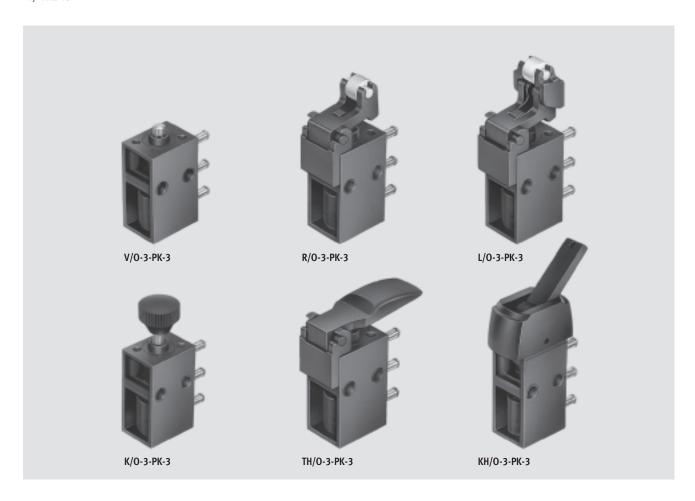
Valves with push-on fittings Key features



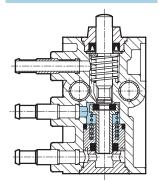


Push-on fitting connection

- Directly actuated valves
- Polymer design
- Ducted exhaust air

The push-on fitting is suitable for plastic tubing with a standard internal diameter → www.festo.com

V/0-3-PK-3



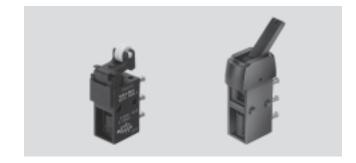
Valves with push-on fittings Technical data

FESTO

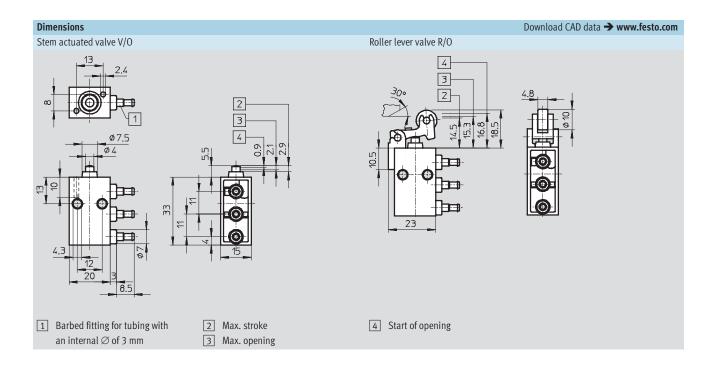


Pressure 0 ... 8 bar

Temperature range −10 ... +60 °C

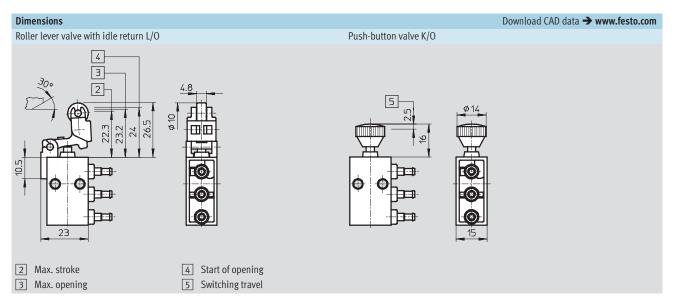


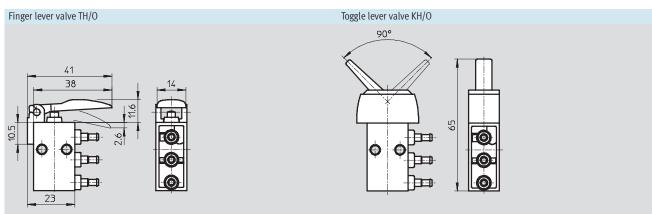
General technica	al data								
Actuation type			Stem actuated valve	Roller lever valve	Roller lever valve with idle return	Push-button valve	Finger lever valve	Toggle lever valve	
Constructional d	esign		Poppet valve, dire	ectly actuated					
Type of mounting	g		Through-holes in	housing					
Pneumatic conne	ection		Barbed fitting for	3 mm plastic tubir	ıg				
Nominal size		[mm]	2.5						
Standard nomina	al flow rate 1 > 2	[l/min]	80						
Operating pressu	ıre range	[bar]	08						
Actuating force a	t 6 bar								
Normally closed		[N]	17	10	10	17	6	6.5	
Normally open		[N]	24	15	13	24	8	7.5	
Temperature ran	ge	[°C]	-10 +60						
Materials	Housing		Plastic						
	Seals		Nitrile rubber						
Weight		[g]	20	18	19	20	18	20	



Valves with push-on fittings Technical data







Ordering data				
Circuit symbol		Actuation type	Part No.	Туре
2	2 11 V 33	Stem actuated valve	10 747	V/O-3-PK-3
2 7 7 7 7 3	2 11 \(\sigma 33\)	Roller lever valve	10 748	R/O-3-PK-3
2 1 V3	2 11 \sqrt{33}	Roller lever valve with idle return	10 749	L/O-3-PK-3
2 1 \ \frac{2}{3}	□ 11	Push-button valve	13 793	K/O-3-PK-3
21	□ 11	Finger lever valve	13 794	TH/O-3-PK-3
2 1 1 2 3	2 1 7 1 7 3	Toggle lever valve	33 003	KH/O-3-PK-3

