

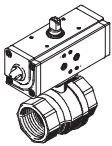
Ball valve actuators VZPR



Ball valve actuators VZPR

Key features and product range overview

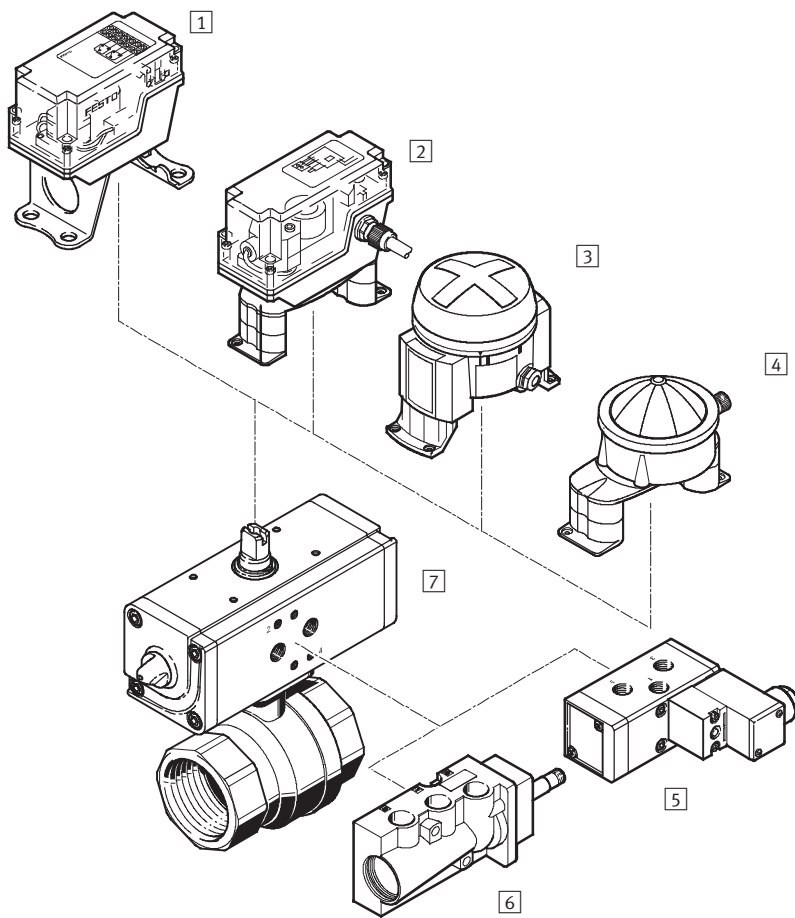
General	Construction	Characteristics	
-N- Connecting thread Rp $\frac{1}{4}$... Rp $2\frac{1}{2}$	• Brass design VZPR-... • Port pattern to NAMUR VDI/VDE 3845	• Combination of a pneumatic quarter-turn actuator and a ball valve	Valves with NAMUR port pattern → Internet: namur
-M- Flow rate Kv 5.9 ... 535 m ³ /h	• PN class to DIN EN 1333	• Flow is fully opened or closed in both directions • 5/2-way valve with NAMUR port pattern can be mounted directly on the drive unit • Limit switch attachments for end-position sensing can be mounted directly on the drive unit	Limit switch attachments with NAMUR mounting-hole pattern → Internet: dapz

Version	Type	Connecting thread ¹⁾	Nominal diameter [mm]	Nominal pressure of process valve [bar]	→ Page/Internet
Brass					
	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 attachments and accessories		
	Brief description	→ Page/Internet
1	Limit switch attachment QH-DR-E Square design Pneumatic, electrical or inductive sensing	qh-dr-e
2	Limit switch attachment DAPZ Square design Electrical, electrically explosion-proof or inductive sensing	dapz
3	Limit switch attachment DAPZ Round design, variant AR Electrical, inductive or inductively explosion-proof sensing	dapz
4	Limit switch attachment DAPZ Round design, variant RO	dapz
5	Solenoid valve MFH Basic valve with pilot control valve for F solenoid coil	8
	Solenoid valve MN1H Basic valve with pilot control valve for N1 solenoid coil	8
	Solenoid valve MGTBH Basic valve with pilot control valve, solenoid coil and socket	8
6	Solenoid valve NVF3 For F solenoid coil and explosion-proof F solenoid coil	8
7	Ball valve actuator VZPR Combination of quarter-turn actuator and ball valve Variant: Brass	8

Ball valve actuators VZPR

Type codes

		VZPR	-	B	P	D	-	22	-	R	38
Type											
VZPR	Ball valve actuator										
Valve											
B	Ball valve										
Drive											
P	Quarter-turn actuator DAPS										
Mode of operation											
D	Double-acting										
Valve function											
22	2/2-way valve										
Closing direction											
R	Closes to right										
Connecting thread											
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 m³/h



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

Pressure
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 ³ /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 ¹⁾	1								
Food industry approval	No								
Quarter-turn actuator									
Operating pressure ²⁾ [bar]	1 ... 8.4								
Operating medium	Dried air, lubricated or unlubricated								
Ball valve									
Nominal pressure of process valve ³⁾	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.

