

# Series 4 valves and solenoid valves

New models

3/2, 5/2 and 5/3-way CC, CO  
Ports: G1/8, G1/4, G1/2



Series 4 solenoid valves have been designed in the 3/2, 5/2, 5/3 versions and with the following two devices of actuation:

- electropneumatically actuated with mechanical spring return
- electropneumatically actuated and return with external and internal air pressure supply

Series 4 valves are equipped with a manual override which allows a stable operation and they are particularly suitable for mounting in arduous conditions.

All these valves can be operated by solenoids Series U, G A8 and H8. Moreover, valves with ports G1/2 only can be supplied with solenoids Series A6 (32x32).

Pneumatically actuated valves 3/2 NC become NO when the supply is on connection 3.

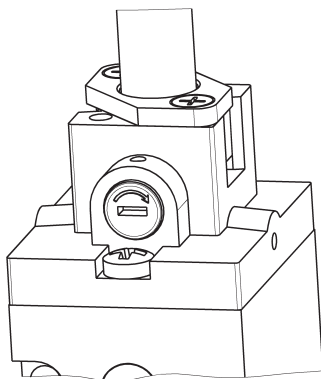
» New models with high flow (3300 and 4000 NI/min) available

## GENERAL DATA

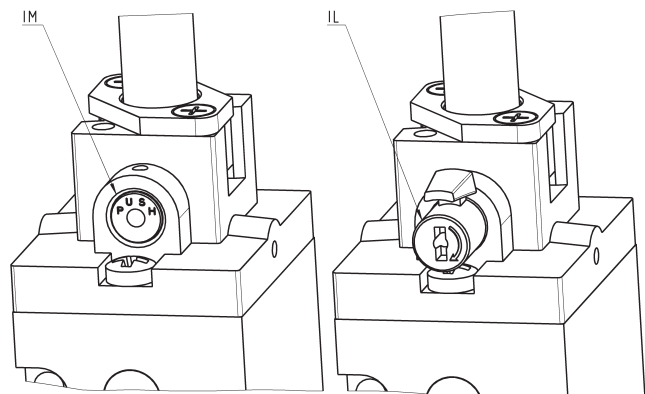
<b>Construction</b>	balanced spool type
<b>Valve functions</b>	3/2 - 5/2 - 5/3-way CC, CO
<b>Materials</b>	AL body and bases, stainless steel spool, technopolymer end cover, NBR PU seals
<b>Ports</b>	G1/8 - G1/4 - G1/2
<b>Installation</b>	in any position
<b>Operating temperature</b>	0 ÷ 60°C (with dry air at -20°C)
<b>Operating pressure</b>	see table
<b>Medium</b>	filtered air, without lubrication. If lubricated air is used, it is recommended to use ISOVG32 oil. Once applied the lubrication should never be interrupted.

CODING EXAMPLE									
4	5	4	-	015	-	22	-	U7	7
<b>4</b>	SERIES								
<b>5</b>	NUMBER OF WAYS - POSITIONS: 3 = 3/2 NC 4 = 3/2 NO 5 = 5/2 6 = 5/3 CC 7 = 5/3 CO								
<b>4</b>	PORTS: 8 = G1/8 4 = G1/4 2C = G1/2 2N = G1/2 (high flow)								
<b>015</b>	ACTUATION: 011 = double solenoid (horizontal solenoids) V11 = double solenoid (vertical solenoids) for G1/4 port only E11 = double solenoid external servo-command E15 = single solenoid external servo-command 015 = single solenoid, spring return (horizontal solenoids) V15 = single solenoid, spring return (vertical solenoid) for G1/4 port only 016 = single solenoid, pneumatic spring return (horizontal solenoid) V16 = single solenoid, pneumatic spring return (vertical solenoid) for G1/4 port only 33 = pneumatic pneumatic 34 = pneumatic differential 35 = pneumatic spring								
<b>22</b>	SOLENOID INTERFACE:: 22 = mech. sol. 22 x 22 50 = mech. sol. 32 x 32 (G1/2 only)								
<b>U7</b>	ENCAPSULATING MATERIAL / SOLENOID DIMENSIONS: A6 = PPS / 32 x 32 (G1/2 only) A8 = PPS / 30 x 30 G7 = PA / 22 x 22 G8 = PA / 30 x 30 (24 V DC only) G9 = PA / 22 x 58 H8 = PA 6 V0 / 30 x 30 U7 = PET / 22 x 22								
<b>7</b>	SOLENOID VOLTAGE: see solenoids section on page 2.2.35.01								
	TYPE OF MANUAL OVERRIDE: = bistable, standard IL = bistable, lever type (available on demand) IM = monostable (available on demand)								

**TYPES OF MANUAL OVERRIDE**



Example of solenoid valve with a bistable standard manual override.

