Ball valves VAPB/QH-DR

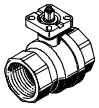
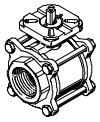
FESTO

- Ball valves and ball valve drive units
- Connecting thread to DIN 2999 or DIN ISO 228-1
- Mounting flange to ISO 5211
- Length to DIN 3202-M3
- Corrosion and acid resistant designs
- Blow-out proof shaft mounted from inside

Ball valves VAPB

Product range overview

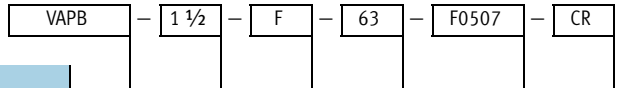
FESTO

Type	Design	Type	Connecting thread[1)]	Nominal size [mm]	Flanged connection to ISO 5211	Max. operating pressure [bar]	→ Page
Ball valve	**Brass**						
		VAPB	Rp¼	15	F03	40	7 / 2.2-4
			Rp⅜	15	F03	40	
			Rp½	15	F03	40	
			Rp¾	20	F03	40	
			Rp1	25	F03	40	
			Rp1¼	32	F0405	40	
			Rp1½	40	F0405	25	
			Rp2	50	F05	25	
			Rp2½	63	F07	25	
	Stainless steel, corrosion-resistant						
		VAPB-...-CR	Rp¼	15	F0304	63	7 / 2.2-7
			Rp⅜	15	F0304		
			Rp½	15	F0304		
			Rp¾	20	F0304		
			Rp1	25	F0405		
			Rp1¼	32	F0405		
			Rp1½	40	F0507		
			Rp2	50	F0507		
			Rp2½	63	F0710		
			Rp3	80	F0710		
			Rp4	100	F1012		

1) Cylindrical barrel with female thread to DIN 2999

Ball valves VAPB

Type code



Type	
VAPB	Ball valve for process automation

Connection size to DIN 2999	
¼	Barrel with female thread Rp¼
⅜	Barrel with female thread Rp⅜
½	Barrel with female thread Rp½
¾	Barrel with female thread Rp¾
1	Barrel with female thread Rp1
1 ¼	Barrel with female thread Rp1¼
1 ½	Barrel with female thread Rp1½
2	Barrel with female thread Rp2
2 ½	Barrel with female thread Rp2½
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 ∅ 36 mm
F0304	2 circular arrangements of holes with ∅ 36 and 42 mm
F0405	2 circular arrangements of holes with ∅ 42 and 50 mm
F05	1 circular arrangement of holes with ∅ 50 mm
F0507	2 circular arrangements of holes with ∅ 50 and 70 mm
F07	1 circular arrangement of holes with ∅ 70 mm
F0710	2 circular arrangements of holes with ∅ 70 and 102 mm
F1012	2 circular arrangements of holes with ∅ 102 and 125 mm

Material	
	Brass
CR	Corrosion resistant cast steel

Ball valves VAPB

Technical data – Brass design

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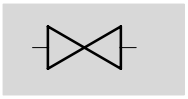


- Connecting thread Rp¼ ... Rp2½
- Flow rate Kv 5.9 ... 535 m³/min

- 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		Rp¼	Rp⅜	Rp½	Rp¾	Rp1	Rp1¼	Rp1½	Rp2	Rp2½
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	[m³/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		Rp¼	Rp⅜	Rp½	Rp¾	Rp1	Rp1¼	Rp1½	Rp2	Rp2½
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[1)]		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[1)] [Nm]									
Connecting thread	Rp¼	Rp⅜	Rp½	Rp¾	Rp1	Rp1¼	Rp1½	Rp2	Rp2½
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

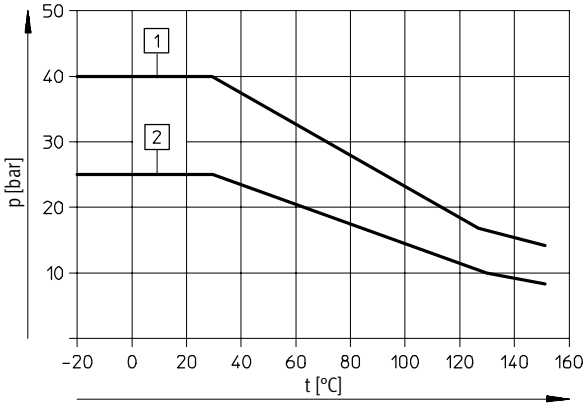
1) Required torque for the actuation of the ball valve

