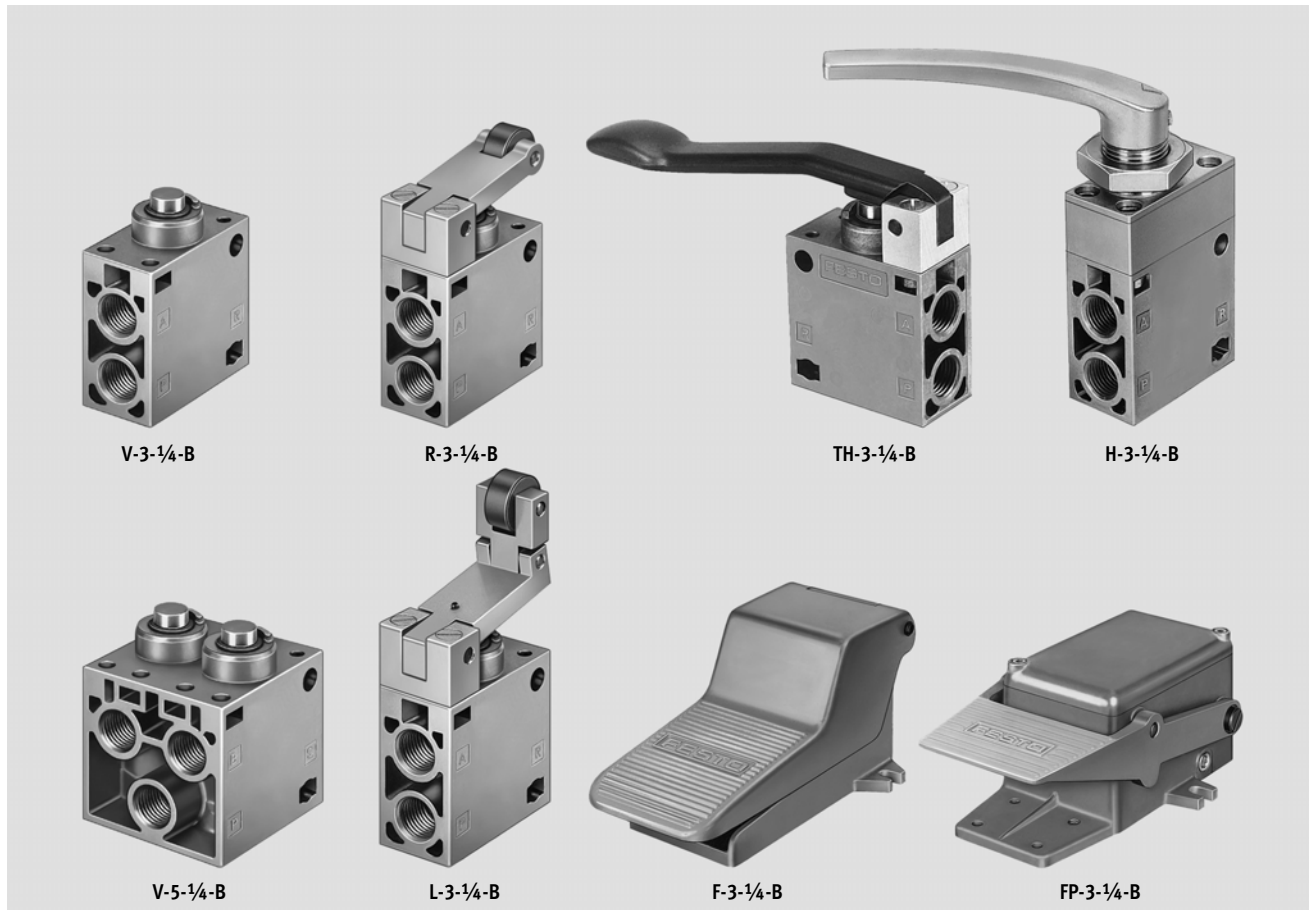


Valves with threaded connections G $\frac{1}{4}$

Key features

FESTO



V-3-1/4-B

R-3-1/4-B

TH-3-1/4-B

H-3-1/4-B

V-5-1/4-B

L-3-1/4-B

F-3-1/4-B

FP-3-1/4-B

Manually and mechanically actuated valves
With threaded connections G $\frac{1}{4}$

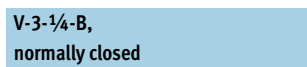
4.5



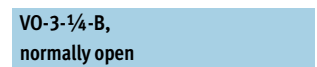
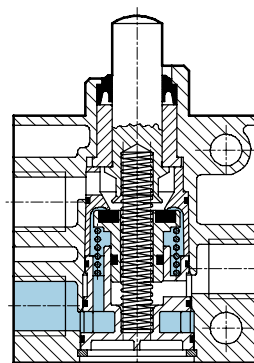
Flow rate
600 l/min



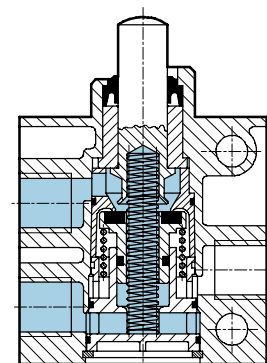
- 3/2-way valves normally closed
- 5/2-way valves normally open
- 7 actuator types



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



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



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

Technical data – 3/2-way valves

FESTO

-  - Flow rate
600 l/min
-  - Temperature range
-10 ... +60°C
-  - Pressure
-0.95 ... +10 bar
-  - Wearing parts kits
→ 2 / 4.5-6



