FESTO



Key features











Innovative

- Small and compact for a wide range of pneumatic applications
- Numerous selectable valve functions: 3/2-way and 5/2-way functions
- Flow rates up to 1200 l/min
- Outstanding pneumatic performance for a wide range of applications
- Light weight
- Minimal actuating forces

Versatile

- Flexibility of the pneumatic working ports provides a practical solution to different requirements
- Round silencer for ducted exhaust air
- Suitable for vacuum in some cases
- Reverse operation possible in some cases
- Actuation: direct and piloted
- Available pressure range from vacuum to 10 bar.
- Design:
 - Stem actuated valve
 - Roller lever valve
 - Roller lever valve with idle return

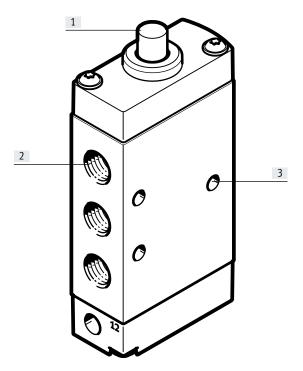
Reliable

- Durable thanks to tried-and-tested piston spool valves and poppet valves
- Sturdy thanks to metal housing and connecting thread or connector

Easy to install

- Mounted via through-holes (stem actuated valves are also suitable for front panel mounting)
- Can be precisely adjusted using mounting kit

Key features



- [1] Stem as actuator
- [2] Practical connection: via threaded connection or connector
- [3] Fast mounting: screwed directly via through-hole, front panel mounting possible

Equipment options

3/2-way valve, monostable

- Normally open/closed
- · Mechanical spring
- Vacuum operation possible
- Directly controlled and pneumatically piloted
- Reversible
- · Ducted exhaust air

5/2-way valve, monostable

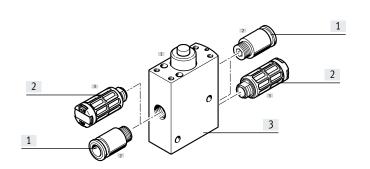
- Pneumatic spring/mechanical spring
- Vacuum operation possible
- Reversible in some cases
- Pneumatically piloted
- Ducted exhaust air

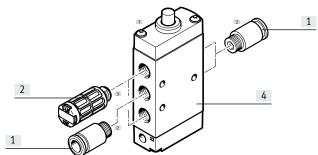
Peripherals overview

Valves, mechanically actuated

Stem actuated valve, 3/2-way valve

Stem actuated valve, 5/2-way valve

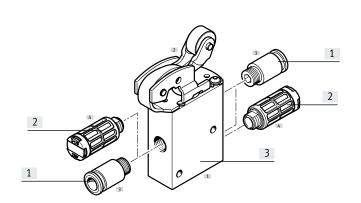


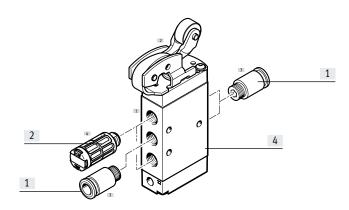


		Brief description	→ Page/Internet
[1]	Fitting	For supply air/exhaust ports (1, 3, 5) and working ports (2, 4)	29
[2]	Silencers	For exhaust ports (3, 5)	29
[3]	3/2-way valve	Stem actuated valve	9
[4]	5/2-way valve	Stem actuated valve	9

Roller lever valve, 3/2-way valve

Roller lever valve, 5/2-way valve





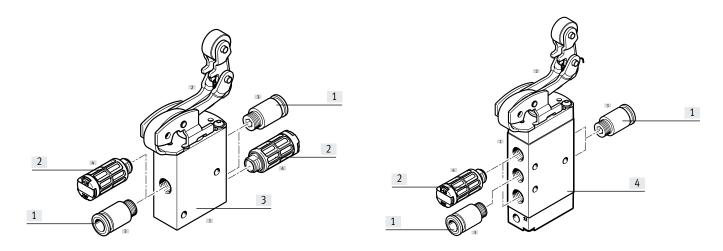
		Brief description	→ Page/Internet
[1]	Fitting	For supply air/exhaust ports (1, 3, 5) and working ports (2, 4)	29
[2]	Silencers	For exhaust ports (3, 5)	29
[3]	3/2-way valve	Stem actuated valve with roller lever attachment	17
[4]	5/2-way valve	Stem actuated valve with roller lever attachment	17

Peripherals overview

Valves, mechanically actuated

Roller lever valve with idle return, 3/2-way valve

Roller lever valve with idle return, 5/2-way valve



		Brief description	→ Page/Internet
[1]	Fitting	For supply air/exhaust ports (1, 3, 5) and working ports (2, 4)	29
[2]	Silencers	For exhaust ports (3, 5)	29
[3]	3/2-way valve	Stem actuated valve with idle return roller lever attachment	21
[4]	5/2-way valve	Stem actuated valve with idle return roller lever attachment	21

Key features – Pneumatic components

Mechanically actuated valves

Mechanically actuated valves are often used as "signal valves", and return a pneumatic signal to the controller. This signal, e.g. "end position reached", is transmitted via a stem or roller actuated valve.

This application sounds simple; it is used in smaller machines and in conveyor systems, e.g. to control simple clamping and locking processes in semi-automatic assembly and manufacturing.

