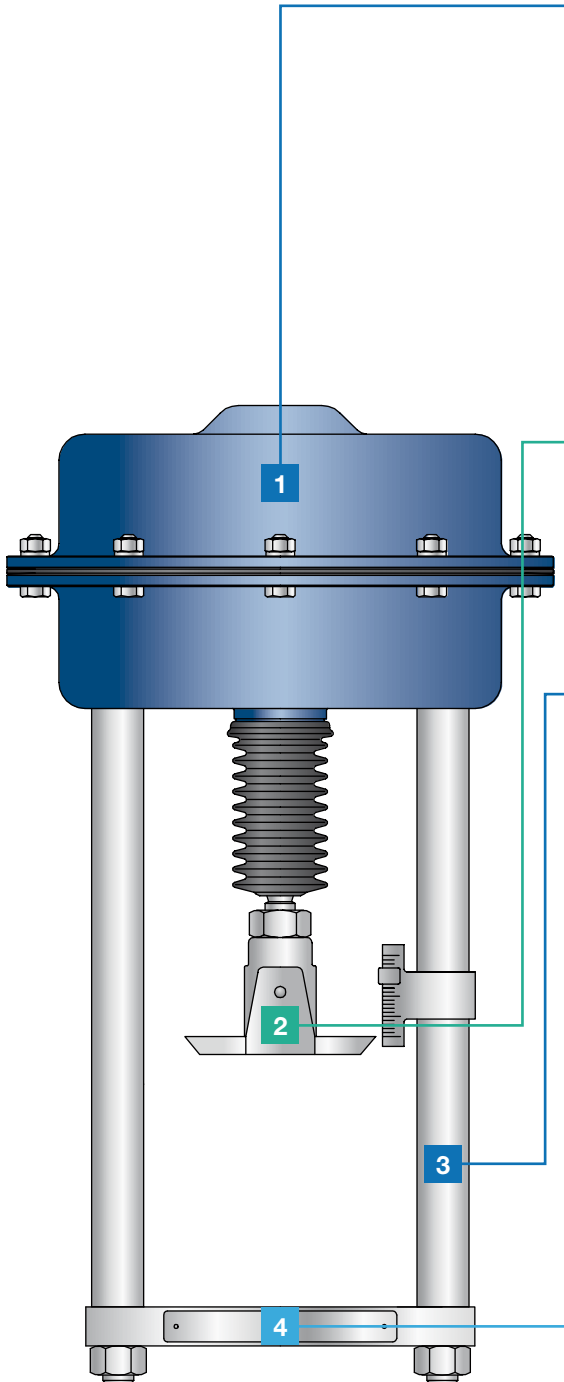


## Series MA-Actuator



# Every component precisely matched



## Powerful valve actuator

Our multi-spring actuators are used to convert a pressure into a linear motion. They are used as actuators for On/Off, control valves, for the control of the variable diffuser outlet blades on fans, for desuperheaters with stroke motion and many other applications. The actuators generate significant actuating forces with short positioning times and meet the requirements for explosion protection without additional effort. Different sizes, strokes and materials can be manufactured according to your requirements.

## Coupling and spindle

The coupling connects the actuator stem to the valve spindle. Optionally we customize the right connection for you.

## Pillars

The pillar construction allows easy NAMUR mounting of positioners and limit switches. Pillar material, length and space can be adapted on request. Optionally, with "Po actuators" the air flow from the positioner to the actuator can be made through one of the pillars (integrated mounting S100).

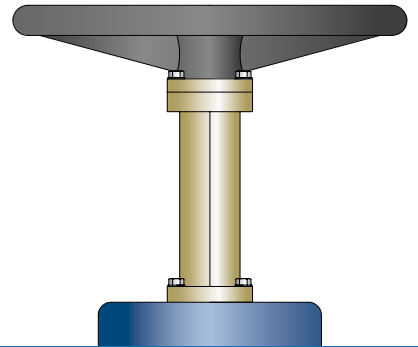
## Traverse

The traverse is the connecting piece between actuator and valve.