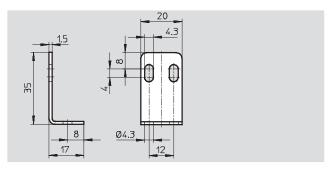
4.2

Valves with push-on fittings

Mounting bracket HV-M5

Material: Galvanised steel





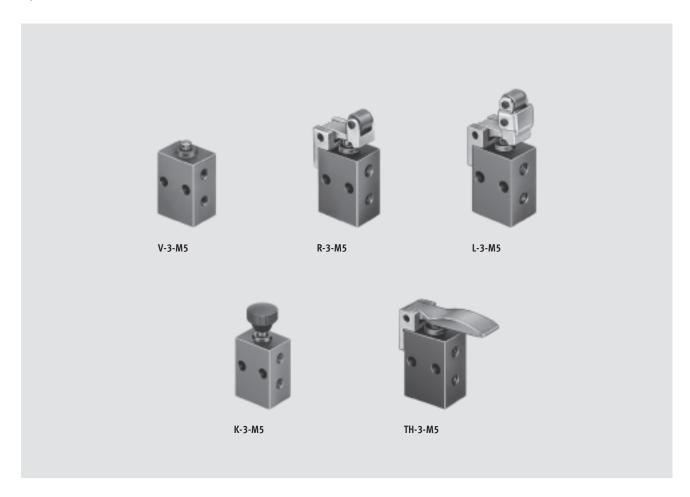
FESTO

Ordering data			
	Weight [g]	Part No.	Туре
Mounting bracket	11	9 634	HV-M5

Valves with threaded connections M5



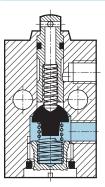






- 3/2-way valve normally closed
- Connection M5
- Compact design

V-3-M5



Valves with threaded connections M5

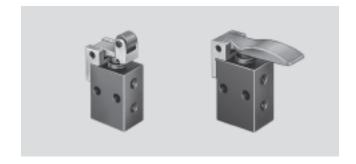
FESTO

Technical data



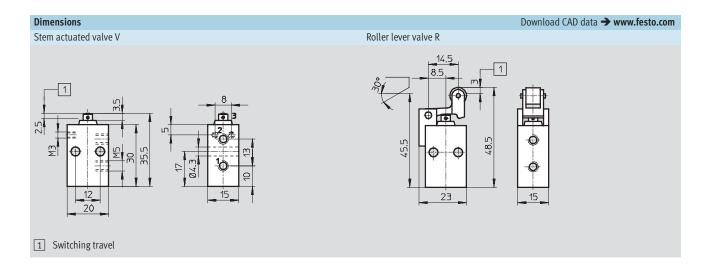
- Pressure -0.95 ... +8 bar

- ↓ - Temperature range -10 ... +60 °C



General technical	l data							
Actuation type			Stem actuated valve	Roller lever valve	Roller lever valve with idle return	Push-button valve	Finger lever valve	
Operating mediun	n		Filtered compressed air, lubricated or unlubricated Vacuum ¹⁾					
Constructional de	sign		Poppet valve, directl	y actuated				
Type of mounting			2 through-holes in housing					
Pneumatic connec	ction		M5					
Nominal size		[mm]	2					
Standard nominal	l flow rate 1 > 2	[l/min]	80					
Operating pressur	re range	[bar]	-0.95 8					
Actuating force at	6 bar	[N]	23	12.5	12.5	23	8	
Temperature rang	e	[°C]	-10 +60		•	•	•	
Materials	Housing		Die-cast zinc					
	Seals		Nitrile rubber					
Weight		[g]	25	40	43	28	37	

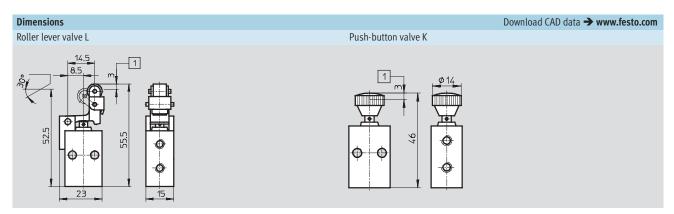
1) Vacuum connection at port 1



Valves with threaded connections M5



Technical data





Ordering data – Basic valves			
Circuit symbol	Actuation type	Part No.	Туре
2 ₁	Stem actuated valve	3 626	V-3-M5
	Roller lever valve	3 629	R-3-M5
2 1 × 3	Roller lever valve with idle return	3 628	L-3-M5
2 1 1 2 3	Push-button valve	3 660	K-3-M5
□ 1 √3	Finger lever valve	6 758	TH-3-M5

Ordering data – Actuator attachments							
Circuit symbol	Actuation type	Part No.	Туре				
• <u> </u>	Roller lever with mounting screws	6 512	AR-05				
	Idle return roller lever with mounting screws	6 513	AL-05				

4.3

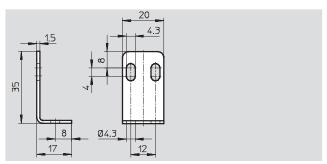
Valves with threaded connections M5

Accessories

Mounting bracket HV-M5

Material: Galvanised steel





FESTO

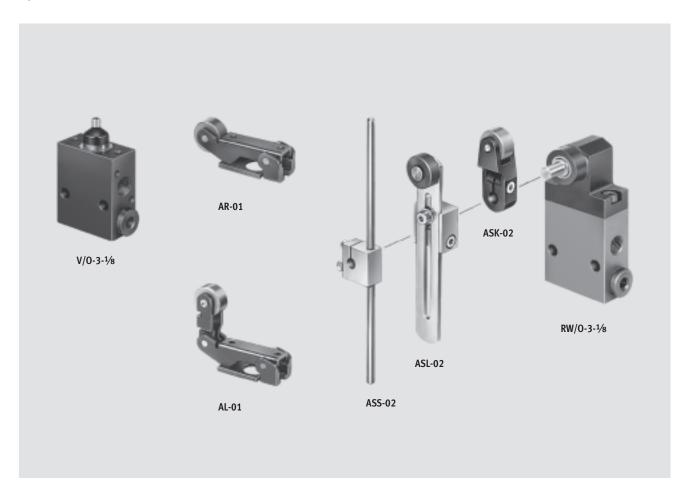
Ordering data			
	Weight	Part No.	Туре
	[g]		
Mounting bracket	11	9 634	HV-M5

2 / 4.3-8

Valves with threaded connections $G^{1/8}$, directly actuated

FESTO

Key features





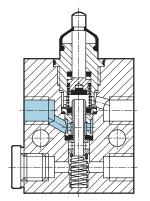
- 3/2-way valve Normally closed Normally open depending upon selected connections
- Connection G½8
- Actuator attachments as desired

The swivel lever valve is mechanically actuated with an eccentric rod.

