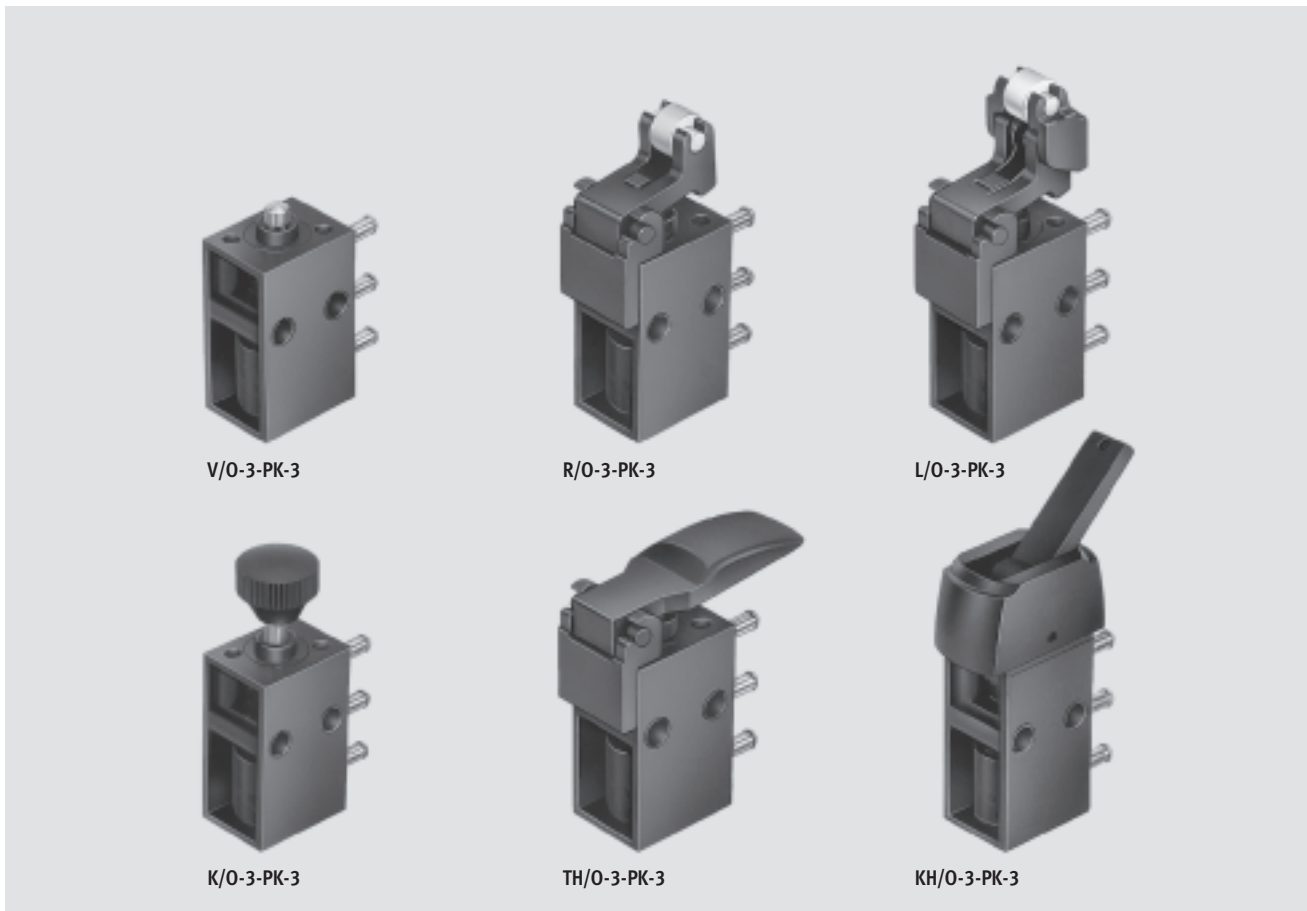


Valves with push-on fittings

Key features

FESTO

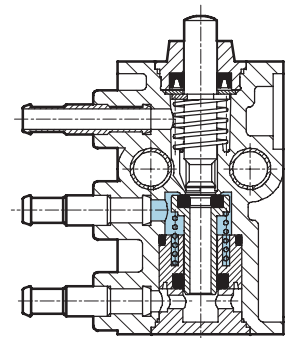


Push-on fitting connection

- 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

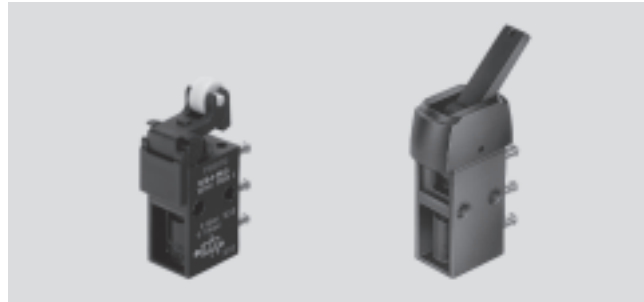
V/O-3-PK-3



Valves with push-on fittings

Technical data

-  Flow rate
80 l/min
-  Pressure
0 ... 8 bar
-  Temperature range
-10 ... +60 °C

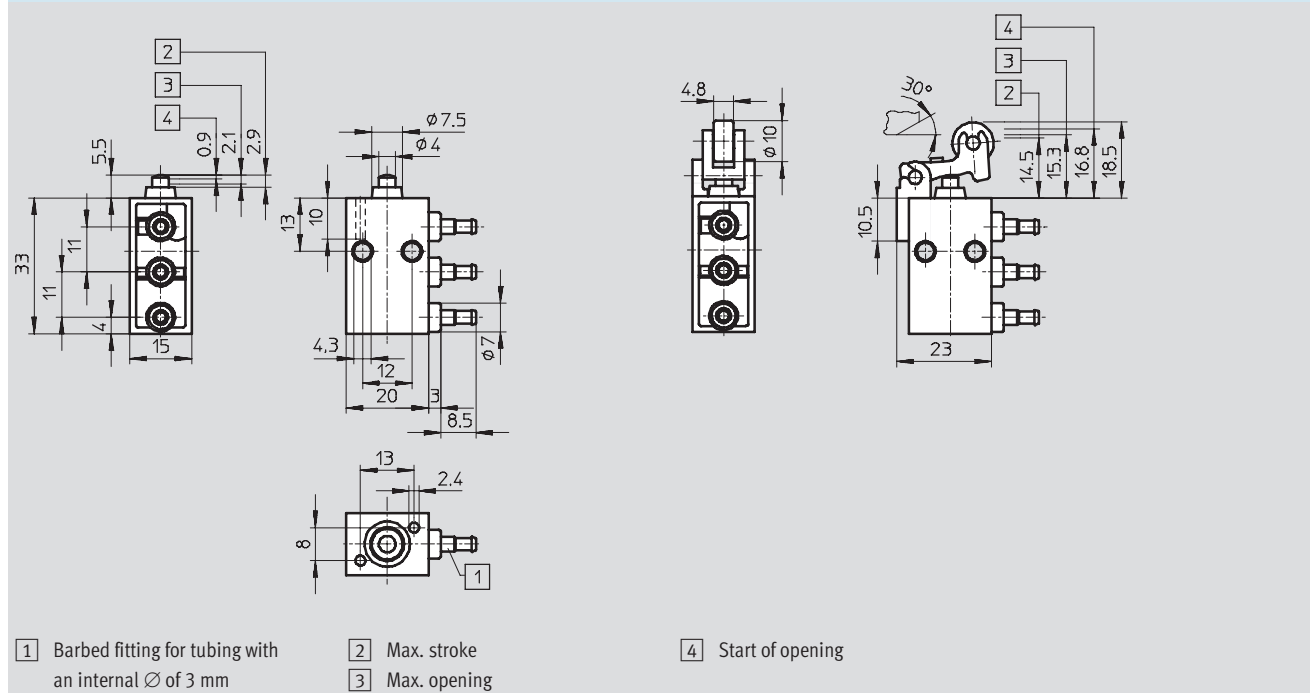


General technical data		Stem actuated valve	Roller lever valve	Roller lever valve with idle return	Push-button valve	Finger lever valve	Toggle lever valve
Actuation type							
Constructional design		Poppet valve, directly actuated					
Type of mounting		Through-holes in housing					
Pneumatic connection		Barbed fitting for 3 mm plastic tubing					
Nominal size	[mm]	2.5					
Standard nominal flow rate 1 > 2	[l/min]	80					
Operating pressure range	[bar]	0 ... 8					
Actuating force at 6 bar							
Normally closed	[N]	17	10	10	17	6	6.5
Normally open	[N]	24	15	13	24	8	7.5
Temperature range	[°C]	-10 ... +60					
Materials	Housing	Plastic					
	Seals	Nitrile rubber					
Weight	[g]	20	18	19	20	18	20

