

# Series 3 valves and solenoid valves

2x3/2, 3/2, 5/2 and 5/3-way CC CO CP  
Ports: G1/8 and G1/4



Series 3 solenoid valves with G1/8 and G1/4 ports have been designed in the 3/2, 2 x 3/2, 5/2, 5/3 versions and with the following two devices of actuation:

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

Series 3 valves are equipped with a manual override which allows a stable operation and they can use Series U or G solenoids (22x22).

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

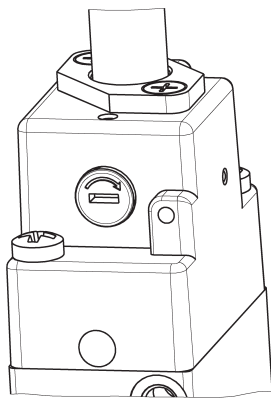
## GENERAL DATA

<b>Construction</b>	spool - type
<b>Valve group</b>	2x3/2 - 3/2 - 5/2 - 5/3-way CC CO CP
<b>Materials</b>	AL body, stainless steel spool, NBR seals
<b>Ports</b>	G1/8 - G1/4
<b>Installation</b>	in any position
<b>Operating temperature</b>	0 ÷ 60°C (with dry air at -20°C)
<b>Operating pressure</b>	see tables
<b>Fluid</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.

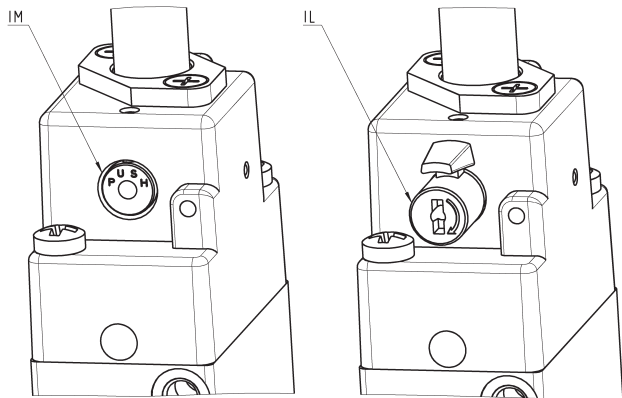
**CODING EXAMPLE**

<b>3</b>	<b>3</b>	<b>8</b>	<b>D</b>	<b>-</b>	<b>015</b>	<b>-</b>	<b>02</b>	<b>-</b>	<b>U7</b>	<b>7</b>
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<b>3</b>	SERIES
<b>3</b>	NUMBER OF WAYS - POSITIONS: 3 = 3/2 NC 4 = 3/2 NO 5 = 5/2 6 = 5/3 CC 7 = 5/3 CO 8 = 5/3 CP 9 = 1x3/2 NC + 1x3/2 NO
<b>8</b>	PORTS: 8 = G1/8 4 = G1/4
<b>D</b>	VERSION: = standard D = double valve 2x3/2 L = for manifold assembly (only for solenoid valves 3/2 with G1/8 ports)
<b>015</b>	ACTUATION: 011 = double solenoid 015 = single solenoid, spring return 016 = single solenoid, pneumatic spring return E11 = double solenoid external servo-command E15 = single solenoid, external servo-command 033 = pneumatic pneumatic 035 = pneumatic spring
<b>02</b>	SOLENOID INTERFACE: 02 = mech. sol. 22 x 22
<b>U7</b>	ENCAPSULATING MATERIAL / SOLENOID DIMENSIONS: 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 the solenoids section from 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**


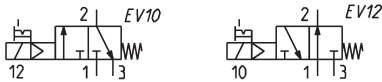
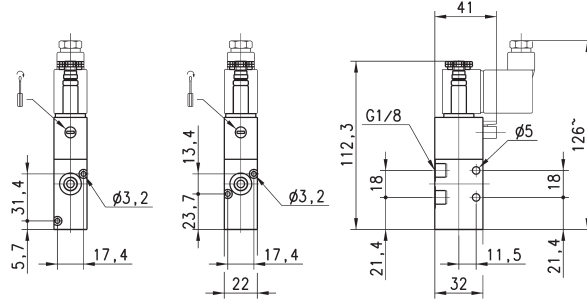
Example of solenoid valve with a bistable standard manual override.



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. 338..., Mod 348...

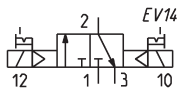
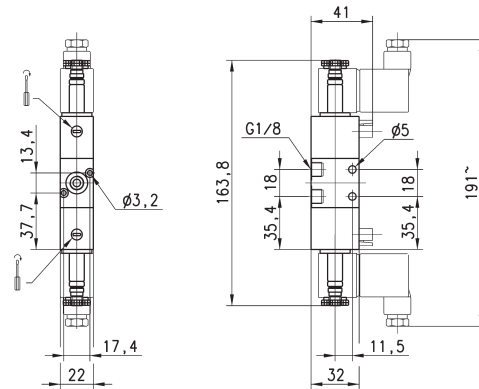
These solenoid valves, which have electropneumatic actuation and spring return, are available in the NC (closed) or NO (open) version.



Mod.	Mounting	Function	Flow rate (NI/min)	Operating pressure (bar)	Symbol
338-015-02	in-line	3/2 NC	700	2,5 + 10	EV10
338L-015-02	on manifold	3/2 NC	700	2,5 + 10	EV10
348-015-02	in-line	3/2 NO	700	2,5 + 10	EV12
348L-015-02	on manifold	3/2 NO	700	2,5 + 10	EV12

3/2-way solenoid valve, G1/8, bistable - Mod. 338...

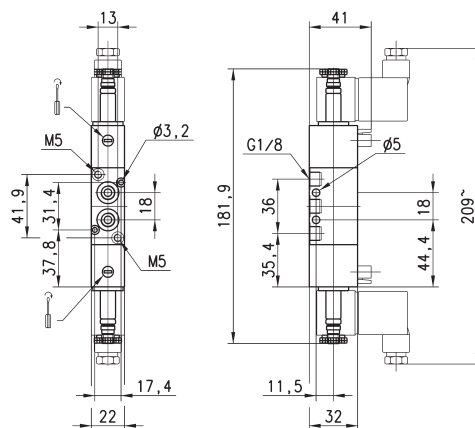
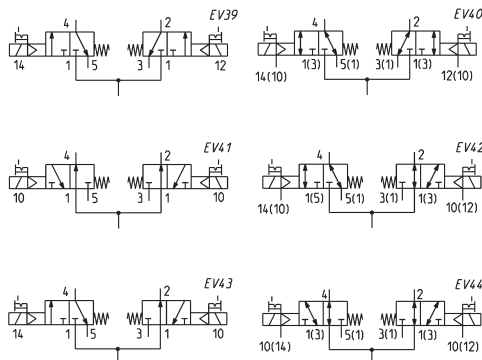
These solenoid valves, which have electropneumatic actuation and return, assume the NC (closed) or NO (open) position depending on the last pulse received.



Mod.	Mounting	Function	Flow rate (NI/min)	Operating pressure (bar)
338-011-02	in-line	3/2	700	1,5 + 10
338L-011-02	on manifold	3/2	700	1,5 + 10

### 2 x 3/2-way solenoid valve, G1/8 - Mod. 338D..., 348D... e 398D...

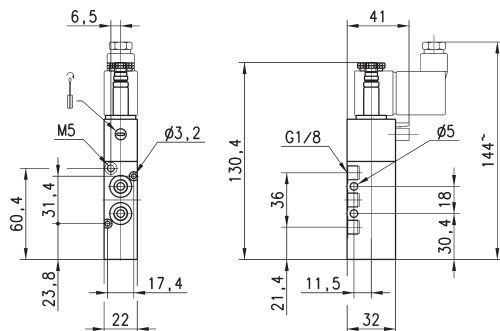
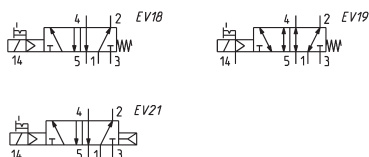
These solenoid valves are available in versions with 2 x 3/2 valves in the same valve.



Mod.	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
338D-015-02	2 x 3/2 NC	700	2,5 + 10	-	EV39
348D-015-02	2 x 3/2 NO	700	2,5 + 10	-	EV41
338D-E15-02	2 x 3/2 NC	700	-0,9 + 10	2,5 + 10	EV40
348D-E15-02	2 x 3/2 NO	700	-0,9 + 10	2,5 + 10	EV44
398D-015-02	1 x 3/2 NC + 1 x 3/2 NO	700	2,5 + 10	-	EV43
398D-E15-02	1 x 3/2 NC + 1 x 3/2 NO	700	-0,9 + 10	2,5 + 10	EV42

### 5/2-way solenoid valve, G1/8, monostable - Mod. 358...

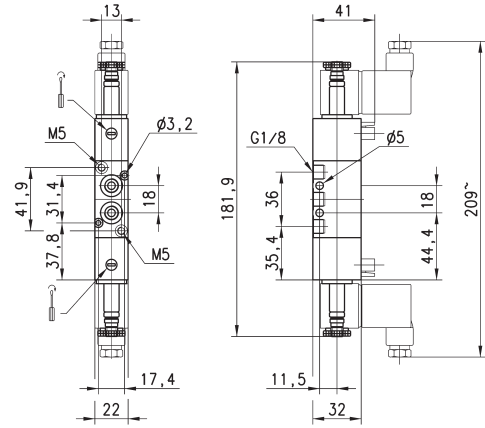
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
358-015-02	5/2	700	2,5 + 10	-	EV18
358-E15-02	5/2	700	-0,9 + 10	2,5 + 10	EV19
358-016-02	5/2	700	2,5 + 10	-	EV21

5/2-way solenoid valve, G1/8, bistable - Mod. 358...

