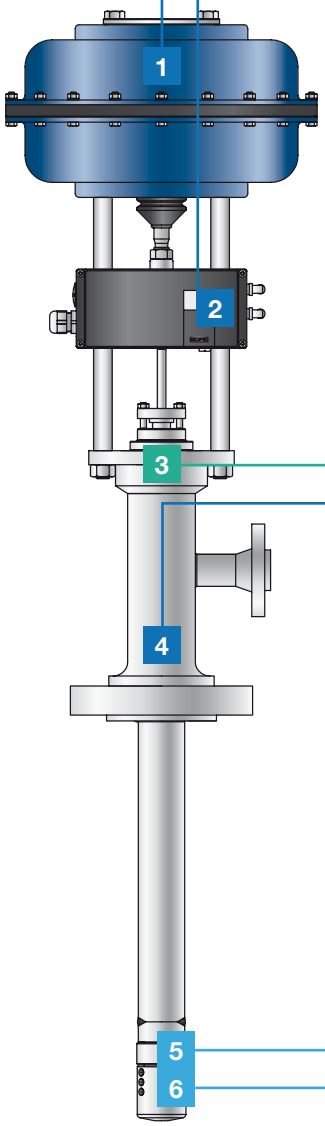
von Rohr
Armaturen AG

Series 1

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. von Rohr desuperheaters are optional also available with electric 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®

Reliable stem seal

Stem surface, packing material and design are finely matched so that neither friction, corrosion nor emission limit values will cause you any issues.

Body

The dimensions of the welded construction can be adapted to the requirements in the plant. The steam-side flange is available as standard in DN80. The water connection flange is available in DN25 or DN40. The layout of the water flange can be arbitrarily selected. With the high-pressure version, water pressure differences of up to 100 bar can be degraded.

Trims

The control of the nozzle orifice is accomplished by positioning of the piston which is operated directly from the valve actuator. The water quantity is controlled by opening or closing a certain number of injection nozzles. The water pressure remains constant, independent of the number of open nozzles. This results in an outstanding and almost evenly atomization quality over the entire control range. The piston rings offer excellent operating characteristics. They are particularly hardened and subsequently nitrided. The internal tightness is achieved by the stellited seat.

Nozzle head

The threaded nozzle head allows easy dismantling. Conversion to other kvs values or a different number of nozzles is possible at any time. For a spacious and fine distribution of the water, the maximum available number of nozzles is used.

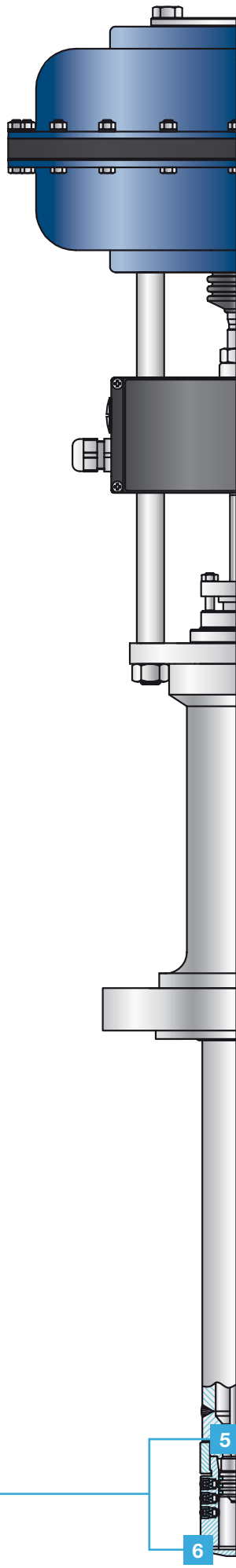
Applications

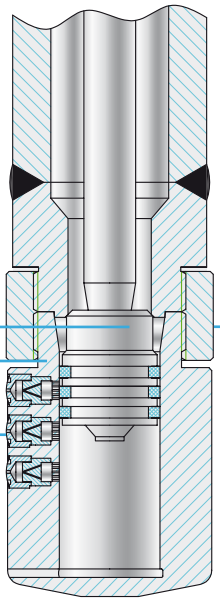
- Petrochemistry, natural gas
- Paper and pulp
- Energy, powerplants, district heating
- Waste management, municipale plants

The desuperheater is a control valve with which, by injecting cooling water, the steam temperature is controlled. The desuperheater is mainly used in steam generators of power plants and other industrial facilities.

The ideal combination of travel, nozzle arrangement and nozzle activation ensures a safe and precise cooling in any load situation.

Throug high rangeability the desuperheater achieves an excellent control performance. The control characteristic remains constant over the entire control range. Due to the simple design an additional water-injection-control-valve can be omitted.