Ball valves VAPB

Technical data – Brass design

FESTO

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



1 Rp½ ... Rp1¼
2 Rp1½ ... Rp2½

Dimensions

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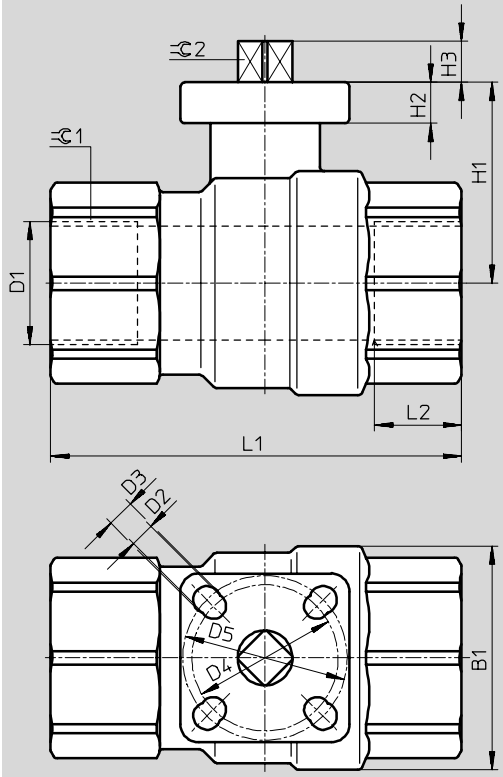


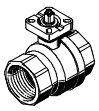
Connecting thread D1[1]	B1	D2 ∅	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	L1	L2	⌀1	⌀2
Rp¼	33	5.5	–	36	–	38	9	9	75	15	26	9
Rp⅜	33	5.5	–	36	–	38	9	9	75	15	26	9
Rp½	33	5.5	–	36	–	38	9	9	75	15	26	9
Rp¾	41	5.5	–	36	–	41	9	9	80	16	32	9
Rp1	50	5.5	–	36	–	44	9	9	90	19	41	9
Rp1¼	61	5.5	6.5	42	50	55	10	11	110	21	50	11
Rp1½	74	5.5	6.5	42	50	62	10	11	120	21	55	11
Rp2	89	6.5	–	50	–	73	12	14	140	25	70	14
Rp2½	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

FESTO

Ordering data			
Design	Connecting thread[1)]	Part No.	Type
	Rp¼	**534 302**	**VAPB-¼-F-40-F03**
	Rp⅜	**534 303**	**VAPB-⅜-F-40-F03**
	Rp½	**534 304**	**VAPB-½-F-40-F03**
	Rp¾	**534 305**	**VAPB-¾-F-40-F03**
	Rp1	**534 306**	**VAPB-1-F-40-F03**
	Rp1¼	**534 307**	**VAPB-1 ¼-F-40-F0405**
	Rp1½	**534 308**	**VAPB-1 ½-F-25-F0405**
	Rp2	**534 309**	**VAPB-2-F-25-F05**
	Rp2½	**534 310**	**VAPB-2 ½-F-25-F07**

1) Cylindrical barrel with female thread to DIN 2999

Ball valves VAPB

Technical data – Stainless steel design

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Connecting thread
Rp¼ ... Rp4

Flow rate Kv
16 ... 1 414 m³/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		Rp¼	Rp⅜	Rp½	Rp¾	Rp1	Rp1¼	Rp1½	Rp2	Rp2½	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	[m³/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		Rp¼	Rp⅜	Rp½	Rp¾	Rp1	Rp1¼	Rp1½	Rp2	Rp2½	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[1)]		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[1)] [Nm]												
Connecting thread		Rp¼	Rp⅜	Rp½	Rp¾	Rp1	Rp1¼	Rp1½	Rp2	Rp2½	Rp3	Rp4
Δp = 0 bar		5	5	7	9	13	20	28	37	49	54	62
Δp = 10 bar		5.5	5.5	7.7	9.9	14.3	22	30.8	40.7	53.9	59.4	68.2
Δp = pN		7	7	10	13	17	28	43	64	69	78	95

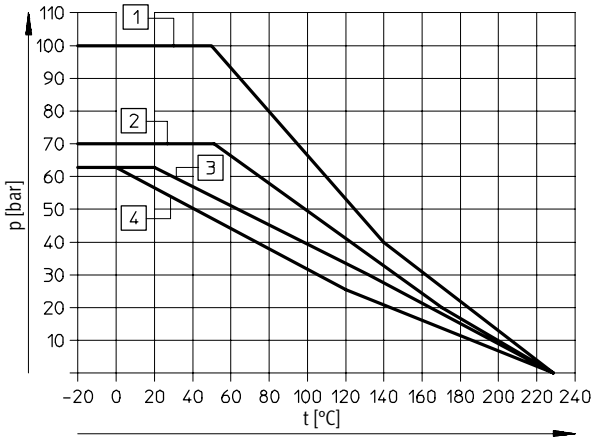
1) Required torque for the actuation of the ball valve