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

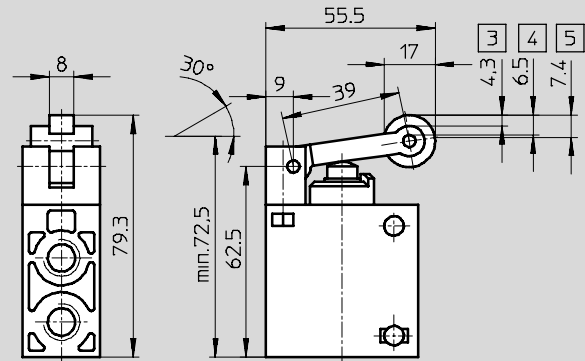
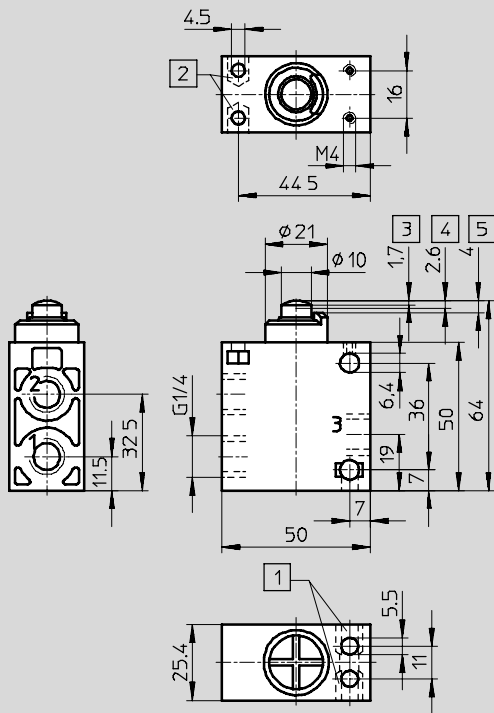


Dimensions

Download CAD data → www.festo.com/en/engineering

Stem actuated valve V

Roller lever valve R



1 For hex nut M5 DIN 934

2 For hex nut M4 DIN 934

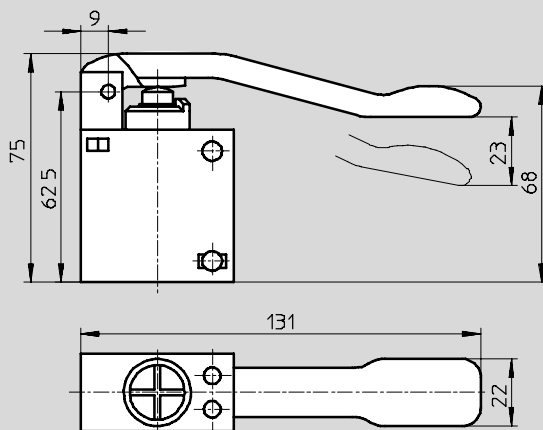
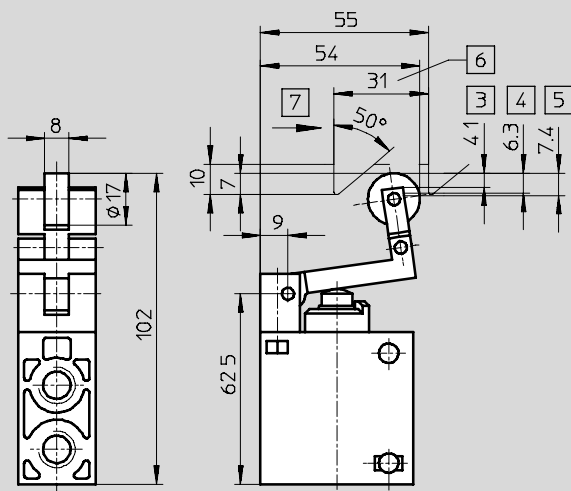
3 Start of opening

5 Max. stroke

4 Max. opening

Roller lever valve with idle return 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 G $\frac{1}{4}$

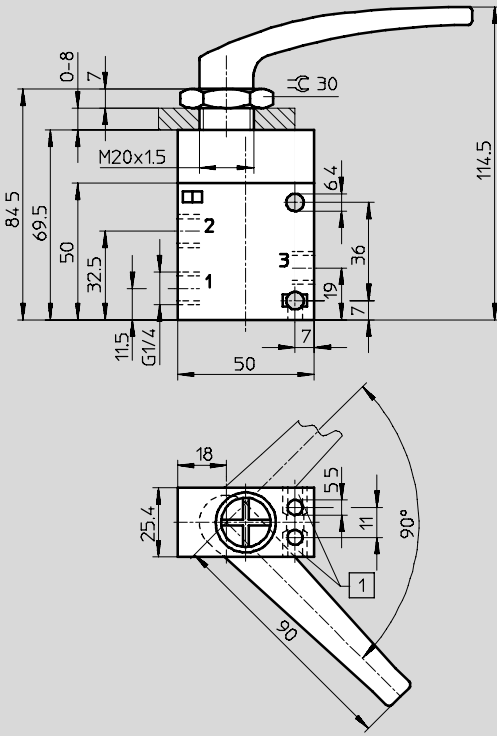
Technical data – 3/2-way valves

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

Hand lever valve H



1 For hex nut M5 DIN 934

2 Locking screw

Manually and mechanically actuated valves
With threaded connections G $\frac{1}{4}$

