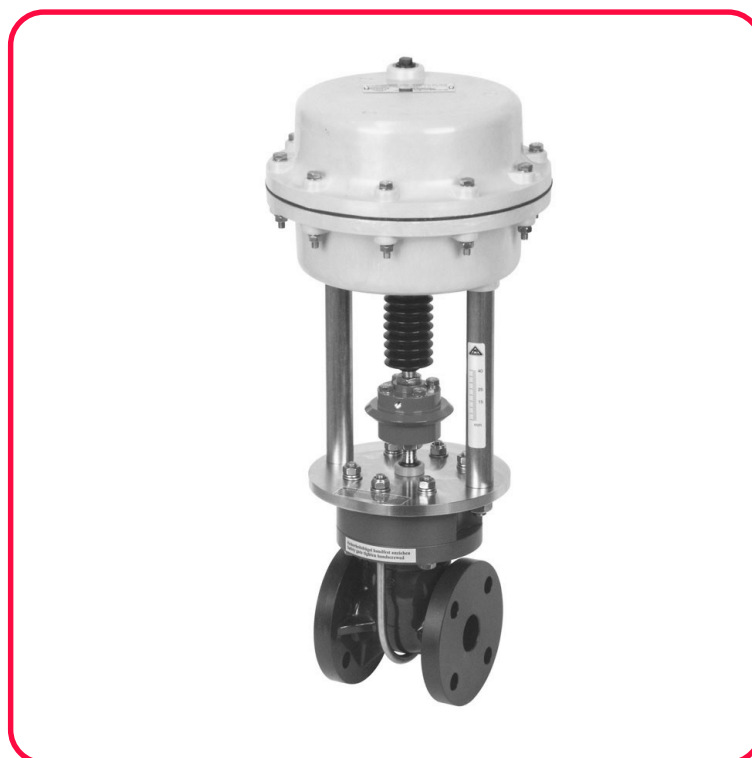


Globe control valve type 640 with pneumatic actuator



Body material	PVC-U	PP
Material plug and seat	PVC-U	PP
Stem material	• 1.4571 • Hastelloy C4	• Other materials on request
Sealing material	• EPDM • FKM	• FEP
Working temperature	0 °C up to 60 °C ¹⁾	-20 °C up to 80 °C ¹⁾
Nominal size	DN 15 up to DN 100 ²⁾	
Connection	Flange connection acc. to DIN 2501 - PN 10 ³⁾	
Length	Company standard	
Actuator	Pneumatic, single or double action, spring to close or to open	
Accessories	Electro-pneumatic or pneumatic positioner Pressure control station	

1) Max. ambient temperature: 60 °C

2) DN 32 only available in PVC-U

3) Flange connection also acc. to ANSI available

Example for an invitation to tender text:

Globe control valve made of plastic, EXNER type 640, DN 25, PN 6, PP/FKM, length acc. to company standard, changeable seat and plug made of PP, PTFE-bellows, flange connection acc. to DIN 2501-PN 10, with pneumatic actuator K 220 II, air to close, linear characteristic, kvs-value 5.2