Benefits of mechanically actuated valves:

- No electronic controller required
- No expensive programming
- Easy to set up and connect
- Can be controlled and measured using sensors

Valve functions Circuit symbol	Type	Description
Stem actuated valve	777	
12 1 3 3 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3	VMEF-ST-M32-M	3/2-way valve, monostable • Normally closed (1> 2) • Normally open (3> 2) • Mechanical spring return • Suitable for vacuum • Reversible
12 2 1 1 3 W	VMEF-STC-M32-M	3/2-way valve, monostable • Normally closed (1 → 2) • Normally open (3 → 2) • Mechanical spring return • Pneumatically piloted, internal pilot air • Reversible
12 12 11 3	VMEF-STCZ-M32-M	3/2-way valve, monostable • Normally closed (1 → 2) • Normally open (3 → 2) • Mechanical spring return • Pneumatically piloted, external pilot air • Reversible
14 7 5 1 3 12	VMEF-S-M52-E	5/2-way valve, monostable Reset via (external) pneumatic spring Suitable for vacuum Reversible
14 2 5 1 3	VMEF-S-M52-M	5/2-way valve, monostable • Mechanical spring return • Suitable for vacuum • Reversible
14 2 1 3 12	VMEF-SCZ-M52-E	5/2-way valve, monostable • Pneumatically piloted, external pilot air • Pneumatic spring return • Suitable for vacuum • Reversible
14 2 T T T T T T T T T T T T T T T T T T	VMEF-SCZ-M52-M	5/2-way valve, monostable • Pneumatically piloted, external pilot air • Mechanical spring return • Suitable for vacuum • Reversible
14 2 5 1 3 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 3 S 1 S 1	VMEF-SC-M52-M	5/2-way valve, monostable Pneumatically piloted, internal pilot air Mechanical spring return

Key features – Pneumatic components

Valve functions		
Circuit symbol	Туре	Description
Roller lever valve		
12 12 11 3	VMEF-RT-M32-M	3/2-way valve, monostable • Normally closed (1> 2) • Normally open (3> 2) • Mechanical spring return • Directly actuated • Suitable for vacuum • Reversible
14 2 5 1 3	VMEF-R-M52-M	5/2-way valve, monostable • Mechanical spring return • Directly actuated • Suitable for vacuum • Reversible
14 2 5 1 3 12	VMEF-R-M52-E	5/2-way valve, monostable Reset via (external) pneumatic spring Directly actuated Suitable for vacuum Reversible
Roller lever valve with idle return		
12 2 1 1 3	VMEF-KT-M32-M	3/2-way valve, monostable • Normally closed (1 → 2) • Normally open (3 → 2) • Mechanical spring return • Directly actuated • Suitable for vacuum • Reversible
9 14 2 5 1 1 3	VMEF-K-M52-M	5/2-way valve, monostable • Mechanical spring return • Directly actuated • Suitable for vacuum • Reversible



A filter must be installed upstream of valves operated in vacuum mode. This prevents any foreign matter in the intake air getting into the valve (e.g. when operating a suction cup with connector).

Type codes

001	Series	
VMEF	Mechanically actuated valve	
002	Actuation type	
S	Stem actuated valve	
R	Roller lever valve	
K	Roller lever valve with idle return	
003	Design principle	
	Piston spool	
T	Poppet valve	
004	Type of control	
	Directly actuated	
С	Indirectly actuated	

005	Pilot air			
	Internal			
Z	External			
006	Valve function			
M32	3/2-way valve, normally closed or open			
M52	5/2-way valve, single solenoid/monostable			
Las	I			
007	Reset method for monostable/single solenoid valves			
007 E	Reset method for monostable/single solenoid valves Pneumatic spring, external			
E	Pneumatic spring, external			
E M	Pneumatic spring, external Mechanical spring			
E M 008	Pneumatic spring, external Mechanical spring Pneumatic connection			
E M 008 G18	Pneumatic spring, external Mechanical spring Pneumatic connection G1/8			

- N - Flow rate

750 ... 1200 l/min



- **-** Pressure

−0.095 ... 1 MPa

−0.95 ... 10 bar



- L - Temperature range

-10 ... +60°C



General technical data		
Design		Stem actuated valve
Width	[mm]	20
Type of control		Directly actuated or piloted
Max. actuating speed		
Directly actuated	[m/s]	0.6
Piloted	[m/s]	0.3
Application information		Do not use as mechanical stop
Actuation type		Mechanical
Mounting		Via through-hole
Sealing principle		Soft
Flow direction		Reversible
Mounting position		Any
Max. switching frequency	[Hz]	3

Fechnical data — Poppet valve							
Туре			VMEF-ST-M32 18	VMEF-STCM32 18	VMEF-ST-M32 14	VMEF-STCM32 14	
Design			Poppet valve	Poppet valve			
Standard nominal flow rate	1 2	[l/min]	750	750	870	870	
	3 2	[l/min]	665	665	750	750	
Valve function			3/2-way valve, monostable		·		
Overlap			Zero overlap	Zero overlap			
Type of control			Directly actuated	Piloted	Directly actuated	Piloted	
Reset method	Reset method			Mechanical spring			
Pneumatic connection 1, 2, 3			1/8 NPT	1/8 NPT	1/4 NPT	1/4 NPT	
Pilot air port 1 2/14			-	M5	-	M5	
Pilot air supply			-	Internal or external	-	Internal or external	
Nominal width		[mm]	5.6	5.6	6.0	6.0	
Actuating force at 6 bar							
 normally closed 		[N]	46	14	46	14	
 normally open 		[N]	82	14	82	14	

