

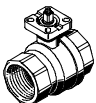
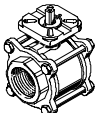
## Ball valves VAPB, mechanically actuated



- Connecting thread to DIN 2999
- Mounting flange to ISO 5211
- Length to DIN 3202-M3
- Blow-out proof shaft assembled from inside
- Centering attachment for simple automation
- O-ring seal for use with a vacuum

## Ball valves VAPB

Product range overview

Type	Design	Type	Connecting thread <sup>1)</sup>	Nominal size [mm]	Flanged connection to ISO 5211	Max. operating pressure [bar]	→ Page		
Ball valve		VAPB	<b>Brass</b>					2 / 5.2-20	
			Rp1/4	15	F03	40			
			Rp3/8	15	F03	40			
			Rp1/2	15	F03	40			
			Rp3/4	20	F03	40			
			Rp1	25	F03	40			
			Rp1 1/4	32	F0405	40			
			Rp1 1/2	40	F0405	25			
			Rp2	50	F05	25			
			Rp2 1/2	63	F07	25			
		VAPB-...-CR	<b>Stainless steel, corrosion-resistant</b>					63	2 / 5.2-23
			Rp1/4	15	F0304				
			Rp3/8	15	F0304				
			Rp1/2	15	F0304				
			Rp3/4	20	F0304				
			Rp1	25	F0405				
			Rp1 1/4	32	F0405				
			Rp1 1/2	40	F0507				
			Rp2	50	F0507				
			Rp2 1/2	63	F0710				
Rp3	80	F0710							
Rp4	100	F1012							

1) Cylindrical barrel with female thread to DIN 2999

# Ball valves VAPB

Type code

VAPB – 1 1/2 – F – 63 – F0507 – CR

Type	
VAPB	Ball valve for process automation

Connection size to DIN 2999	
1/4	Barrel with female thread Rp1/4
3/8	Barrel with female thread Rp3/8
1/2	Barrel with female thread Rp1/2
3/4	Barrel with female thread Rp3/4
1	Barrel with female thread Rp1
1 1/4	Barrel with female thread Rp1 1/4
1 1/2	Barrel with female thread Rp1 1/2
2	Barrel with female thread Rp2
2 1/2	Barrel with female thread Rp2 1/2
3	Barrel with female thread Rp3
4	Barrel with female thread Rp4

Type of barrel connection	
F	Female thread

Max. operating pressure	
25	25 bar
40	40 bar
63	63 bar



Flange connection to ISO 5211	
F03	1 circular arrangement of holes with $\varnothing$ 36 mm
F0304	2 circular arrangements of holes with $\varnothing$ 36 and 42 mm
F0405	2 circular arrangements of holes with $\varnothing$ 42 and 50 mm
F05	1 circular arrangement of holes with $\varnothing$ 50 mm
F0507	2 circular arrangements of holes with $\varnothing$ 50 and 70 mm
F07	1 circular arrangement of holes with $\varnothing$ 70 mm
F0710	2 circular arrangements of holes with $\varnothing$ 70 and 102 mm
F1012	2 circular arrangements of holes with $\varnothing$ 102 and 125 mm

Material	
	Brass
CR	Corrosion resistant cast steel

## Ball valves VAPB

Technical data – Brass design



-  Connecting thread  
Rp1/4 ... Rp2 1/2
-  Flow rate Kv  
5.9 ... 535 m<sup>3</sup>/min

- Connecting thread to DIN 2999
- Mounting flange to ISO 5211
- Length to DIN 3202-M3
- Blow-out proof shaft mounted from inside
- Centering attachment for simple automation
- O-ring seal for use with a vacuum



General technical data									
Connecting thread	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2
Valve function	2/2								
Design	Ball valve								
Sealing principle	Soft								
Actuation type	Pneumatic								
Direction of flow	Reversible								
Type of mounting	In-line installation								
Mounting position	Any								
Nominal size [mm]	15	15	15	20	25	32	40	50	63
Flow rate Kv [m <sup>3</sup> /min]	5.9	9.4	17	41	70	121	200	292	535
Product weight [g]	500	500	400	500	800	1,300	1,900	3,100	3,100

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
Operating medium	Compressed air, water, neutral gasses, neutral fluids Vacuum								
Nominal operating pressure [bar]	40	40	40	40	40	40	25	25	25
Temperature of medium [°C]	-20 ... +150								
Corrosion resistance class CRC <sup>1)</sup>	1								

1) Corrosion resistance class 1 according 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.