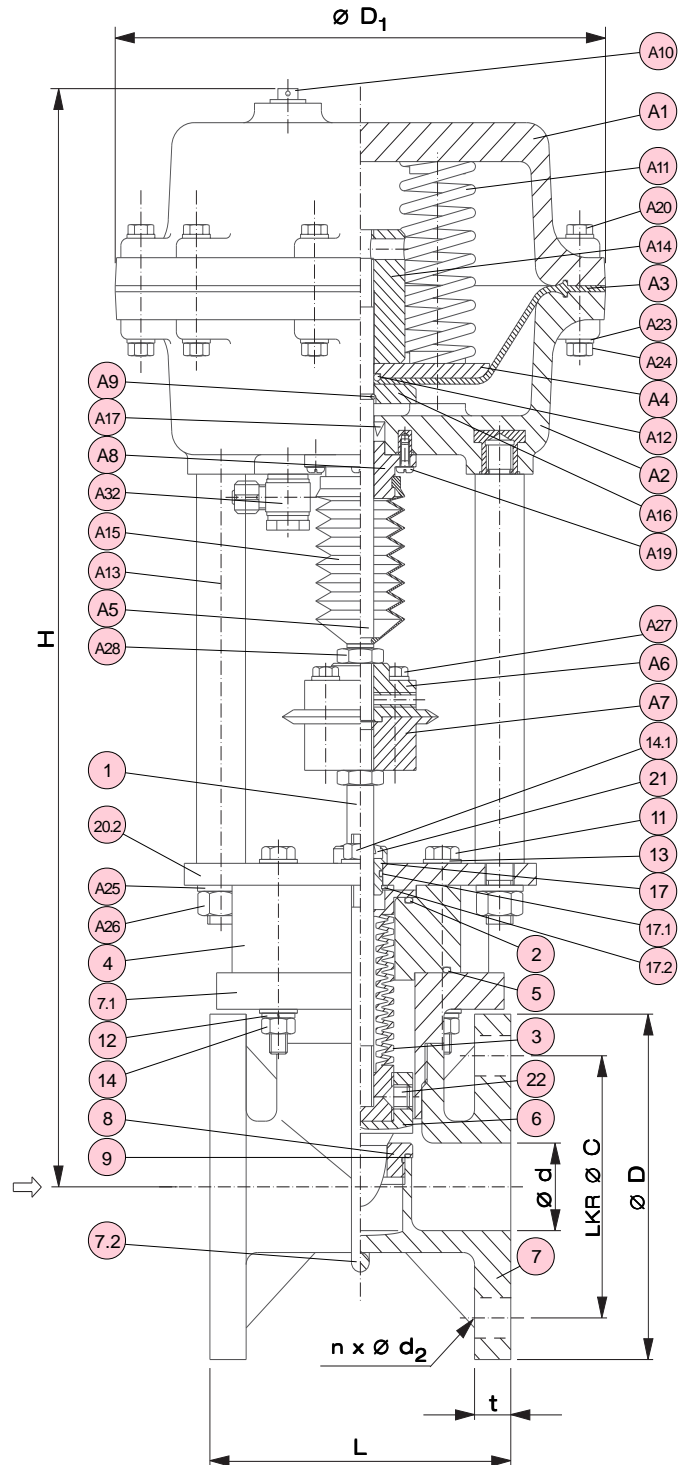
Globe control valve type 640 with pneumatic actuator

No.	Description	Number	Material
1	Valve spindle	1	1.4571, titanium, Hastelloy C4
2	O-ring ^{*)}	1	EPDM, FKM, FEP
3	Bellows	1	PTFE
4	Bellows housing	1	PVC-U / PP
5	O-ring ^{*)}	1	EPDM, FKM, FEP
6	Plug ^{*)}	1	PVC-U / PP
7	Valve body	1	PVC-U / PP
7.1	Flange	1	PVC-U / PP
7.2	U-bolt	1	1.4571
8	Valve seat ^{*)}	1	PVC-U / PP
9	O-ring ^{*)}	1	EPDM, FKM, FEP
11	Hexagonal bolt	4	A4
12	Spring ring	4	A4
13	Washer	10	A4
14	Hexagonal nut	4	A4
14.1	Locking nut	2	A4
17	Guiding bushing	1	PVC-C
17.1	O-ring ^{*)}	1	EPDM, FKM
17.2	Locking ring	1	A2
20.2	Mounting flange	1	1.4571
21	Wiper ring ^{*)}	1	FKM
22	Threaded ¹⁾	1	PVDF
A1	Diaphragm housing upper part	1	GFK
A2	Diaphragm housing lower part	1	GFK
A3	Diaphragm	1	EPDM/reinforcement
A4	Diaphragm plate	1	Aluminium
A5	Actuator spindle	1	1.4571
A6	Coupling upper part	1	1.4571
A7	Coupling lower part	1	1.4571
A8	Spindle leading	1	POM
A9	Clamp, 2-parts	1	1.4308
A10	Vent plug	1	PE
A11	Pressure spring	4	Spring steel ²⁾
A12	O-ring	1	EPDM
A13	Mounting pillar	2	1.4571
A14	Lift stop	1	Polyamid
A15	Protection bellows	1	CSM
A16	Diaphragm washer	1	1.4571
A17	Lip ring ^{*)}	1	EPDM
A19	Flat headed screw	3	A2
A20	Hexagonal bolt	10	A4
A23	Washer	24	A4
A24	Hexagonal nut	10	A4
A25	Washer	2	A4
A26	Hexagonal nut	2	A4
A27	Hexagonal bolt	4	A4
A28	Hexagonal nut	1	A4
A32	Air adapter	1	Aluminium

