



Control valve



Actuator

- pneumatic
- electric

Nominal bores

- DN 15 to 150
- ANSI ½" to 6"

Pressure ratings

- PN 16 to 40
- ANSI Classes 150 and 300

Table of contents:

■ Special features	1
■ Technical data	2
■ Materials	2
■ Actuator layout and permissible differential pressures Δp (examples)	3
■ Actuator and accessories	4
■ Weights and dimensions (examples)	4

Available on request:

■ Technical data	8B.1
■ Versions and variants	8B.2
■ Kvs-values and z-values	8B.3
■ Actuator layout and permissible differential pressures Δp (complete)	8B.4
■ Code numbers for types	8B.5
■ Weights and dimensions (complete)	8B.6
■ Operating and maintenance instructions	8B.7

Also:

■ Pressure-temperature diagrams	vR01
■ Specification sheet	vR02

Features

Body designed to meet flowpath criteria

Advantages

- less noise
- less wear
- less maintenance

Modular design

- many different combinations of valves and actuators possible
- plug / seat combinations
 - metal-sealing
 - soft-sealing
 - stellite or nitride hardened
 - lapped
- packing arrangements
 - maintenance-free PTFE glands
 - graphite etc.
 - complying with TA-air according to VDI2441

Stem guiding

- precise ball guidance
- guided packing space
- minimal packing wear

Compact, sturdy construction

- saves installation space

Easily replaceable components

- low operating costs

Stainless steel internal parts

- no corrosion

Actuation

- pneumatic, electric and manual

Columns comply with NAMUR

- simple mounting of positioners, limit switches etc.

Integrated pipeless mounting of position regulators possible

- high availability
- retrofitting possible

Interchangeable trim

- plug / seat can be replaced

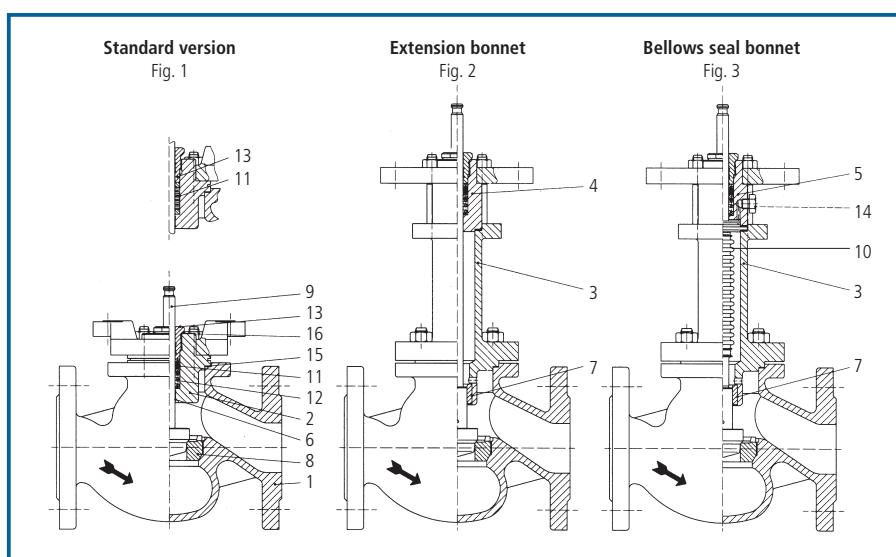
Applications

Control valves in the 8B-series have been designed to meet various different industrial requirements relating to process technology.

Technical data

Nominal bores	■ DN 15 to 150 ■ ANSI 1/2" to 6"
Pressure ratings	■ carbon steel and stainless steel, PN 16 to 40 according to DIN 2401 ■ ANSI class 150 and 300
Characteristics	■ equal percentage, linear, quick open
Rangeability	■ kvs-values > 4 to $\leq 63, 50 : 1$ kvs-values ≤ 4 and $> 63, 30 : 1$
kvs-values	■ control valve 0.06 to 260 m ³ /h, smaller kvs-values possible ■ quick open valve 4.3 to 365 m ³ /h
Leakage	■ lapped plug and seat $\leq 0.01\%$ of kvs-value up to a kvs ≤ 63 , above that 0.05% ■ metal sealing $\leq 0.001\%$ of kvs-value ■ PTFE-sealing : bubble-tight

Materials



Options

- special material e.g. hastelloy, titanium etc.
- model with heating jacket

1) Item		Fig.			Carbon steel GS-C 25 W 1.0619	Stainless steel W 1.4581
		1	2	3		
1	Body				W 1.4301 (DN 15–65), W 1.0619 (DN 80–150)	W 1.4435
2	Bonnet				W 1.0619	W 1.4435
3	Extension bonnet				W 1.4301	W 1.4435
4	Stem seal				W 1.4301	W 1.4435
5	Stem seal				PTFE / W 1.4435	
6	Guide bush				W 1.4435 hardened	
7	Guide bush				Stainless steel	
8	Seat ring				Stainless steel	
9	Plug and stem				PTFE-V-springs / hamar / graphite / PTFE/PTFE-graphite	
10	Bellows				W 1.4571	
11	Packing				W 1.4571	
12	Pressure spring				A 2 70	
13	Gland screw					
14	Check-point					
15	Gaskets					
16	Tap bolts and nuts					

1) No replacement part positioning. See operating- and service instructions 8B.7.