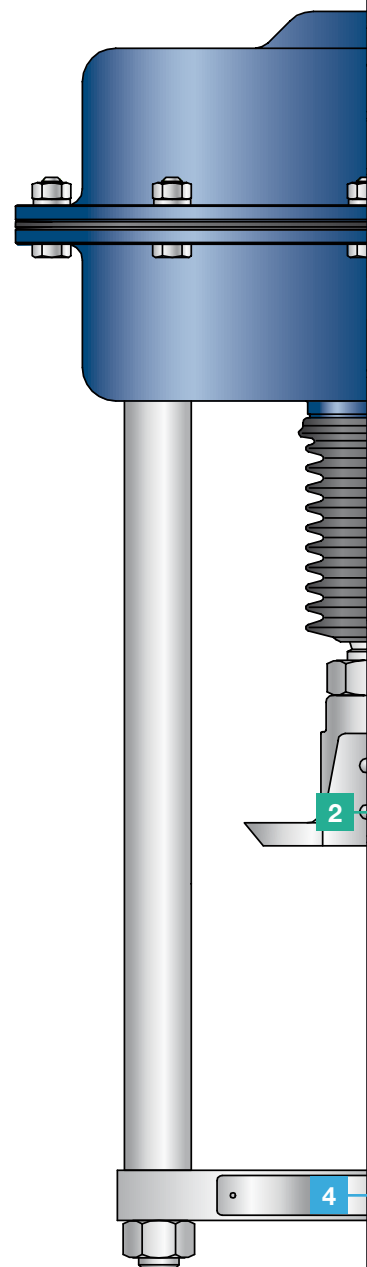
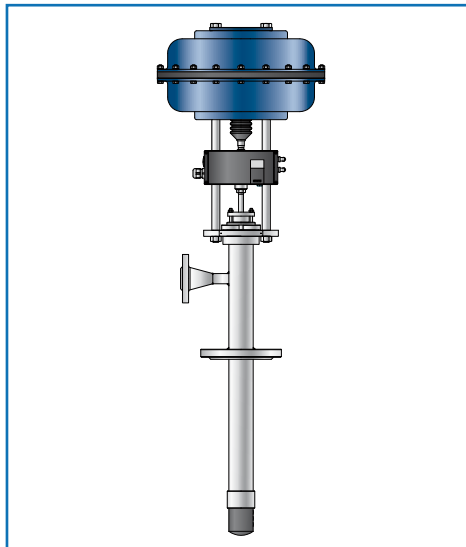
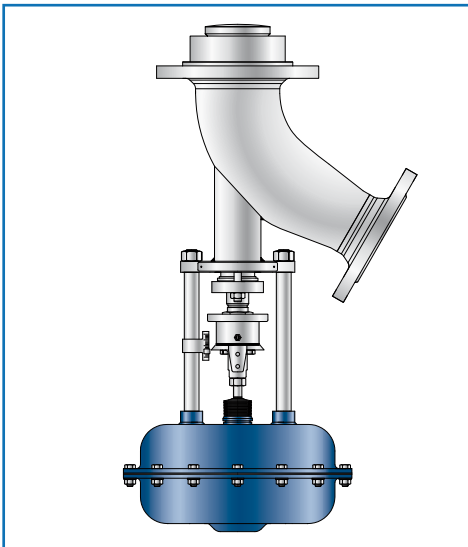
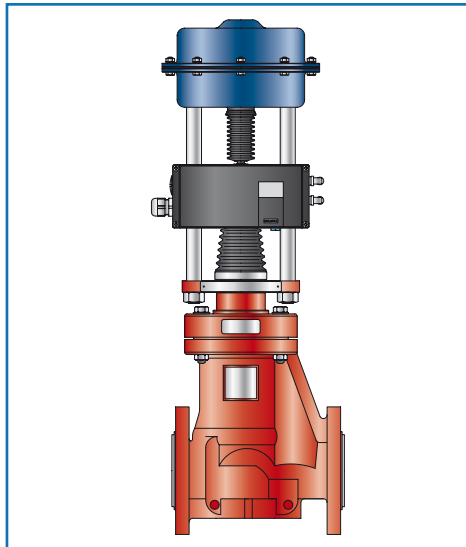
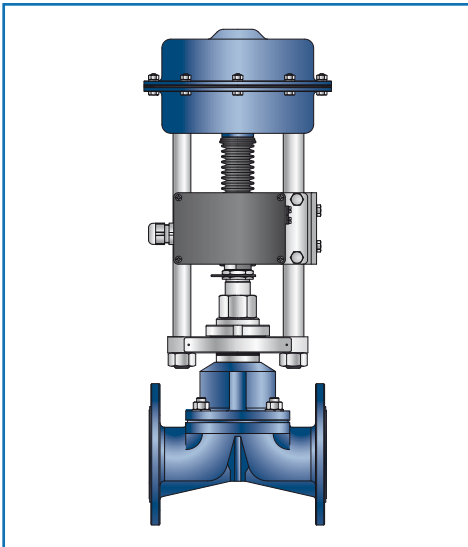
# Applications

