MVA GmbH • Mess- und Verfahrenstechnik
Lochhamer Schlag 6 • D-82166 Gräfelfing
Fon: +49/89-85 83 69 -0 • Fax: +49/89-85 83 69 -70
info@mva-valves.com • www.mva-valves.com

RFS.. 150… 3 - Way control valve with rotor segment

Series RFS..-150-D…..
Externally actuated, electrically or pneumatically

Series RFSH 150-D… electrically actuated

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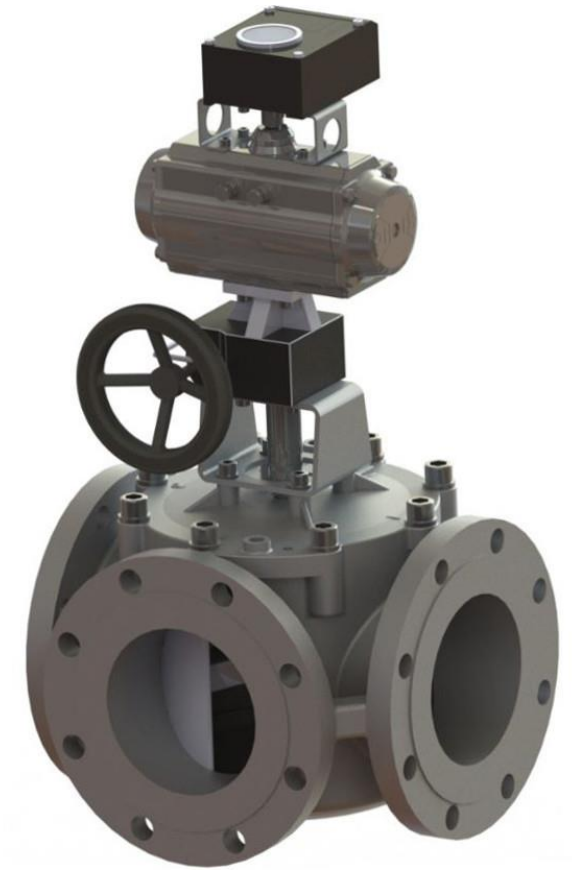
RFS.. 150… 3 - Way control valve with rotor segment

To regulate the temperature of lubrication or cooling circuits in oil and water systems



Series RFSH 150-D…pneumatically actuated

Applications:

- Compressors
- Large engines
- Gears
- Steam turbines
- Gas turbines
- Refrigerator systems
- Offshore
- Marine
- Aircooling

Nominal sizes, Pressure:

- DN 150 Flanges
  acc. DIN EN 1092-1:2013-04 PN 16,
  or acc. ANSI B16.5-2013 Cl. 150

Flow rates, pressure loss DN 150:

- Kvs-value Model H 6'' 730 m^3/ h
- Kvs-value Model R 6''/4'' 325 m^3/ h
- Delta-p: 0,01 to max. 0,3 bar

Housing material:

- Ductile iron EN GJS 400 -18
- Trim: SS / EN GJS 400 – 18
- Sealing Standard NBR

General:
We supply electrically and pneumatically-actuated control valves for mixing and short circuit control in water or oil circuits with 90 ° rotating pneumatic or electric actuators.
The code RFSH… means series high flow, the code RFSR… means series reduced flow.

Construction, application:
Control valves series RFS.. 150-D ... are designed as 3-way valves and have a proportional control behavior respectively dependent to the used process controller. The standard sealing is made of NBR or by specification of the user e.g. VITON or PTFE. The RFS... valves have a very small delta P and can control the desired temperature very precisely. They allow a large Kvs value in very compact, small housing dimensions compared to conventional control valves. Control valves series RFS.. 150-D ... were designed and constructed for very hard and tough applications. The RFS valves can be used in many different media such as water, water-glycol, seawater, lubricating or hydraulic oil.

Control valves with electric or pneumatic actuator should be installed vertical. In order to achieve optimum control, the size of the temperature controller has to be selected carefully.

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Technical data RFS.. 150… electric / pneumatic actuator

For functional safety, the pipeline should be vented at the highest point in the system.
The arrangement of the temperature sensor or the execution of the control loop is set plant-specific and requires the necessary experience of the system installer.
We use quality actuators from leading European manufacturers for our electrically or pneumatically-operated valves.

