL, FDA, EN10204-2.1, 2.2 and 3.1

Materials

Body material	**EN**	**for temperatures**	**ASTM**	**for temperatures**
	0.7043 EN-JS 1049 (GGG40.3)	–10 to 180° C	A395	–10 to 180° C
Lining	standard: AFPS standard (white) optional: AFPA antistatic (black)			

Trim materials

Var.	Plug	K-plug	V-plug	Seat	Bellows	Max. permissible medium temperatur °C
1	PTFE	–	–	PTFE	PTFE	–10 to 180° C
2	–	PTFE	–	PTFE	PTFE	–10 to 180° C
3	PTFE-AS	–	–	PTFE-AS	PTFE-AS	–10 to 180° C
4	–	PTFE-AS	–	PTFE-AS	PTFE-AS	–10 to 180° C

AS = antistatic

von Rohr Armaturen AG • Member of the ARCA FLOW Group
Fichtenhagstrasse 4 • CH-4132 Muttenz • Tel. +41 (0)61 467 91 20 • Fax +41 (0)61 467 91 21 • info@von-rohr.ch • www.von-rohr.ch