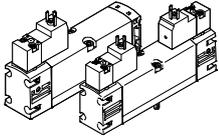


Solenoid/pneumatic valves, ISO 15407-1

Key features

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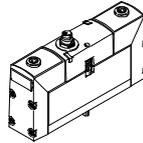
Solenoid valves with square plug, type C



Versions

- Width 18 mm and 26 mm
- 2x 2/2-way, 2x 3/2-way, 5/2-way and 5/3-way valves
- 2x 3/2-way valves for reverse operation
- Internal or external pilot air supply available
- 12, 24 V DC, 24, 110 or 220 V AC

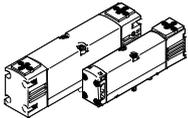
Solenoid valves with central round plug



Versions

- Width 18 mm and 26 mm
- 2x 3/2-way, 5/2-way and 5/3-way valves
- Internal or external pilot air supply available
- 24 V DC

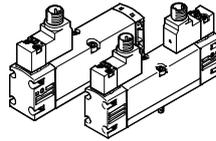
Basic valves with interface to ISO 15218



Versions

- Width 18 mm and 26 mm
- 2x 2/2-way, 2x 3/2-way, 5/2-way and 5/3-way valves
- Internal or external pilot air supply available

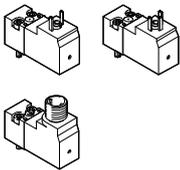
Solenoid valves with M12 round plug



Versions

- Width 18 mm and 26 mm
- 2x 2/2-way, 2x 3/2-way, 5/2-way and 5/3-way valves
- 2x 3/2-way valves for reverse operation
- Internal or external pilot air supply available
- 24 V DC

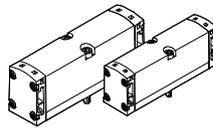
Pilot valve with interface to ISO 15218



Versions

- With square plug, type C or M12 round plug
- For 12, 24 V DC and 24 V AC without protective earth conductor
- For 110 and 220 V AC with protective earth conductor
- 3/2-way valve
- Manual override non-detenting or non-detenting/detenting

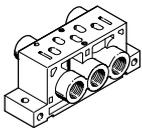
Pneumatically actuated directional control valves



Versions

- Width 18 mm and 26 mm
- 2x 3/2-way, 5/2-way and 5/3-way valves
- Signal inputs 12 and 14 via the sub-base

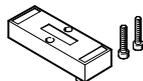
Individual sub-base



Versions

- Width 18 mm and 26 mm
- Ports 12 and 14 for external pilot air supply for solenoid valves and
- Ports signal inputs 12 and 14 for pneumatically actuated valves are the same

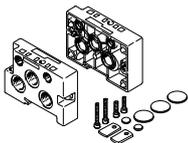
Blanking plate for unused valve position



Versions

- Width 18 mm and 26 mm

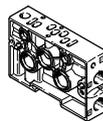
End plate kit



Versions

- Widths 18 mm and 26 mm
- Ports 12 and 14 for external pilot air supply for solenoid valves
- For pneumatically actuated valves the signal inputs are only on suitable manifold sub-bases

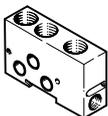
Manifold sub-base/series sub-base



Versions

- Widths 18 mm and 26 mm
- For solenoid valves
- For pneumatically actuated valves with additional ports for the signal inputs

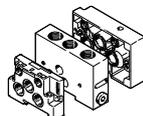
Intermediate plate



Design

- Adapter between width 18 mm and 26 mm
- With additional air supply and exhaust ports

Intermediate plate kit



Design

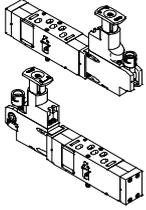
- Intermediate plate as adapter between width 18 mm and 26 mm
- One 18 mm and one 26 mm end plate

Solenoid/pneumatic valves, ISO 15407-1

Key features

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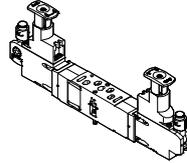
Pressure regulator plate with one pressure regulator



Versions

- Widths 18 mm and 26 mm
- For pressure regulation at supply input 1 (P). Set pressure is the same for outputs 2 and 4
- For pressure regulation at working port 4 (A)
 - The pressure regulator for reverse operation is supplied via port 1 of the sub-base and supplies port 5 on the directional control valve
 - The directional control valve vents via port 1 to ports 3 and 5 of the sub-base
- For pressure regulation at working port 2 (B)
 - Input 3 is supplied here in reverse operation

