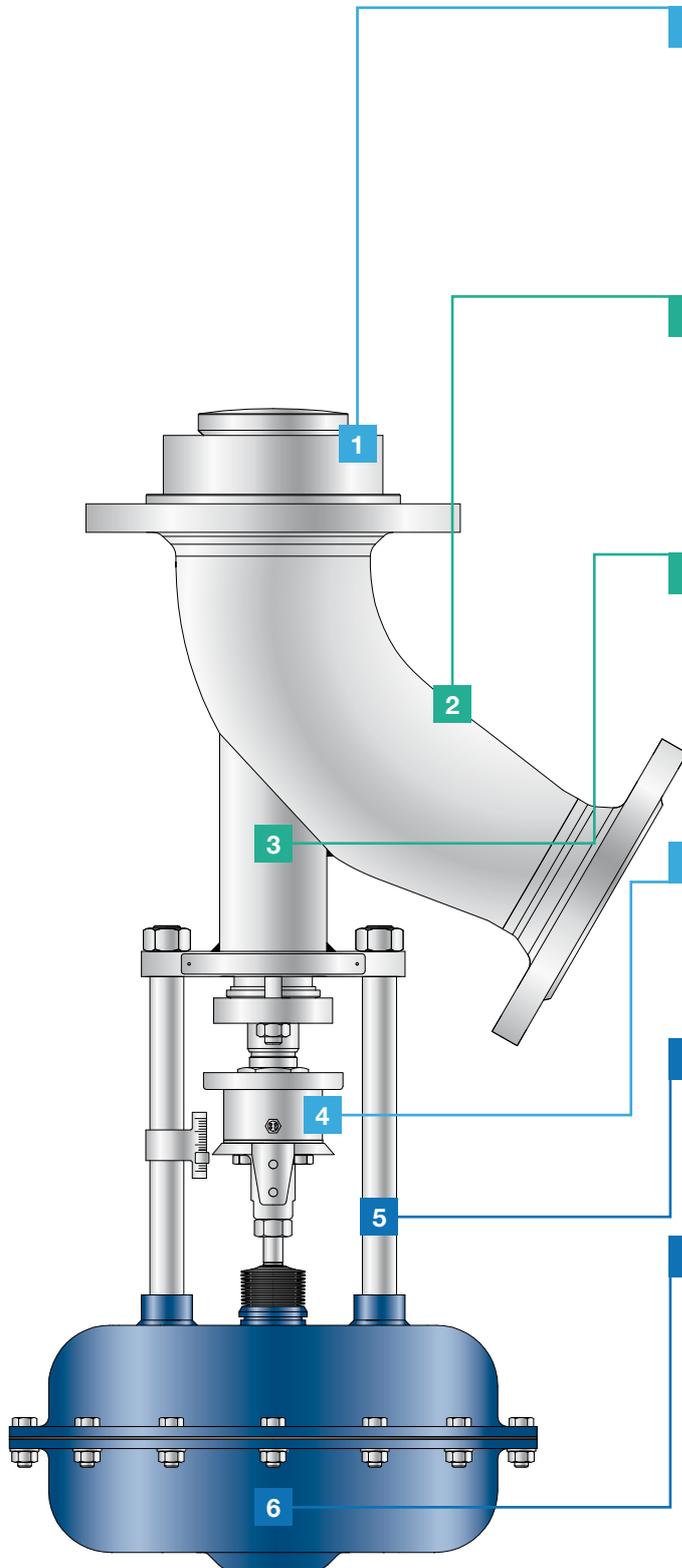


## Series 2



 **Fire safe approved**  
according to EN ISO 10497

# Every component precisely matched



## Robust, high-precision trims

The von Rohr outlet valves are equipped with inner parts specially designed for the prevailing flow conditions in your plant. The replaceable seat and plug allow an easy exchange-service of the inner parts. So, seat, plug and bellows can be optimally adapted to changes in the operating data. The metal or compressible seal of the plug ensures with the metallic seat long-life seat tightness.