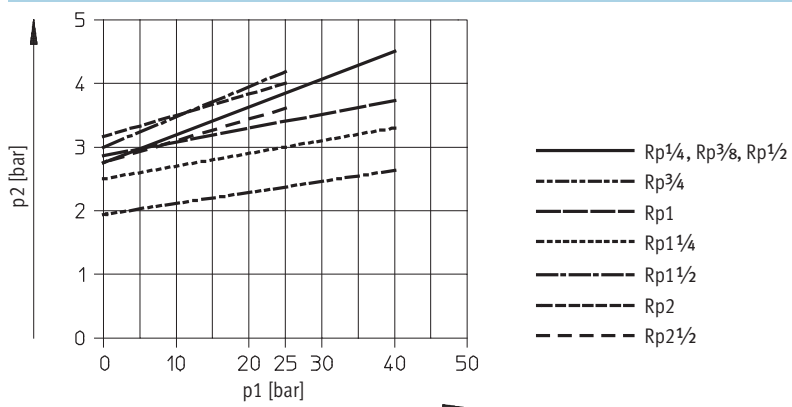
Ball valve actuators VZPR-BPD

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 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



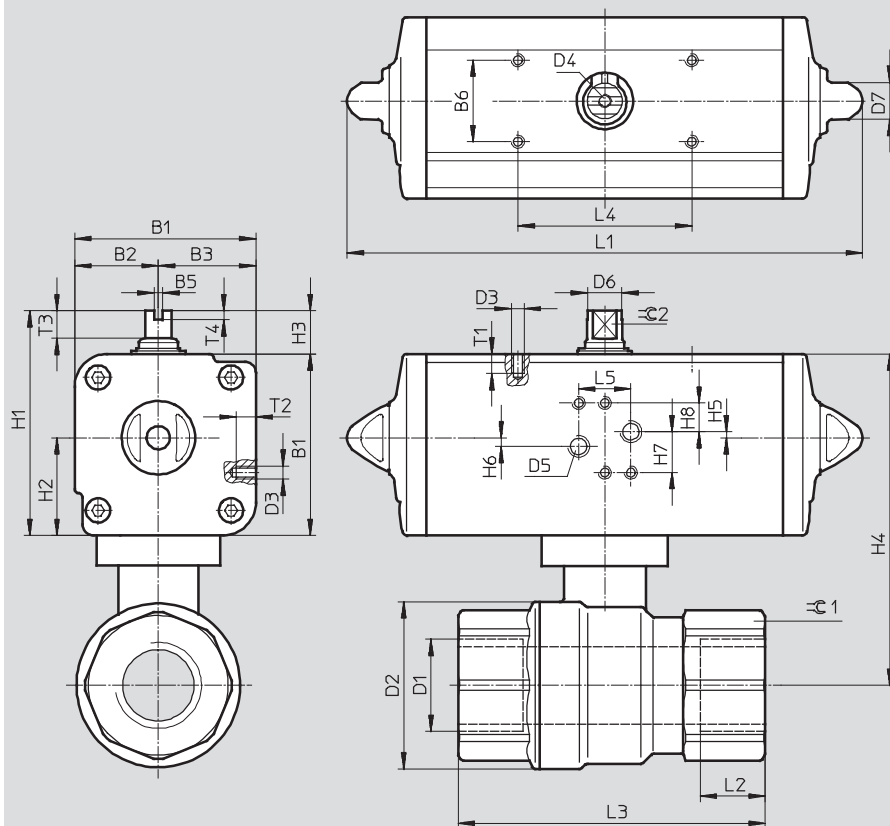
Ball valve actuators VZPR-BPD

Technical data



Dimensions

Download CAD Data → www.festo.com/us/cad

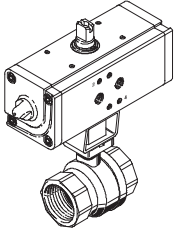


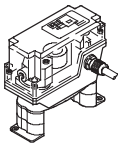
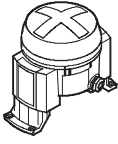
Connecting thread D1	B1	B2	B3	B5	B6	D2 ∅ max.	D3	D4	D5	D6 ∅	D7 ∅	H1	H2	H3	H4							
Rp1/4	52.2	24.2	28	4	30	35	M5	M6	G1/8	9.2	13	72.2	28	20	92.2							
Rp3/8																						
Rp1/2																						
Rp3/4	59.2	27.7	31.5													45	10.9	13	79.2	31.5	20	104.2
Rp1																						
Rp1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

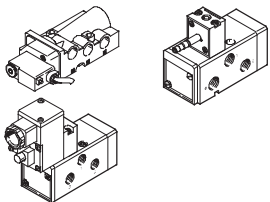
Connecting thread D1	H5	H6	H7	H8	L1	L2	L3	L4	L5	T1	T2	T3	T4	⌀C1	⌀C2			
Rp1/4	0.8	3.2	18	14	159	15	75	80	24	6	7	10	4	26	8			
Rp3/8																		
Rp1/2					174	16	80							10	9			
Rp3/4																		
Rp1					198	19	90							10	10			
Rp1 1/4																		
Rp1 1/2					-	4	198							21	110	13	50	10
Rp2																		
Rp2 1/2	-	4	236.5	21	120	13	55	10										
	-	4	289.9	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-1/4-1A-EX
	1000	F solenoid coil	183 973	MFH-5/2K-FR-NA
		N1 solenoid coil	183 974	MN1H-5/2K-FR-NA

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