Technical data – Piston spool valve				
Туре	VMEF-S-M52-E 18	VMEF-S-M52-M 18	VMEF-S-M52-E 14	VMEF-S-M52-M 14
Design	Piston spool valve			
Standard nominal flow rate 1 2 [l/m	in] 750	750	1200	1200
Valve function	5/2-way valve, monosta	ble		
Overlap	Positive overlap			
Type of control	Directly actuated			
Reset method	Pneumatic spring	Mechanical spring	Pneumatic spring	Mechanical spring
Pneumatic connection 1, 2, 3, 4, 5	1/8 NPT	1/8 NPT	1/4 NPT	1/4 NPT
Pilot air port 1 2/14	M5	-	M5	-
Nominal width [mm	5.2	5.2	7.0	7.0
Actuating force at 6 bar [N]	28	34	48	43

Technical data – Piston spool valve				
Туре	VMEF-SCZ-M52-E 18	VMEF-SM52-M 18	VMEF-SCZ-M52-E 14	VMEF-SM52-M 14
Design	Piston spool valve			
Standard nominal flow rate 1 2 [l/min]	750	750	1200	1200
Valve function	5/2-way valve, monostable			
Overlap	Positive overlap			
Type of control	Piloted			
Reset method	Pneumatic spring	Mechanical spring	Pneumatic spring	Mechanical spring
Pneumatic connection 1, 2, 3, 4, 5	1/8 NPT	1/8 NPT	1/4 NPT	1/4 NPT
Pilot air port 1 2/14	M5	M5	M5	M5
Pilot air supply	External	Internal or external	External	Internal or external
Nominal width [mm]	5.2	5.2	7.0	7.0
Actuating force at 6 bar [N]	14	14	14	14

Materials	
Housing	Anodised wrought aluminium alloy
Cover	Reinforced PA (VMEF-STCM32-, VMEFM52-)
Seal	NBR
Note on materials	RoHS-compliant

Operating and environmental conditions	Operating and environmental conditions						
Туре		VMEF-ST-M32- VMEF-STCZ-M3		VMEF-STC-M3	32	VMEF-S-M52 VMEF-SCZ-M52	VMEF-SC-M52
Operating medium		Compressed a	ir to ISO 8573-1	:2010 [7:-:-]			
Note on the operating/pilot medium		Lubricated ope	eration possible	(in which case	lubricated opera	tion will always be required)	
Operating pressure	[MPa]	-0.095 1		0.35 1		-0.095 1	0.25 1
	[bar]	-0.95 10		3.5 10		-0.95 10	2.5 10
With internal/external pilot air		Internal	External	Internal	External	-	-
NC valves	[bar]	3.5 10	3.0 10	3.0 10	2.5 10		
NO valves	[bar]	3.5 10	3.0 10	3.5 10	2.5 10	-	-
Pilot pressure	[bar]	-		3.5 10		2.5 10	2.5 10
Temperature of medium	[°C]	-10 +60				•	
Ambient temperature	[°C]	-10 +60					
Corrosion resistance class CRC ¹⁾		2					

¹⁾ Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

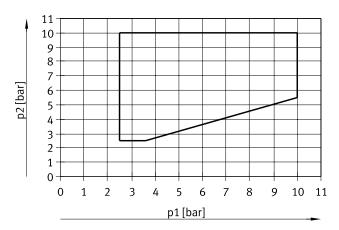
Pilot pressure p2 as a function of external pneumatic spring pressure p1

For piston spool valves VMEF-...-M52...18



The framed area shows the operating area for internal and external pilot air.

For piston spool valves VMEF-...-M52...14

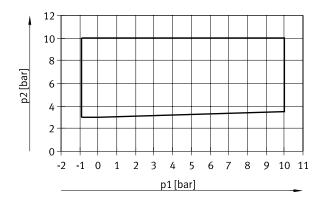


The framed area shows the operating area for internal and external pilot air.

Pilot pressure p2 as a function of working pressure p1

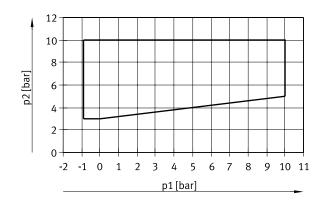
For poppet valves VMEF-...-M32...

(normally closed)

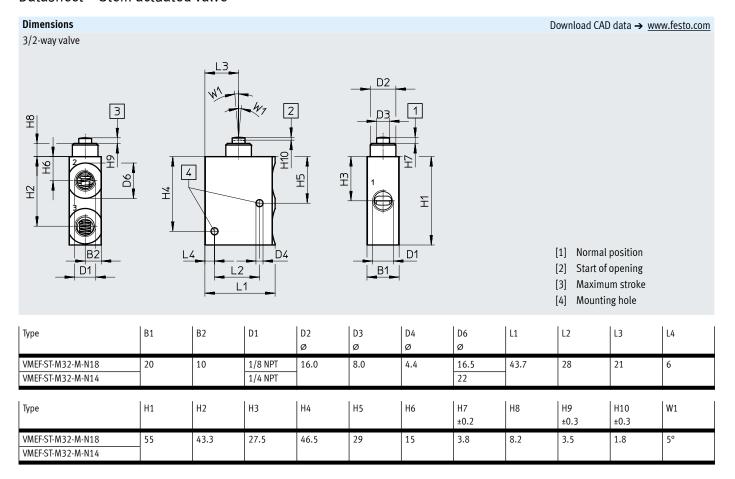


The framed area shows the operating range for external pilot air.