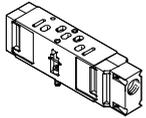
Pressure regulator plate with two pressure regulators



Versions

- Widths 18 mm and 26 mm
- For pressure regulation at working ports 4 (A) and 2 (B)
 - The pressure regulators for reverse operation are supplied via port 1 in the sub-base and feed inputs 5 and 3 on the directional control valve
 - The directional control valve vents via port 1 to ports 3 and 5 of the sub-base

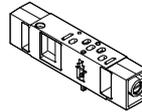
Vertical supply plate



Versions

- Widths 18 mm and 26 mm
- As intermediate supply
 - For one valve
 - To supply a third pressure zone
- Can be equipped with a directional control valve

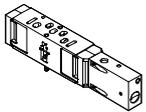
Flow control plate



Versions

- Widths 18 mm and 26 mm
- Exhaust air restrictors in ducts 3 and 5
 - In the case of pressure zones that are formed by ducts 3 and 5, the flow control plates act as supply air restrictors

Vertical pressure shut-off plate



Versions

- Widths 18 mm and 26 mm
- A switch activated with a slotted head screwdriver shuts off duct 1
 - The overlying flow control plates, pressure regulator plates or directional control valves can be replaced
 - Other components of the control chain such as drives, for example, can be replaced following venting via the directional control valve

Pressure gauge



Design

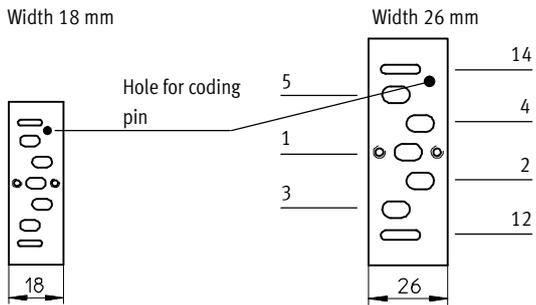
- Can be connected to the pressure regulator plates

Solenoid/pneumatic valves, ISO 15407-1

Key features

FESTO

Port pattern on sub-base to ISO 15407-1

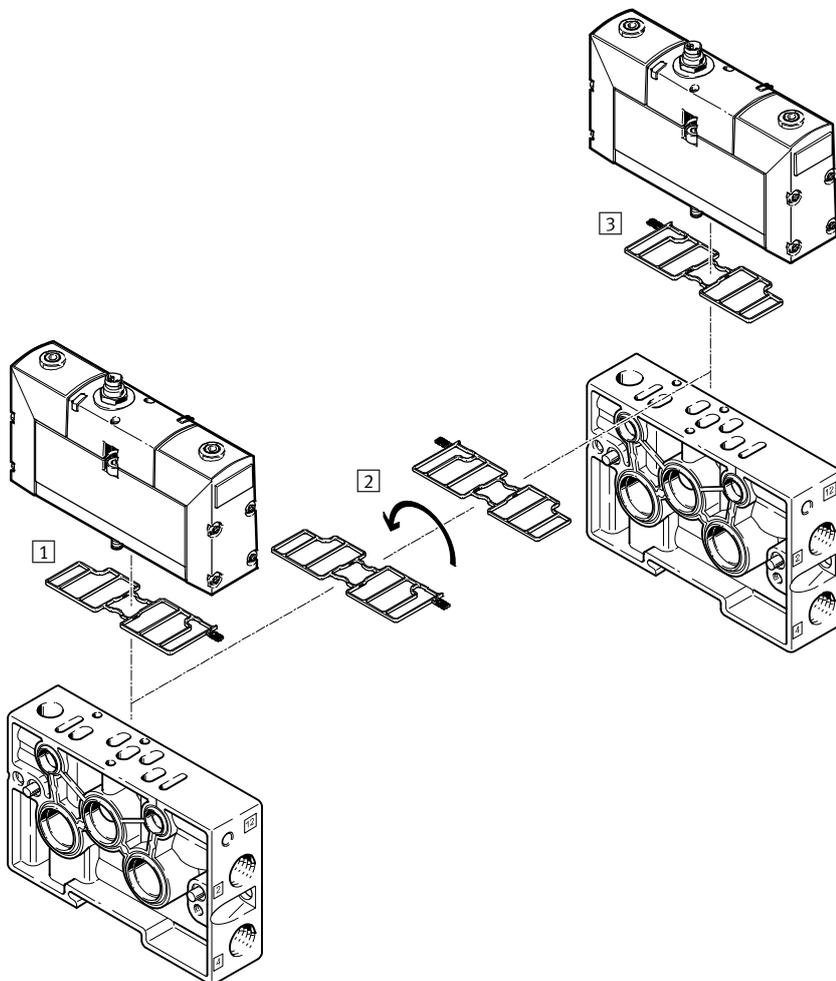


VSVA

Conversion of pilot air exhaust

The valve manifold VTIA is supplied with unducted pilot air exhaust. By turning the seal between the valve

and manifold block, exhaust air (pilot air) can be diverted into pilot duct 12 and can thus be contained and silenced (see illustration).



