

Pneumatic valves VUWG

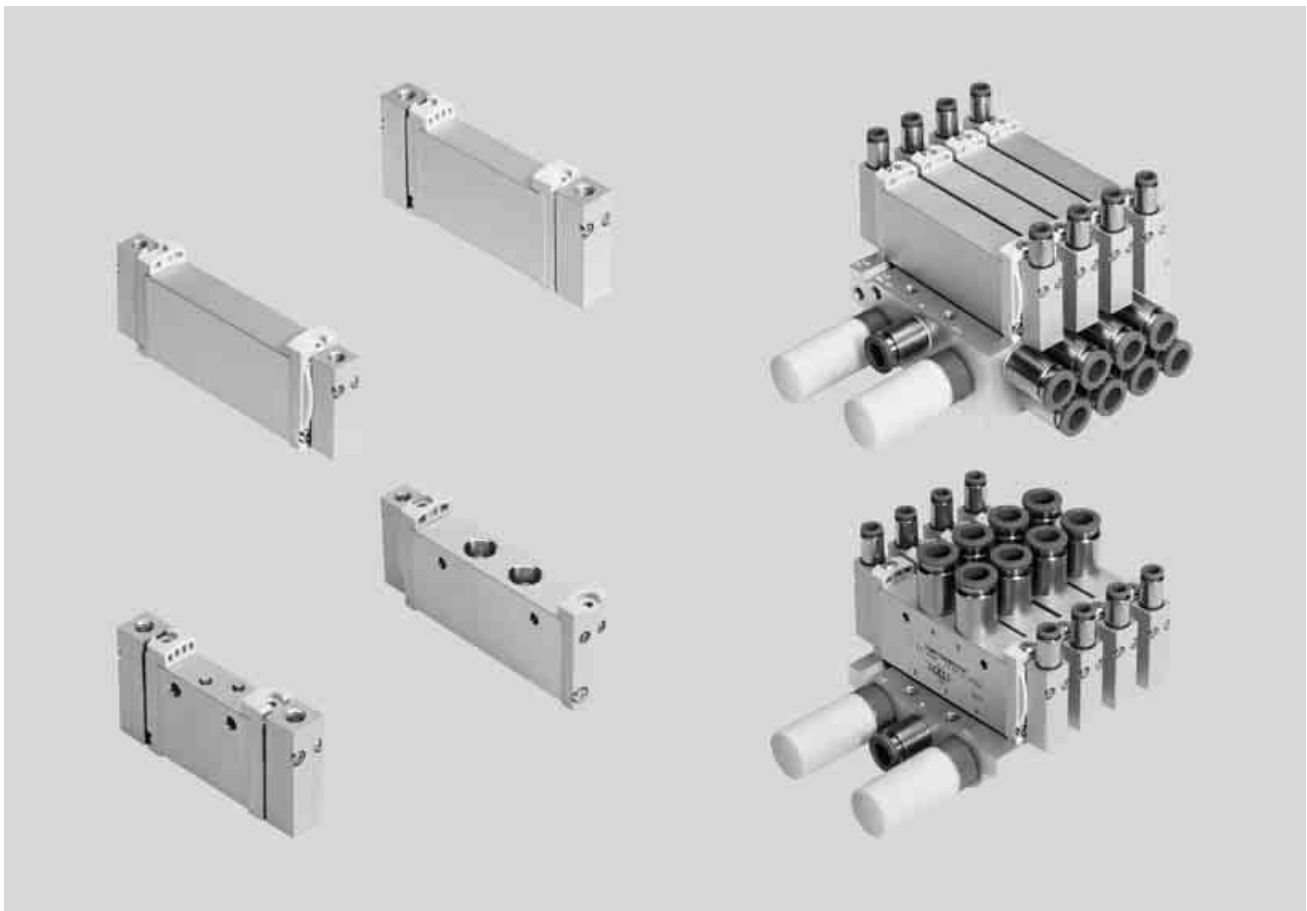
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Pneumatic valves VUWG

Key features

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Innovative

- Various connection sizes (M3, M5, M7, G $\frac{1}{8}$, G $\frac{1}{4}$)
- Max. pressure 10 bar
- 2x3/2-way valve in one valve housing

Versatile

- Wide range of valve functions
- In-line valves can be used as individual valves or manifold valves
- M5/M7 in-line valves can be mixed on one manifold rail
- Identical sub-base valves for M5 or M7 manifold rail
- Manifolds with pressure zones
- Choice of quick push-in connectors

Reliable

- Sturdy and durable metal components
 - Valves
 - Manifold rails
- Reliable servicing thanks to valves that can be replaced quickly and easily

Easy to mount

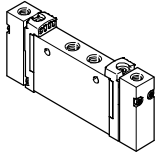
- Secure mounting on wall or H-rail
- Easy mounting thanks to captive screws and seals

Pneumatic valves VUWG

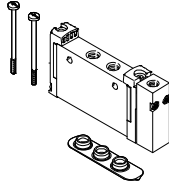
Key features – Pneumatic components

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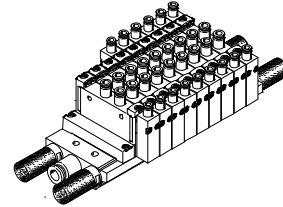
Individual valves and valve manifolds



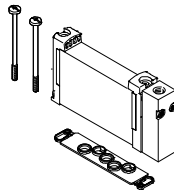
VUWG-L in-line valve as individual valve



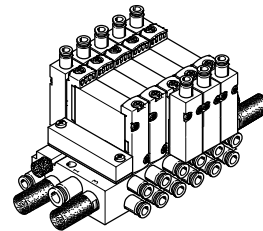
VUWG-S in-line valve for manifold assembly



VUWG-S valve manifold consisting of in-line valves

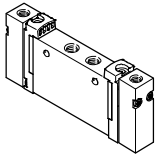


VUWG-B sub-base valve for manifold assembly



VUWG-B valve manifold consisting of sub-base valves

VUWG basic valves



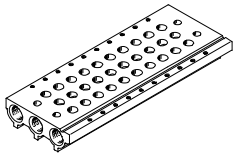
- Width 10, 14 and 18 mm
- 2x 3/2-way, 5/2-way and 5/3-way valves
- In-line valves
- Sub-base valves

Pneumatic valves VUWG

Key features – Pneumatic components

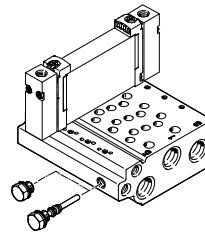
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Manifold rail for in-line valves



- For in-line valves M3, M5, M7, G $\frac{1}{8}$ and G $\frac{1}{4}$, width 10/14/18
- For 2x3/2-way, 5/2-way and 5/3-way valves
- 2 to 10 and 12, 14, 16 valve positions

Manifold rail for sub-base valves



- For sub-base valves 10A, 10, 14 and 18, width 10/14/18
- Manifold rail with M3, M5/M7, G $\frac{1}{8}$ and G $\frac{1}{4}$ working ports
- For 2x3/2-way, 5/2-way and 5/3-way valves
- 2 to 10, 12, 14 and 16 valve positions
- The sub-base valves always have external pneumatic spring supply. The pneumatic spring is supplied via the manifold rail. A short (for internal pneumatic spring supply) and long (for external pneumatic spring supply) blanking plug are included with the manifold rail for this purpose.



Note

Duct 84 must not be sealed by a blanking plug when connecting a sub-base valve.

Blanking plate for vacant position



For covering unused valve positions

Supply plate



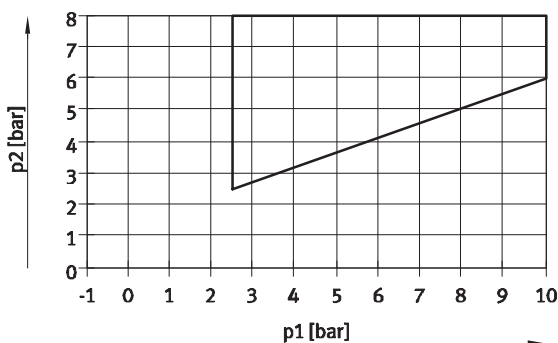
For additional air supply and exhaust via a valve position

Separator for pressure zones



For creating multiple pressure zones

Pilot pressure p2 as a function of operating pressure p1



This graph applies to the 2x3/2-way valves and 5/2-way single pilot valves with air spring:

- T32CA, T32UA, T32HA
- M52A, M52R



Note

The compressed air for the air spring is supplied from port 1 (operating pressure). To ensure reliable valve switching, the minimum pressure as per the graph must always be adhered to for the pilot pressure.

Pneumatic valves VUWG

Key features – Pneumatic components

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Creating pressure zones and separating exhaust air

Compressed air is supplied and exhausted via the manifold rail and supply plates.

The position of the supply plates and duct separations can be freely selected with the VUWG.

Pressure zones are created by isolating the internal supply ducts between the manifold sub-bases by means of appropriate duct separation.

Pressure zone separation can be used for the following ducts:

- Duct 1
- Duct 3
- Duct 5



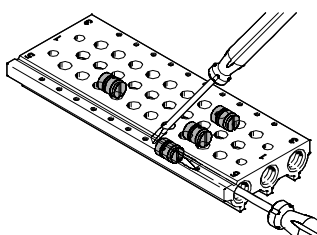
Note

- Use separators if the exhaust air pressures are high
- Use at least one supply plate/supply for each pressure zone

Duct separation

	Description	Symbol
	The pressure zones can be freely configured with the VUWG. The following duct separations are possible:	
	• Duct 1 closed	
	• Duct 1/3/5 closed	
	• Duct 3/5 closed	
	The number of pressure zones with the VUWG is only limited by the number of valve positions on the manifold rail. Note that each supply plate occupies one valve position.	

Separator VABD



Note

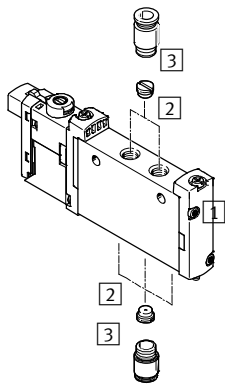
As the separators are mounted from only one side using a slotted screwdriver, several pressure zones can be created in one profile.

Pneumatic valves VUWG

Key features – Pneumatic components

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Flow control valve



- 1 Valve
- 2 Flow control valve
- 3 Fitting

Flow control mountable on port 1, 3/5 and/or on port 2/4.

Operation with different pressures

Vacuum operation

Note the following with vacuum operation:

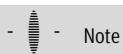
- M52 in-line valves with pneumatic spring and pneumatic/mechanical spring reset (vacuum only at 3/5)
- T32 valves with pneumatic spring reset (vacuum only at 3/5)

If external pilot air via duct 14 is used, M52 sub-base valves (B) can be used without restriction.

The remaining valve types can be used without restriction for vacuum.

Reverse operation

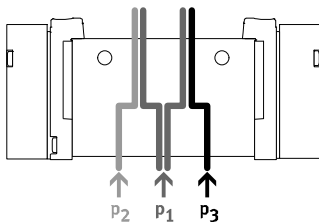
The valves with pneumatic spring are not suitable for reverse operation, since at least the minimum pilot pressure must be present in duct 1.



Note

Pressure must be present at port 1.

Pressure deflector (internal pilot air)



- If two different pressures are required.

- Different pressures can be supplied at duct 1, 3 and 5.



Note

- With internal pilot air, the minimum pilot pressure must be adhered to in duct 1

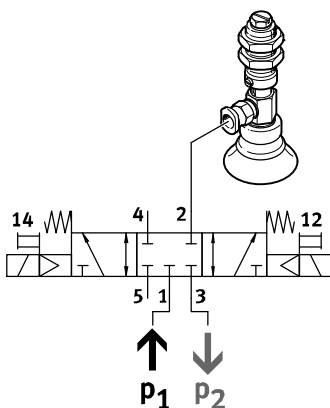
- With 2x3/2-way valves without spring return, the minimum pilot pressure must always be adhered to in duct 1

Advantages

Any pressure or vacuum can be connected at ducts 3 and 5 both with

external and internal pilot air.

Vacuum, ejector pulse and normal position



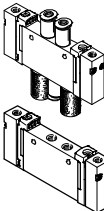
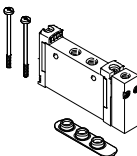
Vacuum, ejector pulse and normal position with internal pilot air can be achieved by connecting vacuum

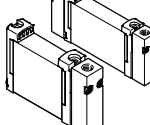
at duct 3 and pressure for the ejector pulse at duct 1.

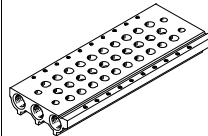
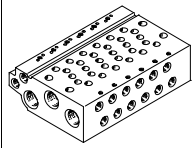
Pneumatic valves VUWG

Product range overview

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Design	Working port	Valve code	Functions and flow rate [l/min]												→ Page/ Internet
			T32C	T32U	T32H	T32C/M	T32U/M	T32H/M	M52	M52/M	B52	P53C	P53U	P53E	
In-line valve as individual valve, VUWG-L															
	M3	10A	–	–	–	–	–	–	■	■	■	■	■	■	12
	M5	10	■	■	■	■	■	■	■	■	■	■	■	■	18
	M7	10	■	■	■	■	■	■	■	■	■	■	■	■	18
	G1/8	14	■	■	■	■	■	■	■	■	■	■	■	■	28
	G1/4	18	■	■	■	■	■	■	■	■	■	■	■	■	35
In-line valve for manifold assembly, VUWG-S															
	M3	10A	–	–	–	–	–	–	■	■	■	■	■	■	15
	M5	10	■	■	■	■	■	■	■	■	■	■	■	■	25
	M7	10	■	■	■	■	■	■	■	■	■	■	■	■	25
	G1/8	14	■	■	■	■	■	■	■	■	■	■	■	■	32
	G1/4	18	■	■	■	■	■	■	■	■	■	■	■	■	39

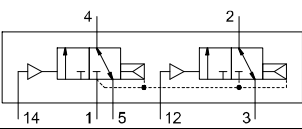
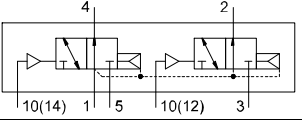
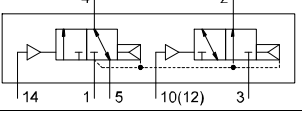
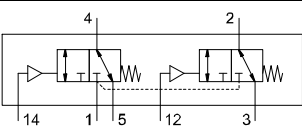
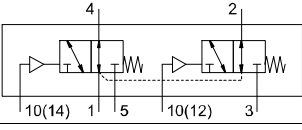
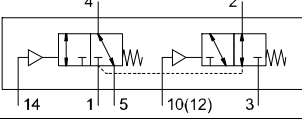
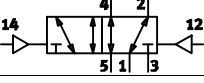
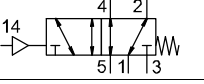
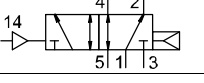
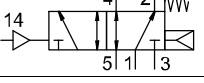
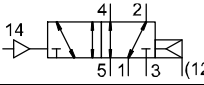
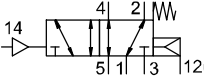
Design	Working port	Type code	Functions and flow rate [l/min]												→ Page/ Internet
			T32C	T32U	T32H	T32C/M	T32U/M	T32H/M	M52	M52/M	B52	P53C	P53U	P53E	
Sub-base valve, VUWG-B															
	–	10 A	–	–	–	–	–	–	■ 100	■ 80	■ 100	■ 90	■ 90	■ 90	42
	–	10	■ 150	■ 150	■ 150	■ 130	■ 120	■ 120	■ 210	■ 180	■ 210	■ 200	■ 200	■ 200	47
	–	10	■ 160	■ 160	■ 160	■ 140	■ 130	■ 130	■ 270	■ 230	■ 270	■ 250	■ 250	■ 250	47
	–	14	■ 540	■ 510	■ 540	■ 430	■ 410	■ 410	■ 580	■ 580	■ 580	■ 540	■ 510	■ 510	52
	–	18	■ 900	■ 900	■ 900	■ 900	■ 900	■ 900	■ 1,000	■ 1,000	■ 1,000	■ 950	■ 950	■ 950	57

Design	Working port	Type code	Description	→ Page/ Internet
Manifold rail VABM- ... -S- ... , for in-line valves (manifold assembly)				
	–	–	Valve size M3, M5, M7, G1/8, G1/4	vabm
Manifold rail VABM, for sub-base valves				
	–	10AW	Connection size M3	vabm
	–	10W	Connection size M5	
	–	10HW	Connection size M7	
	–	14W	Connection size G1/8	
	–	18W	Connection size G1/4	

Pneumatic valves VUWG

Overview of valve functions

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Valve	Valve code	Description	Valve terminal/ position function order code	Size			
				M3	M5/M7	G1/8	G1/4
2x 3/2-way valve, pneumatic spring							
	T32C-A	• Normally closed • Reset via pneumatic spring	K	-	■	■	■
	T32U-A	• Normally open • Reset via pneumatic spring	N	-	■	■	■
	T32H-A	• 1x normally open • 1x normally closed • Reset via pneumatic spring	H	-	■	■	■
2x 3/2-way valve, mechanical spring							
	T32C-M	• Normally closed • Reset via mechanical spring	VK	-	■	■	■
	T32U-M	• Normally open • Reset via mechanical spring	VN	-	■	■	■
	T32H-M	• 1x normally open • 1x normally closed • Reset via mechanical spring	VH	-	■	■	■
5/2-way valve, bistable							
	B52	• Reset via pneumatic spring	J	■	■	■	■
5/2-way valve, monostable							
	M52-M	• Reset via mechanical spring	A	■	■	■	■
	M52-A	• In-line valve • Reset via pneumatic spring	M	-	-	■	-
	M52-R	• In-line valve • Reset via pneumatic/mechanical spring	P	■	■	-	■
5/2-way valve, monostable, sub-base valve							
	M52-A	• Reset via pneumatic spring	M	-	-	■	-
	M52-R	• Reset via pneumatic/mechanical spring	P	■	■	-	■

