

V6R: Through valve with female thread, PN 16

For continuous control of hot and cold water or of air. Valve body of bronze (RG 5). Valve seat of bronze, valve spindle of stainless steel, valve plug of either stainless steel or brass, metallic sealing. Stuffing box of brass with O-ring seal. Valve curve either equal percentage or linear. When spindle is extracted, passage A-AB is closed.

Type	Nominal diameter DN	k_{vs} -value m ³ /h	Valve plug material	Weight kg
V6R 15 F350	15	0,4	stainless steel	1,2
V6R 15 F340	15	0,63	stainless steel	1,2
V6R 15 F330	15	1	stainless steel	1,2
V6R 15 F320	15	1,6	stainless steel	1,2
V6R 15 F310	15	2,5	brass	1,2
V6R 15 F300	15	4	brass	1,2
V6R 25 F310	25	6,3	brass	1,6
V6R 25 F300	25	10	brass	1,6
V6R 40 F310	40	16	brass	3,4
V6R 40 F300	40	25	brass	3,4
V6R 50 F300	50	35	brass	4,6

Operating temperature ¹⁾	-15...130 °C	Leakage rate	≤ 0,05% of k_{vs} -value
Operating pressure	up to 120 °C 16 bar up to 130 °C 13 bar	Dimension drawings	5M100
Valve curve	equal-percentage or linear	Fitting instructions	MV 505580
Control ratio	50 (typical)	AVM 234 / Assembly	MV 505919
Valve stroke	14 mm	AVF 234 / Assembly	MV 505920
		AVN 224 / Assembly	MV 505927

Variants

-F2 . . . Valve linear curve (available from DM 15, k_{vs} 4 m³/h only)

Accessories

0217268 . . . Heating for stuffing box, 15 W; N.B. 24 V = /001, 230 V = /004, MV 505498

0360391 . . . Union piece including asbestos-free seal, 2 pieces required.

Specify when ordering: DN 15 = /015, DN 25 = /025 etc.

DN	15	25	40	50
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0378034 001 Valve with packing box, silicon-free; synthetic lubricant; max. 130 °C

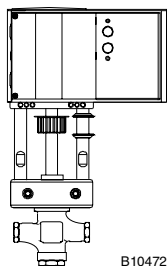
1) At temperatures under 0 °C, use stuffing-box heating (accessory)



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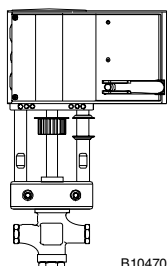
Y07544

Combination V6R with electric actuator
 without spring return:


B10472

Actuator		AVM 234S F132-5					
Type:		2/4/6 s/mm					
Running time:		2-pt./3-pt.; 0...10 V/4...20 mA					
Input:		2-pt./3-pt.; 0...10 V/4...20 mA					
Valve	Closes against the pressure			Closes with the pressure			
	Δp_{max}	close-off pressure		Δp_{max}	close-off pressure		
V6R 15 F300	4	16		3	16		
V6R 25 F300	4	16		2	16		
V6R 40 F300	3	14,4		1,5	13,1		
V6R 50 F300	2	10,8		1	10,3		

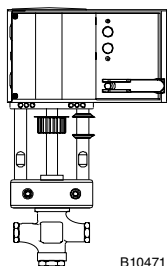
with spring return:



B10470

Actuator		AVF 234S F132-5					
Type:		2/4/6 s/mm					
Running time:		2-pt./3-pt.; 0...10 V/4...20 mA					
Input:		2-pt./3-pt.; 0...10 V/4...20 mA					
Spring return:		15 - 30 s					
Valve	Closes against the pressure			Closes with the pressure			
	Δp_{max}	Δp_s	close-off pressure	Δp_{max}	Δp_s	close-off pressure	
V6R 15 F300	4	16	16	3	16	16	
V6R 25 F300	4	16	16	2	16	16	
V6R 40 F300	3	11,5	11,5	1,5	16	10,4	
V6R 50 F300	2	8,6	8,6	1	16	7,9	

with safety function:



B10471

Actuator		AVN 224S F132-5					
Type:		2/4/6 s/mm					
Running time:		2-pt./3-pt.; 0...10 V/4...20 mA					
Input:		2-pt./3-pt.; 0...10 V/4...20 mA					
Safe function:		15 - 30 s					
Valve	Closes against the pressure			Closes with the pressure			
	Δp_{max}	Δp_s	Close-off pressure	Δp_{max}	Δp_s	close-off pressure	
V6R 15 F300	4	16	16	3	16	16	
V6R 25 F300	4	16	16	2	16	16	
V6R 40 F300	3	6,3	6,3	1,5	16	5,5	
V6R 50 F300	2	4,7	4,7	1	16	4,2	

 Δp_{max} [bar]= Max. permissible pressure difference across the valve at which the drive can still firmly open and close the valve.