- 1 Ducted pilot air exhaust
- 2 Turning the seal by 180°
- 3 Unducted pilot air exhaust (as supplied)

Solenoid/pneumatic valves, ISO 15407-1

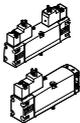
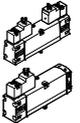
Key features

Use of 2x 3/2-way valve as 5/4-way valve																			
Code	Circuit symbol	Value table	Equivalent circuit symbol	Function															
K		<table border="1"> <thead> <tr> <th>Y1</th> <th>Y2</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	Y1	Y2	A	0	0		0	1		1	0		1	1			<ul style="list-style-type: none"> • Normally exhausted • The double-acting drive connected to outputs 2 and 4 is unpressurised when the valve is in the normal position and can be moved by an external force • If there is a signal present at Y1(14) and Y2(12), there is pressure at outputs 2 and 4
Y1	Y2	A																	
0	0																		
0	1																		
1	0																		
1	1																		
		<table border="1"> <thead> <tr> <th>Y1</th> <th>Y2</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	Y1	Y2	A	0	0		0	1		1	0		1	1			<ul style="list-style-type: none"> • Normally closed (by combining directional control valve code K and two piloted non-return valves) • The piloted non-return valves connected to outputs 2 and 4 are unpressurised when the valve is in the normal position and the pressures in the drive close the non-return valves so it is leak-tight • The drive remains stationary when the forces are in equilibrium • Leakages can only occur via the drive seals • If there is a signal present at Y1(14) and Y2(12), the same pressure is present at outputs 2 and 4
Y1	Y2	A																	
0	0																		
0	1																		
1	0																		
1	1																		
N		<table border="1"> <thead> <tr> <th>Y1</th> <th>Y2</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	Y1	Y2	A	0	0		0	1		1	0		1	1			<ul style="list-style-type: none"> • Normally open • The double-acting drive connected to outputs 2 and 4 is supplied with the same compressed air at both ends when the valve is in the normal position and stops when the forces are in equilibrium • If there is a signal present at Y1(10) and Y2(10), outputs 2 and 4 are exhausted, the drive is unpressurised and can be moved by an external force
Y1	Y2	A																	
0	0																		
0	1																		
1	0																		
1	1																		
H		<table border="1"> <thead> <tr> <th>Y1</th> <th>Y2</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	Y1	Y2	A	0	0		0	1		1	0		1	1			<ul style="list-style-type: none"> • Normally open after output 2 • The double-acting drive connected to outputs 2 and 4 is supplied with compressed air via output 2 when the valve is in the normal position. Output 4 is exhausted. When the system is in its initial position, the drive is thus in a clearly defined position, as would also be the case with a 5/2-way single solenoid valve • If there is a signal at Y1(14) and Y2(10), output 2 is exhausted and there is pressure at output 4. The drive leaves the initial position • A closed circuit can be created with this 2x 3/2-way valve by combining it with piloted non-return valves. However, this is then selected by an active signal at Y2(10)
Y1	Y2	A																	
0	0																		
0	1																		
1	0																		
1	1																		