- Valves (glass valves, cryovalves, bottom outlet valves, etc.)
- Desuperheaters with stroke motion
- Adjustment of diffuser outlet fan blades
- Stroke adjustment at venturi plug
- Steam jet compressor

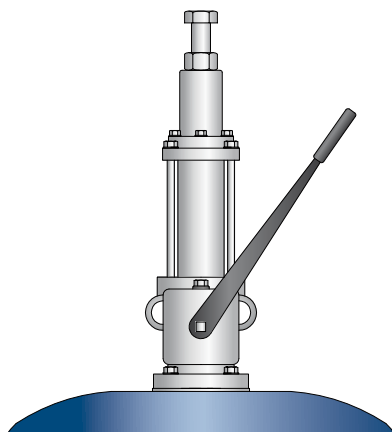
Top mounted mechanical manual-override. Optionally, lateral attachment possible



## Application examples

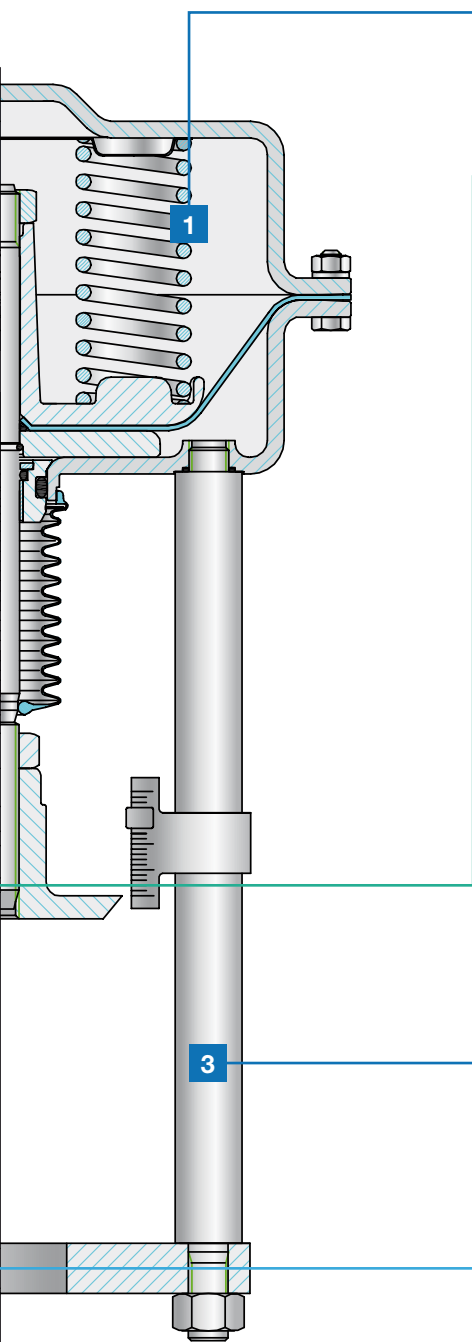


## Top mounted hydraulic manual-override



### Powerful actuator

- Actuator shells as standard coated steel. Optionally available in stainless steel or stainless steel electropolished
- Depressurized stem extended/retracted or without spring return
- Optional: mediumcontrolled execution
- Reinforced diaphragm for heavy use available
- Low-temperature diaphragm available
- Number and type of springs are variable
- Marine application possible