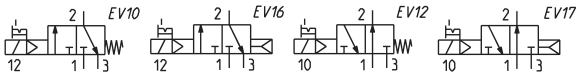
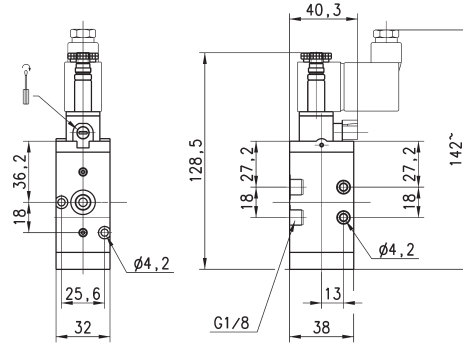


Example of solenoid monostable valve (IM) and bistable valve with a lever type manual override (IL). Both versions are available on demand. To order them it is necessary to add IM or IL at the end of the code. Code ex.: 454-015-22-U77IL.



### 3/2-way solenoid valve G1/8, monostable - Mod. 438... and 448...

These solenoid valves, which have electropneumatic actuation and spring return, are available in the NC (closed) or NO (open) version.

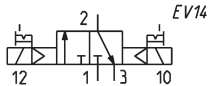
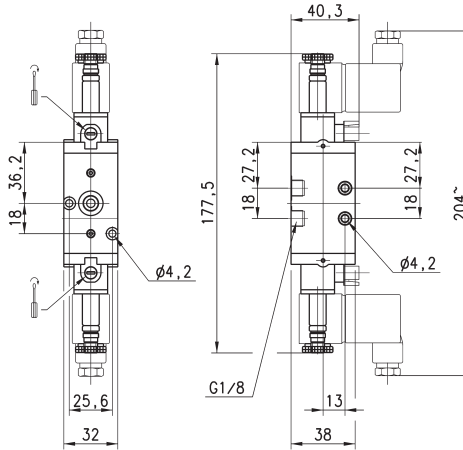


Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol
438-015-22	3/2 NC	650	2,5 + 10	EV10
438-016-22	3/2 NC	650	2,5 + 10	EV16
448-015-22	3/2 NO	650	2,5 + 10	EV12
448-016-22	3/2 NO	650	2,5 + 10	EV17



### 3/2-way solenoid valve G1/8, bistable - Mod. 438-011...

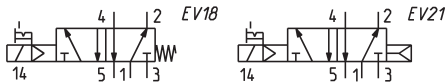
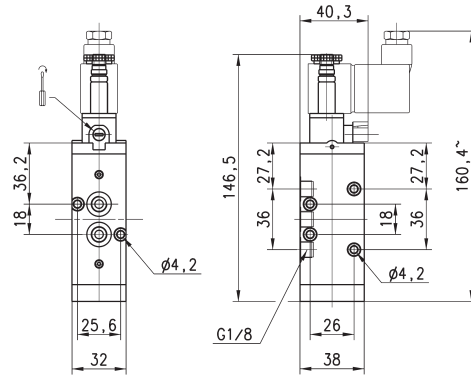
These solenoid valves, which have electropneumatic actuation and return, assume the NC (closed) or NO (open) operating status depending on the last pulse received.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)
438-011-22	3/2	700	2 + 10

5/2-way solenoid valves, G1/8, monostable - Mod 458...

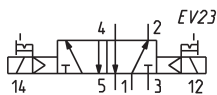
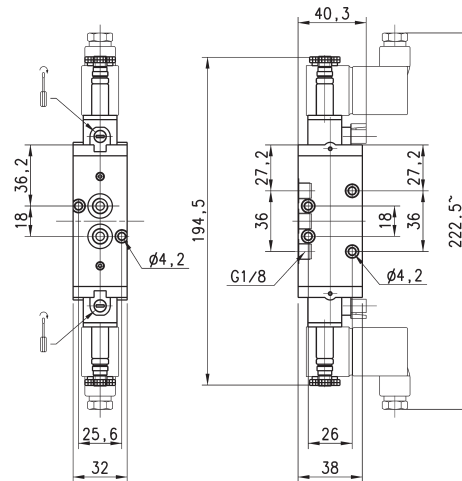
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol
458-015-22	5/2	650	2,5 + 10	EV18
458-016-22	5/2	650	2,5 + 10	EV21

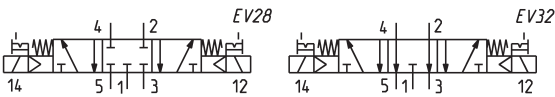
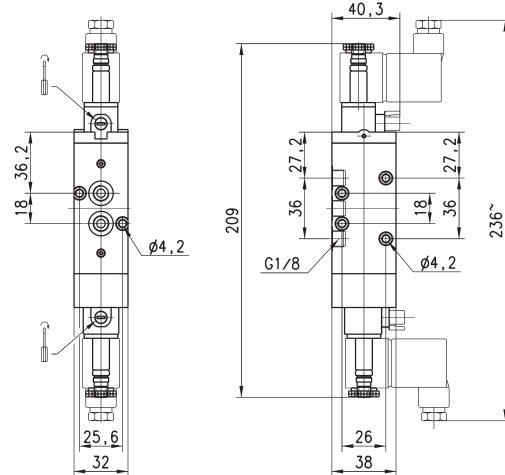
5/2-way solenoid valves, G1/8, bistable - Mod 458-011...

