



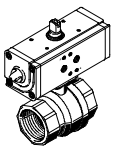
# Ball valve actuators VZPR



# Ball valve actuators VZPR

Key features and product range overview

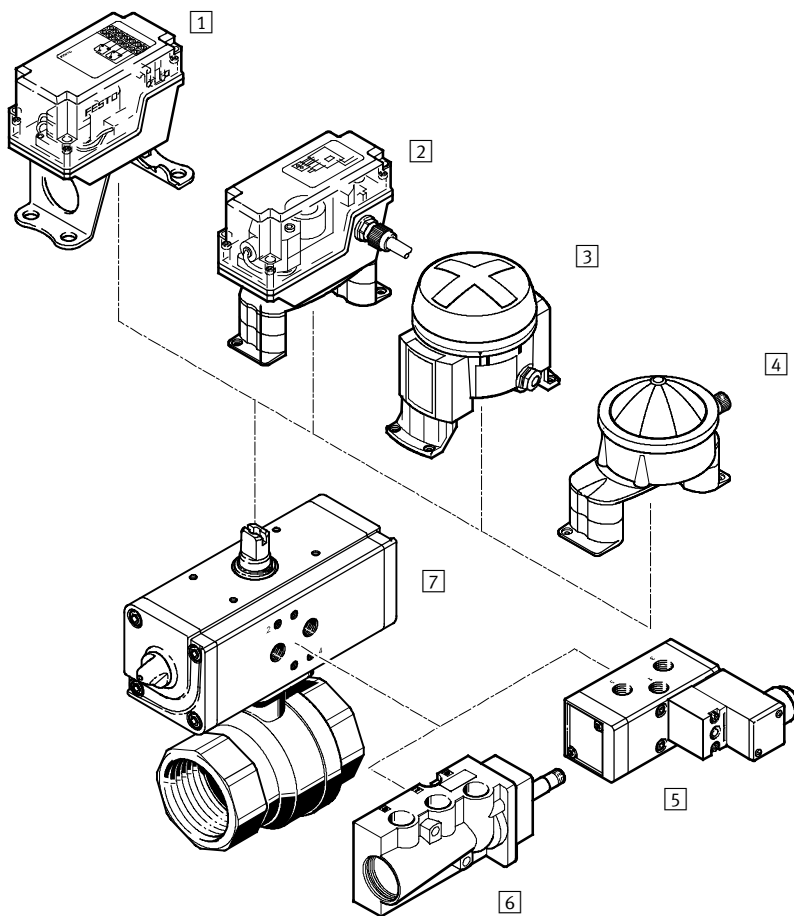
General	Construction	Characteristics	
<ul style="list-style-type: none"> <li>-  - Connecting thread Rp<math>\frac{1}{4}</math> ... Rp<math>2\frac{1}{2}</math></li> <li>-  - Flow rate Kv 5.9 ... 535 m<sup>3</sup>/h</li> </ul>	<ul style="list-style-type: none"> <li>• Brass design VZPR-...</li> <li>• Port 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