Materials		
Housing	Brass	
Ball	Brass	
Seals	Housing	Polytetrafluoroethylene, fibreglass reinforced
	Shaft	Fluorocarbon rubber

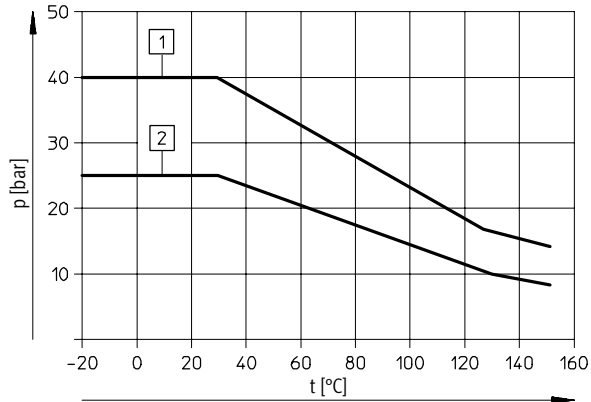
Torque <sup>1)</sup> [Nm]									
Connecting thread	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2
Δp = 0 bar	3.1	3.1	3.1	4.6	6.5	10.8	13.5	20	30
Δp = 10 bar	3.5	3.5	3.5	5.1	7.2	11.9	14.9	22	33
Δp = pN	5	5	5	6	8.5	15	19	29	45

1) Required torque for the actuation of the ball valve

# Ball valves VAPB

Technical data – Brass design

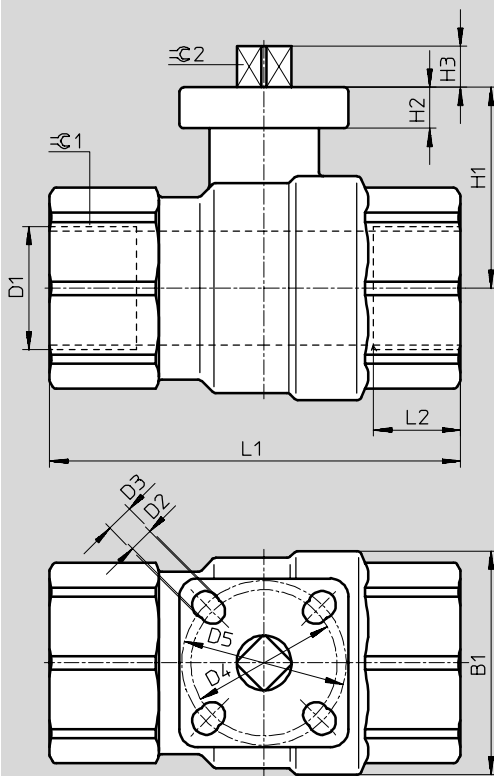
**Permissible operating pressure as a function of the temperature of the medium**



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

**Dimensions**

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

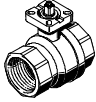


Connecting thread D1 <sup>1)</sup>	B1	D2 ∅	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	L1	L2	≙1	≙2
Rp1/4	33	5.5	-	36	-	38	9	9	75	15	26	9
Rp3/8	33	5.5	-	36	-	38	9	9	75	15	26	9
Rp1/2	33	5.5	-	36	-	38	9	9	75	15	26	9
Rp3/4	41	5.5	-	36	-	41	9	9	80	16	32	9
Rp1	50	5.5	-	36	-	44	9	9	90	19	41	9
Rp1 1/4	61	5.5	6.5	42	50	55	10	11	110	21	50	11
Rp1 1/2	74	5.5	6.5	42	50	62	10	11	120	21	55	11
Rp2	89	6.5	-	50	-	73	12	14	140	25	70	14
Rp2 1/2	106	8.5	-	70	-	83	10	15.5	143	24.2	83	14