These solenoid valves, with electropneumatic actuation and return, are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)
458-011-22	5/2	650	2 + 10

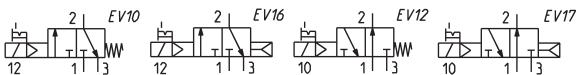
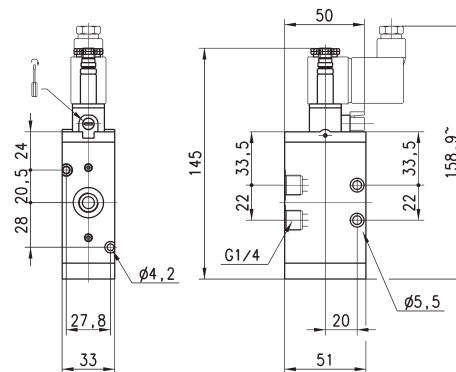
**5/3-way solenoid valve, G1/8 - Mod. 468-011... and 478-011...**

 CC = Centres Closed  
 CO = Centres Open


Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol
468-011-22	5/3 CC	600	2 + 10	EV28
478-011-22	5/3 CO	600	2 + 10	EV32

**3/2-way solenoid valve, G1/4, monostable Mod. 434 and Mod. 444**

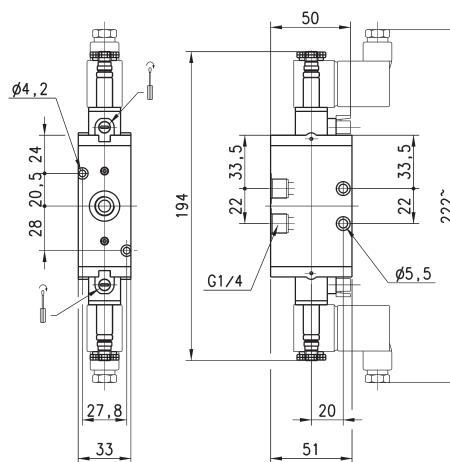
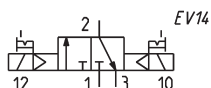
These solenoid valves, which have electropneumatic actuation and spring return, are available in the NC (closed) or NO (open) version.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol
434-015-22	3/2 NC	1250	2 + 10	EV10
434-016-22	3/2 NC	1250	2 + 10	EV16
444-015-22	3/2 NO	1250	2 + 10	EV12
444-016-22	3/2 NO	1250	2 + 10	EV17

### 3/2-way solenoid valve, G1/4, bistable - Mod. 434-011...

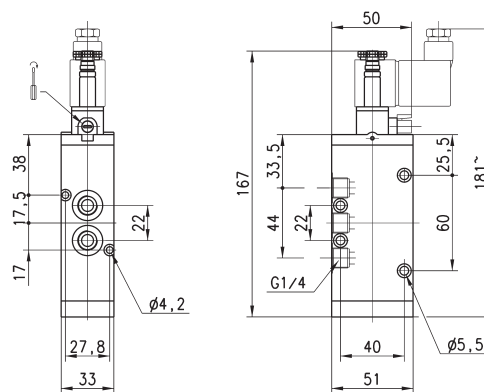
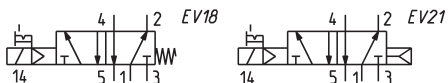
These solenoid valves, which have electropneumatic actuation and return, assume the NC (closed) or NO (open) position depending on the last pulse received.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)
434-011-22	3/2	1250	2 + 10

### 5/2-way solenoid valve, G1/4, monostable - Mod. 454...

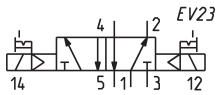
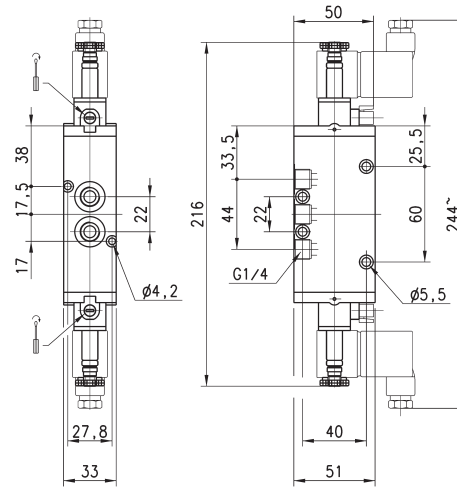
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol
454-015-22	5/2	1250	2,5 + 10	EV18
454-016-22	5/2	1250	2,5 + 10	EV21


**5/2-way solenoid valve, G1/4, bistable - Mod. 454-011...**

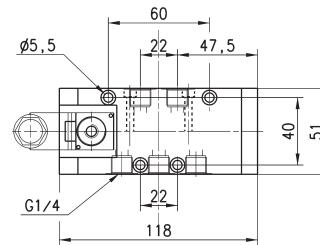
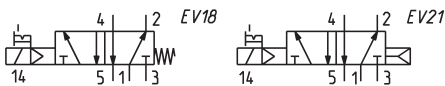
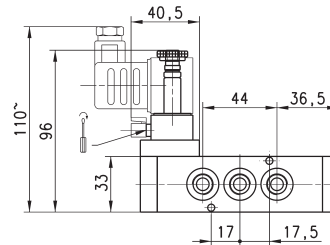
These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)
454-011-22	5/2	1250	2 ÷ 10