Pneumatic valves VUWG

Overview of valve functions



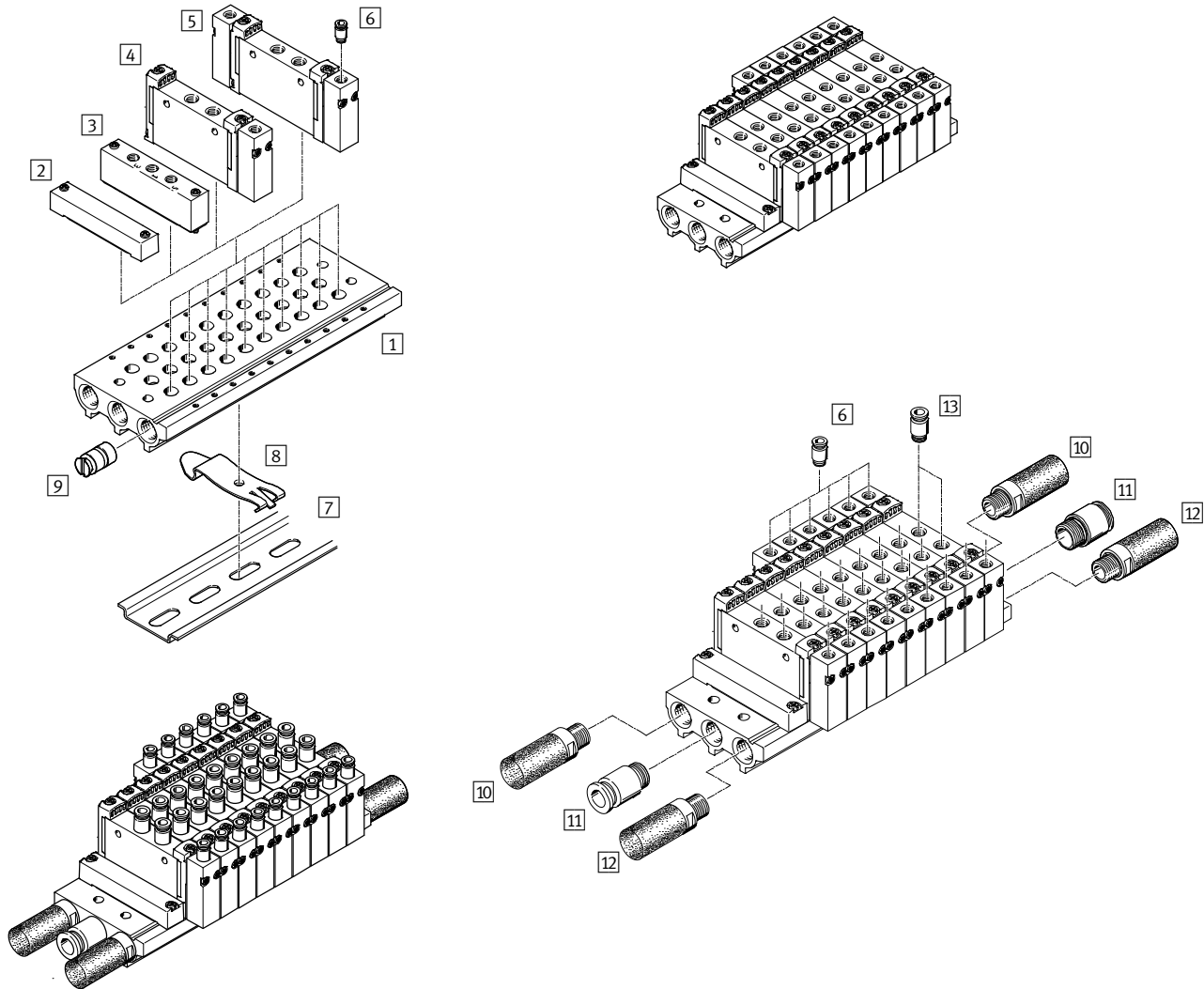
Valve	Valve code	Description	Valve terminal/ position function order code	Size			
				M3	M5/M7	G1/8	G1/4
5/3-way valve							
	P53C	• Mid-position closed • Reset via mechanical spring	G	■	■	■	■
	P53U	• Mid-position pressurised • Reset via mechanical spring	B	■	■	■	■
	P53E	• Mid-position exhausted • Reset via mechanical spring	E	■	■	■	■

Pneumatic valves VUWG

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Sample system overview – VUWG-L10 and VUWG-S10, in-line valves M5/M7

Manifold assembly



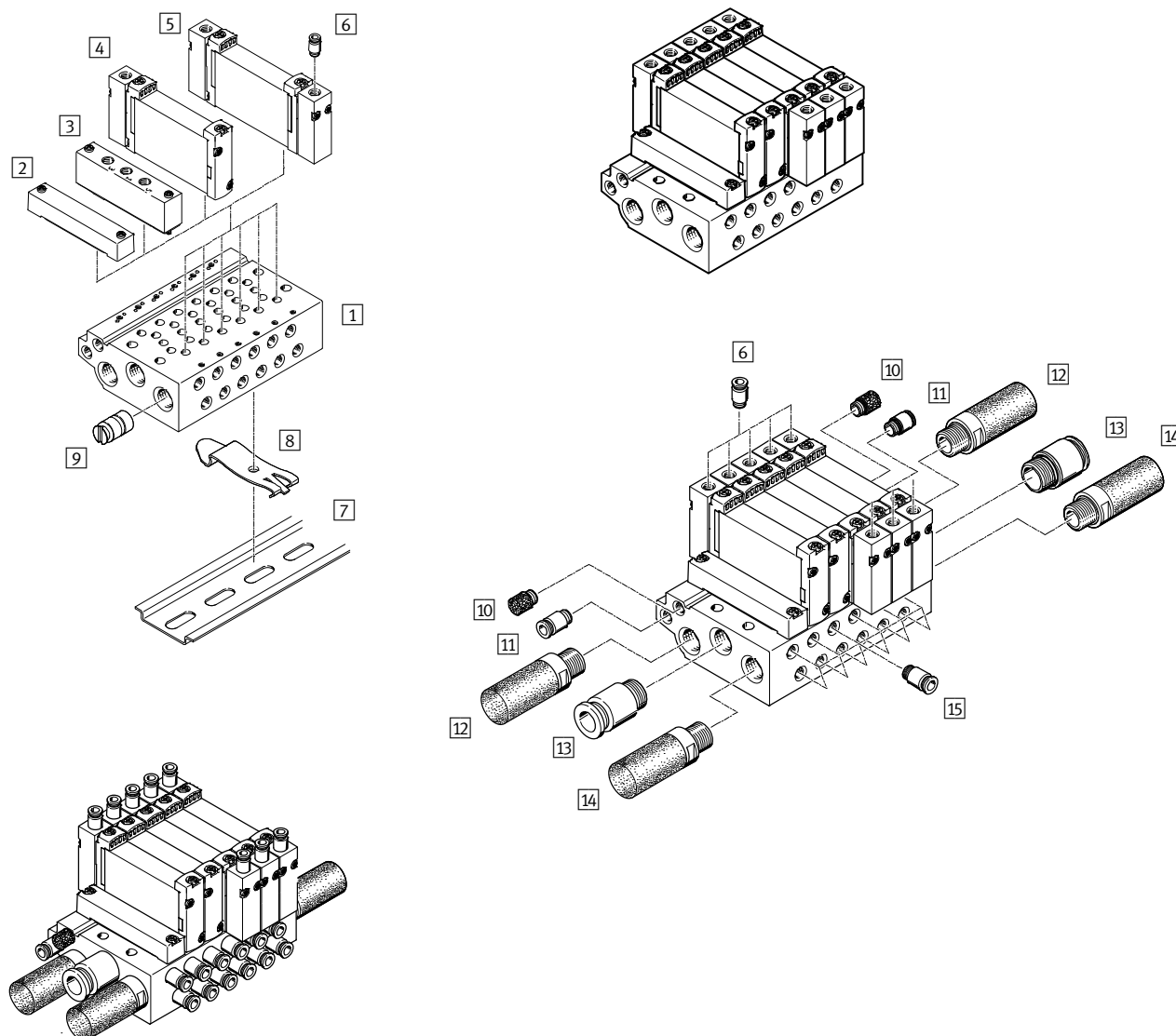
Manifold assembly and accessories			
	Type	Brief description	→ Page/Internet
1	Manifold rail	VABM-L1-10S-G18	For 2 to 10, 12, 14 and 16 valve positions
2	Blanking plate	VABB-L1-10-S	For covering an unused valve position
3	Supply plate	VABF-L1-10-P3A4	For air supply port 1 and ports 3 and 5
4	Pneumatic valve	VUWG	Single pilot pneumatic valve
5	Pneumatic valve	VUWG	Double pilot pneumatic valve
6	Push-in fitting	QS	For adapter plate for port 12 or 14
7	H-rail	NRH-35-2000	For mounting the valve manifold
8	H-rail mounting	VAME-T-M4	2 pieces for fitting the valve manifold on an H-rail
9	Separator	VABD-8-B	For creating pressure zones
10	Silencer	U	For port 3
11	Push-in fitting	QS	For port 1
12	Silencer	U	For port 5
13	Push-in fitting	QS	For ports 2 and 4

Pneumatic valves VUWG

Sample system overview – VUWG-B10, sub-base valves

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Manifold assembly



Manifold assembly and accessories				
	Type	Brief description	➔ Page/Internet	
1	Manifold rail	VABM-L1-10W-G18	For 2 to 10, 12, 14 and 16 valve positions	51
2	Blanking plate	VABB-L1-10-W	For covering an unused valve position	51
3	Supply plate	VABF-L1-10-P3A4-M5	For air supply port 1 and ports 3 and 5	51
4	Pneumatic valve	VUWG	Single pilot pneumatic valve	47
5	Pneumatic valve	VUWG	Double pilot pneumatic valve	47
6	Push-in fitting	QS	For adapter plate for port 12 or 14	62
7	H-rail	NRH-35-2000	For mounting the valve manifold	62
8	H-rail mounting	VAME-T-M4	2 pieces for fitting the valve manifold on an H-rail	62
9	Separator	VABD-6-B	For creating pressure zones	51
10	Silencer	U	For port 84	62
11	Push-in fitting	QS	For port 14	62
12	Silencer	U	For port 5	62
13	Push-in fitting	QS	For port 1	62
14	Silencer	U	For port 3	62
15	Push-in fitting	QS	For ports 2 and 4	62

Pneumatic valves VUWG-L10A, in-line valves M3

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Technical data

Function

5/2-way, single pilot
5/2-way, double pilot
5/3C, 5/3U, 5/3E

-  - Width 10 mm

-  - Flow rate
80 ... 100 l/min



General technical data						
Valve function	M52-R	B52	M52-M	P53		
Normal position	–	–	–	C ¹⁾	U ²⁾	E ³⁾
Pneumatic spring reset method	Yes ⁴⁾	–	No	No		
Mechanical spring reset method	Yes ⁴⁾	–	Yes	Yes		
Vacuum operation at port 1	No	Yes	Yes	Yes		
Vacuum operation at port 3/5	Yes					
Design	Piston spool valve					
Sealing principle	Soft					
Actuation type	Pneumatic					
Type of control	Direct					
Pneumatic spring supply	External					
Exhaust function	With flow control					
Type of mounting	Optionally via through-holes ⁶⁾ or on manifold rail					
Mounting position	Any					
Standard nominal flow rate	[l/min]	100		80	90	
Switching time on/off	[ms]	5/11	–	5/16	7/19	
Changeover time	[ms]	–	5	–	9	
Width	[mm]	10				
Port	1, 2, 3, 4, 5	M3				
	12, 14	M5				
Product weight	[g]	37	40	34	40	
Corrosion resistance class CRC ⁵⁾	2					

1) C = Normally closed

2) U = Normally open/mid-position pressurised

3) E = Normally exhausted

4) Combined reset method

5) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

6) If several valves are to be screwed together via the through-holes to form a block, a minimum gap of 0.3 mm must be ensured by placing spacer discs between them.

Operating and environmental conditions				
Valve function	M52-R ³⁾	B52	M52-M ²⁾	P53
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)			
Operating pressure	[bar]	2.5 ... 10	–0.9 ... 10	–0.9 ... 8
Pilot pressure ¹⁾	[bar]	2.5 ... 10	1.5 ... 10	3 ... 10
Ambient temperature	[°C]	–5 ... +60		
Temperature of medium	[°C]	–5 ... +50		

1) Note operating pressure/pilot pressure graph → page 4

2) Mechanical spring

3) Mixed, pneumatic/mechanical spring

Pneumatic valves VUWG-L10A, in-line valves M3

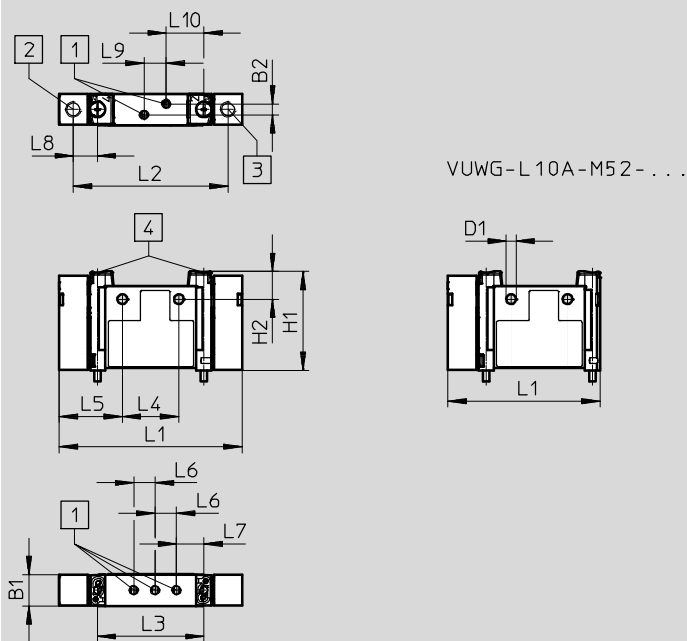
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Technical data

Information on materials	
Housing	Anodised aluminium
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions Download CAD data → www.festo.com

5/2-way and 5/3-way valve



- 1 Ports 1, 2, 3, 4, 5: M3
 2 Port 14: M5
 3 Port 12: M5
 4 M2.5 mounting screw

Type	B1	B2	D1 Ø	H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
VUWG-L10A-...	10.3	3.6	3.2	32.5	9.1	59.9	50.7	34.9	18.5	20.7	7	9	7.9	7.3	12.4
VUWG-L10A-M52-...						49.9									

Ordering data			
	Description	Part No.	Type
In-line valve M3			
	5/2-way valve, monostable		
	External pneumatic spring supply, reset method: mechanical/pneumatic spring	573795	VUWG-L10A-M52-R-M3
	External pneumatic spring supply, reset method: mechanical spring	574250	VUWG-L10A-M52-M-M3
	5/2-way valve, bistable		
	External pneumatic spring supply	573796	VUWG-L10A-B52-M3
	5/3-way valve		
	Mid-position closed, external pneumatic spring supply	573797	VUWG-L10A-P53C-M3
	Mid-position exhausted, external pneumatic spring supply	573798	VUWG-L10A-P53E-M3
	Mid-position pressurised, external pneumatic spring supply	573799	VUWG-L10A-P53U-M3

Pneumatic valves VUWG-S10A, in-line valves M3



Manifold assembly

In-line valves for manifold assembly



Dimensions

Download CAD data → www.festo.com

1

Blanking plate
VABB-L1-10A-S

2

Supply plate
VABF-L1-10A-P3A4-M5

3

Single pilot pneumatic valve

4

Double pilot pneumatic valve

5

H-rail mounting (two M4x15 screws to DIN 912 are required for mounting)

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	D1
VABM-L1-10AS-M5	59.9	49.9	29.7	18.7	7.7	2.95	40.3	6.75	24.2	34	25.9	M5

Type	D2	H1	H2	H3	H4	H5	H6	L3	L5	L6	L7	L8	L9
VABM-L1-10AS-M5	Ø 4.5	42.5	10	5.5	16.2	6.8	20.3	7	12.5	103	10.5	3.5	14

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	42.5	53	63.5	74	84.5	95	105.5	116	126.5	147.5	168.5	189.5
L2 [mm]	28.5	39	49.5	60	70.5	81	91.5	102	112.5	133.5	154.5	175.5
L4 [mm]	35.5	46	56.5	67	77.5	88	98.5	109	119.5	140.5	161.5	182.5

2017/02 – Subject to change

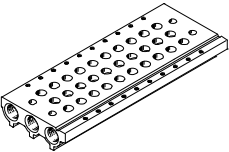
→ Internet: www.festo.com/catalog/...

