

# 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.

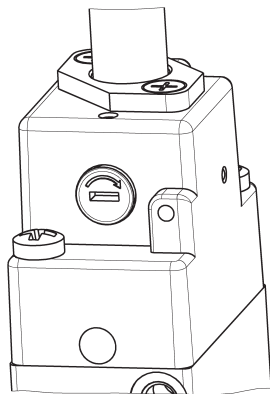
## GENERAL DATA

<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.

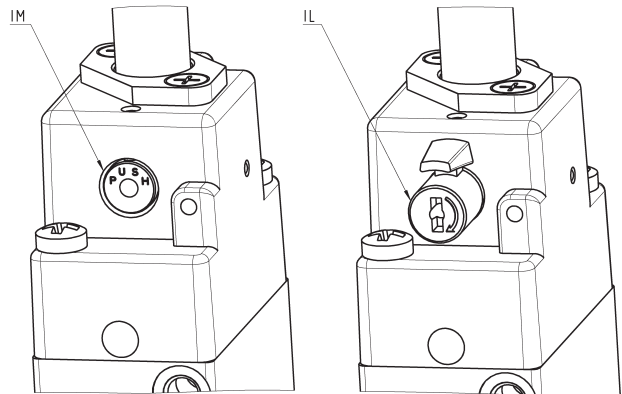
**CODING EXAMPLE**

<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>
----------	----------	----------	----------	----------	------------	----------	-----------	----------	-----------	----------

<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>22</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**


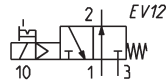
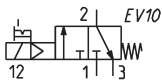
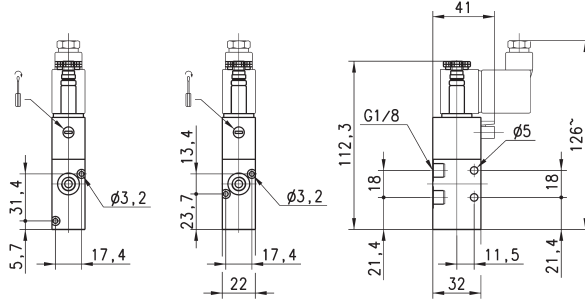
Example of solenoid valve with a bistable standard manual override.



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...

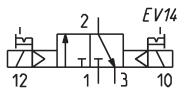
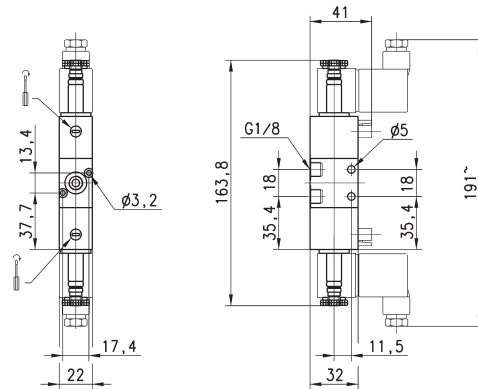
These solenoid valves, which have electropneumatic actuation and spring return, are available in the NC (closed) or NO (open) version.



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...

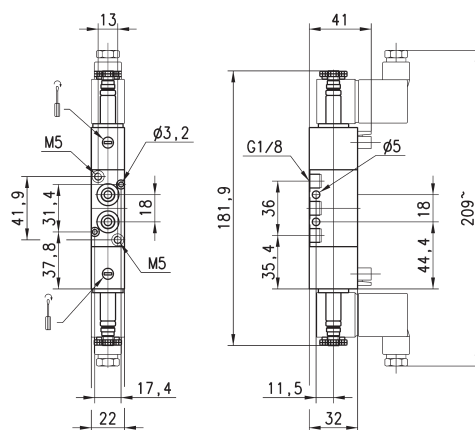
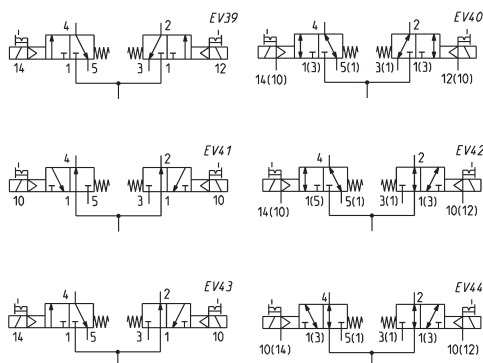
These solenoid valves, which have electropneumatic actuation and return, assume the NC (closed) or NO (open) position depending on the last pulse received.