**5/2-way solenoid valve, G1/4, monostable - Mod. 454-V...**

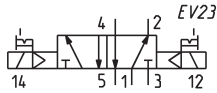
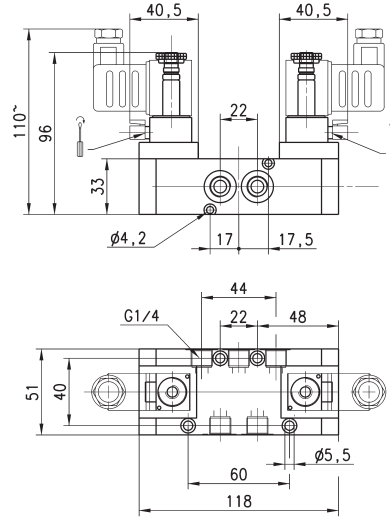
These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol
454-V15-22	5/2	1250	2,5 ÷ 10	EV18
454-V16-22	5/2	1250	2,5 ÷ 10	EV21

5/2-way solenoid valve, G1/4, bistable - Mod. 454-V11...

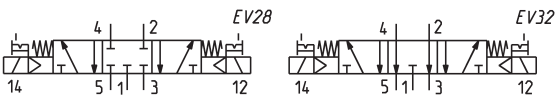
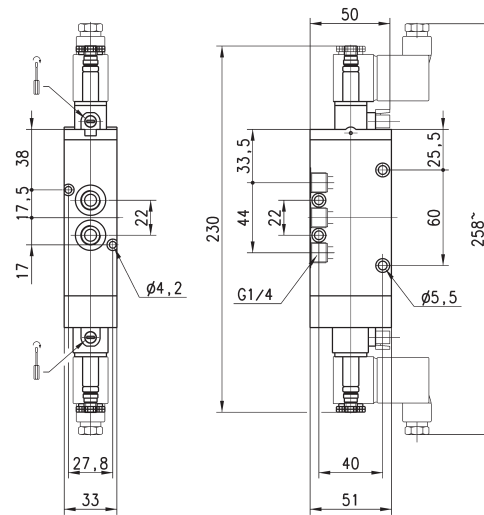
These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)
454-V11-22	5/2	1250	2 ÷ 10

5/3-way solenoid valve, G1/4 - Mod. 464-011... e 474-011...

CC = Centres Closed  
CO = Centres Open

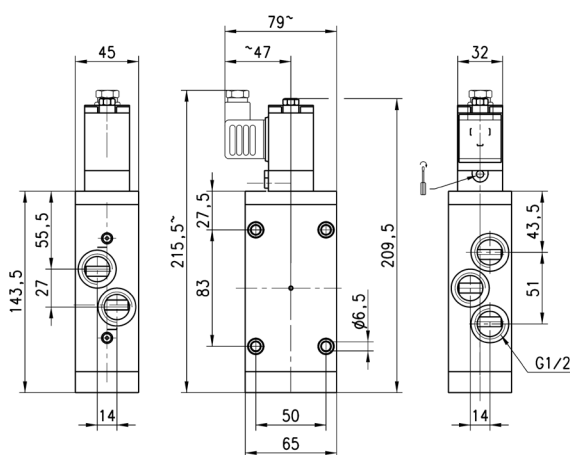


Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol
464-011-22	5/3 CC	1250	3 ÷ 10	EV28
474-011-22	5/3 CO	1250	3 ÷ 10	EV32



**5/2-way solenoid valve, G1/2, monostable - Mod. 452C...**

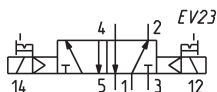
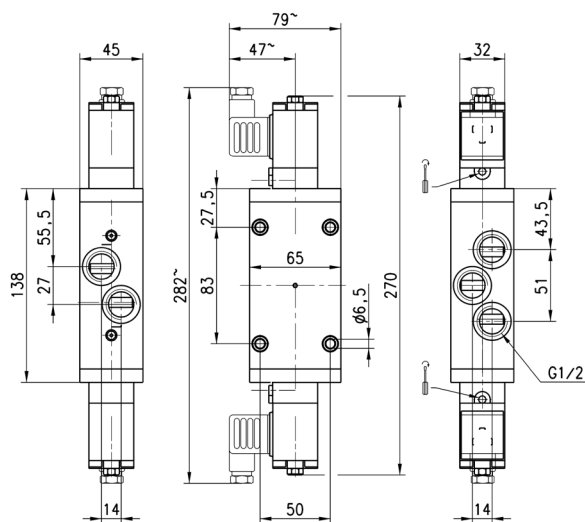

These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol	
452C-015-50-A6*	5/2	2500	2,5 + 10	EV18	* choose the desired voltage
452C-016-50-A6*	5/2	2500	2,5 + 10	EV21	* choose the desired voltage

**5/2-way solenoid valve, G1/2, bistable - Mod. 452C-011...**


These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



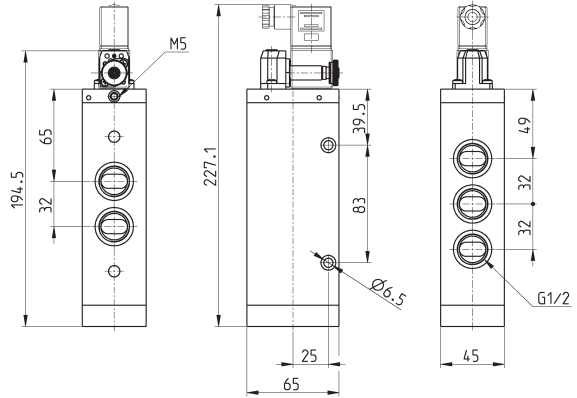
Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	
452C-011-50-A6*	5/2	2500	2 + 10	* choose the desired voltage

5/2-way solenoid valve, G1/2, monostable - Mod. 452N-...