Various actuating ranges can be selected by repositioning

2 components in the control actuator.

Normally closed



Valves with threaded connections G $^1\!/_8$, directly actuated $_{\text{Technical data}}$





- **-** Pressure

-0.95 ... +8 bar





General technical data – Basic valves						
Actuation type		Stem actuated valve	Swivel lever valve			
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum ¹⁾				
Constructional design		Poppet valve, directly actuated				
Type of mounting		2 through-holes in housing				
Pneumatic connection		G ¹ / ₈				
Nominal size	[mm]	3.5				
Standard nominal flow rate 1 > 2	[l/min]	140				
Operating pressure range	[bar]	-0.95 +8				
Actuating force at 6 bar	[N]	28				
Temperature range	[°C]	-10 +60				
Materials Housing		Blue anodised aluminium				
Seals		Nitrile rubber				
Weight	[g]	90	150			

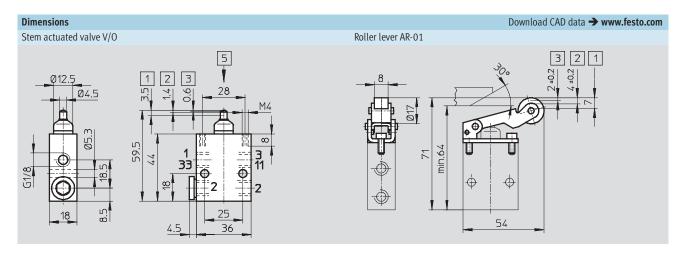
¹⁾ Vacuum connection at port 1 or 11

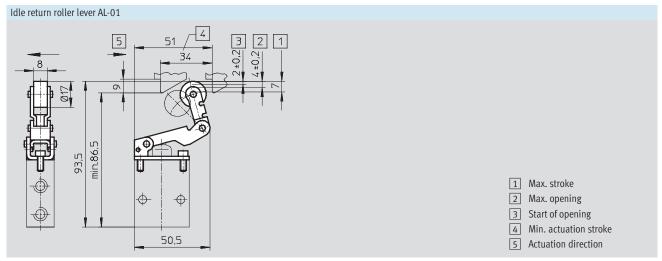
General technical data – Actuator attachments							
		Roller lever	Idle return roller lever	Swivel lever, short	Swivel lever, long	Swivel lever rod	
Actuating force [N]	min.	-	-	-	-	-	
	max.	10	12	7	1)	1)	
Material G		Galvanised steel		Aluminium, steel	Aluminium, steel		
Weight	[g]	42	52	30	35	30	

¹⁾ Dependent upon starting height

Valves with threaded connections G½, directly actuated Technical data



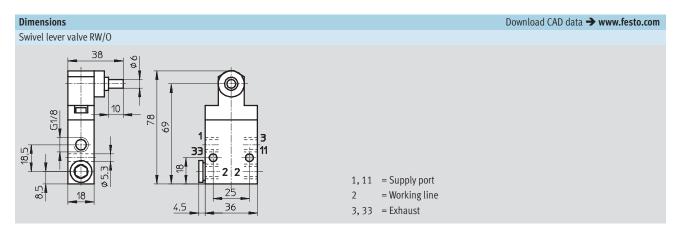


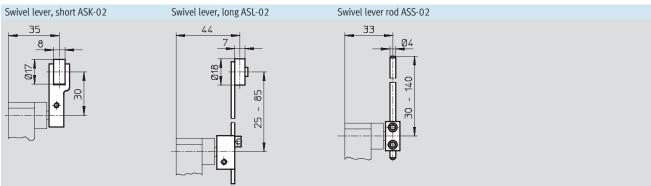


Valves with threaded connections G½, directly actuated



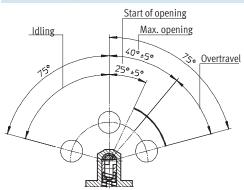
Technical data

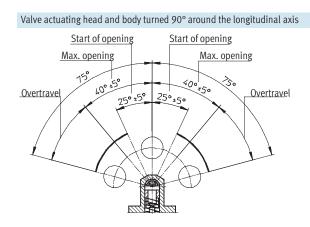


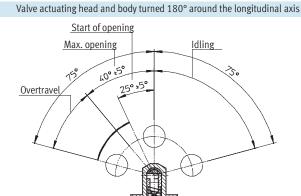


Actuating ranges are set by converting the switching head

Default settings (upon delivery)