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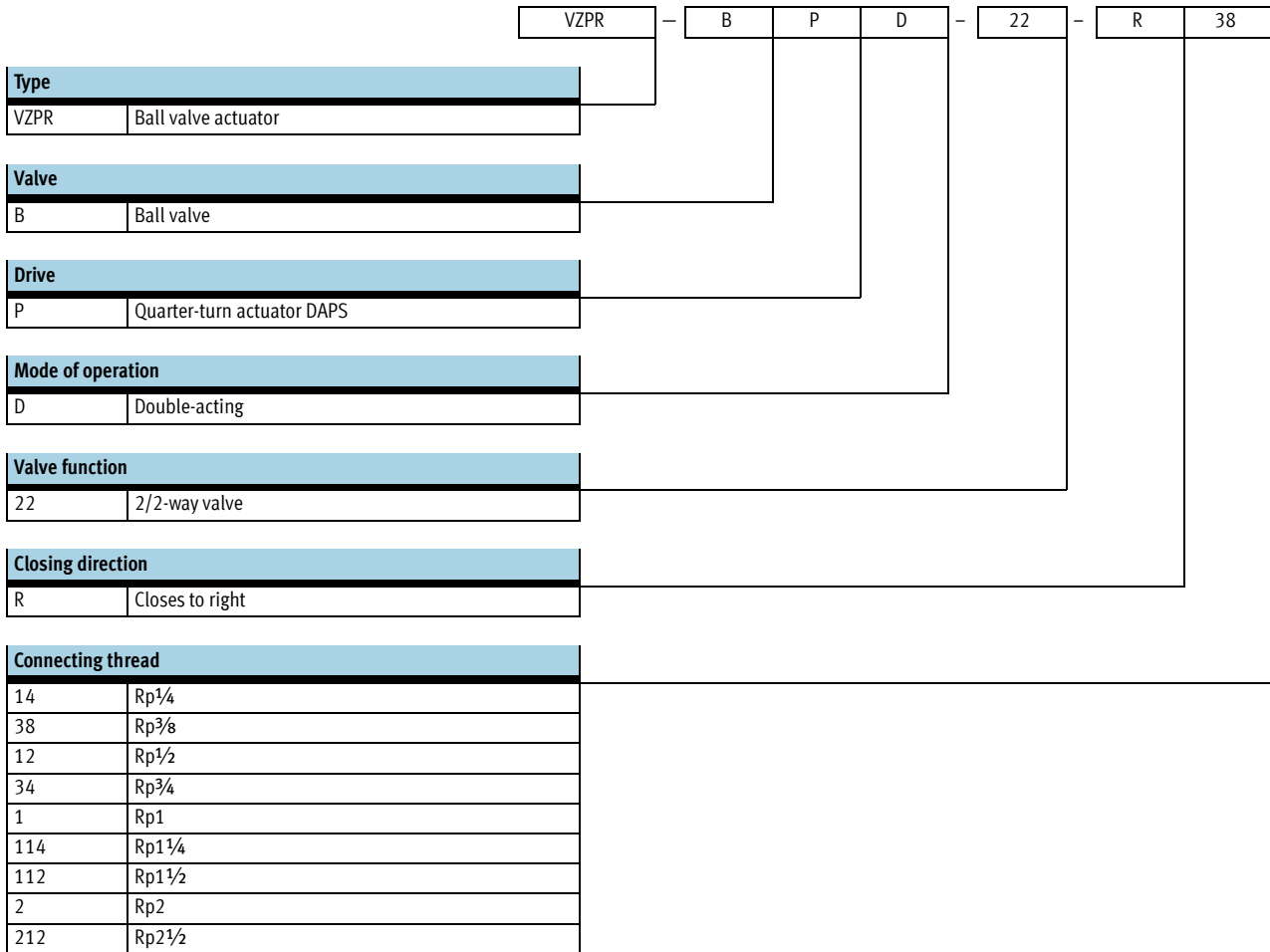
Peripherals overview



Mounting attachments and accessories		
	Brief description	→ Page/Internet
1	Limit switch attachment QH-DR-E	qh-dr-e
2	Limit switch attachment DAPZ	dapz
3	Limit switch attachment DAPZ	dapz
4	Limit switch attachment DAPZ	dapz
5	Solenoid valve MFH	8
	Solenoid valve MN1H	8
	Solenoid valve MGTBH	8
6	Solenoid valve NVF3	8
7	Ball valve actuator VZPR	8

# Ball valve actuators VZPR

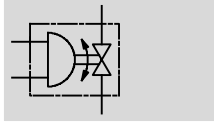
Type codes





# 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								
Corrosion resistance class CRC <sup>1)</sup>	1								
Food industry approval	No								
Quarter-turn actuator									
Operating pressure <sup>2)</sup> [bar]	1 ... 8.4								
Operating medium	Dried air, lubricated or unlubricated								
Ball valve									
Nominal pressure of process valve <sup>3)</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) Corrosion resistance class 1 to Festo standard 940 070  
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

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

3) PN class to DIN EN 1333.