Solenoid/pneumatic valves, ISO 15407-1

FESTO

Product range overview

Function	Type	Valve function	Flow rate Valve [l/min]	Working line on the sub-base		Operating voltage					
				G $\frac{1}{8}$	G $\frac{1}{4}$	[V DC]		[V AC]			
						12	24	24	110	230	
Width 18 mm	Valve with pilot interface to ISO 15218										
		VSVA-B-T22...A2	2x 2/2-way valve, single solenoid	700	■	–	■	■	■	■	■
		VSVA-B-T32...A2	2x 3/2-way valve, single solenoid	600	■	–	■	■	■	■	■
		VSVA-B-M52...A2	5/2-way valve, single solenoid	750	■	–	■	■	■	■	■
		VSVA-B-B52...A2	5/2-way valve, double solenoid	750	■	–	■	■	■	■	■
		VSVA-B-P53...A2	5/3-way valve, mid-position valve	650	■	–	■	■	■	■	■
	Valve with central plug										
		VSVA-B-T32...A2	2x 3/2-way valve, single solenoid	600	■	–	–	■	–	–	–
		VSVA-B-M52...A2	5/2-way valve, single solenoid	750	■	–	–	■	–	–	–
		VSVA-B-B52...A2	5/2-way valve, double solenoid	750	■	–	–	■	–	–	–
		VSVA-B-P53...A2	5/3-way valve, mid-position valve	650	■	–	–	■	–	–	–
	Pneumatic valve										
		VSPA-B-T32...A2	2x 3/2-way valve, monostable	550	■	–	–	–	–	–	–
		VSPA-B-M52...A2	5/2-way valve, monostable	700	■	–	–	–	–	–	–
		VSPA-B-B52...A2	5/2-way valve, bistable	700	■	–	–	–	–	–	–
		VSPA-B-P53...A2	5/3-way valve, mid-position valve	650	■	–	–	–	–	–	–
Width 26 mm	Valve with pilot interface to ISO 15218										
		VSVA-B-T22...A1	2x 2/2-way valve, single solenoid	1350	–	■	■	■	■	■	■
		VSVA-B-T32...A1	2x 3/2-way valve, single solenoid	1250	–	■	■	■	■	■	■
		VSVA-B-M52...A1	5/2-way valve, single solenoid	1400	–	■	■	■	■	■	■
		VSVA-B-B52...A1	5/2-way valve, double solenoid	1400	–	■	■	■	■	■	■
		VSVA-B-P53...A1	5/3-way valve, mid-position valve	1400	–	■	■	■	■	■	■
	Valve with pilot interface to ISO 15218, with position detection										
		VSVA-B-M52...A1	5/2-way valve, single solenoid	1400	–	■	–	■	–	–	–
	Valve with central plug										
		VSVA-B-T32...A1	2x 3/2-way valve, single solenoid	1250	–	■	–	■	–	–	–
		VSVA-B-M52...A1	5/2-way valve, single solenoid	1400	–	■	–	■	–	–	–
		VSVA-B-B52...A1	5/2-way valve, double solenoid	1400	–	■	–	■	–	–	–
		VSVA-B-P53...A1	5/3-way valve, mid-position valve	1400	–	■	–	■	–	–	–
	Pneumatic valve										
		VSPA-B-T32...A1	2x 3/2-way valve, monostable	1250	–	■	–	–	–	–	–
		VSPA-B-M52...A1	5/2-way valve, monostable	1400	–	■	–	–	–	–	–
VSPA-B-B52...A1		5/2-way valve, bistable	1400	–	■	–	–	–	–	–	
VSPA-B-P53...A1		5/3-way valve, mid-position valve	1400	–	■	–	–	–	–	–	

Solenoid/pneumatic valves, ISO 15407-1

Product range overview

Plug connector			Pilot air			→ Page/ Internet
Square	Round plug		In- ternal	Ex- ternal		
MEB	M8x1	M12x1				
Valve with pilot interface to ISO 15218						
■	-	■	■	■	Pneumatic spring return, normally closed	20
■	-	■	■	■	Pneumatic spring return, normally closed, open, 1x open/1x closed	20
■	-	■	■	■	Pneumatic or mechanical spring return	20
■	-	■	■	■	Dominance: 1st signal or at 14	20
■	-	■	■	■	Normally closed, exhausted, open	20
Valve with central plug						
-	■	■	■	■	Pneumatic spring return, normally closed, open, 1x open/1x closed	42
-	■	■	■	■	Pneumatic or mechanical spring return	42
-	■	■	■	■	Dominance: 1st signal or at 14	42
-	■	■	■	■	Normally closed, exhausted, open	42
Pneumatic valve						
-	■	■	■	■	Pneumatic spring return, normally closed, open, 1x open/1x closed	42
-	■	■	■	■	Pneumatic or mechanical spring return	42
-	■	■	■	■	Dominance: 1st signal or at 14	42
-	■	■	■	■	Normally closed, exhausted, open	42
Valve with pilot interface to ISO 15218						
■	-	■	■	■	Pneumatic spring return, normally closed	29
■	-	■	■	■	Pneumatic spring return, normally closed, open, 1x open/1x closed	29
■	-	■	■	■	Dominance: 1st signal or at 14	29
■	-	■	■	■	Normally closed, exhausted, open	29
■	-	■	■	■	Normally closed, exhausted, open	29
Valve with pilot interface to ISO 15218, with position detection						
■	-	-	-	■	Inductive sensor for monitoring normal position of piston spool valve	38
Valve with central plug						
-	■	■	■	■	Pneumatic spring return, normally closed, open, 1x open/1x closed	48
-	■	■	■	■	Dominance: 1st signal or at 14	48
-	■	■	■	■	Normally closed, exhausted, open	48
-	■	■	■	■	Normally closed, exhausted, open	48
Pneumatic valve						
-	■	■	■	■	Pneumatic spring return, normally closed, open, 1x open/1x closed	48
-	■	■	■	■	Dominance: 1st signal or at 14	48
-	■	■	■	■	Normally closed, exhausted, open	48
-	■	■	■	■	Normally closed, exhausted, open	48