We reserve the right to use equivalent alternative materials.

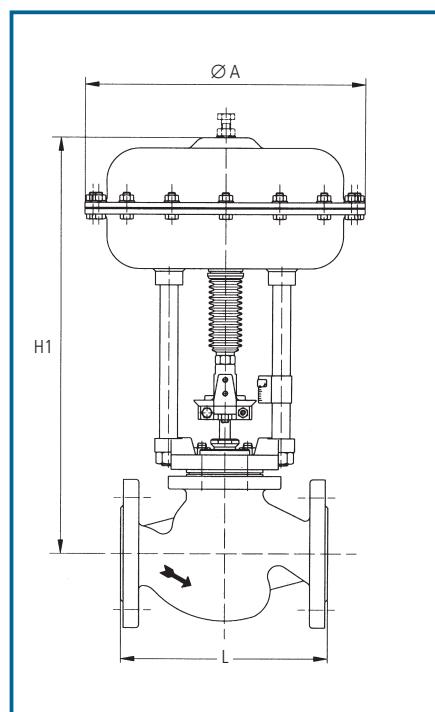
Examples of actuator layouts and permissible differential pressures Δp

Actuator Po Spring closes												Minimum air pressure setting (bar)		1.4		1.4		2		3		4		5		5.5								
												Air pressure setting range (bar)		0.3 – 1.1		0.8 – 1.35		–		–		–		–		–								
Permissible differential pressures (in bar) for each type of seal																																		
Valve																																		
15 1/2 "	20 3/4 "	25 1"	32 1 1/4 "	40 1 1/2 "	50 2"	65 2 1/2 "	80 3"	100 4"	150 6"	1) kvs m³/h	1) cv gpm	Seating ∅ mm	Stroke mm	Actuator-size MA ...	metallic and soft (PTFE)	Stellite	metallic and soft (PTFE)	Stellite	metallic and soft (PTFE)	Stellite	metallic and soft (PTFE)	Stellite	metallic and soft (PTFE)	Stellite	metallic and soft (PTFE)	Stellite								
										0.06	0.07	3	16	16 A6	40	40	40	40																
										0.1	0.12	4	16	16 A6	40	38	40	40																
										0.16	0.19			16 A6	40	38	40	40																
										0.25	0.29			16 A6	34	17	40	33																
										0.4	0.46	5	16	16 A6	34	17	40	33																
										0.63	0.73			16 A6	34	17	40	33																
										0.25	0.29			21 A6	40	40	40	40																
										0.4	0.46	5	16	21 A6	40	40	40	40																
										0.63	0.73			21 A6	40	40	40	40																
										1	1.2	8	16	16 A6	9	—	15	5.2	40	40														
										1.6	1.9	10	16	16 A6	4.6	—	8.4	—	40	40														
										2.5	2.9	12	16	16 A6	2.1	—	4.7	—	40	36														
										4	4.7	15	16	16 A6	0.2	—	19	—	26	21	40	40												
										6.3	7.3	20	16	16 A6	—	—	—	—	14	9	38	34												
										10	11.5	25	16	21 A6	9.3	5.1	9	4.8	30	25	40	40												
										16 A6	33	29	10	6	31 B6	33	29	10	6	40	40													
										16 A6	—	—	—	—	21 A6	5.3	1.9	5.1	1.7	18	15	40	40											
										16 A6	21	18	6	3	31 B6	21	18	6	3	38	35													
										16 A6	—	—	—	—	31 B6	12	9	1	—	24	22													
										25	29	36	16	16 A6	—	—	—	—	3.3	1	10	8.6	13	11	21	19								
										40	46	46	16	21 A6	1.9	—	—	—	8.3	5.9	20	18	25	23	37	35								
										63	73	50	16	21 A6	0.8	—	—	—	4.7	2.9	12	10	15	13	22	21								
										31 B6	4	3	—	—	31 B6	2.7	—	2.6	—	15	13	24	22	40	38									
										41 A6	11	9	20	19	31 A6	2.2	—	2.1	—	12	11	20	18											
										41 A6	9.3	7.6	17	15	31 A6	2.2	—	2.1	—	10	8	17	16											
										100	116	80	30	31 A6	0.9	—	—	—	4.3	3.2	7.2	6.1	12	11	16	15	18	17						
										160	186	100	30	41 A6	3.3	2.2	6.1	5	14	13	22	21												
										260	302	130	30	31 A6	—	—	—	—	2.6	1.7	4.4	3.6	7.9	7	10	9	11	11						
										41 A6	0.9	—	2.1	1.4	31 A6	—	—	—	—	1.3	0.6	2.4	1.7	4.5	3.8	5.8	5	6.7	6					