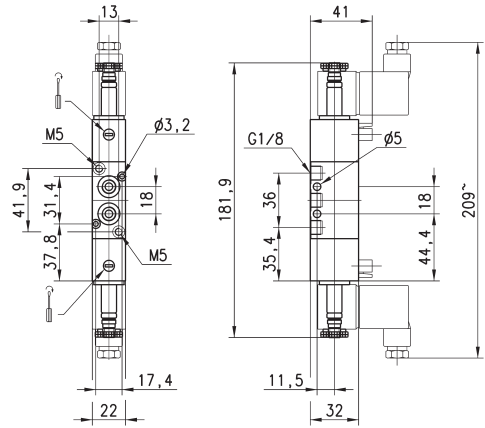
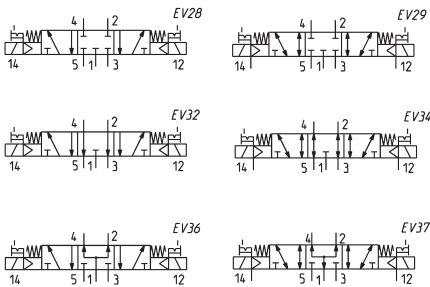
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
358-011-02	5/2	700	1,5 + 10	-	EV23
358-E11-02	5/2	700	-0,9 + 10	1,5 + 10	EV25

5/3-way solenoid valve, G1/8, - Mod. 368... Mod. 378... Mod. 388...

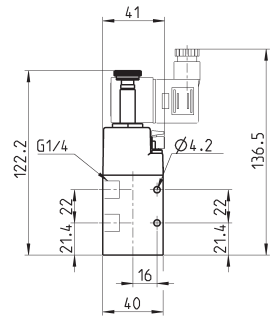
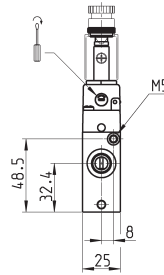
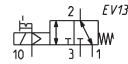
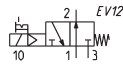
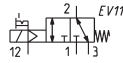
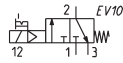
CC = Centres Closed CO = Centres Open CP = Pressure Centres



Mod.	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
368-011-02	5/3 CC	700	2 + 10	-	EV28
368-E11-02	5/3 CC	700	-0,9 + 10	2 + 10	EV29
378-011-02	5/3 CO	700	2-10	-	EV32
378-E11-02	5/3 CO	700	-0,9 + 10	2 + 10	EV34
388-011-02	5/3 CP	700	2 + 10	-	EV36
388-E11-02	5/3 CP	700	-0,9 + 10	2 + 10	EV37

### 3/2-way solenoid valve, G1/4, monostable - Mod. 334... Mod 344...

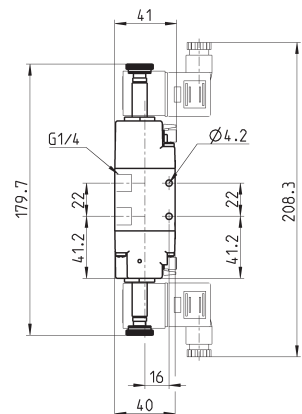
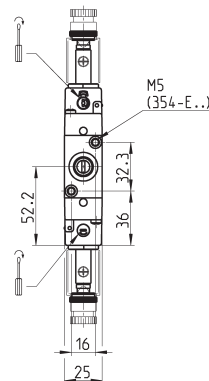
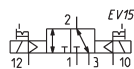
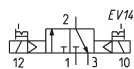
These solenoid valves, which have electropneumatic actuation and spring return, are available in the NC (closed) or NO (open) version.



Mod.	Mounting	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
334-015-02	in-line	3/2 NC	1300	2.5 + 10	-	EV10
334-E15-02	in-line	3/2 NC	1300	-0.9 + 10	2.5 + 10	EV11
344-015-02	in-line	3/2 NO	1300	2.5 + 10	-	EV12
344-E15-02	in-line	3/2 NO	1300	-0.9 + 10	2.5 + 10	EV13

### 3/2-way solenoid valve, G1/4, bistable - Mod. 334...

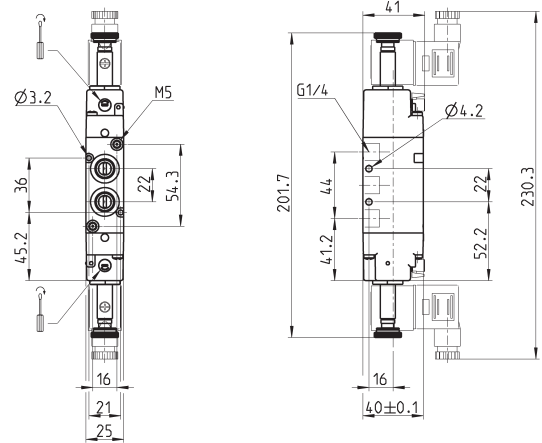
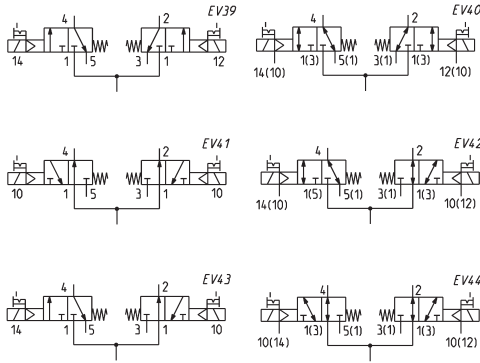
These solenoid valves, which have electropneumatic actuation and return assume the NC (closed) or NO (open) position depending on their last pulse received.



Mod.	Mounting	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
334-011-02	in-line	3/2	1300	1.5 + 10	-	EV14
334-E11-02	in-line	3/2	1300	1.5 + 10	2.5 + 10	EV15

2 x 3/2-way solenoid valve, G1/4 Mod. 334D... 344D... and 394D...

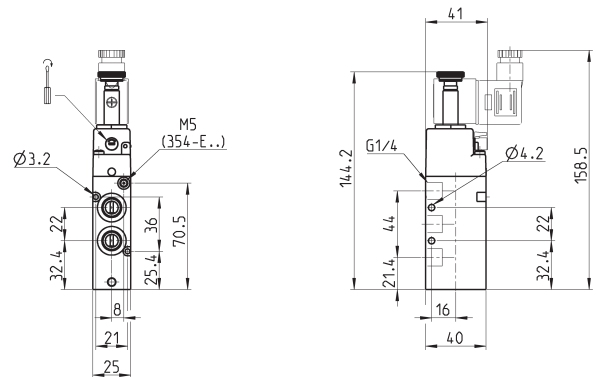
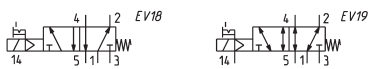
These solenoid valves are available in versions with 2 x 3/2 valves in the same valve.



Mod.	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
334D-015-02	2 x 3/2 NC	1200	2,5 + 10	-	EV39
344D-015-02	2 x 3/2 NO	1050	2,5 + 10	-	EV41
334D-E15-02	2 x 3/2 NC	1200	-0,9 + 10	2,5 + 10	EV40
344D-E15-02	2 x 3/2 NO	1050	-0,9 + 10	2,5 + 10	EV44
394D-015-02	1 x 3/2 NC + 1 x 3/2 NO	1050	2 + 10	-	EV43
394D-E15-02	1 x 3/2 NC + 1 x 3/2 NO	1050	-0,9 + 10	2,5 + 10	EV42

5/2-way solenoid valve, G1/4, monostable - Mod. 354...

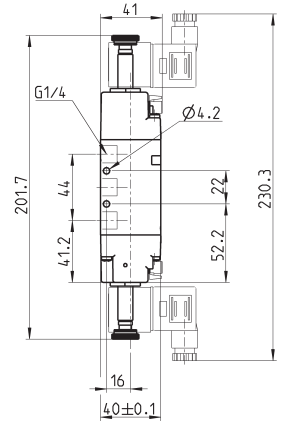
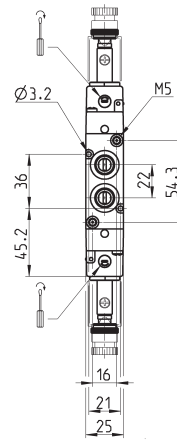
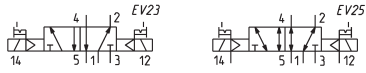
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
354-015-02	5/2	1300	2,5 + 10	-	EV18
354-E15-02	5/2	1300	-0,9 + 10	2,5 + 10	EV19

**5/2-way solenoid valve, G1/4, bistable - Mod. 354...**

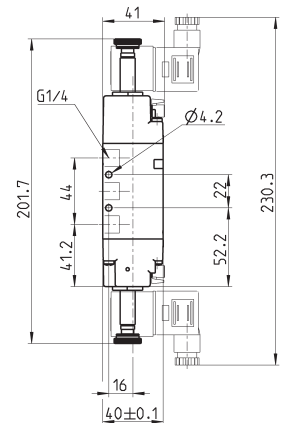
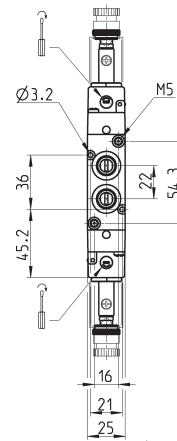
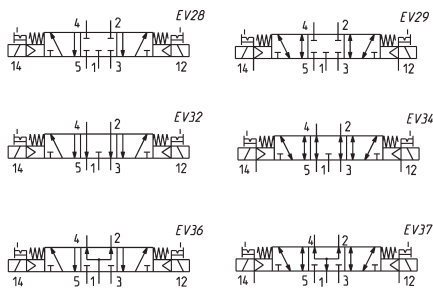
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