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...

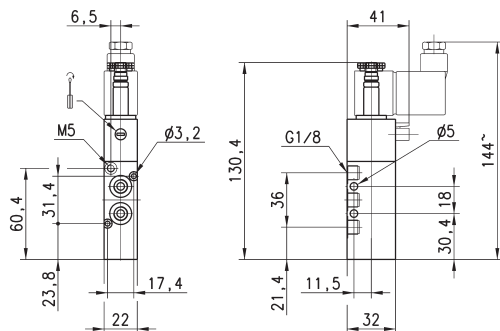
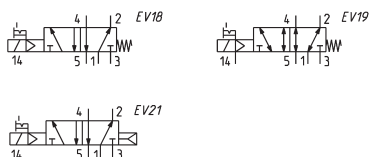
These solenoid valves are available in versions with 2 x 3/2 valves in the same valve.



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

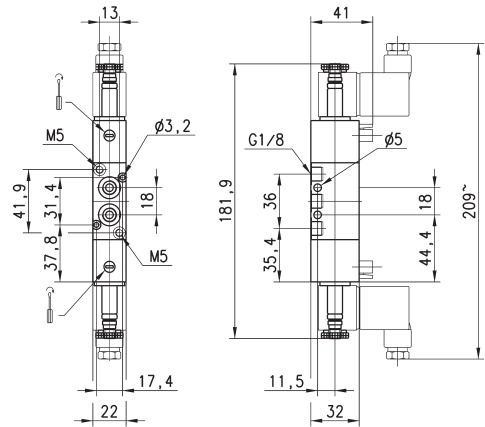
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



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

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

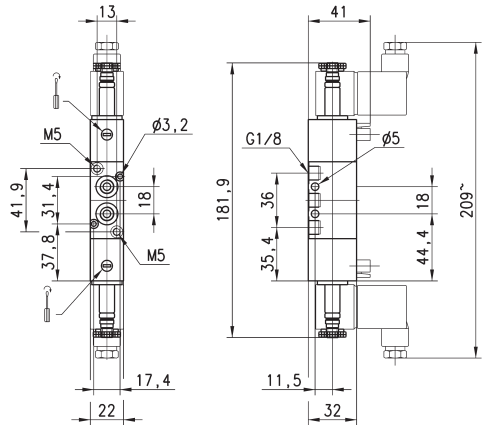
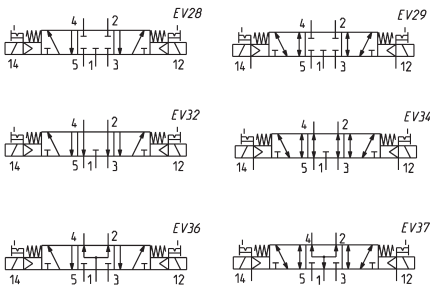
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



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...

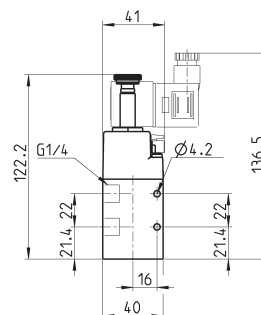
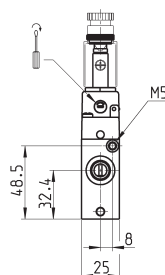
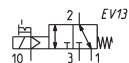
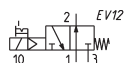
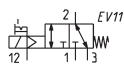
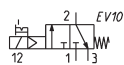
CC = Centres Closed CO = Centres Open CP = Pressure Centres



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...

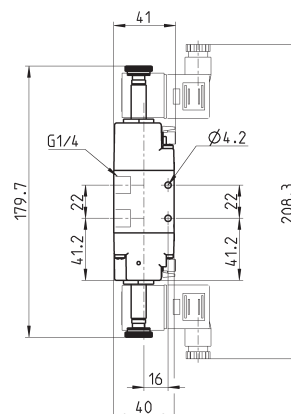
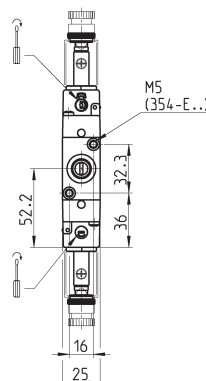
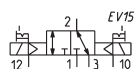
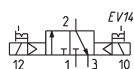
These solenoid valves, which have electropneumatic actuation and spring return, are available in the NC (closed) or NO (open) version.



