



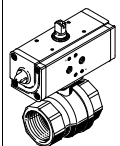
Ball valve actuators VZPR



# Ball valve actuators VZPR

Key features and product range overview

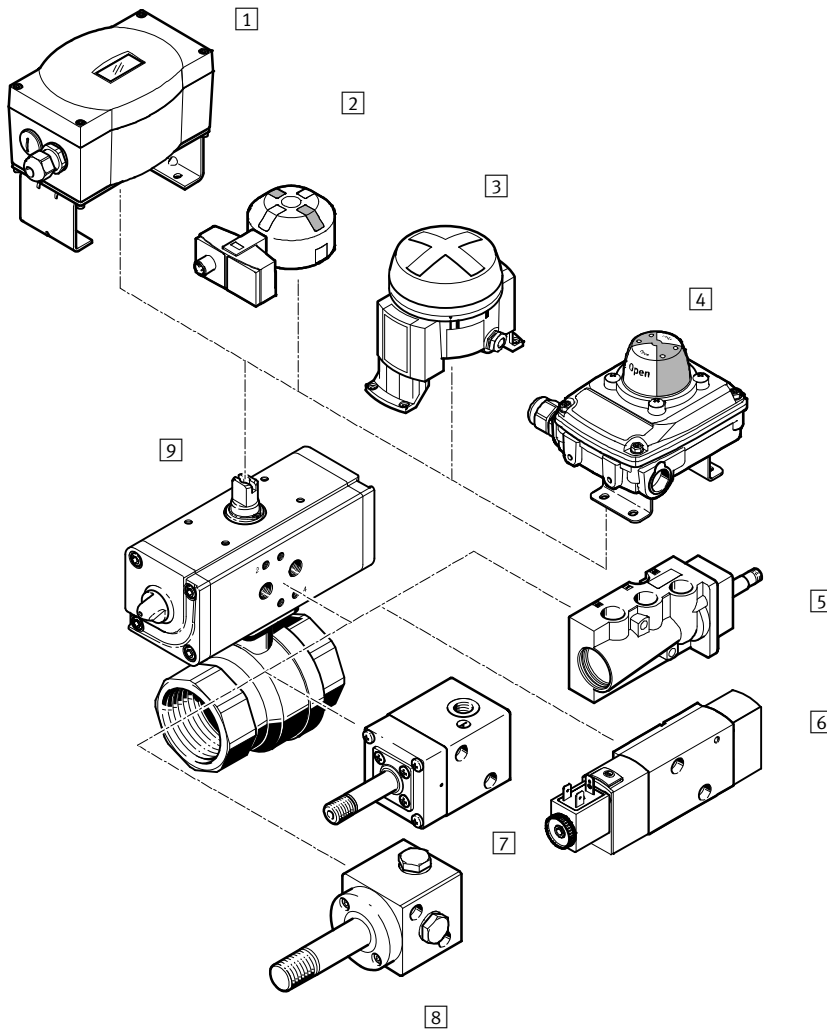
General	Construction	Characteristics	
<ul style="list-style-type: none"> <li>-  - Connecting thread Rp<math>\frac{1}{4}</math> ... Rp<math>2\frac{1}{2}</math></li> <li>-  - Flow rate Kv 5.9 ... 535 m<sup>3</sup>/h</li> </ul>	<ul style="list-style-type: none"> <li>• Brass design VZPR-...</li> <li>• Port pattern to NAMUR VDI/VDE 3845</li> <li>• PN class to DIN EN 1333</li> </ul>	<ul style="list-style-type: none"> <li>• Combination of a pneumatic quarter-turn actuator and a ball valve</li> <li>• Flow is fully opened or closed in both directions</li> <li>• 5/2-way valve with NAMUR port pattern can be mounted directly on the drive unit</li> <li>• Limit switch attachments for end-position sensing can be mounted directly on the drive unit</li> </ul>	<p>Valves with NAMUR port pattern → Internet: namur</p> <p>Limit switch attachments with NAMUR mounting-hole pattern → Internet: dapz</p>