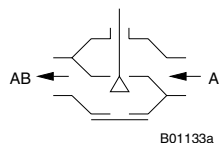
 Δp_s [bar]= Max. permissible pressure difference across the valve at which, in the event of a malfunction, the drive can close the valve.

Close/off pressure The pressure difference across the valve in control mode that can overcome the force of the drive. In this mode, a reduced serviceable life can be expected. Cavitation, erosion and pressure surges may damage the valve. The values stated apply only when the valve is fitted on the drive.

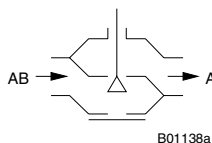
Operation

Using an electric or hydraulic drive, the valve can be moved to any position.

Closes against the pressure



Closes with the pressure



Engineering and installation notes

Can be fitted in any position except facing downwards (see relevant drive). When fitting the drive to the valve, care must be taken not to turn the valve plug on the two stops (seat), thus damaging the seal.

When insulating the valve, the insulation should not extend beyond the connecting clamp on the drive.

Additional technical details

Type	Δp_v
V6R 15 F . 50	4
V6R 15 F . 40	4
V6R 15 F . 30	4
V6R 15 F . 20	4
V6R 15 F . 10	4
V6R 15 F . 00	4
V6R 25 F . 10	4
V6R 25 F . 00	4
V6R 40 F . 10	3
V6R 40 F . 00	3
V6R 50 F . 00	2

Δp_v in bar = max. pressure difference across the valve in any stroke position, limited by the noise level and erosion (max. values without being limited by the force of the drive).

Technical information

– Pressure and temperature specifications	DIN 2401
– Flow parameters	VDI/VDE 2173
– Sauter slide rule for valve sizing	7 090011 003
– Slide rule manual	7 000129 003
– Technical manual `Manipulating units': Parameters, Notes on installation, Control, Pneumatic manipulating units, General information	7 000477 003

Additional details on accessories

0217268/... Heating for stuffing box 15 W; housing of light metal; degree of protection IP 54;
connecting cable $3 \times 0,75 \text{ mm}^2$, earth connection, 1 m in length, cable end sleeves.

Additional details on model types

Valve body with female thread; metallic seal; flat seal of copper at the body; stuffing box with O-ring of ethylene-propylene.

Material numbers as per DIN

	DIN material no.	DIN description
Valve body	2.1096.01	G-Cu Sn 5 Zn Pb (Rg 5)
Valve seat	2.1096.01	G-Cu Sn 5 Zn Pb (Rg 5)
Spindle	1.4305	X 12 Cr Ni S 18 8
Plug	2.0402.26	Cu Zn 40 Pb 2 F43
Plug V6R 15 F.20...F.50	1.4305	X 12 Cr Ni S 18 8
Stuffing box	2.0401.10	Cu Zn 39 Pb 3 F36

Explanation of terms used

Δp_v :

Maximum permissible pressure difference across the valve in any stroke position, limited by the noise level and erosion.

The valve as a traversed element is defined by this parameter specifically in its hydraulic behaviour. By monitoring cavitation, erosion and the noise thus produced, improvements can be achieved in both life expectancy and durability.

Δp_{max} :

Maximum permissible pressure difference across the valve at which the drive can firmly open and close the valve.

Static pressure and fluidic influences are taken into account. This value helps to maintain smooth stroke action and valve sealing. In doing so, the valve's Δp_v value is not exceeded.

Δp_s :

Maximum permissible pressure difference across the valve in the event of a malfunction (e.g. power failure) at which the drive can firmly close the valve and, if necessary, hold the full operating pressure against atmospheric pressure. Since this is a safety function with 'fast' stroke, Δp_s can be larger than Δp_{max} or, respectively, Δp_v . The resultant fluidic disturbances are soon overcome and play a minor role here.

On the three-way valves, the values apply only for the control passage.