4.5

Valves with threaded connections G1/4

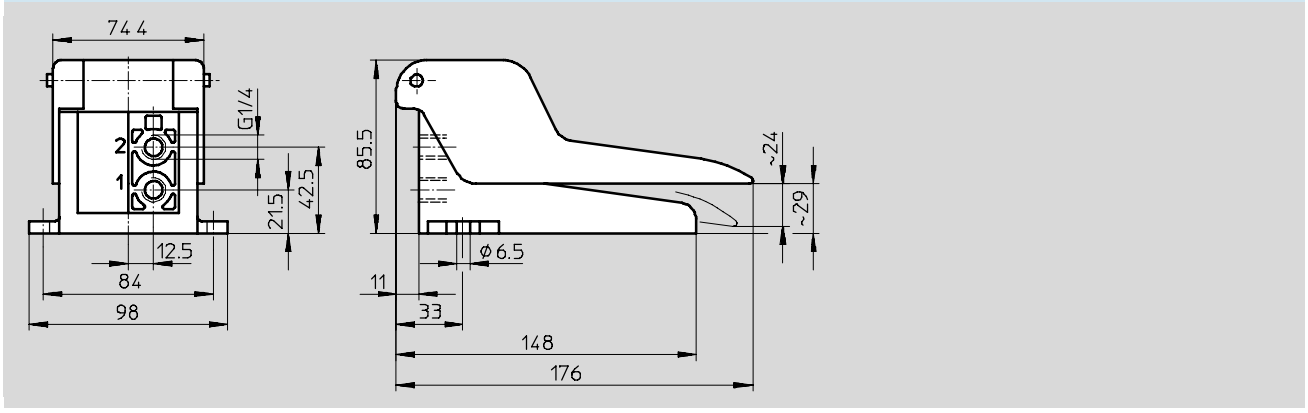
Technical data – 3/2-way valves

Dimensions

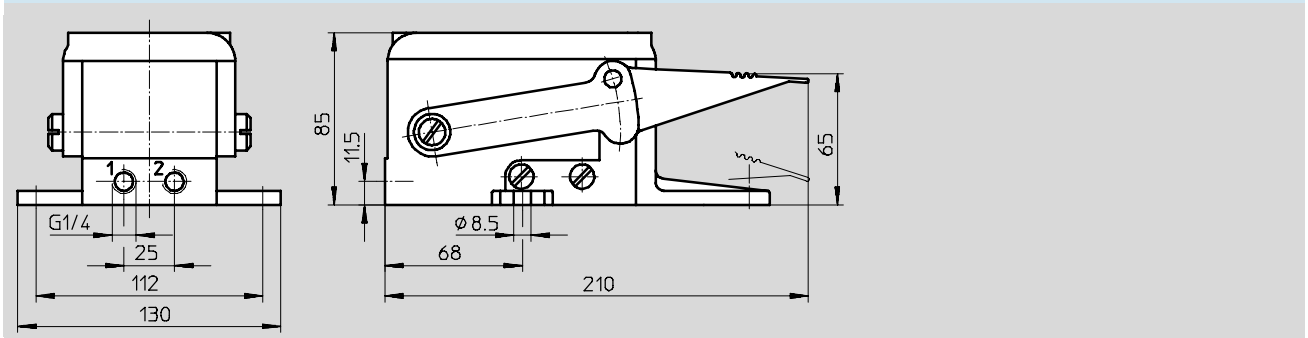
Download CAD data → www.festo.com/en/engineering

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.

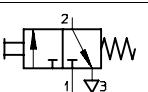
Valves with threaded connections G $\frac{1}{4}$

Technical data – 3/2-way valves

FESTO

Manually and mechanically actuated valves
With threaded connections G $\frac{1}{4}$

4.5

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


Ordering data – Wearing parts kits		Part No.	Type
For 3/2-way valves ¹⁾		104 503	V,VO-3- $\frac{1}{4}$ -B


1) not for foot valves F, FO, FP, FPB


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

FESTO

Technical data – 5/2-way valves

 Flow rate
550 l/min

 Temperature range
-10 ... +60°C

 Pressure
-0.95 ... +10 bar

Wearing parts kits
→ 2 / 4.5-11



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

Manually and mechanically actuated valves
With threaded connections G $\frac{1}{4}$

4.5

Valves with threaded connections G1/4

Technical data – 5/2-way valves

FESTO

Manually and mechanically actuated valves
With threaded connections G1/4

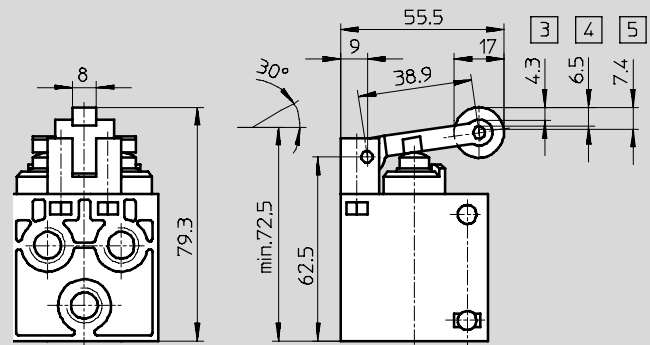
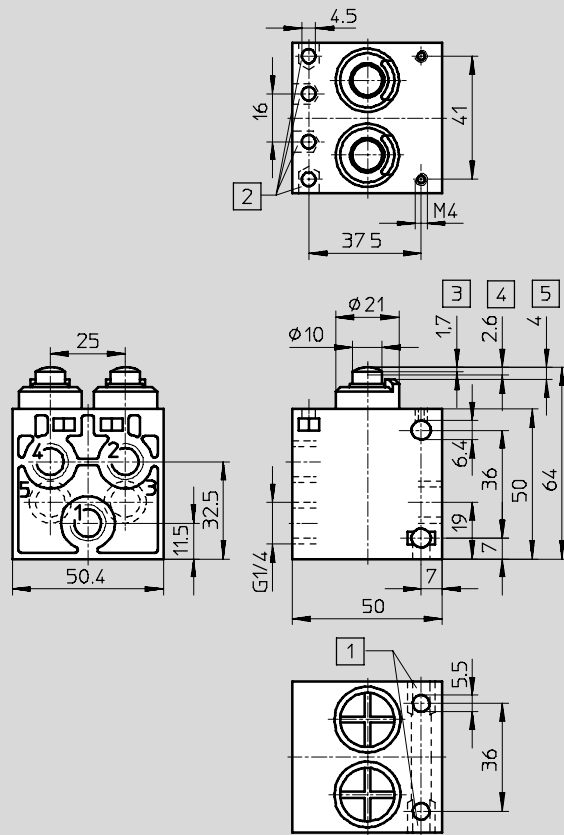
4.5