Mod.	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
354-011-02	5/2	1300	1,5 + 10	-	EV23
354-E11-02	5/2	1300	-0,9 + 10	2,5 + 10	EV25

**5/3-way solenoid valve, G1/4, - Mod. 364... Mod. 374... Mod. 384...**

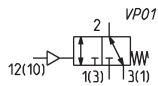
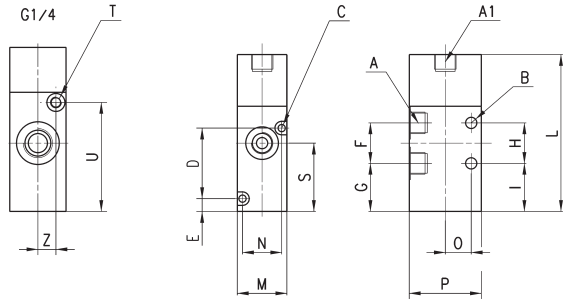
CC = Centres Closed CO = Centres Open CP = Pressure Centres



Mod.	Function	Flow rate (NI/min)	Operating pressure (bar)	Pilot pressure (bar)	Symbol
364-011-02	5/3 CC	1200	2,5 + 10	-	EV28
364-E11-02	5/3 CC	1200	-0,9 + 10	2,5 + 10	EV29
374-011-02	5/3 CO	1200	2,5 + 10	-	EV32
374-E11-02	5/3 CO	1200	-0,9 + 10	2,5 + 10	EV34
384-011-02	5/3 CP	1200	2,5 + 10	-	EV36
384-E11-02	5/3 CP	1200	-0,9 + 10	2,5 + 10	EV37



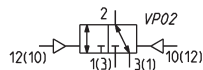
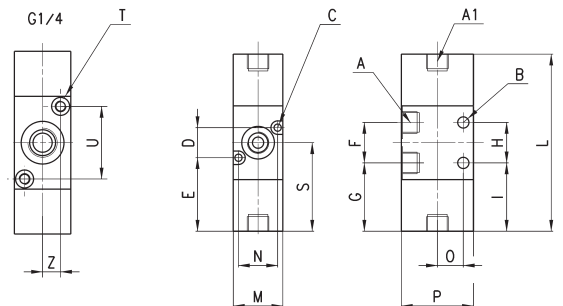
3/2-way valve, G1/8 or G1/4, monostable



DIMENSIONS

Mod.	Mounting	Function	Flow rate (NI/min)	Min. pilot press. (bar)	Working press. (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z
338-035	in-line	3/2 NC	700	2.5	-0.9 + 10	G1/8	G1/8	5	3.2	-	5.7	18	21.4	18	21.4	69.8	22	-	11.5	32	30.4	-	-	-
338L-035	on manifold	3/2 NC	700	2.5	-0.9 + 10	G1/8	G1/8	-	3.2	31.4	5.7	18	21.4	-	21.4	69.8	22	17.4	11.5	32	30.4	-	-	-
334-035	in-line	3/2 NC	1300	3	-0.9 + 10	G1/4	-	4.1	-	-	-	22	21.4	22	21.4	73	25	-	16	40	32.4	M5	48.5	8

3/2-way valve, G1/8 or G1/4, bistable

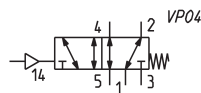
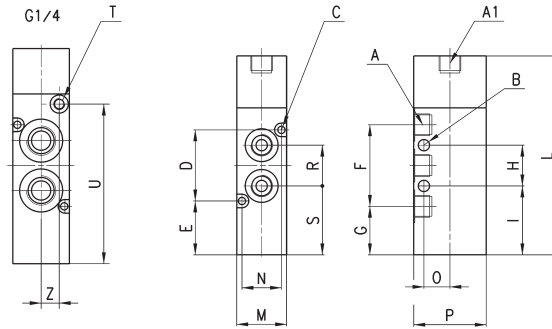


DIMENSIONS

Mod.	Mounting	Function	Flow rate (NI/min)	Min. pilot press. (bar)	Working press. (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z
338-033	in-line	3/2	700	1.5	-0.9 + 10	G1/8	G1/8	5	-	-	-	18	30.4	18	30.4	78.8	22	-	11.5	32	41.7	-	-	-
338L-033	on manifold	3/2	700	1.5	-0.9 + 10	G1/8	G1/8	5	3.2	13.4	32.7	18	30.4	-	30.4	78.8	22	17.4	-	32	41.7	-	-	-
334-033	in-line	3/2	1300	2.5	-0.9 + 10	G1/4	-	4.1	-	-	-	22	29.7	22	29.7	81.3	25	-	16	40	40.7	M5	32.3	8

**5/2-way valve, G1/8 or G1/4, monostable**

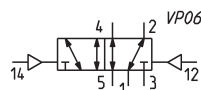
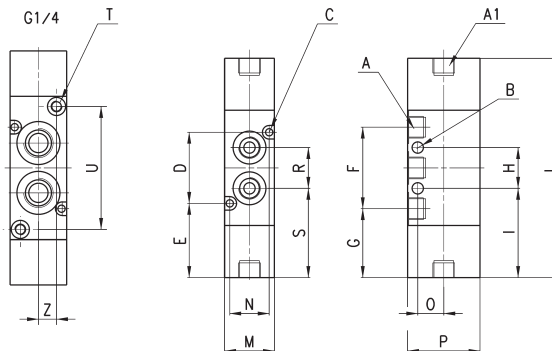
In-line or manifold mounting


**DIMENSIONS**

Mod.	Function	Flow rate (NI/min)	min pilot press. (bar)	Working press. (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z
358-035	5/2	700	2,5	-0,9 + 10	G1/8	G1/8	5	3,2	31,4	23,8	36	21,4	18	30,4	87,8	22	17,4	11,5	32	30,4	-	-	-
354-035	5/2	1300	3	-0,9 + 10	G1/4	-	4,1	3,2	36	25,4	44	21,4	22	30,4	95	25	21	16	40	32,4	M5	70,5	8

**5/2-way valve, G1/8 or G1/4, bistable**

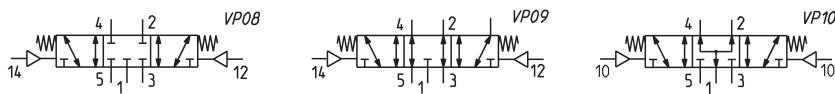
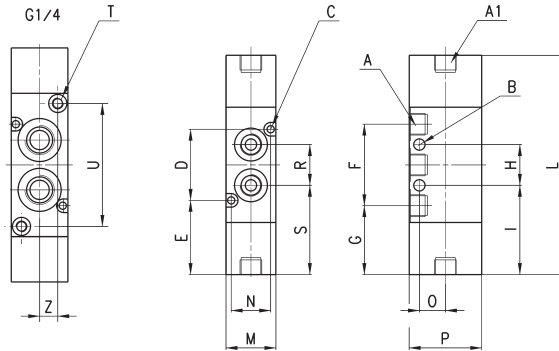
In-line or manifold mounting


**DIMENSIONS**

Mod.	Function	Flow rate (NI/min)	min. pilot pressure (bar)	Working pressure (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z
358-033	5/2	700	1,5	-0,9 + 10	G1/8	G1/8	5	3,2	31,4	32,8	36	30,4	18	39,4	96,8	22	17,4	11,5	32	39,4	-	-	-
354-033	5/2	1300	2,5	-0,9 + 10	G1/4	-	4,1	3,2	36	33,7	44	29,7	22	40,7	103,3	25	21	16	40	40,7	M5	54,3	8

5/3-way valve, G1/8 or G1/4

In-line or manifold mounting

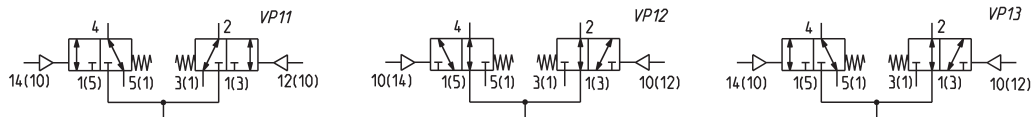
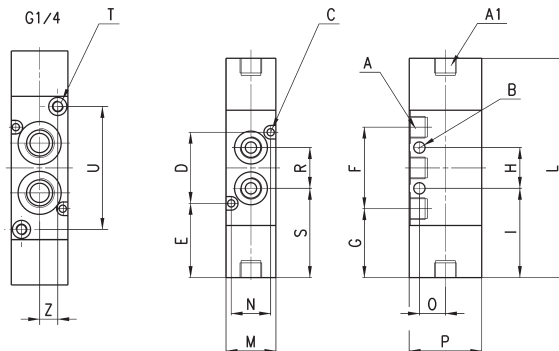