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...

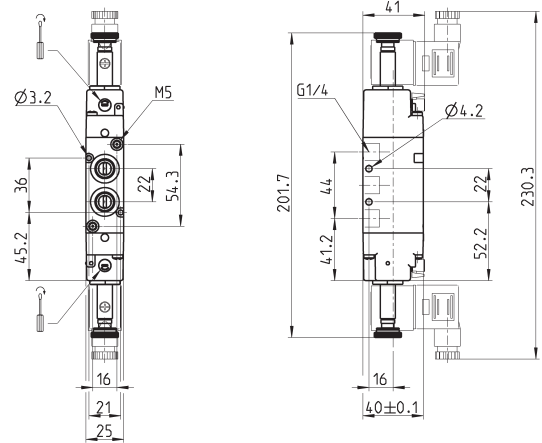
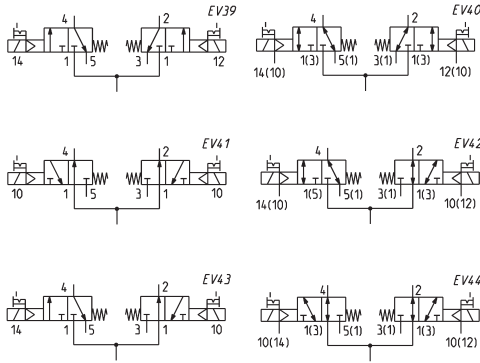
These solenoid valves, which have electropneumatic actuation and return assume the NC (closed) or NO (open) position depending on their last pulse received.



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	-0.9 + 10	2.5 + 10	EV15

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

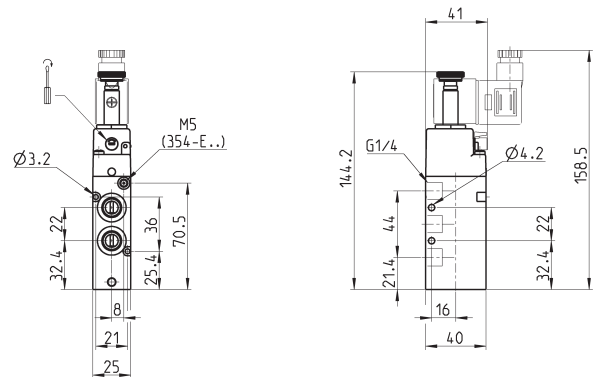
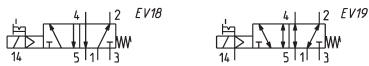
These solenoid valves are available in versions with 2 x 3/2 valves in the same valve.



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...

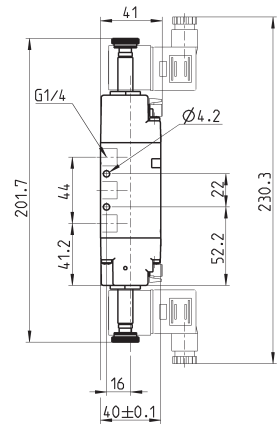
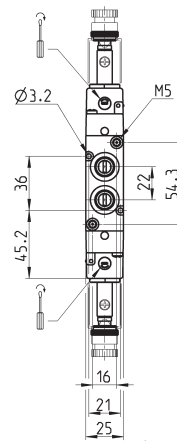
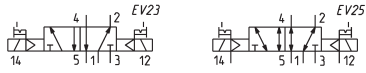
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



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...**

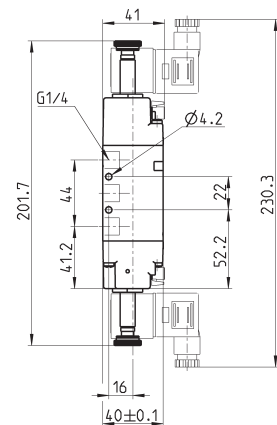
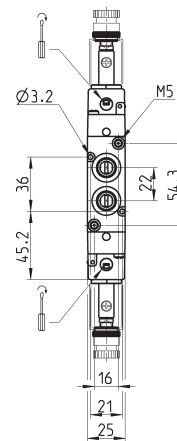
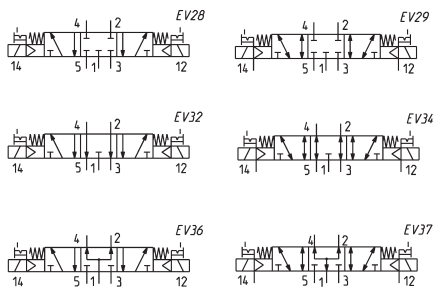
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