Solenoid valves VSVA, ISO 15407-1

Type codes

VSVA		-	B	-	T	32	C	-	A	Z	H
Valve series											
VSVA	Standard valves to ISO 15407-1/-2										
Valve type											
B	Sub-base valve										
Valve function											
M	Single solenoid										
B	Double solenoid										
D	Double solenoid with dominant signal at 14										
P	Single solenoid, mid-position										
T	2 single solenoid valves in one housing										
Connections/switching positions											
22	2/2-way valve										
32	3/2-way valve										
52	5/2-way valve										
53	5/3-way valve										
Normal position											
C	Closed										
N	Code T with 2x closed, reverse operation										
U	Open										
F	Code T with 2x open, reverse operation										
E	Exhausted										
H	Code T with 1x open, 1x closed										
W	Code T with 1x open, 1x closed, reverse operation										
-	Double solenoid valve										
Type of reset											
A	Pneumatic spring										
M	Mechanical spring										
-	Double solenoid valve										
Pilot air supply port											
Z	External										
-	Internal										
Manual override											
H	With manual override										
-	Without manual override										

Solenoid valves VSVA, to ISO 15407-1

Type code

→	-	A1	-	1	C1	-	
Standard							
A1	ISO size 01, width 26 mm						
A2	ISO size 02, width 18 mm						
Operating voltage							
1	24 V DC						
1A	24 V AC						
2A	110 V AC						
3A	230 V AC						
5	12 V DC						
-	Without pilot valve						
Electrical connection							
C1	Type C to EN 175301-803						
R2	Central plug M8x1						
R3	Individual plug M12						
R5	Central plug M12x1						
P1	Without pilot valve						
Signal status display							
L	LED (integrated)						
-	Without signal status display						
Position detection							
APC	Proximity sensor PNP With open cable end						
APP	Proximity sensor PNP With plug M8						
ANC	Proximity sensor NPN With open cable end						
ANP	Proximity sensor NPN With plug M8						
-	Without sensor						