DIMENSIONS

Mod.	Function	Flow rate (NI/min)	Min. pilot pr. (bar)	Working pr. (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z	Symb.
368-033	5/3 CC	700	2,5	-0,9 + 10	G1/8	G1/8	5	3,2	31,4	32,8	36	30,4	18	39,4	96,8	22	17,4	11,5	32	39,4	-	-	-	VP08
364-033	5/3 CC	1200	2,5	-0,9 + 10	G1/4	-	4,1	3,2	36	33,7	44	29,7	22	40,7	103,3	25	21	16	40	40,7	M5	54,3	8	VP08
378-033	5/3 CO	700	2,5	-0,9 + 10	G1/8	G1/8	5	3,2	31,4	32,8	36	30,4	18	39,4	96,8	22	17,4	11,5	32	39,4	-	-	-	VP09
374-033	5/3 CO	1050	2,5	-0,9 + 10	G1/4	-	4,1	3,2	36	33,7	44	29,7	22	40,7	103,3	25	21	16	40	40,7	M5	54,3	8	VP09
388-033	5/3 CP	700	2,5	-0,9 + 10	G1/8	G1/8	5	3,2	31,4	32,8	36	30,4	18	39,4	96,8	22	17,4	11,5	32	39,4	-	-	-	VP10
384-033	5/3 CP	1050	2,5	-0,9 + 10	G1/4	-	4,1	3,2	36	33,7	44	29,7	22	40,7	103,3	25	21	16	40	40,7	M5	54,3	8	VP10

2 x 3/2-way valve, G1/8 or G1/4

In-line or manifold mounting



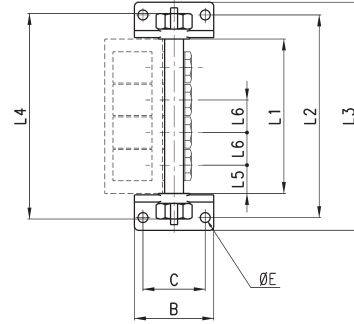
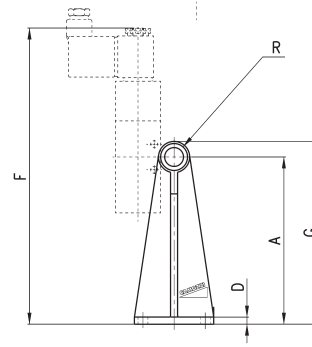
DIMENSIONS

Mod.	Function	Flow rate (NI/min)	min. pilot pr. (bar)	Working pr. (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z	Symb.
338D-035	2x3/2 NC	700	2,5	-0,9 + 10	G1/8	G1/8	5	3,2	31,4	32,8	36	30,4	18	39,4	96,8	22	17,4	11,5	32	39,4	-	-	-	VP11
334D-035	2x3/2 NC	1050	2,5	-0,9 + 10	G1/4	-	4,1	3,2	36	33,7	44	29,7	22	40,7	103,3	25	21	16	40	40,7	M5	54,3	8	VP11
348D-035	2x3/2 NO	700	2,5	-0,9 + 10	G1/8	G1/8	5	3,2	31,4	32,8	36	30,4	18	39,4	96,8	22	17,4	11,5	32	39,4	-	-	-	VP12
344D-035	2x3/2 NO	1050	2,5	-0,9 + 10	G1/4	-	4,1	3,2	36	33,7	44	29,7	22	40,7	103,3	25	21	16	40	40,7	M5	54,3	8	VP12
398D-035	2x3/2 NC/NO	700	2,5	-0,9 + 10	G1/8	G1/8	5	3,2	31,4	32,8	36	30,4	18	39,4	96,8	22	17,4	11,5	32	39,4	-	-	-	VP13
394D-035	2x3/2 NC/NO	1050	2,5	-0,9 + 10	G1/4	-	4,1	3,2	36	33,7	44	29,7	22	40,7	103,3	25	21	16	40	40,7	M5	54,3	8	VP13

**Manifold bars with separate exhausts (low version)**


The following is supplied:

- 2x feet
- 1x manifold
- 1x inlet fitting
- 1x plug
- 4x washers


**DIMENSIONS**

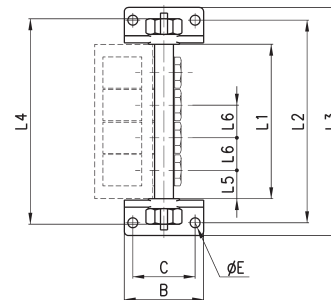
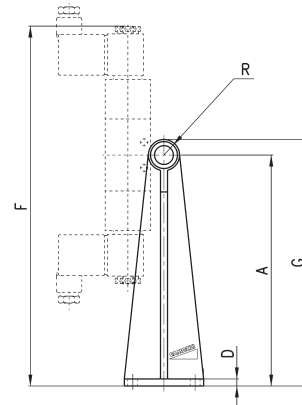
Mod.	Nr of valves	A	B	C	D	ØE	F	G	R	L1	L2	L3	L4	L5	L6	Suitable for Series
CNV-318-2	2	73	56	44	5	7	178	83	G1/4	63	97	115	99	20	23	3 - G1/8
CNV-318-3	3	73	56	44	5	7	178	83	G1/4	86	120	138	119	20	23	3 - G1/8
CNV-318-4	4	73	56	44	5	7	178	83	G1/4	109	143	161	142	20	23	3 - G1/8
CNV-318-5	5	73	56	44	5	7	178	83	G1/4	132	166	184	165	20	23	3 - G1/8
CNV-318-6	6	73	56	44	5	7	178	83	G1/4	155	189	207	188	20	23	3 - G1/8

The fixing screws of the valves Mod. 1631 01-1/8 must be ordered separately.

**Manifold bars with separate exhausts (high version)**


The following is supplied:

- 2x feet
- 1x manifold
- 1x inlet fitting
- 1x plug
- 4x washers


**DIMENSIONS**

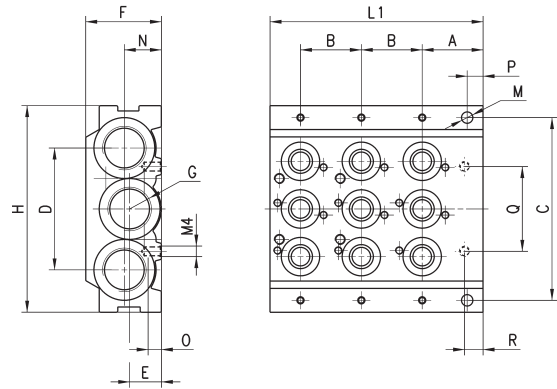
Mod.	Nr of valves	A	B	C	D	ØE	F	G	R	L1	L2	L3	L4	L5	L6	Suitable for Series
CNV-328-2	2	118	56	44	5	7	223	128	G1/4	63	97	115	99	20	23	3 - G1/8
CNV-328-3	3	118	56	44	5	7	223	128	G1/4	86	120	138	119	20	23	3 - G1/8
CNV-328-4	4	118	56	44	5	7	223	128	G1/4	109	143	161	142	20	23	3 - G1/8
CNV-328-5	5	118	56	44	5	7	223	128	G1/4	132	166	184	165	20	23	3 - G1/8
CNV-328-6	6	118	56	44	5	7	223	128	G1/4	155	189	207	188	20	23	3 - G1/8

The fixing screws of the valves Mod. 1631 01-1/8 must be ordered separately.

Initial / final Module with three positions - Mod. CNVL-...



The following is supplied:  
 3x interface O-Rings manifold/manifold;  
 2x fixing nuts;  
 2x junction plugs;  
 9x interface seals valve/manifold (CNVL-3H3)  
 or 3x interface seals valve/manif. (CNVL-4H3);  
 6x fixing screws for valves



DIMENSIONS

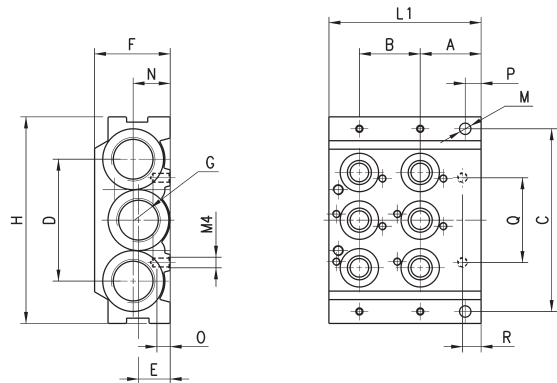
Mod.	A	B	C	D	E	F	H	L1	M	N	O	P	Q	R	G
<b>CNVL-3H3</b>	23	23	69,5	46	12	29	78	80,5	4,3	14	5	6	32	7	3/8
<b>CNVL-4H3</b>	26	26	88	60	14	29	98	91	4,3	-	5	5	38	7	1/2

CNVL-3H3: for Series 3, G1/8  
 CNVL-4H3: for Series 3, G1/4

Initial / final Module with 2 positions - Mod. CNVL-...



Initial module with 2 positions  
 The following is supplied:  
 3x interface O-Rings manifold/manifold;  
 2x fixing nuts;  
 2x junction plugs;  
 6x interface seals valve/manifold (CNVL-3H2)  
 or 2x interface seals valve/manif. (CNVL-4H2);  
 4x fixing screws for valves



DIMENSIONS

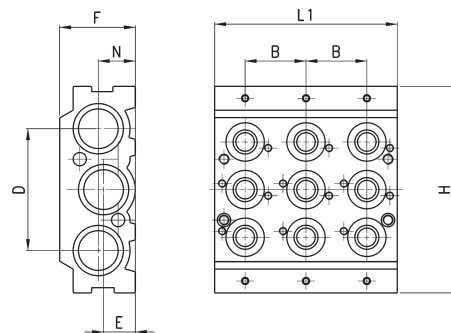
Mod.	A	B	C	D	E	F	H	L1	M	N	O	P	Q	R	G
<b>CNVL-3H2</b>	23	23	69,5	46	12	29	78	57,5	4,3	14	5	6	32	7	3/8
<b>CNVL-4H2</b>	26	26	88	60	14	29	98	65	4,3	-	5	5	38	7	1/2

CNVL-3H2: for Series 3, G1/8  
 CNVL-4H2: for Series 3, G1/4

Intermediate module with 3 positions - Mod. CNVL-...