For poppet valves VMEF-...-M32... (normally open)

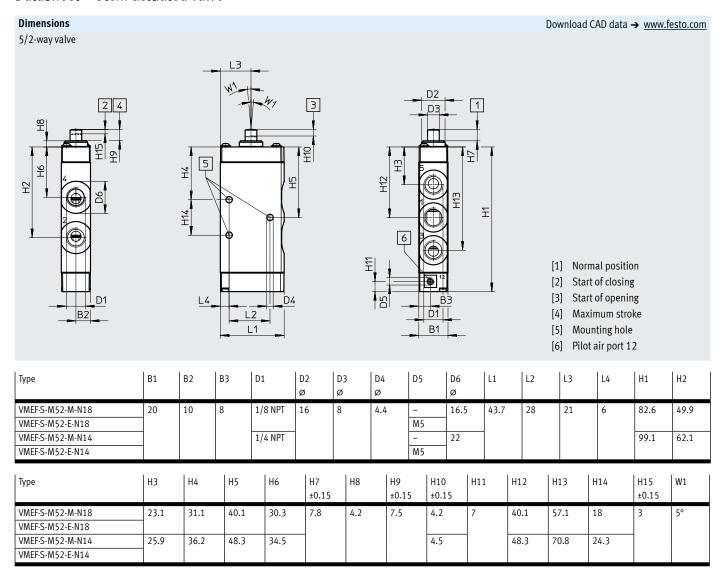


The framed area shows the operating range for external pilot air.



Dimensions Download CAD data → www.festo.com 3/2-way valve and 3/2-way valve with external pilot air supply 2 ,D3 2 卍 7 4 5 王 Normal position [2] Start of opening D1 D4 Maximum stroke [3] L2 B1_ [4] Mounting hole L1 Pilot air port 12 (110) [5] Туре В1 В2 D1 D2 D3 D4 D5 D6 L1 L2 L3 L4 Ø Ø Ø Ø VMEF-STC-M32-M-N18 1/8 NPT 15.9 20 10 10 4.4 16.5 43.7 28 21 VMEF-STC-M32-M-N14 1/4 NPT 22 VMEF-STCZ-M32-M-N18 1/8 NPT M5 16.5 VMEF-STCZ-M32-M-N14 1/4 NPT 22 Н1 H2 Н3 Н4 Н5 Н6 Н7 Н8 Н9 H10 H11 W1 Туре ±0.15 ±0.15 ±0.4 VMEF-STC-M32-M-N18 77.2 65.5 49.7 68.7 51.2 37.2 3.8 8.2 3.5 1.6 9.2 VMEF-STC-M32-M-N14 VMEF-STCZ-M32-M-N18 VMEF-STCZ-M32-M-N14

Dimensions Download CAD data → www.festo.com 5/2-way valve and 5/2-way valve with external pilot air supply 3 2 ,D3, 翌 4 4 Ŧ 宁 H7 Ξ 6 Normal position [1] Start of opening [2] [3] Maximum stroke [4] Mounting hole Pilot air port 14 [5] B1_ L1 [6] Pilot air port 12 B1 L1 В2 В3 D4 D5 D6 Туре D1 D2 D3 L2 L3 Ø Ø Ø Ø VMEF-SC-M52-M-N18 20 10 8 1/8 NPT 15.9 10 4.4 16.5 43.7 28 21 M5 VMEF-SCZ-M52-M-N18 1/8 NPT VMEF-SCZ-M52-E-N18 1/8 NPT VMEF-SC-M52-M-N14 1/4 NPT 22 VMEF-SCZ-M52-M-N14 1/4 NPT M5 VMEF-SCZ-M52-E-N14 1/4 NPT H1 Туре H2 Н3 H4 Н5 Н6 Н7 Н8 Н9 H10 H11 H12 H13 H14 H15 W1 ±0.15 ±0.15 ±0.4 VMEF-SC-M52-M-N18 94.1 61.4 34.6 42.6 51.6 41.8 3.8 8.2 3.5 1.6 9.2 51.6 68.6 18 VMEF-SCZ-M52-M-N18 VMEF-SCZ-M52-E-N18 VMEF-SC-M52-M-N14 110.6 47.7 59.8 82.3 73.6 37.4 59.8 46 24.3 VMEF-SCZ-M52-M-N14 VMEF-SCZ-M52-E-N14



Directly actuated stem actuated valves VMEF-S-... can be extended with the actuator attachment VAOM-R4-20-... to form a roller lever valve or roller lever valve with idle return. Actuator attachments are available for 3/2-way and 5/2-way valves.

The valve can be moved in the actuation direction with the mounting kit VAME-R4-20-PA. This enables the correct switching point to be set. → Page 29

→ Page 25

- 🖣 Note
- When screwing the actuator attachment VAOM-R4-20-... onto the valve, ensure that the prescribed torque of 1.5 Nm ± 10% is observed.
- An actuator attachment VAOM-R4-20-... can only be mounted on a basic valve three times.