Pneumatic valves VSPA, ISO 15407-1

Type codes

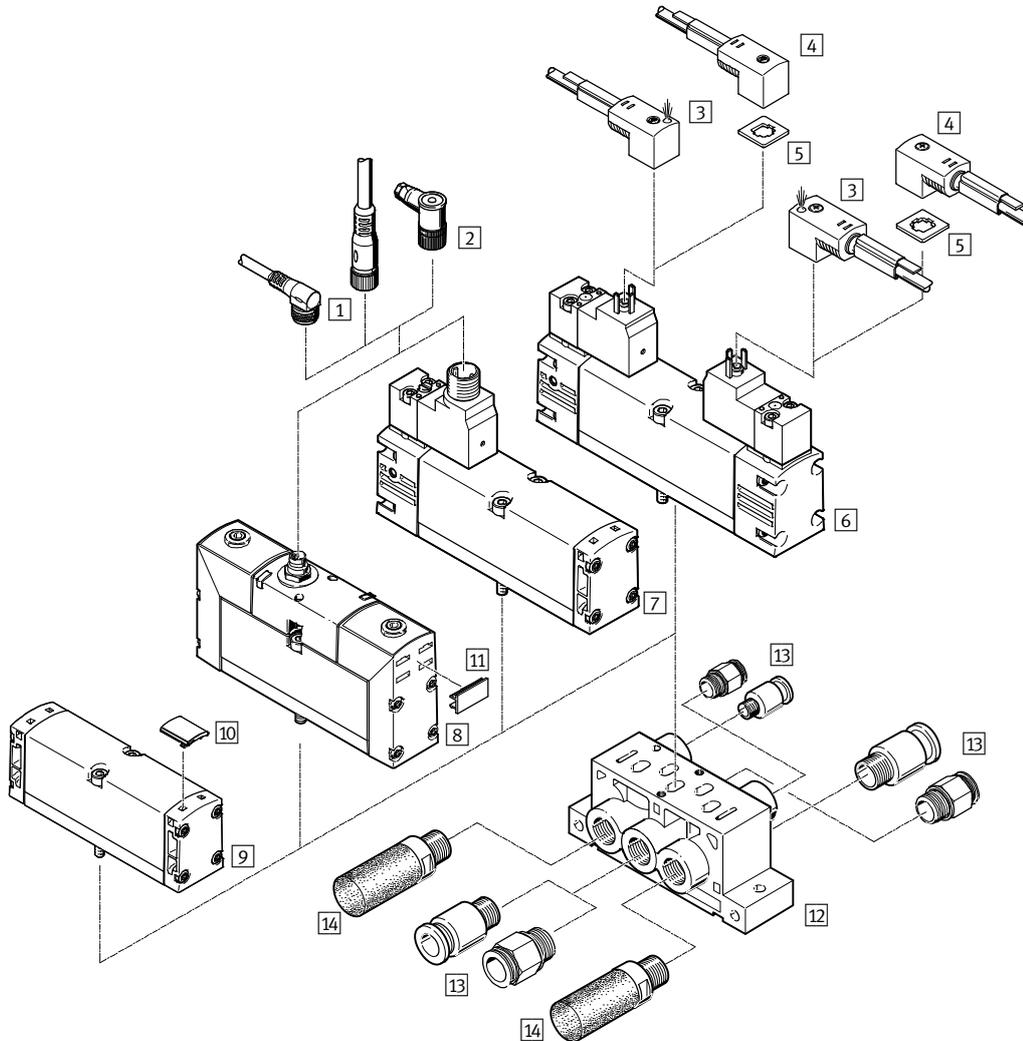
VSPA - B - M 52 - A - A1

Valve series	
VSPA	Standard valves to ISO 15407-1/-2
Valve type	
B	Sub-base valve
Valve function	
M	Monostable
B	Bistable
D	Bistable with dominant signal at 14
P	Monostable, mid-position
T	2 monostable valves in one housing
Connections/switching positions	
32	3/2-way valve
52	5/2-way valve
53	5/3-way valve
Normal position	
C	Closed
U	Open
E	Exhausted
H	Code T with 1x open, 1x closed
-	Bistable valve
Type of reset	
A	Pneumatic spring
M	Mechanical spring
-	Bistable valve
Standard	
A1	ISO size 01, width 26 mm
A2	ISO size 02, width 18 mm