15

Pneumatic valves VUWG-S10A, in-line valves M3

Ordering data



Technical data – Manifold rails							
	Port	CRC	Material ²⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	1, 3, 5				Valve	H-rail	Wall
	M5	2 ¹⁾	Wrought aluminium alloy	–0.9 ... 10	0.45	1.5	3

- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 2) Note on materials: RoHS-compliant.

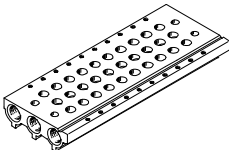
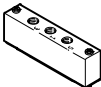
Order code – Manifold rails

VABM	-	L1	-	10A	S	-	M5	-	
Manifold assembly parts									Number of valve positions
Manifold rail		VABM							2 to 10, 12, 14 and 16
Valve series									Ports 1, 3, 5
VUWG		L1					M5	M5	
Valve width									
10 mm				10A					
Manifold rail with ports 1, 3, 5									
For M3 in-line valves					S				

Pneumatic valves VUWG-S10A, in-line valves M3

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Ordering data

Ordering data – Accessories				
	Description		Part No.	Type
Manifold rail for in-line valves (manifold assembly)				
	For valve size M3	2 valve positions	566522	VABM-L1-10AS-M5-2
		3 valve positions	566523	VABM-L1-10AS-M5-3
		4 valve positions	566524	VABM-L1-10AS-M5-4
		5 valve positions	566525	VABM-L1-10AS-M5-5
		6 valve positions	566526	VABM-L1-10AS-M5-6
		7 valve positions	566527	VABM-L1-10AS-M5-7
		8 valve positions	566528	VABM-L1-10AS-M5-8
		9 valve positions	566529	VABM-L1-10AS-M5-9
		10 valve positions	566530	VABM-L1-10AS-M5-10
		12 valve positions	566531	VABM-L1-10AS-M5-12
		14 valve positions	566532	VABM-L1-10AS-M5-14
		16 valve positions	566533	VABM-L1-10AS-M5-16
Blanking plate				
	For manifold rail for M3 in-line valves	Incl. screws and seal	569986	VABB-L1-10A
Separator				
	For manifold rail for M3 in-line valves	Separator for pressure zones	570872	VABD-4.2-B
Supply plate				
	For manifold rail for M3 in-line valves	Incl. screws and seal	569990	VABF-L1-10A-P3A4-M5
Seals for in-line valves				
	M3	Delivery unit: 10 sets (each with 2 screws and 1 seal)	566670	VABD-L1-10AX-S-M3

Pneumatic valves VUWG-L10 and VUWG-S10, in-line valves M5



Technical data

Function
2x3/2C, 2x3/2U, 2x3/2H
5/2-way, single pilot
5/2-way, double pilot
5/3C, 5/3U, 5/3E

-  - Width 10 mm
-  - Flow rate
125 ... 220 l/min



General technical data									
Valve function	T32-A			T32-M			M52-R	B52	M52-M P53
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	–	–	C ¹⁾ U ²⁾ E ³⁾
Pneumatic spring reset method	Yes			No			Yes ⁵⁾	–	No
Mechanical spring reset method	No			Yes			Yes ⁵⁾	–	Yes
Vacuum operation at port 1	No			Yes			No	Yes	
Vacuum operation at port 3/5	Yes								
Design	Piston spool valve								
Sealing principle	Soft								
Actuation type	Pneumatic								
Type of control	Direct								
Pneumatic spring supply	External								
Exhaust function	With flow control								
Type of mounting	Optionally via through-holes ⁷⁾ or on manifold rail								
Mounting position	Any								
Standard nominal flow rate	[l/min]			150	135	125	220	190	210
Switching time on/off	[ms]			4/9	6/7		6/12	–	7/16
Changeover time	[ms]			–				5	–
Width	[mm]			10					
Port	1, 2, 3, 4, 5			M5					
	12, 14			M5					
Product weight	[g]			48	51		45	48	41
Corrosion resistance class CRC ⁶⁾				2					

- 1) C = Normally closed
- 2) U=Normally open/mid-position pressurised
- 3) E = Normally exhausted
- 4) H=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open
- 5) Combined reset method
- 6) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 7) If several valves are to be screwed together via the through-holes to form a block, a minimum gap of 0.3 mm must be ensured by placing spacer discs between them.

Pneumatic valves VUWG-L10 and VUWG-S10, in-line valves M5



Technical data

Operating and environmental conditions						
Valve function	T32-A ²⁾	T32-M ³⁾	M52-R ⁴⁾	B52	M52-M ³⁾	P53
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)					
Operating pressure [bar]	1.5 ... 10	-0.9 ... 10	2.5 ... 10	-0.9 ... 10	-0.9 ... 8	-0.9 ... 10
Pilot pressure ¹⁾ [bar]	1.5 ... 10	3 ... 10	2.5 ... 10	1.5 ... 10	3 ... 10	
Ambient temperature [°C]	-5 ... +60					
Temperature of medium [°C]	-5 ... +50					

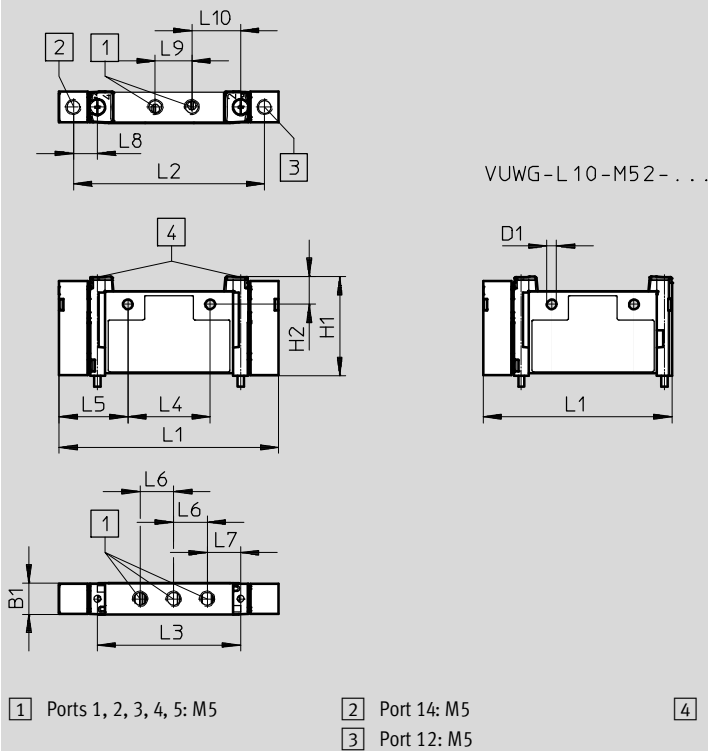
- 1) Note operating pressure/pilot pressure graph → page 4
2) Pneumatic spring
3) Mechanical spring
4) Mixed, pneumatic/mechanical spring

Information on materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions

Download CAD data → www.festo.com

2x3/2-way, 5/2-way and 5/3-way valve

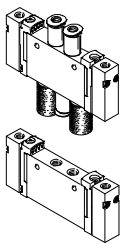


Type	B1	D1 Ø	H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
VUWG-L10-...	10.2	3.2	32.5	9.1	72	62.8	47	27	22.5	11	11	7.9	12	16
VUWG-L10-M52-...					62									

Pneumatic valves VUWG-L10 and VUWG-S10, in-line valves M5

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Technical data

Ordering data			
	Description	Part No.	Type
In-line valve M5			
	2x3/2-way valve		
	Normally closed, external pneumatic spring supply, reset method: pneumatic spring	573805	VUWG-L10-T32C-A-M5
	Normally open, external pneumatic spring supply, reset method: pneumatic spring	573806	VUWG-L10-T32U-A-M5
	1x normally open, 1x normally closed, external pneumatic spring supply, reset method: pneumatic spring	573807	VUWG-L10-T32H-A-M5
	Normally closed, external pneumatic spring supply, reset method: mechanical spring	574251	VUWG-L10-T32C-M-M5
	Normally open, external pneumatic spring supply, reset method: mechanical spring	574252	VUWG-L10-T32U-M-M5
	1x normally open, 1x normally closed, external pneumatic spring supply, reset method: mechanical spring	574253	VUWG-L10-T32H-M-M5
	5/2-way valve, monostable		
	External pneumatic spring supply, reset method: pneumatic/mechanical spring	573808	VUWG-L10-M52-R-M5
	External pneumatic spring supply, reset method: mechanical spring	574254	VUWG-L10-M52-M-M5
	5/2-way valve, bistable		
	External pneumatic spring supply	573809	VUWG-L10-B52-M5
	5/3-way valve		
	Mid-position closed, external pneumatic spring supply	573810	VUWG-L10-P53C-M5
	Mid-position exhausted, external pneumatic spring supply	573811	VUWG-L10-P53E-M5
	Mid-position pressurised, external pneumatic spring supply	573812	VUWG-L10-P53U-M5

Pneumatic valves VUWG-L10 and VUWG-S10, in-line valves M7

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Technical data

Function

2x3/2C, 2x3/2U, 2x3/2H

5/2-way, single pilot

5/2-way, double pilot

5/3C, 5/3U, 5/3E

-  - Width 10 mm

-  - Flow rate
140 ... 380 l/min



General technical data													
Valve function	T32-A			T32-M			M52-R	B52	M52-M	P53			
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	–	–	–	C ¹⁾	U ²⁾	E ³⁾	
Pneumatic spring reset method	Yes			No			Yes ⁵⁾	–	No	No			
Mechanical spring reset method	No			Yes			Yes ⁵⁾	–	Yes	Yes			
Vacuum operation at port 1	No			Yes			No	Yes					
Vacuum operation at port 3/5	Yes												
Design	Piston spool valve												
Sealing principle	Soft												
Actuation type	Pneumatic												
Type of control	Direct												
Pneumatic spring supply	External												
Exhaust function	With flow control												
Type of mounting	Optionally via through-holes ⁷⁾ or on manifold rail												
Mounting position	Any												
Standard nominal flow rate	[l/min]	190		150	140		380		320				
Switching time on/off	[ms]	4/9		6/7			6/12		–	7/16	8/25		
Changeover time	[ms]	–						5		–	11		
Width	[mm]	10											
Port	1, 2, 3, 4, 5	M7											
	12, 14	M5											
Product weight	[g]	48		51			45		48	41	48		
Corrosion resistance class CRC ⁶⁾	2												

1) C = Normally closed

2) U = Normally open/mid-position pressurised

3) E = Normally exhausted

4) H = 2x 3/2-way valve in one housing with 1x normally closed and 1x normally open

5) Combined reset method

6) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

7) If several valves are to be screwed together via the through-holes to form a block, a minimum gap of 0.3 mm must be ensured by placing spacer discs between them.

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Technical data

Operating and environmental conditions							
Valve function		T32-A ²⁾	T32-M ³⁾	M52-R ⁴⁾	B52	M52-M ³⁾	P53
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium		Lubricated operation possible (required during subsequent operation)					
Operating pressure	[bar]	1.5 ... 10	-0.9 ... 10	2.5 ... 10	-0.9 ... 10	-0.9 ... 8	-0.9 ... 10
Pilot pressure ¹⁾	[bar]	1.5 ... 10	3 ... 10	2.5 ... 10	1.5 ... 10	3 ... 10	
Ambient temperature	[°C]	-5 ... +60					
Temperature of medium	[°C]	-5 ... +50					

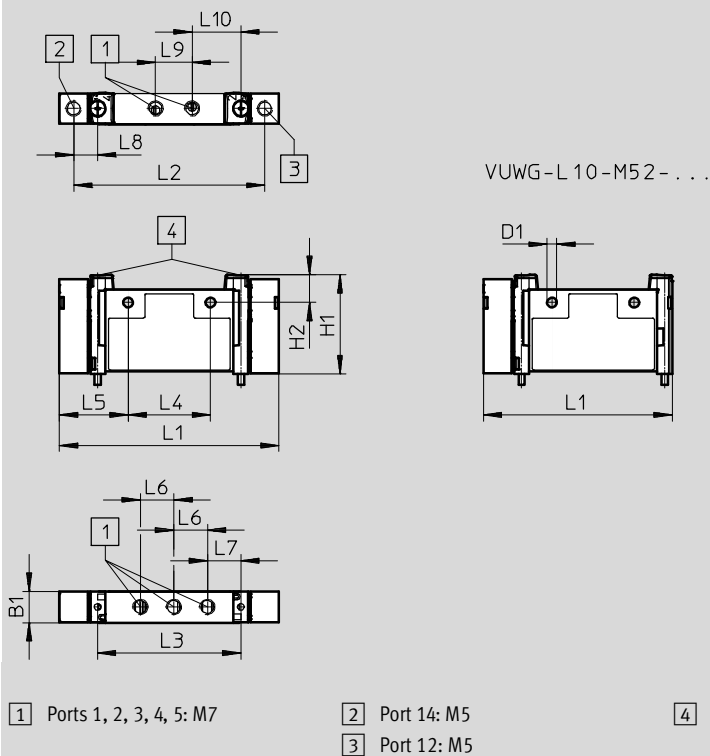
- 1) Note operating pressure/pilot pressure graph → page 4
- 2) Pneumatic spring
- 3) Mechanical spring
- 4) Mixed, pneumatic/mechanical spring

Information on materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions

Download CAD data → www.festo.com

2x3/2-way, 5/2-way and 5/3-way valve

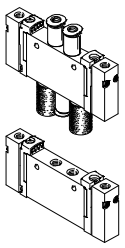


Type	B1	D1 Ø	H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
VUWG-L10-...	10.2	3.2	32.5	9.1	72	62.8	47	27	22.5	11	11	7.9	12	16
VUWG-L10-M52-...					62									

Pneumatic valves VUWG-L10 and VUWG-S10, in-line valves M7

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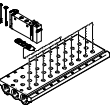
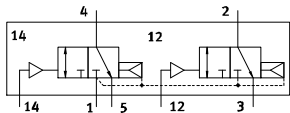
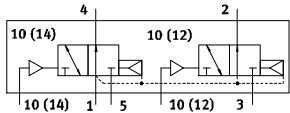
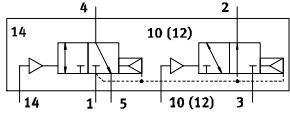
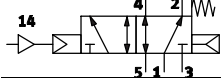
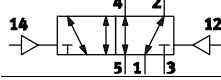
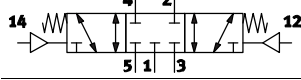
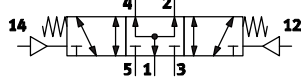
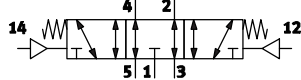
Technical data

Ordering data			
	Description	Part No.	Type
In-line valve M7			
	2x3/2-way valve		
	Normally closed, external pneumatic spring supply, reset method: pneumatic spring	573821	VUWG-L10-T32C-A-M7
	Normally open, external pneumatic spring supply, reset method: pneumatic spring	573822	VUWG-L10-T32U-A-M7
	1x normally open, 1x normally closed, external pneumatic spring supply, reset method: pneumatic spring	573823	VUWG-L10-T32H-A-M7
	Normally closed, external pneumatic spring supply, reset method: mechanical spring	574255	VUWG-L10-T32C-M-M7
	Normally open, external pneumatic spring supply, reset method: mechanical spring	574256	VUWG-L10-T32U-M-M7
	1x normally open, 1x normally closed, external pneumatic spring supply, reset method: mechanical spring	574257	VUWG-L10-T32H-M-M7
	5/2-way valve, monostable		
	External pneumatic spring supply, reset method: pneumatic/mechanical spring	573824	VUWG-L10-M52-R-M7
	External pneumatic spring supply, reset method: mechanical spring	574258	VUWG-L10-M52-M-M7
	5/2-way valve, bistable		
	External pneumatic spring supply	573825	VUWG-L10-B52-M7
	5/3-way valve		
	Mid-position closed, external pneumatic spring supply	573826	VUWG-L10-P53C-M7
	Mid-position exhausted, external pneumatic spring supply	573827	VUWG-L10-P53E-M7
	Mid-position pressurised, external pneumatic spring supply	573828	VUWG-L10-P53U-M7

Pneumatic valves VUWG-L10 and VUWG-S10, in-line valves M5/M7



Order code

VUWG	-	10	-	-
Valve design				
In-line, individual valve	L			
				
In-line valve, manifold valve incl. seal and screws	S			
				
Width				
10 mm		10		
Valve functions				
			T32C	
			T32U	
			T32H	
			M52	
			B52	
			P53C	
			P53U	
			P53E	

- 1) If Q... is chosen for the pneumatic connection, this also applies to the exhaust ports 3 and 5
- 2) Flow rate applies to 5/2-way individual valve