Dimensions

Download CAD data → www.festo.com/en/engineering

Stem actuated valve V

Roller lever valve R



1 For hex nut M5 DIN 934

2 For hex nut M4 DIN 934

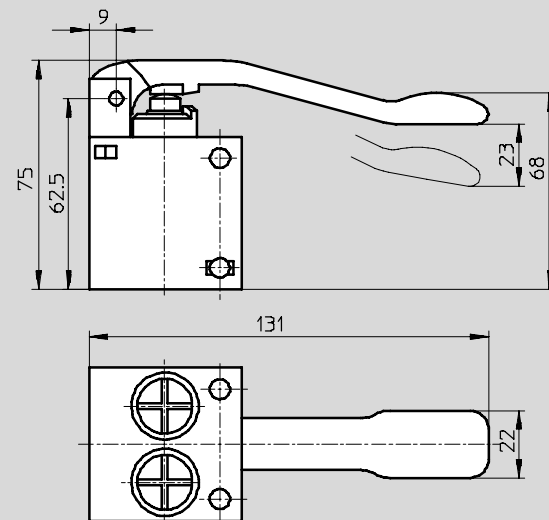
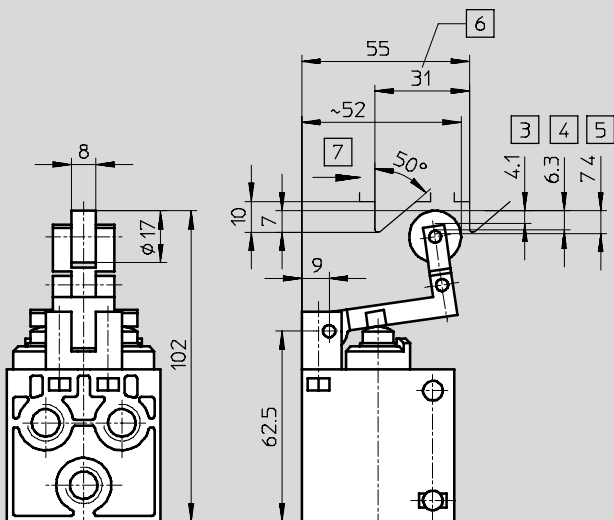
3 Start of opening

4 Max. opening

5 Max. stroke

Roller lever valve 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

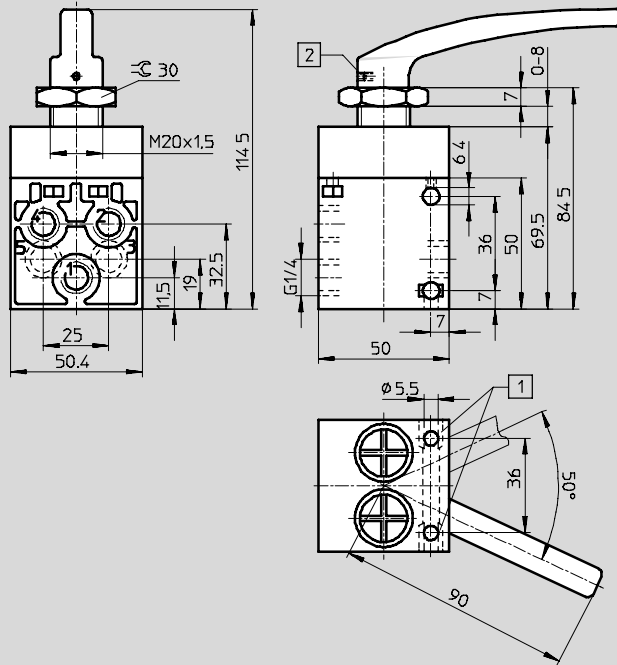
Technical data – 5/2-way valves

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

Hand lever valve H



1 For hex nut M5 DIN 934

2 Locking screw

Manually and mechanically actuated valves
With threaded connections G1/4

4.5

Valves with threaded connections G1/4

Technical data – 5/2-way valves

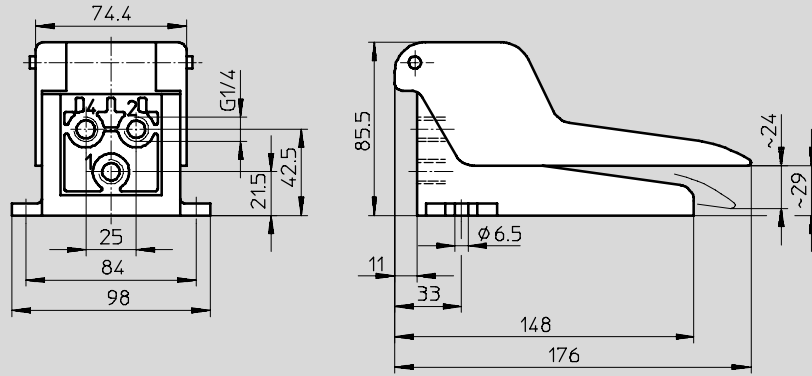
FESTO

Dimensions

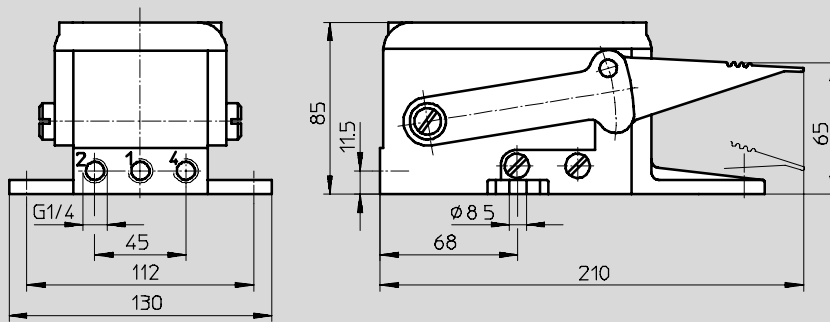
Download CAD data → www.festo.com/en/engineering

Foot valve F

Foot valve FPB with mechanical detent



Foot valve FP with mechanical detent



Manually and mechanically actuated valves
With threaded connections G1/4

4.5

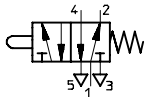
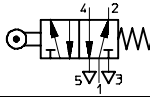
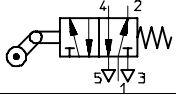
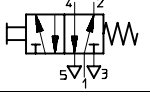
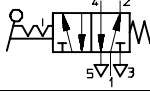
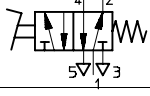
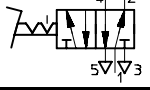
-  - Note