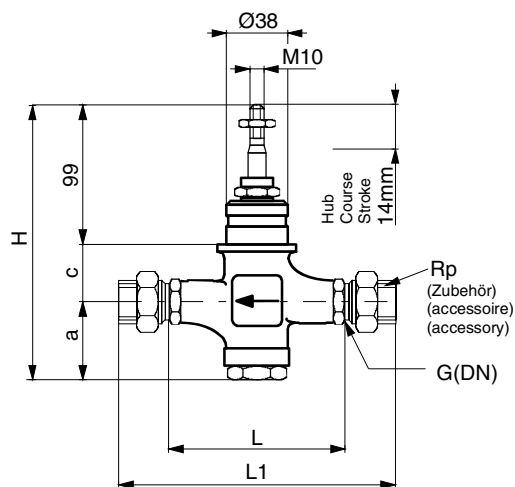
Δp_{stat} :

Line pressure behind the valve. This corresponds largely to the dead pressure when the pump is switched off, e.g. due to the level of liquid in the plant, an increase in pressure via the pressure store, steam pressure etc.

On valves that close with the pressure, the static pressure plus the pump pressure should be used.

Dimension drawings 5M100

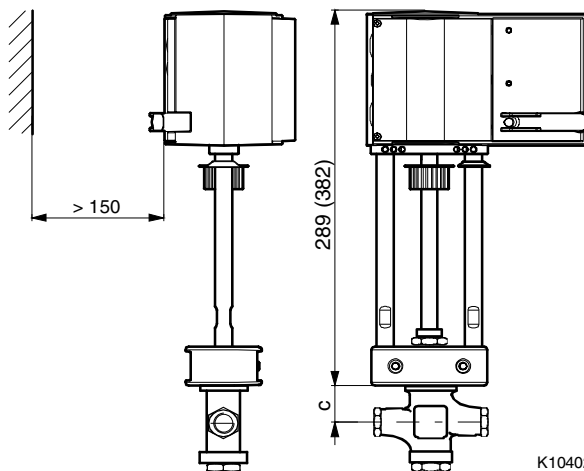
V6R



DN	a	c	H	L	L1	G	Rp
15	1/2"	56	29	184	85	159	1/2 1/2
25	1"	59	33	191	110	196	1 1
40	1 1/2"	76	47	222	150	256	1 1/2 1 1/2
50	2"	98	57	254	180	294	2 2

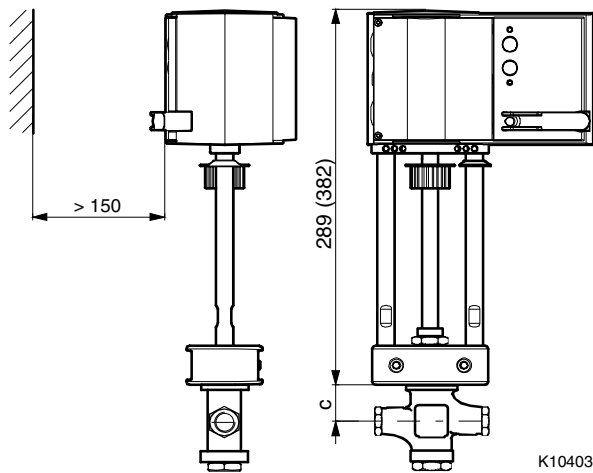
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AVM 2..



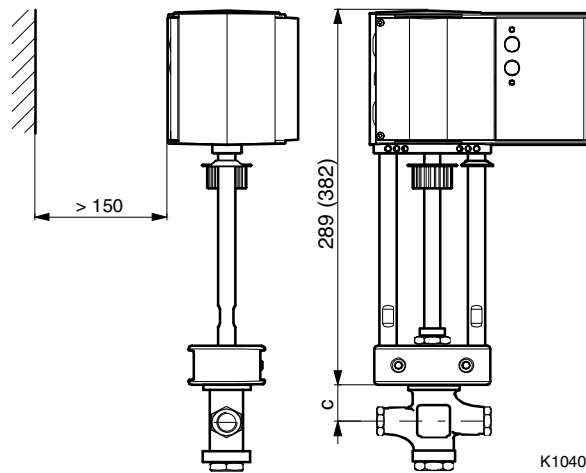
K10402

AVF 2..



K10403

AVN 2..



K10404

Fitting width:

Use measurement 'c' from valve dimension drawing