Dimensions Download CAD data → www.festo.com

Stem actuated valve V/O

Roller lever valve R/O



Valves with push-on fittings

Technical data

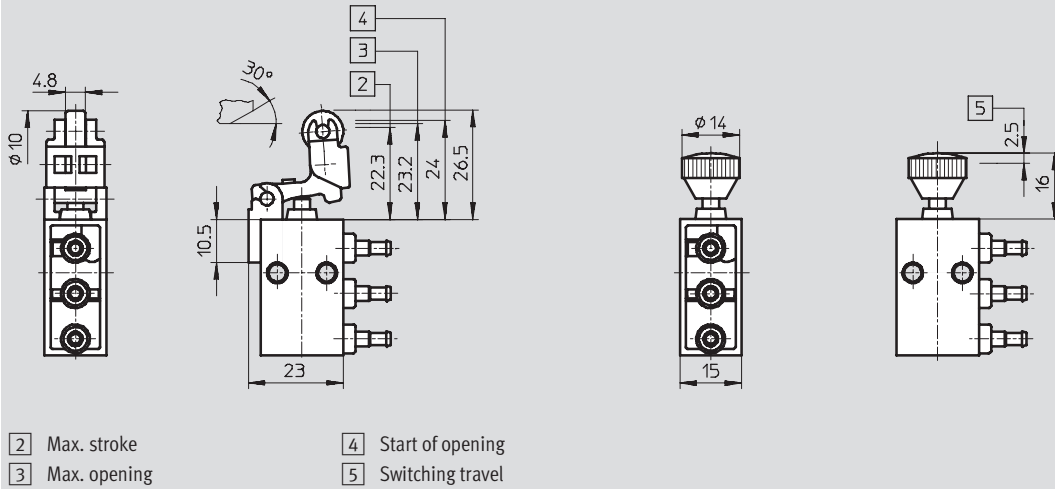
FESTO

Dimensions

Download CAD data → www.festo.com

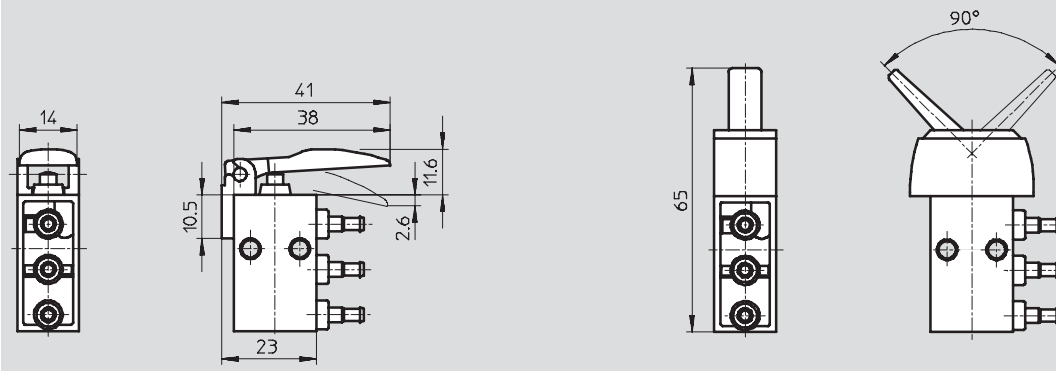
Roller lever valve with idle return L/O

Push-button valve K/O



Finger lever valve TH/O

Toggle lever valve KH/O



Ordering data

Circuit symbol	Actuation type	Part No.	Type
	Stem actuated valve	10 747	V/O-3-PK-3
	Roller lever valve	10 748	R/O-3-PK-3
	Roller lever valve with idle return	10 749	L/O-3-PK-3
	Push-button valve	13 793	K/O-3-PK-3
	Finger lever valve	13 794	TH/O-3-PK-3
	Toggle lever valve	33 003	KH/O-3-PK-3

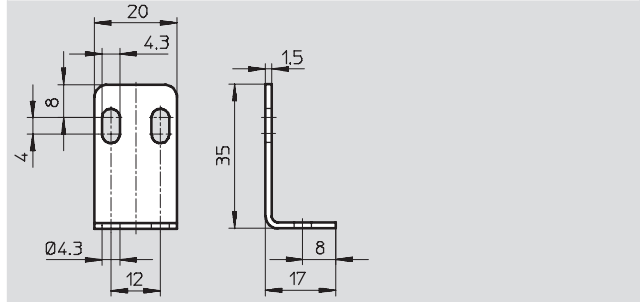
Valves with push-on fittings

Accessories

FESTO

Mounting bracket HV-M5

Material:
Galvanised steel

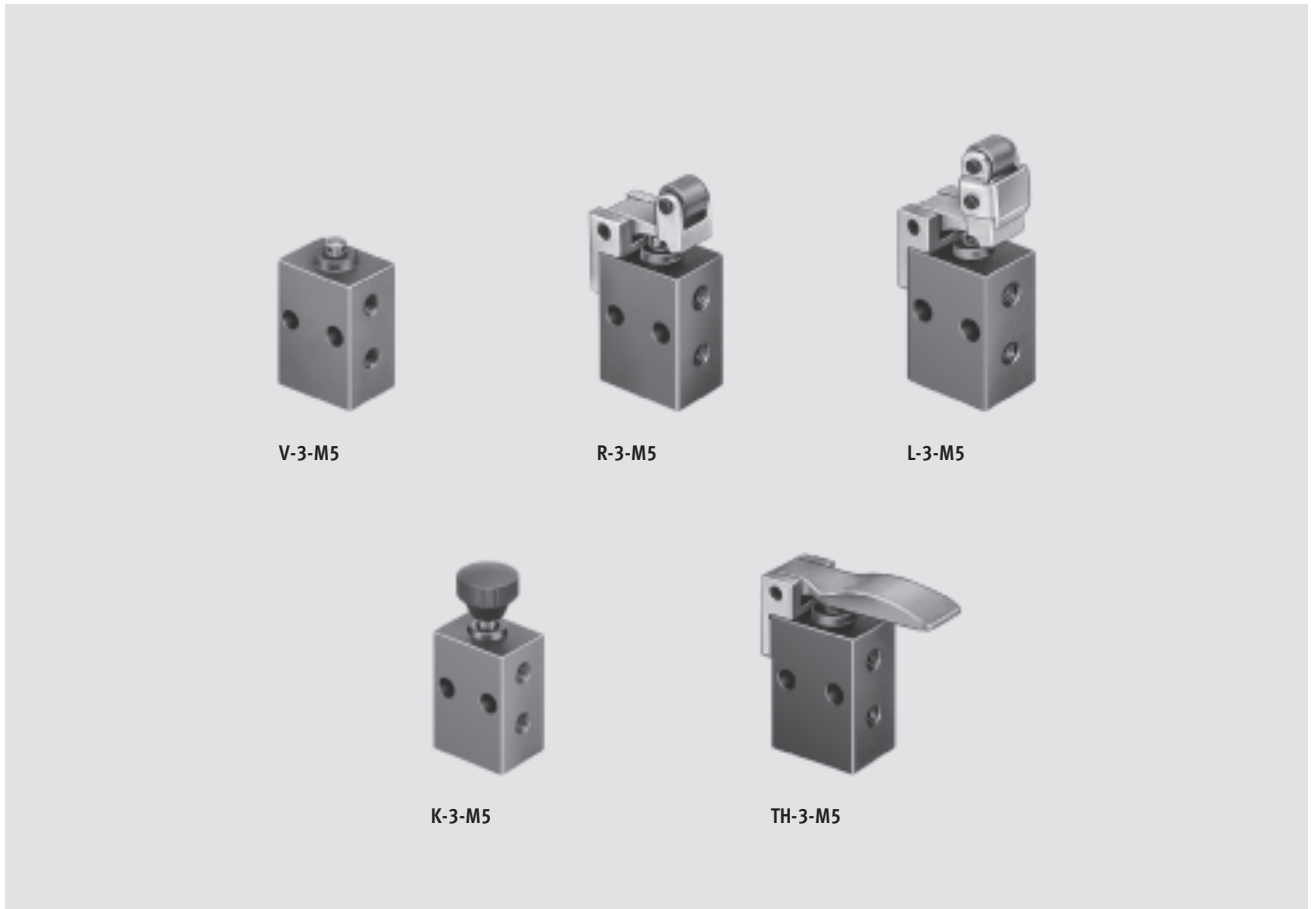



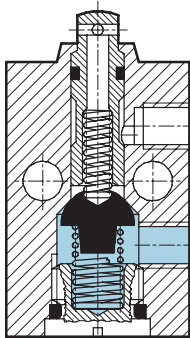
Ordering data		Weight	Part No.	Type
		[g]		
Mounting bracket		11	9 634	HV-M5

Valves with threaded connections M5

Key features

FESTO






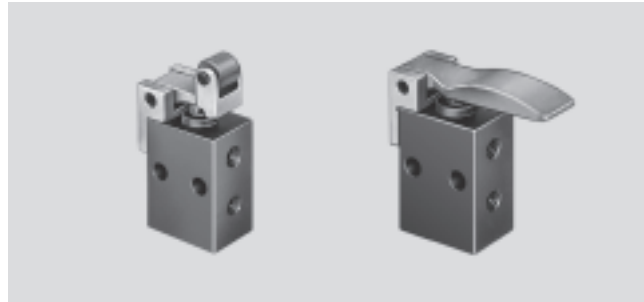
			V-3-M5
<p>-  - Flow rate 80 l/min</p>	<ul style="list-style-type: none">• 3/2-way valve normally closed• Connection M5• Compact design		

Valves with threaded connections M5

FESTO

Technical data

-  Flow rate
80 l/min
-  Pressure
-0.95 ... +8 bar
-  Temperature range
-10 ... +60 °C



General technical data					
Actuation type	Stem actuated valve	Roller lever valve	Roller lever valve with idle return	Push-button valve	Finger 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	M5				
Nominal size [mm]	2				
Standard nominal flow rate 1 > 2 [l/min]	80				
Operating pressure range [bar]	-0.95 ... 8				
Actuating force at 6 bar [N]	23	12.5	12.5	23	8
Temperature range [°C]	-10 ... +60				
Materials	Housing	Die-cast zinc			
	Seals	Nitrile rubber			
Weight [g]	25	40	43	28	37

1) Vacuum connection at port 1

Dimensions

Download CAD data → www.festo.com

Stem actuated valve V

Roller lever valve R

1 Switching travel

Valves with threaded connections M5

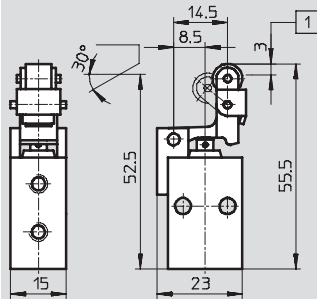
Technical data

FESTO

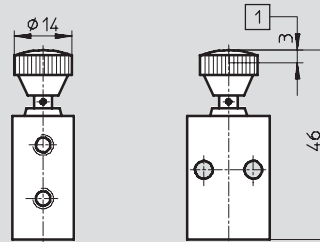
Dimensions

Download CAD data → www.festo.com

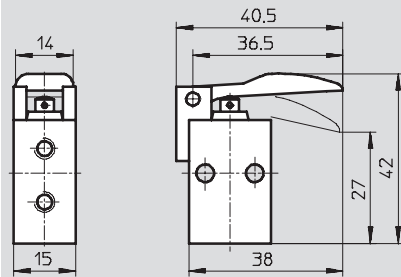
Roller lever valve L



Push-button valve K



Finger lever valve TH



1 Switching travel

Ordering data – Basic valves

Circuit symbol	Actuation type	Part No.	Type
	Stem actuated valve	3 626	V-3-M5
	Roller lever valve	3 629	R-3-M5
	Roller lever valve with idle return	3 628	L-3-M5
	Push-button valve	3 660	K-3-M5
	Finger lever valve	6 758	TH-3-M5