Ball valves VAPB

Technical data – Stainless steel design

FESTO

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



1 Rp¼ ... Rp1
2 Rp1¼ ... Rp1½
3 Rp2 ... Rp2½
4 Rp3..., Rp4

Dimensions

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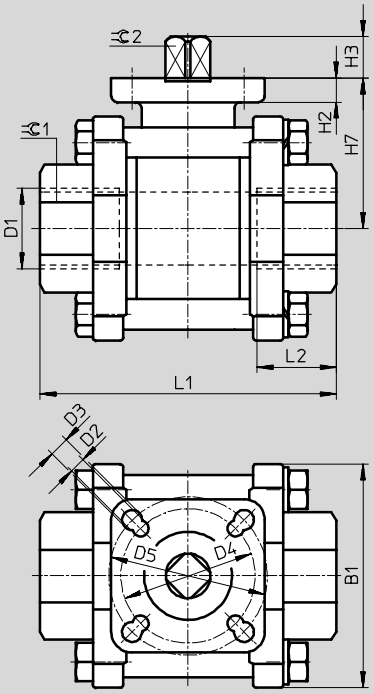

Connecting thread D1[1]	B1	D2 ∅	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	L1	L2	⌀C1	⌀C2
Rp¼	48	5.5	5.5	36	42	40	9	7	65	14	19	9
Rp⅜	48	5.5	5.5	36	42	40	9	7	65	14	24	9
Rp½	50	5.5	5.5	36	42	40	9	7	75	20	29	9
Rp¾	54	5.5	5.5	36	42	44	9	9	80	19	35	9
Rp1	61	5.5	6.5	42	50	52	10	12	90	21	41	11
Rp1¼	72	5.5	6.5	42	50	58	10	12	110	23	50	11
Rp1½	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
Rp2½	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

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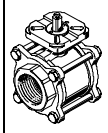
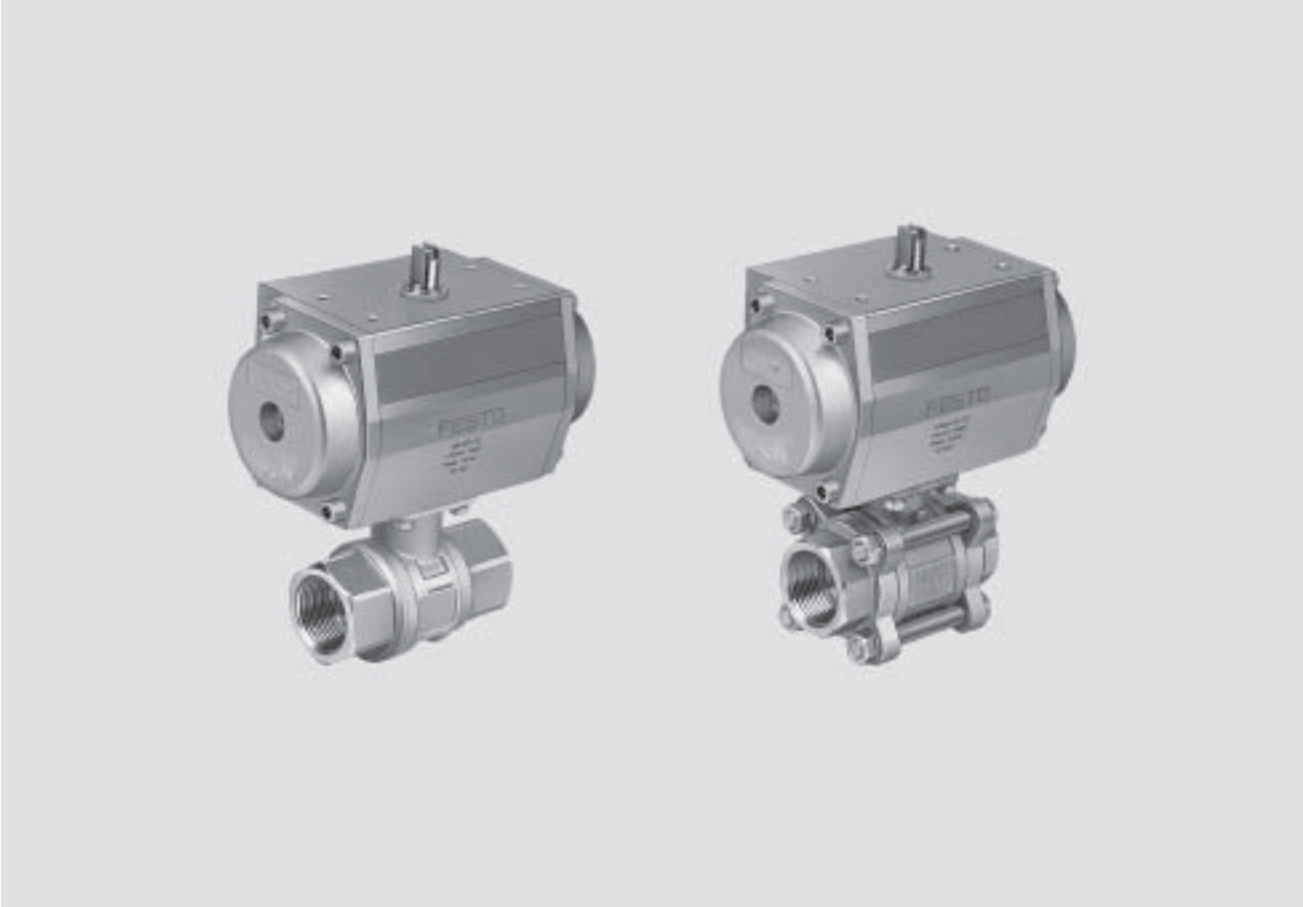
Ordering data			
Design	Connecting thread[1)]	Part No.	Type
	Rp¼	**534 311**	**VAPB-¼-F-63-F0304-CR**
	Rp⅜	**534 312**	**VAPB-⅜-F-63-F0304-CR**
	Rp½	**534 313**	**VAPB-½-F-63-F0304-CR**
	Rp¾	**534 314**	**VAPB-¾-F-63-F0304-CR**
	Rp1	**534 315**	**VAPB-1-F-63-F0405-CR**
	Rp1¼	**534 316**	**VAPB-1 ¼-F-63-F0405-CR**
	Rp1½	**534 317**	**VAPB-1 ½-F-63-F0507-CR**
	Rp2	**534 318**	**VAPB-2-F-63-F0507-CR**
	Rp2½	**534 319**	**VAPB-2 ½-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