Solenoid/pneumatic valves, ISO 15407-1

Peripherals overview

Individual mounting



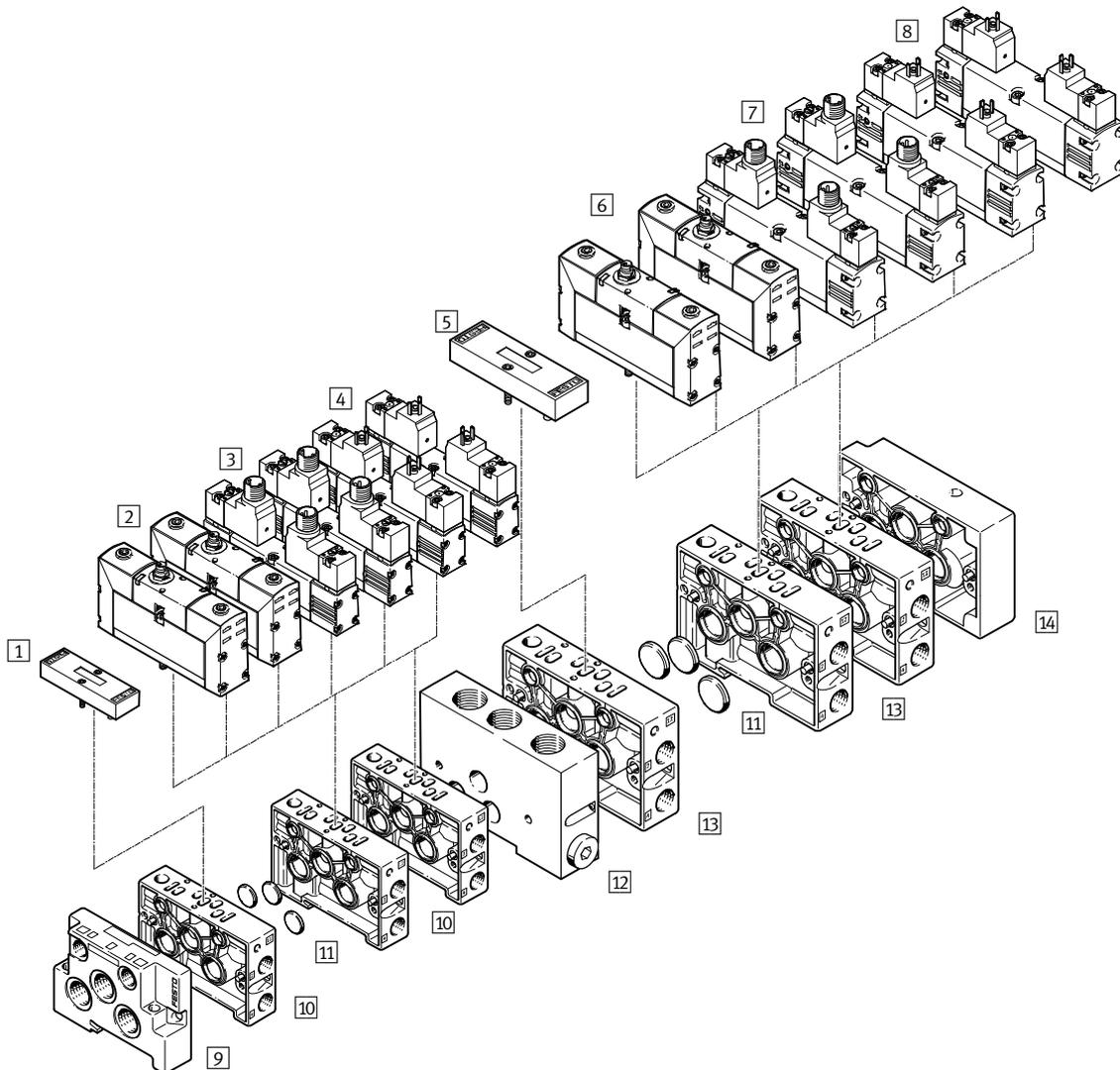
	Type	Brief description	→ Page/Internet	
1	Connecting cable	NEBU	For valves with round plug	78
2	Plug socket	SIE-WD-TR	Angled	78
3	Connecting cable	KMEB...-LED	With PVC casing and LED	78
4	Connecting cable	KMEB	With PVC casing	78
5	Illuminating seal	MEB-LD	For indicating the signal status	78
6	Solenoid valve	VSVA...C	With interface to ISO 15218 and plug pattern type C	20
7	Solenoid valve	VSVA...R3	With interface to ISO 15218 and round plug	20
8	Solenoid valve	VSVA...R	With round plug	42
9	Pneumatic valve	VSPA	Port pattern to ISO 15407-1	54
10	Inscription label holder	ASCF	For identifying the VSPA pneumatic valves	77
11	Inscription labels	IBS-9x20	For identifying the VSVA valves with round plug	77
12	Individual sub-base	NAS	With lateral ports	65
13	Push-in fitting	QS	For standard O.D. tubing	77
14	Silencer	U	For fitting in exhaust ports	77

Solenoid valves, ISO 15407-1

Peripherals overview

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Manifold assembly – Solenoid valves