Ordering data – Actuator attachments

Circuit symbol	Actuation type	Part No.	Type
	Roller lever with mounting screws	6 512	AR-05
	Idle return roller lever with mounting screws	6 513	AL-05

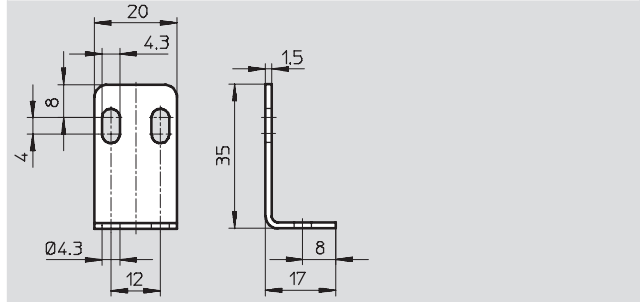
Valves with threaded connections M5

Accessories

FESTO

Mounting bracket HV-M5

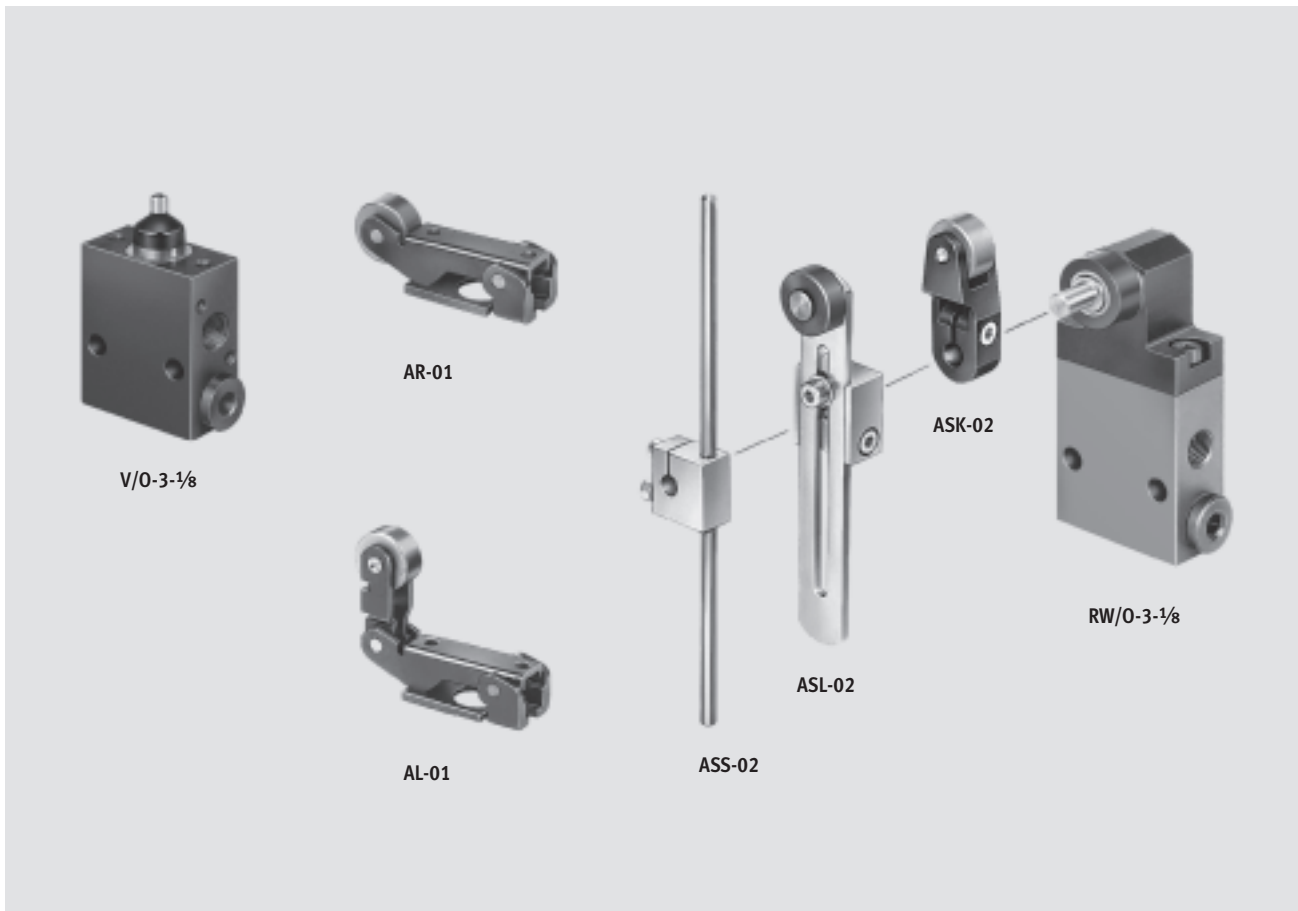
Material:
Galvanised steel



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

Valves with threaded connections G $\frac{1}{8}$, directly actuated

Key features



Flow rate

Flow rate
140 l/min

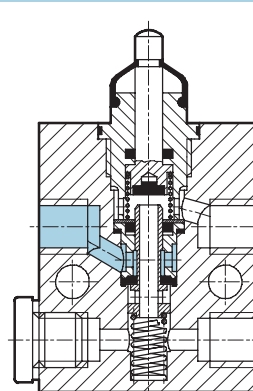
Valve type

- 3/2-way valve
Normally closed Normally open depending upon selected connections
- Connection G $\frac{1}{8}$
- Actuator attachments as desired

Actuation




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 $\frac{1}{8}$, directly actuated

Technical data

-  - Flow rate
140 l/min
-  - Pressure
-0.95 ... +8 bar
-  - Temperature range
-10 ... +60 °C



General technical data – Basic valves		Stem actuated valve	Swivel lever valve
Actuation type			
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 $\frac{1}{8}$	
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		Galvanised steel		Aluminium, steel	Aluminium, steel	
Weight	[g]	42	52	30	35	30

1) Dependent upon starting height

Valves with threaded connections G1/8, directly actuated

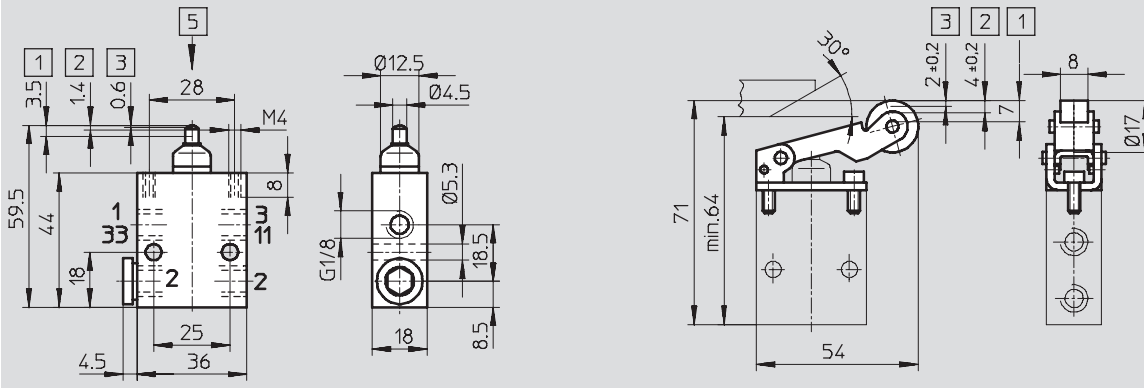
Technical data

Dimensions

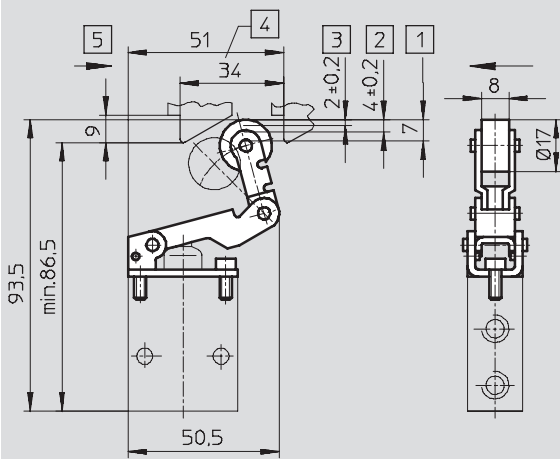
Download CAD data → www.festo.com

Stem actuated valve V/O

Roller lever AR-01



Idle return roller lever AL-01



- 1 Max. stroke
- 2 Max. opening
- 3 Start of opening
- 4 Min. actuation stroke
- 5 Actuation direction

Valves with threaded connections G1/8, directly actuated

Technical data

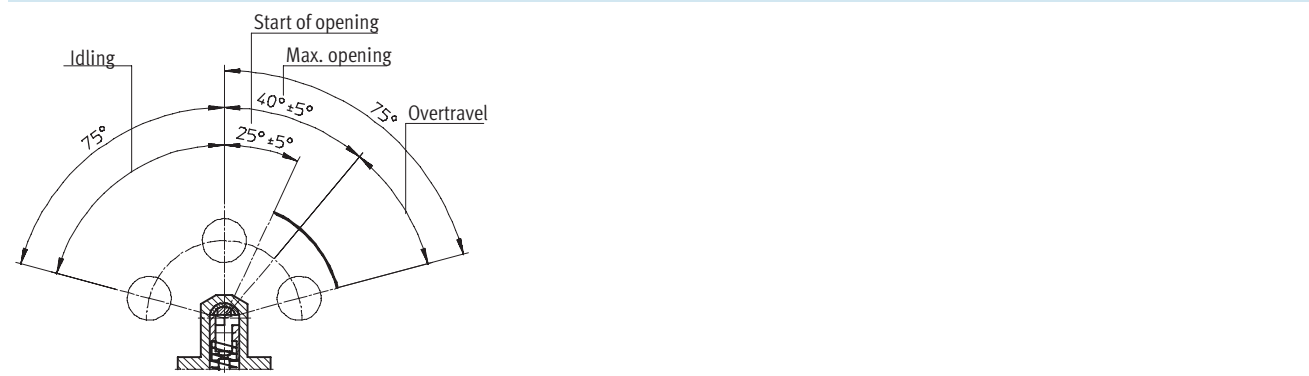
Dimensions Download CAD data → www.festo.com