The technical data's are valid for all sizes

Electric actuator

Power supply:
- 1~230 V / 50-60 Hz
- 3~400 V / 50-60 Hz

Input of position signal:
- 0 (4)…20 mA
  or 0 (2)…10 V

Actual value output:
- 0 (4)…20 mA
  oder 0 (2)…10 V

Limit switch electrically:
- 2 x limit switch

Duty cycle:
- 30 % ED max. 600 c/h

Operating conditions:
- Ambient temperature 0 to
  + 50 °C

Pneumatic actuator

Supply:
- 4…7 bar at + 10 °C to + 40 °C

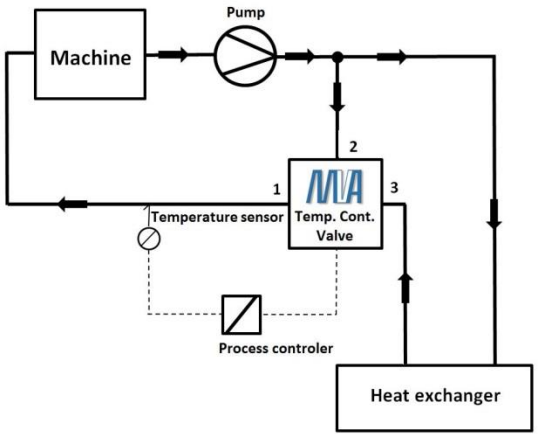
Pneumatic input signal:
- 0,2…1 bar

Operating conditions:
- Control medium acc. DIN ISO 8573-1
- Ambient temperature + 10 °C to
  + 50 °C

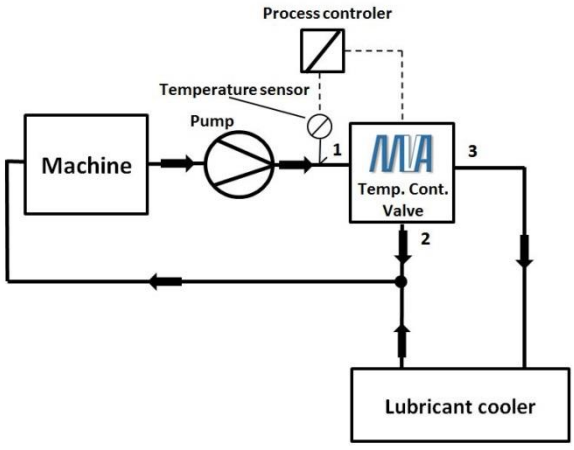
Special feature:
- Security function at power failure possible

Option:
- Input electrically 4…20 mA
  or 0…10V
- Position signal electrically 4…20 mA
  or 0…10V
- 2 x Limit switch