Datasheet – Stem actuated valve

Ordering data						
Type of control	Pilot air	Reset	Flow rate [l/min]	Weight [g]	Part no.	Туре
3/2-way valves	<u> </u>		1	10-		
Direct	-	Mechanical	750	116	8031305	VMEF-ST-M32-M-N18
			870	110	8031310	VMEF-ST-M32-M-N14
Piloted	Internal	Mechanical	750	131	8031333	VMEF-STC-M32-M-N18
			870	124	8031334	VMEF-STC-M32-M-N14
	External	Mechanical	750	131	8031337	VMEF-STCZ-M32-M-N18
			870	124	8031338	VMEF-STCZ-M32-M-N14
5/2-way valves						
Direct	_	Mechanical	750	145	8031307	VMEF-S-M52-M-N18
		Pneumatic	750	144	8031309	VMEF-S-M52-E-N18
		Mechanical	1200	178	8031312	VMEF-S-M52-M-N14
		Pneumatic	1200	177	8031314	VMEF-S-M52-E-N14
Piloted	Internal	Mechanical	1200	184	8031321	VMEF-SC-M52-M-N14
			750	151	8031322	VMEF-SC-M52-M-N18
	External	Pneumatic	1200	183	8031325	VMEF-SCZ-M52-E-N14
			750	150	8031326	VMEF-SCZ-M52-E-N18
		Mechanical	1200	184	8031329	VMEF-SCZ-M52-M-N14
			750	151	8031330	VMEF-SCZ-M52-M-N18

Datasheet – Roller lever valve

- N - Flow rate

750 ... 1200 l/min



- **-** Pressure

−0.095 ... 1 MPa

-0.95 ... 10 bar



- l - Temperature range

-10 ... +60°C



General technical data		
Design		Roller lever
Width	[mm]	20
Type of control		Directly actuated
Application information		Risk of pinching
Actuation type		Mechanical
Mounting		Via through-hole
Sealing principle		Soft
Flow direction		Reversible
Mounting position		Any
Max. switching frequency	[Hz]	3
Max. actuating speed for side actuation	[m/s]	1.4
Cam angle in angular degrees		30

Technical data – Poppet valve	Technical data – Poppet valve				
Туре		VMEF-RT-M3218	VMEF-RT-M3214		
Design		Poppet valve			
Standard nominal flow rate 1 2	[l/min]	750	870		
Valve function		3/2-way valve, monostable			
Overlap		Zero overlap			
Reset method		Mechanical spring			
Pneumatic connection 1, 2, 3		1/8 NPT	1/4 NPT		
Nominal width	[mm]	5.6	6		
Max. stroke limit (hard)	[mm]	6.3			
Actuating force	[N]	35.2			

Technical data – Piston spool valve					
Туре		VMEF-R-M52-E18	VMEF-R-M52-M18	VMEF-R-M52-E14	VMEF-R-M52-M14
Design		Piston spool valve			
Standard nominal flow rate 1> 2	[l/min]	750		1200	
Valve function		5/2-way valve, monostable			
Overlap		Positive overlap	,		
Reset method		Pneumatic spring	Mechanical spring	Pneumatic spring	Mechanical spring
Max. switching frequency	[Hz]	3			
Pneumatic connection 1, 2, 3		1/8 NPT	1/8 NPT	1/4 NPT	1/4 NPT
Nominal width	[mm]	5.2	5.2	7	7
Max. stroke limit (hard)	[mm]	11.6	*	,	
Actuating force	[N]	38			

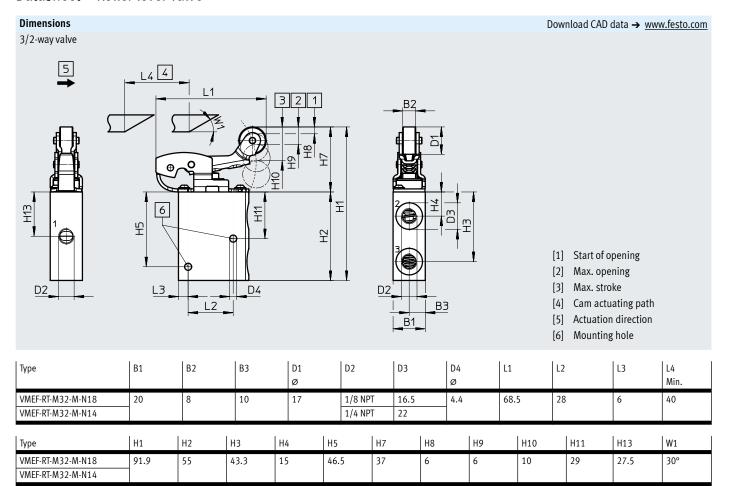
Datasheet – Roller lever valve

Materials	
Housing	Anodised wrought aluminium alloy
Cover	Reinforced PA (VMEFM52-)
Actuator attachment	Galvanised steel
Seal	NBR
Note on materials	RoHS-compliant RoHS-compliant

Operating and environmental condition	Operating and environmental conditions				
Operating medium		Compressed air to ISO 8573-1:2010 [7:-:-]			
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)			
Operating pressure	[MPa]	-0.095 1			
	[bar]	-0.95 10			
Temperature of medium	[°C]	-10 +60			
Ambient temperature	[°C]	-10 +60			
Note on ambient temperature		Influence of heat on wear			
Corrosion resistance class CRC ¹⁾		1			