Swivel lever valve RW/O

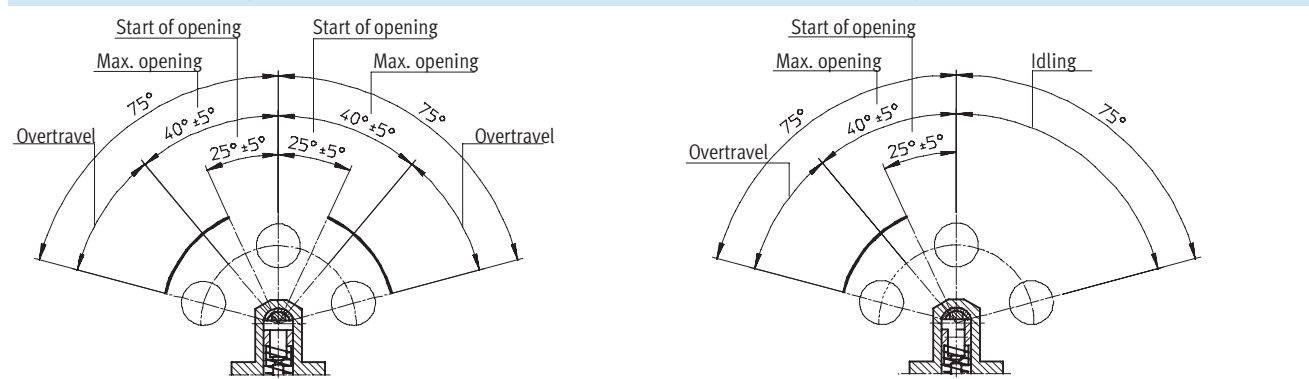
- 1, 11 = Supply port
- 2 = Working line
- 3, 33 = Exhaust

Swivel lever, short ASK-02	Swivel lever, long ASL-02	Swivel lever rod ASS-02

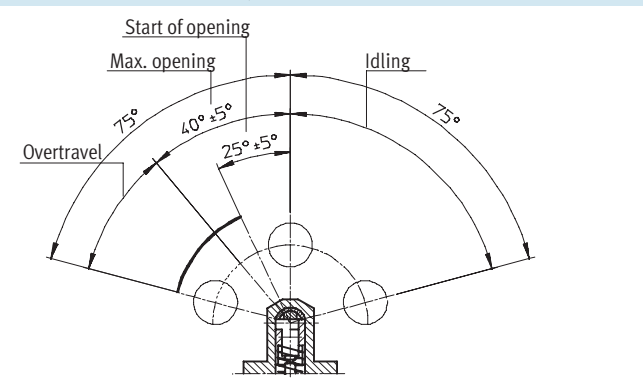
Actuating ranges are set by converting the switching head
Default settings (upon delivery)



Valve actuating head and body turned 90° around the longitudinal axis

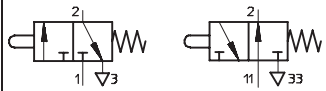


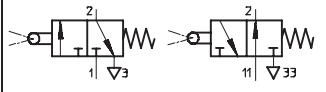





Valve actuating head and body turned 180° around the longitudinal axis



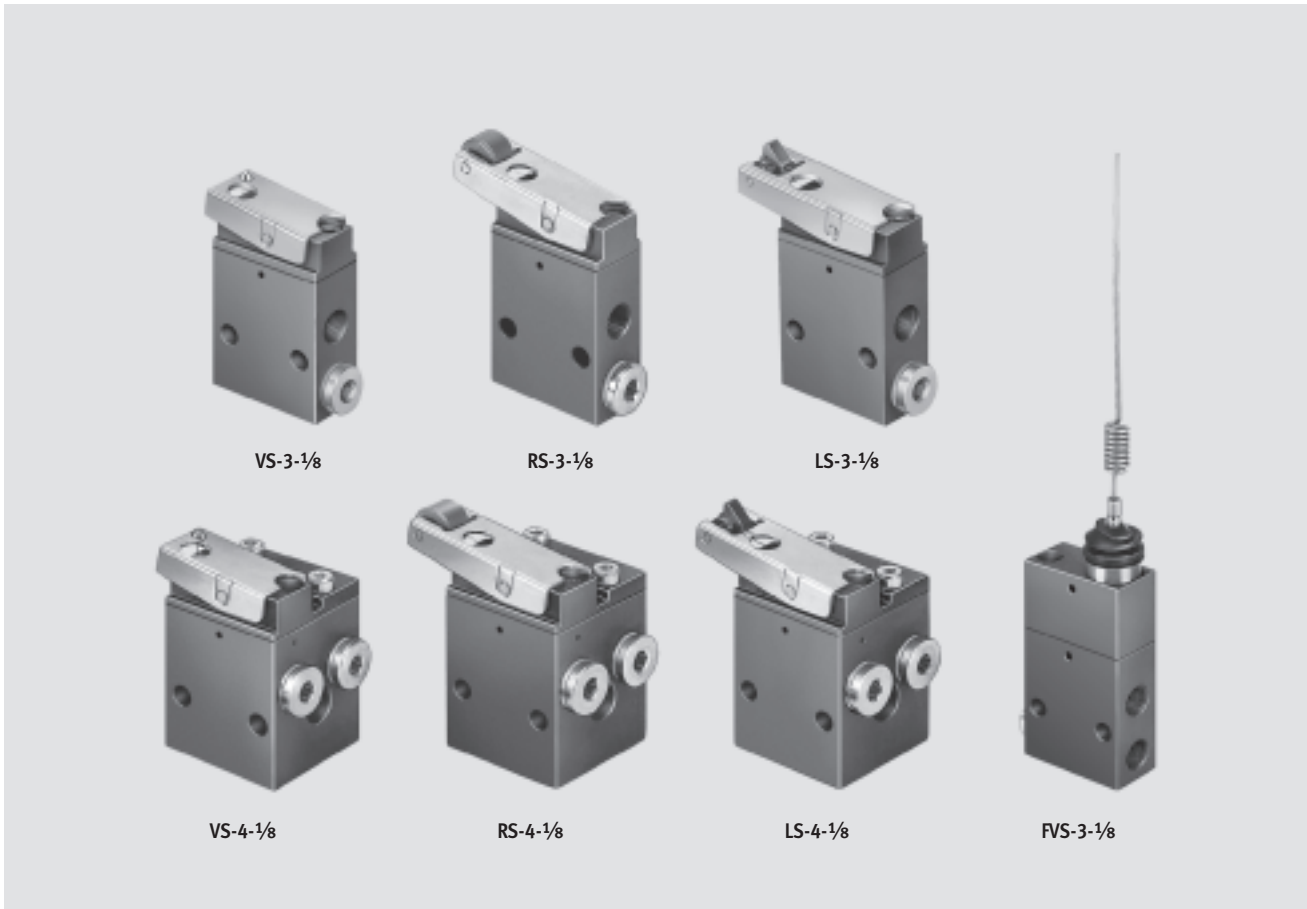
Valves with threaded connections G1/8, directly actuated

Technical data

Ordering data			
Circuit symbol	Actuation type	Part No.	Type
Stem actuated valve			
	Basic valve	4 938	V/O-3-1/8
Actuator attachments			
	Roller lever	4 936	AR-01
	Idle return roller lever	4 941	AL-01
Swivel lever valve			
	Basic valve	4 937	RW/O-3-1/8
Actuator attachments			
	Swivel lever, short	5 835	ASK-02
	Swivel lever, long	5 836	ASL-02
	Swivel lever rod	4 789	ASS-02

Valves with threaded connections G $\frac{1}{8}$, indirectly actuated

Key features



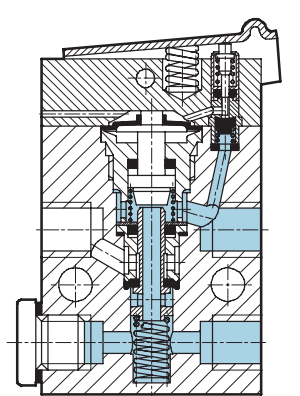
Flow rate

120 l/min

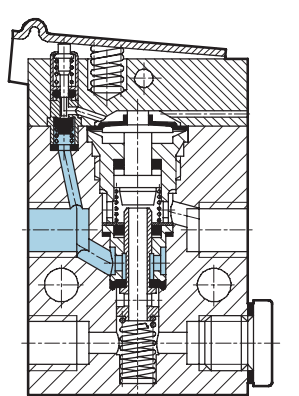
Key features

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

Normally closed



Normally open



Valves with threaded connections G1/8, indirectly actuated

Technical data – 3/2-way valves

-  Flow rate
120 l/min
-  Temperature range
-10 ... +60 °C
-  Pressure
3.5 ... 8 bar
-  Wearing parts kits
→ 17