^{*)} Wearing parts

¹⁾ from DN 32

²⁾ Coated



Valve body PVC-U, DN 32

Globe control valve type 640 with pneumatic actuator

Dimensions acc. to DIN

Dimensions in mm										Actuator
DN	d	D1	C	D	L	H	t	Lift	n x d ₂	Type
15	18	220	65	95	85	441	12	15	4 x 14	K 220
20	24	220	75	105	95	445	14	15	4 x 14	K 220
25	28	220	85	115	110	444	14	25	4 x 14	K 220
32	37	220	100	140	135	452	16	25	4 x 18	K 220
40	41	220	110	150	190	446	16	25	4 x 18	K 220
50	52	220	125	165	200	450	16	25	4 x 18	K 220
65	67	330	145	185	220	592	18	40	4 x 18	K 330
80	78	330	160	200	240	592	18	40	8 x 18	K 330
100	100	330	180	220	290	595	18	40	8 x 18	K 330

Dimensions acc. to ANSI

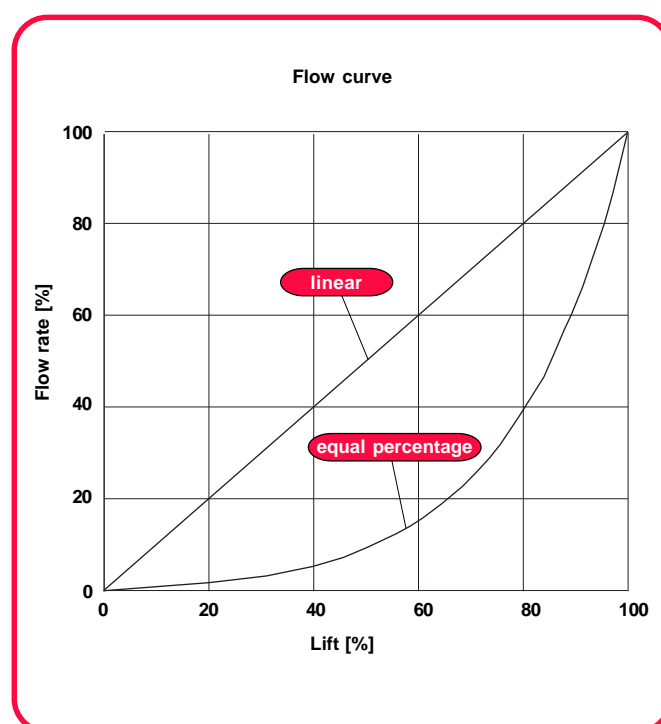
Dimensions in mm										Actuator
DN	d	D1	C	D	L	H	t	Lift	n x d ₂	Type
1/2"	18	220	60	95	85	441	12	15	4 x 16	K 220
3/4"	24	220	70	105	95	445	14	15	4 x 16	K 220
1"	28	220	79	115	110	444	14	25	4 x 16	K 220
1 1/4"	37	220	89	140	135	452	16	25	4 x 16	K 220
1 1/2"	41	220	98	150	190	446	16	25	4 x 16	K 220
2"	52	220	121	165	200	450	16	25	4 x 19	K 220
2 1/2"	67	330	140	185	220	592	18	40	4 x 19	K 330
3"	78	330	152	200	240	592	18	40	4 x 19	K 330
4"	100	330	191	220	290	595	18	40	8 x 19	K 330

Flow rate characteristic value¹⁾ k_{VS} in m³/h
PVC-U / PP²⁾

k_{VS}/c_V	DN								
	15	20	25	32	40	50	65	80	100
0,1 / 0,11	•	•	•						
0,2 / 0,23	•	•	•						
0,4 / 0,46	•	•	•						
0,6 / 0,70	•	•	•						
1,0 / 1,20	•	•	•	•					
1,5 / 1,75	•	•	•	•					
2,2 / 2,60	•	•	•	•					
3,5 / 4,00		•	•	•					
5,2 / 6,10		•	•	•	•				
8,0 / 9,50				•	•	•			
9,0 / 10,50				•	•	•	•		
14,0 / 16,00					•	•	•	•	
22,0 / 25,00						•	•	•	•
34,0 / 40,00							•	•	•
40,0 / 46,00							•	•	•
55,0 / 64,00								•	•
70,0 / 81,00									•
80,0 / 93,00									•