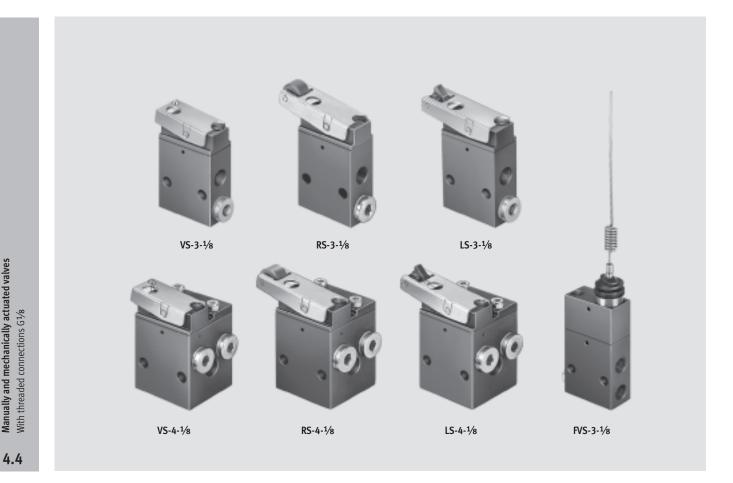




Valves with threaded connections G½, directly actuated Technical data



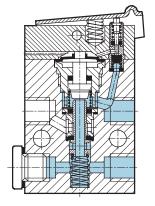
Ordering data			
Circuit symbol	Actuation type	Part No.	Туре
Stem actuated valve			
1	Basic valve	4 938	V/0-3-½
		•	
Actuator attachments			
	Roller lever	4 936	AR-01
	Idle return roller lever	4 941	AL-01
Swivel lever valve			
2 1 \ \sqrt{3}	Basic valve	4 937	RW/0-3-½
		•	
Actuator attachments			
<u>)</u> p[Swivel lever, short	5 835	ASK-02
	Swivel lever, long	5 836	ASL-02
<u>}æ</u> [Swivel lever rod	4 789	ASS-02



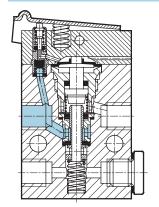
- N - Flow rate 120 l/min

- 3/2-way valves normally closed normally open, changed by repositioning the housing top
- 4/2-way valves
- Minimal actuating force with pilot
- Can also be used as 2/2-way valve by plugging the exhaust





Normally open



Valves with threaded connections $G^{1/8}$, indirectly actuated

Technical data - 3/2-way valves



- **-** Pressure 3.5 ... 8 bar



Wearing parts kits

→ 2 / 4.4-17



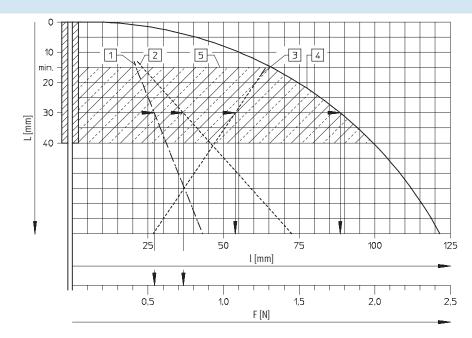
Technical data						
Actuation type			Stem actuated valve	Roller lever valve	Toggle lever valve	Whisker valve
Constructional design			Poppet valve, indirect	ly actuated		
Type of mounting			2 through-holes in ho	using		
Pneumatic connection			G½8			
Nominal size		[mm]	3.5			
Standard nominal flow rate 1 > 2		[l/min]	120			
Operating pressure range		[bar]	3.5 8			
Actuating force at 6 bar		[N]	3.1	1.8	1.8	→ Diagram
Repetition accuracy (+/-)		[mm]	±0.1	•	•	•
Temperature range		[°C]	-10 +60			
Materials	Housing		Blue anodised alumin	ium		
	Seals		Nitrile rubber			
Weight		[g]	110	120	110	130

Switching forces F and switching travel l at 6 bar in relation to approach distance L

Whisker valve

This piloted valve with extremely low actuating forces is particularly suited for units where dissimilar parts or actuating elements without precision positioning are to be sensed, or where the actuating levels are different. The whisker can be approached from any direction perpendicular to the whisker axis, or can be passed.

- 1 Switching force
- 2 Passing force
- 3 Switching travel
- 4 Overtravel
- 5 Permissible approach range



Example:

A distance of 30 mm from the end of the spring results in:

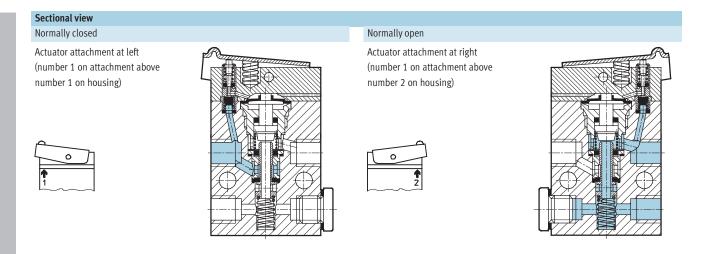
Switching travel of 54 mm A switching force of 0.57 N

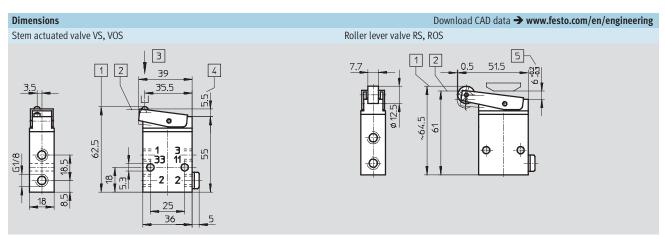
Overtravel of 88 mm A passing force of 0.75 N

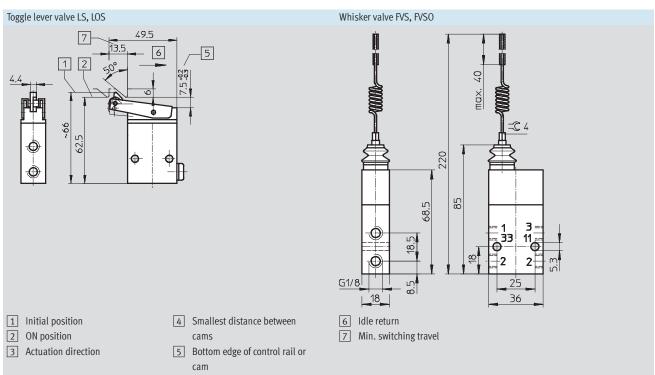
Valves with threaded connections G½, indirectly actuated