### Spindle and the coupling

- Stem in stainless steel as standard
- Stem with threaded end
- Coupling as standard in stainless steel. Optionally, electropolished available

### Pillars

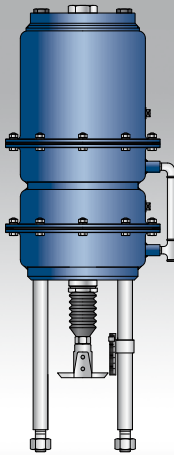
- As standard in galvanized or in stainless steel available. Optionally also in duplex materials
- Pillar spacing and pillar length adaptable
- NAMUR mounting of positioners, limit switches and other equipment available
- Optionally with integrated attachment kit for direct mounting of positioners (S100)

### Traverse

- As standard in galvanized or in stainless steel, electropolished available
- Bolt circles freely selectable

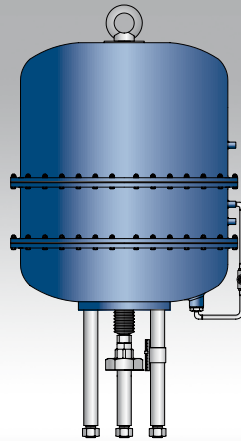
# Series MA-Actuator

**Double-diaphragm actuator  
DMA1.21**



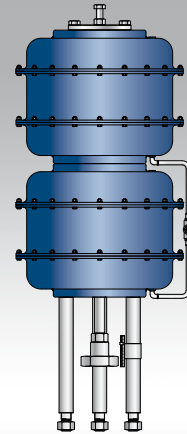
Higher actuating forces  
and larger strokes

**Double-diaphragm actuator  
DMAA1.60**



Higher actuating forces  
and larger strokes

**Tandem-diaphragm actuator  
TMA1.41**



Higher actuating forces  
at the same strokes

Features	Advantages
<b>Industrial design</b>	<ul style="list-style-type: none"> <li>Also suitable for harsh operating</li> </ul>
<b>Highly accurate stem guiding</b>	<ul style="list-style-type: none"> <li>Low wear</li> <li>Long service life</li> </ul>
<b>Easy interchangeability of components</b>	<ul style="list-style-type: none"> <li>Low operating expenses</li> </ul>
<b>Modular Design</b>	<ul style="list-style-type: none"> <li>Various combinations                             <ul style="list-style-type: none"> <li>– 5 actuator sizes</li> <li>– 120 different spring combinations</li> <li>– Many strokes realizable</li> <li>– Completely or partially in stainless steel</li> </ul> </li> </ul>
<b>Pillar comply with NAMUR</b>	<ul style="list-style-type: none"> <li>Easy mounting of positioners and other equipment</li> <li>Easily adaptable to all type of valves and other applications with variable pillar lengths</li> </ul>
<b>Spring extends stem (Po)</b> <b>Spring retracts stem (Ps)</b> <b>Double acting (Pos)</b> <ul style="list-style-type: none"> <li>– Stroke limits</li> <li>– Manual override</li> <li>– Hydraulic damping</li> <li>– Self-regulating execution</li> </ul>	<ul style="list-style-type: none"> <li>Ideal adaptation to your operating conditions</li> </ul>

## Series MA-Actuator

General data					
Series	MA16	MA21	MA31	MA41	MA60
Max. stroke	16 mm	35 mm	59 mm	118 mm	136 mm
Diaphragm surface	85 to 110 cm <sup>2</sup>	150 to 240 cm <sup>2</sup>	355 to 550 cm <sup>2</sup>	600 to 1135 cm <sup>2</sup>	1500 to 2185 cm <sup>2</sup>
Max. number of springs	7	7	7	14	16
Max. force by springs	2.6 kN	4.3 kN	8.4 kN	25.2 kN	45 kN
Max. force by air	4.6 kN	8.5 kN	22.4 kN	40.5 kN	87 kN
Max. positioning signal	6 bar	6 bar	6 bar	6 bar	6 bar
Operating temperature	-20 to +80°C (optionally -40 to +80°C)				
Spring chamber	optionally with air scavenging				