¹⁾ Definition k_{VS} -value see chapter T2 / technical information

²⁾ DN 32 only available in PVC-U

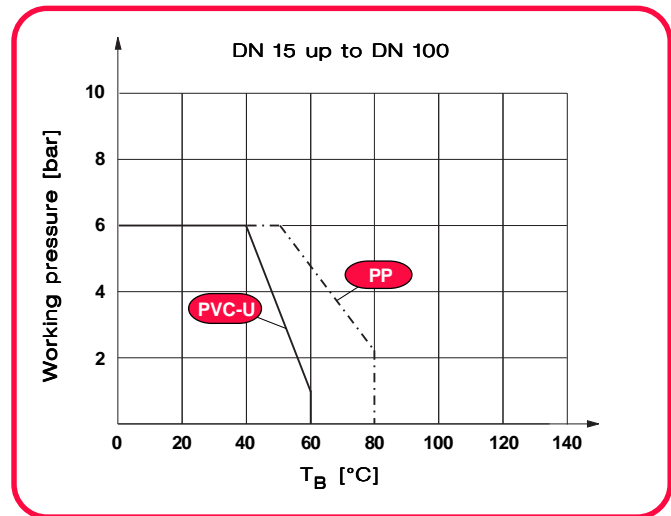


Globe control valve type 640 with pneumatic actuator

Working pressure¹⁾ p_B in bar

Body-material	T_B in °C	DN 15 - 100
PVC-U	0 up to 40	6
	60	1
PP	0 up to 50	6
	80	2,2

¹⁾ Definition see chapter T2 / technical information



Disassembly and assembly

General information: *The valve body and the actuator are fitted with type labels containing the individual data for the valve and its specific working conditions. If the working conditions are changed, the suitability of the materials must be checked. To prevent damage to seat and plug, we recommend installing a dirt trap upstream of every valve.*

Disassembling the fitting

Attention: *Fittings may never be removed when the system is under pressure. During disassembly, it must be ensured that all the components can be reinstalled in their original locations. This applies in particular for ancillary equipment, e.g. positioners.*

- Removal from the pipe by loosening and removing the flange screws.
- Loosen and remove the hex bolts **A27**.
- Loosen the hex nuts **A26**, and remove actuator.
- Loosen the nuts **14**, and pull the hex bolts **11** out of the mounting flange **20.2**.
- Pull bellows housing **4** from the valve body **7**.
- DN 32-100: Loosen the threaded pin **22** in the plug **6**.
all DN: Manually turn the plug **6** counter-clockwise to remove it from the bellows **3**.
- Turn valve spindle **1** out of the bellows **3**.
- Remove the locking ring **17.2** from the collar bushing **17**.
- Press collar bushing **17** out of the mounting flange **20.2**.
- Turn the valve seat **8** counter-clockwise to remove it from the valve body **7**.

Assembling the fitting

- Proceed in the reverse order as for disassembly.
- Before commissioning, the valve must be readjusted and the positioner readjusted or reinitialized, depending on version.

Before installation

- Check the components for damage, and replace if necessary.
- All parts must be free of contamination.
- Flush the pipe, check all the screws on the valve, and retighten carefully, if necessary.

Notes for correct installation

- The fitting must be installed stress-free in the pipe (plane parallelism, axial, overall length).
- Check the direction of flow (arrow on the housing).
- Tighten the connecting screws evenly and crosswise (observe tightening torques). In general, use washers for the nuts and bolts in plastic flanges.
- The use of profiled flange gaskets is recommended.

Connections for pneumatic actuators and positioners

- We recommend fitting a compressed air maintenance unit.
- The actuators may only be operated with dry, clean compressed air at a max. pressure of 6 bar. For the configuration "spring-actuated closing", the G 1/4" pneumatic coupling is located on the lower part of the actuator housing, and on the upper part of the housing for the configuration "spring-actuated opening".
- The danger warnings and the information in the operating manual must be observed.

Important:

- After commissioning, all the screws on the valve must be checked, and retightened if necessary.