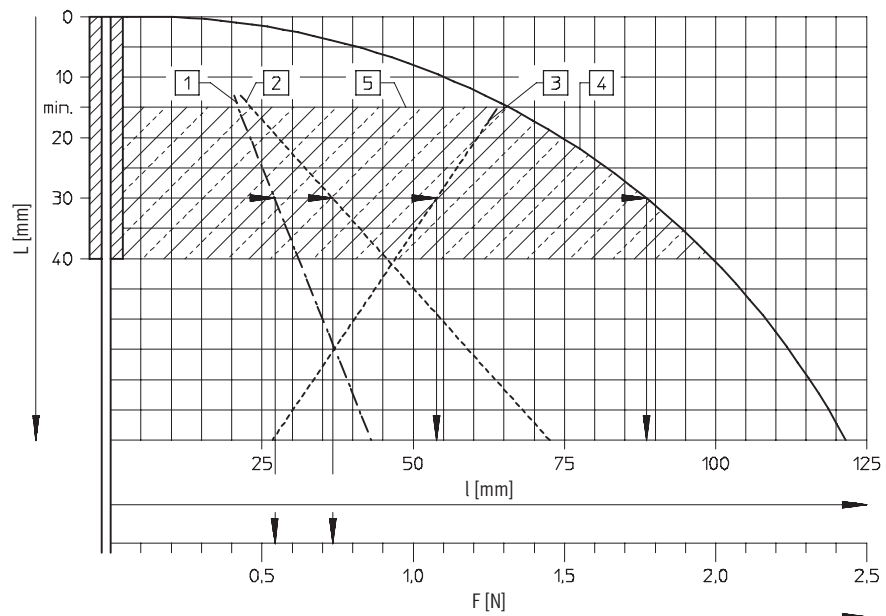
Technical data		Stem actuated valve	Roller lever valve	Toggle lever valve	Whisker valve
Actuation type		Stem actuated valve	Roller lever valve	Toggle lever valve	Whisker valve
Constructional design		Poppet valve, indirectly actuated			
Type of mounting		2 through-holes in housing			
Pneumatic connection		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	1.8	→ Diagram
Repetition accuracy (+/-)	[mm]	±0.1			
Temperature range	[°C]	-10 ... +60			
Materials	Housing	Blue anodised aluminium			
	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

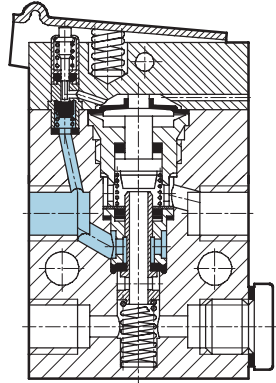
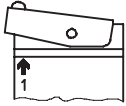
Valves with threaded connections G1/8, indirectly actuated

Technical data – 3/2-way valves

Sectional view

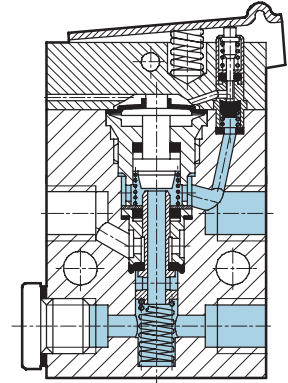
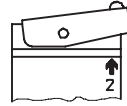
Normally closed

Actuator attachment at left
(number 1 on attachment above
number 1 on housing)



Normally open

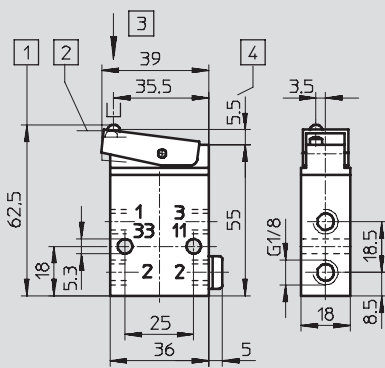
Actuator attachment at right
(number 1 on attachment above
number 2 on housing)



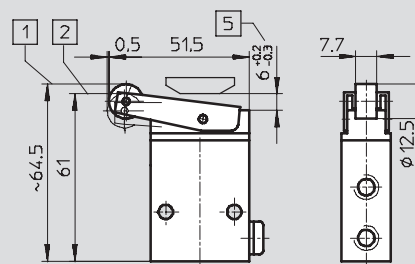
Dimensions

Download CAD data → www.festo.com

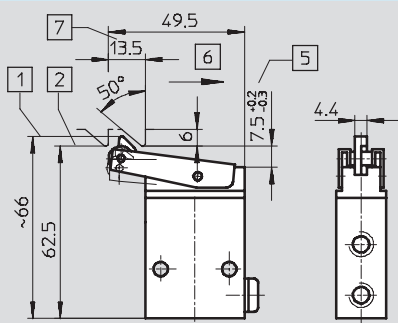
Stem actuated valve VS, VOS



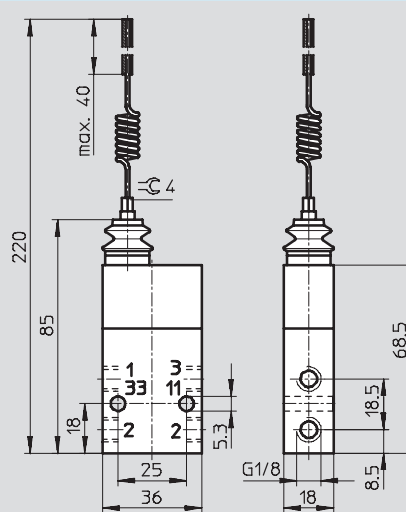
Roller lever valve RS, ROS



Toggle lever valve LS, LOS



Whisker valve FVS, FVSO



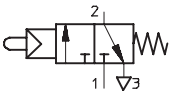
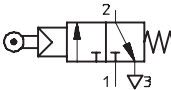
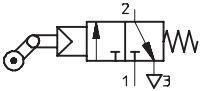
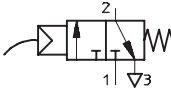
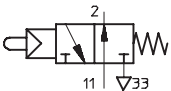
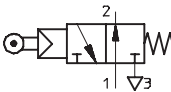
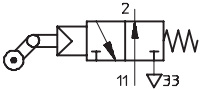
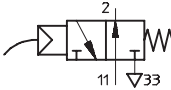
- 1 Initial position
- 2 ON position
- 3 Actuation direction

- 4 Smallest distance between cams
- 5 Bottom edge of control rail or cam

- 6 Idle return
- 7 Min. switching travel

Valves with threaded connections G1/8, indirectly actuated

Technical data – 3/2-way valves


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


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


Valves with threaded connections G $\frac{1}{8}$, indirectly actuated

FESTO

Technical data – 4/2-way valves

-  - Flow rate
120 l/min

-  - Temperature range
-10 ... +60 °C

-  - Pressure
3.5 ... 8 bar

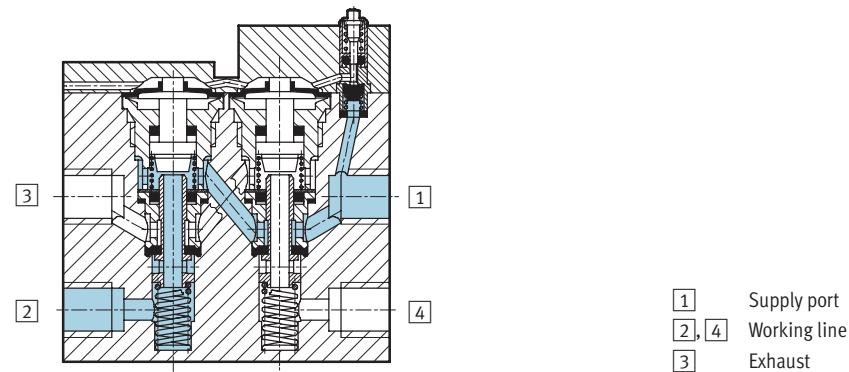
Wearing parts kits
→ 19



Technical data		Stem actuated valve	Roller lever valve	Toggle lever valve
Actuation type				
Constructional design		Poppet valve, indirectly actuated		
Type of mounting		2 through-holes in housing		
Pneumatic connection		G $\frac{1}{8}$		
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 aluminium		
	Seals	Nitrile rubber		
Weight	[g]	220	230	230

Sectional view

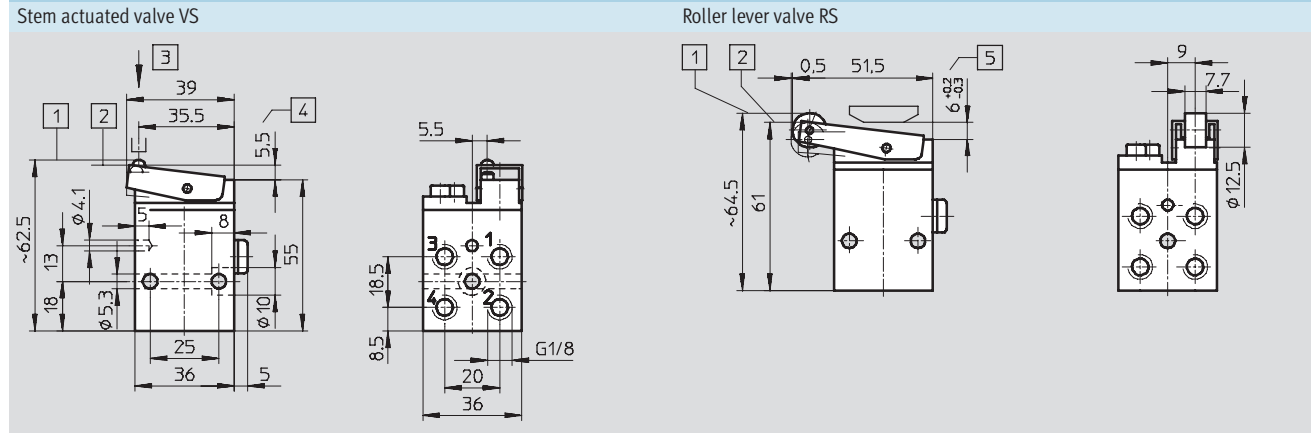
Stem actuated valve VS-4- $\frac{1}{8}$



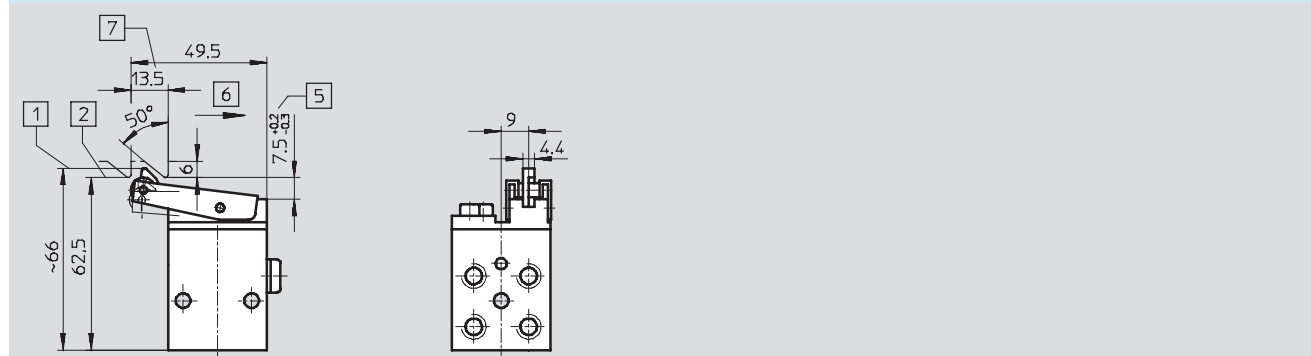
Valves with threaded connections G1/8, indirectly actuated