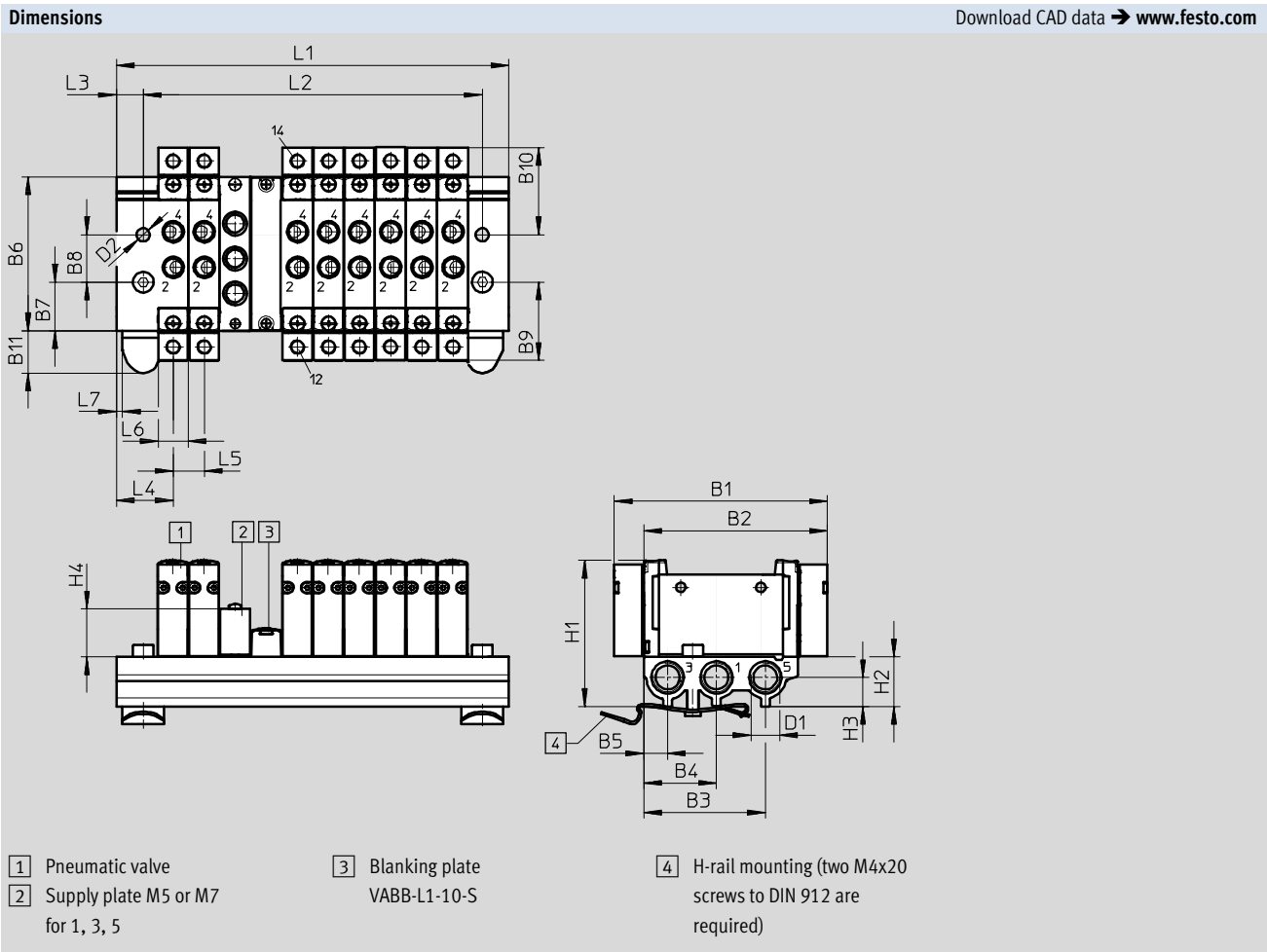
	–		–	
				Exhausting with VUWG-L
			QN	QS if QS ¹⁾
			U	Silencer
			–	M5 and M7

Pneumatic valves VUWG-S10, in-line valves M5/M7



Manifold assembly

In-line valves for manifold assembly



Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
VABM-L1-10S-G18	72	62	41	24.5	8	52	16.5	16	26.5	29.5	14.45

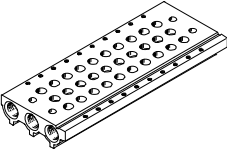
Type	D1	D2	H1	H2	H3	H4	H4	L3	L4	L5	L6	L7
VABM-L1-10S-G18	G1/8	4.5	49.3	16.8	7	16.2	16.2	9	19	10.5	10.3	2

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16	22
L1 [mm]	48.5	59	69.5	80	90.5	101	111.5	122	132.5	153.5	174.5	195.5	258.5
L2 [mm]	30.5	41	51.5	62	72.5	83	93.5	104	114.5	135.5	156.5	177.5	240.5

Pneumatic valves VUWG-S10, in-line valves M5/M7



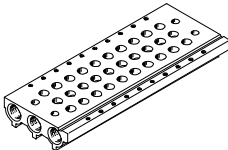
Ordering data

Technical data – Manifold rails							
	Port	CRC	Material ²⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	1, 3, 5				Valve	H-rail	Wall
	G1/8	2 ¹⁾	Wrought aluminium alloy	–0.9 ... 10	0.45	1.5	3

- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 2) Note on materials: RoHS-compliant.

Order code – Manifold rails

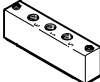
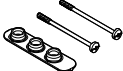
VABM	-	L1	-	10	S	-	G18	-	
Manifold assembly parts									Number of valve positions
Manifold rail		VABM							2 to 10, 12, 14 and 16
Valve series									Ports 1, 3, 5
VUWG		L1					G18	G1/8	
Valve width									
10 mm				10					
Manifold rail with ports 1, 3, 5									
For M5 and M7 in-line valves					S				

Ordering data – Manifold rail				
	Description		Part No.	Type
Manifold rail for in-line valve (manifold assembly)				
	For valve size M5/M7	2 valve positions	566558	VABM-L1-10S-G18-2
		3 valve positions	566559	VABM-L1-10S-G18-3
		4 valve positions	566560	VABM-L1-10S-G18-4
		5 valve positions	566561	VABM-L1-10S-G18-5
		6 valve positions	566562	VABM-L1-10S-G18-6
		7 valve positions	566563	VABM-L1-10S-G18-7
		8 valve positions	566564	VABM-L1-10S-G18-8
		9 valve positions	566565	VABM-L1-10S-G18-9
		10 valve positions	566566	VABM-L1-10S-G18-10
		12 valve positions	566567	VABM-L1-10S-G18-12
		14 valve positions	566568	VABM-L1-10S-G18-14
		16 valve positions	566569	VABM-L1-10S-G18-16

Pneumatic valves VUWG-S10, in-line valves M5/M7

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Ordering data

Ordering data – Accessories				
Description		Part No.	Type	
Blanking plate			Technical data → Internet: vabb	
	For manifold rail for M5/M7 in-line valves	Incl. screws and seal	566462	VABB-L1-10-S
Separator			Technical data → Internet: vabd	
	For manifold rail for M5/M7 in-line valves	Separator for pressure zones	569995	VABD-8-B
Supply plate			Technical data → Internet: vabf	
	For manifold rail for M5 in-line valves	Incl. screws and seal	569991	VABF-L1-10-P3A4-M5
	For manifold rail for M7 in-line valves		569992	VABF-L1-10-P3A4-M7
Seals for in-line valves			Technical data → Internet: vabd	
	M5	Delivery unit: 10 sets (each with 2 screws and 1 seal)	566672	VABD-L1-10X-S-M5
	M7		566673	VABD-L1-10X-S-M7

Pneumatic valves VUWG-L14 and VUWG-S14, in-line valves G1/8



Technical data

Function
2x3/2C, 2x3/2U, 2x3/2H
5/2-way, single pilot
5/2-way, double pilot
5/3C, 5/3U, 5/3E

- - Width 14 mm
- - Flow rate
500 ... 780 l/min



General technical data													
Valve function	T32-A			T32-M			M52-A	B52	M52-M	P53			
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	–	–	–	C ¹⁾	U ²⁾	E ³⁾	
Pneumatic spring reset method	Yes			No			Yes	–	No	No			
Mechanical spring reset method	No			Yes			No	–	Yes	Yes			
Vacuum operation at port 1	No			Yes			No	Yes					
Vacuum operation at port 3/5	Yes												
Design	Piston spool valve												
Sealing principle	Soft												
Actuation type	Pneumatic												
Type of control	Direct												
Pneumatic spring supply	External												
Exhaust function	With flow control												
Type of mounting	Optionally via through-holes ⁶⁾ or on manifold rail												
Mounting position	Any												
Standard nominal flow rate	[l/min]	650	600	650	550	500	780			650	600		
Switching time on/off	[ms]	6/19			9/13		12/22	–	12/32	8/30			
Changeover time	[ms]	–						6	–	16			
Width	[mm]	14											
Port	1, 2, 3, 4, 5	G1/8											
	12, 14	M5											
Product weight	[g]	81			77		75	81	67	81			
Corrosion resistance class CRC ⁵⁾	2												

1) C = Normally closed
2) U=Normally open/mid-position pressurised
3) E = Normally exhausted
4) H=2x3/2-way valve in one housing with 1x normally closed and 1x normally open
5) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
6) If several valves are to be screwed together via the through-holes to form a block, a minimum gap of 0.3 mm must be ensured by placing spacer discs between them.

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Technical data

Operating and environmental conditions						
Valve function	T32-A ²⁾	T32-M ³⁾	M52-A ²⁾	B52	M52-M ³⁾	P53
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)					
Operating pressure [bar]	1.5 ... 10	−0.9 ... 10	2.5 ... 10	−0.9 ... 10	−0.9 ... 8	−0.9 ... 10
Pilot pressure ¹⁾ [bar]	1.5 ... 10	3 ... 10	2.5 ... 10	1.5 ... 10	3 ... 10	
Ambient temperature [°C]	−5 ... +60					
Temperature of medium [°C]	−5 ... +50					

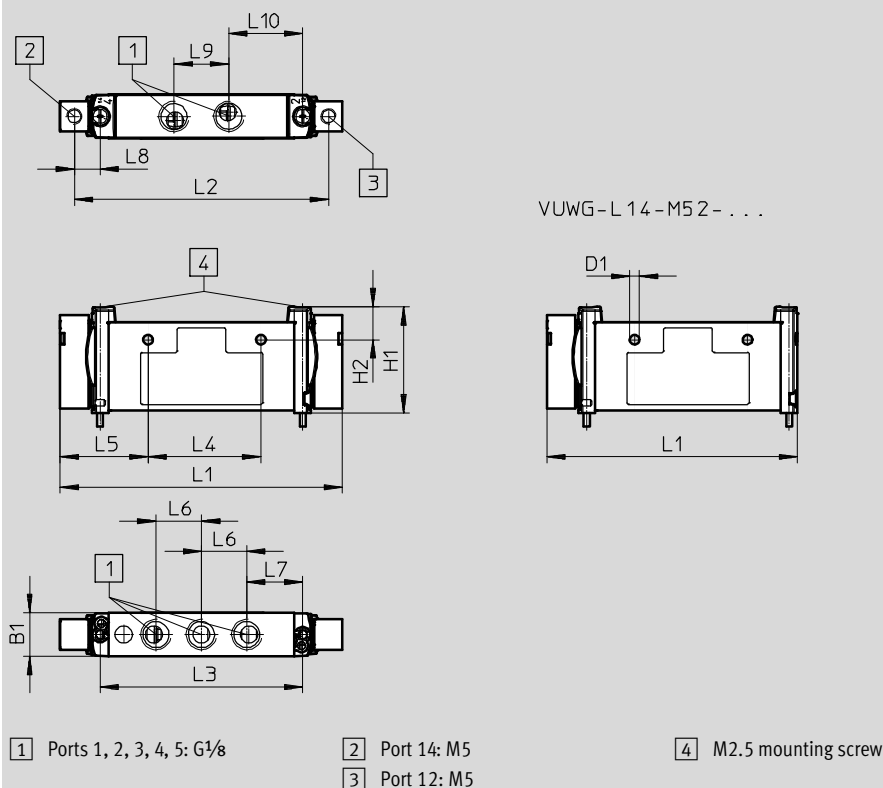
- 1) Note operating pressure/pilot pressure graph → page 4
- 2) Pneumatic spring
- 3) Mechanical spring

Information on materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions

Download CAD data → www.festo.com

2x3/2-way, 5/2-way and 5/3-way valve

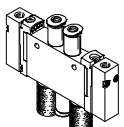
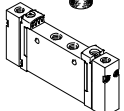


Type	B1	D1 Ø	H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
VUWG-L14-...	14.4	3.2	34.8	10.8	92.6	83.4	66.5	37	28.8	14.9	18.35	8.45	18	24.25
VUWG-L14-M52-...					82.25									

Pneumatic valves VUWG-L14 and VUWG-S14, in-line valves G1/8

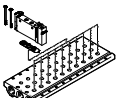
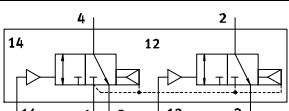
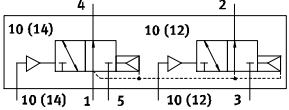
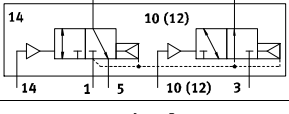
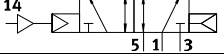
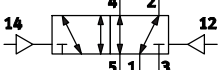
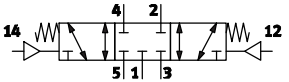
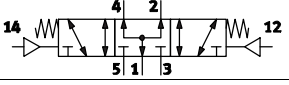
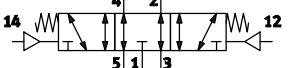
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Technical data

Ordering data			
	Description	Part No.	Type
In-line valve G1/8			
 	2x3/2-way valve		
	Normally closed, external pneumatic spring supply, reset method: pneumatic spring	573829	VUWG-L14-T32C-A-G18
	Normally open, external pneumatic spring supply, reset method: pneumatic spring	573830	VUWG-L14-T32U-A-G18
	1x normally open, 1x normally closed, external pneumatic spring supply, reset method: pneumatic spring	573831	VUWG-L14-T32H-A-G18
	Normally closed, external pneumatic spring supply, reset method: mechanical spring	574259	VUWG-L14-T32C-M-G18
	Normally open, external pneumatic spring supply, reset method: mechanical spring	574260	VUWG-L14-T32U-M-G18
	1x normally open, 1x normally closed, external pneumatic spring supply, reset method: mechanical spring	574261	VUWG-L14-T32H-M-G18
	5/2-way valve, monostable		
	External pneumatic spring supply, reset method: pneumatic/mechanical spring	573832	VUWG-L14-M52-A-G18
	External pneumatic spring supply, reset method: mechanical spring	574262	VUWG-L14-M52-M-G18
	5/2-way valve, bistable		
	External pneumatic spring supply	573833	VUWG-L14-B52-G18
	5/3-way valve		
	Mid-position closed, external pneumatic spring supply	573834	VUWG-L14-P53C-G18
	Mid-position exhausted, external pneumatic spring supply	573835	VUWG-L14-P53E-G18
	Mid-position pressurised, external pneumatic spring supply	573836	VUWG-L14-P53U-G18

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Order code

VUWG		-	14	-	-	-	-	-	-
Valve design									
In-line, individual valve				L					
									
In-line valve, manifold valve incl. seal and screws				S					
									
Width									
14 mm				14					
Valve functions									
					T32C				
					T32U				
					T32H				
					M52				
					B52				
					P53C				
					P53U				
					P53E				
Exhausting with VUWG-L									
QN		QS if QS ¹⁾							
U		Silencer							
-		G $\frac{1}{8}$							
Pneumatic connection						Flow rate [l/min] ²⁾			
G18		Thread G $\frac{1}{8}$				780			
Q4		Push-in connector 4 mm/G $\frac{1}{8}$				200			
Q6		Push-in connector 6 mm/G $\frac{1}{8}$				400			
Q8		Push-in connector 8 mm/G $\frac{1}{8}$				700			
T14		Push-in connector $\frac{1}{4}$ "				400			
T516		Push-in connector $\frac{5}{16}$ "				700			
Reset method									
A		Pneumatic spring for T32 and M52							
M		Mechanical spring for T32 and M52							
-		With B52 and P53							

- 1) If Q... is chosen for the pneumatic connection, this also applies to the exhaust ports 3 and 5