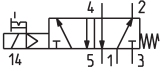
New models



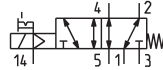
These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.



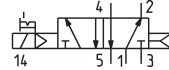
EV18



EV19



EV21



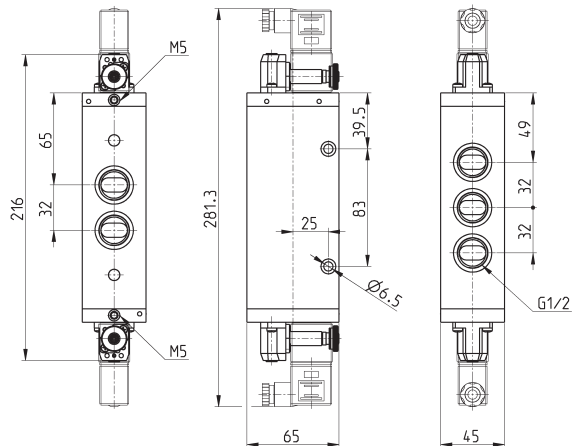
Mod.	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-015-22	5/2	4000	-	2.5 + 10	EV18
452N-016-22	5/2	4000	-	2 + 10	EV21
452N-E15-22	5/2	4000	2.5	-0.9 + 10	EV19

5/2-way solenoid valve, G1/2, bistable - Mod. 452N-...

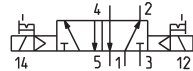
New models



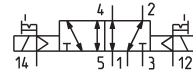
These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



EV23



EV25



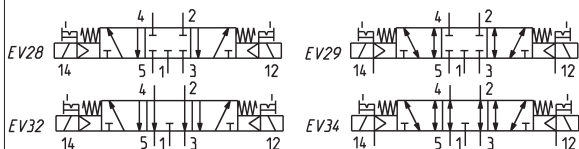
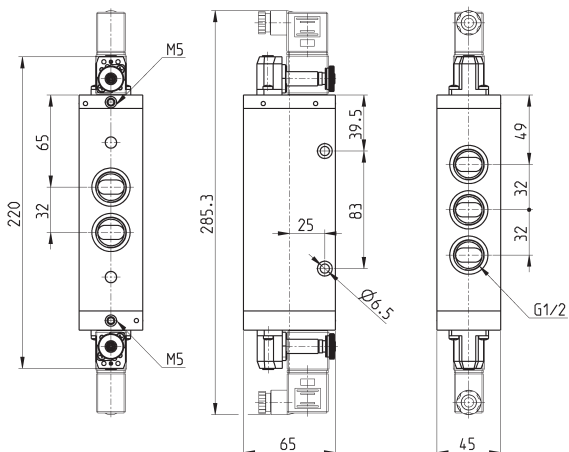
Mod.	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-011-22	5/2	4000	-	2 + 10	EV23
452N-E11-22	5/2	4000	2	-0.9 + 10	EV25

5/3-way solenoid valve, G1/2, bistable - Mod. 462N-..., 472N-...

New models

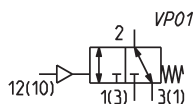
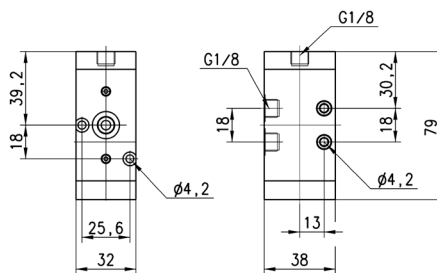


These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



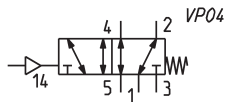
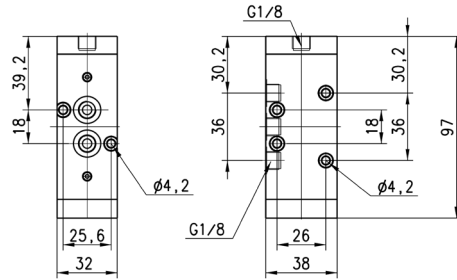
Mod.	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
462N-011-22	5/3 CC	3300	-	2 + 10	EV28
462N-E11-22	5/3 CC	3300	2	-0.9 + 10	EV29
472N-011-22	5/3 CO	3300	-	2 + 10	EV32
472N-E11-22	5/3 CO	3300	2	-0.9 + 10	EV34