## Body

Various special materials are available. For solidifying media, a body with heating jacket is obtainable. The purge connection on the body permits cleaning of the bottom outlet valve without dismantling. Different connection dimensions and angles are also possible on request.

## Reliable stem seal

Depending on the process fluid, pressure and temperature, we can advise you on the most suitable stem seal – from the stuffing box to the hermetically-tight bellows sealing – so that your system remains completely leak proof. Stem surface, packing material and design are finely matched so that neither friction, corrosion nor emission limit values will cause you any issues.

## Temperature measurement via the plug

The hollow spindle allows, using the temperature sensor PT100, a temperature measurement at the plug. The sensor can be inserted via the coupling or on request through the actuator.

## Pillar mounting and force transmission

When space is limited, the pillars can be adapted. Another option is the special force transmission with the actuator mounted sideways to the valve.

## 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. von Rohr outlet valves are optional also available with electric actuators. For more details, see the von Rohr brochures MA actuators or SHE actuators.

# Valve design

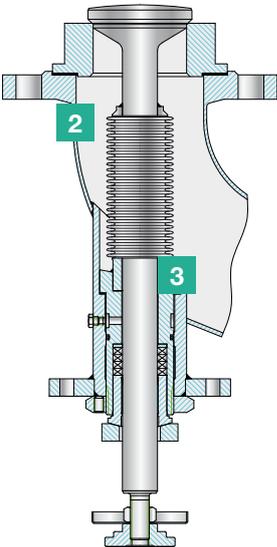
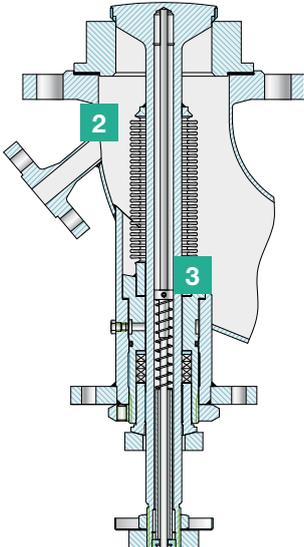
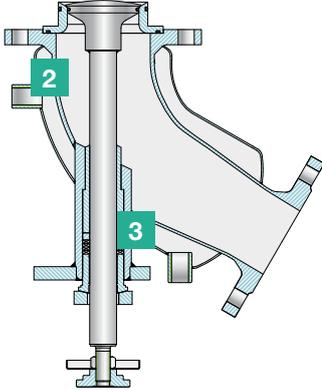
In order to fulfill its function properly within an installation, the valve has to be designed to the particular operating conditions such as flow rate, operating pressure difference, tightness and noise requirements. This is realised thanks to the numerous combinations that the modular design allows.