2) Flow rate applies to 5/2-way individual valve

Pneumatic valves VUWG-S14, in-line valves G1/8



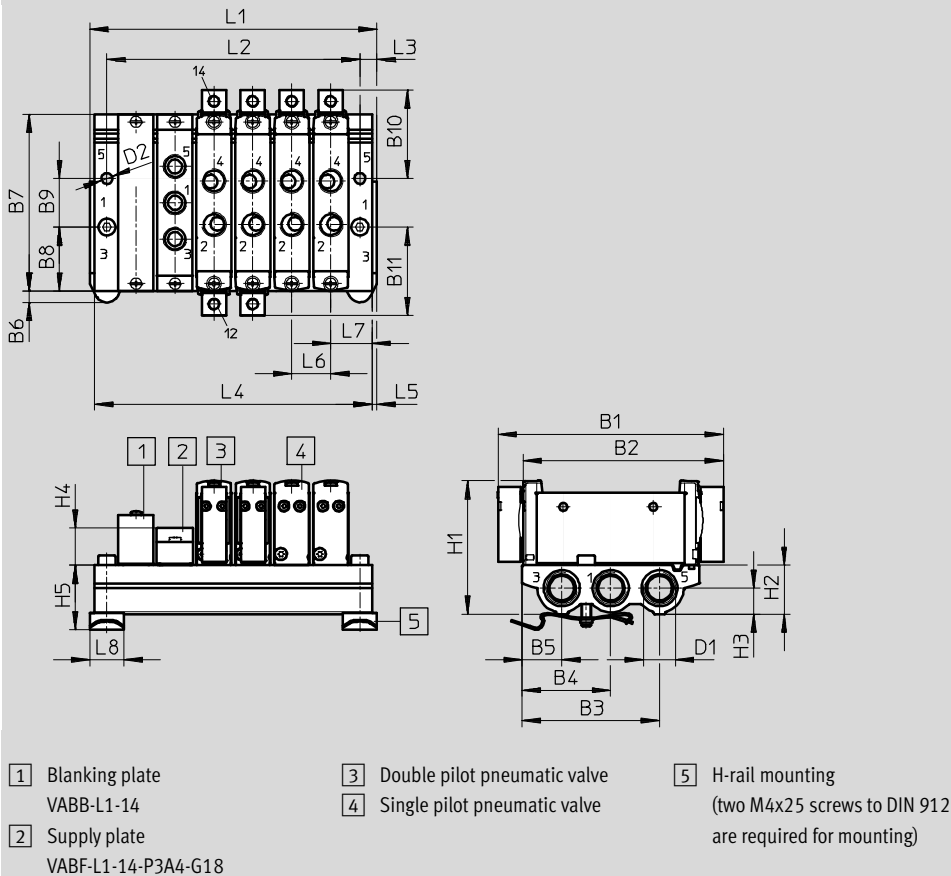
Manifold assembly

In-line valves for manifold assembly



Dimensions

Download CAD data → www.festo.com



Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	D1
VABM-L1-14S-G14	92.6	82.3	56.6	36.5	16.4	4.5	72.9	26.45	20	36.3	36.3	G3/4

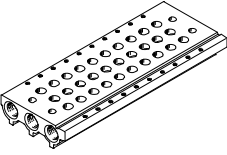
Type	D2	H1	H2	H3	H4	H5	L3	L5	L6	L7
VABM-L1-14S-G14	Ø 4.5	54.8	20	10.6	15.4	26.4	7	2	16	17

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	54	70	86	98	118	134	150	166	182	214	246	278
L2 [mm]	40	56	72	88	104	120	136	152	168	200	232	264
L4 [mm]	50	66	82	98	114	130	146	162	178	210	242	274

Pneumatic valves VUWG-S14, in-line valves G1/8



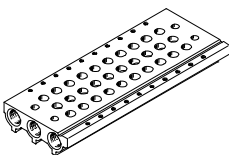
Ordering data

Technical data – Manifold rails							
	Port	CRC	Material ²⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	1, 3, 5				Valve	H-rail	Wall
	G1/4	2 ¹⁾	Wrought aluminium alloy	–0.9 ... 10	0.65	1.5	3

- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 2) Note on materials: RoHS-compliant.

Order code – Manifold rails

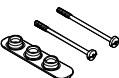
VABM	–	L1	–	14	S	–	G14	–	
Manifold assembly parts									Number of valve positions
Manifold rail		VABM							2 to 10, 12, 14 and 16
Valve series									Ports 1, 3, 5
VUWG		L1					G14	G1/4	
Valve width									
14 mm				14					
Manifold rail with ports 1, 3, 5									
For G1/8 in-line valves					S				

Ordering data – Manifold rail				
	Description		Part No.	Type
Manifold rail for in-line valves (manifold assembly)				
	For valve size G1/8	2 valve positions	566618	VABM-L1-14S-G14-2
		3 valve positions	566619	VABM-L1-14S-G14-3
		4 valve positions	566620	VABM-L1-14S-G14-4
		5 valve positions	566621	VABM-L1-14S-G14-5
		6 valve positions	566622	VABM-L1-14S-G14-6
		7 valve positions	566623	VABM-L1-14S-G14-7
		8 valve positions	566624	VABM-L1-14S-G14-8
		9 valve positions	566625	VABM-L1-14S-G14-9
		10 valve positions	566626	VABM-L1-14S-G14-10
		12 valve positions	566627	VABM-L1-14S-G14-12
		14 valve positions	566628	VABM-L1-14S-G14-14
		16 valve positions	566629	VABM-L1-14S-G14-16

Pneumatic valves VUWG-S14, in-line valves G1/8

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Ordering data

Ordering data – Accessories			
	Description	Part No.	Type
Blanking plate Technical data → Internet: vabb			
	For manifold rail for G1/8 in-line valves	Incl. screws and seal	569989 VABB-L1-14
Separator Technical data → Internet: vabd			
	For manifold rail for G1/8 in-line valves	Separator for pressure zones	569996 VABD-10-B
Supply plate Technical data → Internet: vabf			
	For manifold rail for G1/8 in-line valves	Incl. screws and seal	569993 VABF-L1-14-P3A4-G18
Seals for in-line valves Technical data → Internet: vabd			
	G1/8	Delivery unit: 10 sets (each with 2 screws and 1 seal)	566675 VABD-L1-14X-S-G18

Pneumatic valves VUWG-L18 and VUWG-S18, in-line valves G¹/₄

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Technical data

Function

2x3/2C, 2x3/2U, 2x3/2H

5/2-way, single pilot

5/2-way, double pilot

5/3C, 5/3U, 5/3E

 Width 18 mm

 Flow rate
1,000 ... 1,380 l/min


General technical data													
Valve function	T32-A			T32-M			M52-R	B52	M52-M	P53			
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	–	–	–	C ¹⁾	U ²⁾	E ³⁾	
Pneumatic spring reset method	Yes			No			Yes ⁵⁾	–	No	No			
Mechanical spring reset method	No			Yes			Yes ⁵⁾	–	Yes	Yes			
Vacuum operation at port 1	No			Yes			No	Yes					
Vacuum operation at port 3/5	Yes												
Design	Piston spool valve												
Sealing principle	Soft												
Actuation type	Pneumatic												
Type of control	Direct												
Pneumatic spring supply	External												
Exhaust function	With flow control												
Type of mounting	Optionally via through-holes ⁷⁾ or on manifold rail												
Mounting position	Any												
Standard nominal flow rate	[l/min]	1,000					1,300	1,380	1,300	1,200			
Switching time on/off	[ms]	12/36			17/25		16/40	–	12/59	17/69			
Changeover time	[ms]	–						12	–	34			
Width	[mm]	18											
Port	1, 2, 3, 4, 5	G1/4											
	12, 14	M5											
Product weight	[g]	160					152	160	152				
Corrosion resistance class CRC ⁶⁾	2												

1) C = Normally closed

2) U=Normally open/mid-position pressurised

3) E = Normally exhausted

4) H=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open

5) Combined reset method

6) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

7) If several valves are to be screwed together via the through-holes to form a block, a minimum gap of 0.3 mm must be ensured by placing spacer discs between them.

Pneumatic valves VUWG-L18 and VUWG-S18, in-line valves G1/4

Technical data

Operating and environmental conditions						
Valve function	T32-A ²⁾	T32-M ³⁾	M52-R ⁴⁾	B52	M52-M ³⁾	P53
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)					
Operating pressure [bar]	1.5 ... 10	−0.9 ... 10	2.5 ... 10	−0.9 ... 10	−0.9 ... 8	−0.9 ... 10
Pilot pressure ¹⁾ [bar]	1.5 ... 10	3 ... 10	2.5 ... 10	1.5 ... 10	3 ... 10	
Ambient temperature [°C]	−5 ... +60					
Temperature of medium [°C]	−5 ... +50					

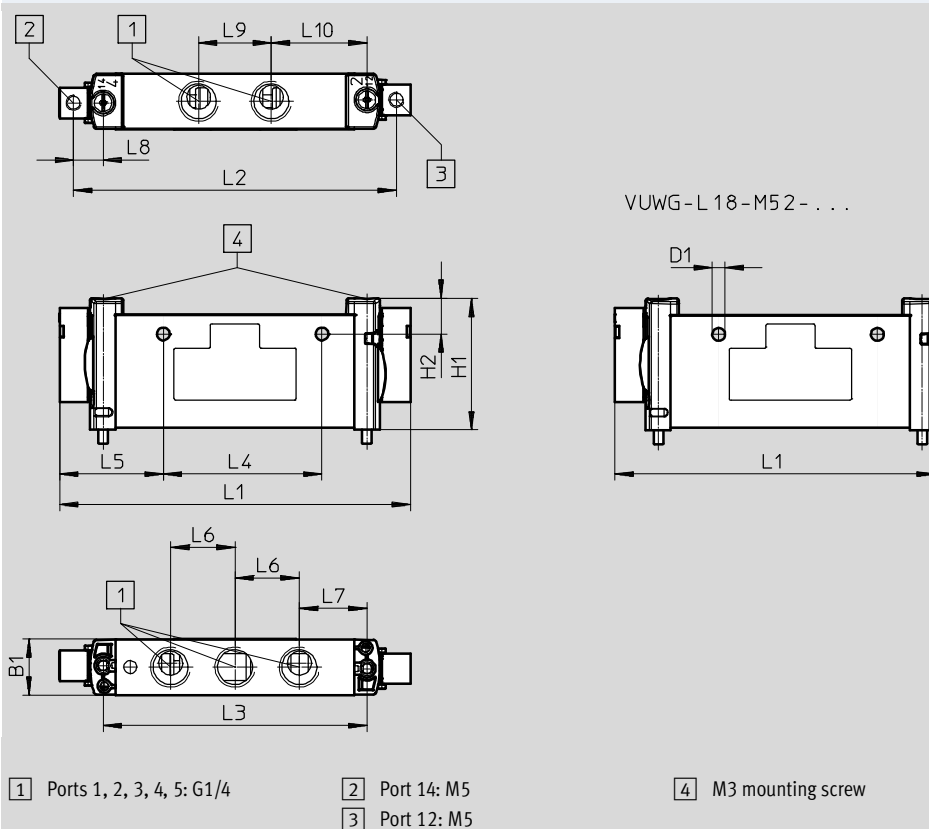
- 1) Note operating pressure/pilot pressure graph → page 4
2) Pneumatic spring
3) Mechanical spring
4) Mixed, pneumatic/mechanical spring

Information on materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions

Download CAD data → www.festo.com

2x3/2-way, 5/2-way and 5/3-way valve

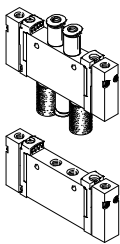


Type	B1	D1 Ø	H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
VUWG-L18-...	18.3	4.2	43.1	6.4	115	96.1	86.4	52	34	21.1	22.1	9.7	23.8	31.3
VUWG-L18-M52-...					105									

Pneumatic valves VUWG-L18 and VUWG-S18, in-line valves G¹/₄

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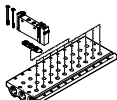
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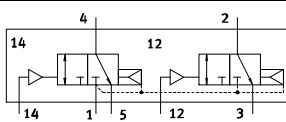
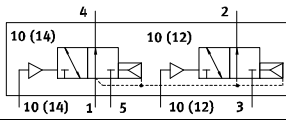
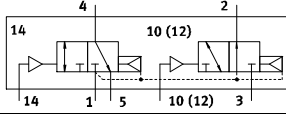
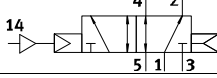
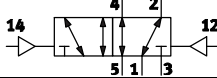
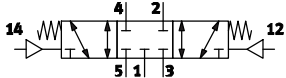
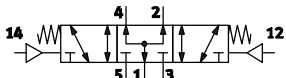
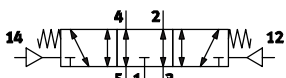
Ordering data			
	Description	Part No.	Type
	In-line valve G ¹ / ₄		
	2x3/2-way valve		
	Normally closed, external pneumatic spring supply, reset method: pneumatic spring	574263	VUWG-L18-T32C-A-G14
	Normally open, external pneumatic spring supply, reset method: pneumatic spring	574264	VUWG-L18-T32U-A-G14
	1x normally open, 1x normally closed, external pneumatic spring supply, reset method: pneumatic spring	574265	VUWG-L18-T32H-A-G14
	Normally closed, external pneumatic spring supply, reset method: mechanical spring	574266	VUWG-L18-T32C-M-G14
	Normally open, external pneumatic spring supply, reset method: mechanical spring	574267	VUWG-L18-T32U-M-G14
	1x normally open, 1x normally closed, external pneumatic spring supply, reset method: mechanical spring	574268	VUWG-L18-T32H-M-G14
	5/2-way valve, monostable		
	External pneumatic spring supply, reset method: pneumatic/mechanical spring	574269	VUWG-L18-M52-R-G14
	External pneumatic spring supply, reset method: mechanical spring	574270	VUWG-L18-M52-M-G14
	5/2-way valve, bistable		
	External pneumatic spring supply	574271	VUWG-L18-B52-G14
	5/3-way valve		
	Mid-position closed, external pneumatic spring supply	574272	VUWG-L18-P53C-G14
	Mid-position exhausted, external pneumatic spring supply	574273	VUWG-L18-P53E-G14
	Mid-position pressurised, external pneumatic spring supply	574274	VUWG-L18-P53U-G14

Pneumatic valves VUWG-L18 and VUWG-S18, in-line valves G¹/₄

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Order code

VUWG	-	18	-	-
Valve design				
In-line, individual valve		L		
				
In-line valve, manifold valve incl. seal and screws		S		
				
Width				
18 mm		18		

Valve functions	
	T32C
	T32U
	T32H
	M52
	B52
	P53C
	P53U
	P53E

Exhausting with VUWG-L	
QN	QS if QS ¹⁾
U	Silencer
-	G ¹ / ₈

Pneumatic connection	Flow rate [l/min] ²⁾
G14 Thread G ¹ / ₄	1,300
Q6 Push-in connector 6 mm	400
Q8 Push-in connector 8 mm	700
Q10 Push-in connector 10 mm	1,100
T14 Push-in connector 1/4"	400
T38 Push-in connector 3/8"	1,200
T516 Push-in connector 5/16"	700

Reset method	
A	Pneumatic spring for T32 and M52
M	Mechanical spring for T32 and M52
R	Pneu./mech. spring for M52
-	With B52 and P53

1) If Q... is chosen for the pneumatic connection, this also applies to the exhaust ports 3 and 5

2) Flow rate applies to 5/2-way individual valve

Pneumatic valves VUWG-S18, in-line valves G1/4

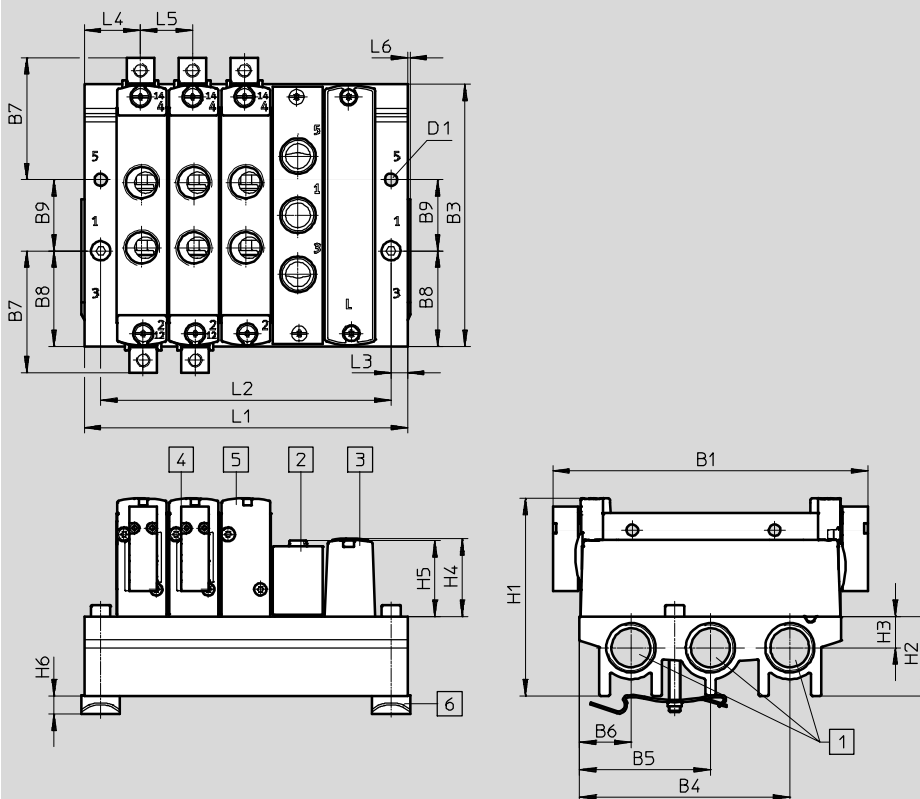
Manifold assembly

In-line valves for
manifold assembly



Dimensions

Download CAD data → www.festo.com



- | | | | |
|----------------------------------|---|----------------------------------|--|
| [1] Ports 1, 3 and 5: G3/8 | [3] Supply plate
VABF-L1-18-P3A4-G14 | [5] Single pilot pneumatic valve | [6] H-rail mounting (two M4x35
screws to DIN 912 are
required) |
| [2] Blanking plate
VABB-L1-18 | [4] Double pilot pneumatic valve | | |

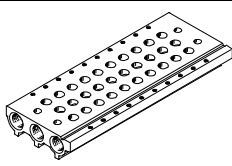
Type	B1	B3	B4	B5	B6	B7	B8	B9	D1	H1	H2
VABM-L1-18S-G38	115	95.6	76.8	47.8	18.8	44.5	34.8	26	4.5	72.1	29

Type	H3	H4	H5	H6	L3	L4	L5	L6
VABM-L1-18S-G38	11.5	28.4	27.6	6.5	6	20.5	19	1

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	61	80	99	118	137	156	175	194	213	251	289	327
L2 [mm]	49	68	87	106	125	144	163	182	201	239	277	315

Pneumatic valves VUWG-S18, in-line valves G1/4

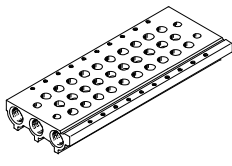
Ordering data

Technical data – Manifold rails							
	Port	CRC	Material ²⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	1, 3, 5				Valve	H-rail	Wall
	G3/8	2 ¹⁾	Wrought aluminium alloy	-0.9 ... 10	0.65	1.5	3

- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 2) Note on materials: RoHS-compliant.