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Technical data - 3/2-way valves







Valves with threaded connections G½, indirectly actuated Technical data – 3/2-way valves

FESTO

Ordering data			
Circuit symbol	Actuation type	Part No.	Туре
3/2-way valves, normally closed			
2 1 V3	Stem actuated valve	2 334	VS-3-1/8
	Roller lever valve	2 272	RS-3- ¹ / ₈
2 1 1 3	Toggle lever valve	2 186	LS-3-1⁄8
2 1 V3	Whisker valve	3 876	FVS-3-1/8
3/2-way valves, normally open		•	
3/2-way valves, normally open	Stem actuated valve	2 952	VOS-3-1/8
②————————————————————————————————————	Roller lever valve	2 270	ROS-3-1/8
2 11 \square 33	Toggle lever valve	2 950	LOS-3-1/8
2 11 ∇33	Whisker valve	3 877	FVSO-3-1/8

Ordering data – Wearing parts kits		
	Part No.	Туре
For 3/2-way valves	104 222	VS-3-1/8

4.4

Valves with threaded connections G½, indirectly actuated Technical data – 4/2-way valves

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Temperature range −10 ... +60 °C

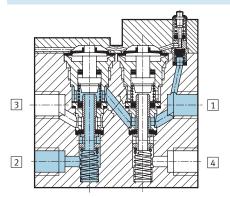
Pressure 3.5 ... 8 bar Wearing parts kits **→** 2 / 4.4-19



Technical data							
Actuation type			Stem actuated valve	Roller lever valve	Toggle lever valve		
Constructional design			Poppet valve, indirectly actuated				
Type of mounting			2 through-holes in housing				
Pneumatic connection			G1/8				
Nominal size		[mm]	3.5				
Standard nominal flow rate 1 > 2		[l/min]	120				
Operating pressure range		[bar]	3.5 8				
Actuating force at 6 bar		[N]	3.1	1.8	2.2		
Repetition accuracy (+/-)		[mm]	±0.1	•			
Temperature range		[°C]	-10 +60				
Materials	Housing		Blue anodised aluminiun	n			
	Seals		Nitrile rubber				
Weight		[g]	220	230	230		

Sectional view

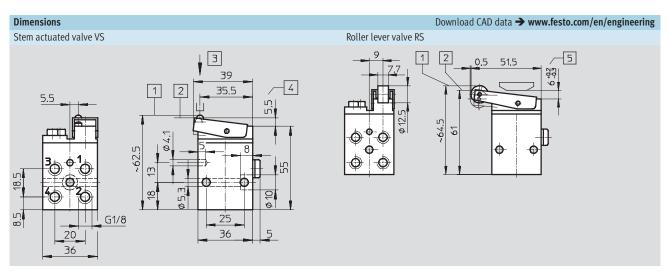
Stem actuated valve VS-4-1/8

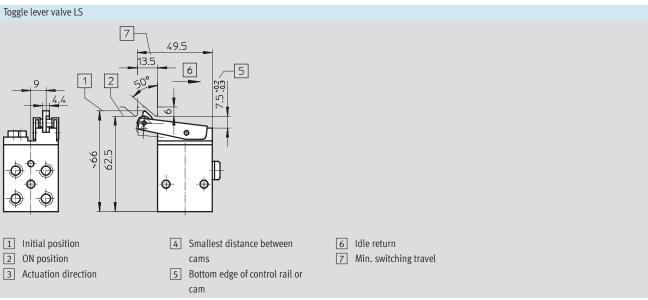


- Supply port
- 2,4 Working line
- Exhaust 3

Valves with threaded connections $G^{1/8}$, indirectly actuated

Technical data – 4/2-way valves





Ordering data			
Circuit symbol	Actuation type	Part No.	Туре
1 V3	Stem actuated valve	3 394	VS-4- ¹ / ₈
⊙ 1 1 2 3	Roller lever valve	2 949	RS-4-1/8
	Toggle lever valve	3 416	LS-4- ¹ / ₈

Ordering data – Wearing parts kits		
	Part No.	Туре
For 4/2-way valves	104 201	VS-4-1/8

4.4

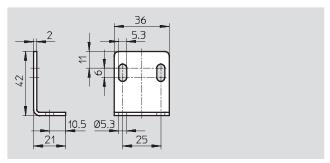
Valves with threaded connections G½, indirectly actuated Accessories

FESTO

Mounting bracket HV-1/8

Material: Galvanised steel





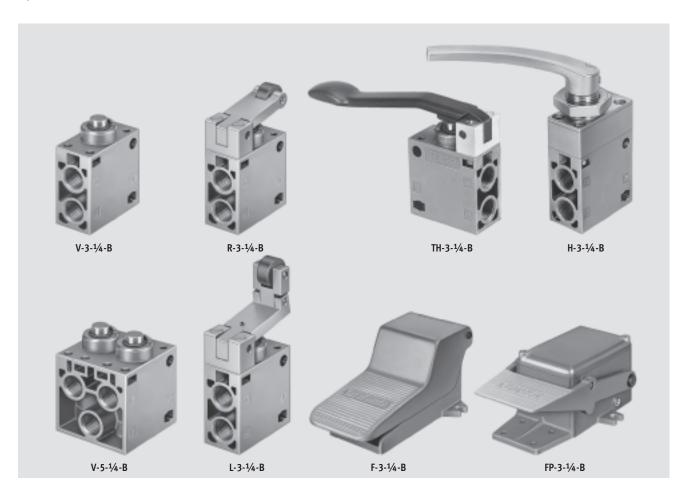
	Ordering data			
		. 1	Part No.	Туре
		[g]		
L	Mounting bracket	32	9 635	HV-1/8