¹⁾ Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

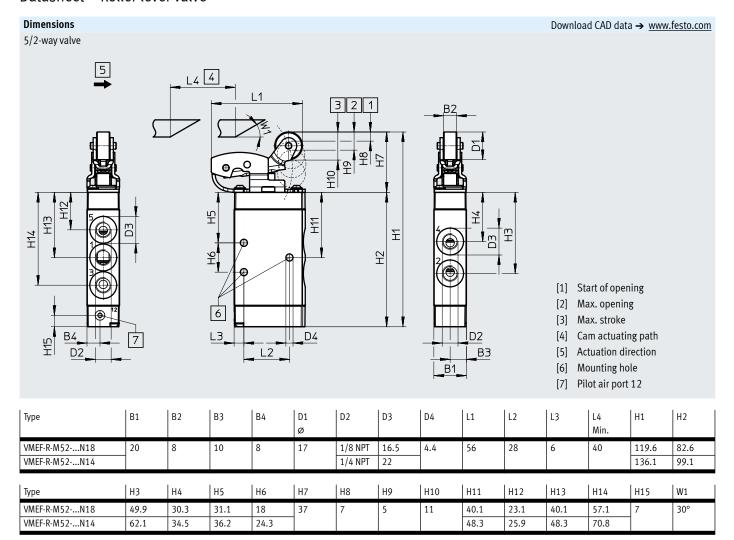
Datasheet - Roller lever valve





Roller lever valves can be actuated by a cam from either side, i.e. from the left (forward movement) or from the right (backward movement).

Datasheet - Roller lever valve



If required, actuator attachments VAOM-R4-20-... can be used as spare parts for existing directly actuated roller lever valves. → Page 25

The valve can be moved in the actuation direction with the mounting kit VAME-R4-20-PA. This enables the correct switching point to be set. → Page 29



When screwing the actuator attachment VAOM-R4-20-... onto the valve, ensure that the prescribed torque of 1.5 Nm \pm 10% is observed.

Ordering data					
Type of control	Reset	Flow rate	Weight	Part no.	Туре
		[l/min]	[g]		
3/2-way valves					
Direct	Mechanical	750	209	8047098	VMEF-RT-M32-M-N18
	Mechanical	870	204	8047101	VMEF-RT-M32-M-N14
5/2-way valves					
Direct	Pneumatic	750	240	8047096	VMEF-R-M52-E-N18
	Mechanical	750	240	8047097	VMEF-R-M52-M-N18
	Pneumatic	1200	272	8047099	VMEF-R-M52-E-N14
	Mechanical	1200	272	8047100	VMEF-R-M52-M-N14

Datasheet – Roller lever valve

- N - Flow rate

750 ... 1200 l/min



- **-** Pressure

−0.095 ... 1 MPa

-0.95 ... 10 bar



- l - Temperature range

-10 ... +60°C



General technical data		
Design		Roller lever with idle return
Width	[mm]	20
Type of control		Directly actuated
Application information		Risk of pinching
Actuation type		Mechanical
Mounting		Via through-hole
Sealing principle		Soft
Flow direction		Reversible
Mounting position		Any
Max. switching frequency	[Hz]	3
Max. actuating speed for side actuation	[m/s]	0.7
Cam angle in angular degrees		30

Technical data – Poppet valve	Technical data – Poppet valve				
Туре		VMEF-KT-M3218	VMEF-KT-M3214		
Design		Poppet valve			
Standard nominal flow rate 1 2	[l/min]	750	870		
Valve function		3/2-way valve, monostable			
Overlap		Zero overlap			
Reset method		Mechanical spring			
Pneumatic connection 1, 2, 3		1/8 NPT	1/4 NPT		
Nominal width	[mm]	5.6	6		
Max. stroke limit (hard)	[mm]	11			
Actuating force	[N]	32.7			

Technical data – Piston spool valve				
Туре		VMEF-K-M52-M18	VMEF-K-M52-M14	
Design		Piston spool valve		
Standard nominal flow rate 1 2 [[l/min]	750	1200	
Valve function		5/2-way valve, monostable		
Overlap		Positive overlap		
Reset method		Mechanical spring		
Pneumatic connection 1, 2, 3		1/8 NPT	1/4 NPT	
Nominal width [mm]	5.2	7	
Max. stroke limit (hard)	mm]	11.8		
Actuating force [[N]	23.5		

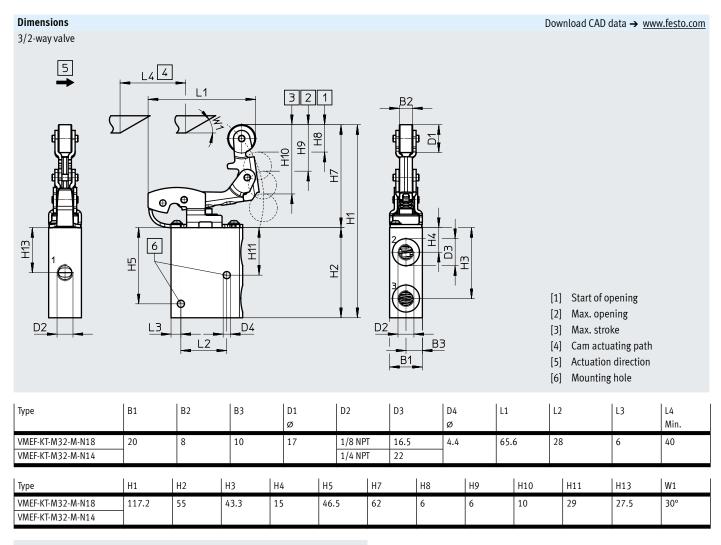
Datasheet – Roller lever valve

Materials	
Housing	Anodised wrought aluminium alloy
Cover	Reinforced PA (VMEFM52-)
Actuator attachment	Galvanised steel
Seal	NBR
Note on materials	RoHS-compliant