Order code – Manifold rails

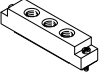
VABM	-	L1	-	18	S	-	G38	-	
Manifold assembly parts									Number of valve positions
Manifold rail		VABM							2 to 10, 12, 14 and 16
Valve series									Ports 1, 3, 5
VUWG		L1					G38	G3/8	
Valve width									
18 mm				18					
Manifold rail with ports 1, 3, 5									
For G1/8 in-line valves					S				

Ordering data – Manifold rail				
	Description	Part No.	Type	
	For valve size G1/4	2 valve positions	574455	VABM-L1-18S-G38-2
		3 valve positions	574456	VABM-L1-18S-G38-3
		4 valve positions	574457	VABM-L1-18S-G38-4
		5 valve positions	574458	VABM-L1-18S-G38-5
		6 valve positions	574459	VABM-L1-18S-G38-6
		7 valve positions	574460	VABM-L1-18S-G38-7
		8 valve positions	574461	VABM-L1-18S-G38-8
		9 valve positions	574462	VABM-L1-18S-G38-9
		10 valve positions	574463	VABM-L1-18S-G38-10
		12 valve positions	574464	VABM-L1-18S-G38-12
		14 valve positions	574465	VABM-L1-18S-G38-14
		16 valve positions	574466	VABM-L1-18S-G38-16

Pneumatic valves VUWG-S18, in-line valves G¹/₄

FESTO

Ordering data

Ordering data – Accessories			
	Description	Part No.	Type
Blanking plate Technical data → Internet: vabb			
	For manifold rail for G ¹ / ₄ in-line valves	Incl. screws and seal	574482 VABB-L1-18
Separator Technical data → Internet: vabd			
	For manifold rail for G ¹ / ₄ in-line valves	Separator for pressure zones	574483 VABD-14-B
Supply plate Technical data → Internet: vabf			
	For manifold rail for G ¹ / ₄ in-line valves	Incl. screws and seal	574481 VABF-L1-18-P3A4-G14
Seals for in-line valves Technical data → Internet: vabd			
	G ¹ / ₄	Delivery unit: 10 sets (each with 2 screws and 1 seal)	574479 VABD-L1-18X-S-G14

 **Note**

Connect supply plate at port 1 with compressed air. Reverse operation (pressure at port 3/5) is not permissible.

Pneumatic valves VUWG-B10A, sub-base valves



Technical data

Function
 5/2-way, single pilot
 5/2-way, double pilot
 5/3C, 5/3U, 5/3E

-  - Width 10 mm
 -  - Flow rate
 80 ... 100 l/min



General technical data						
Valve function		M52-R	B52	M52-M	P53	
Normal position		–	–	–	C ¹⁾	U ²⁾ E ³⁾
Pneumatic spring reset method		Yes ⁴⁾	–	No	No	
Mechanical spring reset method		Yes ⁴⁾	–	Yes	Yes	
Vacuum operation at port 1		No	Yes			
Vacuum operation at port 3/5		Yes				
Design		Piston spool valve				
Sealing principle		Soft				
Actuation type		Pneumatic				
Type of control		Direct				
Pneumatic spring supply		External				
Exhaust function		With flow control				
Type of mounting		On manifold rail				
Mounting position		Any				
Standard nominal flow rate		[l/min]	100		80	90
Switching time on/off		[ms]	5/11	–	5/16	7/19
Changeover time		[ms]	–	5	–	9
Width		[mm]	10			
Port	1, 3, 5	M7 in manifold rail				
	2, 4	M5 in manifold rail				
	12, 14	M5				
Product weight		[g]	37	40	34	40
Corrosion resistance class CRC ⁵⁾		2				

1) C = Normally closed
 2) U = Normally open/mid-position pressurised
 3) E = Normally exhausted
 4) Combined reset method
 5) Corrosion resistance class 2 according to Festo standard 940 070
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Pneumatic valves VUWG-B10A, sub-base valves

Technical data

Operating and environmental conditions				
Valve function	M52-R ³⁾	B52	M52-M ²⁾	P53
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)			
Operating pressure [bar]	2.5 ... 10	-0.9 ... 10	-0.9 ... 8	-0.9 ... 10
Pilot pressure ¹⁾ [bar]	2.5 ... 10	1.5 ... 10	3 ... 10	
Ambient temperature [°C]	-5 ... +60			
Temperature of medium [°C]	-5 ... +50			

- 1) Note operating pressure/pilot pressure graph → page 4
- 2) Mechanical spring
- 3) Mixed, pneumatic/mechanical spring

Information on materials	
Housing	Anodised aluminium
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions

Download CAD data → www.festo.com

5/2-way and 5/3-way valve

VUWG-B10A-M52- . . .

1

Ports 1, 2, 3, 4, 5

2

Port 14: M5

3

Port 12: M5

4

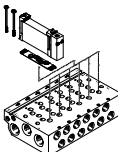
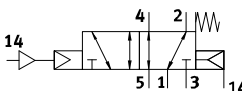
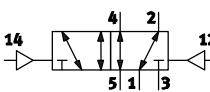
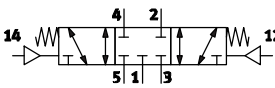
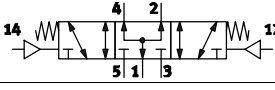
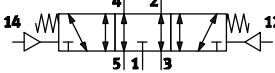
M2.5 mounting screw

Type	B1	H1	L1	L2	L3	L8
VUWG-B10A-...	10.3	32.5	59.9	50.7	34.9	7.9
VUWG-B10A-M52-...			49.9			

Pneumatic valves VUWG-B10A, sub-base valves



Order code

VUWG	-	B	10A	-	-	-	F
Valve design							
Sub-base, manifold valve			B				
incl. seal and screws							
							
Width							
10 mm			10A				
Valve functions							
			M52				
			B52				
			P53C				
			P53U				
			P53E				

-	F
Pneumatic connection	
F	In the manifold rail
Reset method	
M	Mechanical spring for M52
R	Pneu./mech. spring for M52
-	With B52 and P53

Pneumatic valves VUWG-B10A, sub-base valves

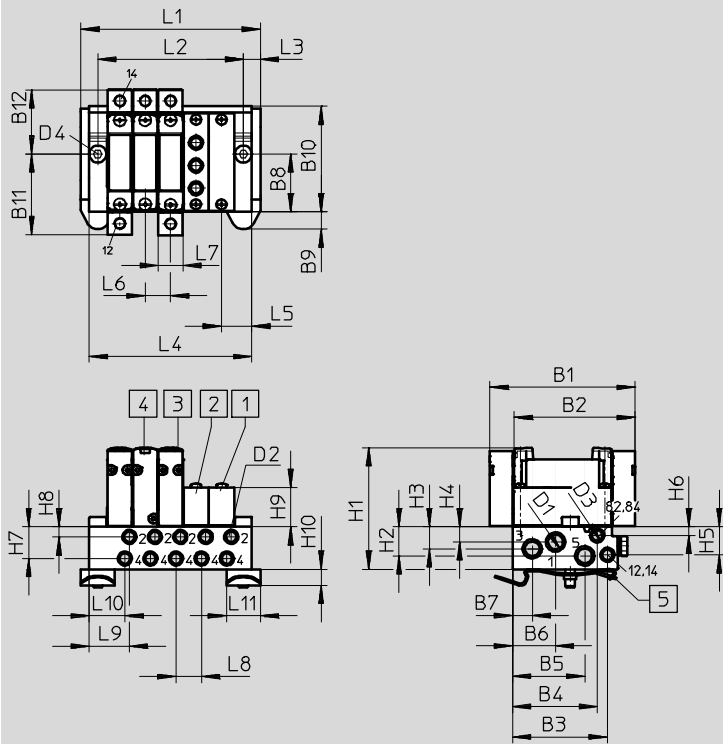
Manifold assembly

Sub-base valve for
manifold assembly
M5 connection



Dimensions

Download CAD data → www.festo.com



- | | | | | | |
|---|----------------------------------|---|------------------------------|---|--|
| 1 | Blanking plate VABB-L1-10A | 3 | Double pilot pneumatic valve | 5 | H-rail mounting (two M4x25 screws to DIN 912 are required) |
| 2 | Supply plate VABF-L1-10A-P3A4-M5 | 4 | Single pilot pneumatic valve | | |

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
VABM-L1-10AW-M7	59.9	49.9	39.1	35	29.8	17.8	8.2	24	7.15	43.5	33.45	26.45

Type	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	D1	D2
VABM-L1-10AW-M7	50	12	9.1	6.3	11.6	3.6	13.1	4.2	16.2	6.8	M7	M5

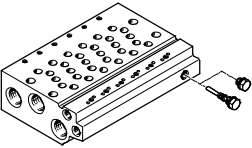
Type	D3	D4	L3	L5	L6	L7	L8	L9	L10	L11
VABM-L1-10AW-M7	M5	Ø 4.5	7	12.5	10.5	10.2	10.5	16.5	14.7	11

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	42.5	53	63.5	74	84.5	96	106.5	116	126.5	147.5	168.5	189.5
L2 [mm]	28.5	39	49.5	60	70.5	81	91.5	102	112.5	133.5	154.5	175.5
L4 [mm]	35.5	46	56.5	67	77.5	89	99.5	109	119.5	140.5	161.5	182.5

Pneumatic valves VUWG-B10A, sub-base valves



Ordering data

Technical data – Manifold rails ¹⁾									
	Port			CRC	Material ³⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	2, 4	1, 3, 5	12/14, 82/84				Valve	H-rail	Wall
	M5	M7	M5	2 ²⁾	Wrought aluminium alloy	–0.9 ... 10	0.45	1.5	1.5

- 1) Blanking plugs are included with the manifold rail.
- 2) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 3) Note on materials: RoHS-compliant.

Order code – Manifold rails M3

VABM	-	L1	-	10A	W	-	M7	-	
Manifold assembly parts									Number of valve positions
Manifold rail		VABM							2 to 10, 12, 14 and 16
Valve series									Ports 1, 3, 5
VUWG		L1					M7	M7	
Valve width									
10 mm				10A					
Rail with ports 1, 2, 3, 4, 5, 12/14, 82/84									
Port 2 and 4 in M5					W				

Ordering data – Accessories				Part No.	Type
Blanking plate				Technical data → Internet: vabb	
	For manifold rail 10AW	Incl. screws and seal		569986	VABB-L1-10A
Separator				Technical data → Internet: vabd	
	For manifold rail 10AW	Separator for pressure zones		570872	VABD-4.2-B
Supply plate				Technical data → Internet: vabf	
	For manifold rail 10AW	Incl. screws and seal		569990	VABF-L1-10A-P3A4-M5
Seals				Technical data → Internet: vabd	
	For sub-base valves B10A	Delivery unit: 10 sets (each with 2 screws and 1 seal)		566671	VABD-L1-10AB-S-M3

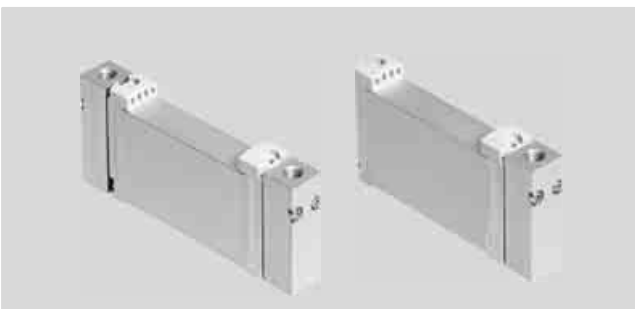
Pneumatic valves VUWG-B10, sub-base valves



Technical data

Function
2x3/2C, 2x3/2U, 2x3/2H
5/2-way, single pilot
5/2-way, double pilot
5/3C, 5/3U, 5/3E

-  - Width 10 mm
-  - Flow rate
120 ... 270 l/min



General technical data												
Valve function		T32-A			T32-M			M52-R	B52	M52-M	P53	
Normal position		C ¹⁾	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	–	–	–	C ¹⁾	U ²⁾ E ³⁾
Pneumatic spring reset method		Yes			No			Yes ⁵⁾	–	No	No	
Mechanical spring reset method		No			Yes			Yes ⁵⁾	–	Yes	Yes	
Vacuum operation at port 1		No			Yes			Yes ⁷⁾	Yes			
Vacuum operation at port 3/5		Yes										
Design		Piston spool valve										
Sealing principle		Soft										
Actuation type		Pneumatic										
Type of control		Direct										
Pneumatic spring supply		External										
Exhaust function		With flow control										
Type of mounting		On manifold rail										
Mounting position		Any										
Standard nominal flow rate M5		[l/min]	150		130	120		210		180		200
Standard nominal flow rate M7		[l/min]	160		140	130		270		230		250
Switching time on/off		[ms]	4/9		6/7		6/12		–	7/16		8/25
Changeover time		[ms]	–						5	–		11
Width		[mm]	10									
Port		1, 3, 5	G1/8 in manifold rail									
		2, 4	M5/M7 in manifold rail									
		12, 14	M5									
Product weight		[g]	48		51		45		48	41		48
Corrosion resistance class CRC ⁶⁾		2										

- 1) C = Normally closed
- 2) U = Normally open/mid-position pressurised
- 3) E = Normally exhausted
- 4) H = 2x 3/2-way valve in one housing with 1x normally closed and 1x normally open
- 5) Combined reset method
- 6) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 7) Only with external pneumatic spring supply

Pneumatic valves VUWG-B10, sub-base valves



Technical data

Operating and environmental conditions						
Valve function	T32-A ²⁾	T32-M ³⁾	M52-R ⁴⁾	B52	M52-M ²⁾	P53
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)					
Operating pressure [bar]	1.5 ... 10	-0.9 ... 10	2.5 ... 10	-0.9 ... 10	-0.9 ... 8	-0.9 ... 10
Pilot pressure ¹⁾ [bar]	1.5 ... 10	3 ... 10	2.5 ... 10	1.5 ... 10	3 ... 10	
Ambient temperature [°C]	-5 ... +60					
Temperature of medium [°C]	-5 ... +50					

- 1) Note operating pressure/pilot pressure graph → page 4
- 2) Pneumatic spring
- 3) Mechanical spring
- 4) Mixed, pneumatic/mechanical spring

Information on materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions

Download CAD data → www.festo.com

2x3/2-way, 5/2-way and 5/3-way valve

VUWG-B10-M52-...