3/2-way valve, G1/8 port, monostable Mod. 438-35



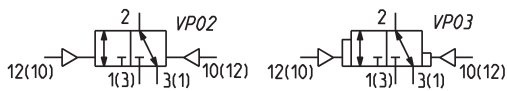
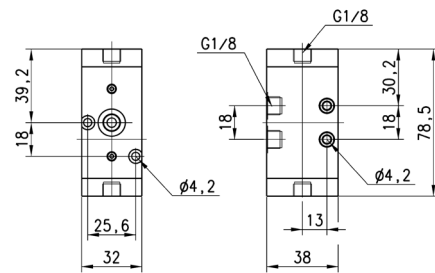
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
438-35	in-line/on manifold	3/2 NC	700	2.5	-0.9 + 10

5/2-way valve, G1/8 port, monostable Mod. 458-35



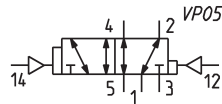
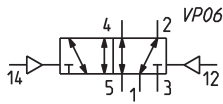
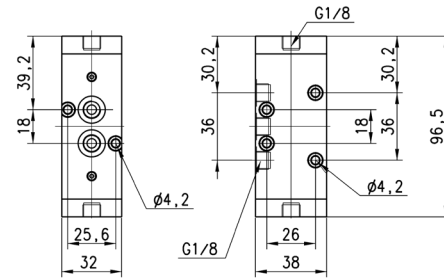
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
458-35	in-line/manifold	5/2	700	2.5	-0.9 + 10

3/2-way valve, G1/8 port, bistable Mod. 438



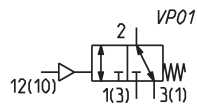
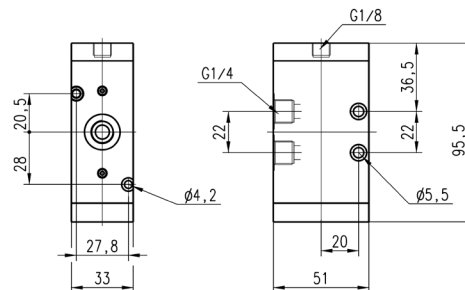
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
438-33	in-line/on manifold	3/2	700	2	-0.9 + 10	VP02
438-34	in-line/on manifold	3/2	700	2	-0.9 + 10	VP03

## 5/2-way valve, G1/8 port, bistable Mod. 458



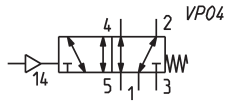
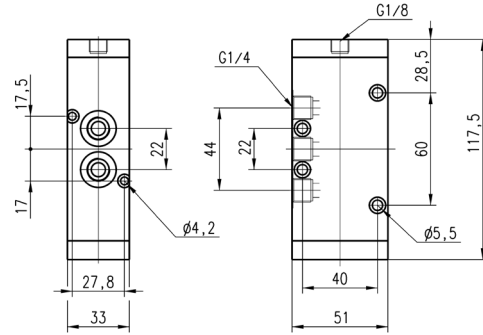
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
458-33	in-line/on manifold	5/2	700	2	-0.9 + 10	VP06
458-34	in-line/on manifold	5/2	700	2	-0.9 + 10	VP05

## 3/2-way valve, G1/4 port, monostable Mod. 434-35



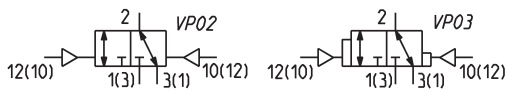
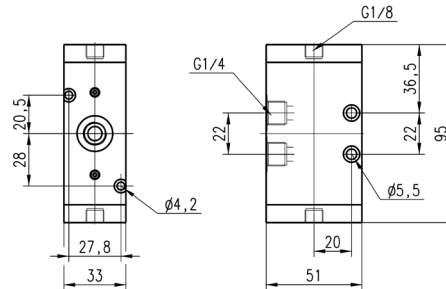
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
434-35	in-line/on manifold	3/2 NC	1250	2.5	-0.9 + 10

5/2-way valve, G1/4 port, monostable Mod. 454-35

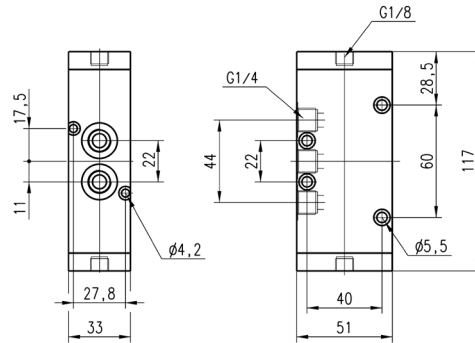


Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
454-35	in-line/on manifold	5/2	1250	2.5	-0.9 + 10

3/2-way valve, G1/4 port, bistable Mod. 434



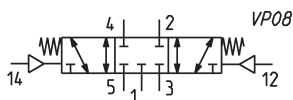
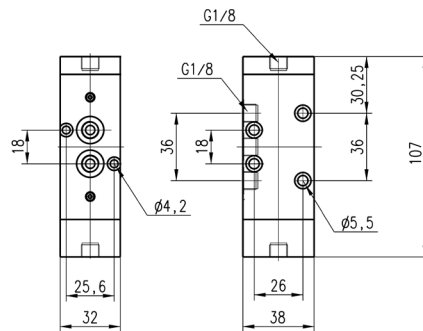
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
434-33	in-line/on manifold	3/2 NC	1250	2	-0.9 + 10	VP02
434-34	in-line/on manifold	3/2 NC	1250	2	-0.9 + 10	VP03