1) Cylindrical barrel with female thread to DIN 2999

## Ball valves VAPB

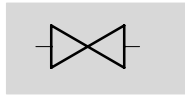
Technical data – Brass design



Ordering data			
Design	Connecting thread <sup>1)</sup>	Part No.	Type
	Rp $\frac{1}{4}$	534 302	VAPB- $\frac{1}{4}$ -F-40-F03
	Rp $\frac{3}{8}$	534 303	VAPB- $\frac{3}{8}$ -F-40-F03
	Rp $\frac{1}{2}$	534 304	VAPB- $\frac{1}{2}$ -F-40-F03
	Rp $\frac{3}{4}$	534 305	VAPB- $\frac{3}{4}$ -F-40-F03
	Rp1	534 306	VAPB-1-F-40-F03
	Rp1 $\frac{1}{4}$	534 307	VAPB-1 $\frac{1}{4}$ -F-40-F0405
	Rp1 $\frac{1}{2}$	534 308	VAPB-1 $\frac{1}{2}$ -F-25-F0405
	Rp2	534 309	VAPB-2-F-25-F05
	Rp2 $\frac{1}{2}$	534 310	VAPB-2 $\frac{1}{2}$ -F-25-F07

1) Cylindrical barrel with female thread to DIN 2999

# Ball valves VAPB

Technical data – Stainless steel design



-  Connecting thread  
Rp $\frac{1}{4}$  ... Rp4
-  Flow rate Kv  
16 ... 1 414 m<sup>3</sup>/min

- Connecting thread to DIN 2999
- Mounting flange to ISO 5211
- Length to DIN 3202-M3
- Blow-out proof shaft mounted from inside
- Centering attachment for simple automation
- O-ring seal for use with a vacuum



General technical data												
Connecting thread		Rp $\frac{1}{4}$	Rp $\frac{3}{8}$	Rp $\frac{1}{2}$	Rp $\frac{3}{4}$	Rp1	Rp1 $\frac{1}{4}$	Rp1 $\frac{1}{2}$	Rp2	Rp2 $\frac{1}{2}$	Rp3	Rp4
Valve function		2/2										
Design		Ball valve										
Sealing principle		Soft										
Actuation type		Pneumatic										
Direction of flow		Reversible										
Type of mounting		In-line installation										
Mounting position		Any										
Nominal size	[mm]	10	12	16	20	25	32	40	50	63	80	100
Flow rate Kv	[m <sup>3</sup> /min]	16	21	35	46	72	105	170	275	507	905	1 414
Product weight	[g]	200	200	700	800	1,200	1,900	2,800	4,500	9,200	13,900	22,300

Operating and environmental conditions												
Connecting thread		Rp $\frac{1}{4}$	Rp $\frac{3}{8}$	Rp $\frac{1}{2}$	Rp $\frac{3}{4}$	Rp1	Rp1 $\frac{1}{4}$	Rp1 $\frac{1}{2}$	Rp2	Rp2 $\frac{1}{2}$	Rp3	Rp4
Operating medium		Compressed air, water, neutral gasses, neutral fluids Vacuum										
Nominal operating pressure	[bar]	63										
Temperature of medium	[°C]	-20 ... +150										
Corrosion resistance class CRC <sup>1)</sup>		3										

1) Corrosion resistance class 3 according to Festo standard 940 070  
Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Materials		
Housing		Stainless steel
Ball		Stainless steel
Seals	Housing	Polytetrafluoroethylene, fibreglass reinforced
	Shaft	Fluorocarbon rubber

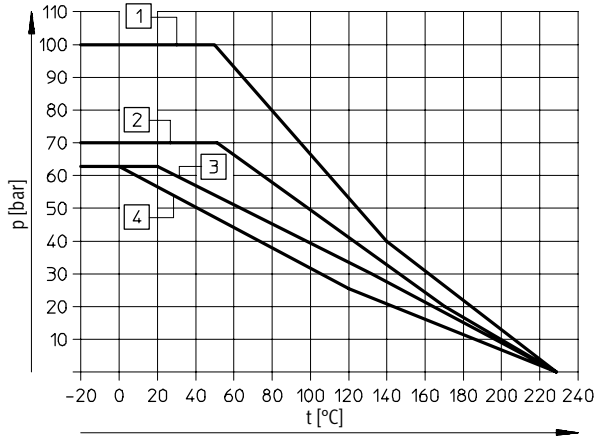
Torque <sup>1)</sup> [Nm]												
Connecting thread		Rp $\frac{1}{4}$	Rp $\frac{3}{8}$	Rp $\frac{1}{2}$	Rp $\frac{3}{4}$	Rp1	Rp1 $\frac{1}{4}$	Rp1 $\frac{1}{2}$	Rp2	Rp2 $\frac{1}{2}$	Rp3	Rp4
$\Delta p = 0$ bar		5	5	7	9	13	20	28	37	49	54	62
$\Delta p = 10$ bar		5.5	5.5	7.7	9.9	14.3	22	30.8	40.7	53.9	59.4	68.2
$\Delta p = pN$		7	7	10	13	17	28	43	64	69	78	95