1

Ports 1, 2, 3, 4, 5

2

Port 14: M5

3

Port 12: M5

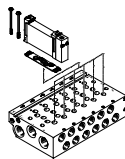
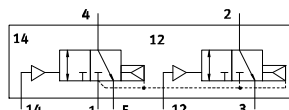
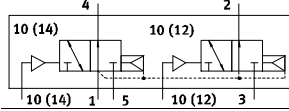
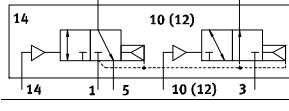
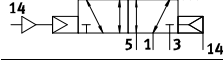
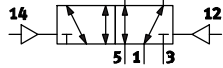
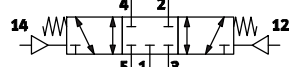
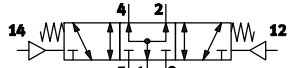
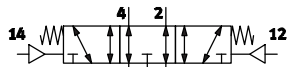
4

M2.5 mounting screw

Type	B1	H1	L1	L2	L3	L8
VUWG-B10-...	10.3	32.5	72	62.8	47	7.9
VUWG-B10-M52-...			62			

Pneumatic valves VUWG-B10, sub-base valves

Order code

VUWG	-	B	10	-	-	-	F
Valve design							
Sub-base, manifold valve incl. seal and screws				B			
							
Width							
10 mm				10			
Valve functions							
				T32C			
				T32U			
				T32H			
				M52			
				B52			
				P53C			
				P53U			
				P53E			

-	F
Pneumatic connection	
F	In the manifold rail
Reset method	
A	Pneumatic spring for T32 and M52
M	Mechanical spring for T32 and M52
R	Pneu./mech. spring for M52
-	With B52 and P53

Pneumatic valves VUWG-B10, sub-base valves

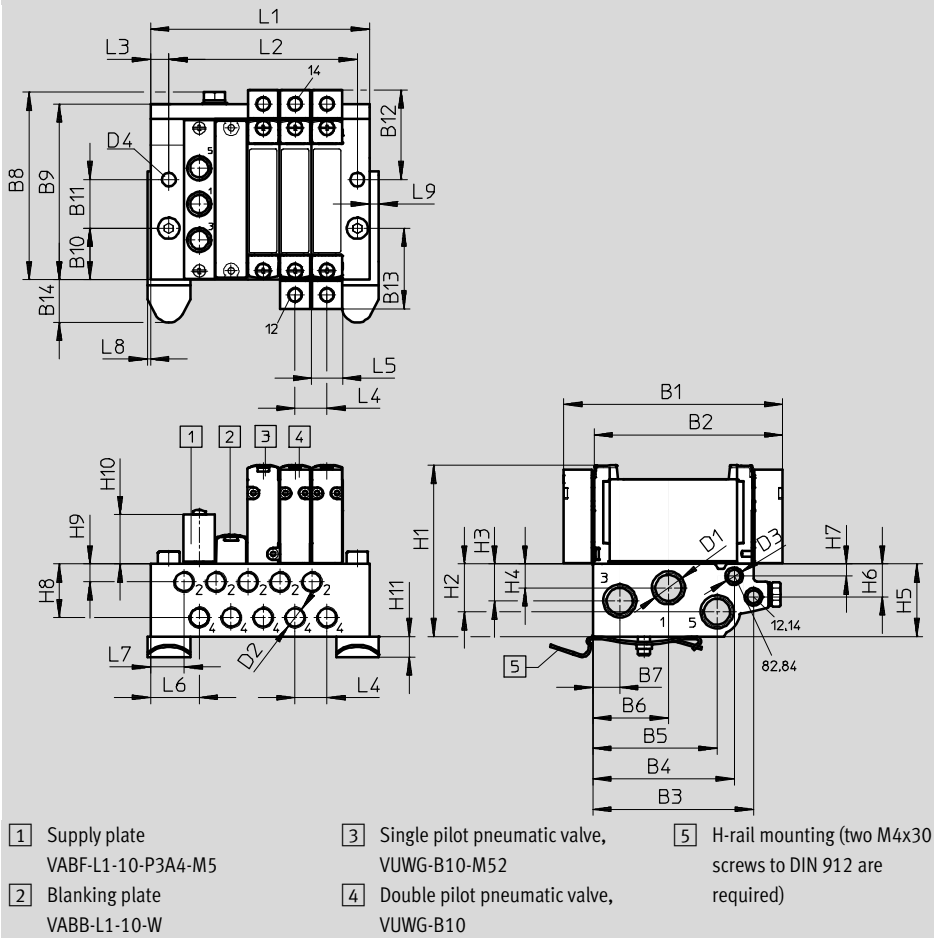


Manifold assembly

Sub-base valve for manifold assembly
M5 or M7 connection



Dimensions
 Download CAD data → www.festo.com



Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
VABM-L1-...G18	72	62	52.9	46.5	40.9	24.9	8.9	62	57.7	16.9	16	29.5

Type	B13	B14	D1	D2	D3	D4	H1	H2	H3	H4	H5	H6
VABM-L1-...G18	26.5	14.1	G ¹ / ₈	M5	M5	4.5	56.4	15.7	12.2	7.9	23.9	10.8

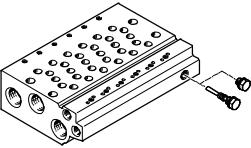
Type	H7	H8	H9	H10	H11	L3	L4	L5	L6	L7	L8	L9	L15
VABM-L1-...G18	4	17.6	5.9	16.2	6.8	4	10.5	10.3	16	11	1	3	10

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16	22
L1 [mm]	48.5	59	69.5	80	90.5	101	111.5	122	132.5	153.5	174.5	195.5	258.5
L2 [mm]	30.5	41	51.5	62	72.5	83	93.5	104	114.5	135.5	156.5	177.5	240.5

Pneumatic valves VUWG-B10, sub-base valves



Ordering data

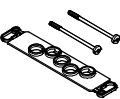
Technical data – Manifold rails ¹⁾									
	Port			CRC	Material ³⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	2, 4	1, 3, 5	12/14, 82/84				Valve	H-rail	Wall
	M5 or M7	G $\frac{1}{8}$	M5	2 ²⁾	Wrought aluminium alloy	–0.9 ... 10	0.45	1.5	3

- 1) Blanking plugs are included with the manifold rail.
2) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
3) Note on materials: RoHS-compliant.

Order code – Manifold rails M5 and M7

VABM	–	L1	–	10	–	G18	–	
Manifold assembly parts								Number of valve positions
Manifold rail VABM								2 to 10, 12, 14 and 16
Valve series								Ports 1, 3, 5
VUWG		L1				G18	G $\frac{1}{8}$	
Valve width								
10 mm				10				
Manifold rail with ports 1, 2, 3, 4, 5, 12/14, 82/84								
Port 2 and 4 in M5				W				
Port 2 and 4 in M7				HW				

Ordering data – Accessories

	Part No.	Type
Blanking plate		Technical data → Internet: vabb
 For manifold rail 10W/10HW, sub-base valves	566495	VABB-L1-10-W
Separator		Technical data → Internet: vabd
 For manifold rail 10W and 10HW, sub-base valves	569994	VABD-6-B
Supply plate		Technical data → Internet: vabf
 For manifold rail 10W	569991	VABF-L1-10-P3A4-M5
For manifold rail 10HW	569992	VABF-L1-10-P3A4-M7
Seals		Technical data → Internet: vabd
 For sub-base valves B10	566674	VABD-L1-10B-S-M7

Pneumatic valves VUWG-B14, sub-base valves



Technical data

Function
 2x3/2C, 2x3/2U, 2x3/2H
 5/2-way, single pilot
 5/2-way, double pilot
 5/3C, 5/3U, 5/3E

-  - Width 14 mm
 -  - Flow rate
 410 ... 580 l/min



General technical data													
Valve function	T32-A			T32-M			M52-A	B52	M52-M	P53			
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	–	–	–	C ¹⁾	U ²⁾	E ³⁾	
Pneumatic spring reset method	Yes			No			Yes	–	No	No			
Mechanical spring reset method	No			Yes			No	–	Yes	Yes			
Vacuum operation at port 1	No			Yes			No	Yes					
Vacuum operation at port 3/5	Yes												
Design	Piston spool valve												
Sealing principle	Soft												
Actuation type	Pneumatic												
Type of control	Direct												
Pneumatic spring supply	External												
Exhaust function	With flow control												
Type of mounting	On manifold rail												
Mounting position	Any												
Standard nominal flow rate	[l/min]	540	510	540	430	410	580			540	510		
Switching time on/off	[ms]	6/19			9/13		12/22	–	12/32	8/30			
Changeover time	[ms]	–						6	–	16			
Width	[mm]	14											
Port	1, 3, 5	G¼ in manifold rail											
	2.4	G⅛ in manifold rail											
	12, 14	M5											
Product weight	[g]	83			83		75	81					
Corrosion resistance class CRC ⁵⁾	2												

1) C = Normally closed
 2) U=Normally open/mid-position pressurised
 3) E = Normally exhausted
 4) H=2x3/2-way valve in one housing with 1x normally closed and 1x normally open
 5) Corrosion resistance class 2 according to Festo standard 940 070
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Pneumatic valves VUWG-B14, sub-base valves



Technical data

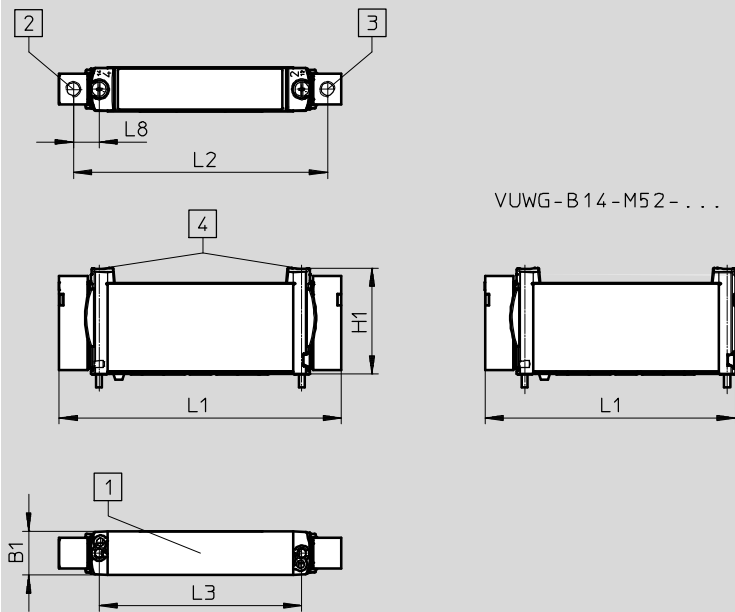
Operating and environmental conditions						
Valve function	T32-A ²⁾	T32-M ³⁾	M52-A ²⁾	B52	M52-M ³⁾	P53
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)					
Operating pressure [bar]	1.5 ... 10	-0.9 ... 10	2.5 ... 10	-0.9 ... 10	-0.9 ... 8	-0.9 ... 10
Pilot pressure ¹⁾ [bar]	1.5 ... 10	3 ... 10	2.5 ... 10	1.5 ... 10	3 ... 10	
Ambient temperature [°C]	-5 ... +60					
Temperature of medium [°C]	-5 ... +50					

- 1) Note operating pressure/pilot pressure graph → page 4
- 2) Pneumatic spring
- 3) Mechanical spring

Information on materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions Download CAD data → www.festo.com

2x3/2-way, 5/2-way and 5/3-way valve



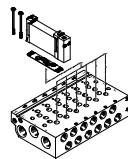
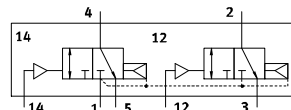
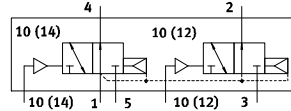
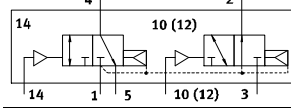
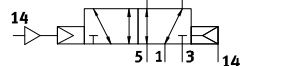
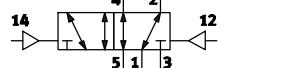
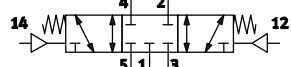
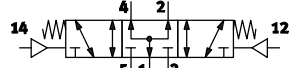
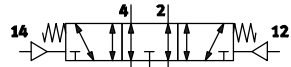
- 1 Ports 1, 2, 3, 4, 5
- 2 Port 14: M5
- 3 Port 12: M5
- 4 M2.5 mounting screw

Type	B1	H1	L1	L2	L3	L8
VUWG-B14-...	14.4	34.8	92.6	83.4	66.5	8.5
VUWG-B14-M52-...			82.3			

Pneumatic valves VUWG-B14, sub-base valves



Order code

VUWG	-	B	14	-	-	-	F
Valve design							Pneumatic connection
Sub-base, manifold valve							F In the manifold rail
incl. seal and screws							
							
Width							
10 mm							14
Valve functions							
							T32C
							T32U
							T32H
							M52
							B52
							P53C
							P53U
							P53E

Pneumatic valves VUWG-B14, sub-base valves

Manifold assembly

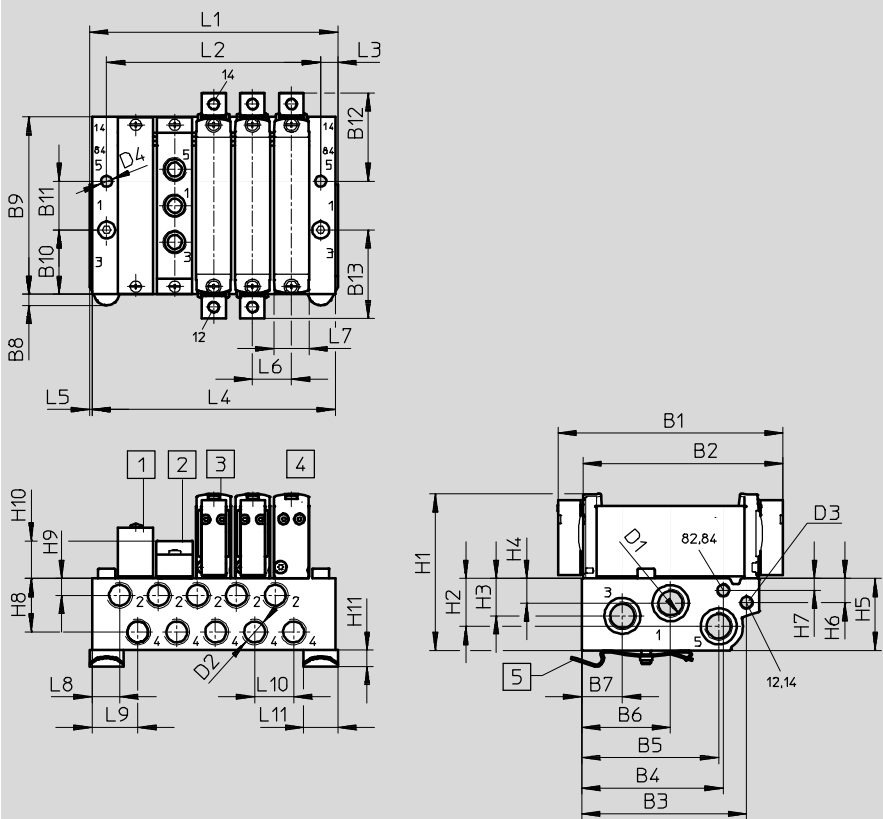
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Sub-base valve for
manifold assembly
G $\frac{1}{8}$ connection



Dimensions

Download CAD data → www.festo.com



- | | | |
|------------------------------------|--------------------------------|--|
| 1 Blanking plate VABB-L1-14 | 3 Double pilot pneumatic valve | 5 H-rail mounting (two M4x25 screws to DIN 912 are required) |
| 2 Supply plate VABF-L1-14-P3A4-G18 | 4 Single pilot pneumatic valve | |

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
VUWG-B14 -...-F- ...	92.6	82.3	67.7	58.2	56.3	36.6	16.7	4.5	72.9	26.5	20	36.3

Type	B13	D1	D2	D3	D4	H1	H2	H3	H4	H5	H6	H7
VUWG-B14 -...-F- ...	36.3	G $\frac{1}{4}$	G $\frac{1}{8}$	M5	Ø 4.5	64.3	19.6	15.3	10.1	29.5	9.8	4.8

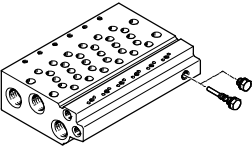
Type	H8	H9	H10	H11	L3	L5	L6	L7	L8	L9	L10	L11
VUWG-B14 -...-F- ...	22.1	7	15.4	6.8	6	1	16	14.4	11.3	18.5	16	14

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	56.3	72.3	88.3	104.3	120.3	136.3	152.3	168.3	184.3	216.3	248.3	280.3
L2 [mm]	40	56	72	88	104	120	136	152	168	200	232	264
L4 [mm]	54.3	70.3	86.3	102.3	118.3	134.3	150.3	166.3	182.3	214.3	246.6	278.3

Pneumatic valves VUWG-B14, sub-base valves



Ordering data

Technical data – Manifold rails ¹⁾									
	Port			CRC	Material ³⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	2, 4	1, 3, 5	12/14, 82/84				Valve	H-rail	Wall
	G1/8	G1/4	M5	2 ²⁾	Wrought aluminium alloy	-0.9 ... 10	0.65	1.5	3

- Blanking plugs are included with the manifold rail.
- Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- Note on materials: RoHS-compliant

Order code – Manifold rails G1/8

VABM	-	L1	-	14	W	-	G14	-	
Manifold assembly parts									Number of valve positions
Manifold rail		VABM							2 to 10, 12, 14 and 16
Valve series									Ports 1, 3, 5
VUWG		L1					G14	G1/4	
Valve width									
14 mm					14				
Manifold rail with ports 1, 2, 3, 4, 5, 12/14, 82/84									
Ports 2 and 4 in G1/8					W				

Ordering data – Accessories				Part No.	Type
Blanking plate				Technical data → Internet: vabb	
	For manifold rail 14W, sub-base valves	Incl. screws and seal		569989	VABB-L1-14
Separator				Technical data → Internet: vabd	
	For manifold rail 14W, sub-base valves	Separator for pressure zones		569996	VABD-10-B
Supply plate				Technical data → Internet: vabf	
	For manifold rail 14W	Incl. screws and seal		569993	VABF-L1-14-P3A4-G18
Seals				Technical data → Internet: vabd	
	For sub-base valves B14	Delivery unit: 10 sets (each with 2 screws and 1 seal)		566676	VABD-L1-14B-S-G18

Pneumatic valves VUWG-B18, sub-base valves

Technical data

Function

2x3/2C, 2x3/2U, 2x3/2H

5/2-way, single pilot

5/2-way, double pilot

5/3C, 5/3U, 5/3E

 Width 18 mm

 Flow rate
900 ... 1,000 l/min



General technical data														
Valve function		T32-A			T32-M			M52-R	B52	M52-M	P53			
Normal position		C ¹⁾	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	–	–	–	C ¹⁾	U ²⁾	E ³⁾	
Pneumatic spring reset method		Yes			No			Yes ⁵⁾	–	No	No			
Mechanical spring reset method		No			Yes			Yes ⁵⁾	–	Yes	Yes			
Vacuum operation at port 1		No			Yes			No	Yes					
Vacuum operation at port 3/5		Yes												
Design		Piston spool valve												
Sealing principle		Soft												
Actuation type		Pneumatic												
Type of control		Direct												
Pneumatic spring supply		External												
Exhaust function		With flow control												
Type of mounting		On manifold rail												
Mounting position		Any												
Standard nominal flow rate		[l/min]	900					1,000			950			
Switching time on/off		[ms]	12/36			17/25			16/40	–	12/59	17/69		
Changeover time		[ms]	–						12		–	34		
Width		[mm]	18											
Port		1, 3, 5		G3⁄8 in manifold rail										
		2.4		G1⁄4 in manifold rail										
		12, 14		M5										
Product weight		[g]	83			83			75	81				
Corrosion resistance class CRC ⁶⁾		2												