Ball valve drive units QH-DR/CRQH-DR

Features



QH-DR
CRQH-DR

- Connecting thread G¼ ... G2
- Flow rate Kv 5.1 ... 191 m^3/min

– Corrosion and acid-resistant version CRQH-DR
– Namur port pattern

Flow is entirely closed or opened in both directions via the ball valve drive unit.

The unit is a combination of a pneumatic rotary drive and a ball valve.

A 5/2-way solenoid valve with Namur port pattern can be directly connected to the drive unit.

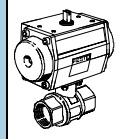
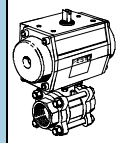
The drive unit can also be actuated with a separate valve.

Valves with Namur port pattern
➔ 7 / 2.1-6

Pneumatic, electric or inductive end-position sensing is possible with corresponding limit switch attachments. The attachments can be screwed directly to the drive unit.

Ball valve drive units QH-DR/CRQH-DR

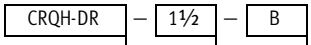
Product range overview

Type	Design	Type	Connecting thread[1)]	Nominal size [mm]	Max. operating pressure [bar]	→ Page
Ball valve drive unit						
		QH-DR	G¼	8	63	7 / 2.2-13
			G⅜	10	63	
			G½	15	63	
			G¾	20	50	
			G1	25	50	
			G1¼	32	40	
			G1½	40	40	
			G2	50	40	
	Corrosion resistant					
		CRQH-DR	G¼	9	63	7 / 2.2-17
			G⅜	12		
			G½	16		
			G¾	20		
			G1	25		
			G1¼	32		
			G1½	40		
			G2	50		

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

Ball valve drive units QH-DR/CRQH-DR

Type codes



Type	
QH-DR	Ball valve drive unit for process automation
CRQH-DR	Ball valve drive unit for process automation, corrosion-resistant

Connection size to DIN ISO 228-1	
¼	Barrel with female thread G¼
⅜	Barrel with female thread G⅜
½	Barrel with female thread G½
¾	Barrel with female thread G¾
1	Barrel with female thread G1
1¼	Barrel with female thread G1¼
1½	Barrel with female thread G1½
2	Barrel with female thread G2