Technical data – 4/2-way valves

Dimensions Download CAD data → www.festo.com



Toggle lever valve LS



- 1 Initial position
- 2 ON position
- 3 Actuation direction
- 4 Smallest distance between cams
- 5 Bottom edge of control rail or cam
- 6 Idle return
- 7 Min. switching travel

Ordering data			
Circuit symbol	Actuation type	Part No.	Type
	Stem actuated valve	3 394	VS-4-1/8
	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.	Type	
For 4/2-way valves	104 201	VS-4-1/8	

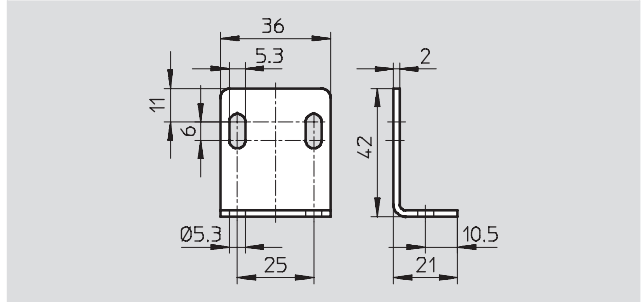
Valves with threaded connections G1/8, indirectly actuated

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Accessories

Mounting bracket HV-1/8

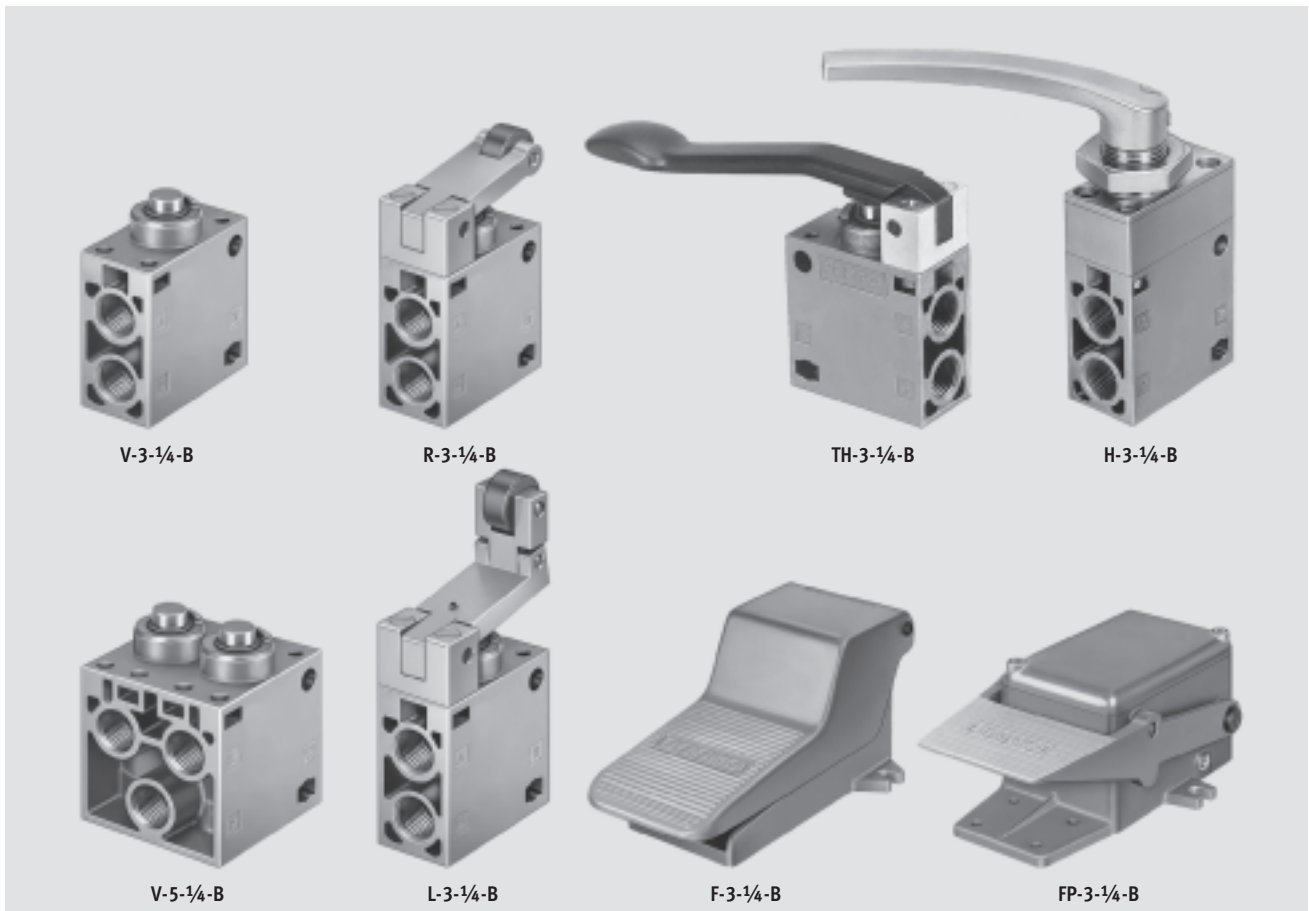
Material:
Galvanised steel




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

Valves with threaded connections G $\frac{1}{4}$

Key features

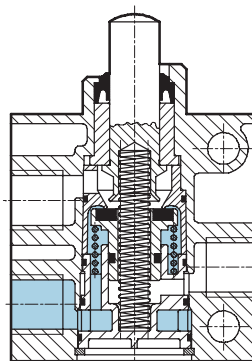


-  - Flow rate
600 l/min

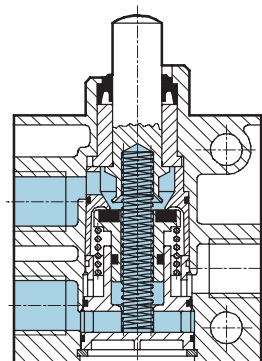


- 3/2-way valves normally closed normally open
- 5/2-way valves
- 7 actuator types

V-3- $\frac{1}{4}$ -B,
normally closed




VO-3- $\frac{1}{4}$ -B,
normally open





Valves with threaded connections G $\frac{1}{4}$

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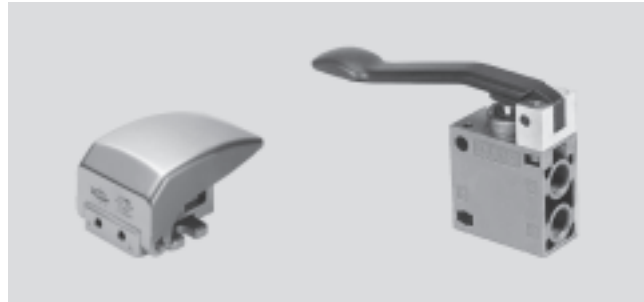
Technical data – 3/2-way valves

-  - Flow rate
600 l/min

-  - Temperature range
-10 ... +60 °C

-  - Pressure
-0.95 ... +10 bar

Wearing parts kits
→ 26



General technical 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 medium		Filtered compressed air, lubricated or unlubricated Vacuum ¹⁾							
Constructional design		Poppet valve, directly actuated							
Type of mounting		2 through-holes in housing ²⁾							
Connection		G $\frac{1}{4}$							
Nominal size		[mm]	7						
Standard nominal flow rate 1 > 2		[l/min]	600						
Operating pressure range		[bar]	-0.95 ... +10						
Actuating force 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 aluminium Foot valves: die-cast zinc							
	Seals	Nitrile rubber							
Weight	Valve	[g]	130	230	250	210	320	595	1,760
	Safety guard	[g]	-	-	-	-	-	1,200	660

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

Valves with threaded connections G1/4

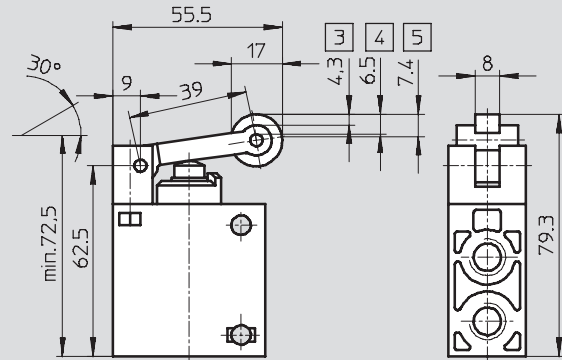
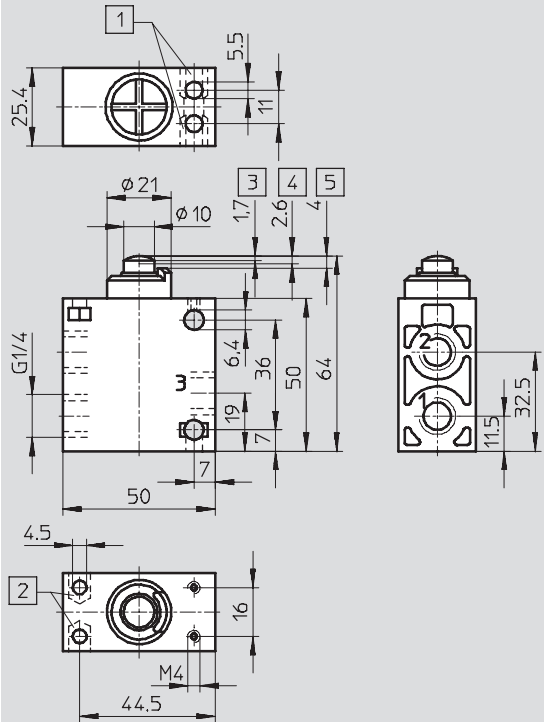
Technical data – 3/2-way valves