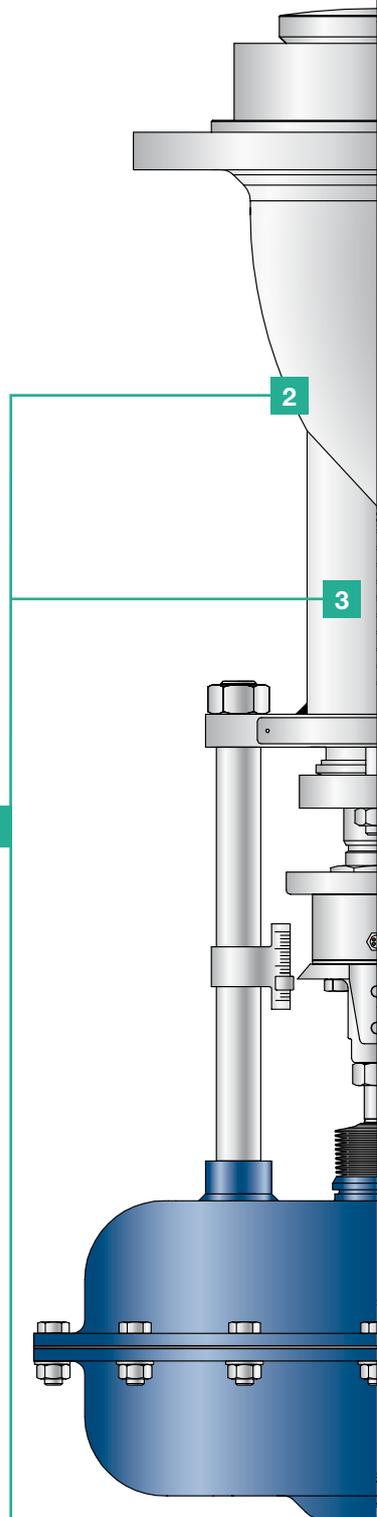
## Valve stem seals

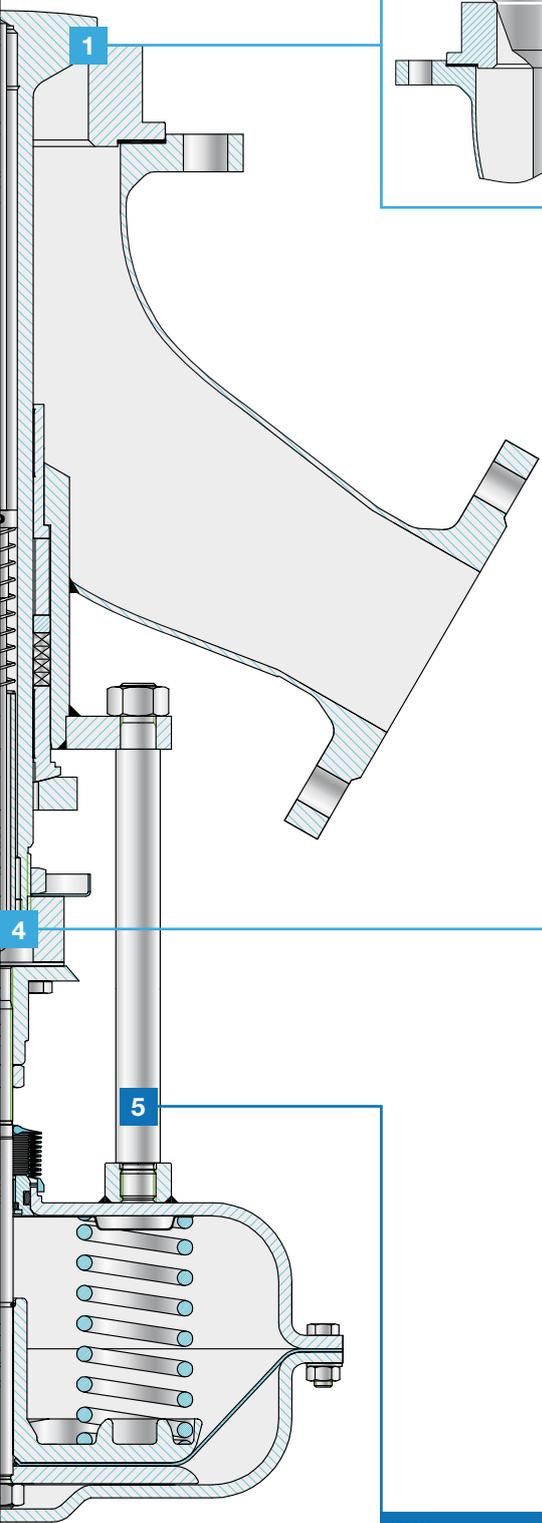
The type of valve stem seal depends on the fluid as well as the operating conditions such as temperature and pressure. It also, however, has decisive influence on the operational safety, the maintenance and, last not least, on the availability of the valve.

## Valve trims

A number of different valve trims are available for series 2 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.