Version	Type	Connecting thread <sup>1)</sup>	Nominal diameter [mm]	Nominal pressure of process valve [bar]	→ Page/Internet
<b>Brass</b>					
	VZPR-BPD-...	Rp $\frac{1}{4}$	15	PN 40	5
		Rp $\frac{3}{8}$	15	PN 40	
		Rp $\frac{1}{2}$	15	PN 40	
		Rp $\frac{3}{4}$	20	PN 40	
		Rp1	25	PN 40	
		Rp $1\frac{1}{4}$	32	PN 40	
		Rp $1\frac{1}{2}$	40	PN 25	
		Rp2	50	PN 25	
		Rp $2\frac{1}{2}$	63	PN 25	

1) Cylindrical barrel with female thread to DIN ISO 228-1

# Ball valve actuators VZPR

Peripherals overview



Mounting components and accessories		
	Brief description	→ Page/Internet
1	Positioner CMSX	For position control of quarter turn actuators in process automation systems cmsx
2	Sensor boxes SRBG	For electrical feedback and position monitoring of process valves which are actuated with quarter turn actuators srbg
3	Limit switch attachments DAPZ	Round design, variant AR Electrical, inductive or inductive and explosion-proof sensing dapz
4	Sensor boxes SRBC	For electrical feedback and position monitoring of process valves which are actuated with quarter turn actuators srbc
5	Solenoid valves NVF3	For F solenoid coil and explosion-proof F solenoid coil nvf3
6	Solenoid valves VSNC	For single- and double-acting quarter turn actuators with a connection pattern to VDI/VDE 3845 vsnc
7	Solenoid valves VOFC	Solenoid valve with solenoid coil, connection pattern to Namur vofc
8	Solenoid valves VOFD	Solenoid valve with solenoid coil, connection pattern to Namur vofd
9	Ball valve actuator unit VZPR	Combination of quarter turn actuator and ball valve, versions in brass 5

# Ball valve actuators VZPR

Type codes



		VZPR	-	B	P	D	-	22	-	R	38
<b>Type</b>											
VZPR	Ball valve actuator										
<b>Valve</b>											
B	Ball valve										
<b>Drive</b>											
P	Quarter-turn actuator DAPS										
<b>Mode of operation</b>											
D	Double-acting										
<b>Valve function</b>											
22	2/2-way valve										
<b>Closing direction</b>											
R	Closes to right										
<b>Connecting thread</b>											
14	Rp1/4										
38	Rp3/8										
12	Rp1/2										
34	Rp3/4										
1	Rp1										
114	Rp1 1/4										
112	Rp1 1/2										
2	Rp2										
212	Rp2 1/2										

# Ball valve actuators VZPR-BPD


## Technical data


### Function



-  Swivel angle  
0 ... 90°
-  Flow rate Kv  
5.9 ... 535 m<sup>3</sup>/h



-  Connecting thread  
Rp1/4 ... Rp2 1/2

-  Torque  
15 ... 180 Nm

General technical data									
Connecting thread	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2
Quarter-turn actuator									
Pneumatic connection	G1/8								
Constructional design	Scotch yoke mechanism, double-acting								
Type of mounting	Via female threads								
Mounting position	Any								
Swivel angle [°]	90								
Closing direction	Closes to right								
Torque at 5.6 bar and 0° swivel angle [Nm]	15	15	15	30	30	60	60	106	180
Ball valve									
Valve function	2/2								
Constructional design	2-way ball valve								
Sealing principle	Soft								
Actuation type	Pneumatic								
Direction of flow	Reversible								
Nominal diameter [mm]	15	15	15	20	25	32	40	50	63
Flow rate Kv [m <sup>3</sup> /h]	5.9	9.4	17	41	70	121	200	292	535

Operating and environmental conditions									
Connecting thread	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2
Ambient temperature [°C]	-20 ... +80								
Temperature of medium [°C]	-20 ... +150								
Quarter-turn actuator									
Operating pressure <sup>1)</sup> [bar]	1 ... 8.4								
Operating medium	Dried air, lubricated or unlubricated								
Ball valve									
Nominal pressure of process valve <sup>2)</sup>	PN 40	PN 40	PN 40	PN 40	PN 40	PN 40	PN 25	PN 25	PN 25
Operating medium	Compressed air, water, neutral gasses, neutral fluids, vacuum								

1) Minimum operating pressures vary for single-acting quarter-turn actuators depending upon spring quantity.