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

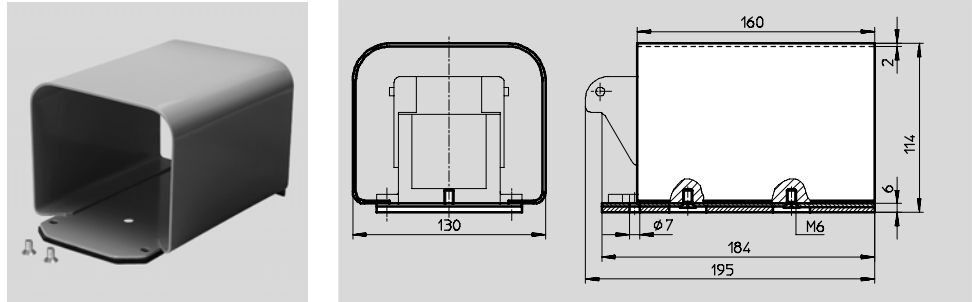
1) not for foot valves F, FP, FPB

Valves with threaded connections G1/4

Accessories

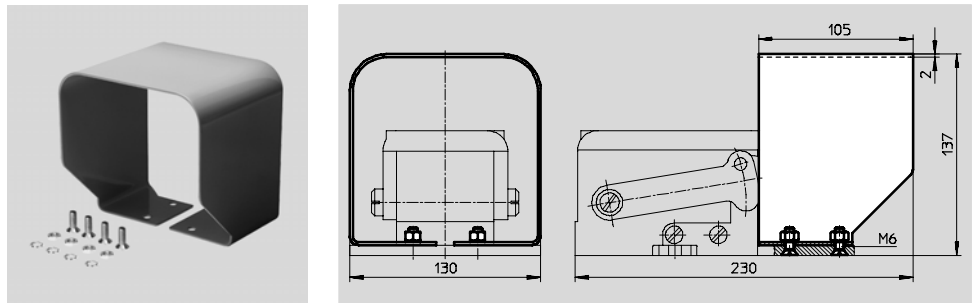


Safety guard FH



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

Safety guard FPH-121



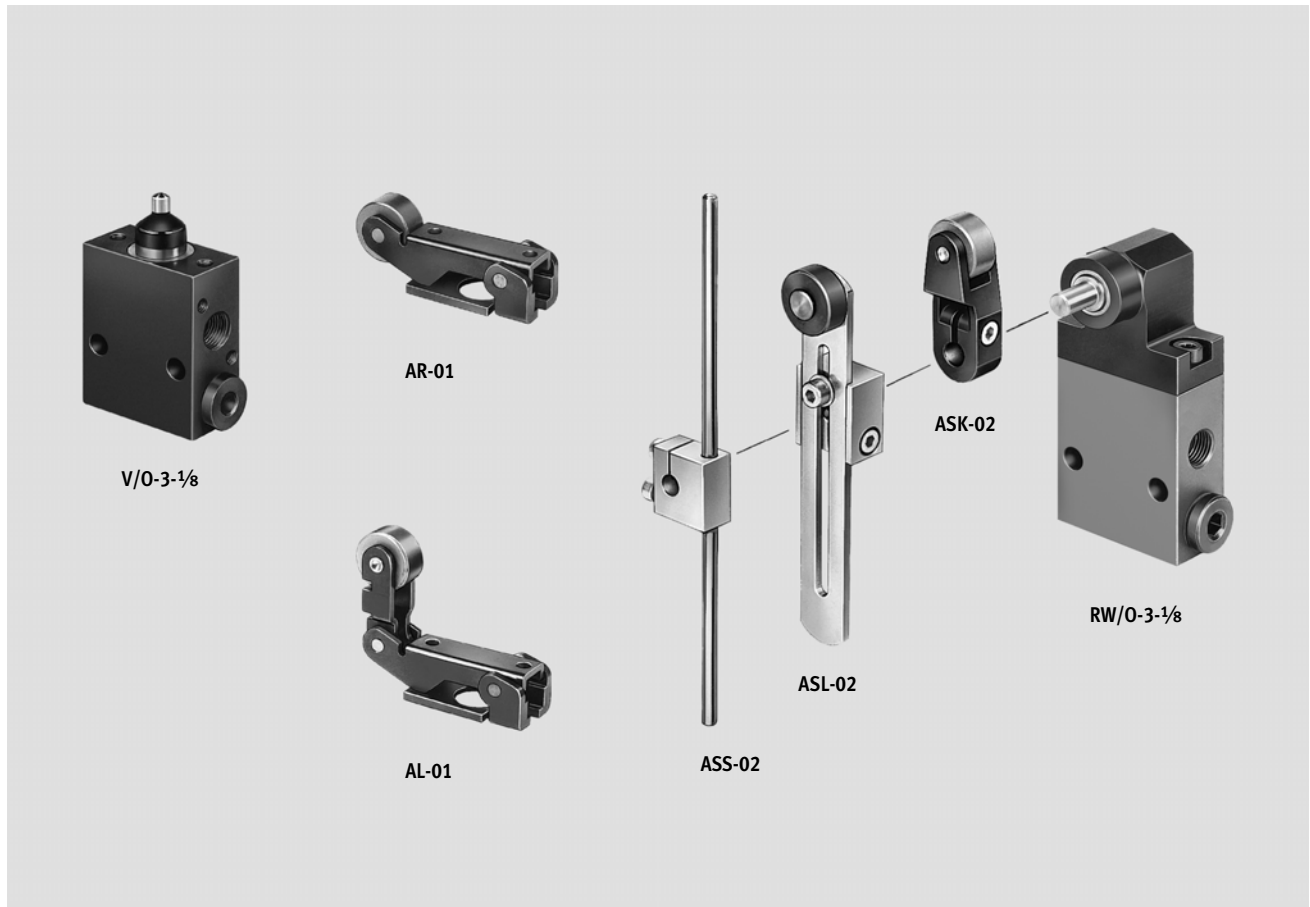
Ordering data			
	Weight [g]	Part No.	Type
Safety guard for foot valve FP with mechanical detent	670	2 071	FPH-121

Manually and mechanically actuated valves
With threaded connections G1/4

Valves with threaded connections G1/8, directly actuated

FESTO

Key features



Manually and mechanically actuated valves
With threaded connections G1/8

4.4

Flow rate

Flow rate
140 l/min

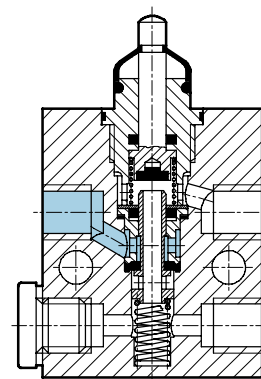
3/2-way valve

- 3/2-way valve
- Normally closed Normally open depending upon selected connections
- Connection G1/8
- Actuator attachments as desired