Operating and environmental condition	ns	
Operating medium		Compressed air to ISO 8573-1:2010 [7:-:-]
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure	[MPa]	-0.095 1
	[bar]	-0.95 10
Temperature of medium	[°C]	-10 +60
Ambient temperature	[°C]	-10 +60
Note on ambient temperature		Influence of heat on wear
Corrosion resistance class CRC ¹⁾		1

¹⁾ Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

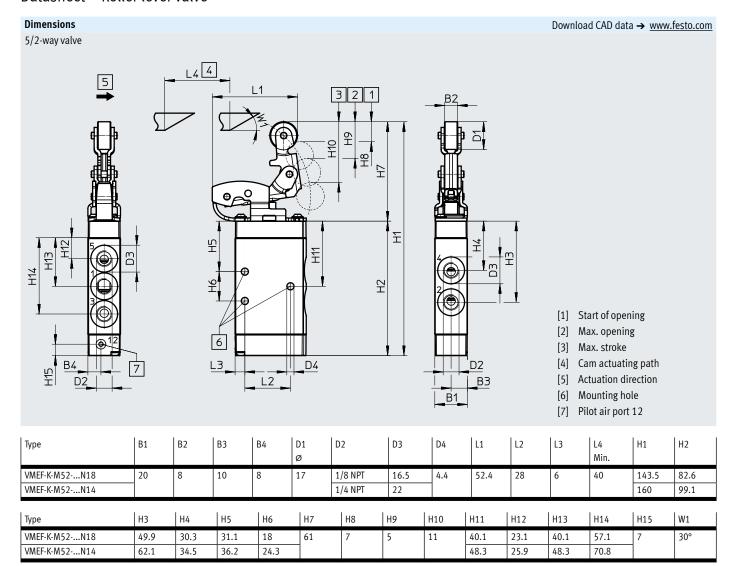
Datasheet - Roller lever valve





Roller lever valves with idle return can only be actuated by a cam from one side, i.e. only in one direction (forward movement). If the actuation is applied from the other direction (backward movement), the valve is not actuated.

Datasheet - Roller lever valve



If required, actuator attachments VAOM-R4-20-... can be used as spare parts for existing directly actuated roller lever valves. → Page 25

The valve can be moved in the actuation direction with the mounting kit VAME-R4-20-PA. This enables the correct switching point to be set. → Page 29



When screwing the actuator attachment VAOM-R4-20-... onto the valve, ensure that the prescribed torque of 1.5 Nm \pm 10% is observed.

Ordering data Type of control	Reset	Flow rate [l/min]	Weight [g]	Part no.	Туре
3/2-way valves					
Direct	Mechanical	750	227	8047105	VMEF-KT-M32-M-N18
		870	218	8047107	VMEF-KT-M32-M-N14
5/2-way valves					
Direct	Mechanical	750	255	8047104	VMEF-K-M52-M-N18
		1200	286	8047106	VMEF-K-M52-M-N14

Datasheet - Actuator attachments

Actuator attachments as replacement or extension option for stem actuated valves:

- Roller lever
- Roller lever with idle return



General technical data			
Туре		VAOM-R4-20-D1	VAOM-R4-20-D2
Design		Roller lever	Roller lever with idle return
Width	[mm]	20	
Type of control		Directly actuated	
Actuation		Mechanical	
Mounting position		Screwed onto valve, in the movement plane	
Mounting		Screwed with self-tapping screws	
Ambient temperature	[°C]	-10 +60	

Materials	
Actuator attachment	Galvanised steel
Note on materials	RoHS-compliant
Corrosion resistance class CRC ¹⁾	1

¹⁾ Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

Actuator attachments for valves

Stem actuated valves from the series VMEF can be retrofitted with the actuator attachments VAOM.

If an actuator attachment VAOM is screwed onto the corresponding stem actuated valve of the VMEF series, it converts it to a roller lever valve or roller lever valve with idle return.

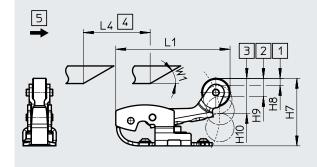
- Roller lever valves can be actuated by a cam from either side, i.e. from the left (forward movement) or from the right (backward movement).
- Roller lever valves with idle return can only be actuated by a cam from one side, i.e. only in one direction (forward movement). If the actuation is applied from the other direction (backward movement), the valve is not actuated.

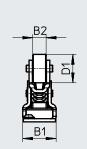
The actuator attachments VAOM can also be used to replace mechanically worn attachments for roller lever valves or roller lever valves with idle return.