2) PN class to DIN EN 1333.

# Ball valve actuators VZPR-BPD

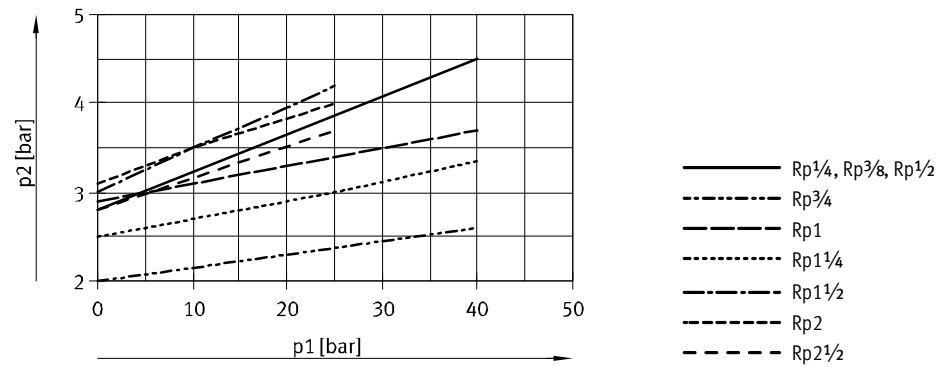
Technical data



Materials		
Housing		Brass
Ball		Brass
Seals	Housing	Polytetrafluoroethylene, fibre glass reinforced
	Shaft	Fluoro elastomer

Weight [g]			
Connecting thread		Connecting thread	
Rp1/4	1300	Rp1 1/4	3200
Rp3/8	1300	Rp1 1/2	3800
Rp1/2	1200	Rp2	5400
Rp3/4	1500	Rp2 1/2	7300
Rp1	1800		