Generation	
B	Series B

Ball valve drive units QH-DR

Technical data

FESTO

- Connecting thread G¼ ... G2
- Flow rate Kv 5.1 ... 191 m³/min

- Combination of a ball valve and pneumatic rotary drive
- Connecting thread to DIN ISO 228-1
- Solenoid valves with the Namur port pattern can be connected directly
- Limit switch attachments can be screwed directly onto the drive unit

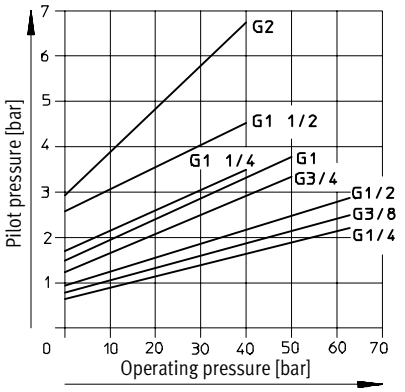
General technical data									
Connecting thread		G¼	G⅜	G½	G¾	G1	G1¼	G1½	G2
Valve function		2/2 way							
Design		Ball valve							
Sealing principle		Soft							
Actuation type		Pneumatic							
Direction of flow		Reversible							
Type of mounting		In-line installation							
Mounting position		Any							
Nominal size	[mm]	8	10	15	20	25	32	40	50
Flow rate Kv	[m³/min]	5.1	6.8	16	26	47	70	145	191
Product weight	[g]	1,150	1,200	1,250	1,450	2,300	2,850	4,650	5,650

Operating and environmental conditions									
Connecting thread		G¼	G⅜	G½	G¾	G1	G1¼	G1½	G2
Operating medium		Compressed air, water, neutral gasses, neutral fluids Vacuum							
Pilot medium		Filtered compressed air, lubricated or unlubricated							
Nominal operating pressure	[bar]	63	63	63	50	50	40	40	32
Temperature of medium	[°C]	−40 ... +200 (for water 4 ... 60)							
Ambient temperature	[°C]	−20 ... +85							
Corrosion resistance class CRC[1)]		1							

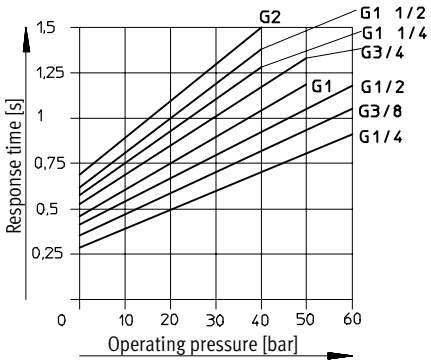
1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Materials		
Ball valve		
Housing		Brass
Ball		Brass
Seals	Housing	Polytetrafluoroethylene, fibreglass reinforced
	Shaft	Polytetrafluoroethylene, fibreglass reinforced
Rotary drive		
Housing		Hard anodised aluminium
Shaft		Nickel plated steel

Minimum pilot pressure as a function of operating pressure[1)]

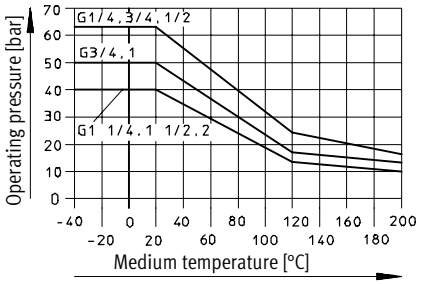


Response times as a function of operating pressure[2)]



1) For lubricating media. Values may be as much as 30% higher for non-lubricating media.
2) Guide values at 5 bar pilot pressure