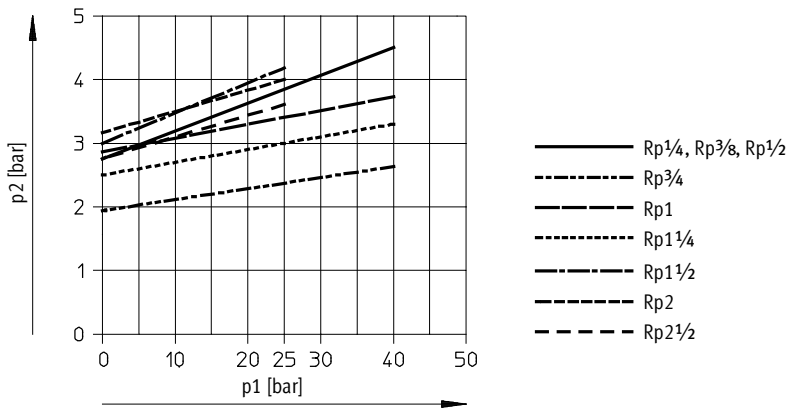
# Ball valve actuators VZPR-BPD

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	Rp1/4	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

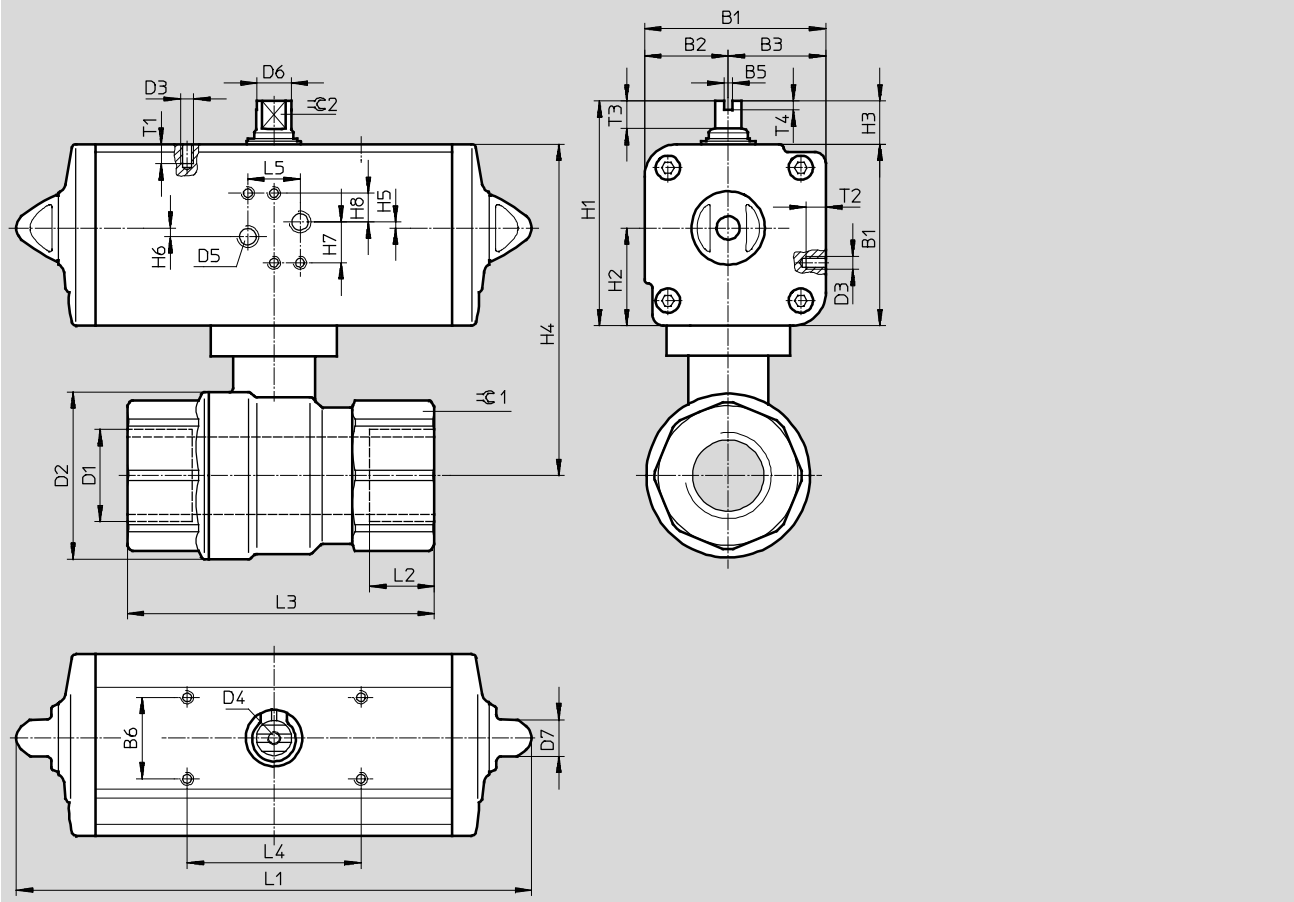


# Ball valve actuators VZPR-BPD

Technical data

Dimensions

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

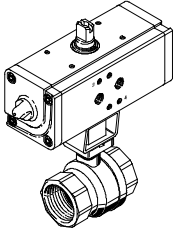


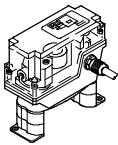
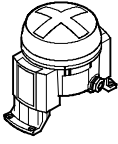
Connecting thread D1	B1	B2	B3	B5	B6	D2 ∅ max.	D3	D4	D5	D6 ∅	D7 ∅	H1	H2	H3	H4							
Rp1/4	52.2	24.2	28	4	30	35	M5	M6	G1/8	9.2	13	72.2	28	20	92.2							
Rp3/8																						
Rp1/2																						
Rp3/4	59.2	27.7	31.5													45	10.9	13	79.2	31.5	20	104.2
Rp1																						
Rp1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

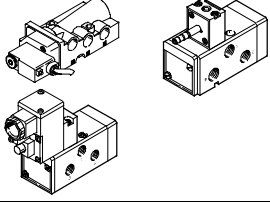
Connecting thread D1	H5	H6	H7	H8	L1	L2	L3	L4	L5	T1	T2	T3	T4	⊕1	⊕2				
Rp1/4	0.8	3.2	18	14	159	15	75	80	24	6	7	10	4	26	8				
Rp3/8																			
Rp1/2					174	16	80									10	9		
Rp3/4																			
Rp1					198	19	90									10	10		
Rp1 1/4																			
Rp1 1/2					-	4	21									110	13	10	50
Rp2																			
Rp2 1/2	-	4	21	120	13	13	55												
	-	4	236.5	25	140	16	70	12											
	-	4	289.9	24	143	16	83	15											

# Ball valve actuators VZPR-BPD

Technical data