Trim

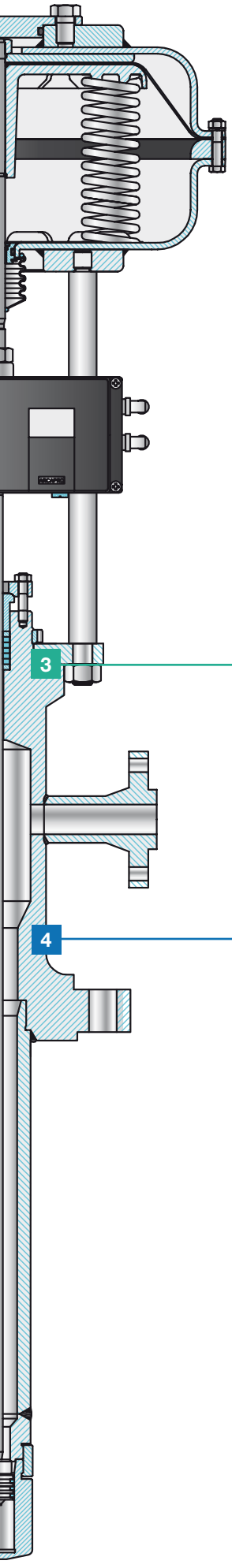
- Hardened piston rings
- High operating characteristics
- Armored seat

Nozzle head

- Removable nozzle head allows easy dismantling

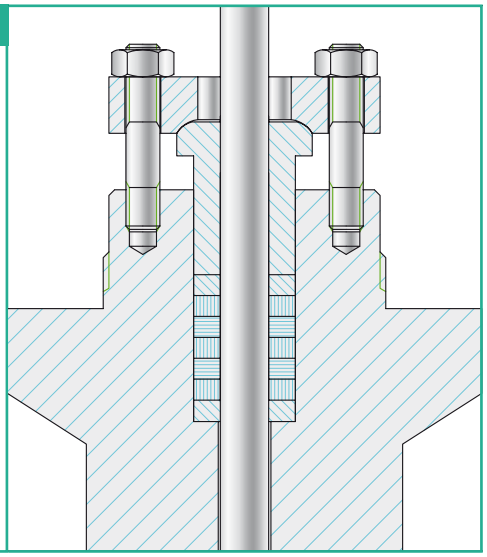
Nozzles

- Variable number of nozzles and kvs values



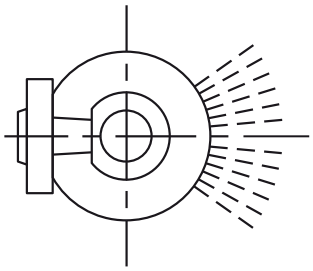
Stem sealing

- Less friction losses through the ideal arrangement of the packing and stem



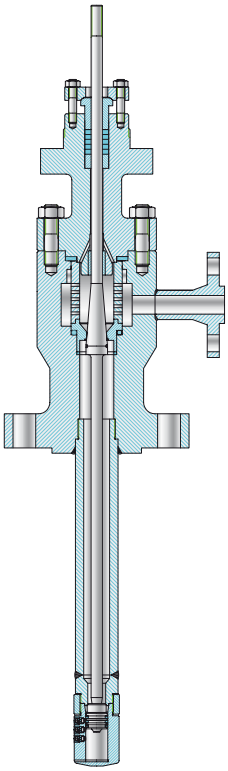
Water connection

- Layout is possible in 4 different positions
- Available with flanges or welding ends



High-pressure version

- Dp values of up to 80–100 bar possible (depending on the water temperature)
- The three-stage pressure drop occurs through two controllable stages and one solid step by a perforated basket



Series 1

Standard version

Features	Advantages
Modular design	● Various combinations of valves and actuators ● Readjustable gland packing
Accurate stem guiding	● Permanent external tightness ● Minimum wear of packing
Ideal combination of travel, nozzle arrangement and nozzle activation	● Safe and precise cooling
Nozzles	● Precise control ● No cross flows
High interchangeability of components	● Low operating expenses
Stainless steel internal parts	● No corrosion
Optionally available with pneumatic or electric actuator	● Wide range of choice

von Rohr
Armaturen AG

Series 1

General data

Series	1
Nominal bore DN/NPS	steam from 80/3“ water 25–40/1“–1 ½“
Nominal pressure PN/ANSI	25–400/Class 150–2500
Characteristics	linear or linear modified
Rangeability	50:1 or 30:1 depending on version
Leakage rate	metallic sealing: IEC 60534-4 Leakage rate IV or V
Flanges	acc. to DIN EN 1092-1, Form A–H, ANSI or welding ends
Nozzles	6 or 9 nozzles

Materials

Body material	**EN**	**Temperatures**	**ASTM**	**Temperatures**
	1.7357 17CrMo5-5	–10 to 530°C	–	–
	1.7380 10CrMo9-10	–10 to 600°C	–	–

Trim materials			
Piston	**Seat**	**Sealing**	**Max. permissible medium temperature °C**
1.4021	stellited 6	metallic	acc. to stem sealing

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