Swivel lever valve

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 G¹/₈, directly actuated

FESTO

Technical data

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



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

Manually and mechanically actuated valves
With threaded connections G¹/₈

4.4

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



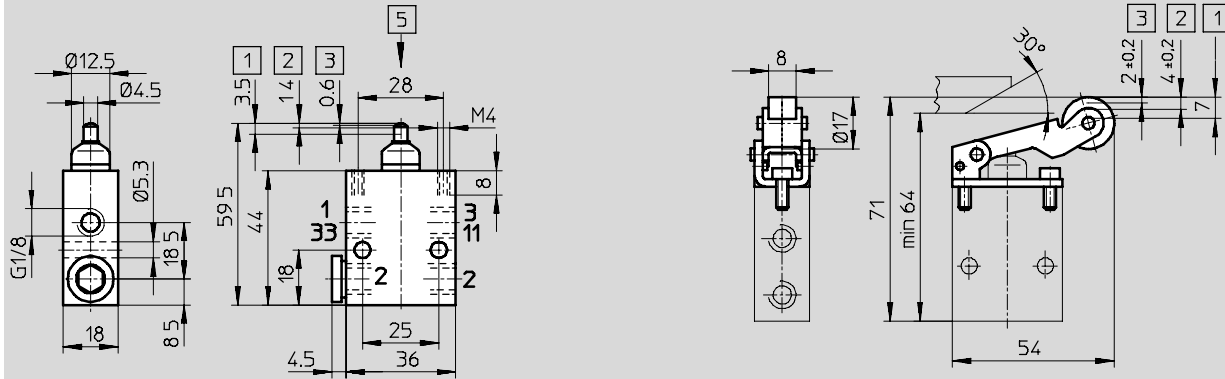
Technical data

Dimensions

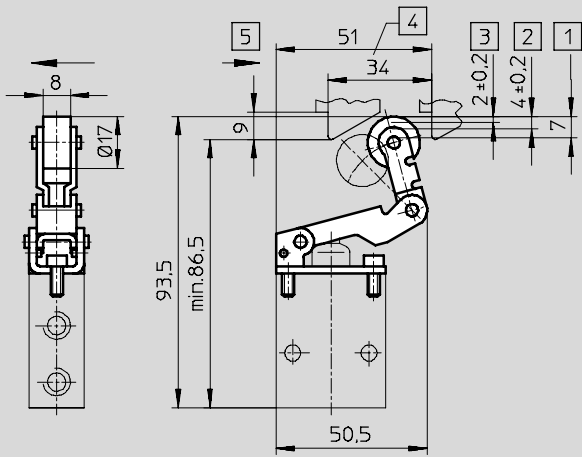
Download CAD data → www.festo.com/en/engineering

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

Manually and mechanically actuated valves
With threaded connections G1/8

4.4

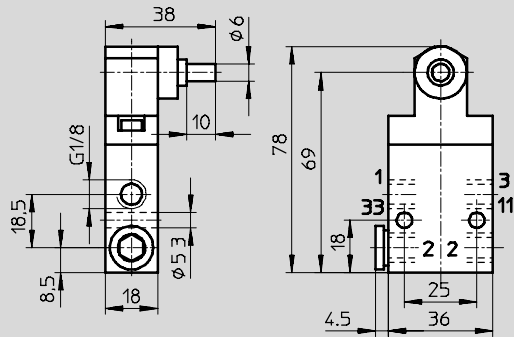
Valves with threaded connections G1/8, directly actuated

Technical data

Dimensions

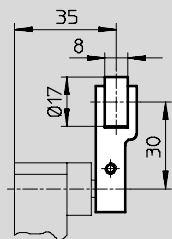
Download CAD data → www.festo.com/en/engineering

Swivel lever valve RW/O

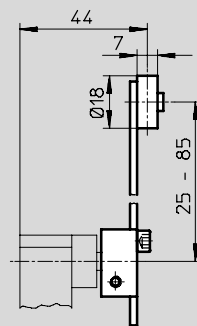


- 1, 11 = Supply port
- 2 = Working line
- 3, 33 = Exhaust

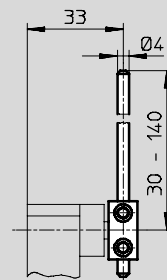
Swivel lever, short ASK-02



Swivel lever, long ASL-02



Swivel lever rod ASS-02

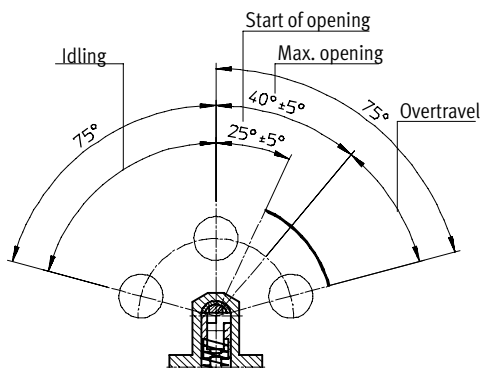


Manually and mechanically actuated valves
With threaded connections G1/8

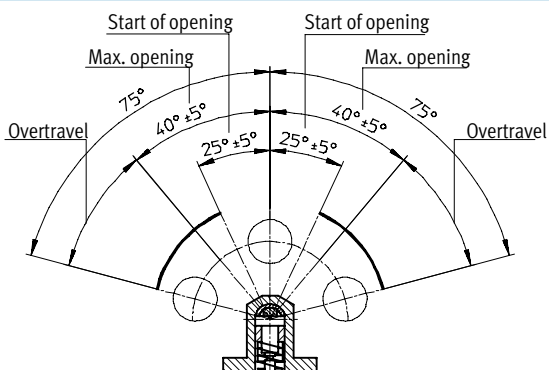
4.4

Actuating ranges are set by converting the switching head

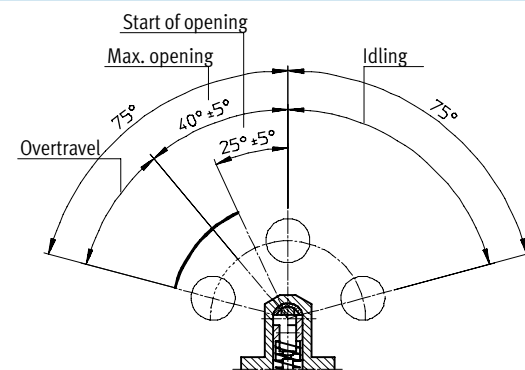
Default settings (upon delivery)