2 / 4.4-20

Valves with threaded connections G1/4

Key features

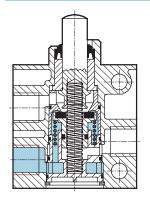




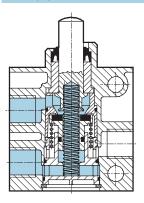


- 3/2-way valves normally closed normally open
- 5/2-way valves
- 7 actuator types

V-3-1/4-B, normally closed



VO-3-1/4-B, normally open



Valves with threaded connections G¹/₄ Technical data -3/2-way valves





- Temperature range -10 ... +60 °C

- **-** Pressure -0.95 ... +10 bar Wearing parts kits **→** 26



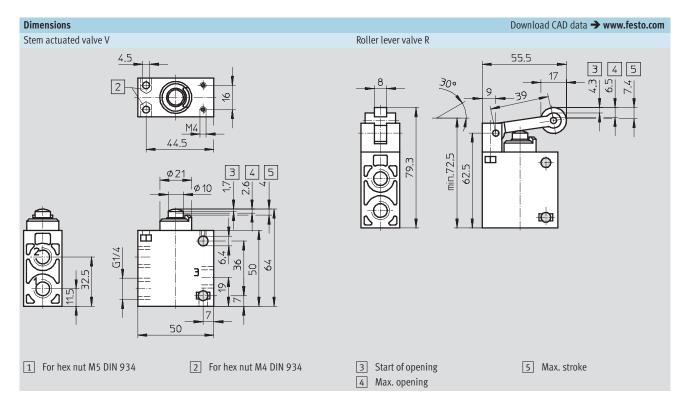
General tech	inical data								
Actuation typ	oe		Stem actuated valve	Roller lever valve	Roller lever valve with idle return	Finger lever valve	Hand lever valve	Foot valve	Foot valve with mechanical detent
Operating m	edium		Filtered comp Vacuum ¹⁾	ressed air, lub	ricated or unlub	oricated			
Constructional design			Poppet valve,	directly actuat	ed				
Type of mounting 2 through-holes in housing ²⁾									
Connection			G1/4						
Nominal size [mm]			7						
Standard no	minal flow rate 1 > 2	[l/min]	600						
Operating pr	essure range	[bar]	-0.95 +10						
Actuating for	ce at 6 bar	[N]							
	Normally closed		37	10	15	6.7	5.5	26	45
	Normally open		93	26	38	17	-	37	-
Temperature	range	[°C]	-10 +60	•	•	•		•	•
Materials	Housing		Die-cast alum Foot valves: d						
	Seals		Nitrile rubber						
Weight	Valve	[g]	130	230	250	210	320	595	1,760
	Safety guard	[g]	-	-	-	-	-	1,200	660

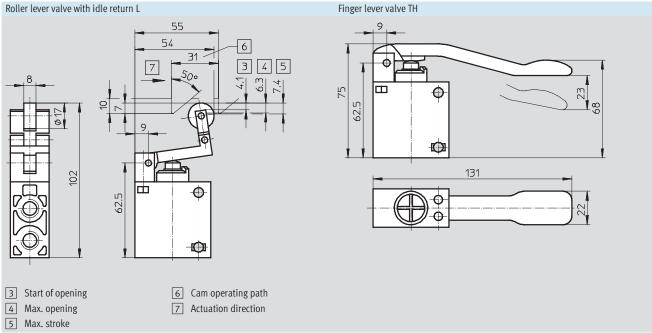
Vacuum connection at port 1
 Hand lever valve suitable for panel mounting
 Foot valves with flange eye on housing

Valves with threaded connections G1/4



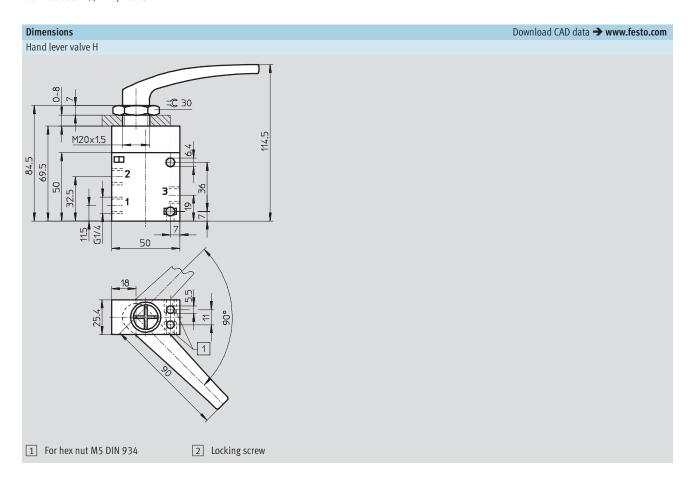
Technical data – 3/2-way valves





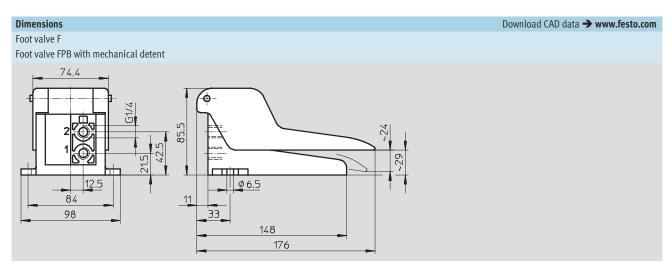
Valves with threaded connections G¹/₄ Technical data – 3/2-way valves