The following is supplied:  
 3x interface O-Rings manifold/manifold;  
 2x fixing nuts;  
 2x junction plugs;  
 9x interface seals valve/manifold (CNVL-3I3)  
 or 3x interface seals valve/manif. (CNVL-4I3);  
 6x fixing screws for valves



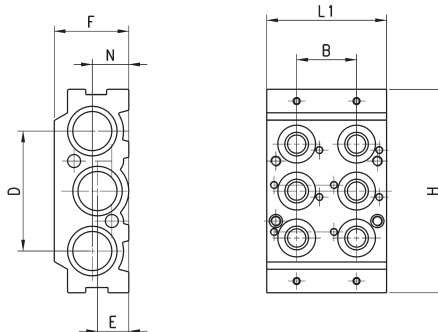
DIMENSIONS

Mod.	B	D	E	F	H	L1	N
<b>CNVL-3I3</b>	23	46	12	29	78	69	14
<b>CNVL-4I3</b>	26	60	14	29	98	78	-

CNVL-3I3: for Series 3, G1/8  
 CNVL-4I3: for Series 3, G1/4

**Intermediate module with 2 positions - Mod. CNVL-...**


The following is supplied:  
 3x interface O-Rings manifold/manifold;  
 2x fixing nuts;  
 2x junction plugs;  
 6x interface seals valve/manifold (CNVL-312)  
 or 2x interface seals valve/manif. (CNVL-412);  
 4x fixing screws for valves

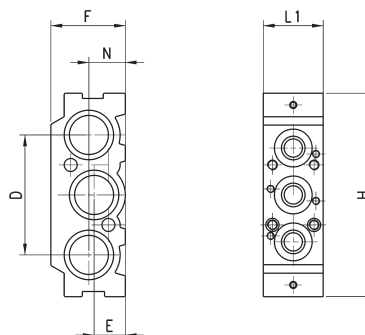

**DIMENSIONS**

Mod.	B	D	E	F	H	L1	N
<b>CNVL-312</b>	23	46	12	29	78	46	14
<b>CNVL-412</b>	26	60	14	29	98	52	-

CNVL-312: for Series 3, G1/8  
 CNVL-412: for Series 3, G1/4

**Intermediate module with 1 position - Mod. CNVL-...**


The following is supplied:  
 3x interface O-Rings manifold/manifold;  
 2x fixing nuts;  
 2x junction plugs;  
 3x interface seals valve/manifold (CNVL-311)  
 or 1x interface seal valve/manif. (CNVL-411);  
 2x fixing screws for valves

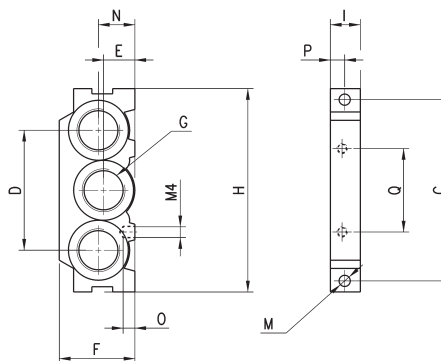

**DIMENSIONS**

Mod.	D	E	F	H	L1	N
<b>CNVL-311</b>	46	12	29	78	23	14
<b>CNVL-411</b>	60	14	29	98	26	-

CNVL-311: for Series 3, G1/8  
 CNVL-411: for Series 3, G1/4

**Terminal module Mod. CNVL-\*H**


The following is supplied:  
 2x fixing nuts

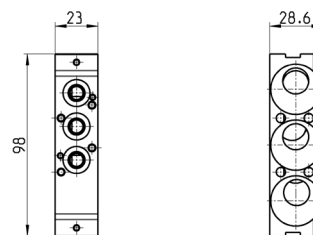

**DIMENSIONS**

Mod.	C	D	E	F	H	I	M	N	O	P	Q	G
<b>CNVL-3H</b>	69,5	46	12	29	78	11,5	4,3	14	5	6	32	3/8
<b>CNVL-4H</b>	88	60	14	29	98	13	4,3	-	5	8	29	1/2

CNVL-3H: for Series 3, G1/8  
 CNVL-4H: for Series 3, G1/4

**Interface module manifold between Series 3 G1/8 and G1/4**


The following is supplied:  
 3x interface seal  
 2x screws  
 2x pins  
 4x plugs  
 6x O-Rings



Mod.

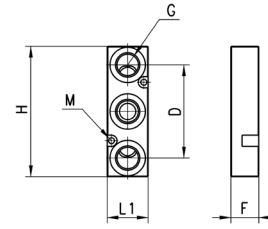
**CNVL-4H-3H**

It is possible to seat 1 valve,  
 series 3 with G1/8 port.

Intermediate plate for additional inlet and exhaust pressure



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



DIMENSIONS							
Mod.	G	H	M	F	L1	D	F
<b>CNVL-3P</b>	G1/4	70	3.2	29	22	50	15
<b>CNVL-4P</b>	G1/4	73	3.2	29	25	50	20

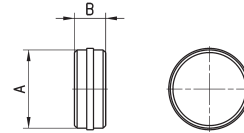
CNVL-3P: for Series 3, G1/8  
CNVL-4P: for Series 3, G1/4

Separation diaphragm



For separation of channel: 1 - 3 - 5.

The following is supplied:  
1x diaphragm

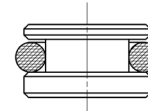


DIMENSIONS			
Mod.	A	B	
<b>CNVL-3H-TP</b>	15.6	6	for Series 3, G1/8
<b>CNVL-4H-TP</b>	23.8	8	for Series 3, G1/4

Blanking plug Mod. TCNVL for manifolds



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



Mod.		
<b>TCNVL/3</b>	for Series 3, G1/8	
<b>TCNVL/5</b>	for Series 3, G1/4	

Blanking plate Mod. CNVL for manifolds

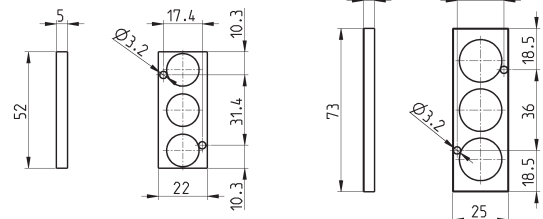
It is used to blank vacant positions of a manifold.



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

CNVL/1

CNVL/4



Mod.		
<b>CNVL/1</b>	for Series 3, G1/8	
<b>CNVL/4</b>	for Series 3, G1/4	

# 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

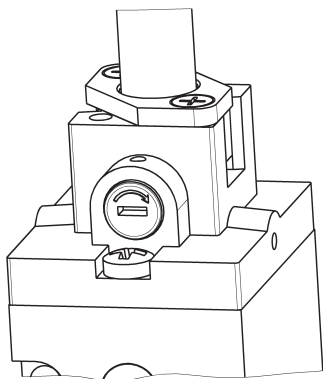
## GENERAL DATA

<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.

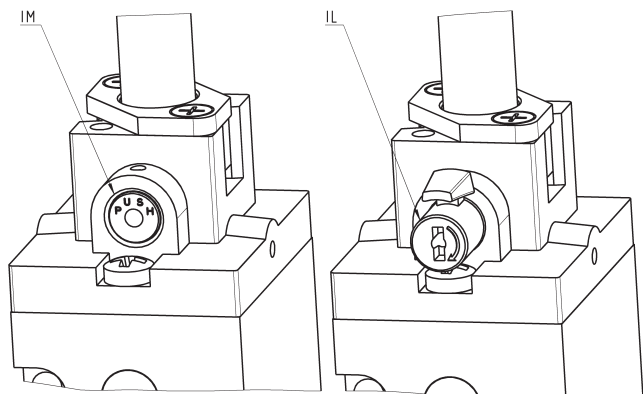


CODING EXAMPLE									
4	5	4	-	015	-	22	-	U7	7
<b>4</b>	SERIES								
<b>5</b>	NUMBER OF WAYS - POSITIONS: 3 = 3/2 NC 4 = 3/2 NO 5 = 5/2 6 = 5/3 CC 7 = 5/3 CO								
<b>4</b>	PORTS: 8 = G1/8 4 = G1/4 2C = G1/2 2N = G1/2 (high flow)								
<b>015</b>	ACTUATION: 011 = double solenoid (horizontal solenoids) 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.

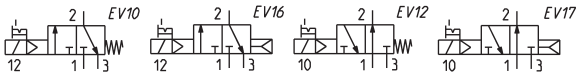
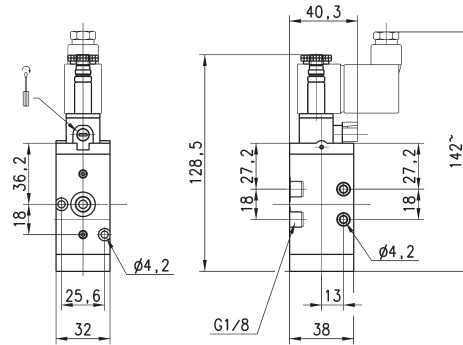


Example of solenoid monostable valve (IM) and bistable valve with a lever type manual override (IL). Both versions are available on demand. To order them it is necessary to add IM or IL at the end of the code. Code ex.: 454-015-22-U77IL.