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

FESTO

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

Manually and mechanically actuated valves
With threaded connections G¹/₈

4.4

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

FESTO

Key features

Manually and mechanically actuated valves
With threaded connections G $\frac{1}{8}$

4.4



Flow rate

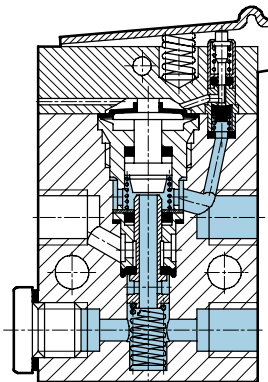
Flow rate
120 l/min

3/2-way valves

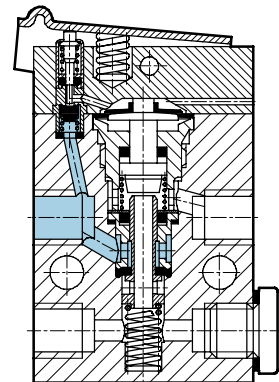
normally closed
normally open,
changed by repositioning the
housing top

- 4/2-way valves
- Minimal actuating force with pilot 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
→ 2 / 4.4-9



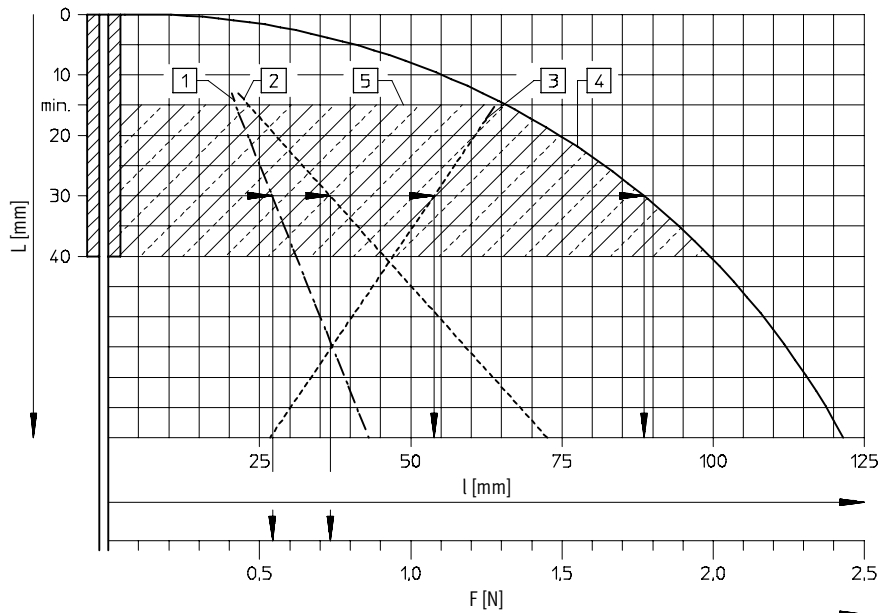
Technical data		Stem actuated valve	Roller lever valve	Toggle lever valve	Whisker valve
Actuation type		Stem actuated valve	Roller lever valve	Toggle lever valve	Whisker valve
Constructional design		Poppet valve, indirectly actuated			
Type of mounting		2 through-holes in housing			
Pneumatic connection		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

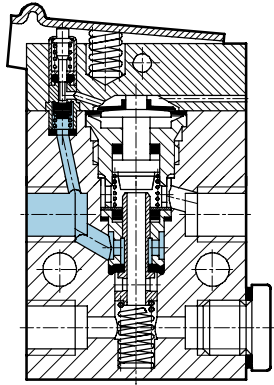
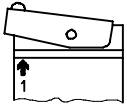


Technical data – 3/2-way valves

Sectional view

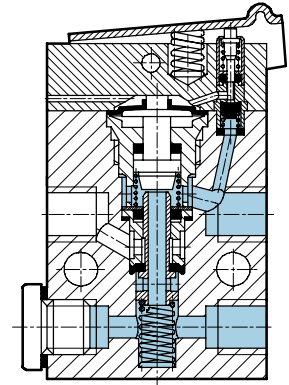
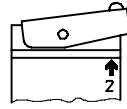
Normally closed

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)

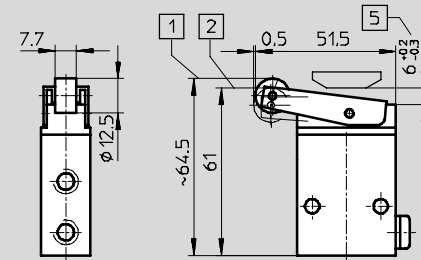
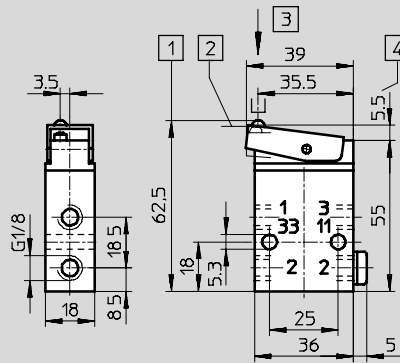


Dimensions

Download CAD data → www.festo.com/en/engineering

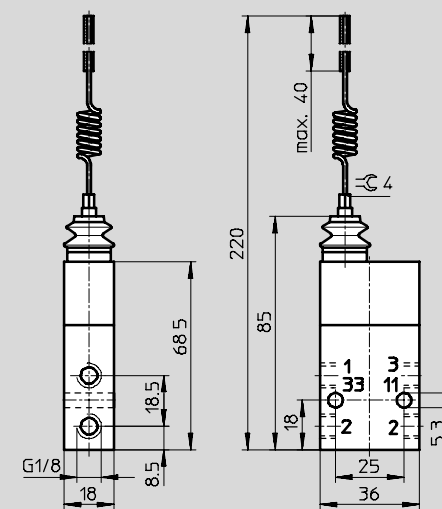
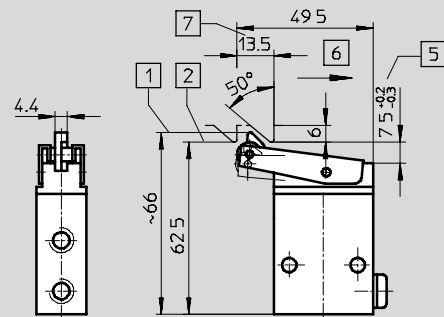
Stem actuated valve VS, VOS