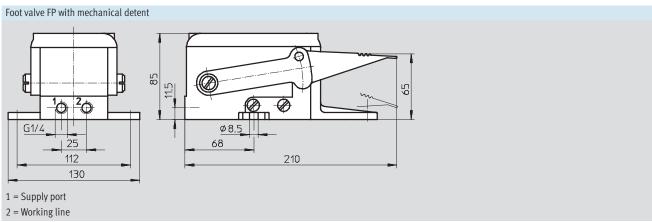


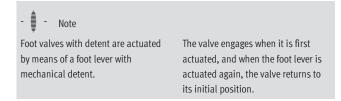


Valves with threaded connections G¹/₄ Technical data – 3/2-way valves









Valves with threaded connections G¹/₄ Technical data – 3/2-way valves



Ordering data		
Circuit symbol	Actuation type	Part No. Type
Normally closed		
21	Stem actuated valve	6 808 V-3-1⁄4-B
2 1 V 3	Roller lever valve	8 985 R-3-1/4-B
2 1 V3	Roller lever valve with idle return	8 982 L-3-1/4-B
2 1 V3	Finger lever valve	8 983 TH-3-1/4-B
2 1 7 3	Hand lever valve	8 987 H-3-1/4-B
2 N	Foot valve	8 984 F-3-1⁄4-B
21	Foot valve with mechanical detent	8 986 FP-3-1/4-B
		526 985 FPB-3- ¹ / ₄
Normally open		
2	Stem actuated valve	9 157 VO-3-1/4-B
2 11 \sqrt{33}	Roller lever valve	8 991 RO-3-1/4-B
2 11 \sqrt{33}	Roller lever valve with idle return	8 989 LO-3-1/4-B
2 11 V33	Finger lever valve	8 990 THO-3-1/4-B
Z V	Foot valve	8 988 FO-3-1/4-B
	<u> </u>	

Ordering data – Wearing parts kits		
	Part No.	Туре
For 3/2-way valves ¹⁾	104 503	V-,VO-3-1/4-B

¹⁾ not for foot valves F, FO, FP, FPB

Valves with threaded connections G¹/₄ Technical data – 5/2-way valves





- ↓ - Temperature range -10 ... +60 °C

- **-** Pressure −0.95 ... +10 bar Wearing parts kits **→** 31



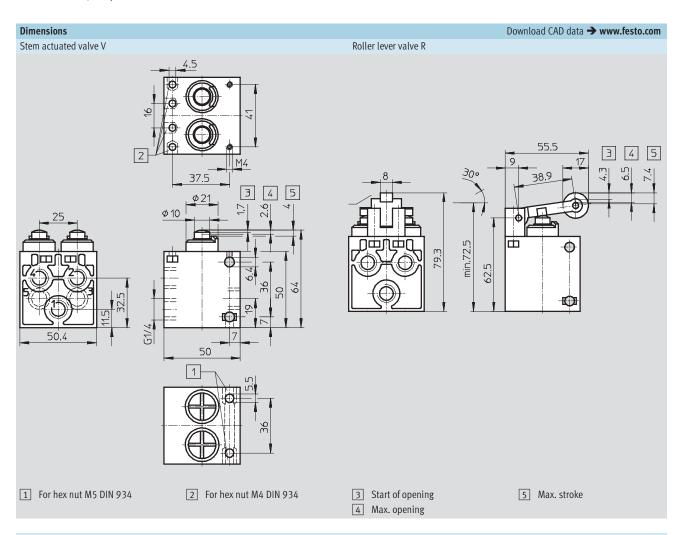
General techn	ical data								
Actuation type			Stem actuated valve	Roller lever valve	Roller lever valve with idle return	Finger lever valve	Hand lever valve	Foot valve	Foot valve with mechanical detent
Operating med	lium		Filtered compo Vacuum ¹⁾	ressed air, lubr	icated or unlub	ricated			
Constructional design			Poppet valve, directly actuated						
Type of mounting 2 through-holes in housing ²⁾									
Connection			G1/4						
Nominal size		[mm]	7						
Standard nom	inal flow rate 1 > 2	[l/min]	550						
Pressure range	9	[bar]	-0.95 +10						
Actuating force	e at 6 bar	[N]	132	35	53	24	22	52	69
Temperature ra	ange	[°C]	-10 +60						
Materials	Housing		Die-cast aluminium, types F and FP: die-cast zinc						
	Seals		Nitrile rubber						
Weight	Valve	[g]	240	340	360	320	510	705	1,845
	Safety guard	[g]	-	-	-	-	-	1,200	660

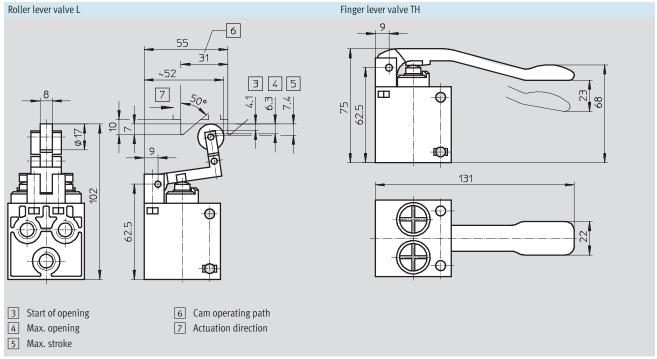
Vacuum connection at port 1
 Hand lever valve suitable for panel mounting
 Foot valves with flange eye on housing