Dimensions

Download CAD data → www.festo.com

Stem actuated valve V

Roller lever valve R



1 For hex nut M5 DIN 934

2 For hex nut M4 DIN 934

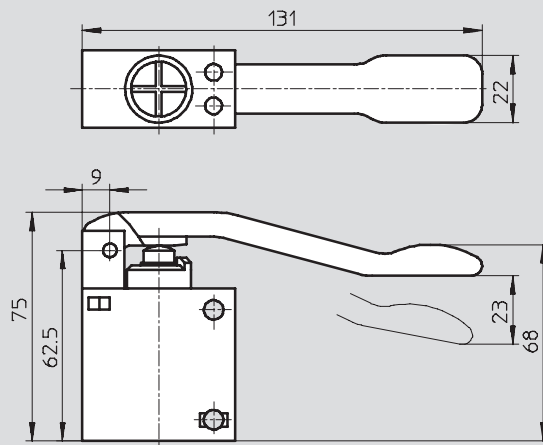
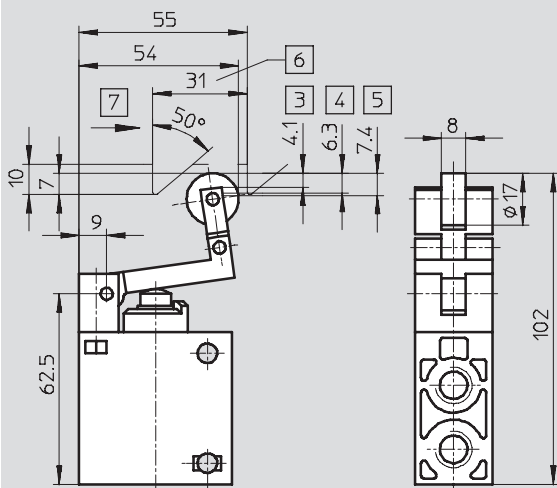
3 Start of opening

4 Max. opening

5 Max. stroke

Roller lever valve with idle return L

Finger lever valve TH



3 Start of opening

4 Max. opening

5 Max. stroke

6 Cam operating path

7 Actuation direction

Valves with threaded connections G1/4

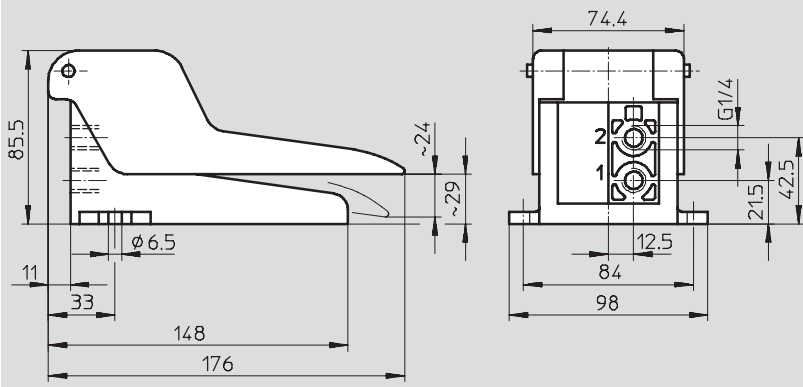
Technical data – 3/2-way valves

Download CAD data → www.festo.com

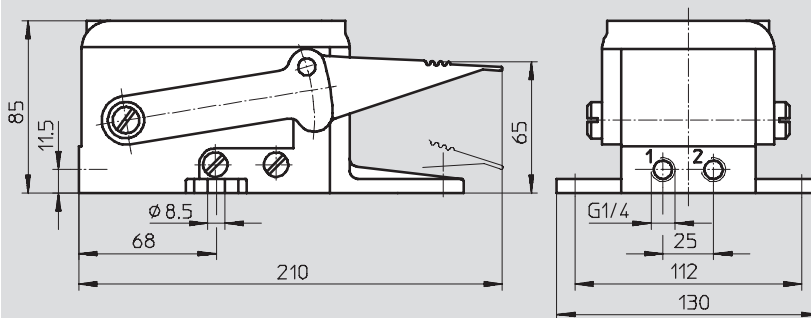
Dimensions

Foot valve F


Foot valve FPB with mechanical detent



Foot valve FP with mechanical detent



- 1 = Supply port
- 2 = Working line

-  - Note

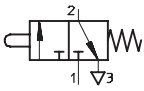
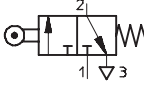
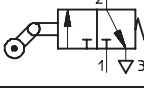
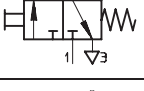

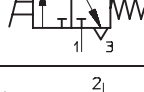
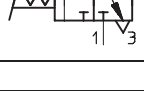
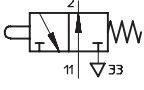
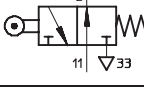
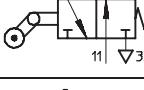
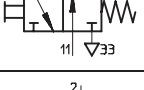

Foot valves with detent are actuated by means of a foot lever with mechanical detent.

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

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Technical data – 3/2-way valves

Ordering data			
Circuit symbol	Actuation type	Part No.	Type
Normally closed			
	Stem actuated valve	6 808	V-3-1/4-B
	Roller lever valve	8 985	R-3-1/4-B
	Roller lever valve with idle return	8 982	L-3-1/4-B
	Finger lever valve	8 983	TH-3-1/4-B
	Hand lever valve	8 987	H-3-1/4-B
	Foot valve	8 984	F-3-1/4-B
	Foot valve with mechanical detent	8 986	FP-3-1/4-B
		526 985	FPB-3-1/4
Normally open			
	Stem actuated valve	9 157	VO-3-1/4-B
	Roller lever valve	8 991	RO-3-1/4-B
	Roller lever valve with idle return	8 989	LO-3-1/4-B
	Finger lever valve	8 990	THO-3-1/4-B
	Foot valve	8 988	FO-3-1/4-B


Ordering data – Wearing parts kits			
		Part No.	Type
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 G $\frac{1}{4}$

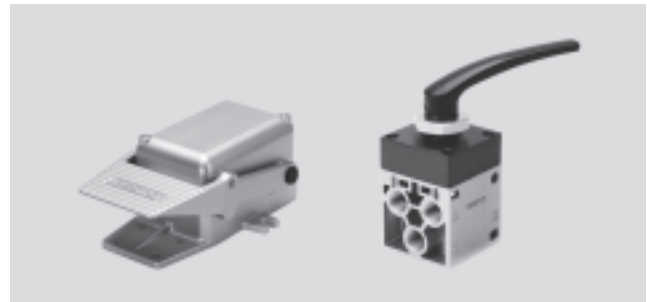
Technical data – 5/2-way valves

-  - Flow rate
550 l/min

-  - Temperature range
-10 ... +60 °C

-  - Pressure
-0.95 ... +10 bar

Wearing parts kits
→ 31



General technical 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 medium		Filtered compressed air, lubricated or unlubricated Vacuum ¹⁾							
Constructional design		Poppet valve, directly actuated							
Type of mounting		2 through-holes in housing ²⁾							
Connection		G $\frac{1}{4}$							
Nominal size	[mm]	7							
Standard nominal flow rate 1 > 2	[l/min]	550							
Pressure range	[bar]	-0.95 ... +10							
Actuating force at 6 bar	[N]	132	35	53	24	22	52	69	
Temperature range	[°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

1) Vacuum connection at port 1
2) 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

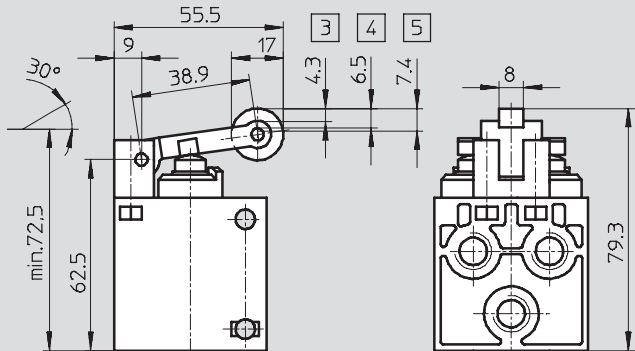
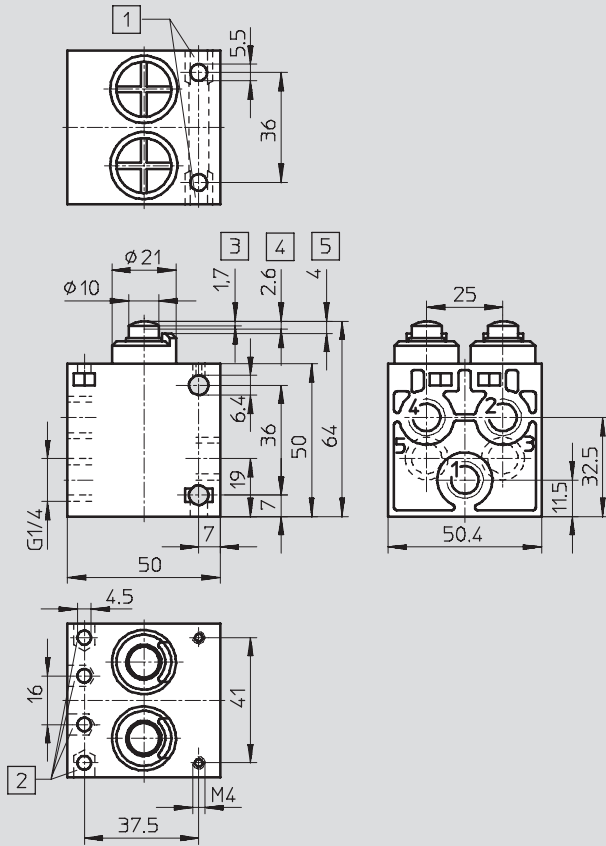
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Dimensions