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

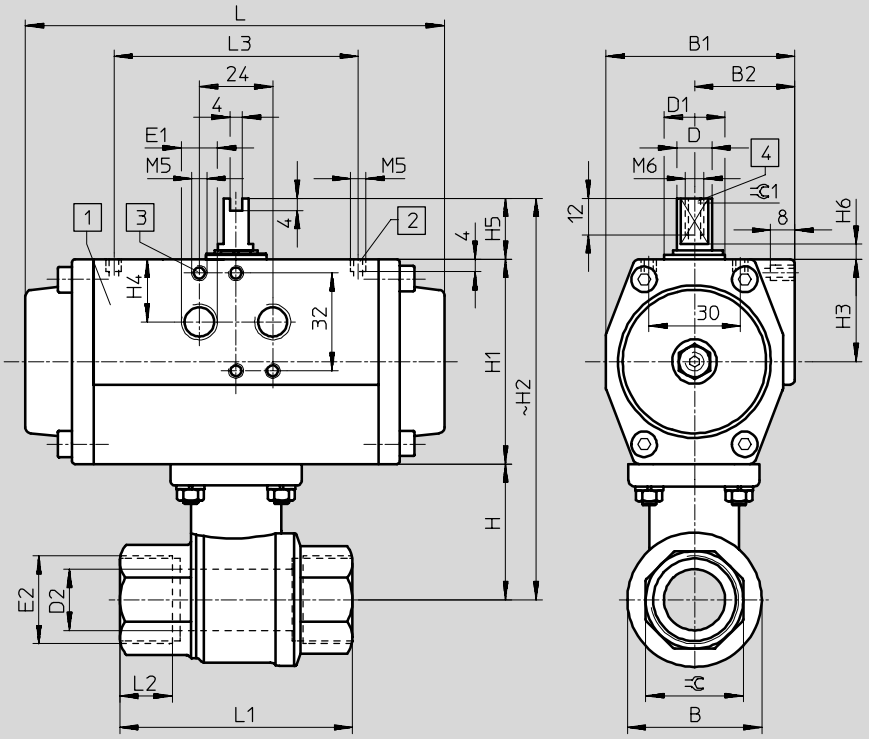


Ball valve drive units QH-DR

Technical data

FESTO

Dimensions and ordering data Download CAD data ➔ **www.festo.com/en/engineering**



1 Flange mounting surface for solenoid valve with Namur port pattern
2 Tightening torque max. 2 Nm
3 Tightening torque max. 2 Nm
4 Tightening torque max. 10 Nm

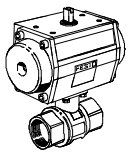
Connecting thread E2[1)]	B	B1	B2	D ∅	D1 ∅	D2 ∅	E1	H	H1	H2
G¼	25.5	66	37	12	20	8	⅛	33	67	120
G⅜	25.5	66	37	12	20	10	⅛	34	67	121
G½	34	66	37	12	20	15	⅛	35.5	67	122.5
G¾	44	66	37	12	20	20	⅛	45.5	67	132.5
G1	53	80.5	44	12	20	25	¼	49.5	83	152.5
G1¼	66	80.5	44	12	20	32	¼	63	83	166
G1½	79	91	48	18	27	40	¼	69	100	189
G2	95	91	48	18	27	50	¼	85	100	205

Connecting thread E2[1)]	H3	H4	H5	H6	L	L1	L2	L3	⌀C	⌀C1
G¼	41	22	20	5	138	50	10	80	19	8
G⅜	41	22	20	5	138	60	11.4	80	22	8
G½	41	22	20	5	138	75	15	80	27	8
G¾	41	22	20	5	138	80	16.3	80	32	8
G1	42	21	20	4.5	152	90	19.1	80	41	8
G1¼	42	21	20	4.5	152	110	21.4	80	50	8
G1½	46	23	20	4.5	202	120	21.4	80	55	14
G2	46	23	20	4.5	202	140	25.7	80	70	14

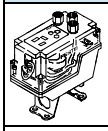
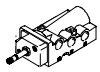
1) Cylindrical barrel with female thread to DIN ISO 228-1

Ball valve drive units QH-DR

Technical data

Ordering data – Ball valve drive units			
Design	Connecting thread[1)]	Part No.	Type
	G¼	**164 242**	**QH-DR-¼-B**
	G⅜	**164 243**	**QH-DR-⅜-B**
	G½	**164 244**	**QH-DR-½-B**
	G¾	**164 245**	**QH-DR-¾-B**
	G1	**164 246**	**QH-DR-1-B**
	G1¼	**164 247**	**QH-DR-1 ¼-B**
	G1½	**164 248**	**QH-DR-1 ½-B**
	G2	**164 249**	**QH-DR-2-B**

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

Ordering data – Accessories			
	Description	Part No.	Type
Limit switch attachments			Technical data → 7 / 1.2-60
	pneumatic sensing with S-3-PK-3-B	**164 855**	**QH-DR-E-S3-PK-3-B-B**
	electrical sensing with S-3-E-SW	**164 854**	**QH-DR-E-S3-E-SW-B**
	inductive sensing with SIE-M12S-...	**164 853**	**QH-DR-E-SIEN-M12-NB-B**
Solenoid valves, 5/2-way			Technical data → 7 / 2.1-6
	–	**535 987**	**NVF3-MOH-5/2-K-¼-EX**
	explosion-proof, intrinsically safe	**535 988**	**NVF3-MOH-5/2-K-¼-IA-EX**