1) Required torque for the actuation of the ball valve

# Ball valves VAPB

Technical data – Stainless steel design

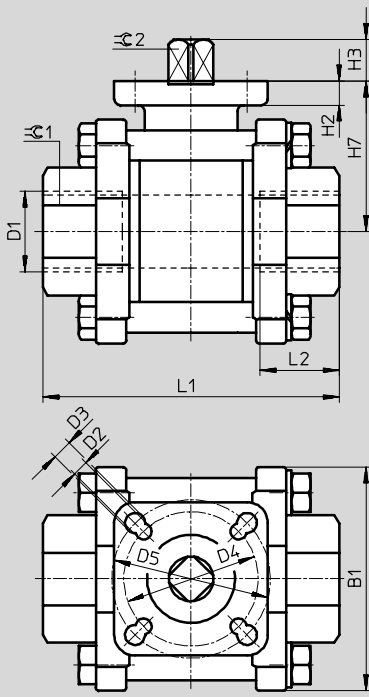
## Permissible operating pressure as a function of the temperature of the medium



- 1 Rp1/4 ... Rp1
- 2 Rp1 1/4 ... Rp1 1/2
- 3 Rp2 ... Rp2 1/2
- 4 Rp3..., Rp4

## Dimensions

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




Connecting thread D1 <sup>1)</sup>	B1	D2 ∅	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	L1	L2	⊖C1	⊖C2
Rp1/4	48	5.5	5.5	36	42	40	9	7	65	14	19	9
Rp3/8	48	5.5	5.5	36	42	40	9	7	65	14	24	9
Rp1/2	50	5.5	5.5	36	42	40	9	7	75	20	29	9
Rp3/4	54	5.5	5.5	36	42	44	9	9	80	19	35	9
Rp1	61	5.5	6.5	42	50	52	10	12	90	21	41	11
Rp1 1/4	72	5.5	6.5	42	50	58	10	12	110	23	50	11
Rp1 1/2	82	6.5	8.5	50	70	68	13	16	120	25	58	14
Rp2	99	6.5	8.5	50	70	77	13	16	140	28	73	14
Rp2 1/2	126	8.5	10.5	70	102	98	13	19	185	38	90	17
Rp3	186	8.5	10.5	70	102	110	13	19	205	42	105	17
Rp4	224	10.5	12.5	102	125	138	20	24	240	42	135	22

1) Cylindrical barrel with female thread to DIN 2999



## Ball valves VAPB

Technical data – Stainless steel design

Ordering data			
Design	Connecting thread <sup>1)</sup>	Part No.	Type
	Rp $\frac{1}{4}$	534 311	VAPB- $\frac{1}{4}$ -F-63-F0304-CR
	Rp $\frac{3}{8}$	534 312	VAPB- $\frac{3}{8}$ -F-63-F0304-CR
	Rp $\frac{1}{2}$	534 313	VAPB- $\frac{1}{2}$ -F-63-F0304-CR
	Rp $\frac{3}{4}$	534 314	VAPB- $\frac{3}{4}$ -F-63-F0304-CR
	Rp1	534 315	VAPB-1-F-63-F0405-CR
	Rp1 $\frac{1}{4}$	534 316	VAPB-1 $\frac{1}{4}$ -F-63-F0405-CR
	Rp1 $\frac{1}{2}$	534 317	VAPB-1 $\frac{1}{2}$ -F-63-F0507-CR
	Rp2	534 318	VAPB-2-F-63-F0507-CR
	Rp2 $\frac{1}{2}$	534 319	VAPB-2 $\frac{1}{2}$ -F-63-F0710-CR
	Rp3	534 320	VAPB-3-F-63-F0710-CR
	Rp4	534 321	VAPB-4-F-63-F1012-CR

1) Cylindrical barrel with female thread to DIN 2999