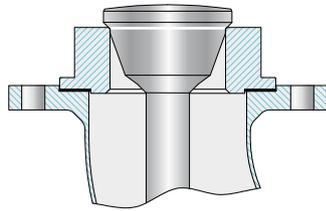
Body and stem seal		
<ul style="list-style-type: none"><li>● Standard body</li><li>● Stuffing box adjustable</li><li>● Temperature range -200° C to +450° C</li><li>● Bellows ensures absolute tightness towards the outside</li></ul>	<ul style="list-style-type: none"><li>● Standard body with purge connection allows the cleaning of the bellows and body</li><li>● Stuffing box adjustable</li><li>● Temperature range -200° C to +450° C</li><li>● Bellows ensures absolute tightness towards the outside</li><li>● Plug and stem with built-in temperature sensor (PT 100)</li></ul>	<ul style="list-style-type: none"><li>● Heating jacket body for solidifying media</li><li>● Stuffing box adjustable</li><li>● Temperature range -200° C to +200° C</li><li>● Standard stem sealing</li></ul>
		





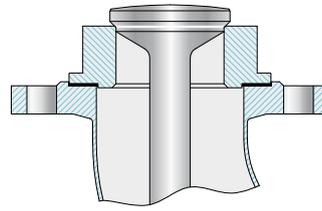
### Parabolic plug soft sealing

- Valve characteristic linear
- Soft sealing with PTFE
- (VBJ) opens inwards the tank
- Leakage rate bubble-tight
- Temperature range -196° C to +200° C



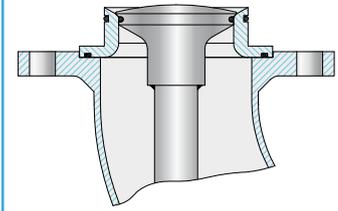
### On/Off plug soft sealing

- On/Off function
- Soft sealing with PTFE
- (VBJ) opens inwards the tank
- Leakage rate bubble-tight
- Temperature range -196° C to +200° C



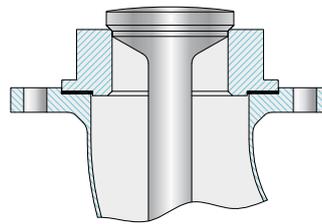
### On/Off plug soft sealing

- On/Off function
- Soft sealing with EPDM
- (VBJ) opens inwards from tank
- Leakage rate bubble-tight
- Temperature range -45° C to +120° C



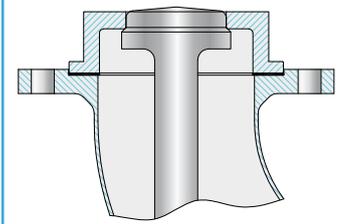
### On/Off plug metallic sealing

- On/Off function
- (VBJ) opens inwards the tank



### On/Off plug metallic sealing

- On/Off function
- (VBA) opens outwards from tank



### Pillar mounting and force transmission

- Compact and variable design
- When space is limited, actuator can be mounted sideways (see page 4)

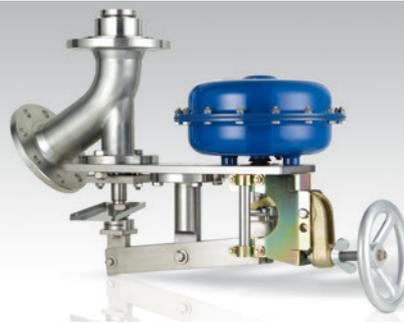
### Temperature sensor (PT 100)

- Temperature measurement of the medium at the plug
- Standard insertion via the coupling  
Insertion via the actuator available as an option
- Measuring of the temperature range -70° C to +500° C