1) C = Normally closed

2) U = Normally open/mid-position pressurised

3) E = Normally exhausted

4) H = 2x 3/2-way valve in one housing with 1x normally closed and 1x normally open

5) Combined reset method

6) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Pneumatic valves VUWG-B18, sub-base valves

Technical data

Operating and environmental conditions						
Valve function	T32-A ²⁾	T32-M ³⁾	M52-R ⁴⁾	B52	M52-M ³⁾	P53
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)					
Operating pressure [bar]	1.5 ... 10	-0.9 ... 10	2.5 ... 10	-0.9 ... 10	-0.9 ... 8	-0.9 ... 10
Pilot pressure ¹⁾ [bar]	1.5 ... 10	3 ... 10	2.5 ... 10	1.5 ... 10	3 ... 10	
Ambient temperature [°C]	-5 ... +60					
Temperature of medium [°C]	-5 ... +50					

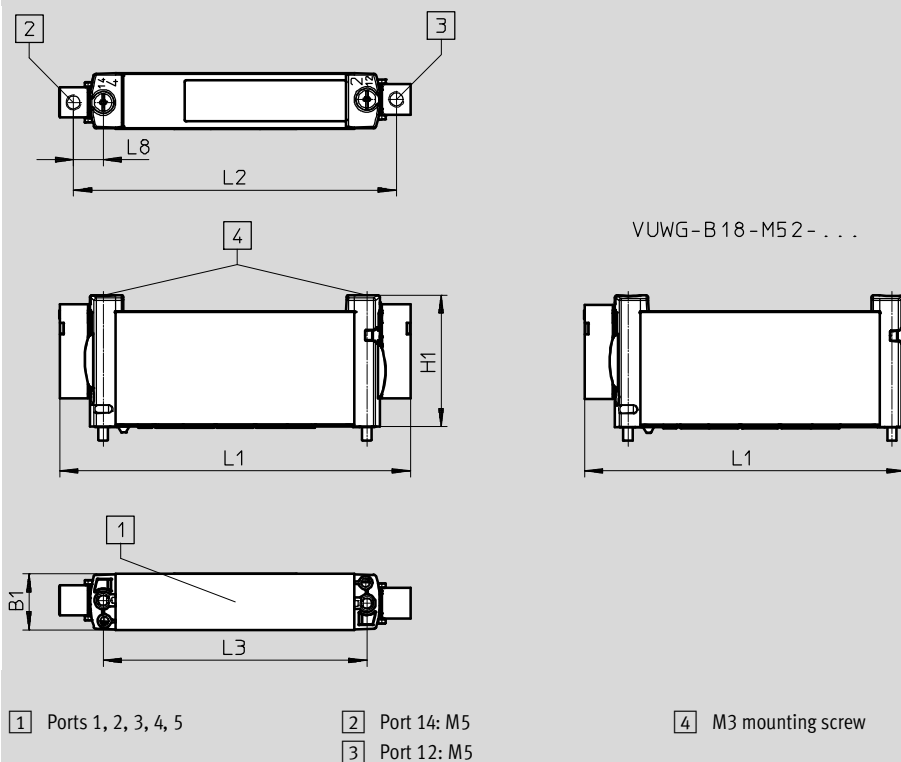
- 1) Note operating pressure/pilot pressure graph → page 4
2) Pneumatic spring
3) Mechanical spring
4) Mixed, pneumatic/mechanical spring

Information on materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions

Download CAD data → www.festo.com

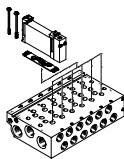
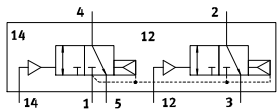
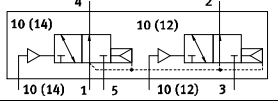
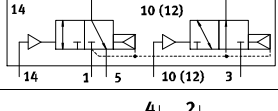
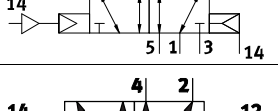
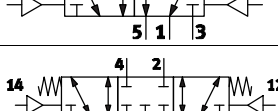
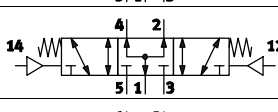
2x3/2-way, 5/2-way and 5/3-way valve



Type	B1	H1	L1	L2	L3	L8
VUWG-B18-...	18.3	43.1	115	96.1	86.4	9.7
VUWG-B18-M52-...			105			

Pneumatic valves VUWG-B18, sub-base valves

Order code

VUWG	-	B	18	-	-	-	F
Valve design							Pneumatic connection
Sub-base, manifold valve incl. seal and screws							F In the manifold rail
							Reset method
Width							A Pneumatic spring for T32 and M52
18 mm							M Mechanical spring for T32 and M52
18							R Pneu./mech. spring for M52
							- With B52 and P53
Valve functions							
							T32C
							T32U
							T32H
							M52
							B52
							P53C
							P53U
							P53E

Pneumatic valves VUWG-B18, sub-base valves

Manifold assembly

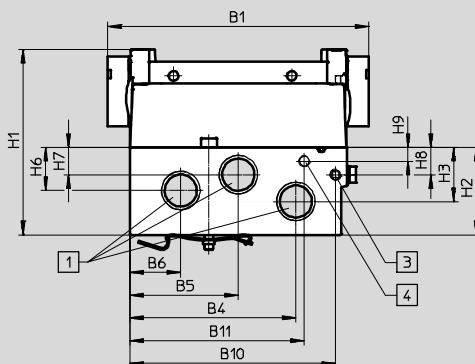
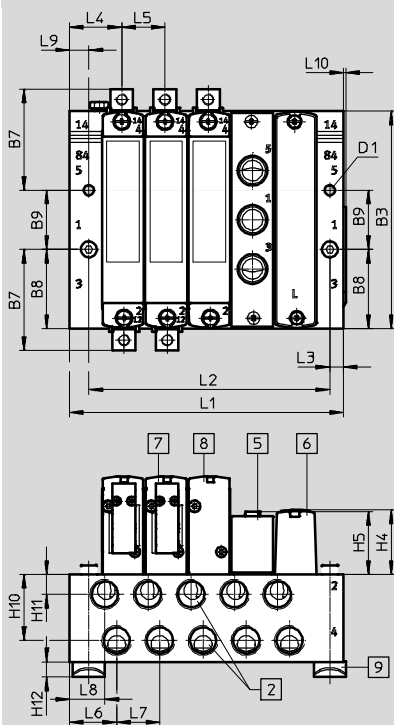
FESTO

Sub-base valve for
manifold assembly
G $\frac{3}{8}$ connection



Dimensions

Download CAD data → www.festo.com



1 Ports 1, 3 and 5: G $\frac{3}{8}$ (at both ends)

2 Ports 2 and 4: G $\frac{1}{4}$

3 Port 12/14 for external pilot air: M5

4 Port 82/84 for external pilot air: M5

5 Supply plate VABF-L1-18-P3A4-G14

6 Blanking plate VABB-L1-18

7 Double pilot pneumatic valve

8 Single pilot pneumatic valve

9 H-rail mounting (two M4x40 screws to DIN 912 are required for mounting)

Type	B1	B3	B4	B5	B6	B7	B8	B9	B10	B11	D1	H1
VUWG-B14 -...-F- ...	115	95.6	73.1	47.8	22.5	51.7	34.8	26	90.6	76.8	4.5	81.6

Type	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	L3
VUWG-B14 -...-F- ...	38.5	23.8	28.4	27.6	19	12	12.1	6.1	29.1	8.8	6.5	6

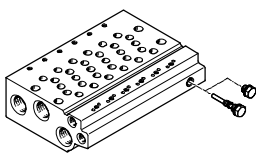
Type	L4	L5	L6	L7	L8	L9	L10
VUWG-B14 -...-F- ...	23	19	20.8	19	15.6	8.5	1

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	63.5	82.5	101.5	120.5	139.5	158.5	177.5	196.5	215.5	253.5	291.5	329.5
L2 [mm]	49	68	87	106	125	144	163	182	201	239	277	315

Pneumatic valves VUWG-B18, sub-base valves

FESTO

Ordering data

Technical data – Manifold rails ¹⁾									
	Port			CRC	Material ³⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	2, 4	1, 3, 5	12/14, 82/84				Valve	H-rail	Wall
	G1/4	G3/8	M5	2 ²⁾	Wrought aluminium alloy	–0.9 ... 10	0.65	1.5	3

1) Blanking plugs are included with the manifold rail.

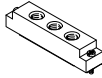
2) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

3) Note on materials: RoHS-compliant.

Order code – Manifold rails G1/4

VABM	–	L1	–	18	W	–	G38	–	
Manifold assembly parts									Number of valve positions
Manifold rail VABM									2 to 10, 12, 14 and 16
Valve series									Ports 1, 3, 5
VUWG		L1					G38	G3/8	
Valve width									
18 mm				18					
Manifold rail with ports 1, 2, 3, 4, 5, 12/14, 82/84									
Ports 2 and 4 in G1/4					W				

Ordering data – Accessories					Part No.	Type
Blanking plate					Technical data → Internet: vabb	
	For manifold rail 18W, sub-base valves	Incl. screws and seal			574482	VABB-L1-18
Separator					Technical data → Internet: vabd	
	For manifold rail 18W, sub-base valves	Separator for pressure zones			574483	VABD-14-B
Supply plate					Technical data → Internet: vabf	
	For manifold rail 18W	Incl. screws and seal			574481	VABF-L1-18-P3A4-G14
Seals					Technical data → Internet: vabd	
	For sub-base valves B18	Delivery unit: 10 sets (each with 2 screws and 1 seal)			574480	VABD-L1-18B-S-G14

Pneumatic valves VUWG

Accessories

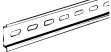
FESTO

Ordering data				
	Description		Part No.	Type
Pneumatic silencer			Technical data → Internet: u	
	For thread M5	1 piece	165003	UC-M5
	For thread M7		161418	UC-M7
	For thread G1/8	50 pieces	534222	U-1/8-50
		1 piece	161419	UC-1/8
	For thread G1/4	20 pieces	534220	UC-1/4-20
			534223	U-1/4-20
Fittings			Technical data → Internet: qs	
	For tubing Ø 3 mm	10 pieces	133003	QSM-M5-3-I-R
	For tubing Ø 4 mm		133004	QSM-M5-4-I-R
	For tubing Ø 6 mm		133005	QSM-M5-6-I-R
	For tubing Ø 6 mm		133007	QSM-M7-6-I-R
	For tubing Ø 3 mm		153313	QSM-M5-3-I
	For tubing Ø 4 mm		153315	QSM-M5-4-I
	For tubing Ø 4 mm		153319	QSM-M7-4-I
	For tubing Ø 4 mm	10 pieces	186106	QS-G1/8-4-I
	For tubing Ø 6 mm		186107	QS-G1/8-6-I
	For tubing Ø 8 mm		186109	QS-G1/8-8-I
	For tubing Ø 8 mm	20 pieces	130995	QS-B-1/4-8-I-20
	For tubing Ø 10 mm		132152	QS-B-1/4-10-I-20
	For tubing Ø 12 mm		132153	QS-B-1/4-12-I-20
	For tubing Ø 10 mm		132151	QS-B-1/8-10-I-20
	For tubing Ø 6 mm	10 pieces	186117	QSL-G1/8-6
	For tubing Ø 8 mm		186119	QSL-G1/8-8
	For tubing Ø 8 mm	20 pieces	130931	QSL-B-1/4-8-20
	For tubing Ø 10 mm		132127	QSL-B-1/4-10-20
	For tubing Ø 12 mm		132128	QSL-B-1/4-12-20
	For tubing Ø 10 mm		132126	QSL-B-1/8-10-20
	For tubing Ø 6 mm	10 pieces	186128	QSLL-G1/8-6
	For tubing Ø 8 mm		186130	QSLL-G1/8-8
	For tubing Ø 3 mm		153331	QSML-M5-3
	For tubing Ø 4 mm		153333	QSML-M5-4
	For tubing Ø 4 mm		186352	QSML-M7-4
	For tubing Ø 3 mm		130838	QSMLL-M5-3
	For tubing Ø 4 mm		153339	QSMLL-M5-4
	For tubing Ø 4 mm		186354	QSMLL-M7-4
Blanking plug			Technical data → Internet: b	
	For thread M5	10 pieces	174308	B-M5-B
	For thread M7		174309	B-M7
	For thread G1/8		3568	B-1/8
	For thread G1/4		3569	B-1/4
Compact blanking plug, for valve			Technical data → Internet: npqh	
	For sealing a connection (valve requires a blanking plug with a low screw-in depth)	For valve size 14 (G1/8), 10 pieces	578406	NPQH-BK-G18-P10
		For valve size 18 (G1/4), 10 pieces	578407	NPQH-BK-G14-P10

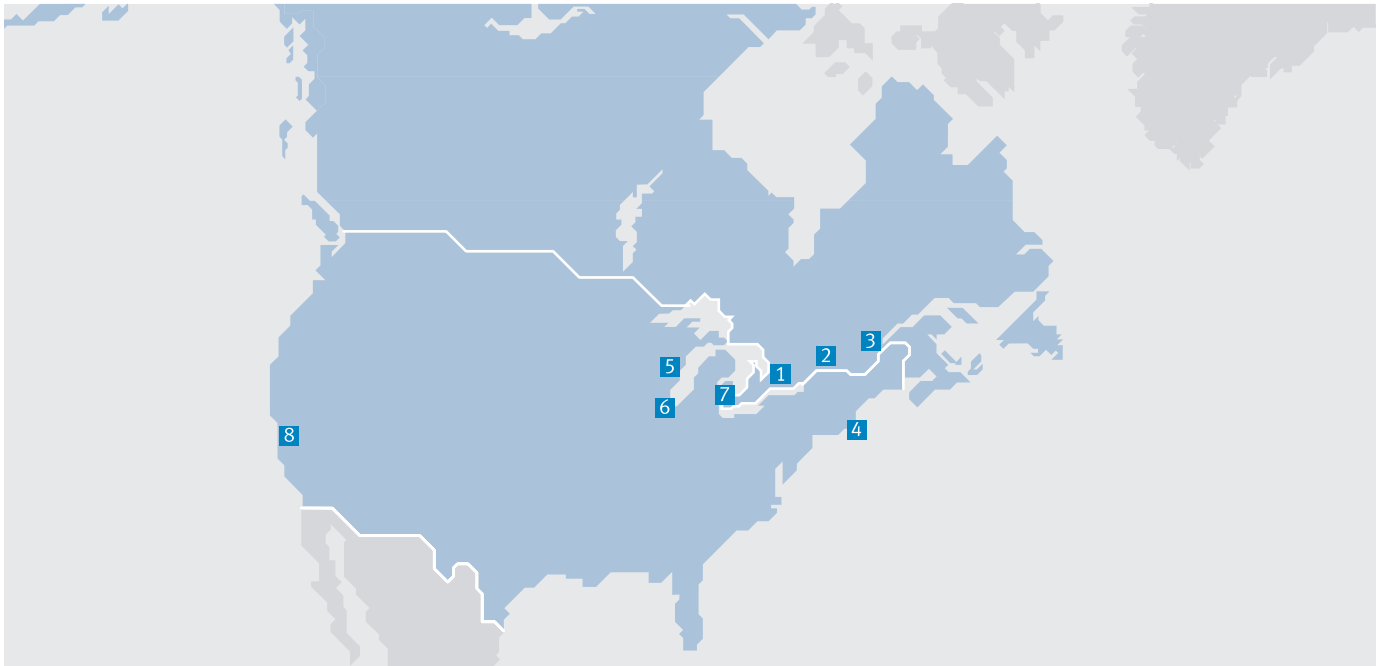
Pneumatic valves VUWG

Accessories

FESTO

Ordering data						
	Description			Part No.	Type	
H-rail				Technical data → Internet: nrh		
	To EN 60715, 35 x 7.5 (WxH)		2 m	35430	NRH-35-2000	
H-rail mounting				Technical data → Internet: vame		
	-		2 pieces	569998	VAME-T-M4	
Flow control valve						
	For M5 valves, for setting the flow rate during pressurisation and exhausting (10 pieces)	Flow rate: 9.6 l/min	b value: 0.5	C value: 0.04	8025709	VFFG-T-M5-5
		Flow rate: 14.6 l/min	b value: 0.5	C value: 0.05	8025710	VFFG-T-M5-6
		Flow rate: 19.1 l/min	b value: 0.5	C value: 0.07	8025711	VFFG-T-M5-7
		Flow rate: 26.1 l/min	b value: 0.5	C value: 0.10	8025712	VFFG-T-M5-8
		Flow rate: 40.8 l/min	b value: 0.5	C value: 0.14	8025713	VFFG-T-M5-10
		Flow rate: 45.4 l/min	b value: 0.5	C value: 0.16	8025714	VFFG-T-M5-12
		Flow rate: 67.4 l/min	b value: 0.5	C value: 0.25	8025715	VFFG-T-M5-15

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