### 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.

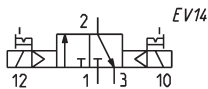
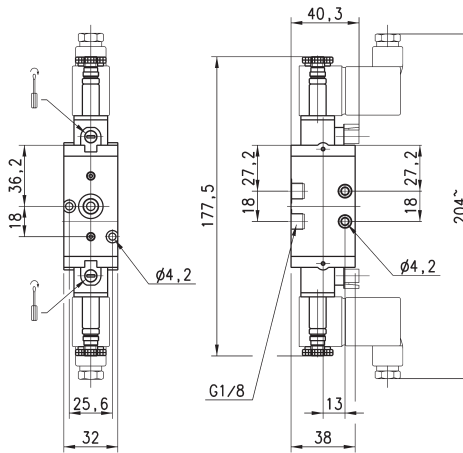


Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol
438-015-22	3/2 NC	650	2,5 + 10	EV10
438-016-22	3/2 NC	650	2,5 + 10	EV16
448-015-22	3/2 NO	650	2,5 + 10	EV12
448-016-22	3/2 NO	650	2,5 + 10	EV17



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

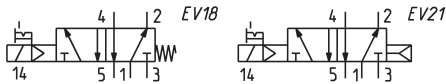
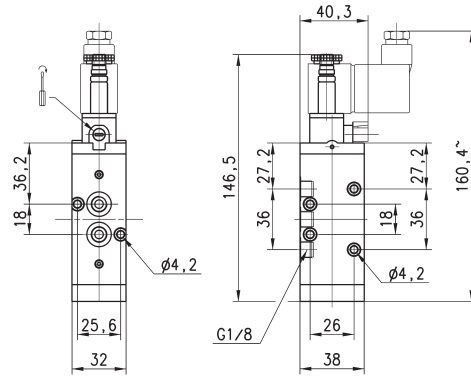
These solenoid valves, which have electropneumatic actuation and return, assume the NC (closed) or NO (open) operating status depending on the last pulse received.



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...

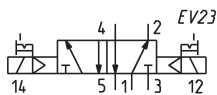
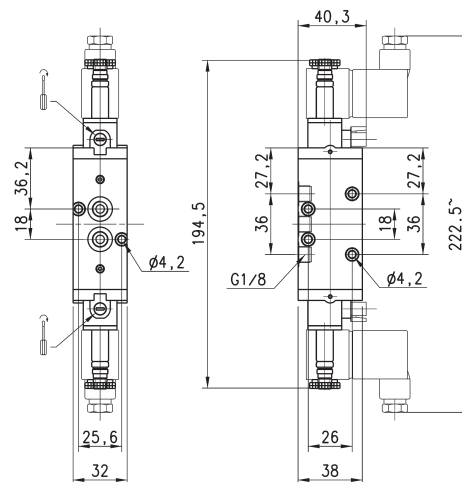
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



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

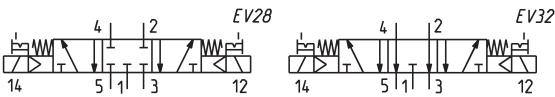
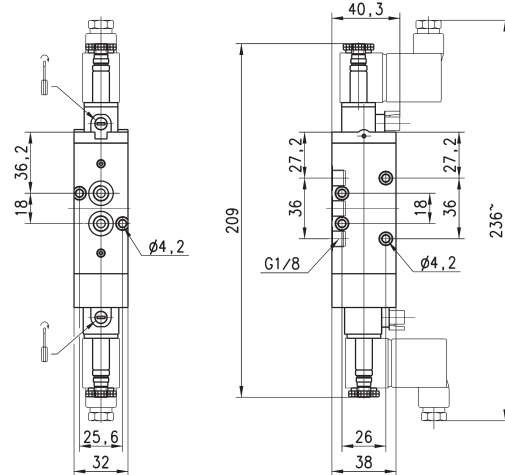
5/2-way solenoid valves, G1/8, bistable - Mod 458-011...

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

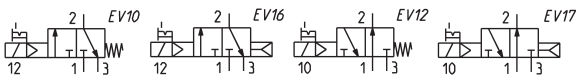
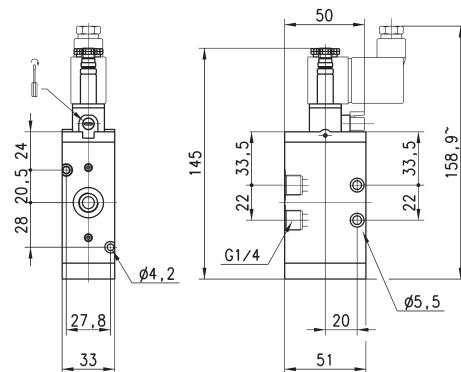
**5/3-way solenoid valve, G1/8 - Mod. 468-011... and 478-011...**

 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**

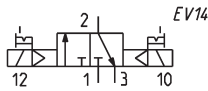
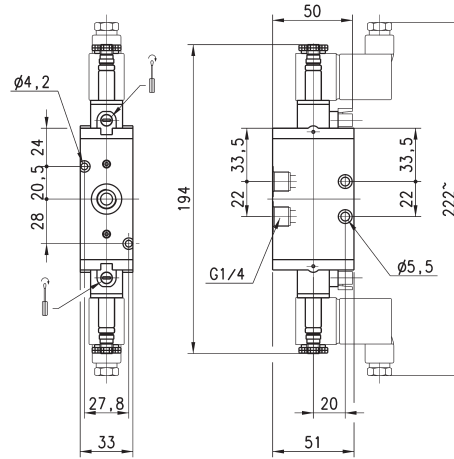
These solenoid valves, which have electropneumatic actuation and spring return, are available in the NC (closed) or NO (open) version.



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...

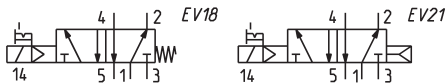
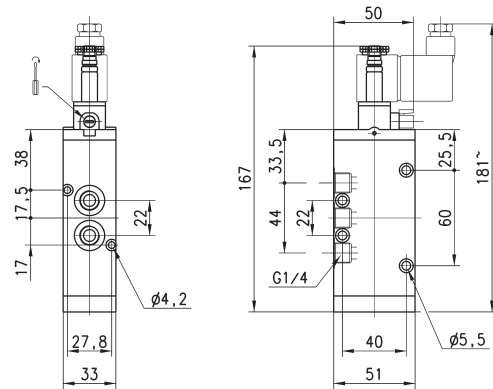
These solenoid valves, which have electropneumatic actuation and return, assume the NC (closed) or NO (open) position depending on the last pulse received.



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...

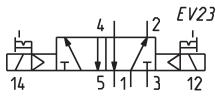
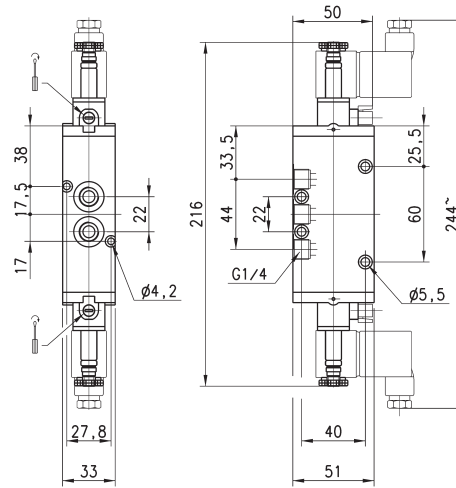
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



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...**

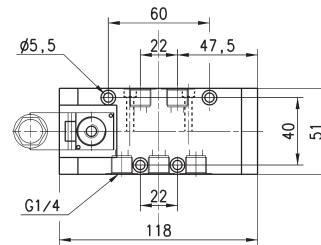
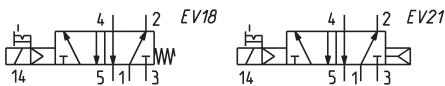
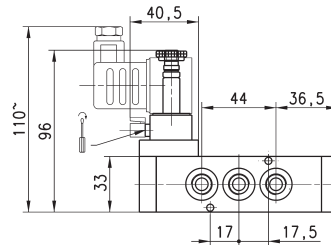
These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



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...**

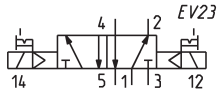
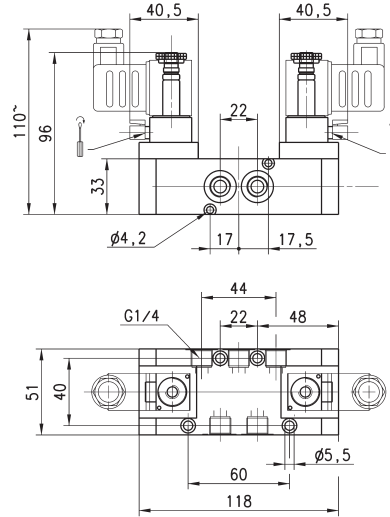
These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.



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...

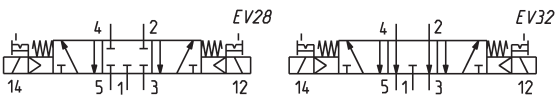
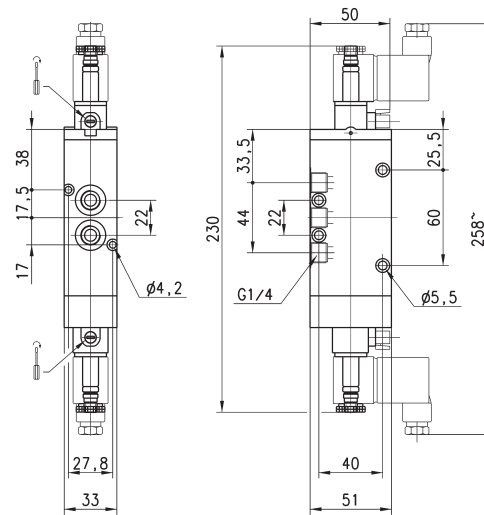
These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



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...