Scheme of mixed Control



Scheme of a short-circuit control



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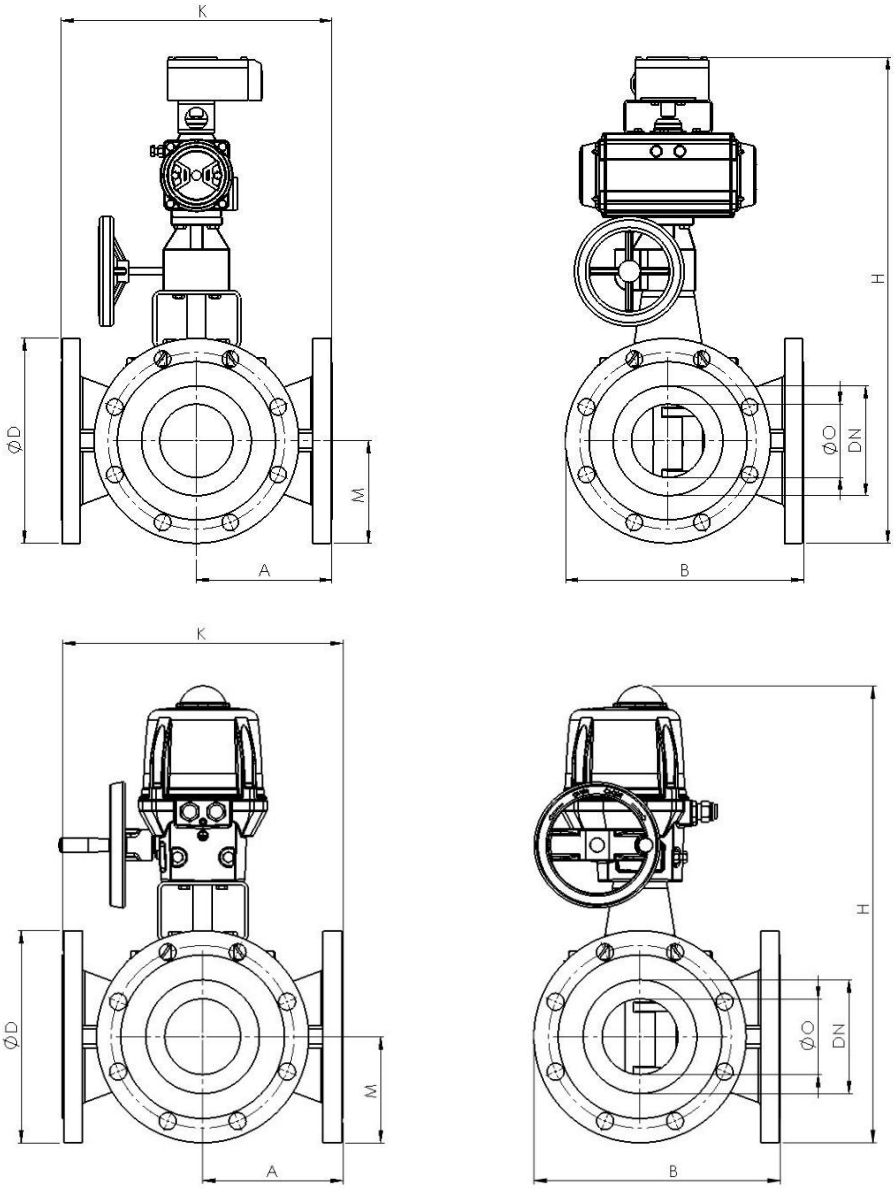
Dimensions RFS.. 150… 3 – Way control valve

Dimensions with pneumatic / electric actuator



Dimensions RFSH-150-D… pneumatic (pe) / electronic (el) actuator									
EN-GJS-400-18	K [mm]	M [mm]	A [mm]	H (pe) [mm]	H (el) [mm]	B [mm]	D [mm]	DN	O [mm]
PN16	362	142,5	181	702	641	331	285	150	150
ANSI Class 150	370	140	185	699	638	335	280	150	150

Dimensions RFSR-150-D… pneumatic (pe) / electronic (el) actuator									
EN-GJS-400-18	K [mm]	M [mm]	A [mm]	H (pe) [mm]	H (el) [mm]	B [mm]	D [mm]	DN	O [mm]
PN16	362	142,5	181	667	606	323,5	285	150	100
ANSI Class 150	370	140	185	664	603	325	280	150	100

When planning the piping system, deviations up to 10 mm have to be considered constructively

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Code RFS.. 150… 3 - Way control valve

3- Way control valve - ordercode

Example:		**R F S R**	**- 150**	**- D**	**- N**	**- 5**	**- H**	**- 5**	**- F**	**- 2**
Valvetype Externaly actuated Rotor segment H = high Flow, R = reduced Flow										
Nominal diameter	DN in preperation		050							
	DN in preperation		100							
	DN		150							
	DN in preperation		200							
Material	Ductile iron			D						
Sealing	NBR				N					
	Viton				V					
	PTFE				P					
Connection	Flange ANSI B16,5-2013 Class 150 RF					5				
	Flange DIN EN 1092-1 PN16					8				
Actuator	Elektric 100/120V 50/60Hz						A			
	Elektric 200/240V 50/60Hz						B			
	Elektric 380/400V 50/60Hz						C			
	Pneumatic, 4..6 bar, air connection G 1/4", double acting						G			
	Pneumatic, 4..6 bar, air connection G 1/4", single acting						H			
Regulation	Control signal 4..20 mA							1		
	Control signal 0..10 V							2		
	Control signal 4..20 mA Hart communiucation							3		
	Control signal 0,2 ..1 bar bzw. 3..15 psi							5		
Return position	4..20 mA								A	
	0..10 V								B	
	no								F	
Particularities	No Signal = Fail - safe position: Port 2 spring closed									2