**5/2-way valve, G1/4 port, bistable Mod. 454**


Mod.	Mounting	Function	Flow rate Qn (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
454-33	in-line/on manifold	5/2	1250	2	-0.9 + 10	VP06
454-34	in-line/on manifold	5/2	1250	2	-0.9 + 10	VP05

**5/3-way C.C. valve, G1/8, monostable, with central stable position**

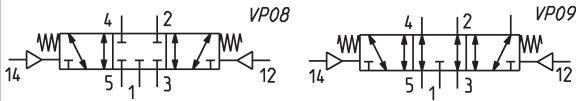
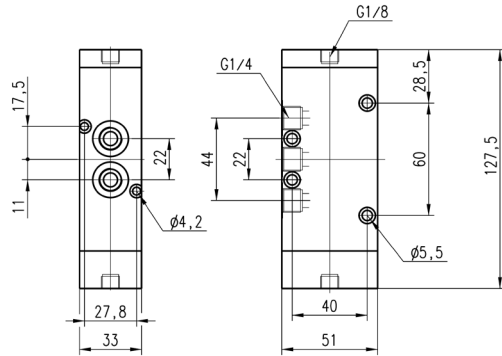
CC = Centres Closed



Mod.	Mounting	Function	Flow rate Qn (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)
468-33	in-line/on manifold	5/3 CC	700	2.5	-0.9 + 10

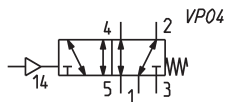
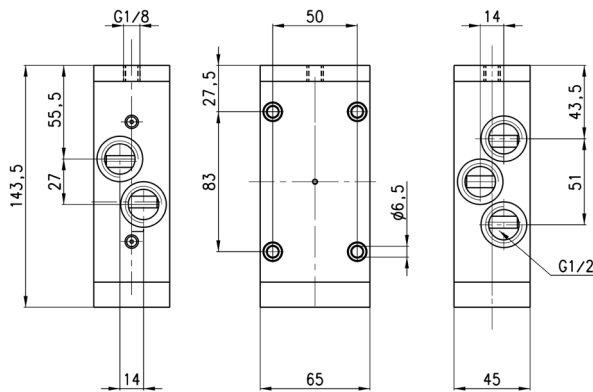
5/3-way CC CO valve, G1/4, monostable, central stable position

CC = Centres Closed  
CO = Centres Open



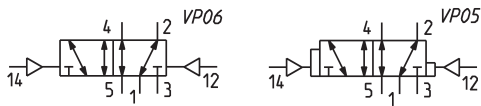
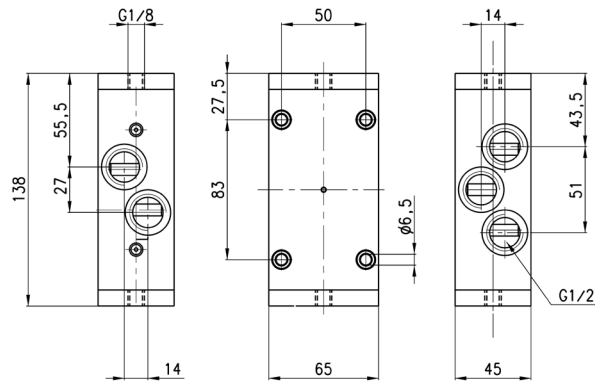
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
464-33	in-line/on manifold	5/3 CC	1250	2.5	-0.9 + 10	VP08
474-33	in-line/on manifold	5/3 CO	1200	2.5	-0.9 + 10	VP09

5/2-way valve, G1/2 port, monostable Mod. 452C-35

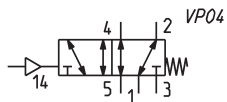
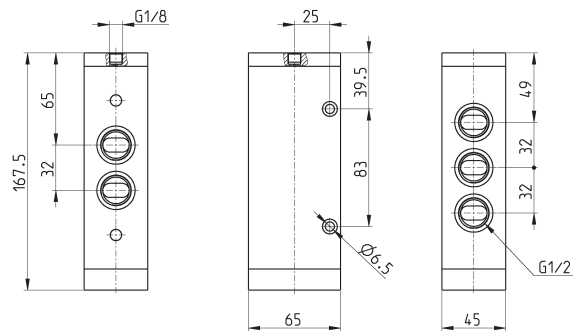


Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
452C-35	in-line	5/2	2500	2.5	-0.9 + 10