Ordering data – Ball valve actuators			
	Connecting thread	Part No.	Type
	Rp1/4	540 510	VZPR-BPD-22-R14
	Rp3/8	540 511	VZPR-BPD-22-R38
	Rp1/2	540 512	VZPR-BPD-22-R12
	Rp3/4	540 513	VZPR-BPD-22-R34
	Rp1	540 514	VZPR-BPD-22-R1
	Rp1 1/4	540 515	VZPR-BPD-22-R114
	Rp1 1/2	540 516	VZPR-BPD-22-R112
	Rp2	540 517	VZPR-BPD-22-R2
	Rp2 1/2	540 874	VZPR-BPD-22-R212

Ordering data – Limit switch attachments (NAMUR)			Technical data → Internet: dapz, qh-dr	
	Sensing principle	Explosion-proof	Part No.	Type
Square design				
	Electrical	–	534 468	DAPZ-SB-M-250AC-DSM-RO
	Electrical	■	534 470	DAPZ-SB-M-250AC-EXS-RO
	Inductive	–	534 473	DAPZ-SB-I-30DC-DSAM-RO
	Pneumatic	–	164 855	QH-DR-E-S3-PK-3-B-B
	Electrical	–	164 854	QH-DR-E-S3-E-SW-B
	Inductive	–	164 853	QH-DR-E-SIEN-M12-NB-B
Round design				
	Electrical	–	534 469	DAPZ-SB-M-250AC-DR-RO
	Inductive	–	534 471	DAPZ-SB-I-30DC-DR-RO
	Inductive	■	534 472	DAPZ-SB-I-25DC-R-RO
	Electrical	–	534 474	DAPZ-SB-M-250AC-DR-AR
	Inductive	–	534 475	DAPZ-SB-I-30DC-DR-AR
	Inductive	■	534 476	DAPZ-SB-I-25DC-EXDR-AR

Ordering data – Solenoid valves (NAMUR)			Technical data → Internet: solenoid valves	
	Standard nominal flow rate	For coil type	Part No.	Type
	900	F solenoid coil	535 987	NVF3-MOH-5/2-K-1/4-EX
		V solenoid coil	535 988	NVF3-MOH-5/2-K-1/4-IA-EX
	1000	F solenoid coil	183 973	MFH-5/2K-FR-NA
		N1 solenoid coil	183 974	MN1H-5/2K-FR-NA