Datasheet - Actuator attachments

Dimensions

Roller lever for 3/2-way valves



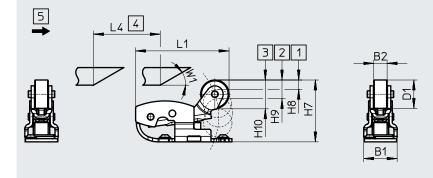


Download CAD data → www.festo.com

- [1] Start of opening
- [2] Max. opening
- Max. stroke
- [4] Cam actuating path
- [5] Actuation direction

Туре	B1	B2	D1	L1	L4	H7	Н8	H9	H10	W1
			Ø		Min.	±0.1	±0.1	±0.1	±0.1	
VAOM-R4-20-D1-32	20	8	17	68.5	40	36.9	2.9	2.9	6.3	30°

Roller lever for 5/2-way valves



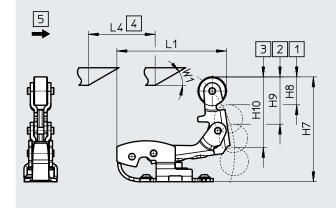
- [1] Start of opening
- [2] Max. opening
- Max. stroke [3]
- [4] Cam actuating path
- Actuation direction

Туре	B1	B2	D1 Ø	L1	L4 Min.	H7 ±0.2	H8 ±0.3	H9 ±0.2	H10 ±0.1	W1
VAOM-R4-20-D1-52	20	8	17	56	40	37	7.3	7.6	11.6	30°

Datasheet - Actuator attachments

Dimensions

Roller lever with idle return for 3/2-way valves

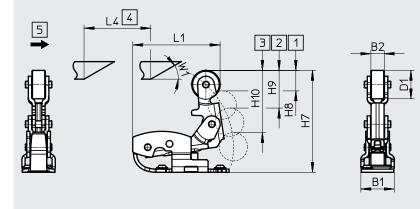


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- [1] Start of opening
- [2] Max. opening
- 3] Max. stroke
- [4] Cam actuating path
- [5] Actuation direction

Туре		B1	B2	D1 Ø	L1	L4 Min.	H7 ±0.2	H8 ±0.2	H9 ±0.2	H10 ±0.1	W1
VAOM	1-R4-20-D2-32	20	8	17	65.6	40	62.2	5.9	5.8	11.1	30°

Roller lever with idle return for 5/2-way valves



- [1] Start of opening
- [2] Max. opening
- [3] Max. stroke
- [4] Cam actuating path
- [5] Actuation direction

Туре	B1	B2	D1	L1	L4	H7	H8	Н9	H10	W1
			Ø		Min.	±0.1	±0.3	±0.3	±0.1	
VAOM-R4-20-D2-52	20	8	17	52.4	40	60.9	7.4	7.7	11.8	30°



- When screwing the actuator attachment VAOM-R4-20-... onto the valve, ensure that the prescribed torque of 1.5 Nm \pm 10% is observed.
- An actuator attachment VAOM-R4-20-... can only be mounted on a basic valve three times.

Datasheet – Actuator attachments

Ordering data				
	Description	Part no.	Туре	PU ¹⁾
Roller lever				
\bigcirc	For 3/2-way valves, with retaining screws	8049235	VAOM-R4-20-D1-32	1
O S	For 5/2-way valves, with retaining screws	8049233	VAOM-R4-20-D1-52	1
Roller lever with idle re	turn			
	For 3/2-way valves, with retaining screws	8049237	VAOM-R4-20-D2-32	1
	For 5/2-way valves, with retaining screws	8049236	VAOM-R4-20-D2-52	1

¹⁾ Packaging unit

Accessories

Ordering data	Description			Part no.	Туре	PU ¹⁾
ush-in fitting, straig	·				71	
<u> </u>	With internal hex	Connecting thread 10-32 UNF for tubing O.D.	5/32"	572312	QBM-10-32-UNF-5/32-I-U	10
		Connecting thread 1/8 NPT for tubing O.D.	5/32"	572317	QB-1/8-5/32-I-U	10
			1/4"	572318	QB-1/8-1/4-I-U	10
			5/16"	572319	QB-1/8-5/16-I-U	10
		Connecting thread 1/4 NPT for tubing O.D.	5/16"	572321	QB-1/4-5/16-I-U	10
			3/8"	572322	QB-1/4-3/8-I-U	10
			1/2"	567771	QB-1/4-1/2-U	10
ush-in fitting, angle	d					
	With external hex	Connecting thread 1/8 NPT for tubing O.D.	5/32"	533290	QBL-1/8-5/32-U	10
			1/4"	533292	QBL-1/8-1/4-U	10
			5/16"	533293	QBL-1/8-5/16-U	10
		Connecting thread 1/4 NPT for tubing O.D.	5/16"	533296	QBL-1/4-5/16-U	10
		3/8"	533297	QBL-1/4-3/8-U	5	
		1/2"	567775	QBL-1/4-1/2-U	5	
			5/16"	564670 564671	QBLL-1/8-1/4-U QBLL-1/8-5/16-U	10
ilencers						
	Metal	With connecting thread	1/8 NPT	12638	U-1/8-B-NPT	1
			1/4 NPT	12639	U-1/4-B-NPT	1
Nounting kit for swite	ching point adjustment					
	Mounting kit for valves \ • 1x mounting plate • 3x socket head scr • 3x slot nuts			8060046	VAME-R4-20-PA	1

¹⁾ Packaging unit