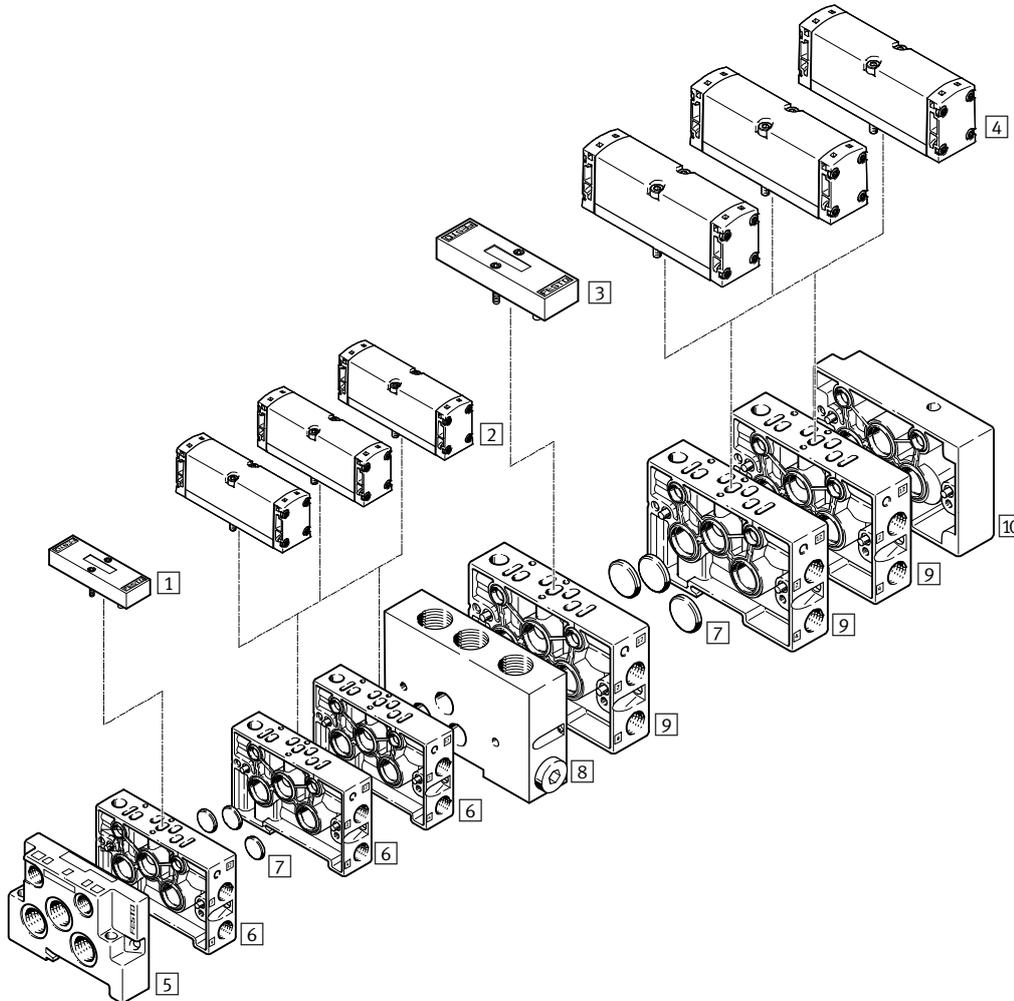


	Type	Brief description	→ Page/Internet	
1	Blanking plate	NDV-02-VDMA	For width 18 mm, vacant or spare position	75
2	Solenoid valve	VSVA...A2...R	Width 18 mm with round plug	42
3	Solenoid valve	VSVA...A2...R3	Width 18 mm, interface to ISO 15218 with round plug	20
4	Solenoid valve	VSVA...A2...C	Width 18 mm, interface to ISO 15218 with plug pattern type C	20
5	Blanking plate	NDV-01-VDMA	For width 26 mm, vacant or spare position	75
6	Solenoid valve	VSVA...A1...R	Width 26 mm with round plug	48
7	Solenoid valve	VSVA...A1...R3	Width 26 mm, interface to ISO 15218 with round plug	29
8	Solenoid valve	VSVA...A1...C	Width 26 mm, interface to ISO 15218 with plug pattern type C	29
9	End plate	NEV	For sealing the manifold sub-bases width 18 mm	66
10	Manifold sub-base	NAW-1/8-02-VDMA	Width 18 mm with lateral ports 2 and 4	66
11	Isolating disc	NSC	For creating pressure zones or for sealing ports on the end plates	75
12	Intermediate plate	NZV-01/02-VDMA	For connecting width 18 mm with width 26 mm	67
13	Manifold sub-base	NAW-1/4-01-VDMA	Width 26 mm with lateral ports 2 and 4	66
14	End plate	NEV	For sealing the manifold sub-bases width 26 mm	66

Pneumatic valves VSPA, ISO 15407-1

Peripherals overview

Manifold assembly – Pneumatic valves



	Type	Brief description	→ Page/Internet	
1	Blanking plate	NDV-02-VDMA	For width 18, vacant or spare position	75
2	Pneumatic valve	VSPA...A2	Width 18	54
3	Blanking plate	NDV-01-VDMA	For width 26, vacant or spare position	75
4	Pneumatic valve	VSPA...A1	Width 26	57
5	End plate	NEV	For sealing the manifold sub-bases width 18	66
6	Manifold sub-base	NAW-1/8-02-VDMA	Width 18 with lateral ports 2 and 4	66
7	Isolating disc	NSC	For creating pressure zones or for sealing ports on the end plates	75
8	Intermediate plate	NZV-01/02-VDMA	For connecting width 18 with width 26	67
9	Manifold sub-base	NAW-1/4-01-VDMA	Width 26 with lateral ports 2 and 4	66
10	End plate	NEV	For sealing the manifold sub-bases width 26	66