Valves with threaded connections G1/4



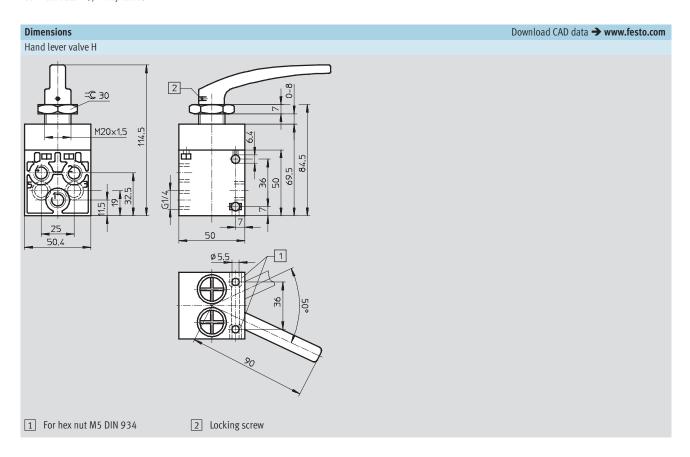
Technical data – 5/2-way valves





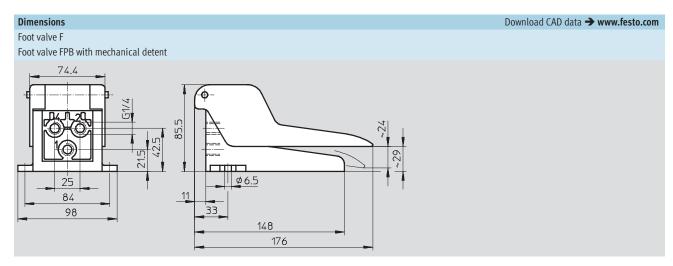
Valves with threaded connections G¹/₄ Technical data – 5/2-way valves

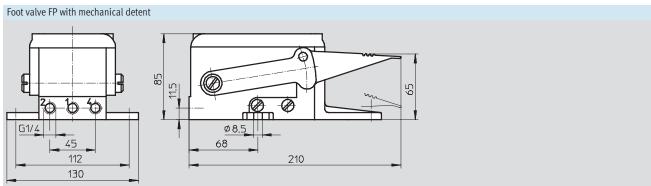


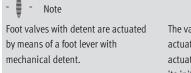


Valves with threaded connections G¹/₄ Technical data – 5/2-way valves









The valve engages when it is first actuated, and when the foot lever is actuated again, the valve returns to its initial position.

Valves with threaded connections G¹/₄ Technical data – 5/2-way valves



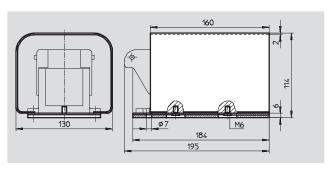
Ordering data			
Circuit symbol	Actuation type	Part No.	Туре
5VV3	Stem actuated valve	6 809	V-5-1⁄4-B
	Roller lever valve	8 996	R-5-1/4-B
5√√3	Roller lever valve with idle return	8 993	L-5-1⁄4-B
	Finger lever valve	8 994	TH-5-1⁄4-B
\$\frac{4}{2} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	Hand lever valve	8 995	H-5-1⁄4-B
5√√3	Foot valve	8 992	F-5- ¹ / ₄ -B
7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Foot valve with mechanical detent	8 997	FP-5-1/4-B
5 7 3		526 985	FPB-5- ¹ / ₄

Ordering data – Wearing parts kits		
	Part No.	Туре
For 5/2-way valves ¹⁾	104 502	V-5-1/4-B

¹⁾ not for foot valves F, FP, FPB

4.5

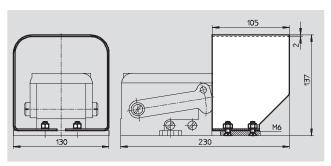




Ordering data			
	Weight	Part No.	Туре
	[g]		
Safety guard for foot valve F	1,240	4 500	FH

Safety guard FPH-121





Ordering data			
	Weight	Part No.	Туре
	[g]		
Safety guard for foot valve FP	670	2 071	FPH-121
with mechanical detent			

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Festo North America

United States

Customer Resource Center

502 Earth City Expy., Suite 125 Earth City, MO 63045

For ordering assistance, or to find your nearest Festo Distributor, **Call:** 1.800.99.FESTO **Fax:** 1.800.96.FESTO

Email: customer.service@us.festo.com

For technical support,
Call: 1.866.GO.FESTO
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Email: product.support@us.festo.com

Headquarters

Festo Corporation 395 Moreland Road P.O. Box 18023 Hauppauge, NY 11788 www.festo.com/us

Sales Offices

Appleton

N. 922 Tower View Drive, Suite N Greenville, WI 54942

Boston

120 Presidential Way, Suite 330 Woburn, MA 01801

Chicago

1441 East Business Center Drive Mt. Prospect, IL 60056

Dallas

1825 Lakeway Drive, Suite 600 Lewisville, TX 75057

Detroit - Automotive Engineering Center 2601 Cambridge Court, Suite 320 Auburn Hills, MI 48326

New York

395 Moreland Road Hauppauge, NY 11788

Silicon Valley

4935 Southfront Road, Suite F Livermore, CA 94550

Design and Manufacturing Operations



East: 395 Moreland Road, Hauppauge, NY 11788



Central: 1441 East Business Center Drive, Mt. Prospect, IL 60056



West: 4935 Southfront Road, Suite F, Livermore, CA 94550

Mexico

Headquarters

Festo Pneumatic, S.A.

Av. Ceylán 3, Col. Tequesquinahuac
54020 Tlalnepantla, Edo. de México
Call: 011 52 [55] 53 21 66 00

Fax: 011 52 [55] 53 21 66 65

Email: festo.mexico@mx.festo.com

www.festo.com/mx



Canada

Headquarters

Festo Inc. 5300 Explorer Drive

Mississauga, Ontario L4W 5G4

Call: 1.905.624.9000 Fax: 1.905.624.9001 Email: info.ca@ca.festo.com

www.festo.com/ca



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