**5/2-way valve, G1/2 port, bistable Mod. 452C**


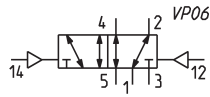
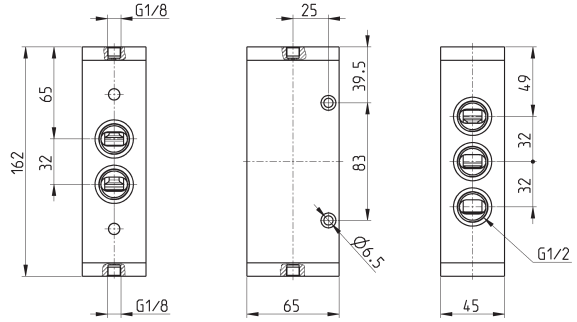
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452C-33	in-line	5/2	2500	2	-0.9 + 10	VP06
452C-34	in-line	5/2	2500	2	-0.9 + 10	VP05

**5/2-way valve, G1/2 port, monostable Mod. 452N-35**
**New model**


Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
452N-35	in-line	5/2	4000	2.5	-0.9 + 10

5/2-way valve, G1/2 port, bistable Mod. 452N-33

New model



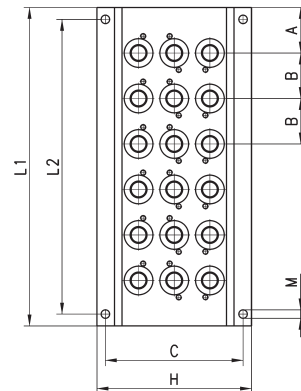
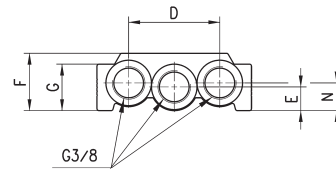
Mod.	Mounting	Function	Flow rate Qn (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-33	in-line	5/2	4000	2	-0.9 ÷ 10	VP06

Manifold base with common exhausts

For valves Series 4, G1/8 (3/2, 5/2 or 5/3-way)

The following is supplied with:

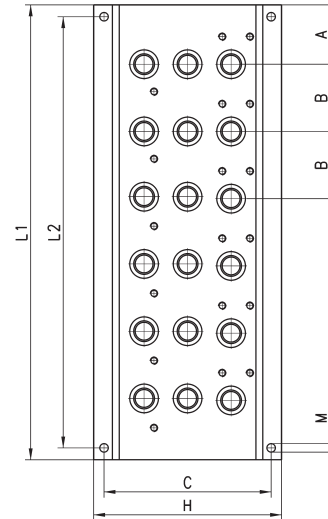
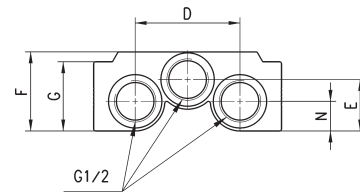
- 1x manifold
- 1x pair of fixing screws for valve position
- 1x interface seal for valve positions
- 2x guides for valve position



DIMENSIONS												
Mod.	A	B	C	D	E	F	G	H	L1	L2	M	N
CNVL-42	28	33	69,5	46	12	29	23,5	78	89	77	4,3	14
CNVL-43	28	33	69,5	46	12	29	23,5	78	122	110	4,3	14
CNVL-44	28	33	69,5	46	12	29	23,5	78	155	143	4,3	14
CNVL-45	28	33	69,5	46	12	29	23,5	78	188	176	4,3	14
CNVL-46	28	33	69,5	46	12	29	23,5	78	221	209	4,3	14

**Manifold base with common exhausts**

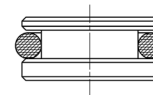
For valves Series 4, G1/4 (3/2, 5/2 or 5/3-way)  
 The following is supplied :  
 1x manifold  
 1x pair of fixing screws for valve position  
 1x interface seal for valve positions  
 2x guides for valve position


**DIMENSIONS**

Mod.	A	B	C	D	E	F	G	H	L1	L2	M	N
<b>CNVL-52</b>	30	34	84,5	53	26	40	35	95	94	82	4,3	15
<b>CNVL-53</b>	30	34	84,5	53	26	40	35	95	128	116	4,3	15
<b>CNVL-54</b>	30	34	84,5	53	26	40	35	95	162	150	4,3	15
<b>CNVL-55</b>	30	34	84,5	53	26	40	35	95	196	184	4,3	15
<b>CNVL-56</b>	30	34	84,5	53	26	40	35	95	230	218	4,3	15

**Blanking plug Mod. TCNVL for manifolds**

The following is supplied:  
 1x blanking plug  
 1x O-Ring



Mod.

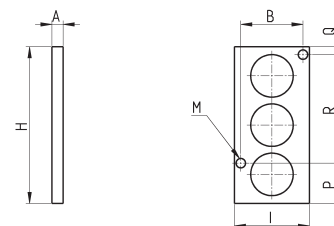
**TCNVL/3**
**TCNVL/5**

 TCNVL/3: for Series 4, G1/8  
 TCNVL/5: for Series 4, G1/4

**Blanking plate Mod. CNVL for manifolds**

It is used to blank vacant positions of a manifold.

The following is supplied:  
 2x fixing screws  
 3x O-Rings


**DIMENSIONS**

Mod.	A	B	H	I	M	P	Q	R
<b>CNVL/2</b>	5	25.6	52	32	4.2	17	17	18
<b>CNVL/3</b>	5	27.8	70	33.5	4.2	18	3.5	48.5

 CNVL/2: for Series 4, G1/8  
 CNVL/3: for Series 4, G1/4