## Operating pressure p2 as a function of nominal operating pressure p1

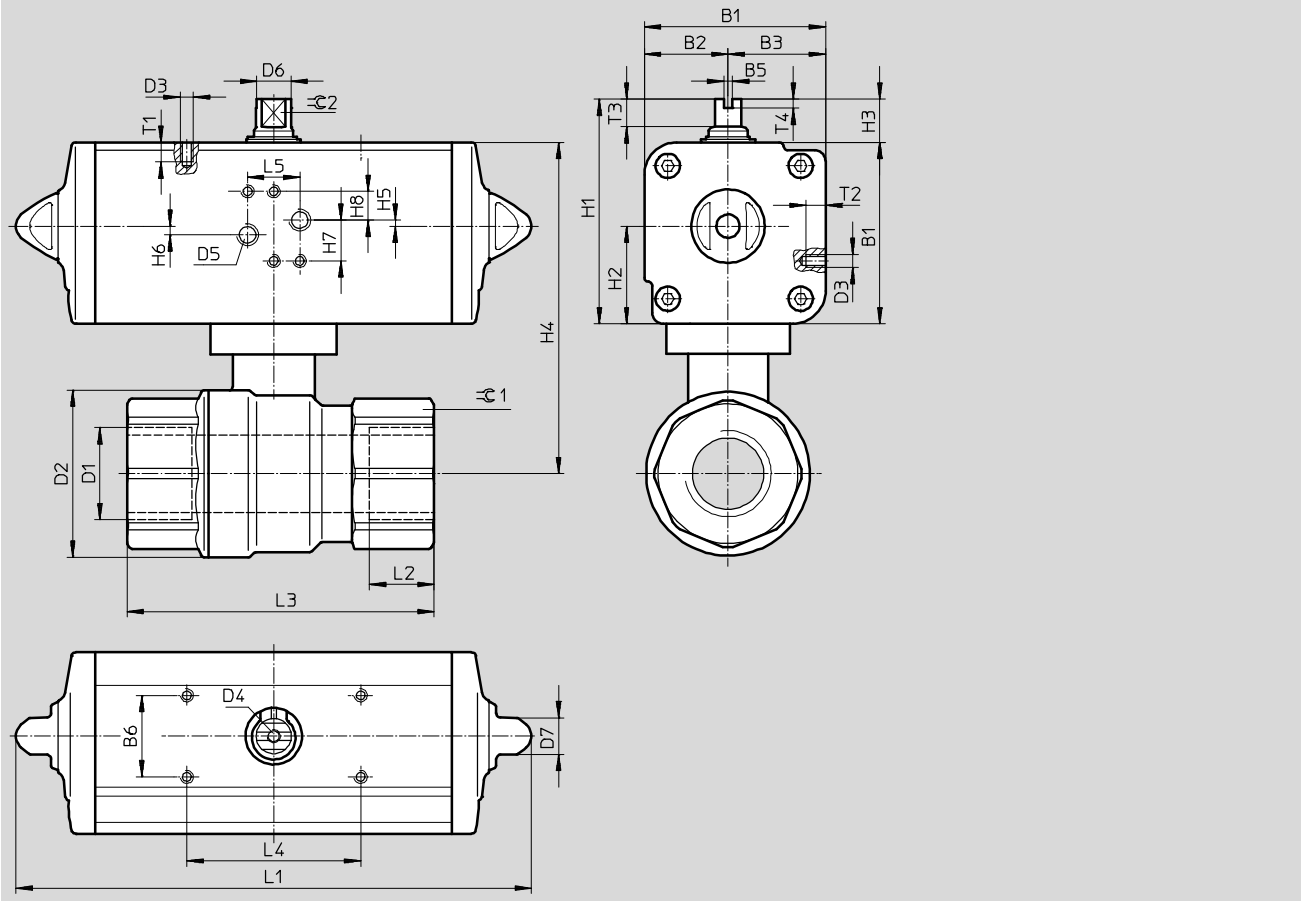


# Ball valve actuators VZPR-BPD

Technical data

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



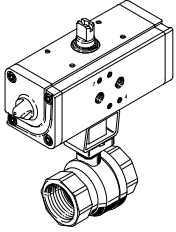
Connecting thread D1	B1	B2	B3	B5	B6	D2 ∅ max.	D3	D4	D5	D6 ∅	D7 ∅	H1	H2	H3	H4								
Rp1/4	52.2	24.2	28	4	30	35	M5	M6	G1/8	9.2	13	72.2	28	20	92.2								
Rp3/8																							
Rp1/2																							
Rp3/4																							
Rp1	59.2	27.7	31.5													45	55	10.9	13	79.2	31.5	20	104.2
Rp1 1/4	70.4	32.7	37.7													65	75	14.5	13	90.4	37.7	20	130.2
Rp1 1/2																158.3							
Rp2	83.3	38.5	44.8													90	16.2	17	103.3	44.8	20	158.3	
Rp2 1/2	107.5	51	56.5	110	20.2	22	137.5	56.5	30	192.5													

Connecting thread D1	H5	H6	H7	H8	L1	L2	L3	L4	L5	T1	T2	T3	T4	∅C1	∅C2		
Rp1/4	0.8	3.2	18	14	159	15	75	80	24	6	7	10	4	26	8		
Rp3/8																	
Rp1/2																	
Rp3/4					174	16	80									10	32
Rp1					19	90	9									41	
Rp1 1/4					21	110	10									50	
Rp1 1/2					198	21	120									13	55
Rp2					236.5	25	140									13	70
Rp2 1/2	289.9	24	143	16	83												

# Ball valve actuators VZPR-BPD

Technical data

FESTO

Ordering data – Ball valve actuators			
	Connecting thread	Part No.	Type
	Rp1/4	540510	VZPR-BPD-22-R14
	Rp3/8	540511	VZPR-BPD-22-R38
	Rp1/2	540512	VZPR-BPD-22-R12
	Rp3/4	540513	VZPR-BPD-22-R34
	Rp1	540514	VZPR-BPD-22-R1
	Rp1 1/4	540515	VZPR-BPD-22-R114
	Rp1 1/2	540516	VZPR-BPD-22-R112
	Rp2	540517	VZPR-BPD-22-R2
	Rp2 1/2	540874	VZPR-BPD-22-R212