# Series 2

## Series 2 with special force transmission



Features	Advantages
<b>Body designed to meet flow path criteria</b>	<ul style="list-style-type: none"> <li>● Less noise</li> <li>● Less wear</li> <li>● Less maintenance</li> </ul>
<b>Modular Design</b>	<ul style="list-style-type: none"> <li>● Many different combinations of valves and actuators possible</li> <li>● Plug/seat combinations                             <ul style="list-style-type: none"> <li>– Metallic sealing</li> <li>– Soft sealing</li> <li>– Stellite</li> <li>– Grinded-in</li> </ul> </li> <li>● Body combinations                             <ul style="list-style-type: none"> <li>– Standard</li> <li>– Purge connection</li> <li>– Heating jacket</li> </ul> </li> <li>● Stem/seal combinations                             <ul style="list-style-type: none"> <li>– Adjustable stuffing box</li> <li>– Bellows</li> </ul> </li> </ul>
<b>Fire-safe execution</b>	<ul style="list-style-type: none"> <li>● On request</li> </ul>
<b>Highly accurate stem guiding</b>	<ul style="list-style-type: none"> <li>● Precise plug guiding</li> <li>● Guided stuffing box</li> <li>● Minimum wear of packing</li> </ul>
<b>Compact and robust design</b>	<ul style="list-style-type: none"> <li>● Saves installation space</li> </ul>
<b>Easy interchangeability of components</b>	<ul style="list-style-type: none"> <li>● Low operating expenses</li> </ul>
<b>Stainless steel internal parts</b>	<ul style="list-style-type: none"> <li>● No corrosion</li> </ul>
<b>Optionally available with manual, pneumatic or electric actuator</b>	<ul style="list-style-type: none"> <li>● Wide range of choice</li> </ul>
<b>Pillars comply with NAMUR</b>	<ul style="list-style-type: none"> <li>● Simple mounting of positioners, limit switches etc.</li> </ul>
<b>Temperature measurement</b>	<ul style="list-style-type: none"> <li>● At the plug possible</li> </ul>
<b>Integrated pipeless mounting of position regulators possible</b>	<ul style="list-style-type: none"> <li>● High availability</li> <li>● Retrofitting possible</li> </ul>
<b>Interchangeable trim</b>	<ul style="list-style-type: none"> <li>● Changes in kv-value possible</li> </ul>

## Series 2

General data	
Series	2
Nominal bore DN/NPS	50 to 150 / 2" to 6"
Nominal pressure PN/ANSI	16 to 40 / class 150 to 300
Characteristics	linear or On/Off
Rangeability	25:1
Plug guide	stem guided
Leakage rate	metal sealing: IEC 60534-4 leakage rate class IV (0.01% of kvs-value); soft sealing: IEC 60534-4 leakage rate class VI, others on request
Flanges	according to DIN EN 1092-1, form A to H, ANSI
Bellows seal bonnet	seamless, double walled, made of 1.4571 or equivalent optional Hastelloy and other materials
Purge connection	inside thread and flange connections on request possible
Heating jacket	inside thread and flange connections on request possible
Temperature measuring	optionally with temperature sensor PT100 available
Opening direction	(VBJ) opens inwards- or (VBA) opens outwards from tank

Materials					
Body material	EN	for temperatures		ASTM	for temperatures
		1.4435 X2CrNiMo18-14-3	– 60 to 500° C		–
	1.4404 X2CrNiMo17-12-2	– 196 to 500° C		–	–
	Hastelloy and other materials available on request				
Seat material	according to body material				
Trim materials					
Var.	Parabolic plug	On/Off plug	Seat	Sealing	Max. permissible medium temperatur ° C
1	1.4435 / 1.4404	–	acc. to plug	metallic	acc. to stem sealing
2	1.4435 / 1.4404	–	acc. to plug	soft (PTFE)	– 196 to 200° C
3	–	1.4435 / 1.4404	acc. to plug	metallic	acc. to stem sealing
4	–	1.4435 / 1.4404	acc. to plug	soft (PTFE)	– 196 to 200° C
5	–	1.4435 / 1.4404	acc. to plug	soft (EPDM)	– 45 to 120° C
Hastelloy and other materials possible on request					