1) Further kvs-/cv-values (stroke 16 mm, only linear): 0.04/0.05 0.025/0.029 0.016/0.019 0.01/0.012 0.0063/0.0073 0.004/0.0046 0.0025/0.0029 0.0016/0.0019

**Detailed documentation is available on request –
please phone us: +41 (0)61 467 91 20, or visit our internet site:
www.von-rohr.ch**

Pneumatic actuators



Technical data

- compact construction, simple operation with multi-spring
- membrane surfaces: 110, 240, 510 and 1090 cm²
- setting forces 0.3 to 29 kN
- membrane made of polyamide weave with coating based on NBR
- housing made of steel plate coated on both sides with twin-pack epoxy resin, or in 316
- spindle made of W 1.4305, surface smoothed, O-ring seal
- maximum air supply pressure 6 bar
- permissible ambient temperature -30°C to +90°C
- quick and simple to reverse Po ↔ Ps

Optional extras

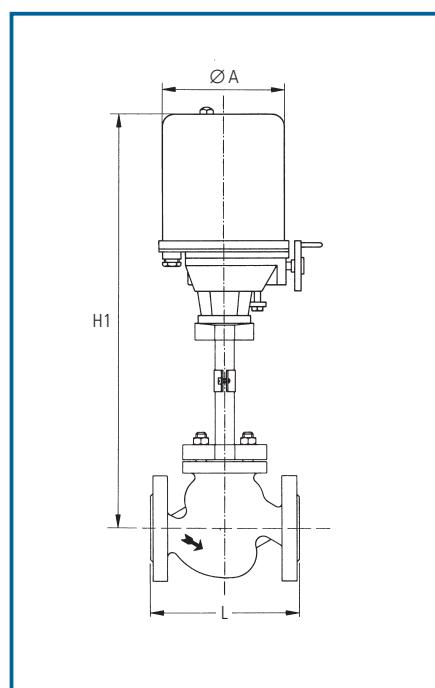
- housing made of W 1.4301, electrolytically polished if required
- mechanical stroke limitation, simple to adjust
- emergency manual adjustment

Accessories

- pneumatic and electro-pneumatic positioner, also in ex-version
- integrated mounting possible
- limit switches, solenoid valves, amplifiers etc.

Valve	DN	mm	15	20	25	32	40	50	65	80	100	150
	L PN 16...40		130	150	160	180	200	230	290	310	350	480
	1) approx. weight of valve (kg)		6.5	8.5	9	10	17	19	27.5	54	77	110
	2) approx. weight of valve (kg)		10	12	13	14	22	24	32	56	84	115
Actuator	MA...	approx. weight (kg)	Ø A						H1 standard 1)			
9.16 A6 ...		4	162	341	341	341	341	371	371			
9.21 A6 ...		6.5	210	402	402	402	402	432	432			
9.31 B6 ...		18	310	412	412	412	412	442	442			
9.31 A6 ...		19	310							543	568	613
9.41 A6 ...		48	415							605	630	675
									H1 bellows / extension tube 2)			
9.16 A6 ...		4	162	528	528	528	528	528	528			
9.21 A6 ...		6.5	210	589	589	589	589	589	589			
9.31 B6 ...		18	310	599	599	599	599	599	599			
9.31 A6 ...		19	310							720	720	720
9.41 A6 ...		48	415							782	782	782

Electrical actuators



Technical data

- connectors comply with DIN 3358 – F05, DIN 3210 – B0 and columns (pillars)
- thrust 0.6 bis 25 kN
- safety category IP 65
- permissible ambient temperature -20°C to +60°C
- motor voltage: standard 230 V 50 Hz
- 2 load switches built in as standard
- 1 travel-dependent switch 2.2,0 – 25

Optional extras

- other voltage
- limit switches
- feed back potentiometer, 1000 Ohm (other resistance values possible)
- electronic position transmitter
- positioner (positioning electronics, 0–10 V, 4–20 mA)
- heat-resistance

Valve	DN	mm	15	20	25	32	40	50	65	80	100	150
	L PN 16...40		130	150	160	180	200	230	290	310	350	480
	approx. weight of valve (kg)		6.5	8.5	9	10	17	19	27.5	54	77	110
Actuator	SHE...	approx. weight (kg)	Ø A									
2.0.6... – 1.2...		3	128	348	348	348	348	379	379			
2.1.2... – 6...		7	145	478	478	478	478	509	509	509	589	614
2.8... – 15...		11	188					564	564	564	644	669
2.15... – 25...		18	216							710	735	780

Armaturen AG

von Rohr

Pneumatic and electric control valves and appliance

Fichtenhagstrasse 4, CH-4132 Muttenz 2, Phone +41 (0)61 467 91 20, Fax +41 (0)61 467 91 21
info@von-rohr.ch, www.von-rohr.ch