Roller lever valve RS, ROS



Toggle lever valve LS, LOS

Whisker valve FVS, FVSO



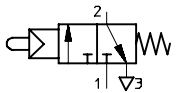
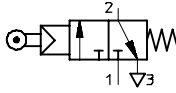
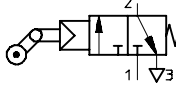
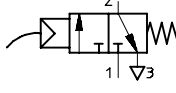
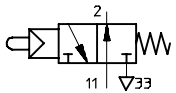
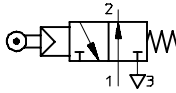
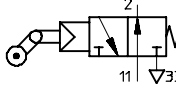
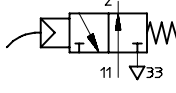
- 1 Initial position
- 2 ON position
- 3 Actuation direction
- 4 Smallest distance between cams
- 5 Bottom edge of control rail or cam

- 6 Idle return
- 7 Min. switching travel

Valves with threaded connections G1/8, indirectly actuated

FESTO

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

Manually and mechanically actuated valves
With threaded connections G1/8

4.4

11. Valves with threaded connections G1/8, indirectly actuated

FESTO

Technical data – 4/2-way valves

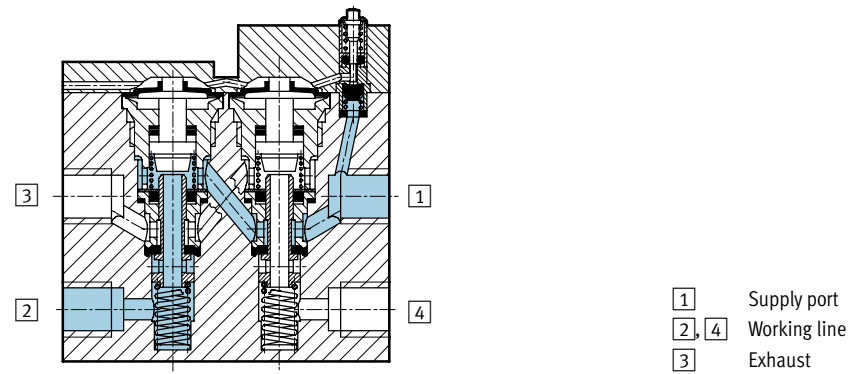
-  - Flow rate
120 l/min
-  - Temperature range
-10 ... +60°C
-  - Pressure
3.5 ... 8 bar
-  - Wearing parts kits
→ 2 / 4.4-11



Technical data		Stem actuated valve	Roller lever valve	Toggle lever valve
Actuation type		Stem actuated 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		3.5 ... 8		
Actuating force at 6 bar	[N]	3.1	1.8	2.2
Repetition accuracy (+/-)		±0.1		
Temperature range		-10 ... +60		
Materials	Housing	Blue anodised aluminium		
	Seals	Nitrile rubber		
Weight	[g]	220	230	230

Sectional view

Stem actuated valve VS-4-1/8



Manually and mechanically actuated valves
With threaded connections G1/8

4.4

12. Valves with threaded connections G1/8, indirectly actuated



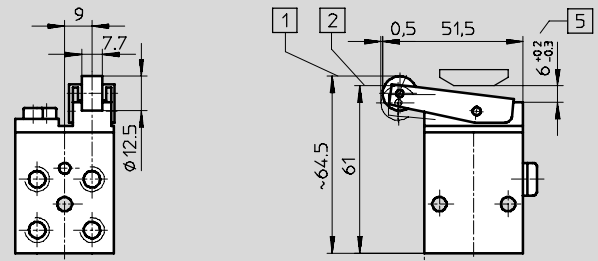
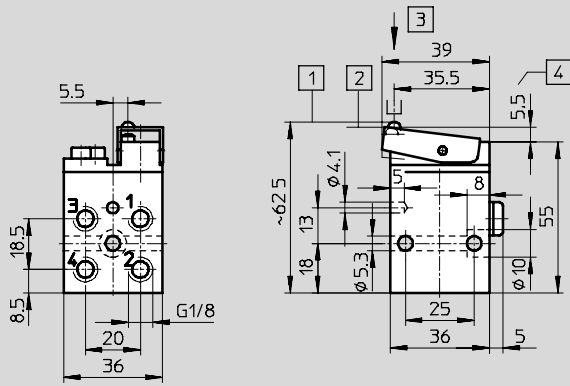
Technical data – 4/2-way valves

Dimensions

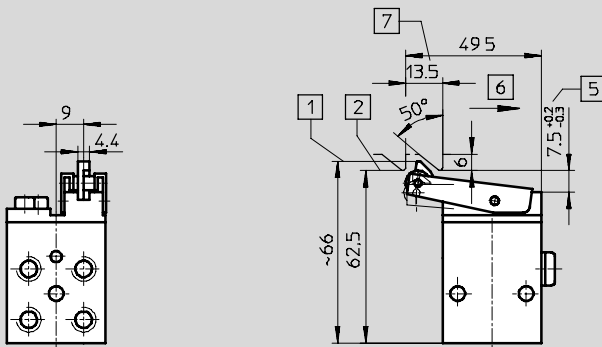
Download CAD data → www.festo.com/en/engineering

Stem actuated valve VS

Roller lever valve RS



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

13. Ordering data – Wearing parts kits

	Part No.	Type
For 4/2-way valves	104 201	VS-4-1/8

Manually and mechanically actuated valves
With threaded connections G1/8

4.4

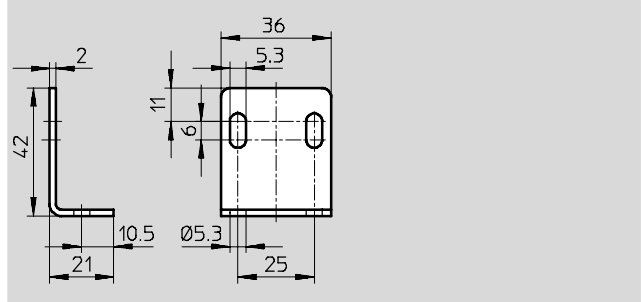
Valves with threaded connections G1/8, indirectly actuated

FESTO

Accessories

Mounting bracket HV-1/8

Material:
Galvanised steel



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