Ball valve drive units CRQH-DR, stainless steel

Technical data

FESTO

- Connecting thread G¼ ... G2
- Flow rate Kv 5.1 ... 191 m³/min

- Corrosion and acid resistant design
- Combination of a ball valve and pneumatic rotary drive
- Connecting thread to DIN ISO 228-1
- Solenoid valves with the Namur port pattern can be connected directly
- Limit switch attachments can be screwed directly onto the drive unit

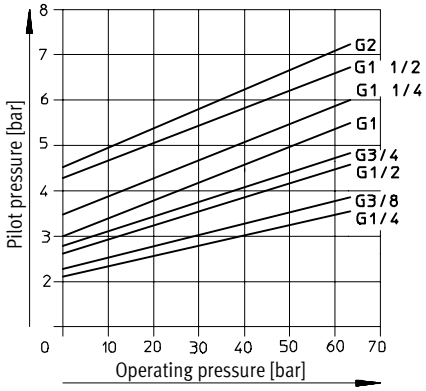
General technical data									
Connecting thread		G¼	G⅜	G½	G¾	G1	G1¼	G1½	G2
Valve function		2/2 way							
Design		Ball valve							
Sealing principle		Soft							
Actuation type		Pneumatic							
Direction of flow		Reversible							
Type of mounting		In-line installation							
Mounting position		Any							
Nominal size	[mm]	9	12	16	20	25	32	40	50
Flow rate Kv	[m³/min]	5.1	6.8	16	26	47	70	145	191
Product weight	[g]	1,500	1,500	1,500	1,700	2,650	3,350	5,450	7,150

Operating and environmental conditions									
Connecting thread		G¼	G⅜	G½	G¾	G1	G1¼	G1½	G2
Operating medium		Compressed air, water, neutral gasses, neutral fluids Vacuum							
Pilot medium		Filtered compressed air, lubricated or unlubricated							
Nominal operating pressure	[bar]	63	63	63	50	50	40	40	32
Temperature of medium	[°C]	–40 ... +200 (for water 4 ... 160)							
Ambient temperature	[°C]	–20 ... +85							
Corrosion resistance class CRC[1)]		3							

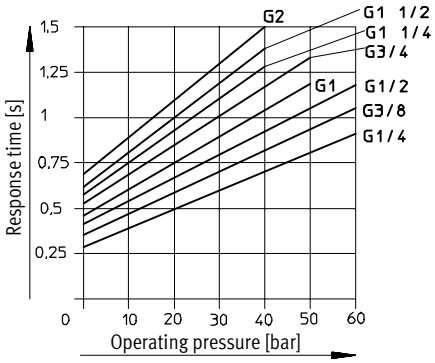
1) Corrosion resistance class 3 according to Festo standard 940 070
Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Materials		
Ball valve		
Housing		Corrosion resistant cast steel
Ball		Corrosion resistant cast steel
Seals	Housing	Polytetrafluoroethylene, fibreglass reinforced
	Shaft	Polytetrafluoroethylene, fibreglass reinforced
Rotary drive		
Housing		Hard anodised aluminium
Shaft		Nickel plated steel

Minimum pilot pressure as a function of operating pressure[1)]

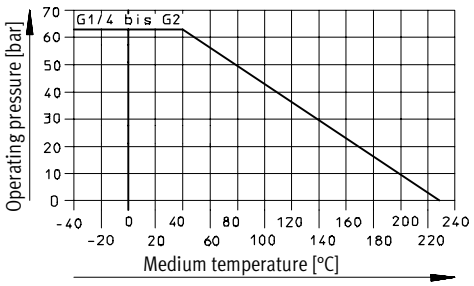


Response times as a function of operating pressure[2)]



1) For lubricating media. Values may be as much as 30% higher for non-lubricating media.
2) Guide values at 5 bar pilot pressure