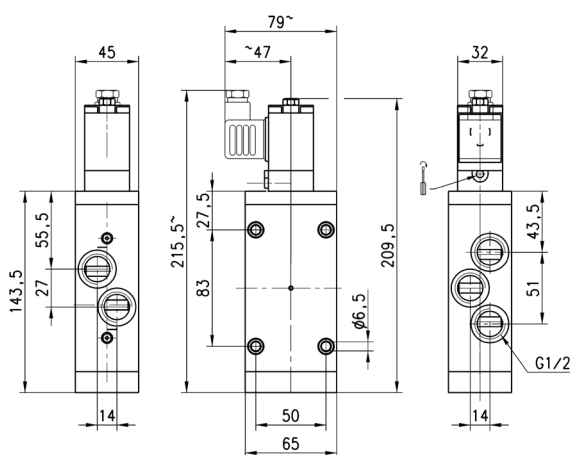
CC = Centres Closed  
CO = Centres Open



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...**

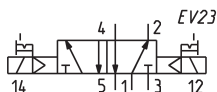
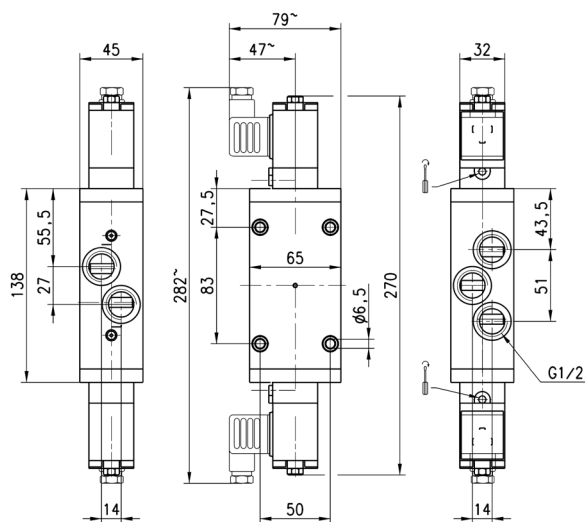

These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.



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

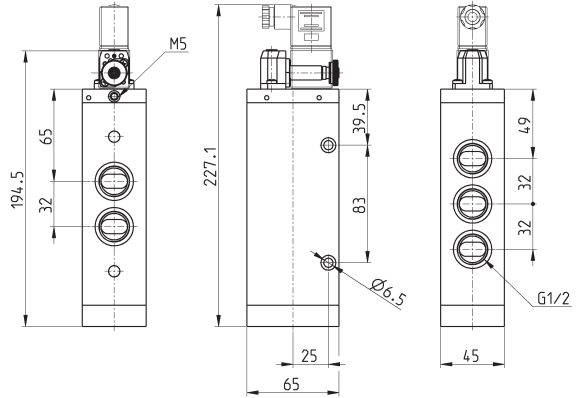


5/2-way solenoid valve, G1/2, monostable - Mod. 452N-...

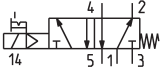
New models



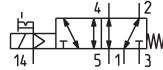
These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.



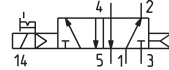
EV18



EV19



EV21



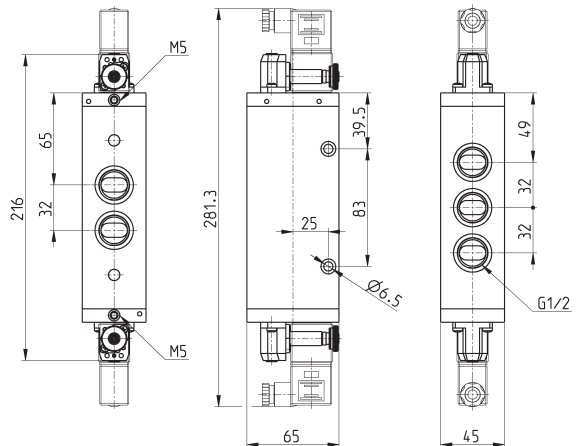
Mod.	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-015-22	5/2	4000	-	2.5 + 10	EV18
452N-016-22	5/2	4000	-	2 + 10	EV21
452N-E15-22	5/2	4000	2.5	-0.9 + 10	EV19

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

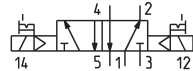
New models



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



EV23



EV25



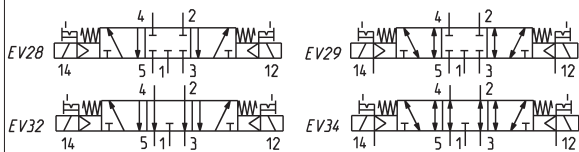
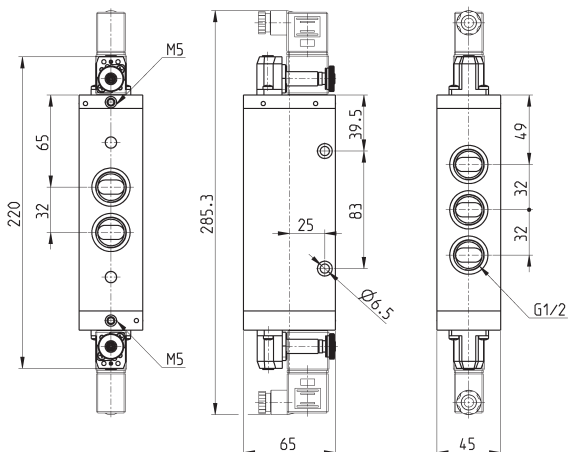
Mod.	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-011-22	5/2	4000	-	2 + 10	EV23
452N-E11-22	5/2	4000	2	-0.9 + 10	EV25

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

New models

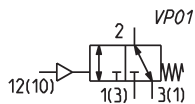
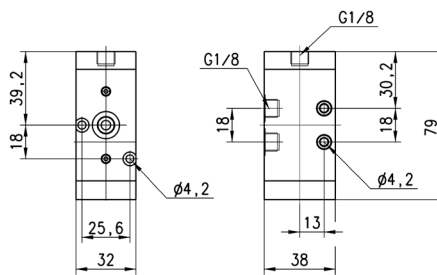


These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



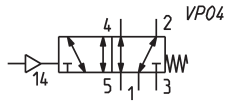
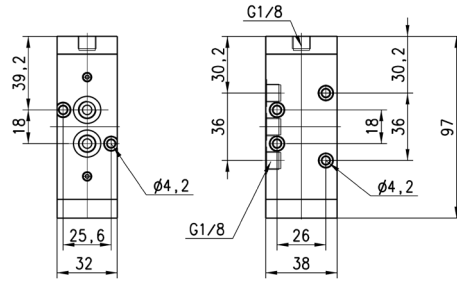
Mod.	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
462N-011-22	5/3 CC	3300	-	2 + 10	EV28
462N-E11-22	5/3 CC	3300	2	-0.9 + 10	EV29
472N-011-22	5/3 CO	3300	-	2 + 10	EV32
472N-E11-22	5/3 CO	3300	2	-0.9 + 10	EV34

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



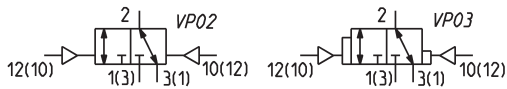
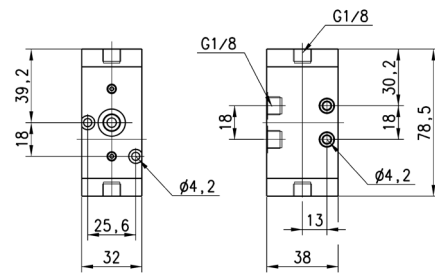
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
438-35	in-line/on manifold	3/2 NC	700	2.5	-0.9 + 10

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



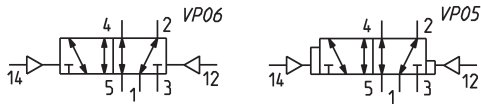
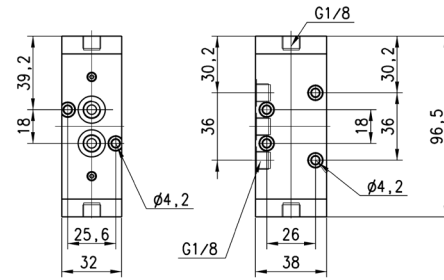
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
458-35	in-line/manifold	5/2	700	2.5	-0.9 + 10

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



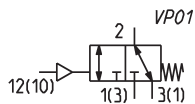
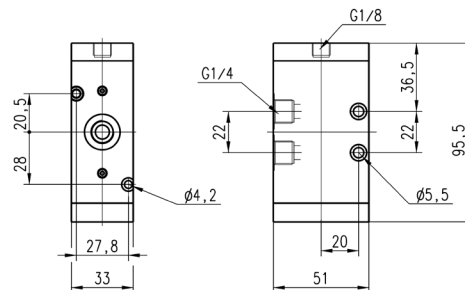
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
438-33	in-line/on manifold	3/2	700	2	-0.9 + 10	VP02
438-34	in-line/on manifold	3/2	700	2	-0.9 + 10	VP03

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



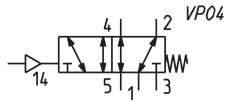
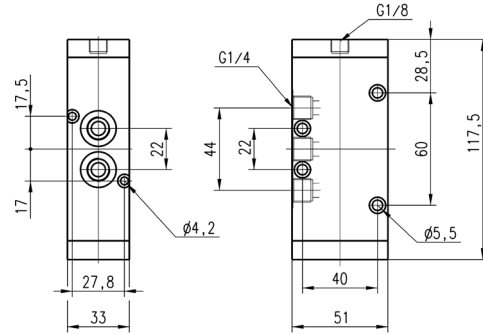
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
458-33	in-line/on manifold	5/2	700	2	-0.9 + 10	VP06
458-34	in-line/on manifold	5/2	700	2	-0.9 + 10	VP05