Download CAD data → www.festo.com

Stem actuated valve V

Roller lever valve R



1 For hex nut M5 DIN 934

2 For hex nut M4 DIN 934

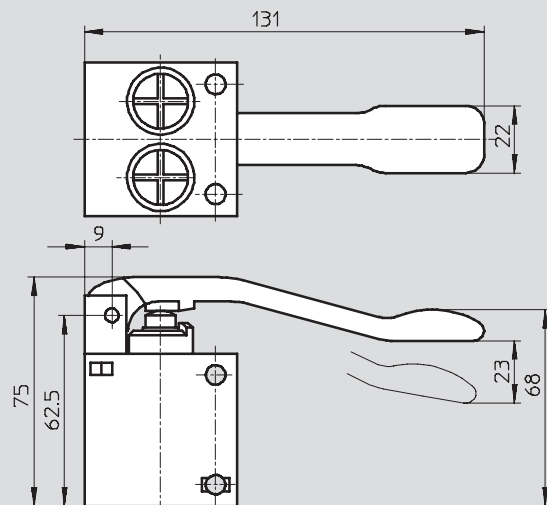
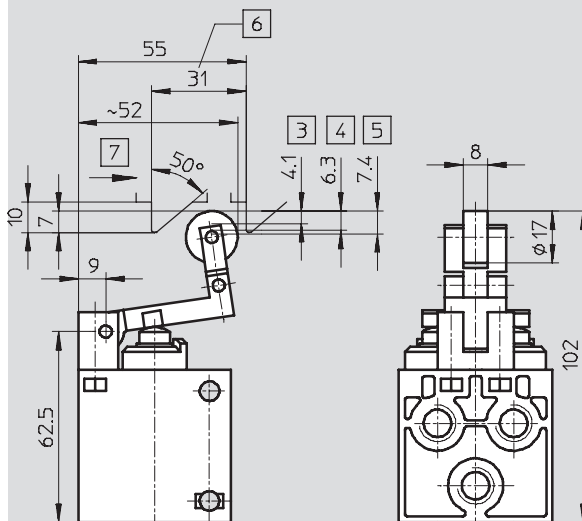
3 Start of opening

5 Max. stroke

4 Max. opening

Roller lever valve L

Finger lever valve TH



3 Start of opening

6 Cam operating path

4 Max. opening

7 Actuation direction

5 Max. stroke

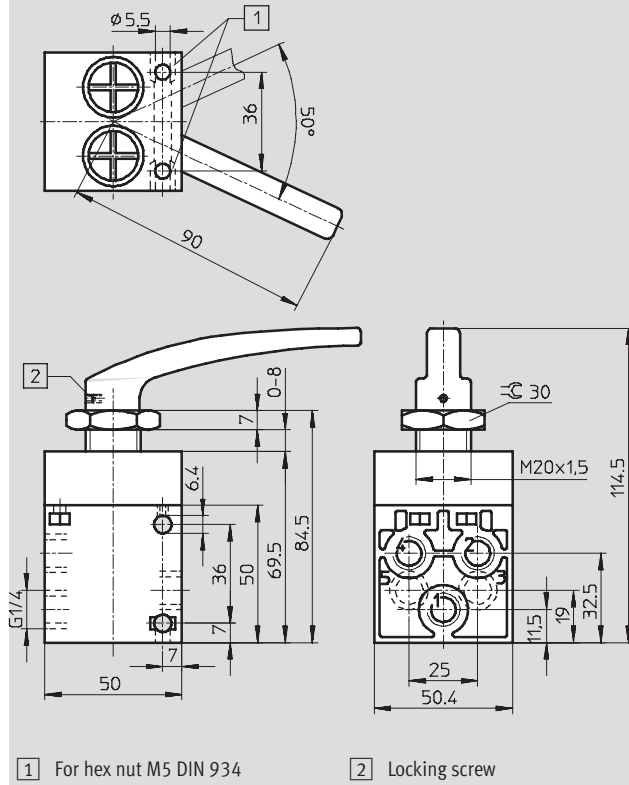
Valves with threaded connections G1/4

Technical data – 5/2-way valves

Dimensions

Download CAD data → www.festo.com

Hand lever valve H

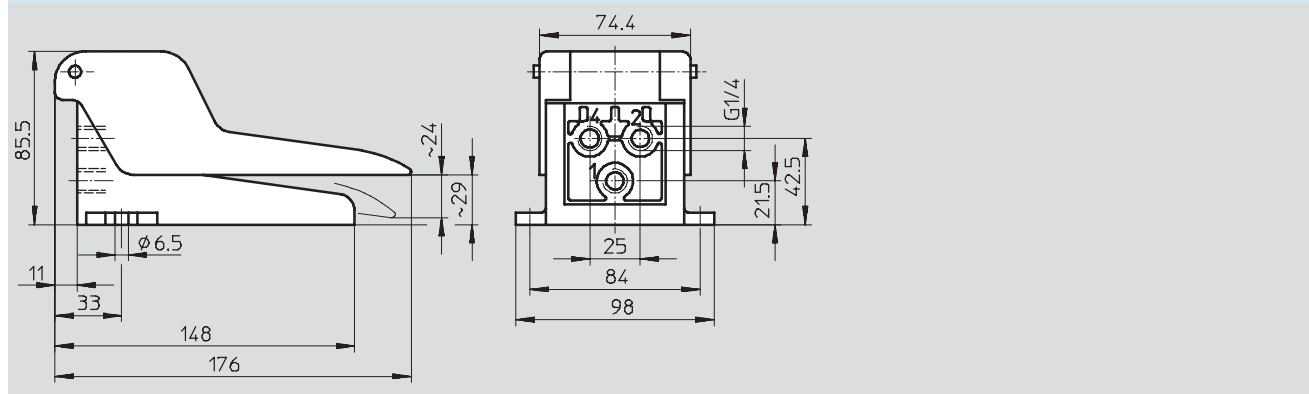


Valves with threaded connections G1/4

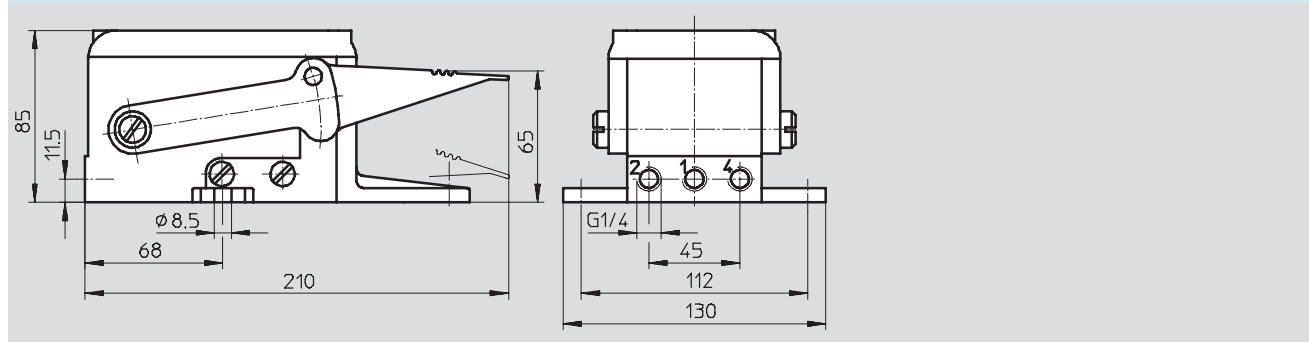
Technical data – 5/2-way valves


Dimensions Download CAD data → www.festo.com

Foot valve F
Foot valve FPB with mechanical detent



Foot valve FP with mechanical detent

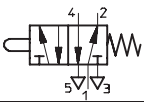
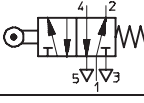
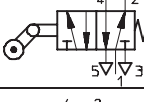
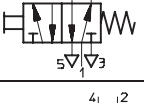
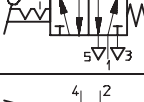
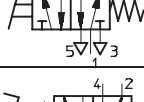



-  - Note

Foot valves with detent are actuated by means of a foot lever with mechanical detent. 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.	Type
	Stem actuated valve	6 809	V-5-1/4-B
	Roller lever valve	8 996	R-5-1/4-B
	Roller lever valve with idle return	8 993	L-5-1/4-B
	Finger lever valve	8 994	TH-5-1/4-B
	Hand lever valve	8 995	H-5-1/4-B
	Foot valve	8 992	F-5-1/4-B
	Foot valve with mechanical detent	8 997	FP-5-1/4-B
		526 985	FPB-5-1/4

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

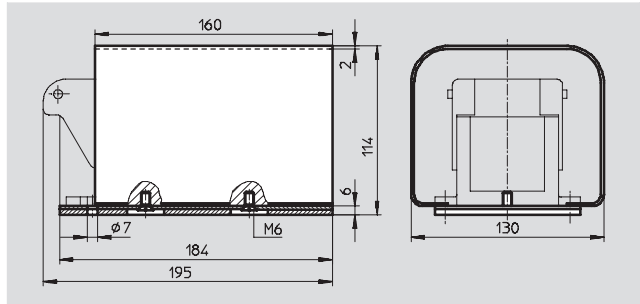
1) not for foot valves F, FP, FPB

Valves with threaded connections G1/4

Accessories

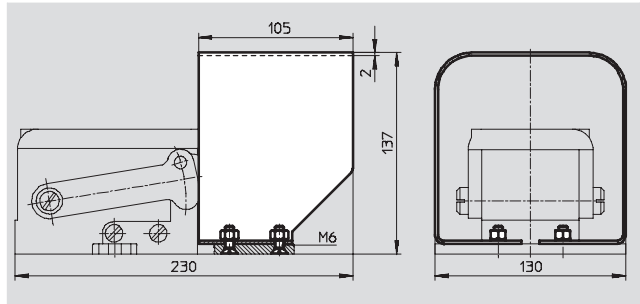
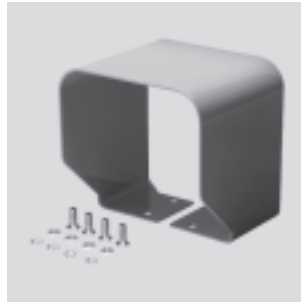
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Safety guard FH



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

Safety guard FPH-121



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