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

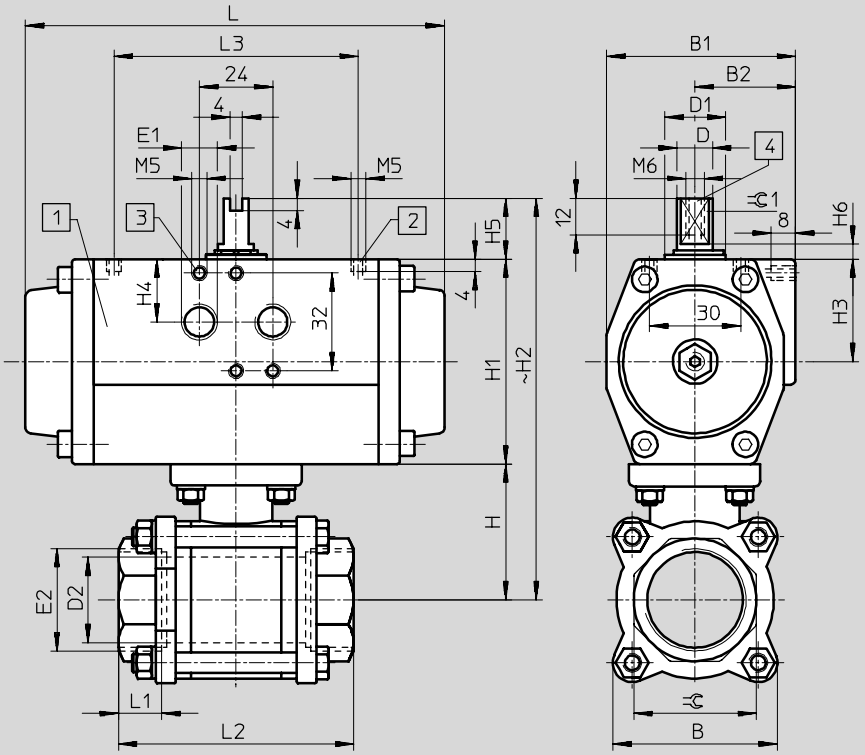


Ball valve drive units CRQH-DR, stainless steel

Technical data

FESTO

Dimensions and ordering data Download CAD data ➔ **www.festo.com/en/engineering**



1 Flange mounting surface for solenoid valve with Namur port pattern
2 Tightening torque max. 2 Nm
3 Tightening torque max. 2 Nm
4 Tightening torque max. 10 Nm

Connecting thread E2[1)]	B	B1	B2	D ∅	D1 ∅	D2 ∅	E1	H	H1	H2
G¼	50	66	37	12	20	9.5	⅛	36.5	67	124
G⅜	50	66	37	12	20	12.6	⅛	36.5	67	124
G½	50	66	37	12	20	16	⅛	36.5	67	124
G¾	54	66	37	12	20	20	⅛	39.5	67	127
G1	60	80.5	44	12	20	25	¼	47.5	83	152
G1¼	72	80.5	44	12	20	32	¼	53	83	156
G1½	81	91	48	18	27	38	¼	61.5	100	182
G2	99	91	48	18	27	50.8	¼	70.5	100	191

Connecting thread E2[1)]	H3	H4	H5	H6	L	L1	L2	L3	⌀	⌀1
G¼	41	22	20	5	138	50	13	80	24	8
G⅜	41	22	20	5	138	60	16	80	24	8
G½	41	22	20	5	138	75	19	80	29	8
G¾	41	22	20	5	138	80	19	80	35	8
G1	42	21	20	4.5	152	90	21	80	41	8
G1¼	42	21	20	4.5	152	110	24	80	50	8
G1½	46	23	20	4.5	202	120	26	80	58	14
G2	46	23	20	4.5	202	140	29	80	73	14

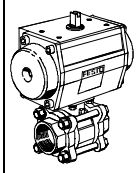
1) Cylindrical barrel with female thread to DIN ISO 228-1

Ball valve drive units CRQH-DR, stainless steel

Technical data

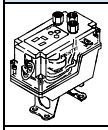
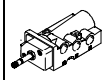
FESTO

Ordering data – Ball valve drive units

Design	Connecting thread[1)]	Part No.	Type
	G1/4	**154 074**	**CRQH-DR-1/4-B**
	G3/8	**154 075**	**CRQH-DR-3/8-B**
	G1/2	**154 076**	**CRQH-DR-1/2-B**
	G3/4	**154 077**	**CRQH-DR-3/4-B**
	G1	**154 078**	**CRQH-DR-1-B**
	G1 1/4	**154 079**	**CRQH-DR-1 1/4-B**
	G1 1/2	**154 080**	**CRQH-DR-1 1/2-B**
	G2	**154 081**	**CRQH-DR-2-B**

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

Ordering data – Accessories

	Description	Part No.	Type
Limit switch attachments			Technical data → 7 / 1.2-60
	pneumatic sensing with S-3-PK-3-B	**164 855**	**QH-DR-E-S3-PK-3-B-B**
	electrical sensing with S-3-E-SW	**164 854**	**QH-DR-E-S3-E-SW-B**
	inductive sensing with SIE-M12S-...	**164 853**	**QH-DR-E-SIEN-M12-NB-B**
Solenoid valves, 5/2-way			Technical data → 7 / 2.1-6
	–	**535 987**	**NVF3-MOH-5/2-K-1/4-EX**
	explosion-proof, intrinsically safe	**535 988**	**NVF3-MOH-5/2-K-1/4-IA-EX**