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



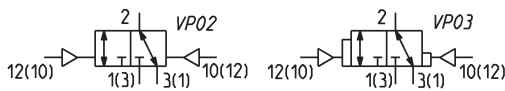
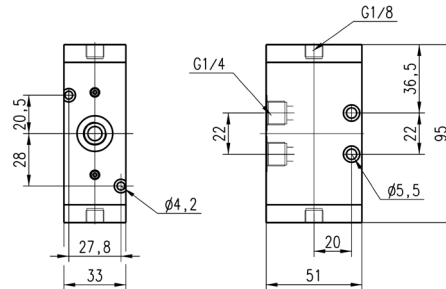
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
434-35	in-line/on manifold	3/2 NC	1250	2.5	-0.9 + 10

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

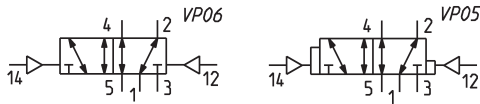
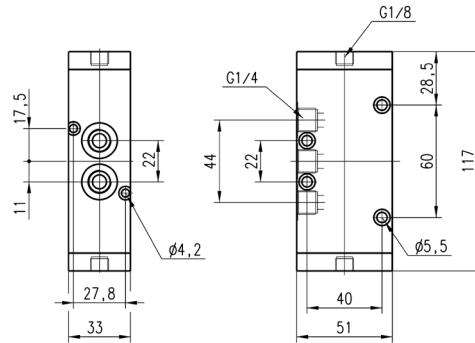


Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
454-35	in-line/on manifold	5/2	1250	2.5	-0.9 + 10

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



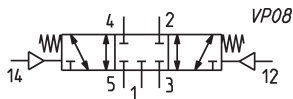
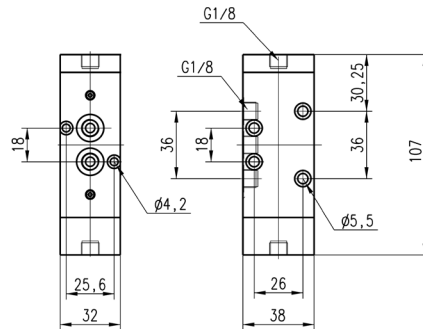
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
434-33	in-line/on manifold	3/2 NC	1250	2	-0.9 + 10	VP02
434-34	in-line/on manifold	3/2 NC	1250	2	-0.9 + 10	VP03

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


Mod.	Mounting	Function	Flow rate Qn (NI/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**

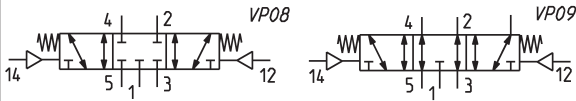
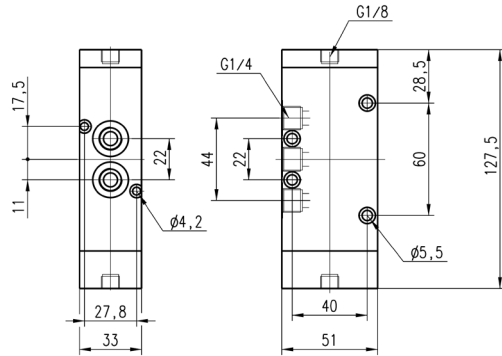
CC = Centres Closed



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

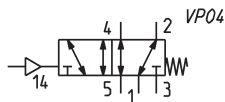
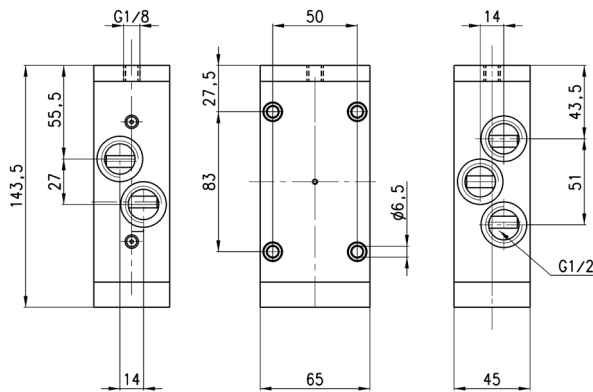
5/3-way CC CO valve, G1/4, monostable, central stable position

CC = Centres Closed  
CO = Centres Open

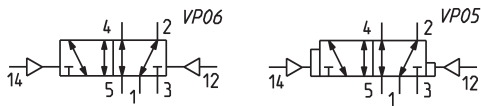
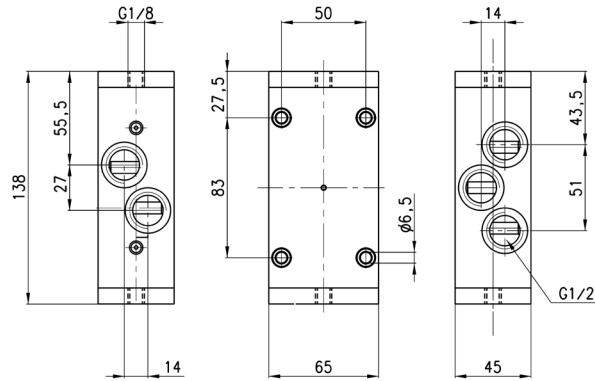


Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
464-33	in-line/on manifold	5/3 CC	1250	2.5	-0.9 + 10	VP08
474-33	in-line/on manifold	5/3 CO	1200	2.5	-0.9 + 10	VP09

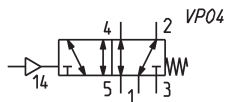
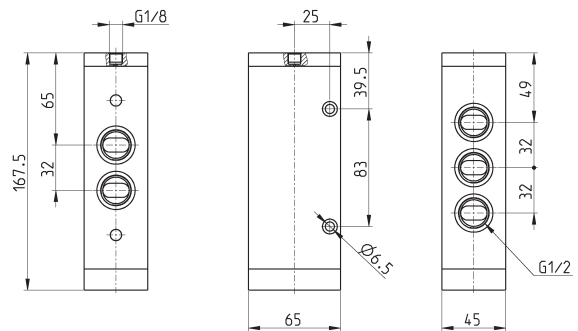
5/2-way valve, G1/2 port, monostable Mod. 452C-35



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

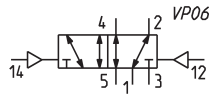
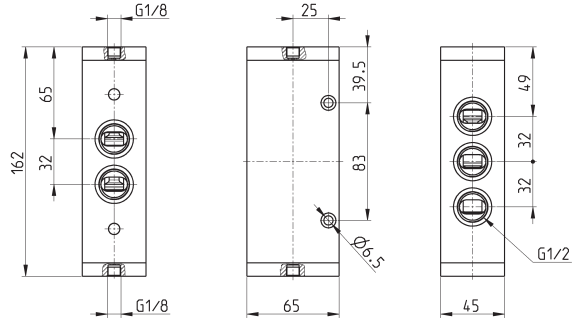
**5/2-way valve, G1/2 port, monostable Mod. 452N-35**
**New model**


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



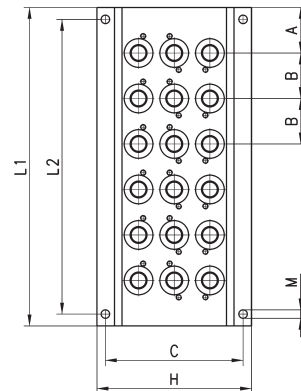
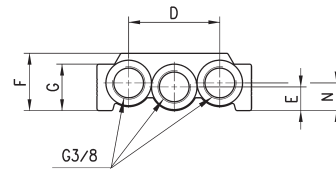
Mod.	Mounting	Function	Flow rate Qn (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-33	in-line	5/2	4000	2	-0.9 ÷ 10	VP06

Manifold base with common exhausts

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

The following is supplied with:

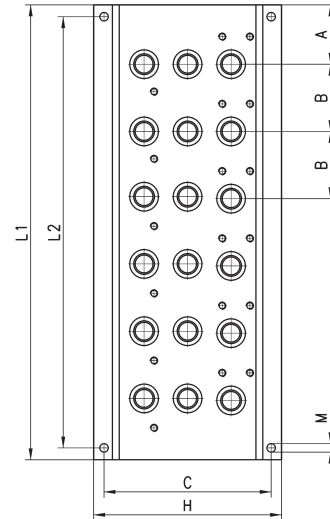
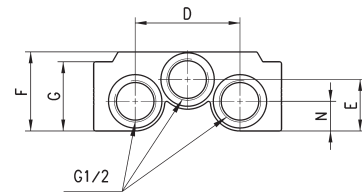
- 1x manifold
- 1x pair of fixing screws for valve position
- 1x interface seal for valve positions
- 2x guides for valve position



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**

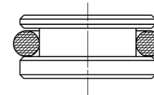
For valves Series 4, G1/4 (3/2, 5/2 or 5/3-way)  
 The following is supplied :  
 1x manifold  
 1x pair of fixing screws for valve position  
 1x interface seal for valve positions  
 2x guides for valve position


**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**

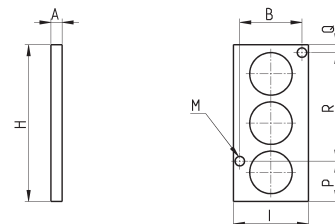
TCNVL/3: for Series 4, G1/8

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