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...**

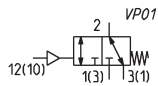
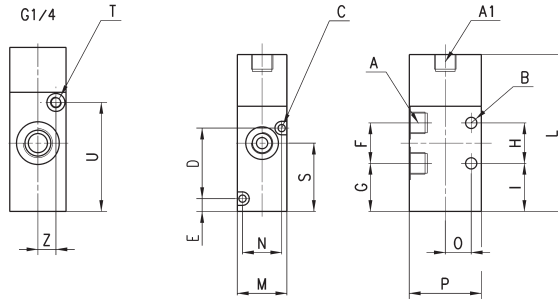
CC = Centres Closed CO = Centres Open CP = Pressure Centres



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



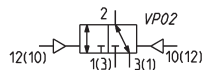
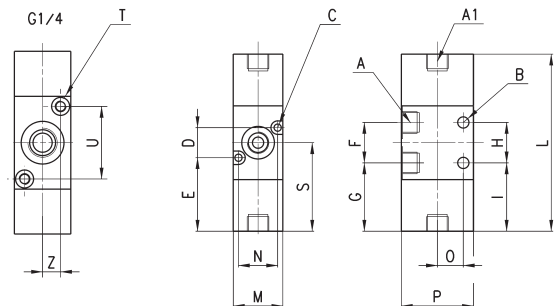
3/2-way valve, G1/8 or G1/4, monostable



DIMENSIONS

Mod.	Mounting	Function	Flow rate (NI/min)	Min. pilot pressure (bar)	Working pressure (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z
<b>338-035</b>	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	-	-	-
<b>338L-035</b>	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	-	-	-
<b>334-035</b>	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

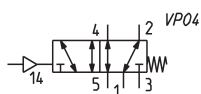
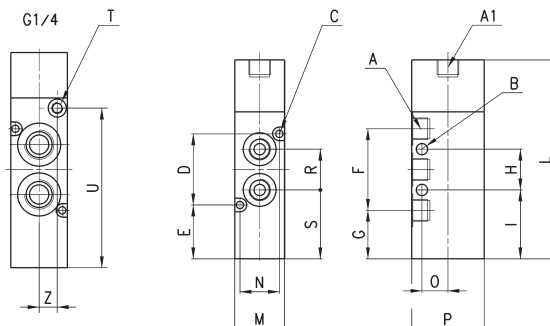


DIMENSIONS

Mod.	Mounting	Function	Flow rate (NI/min)	Min. pilot pressure (bar)	Working pressure (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z
<b>338-033</b>	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	-	-	-	-
<b>338L-033</b>	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	-	-	-
<b>334-033</b>	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	-	-	

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

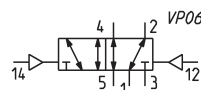
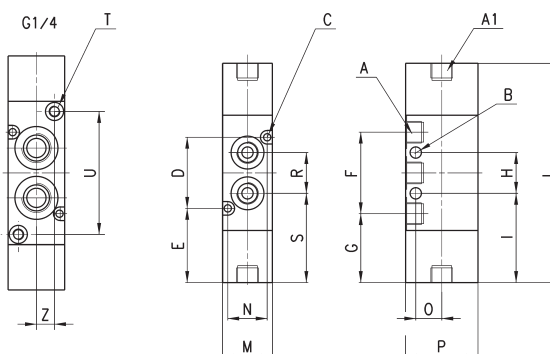
In-line or manifold mounting


**DIMENSIONS**

Mod.	Function	Flow rate (Nl/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
358-035	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**

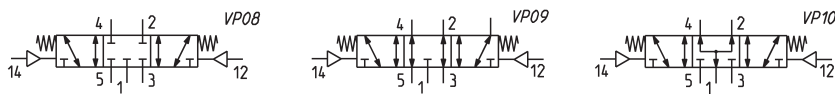
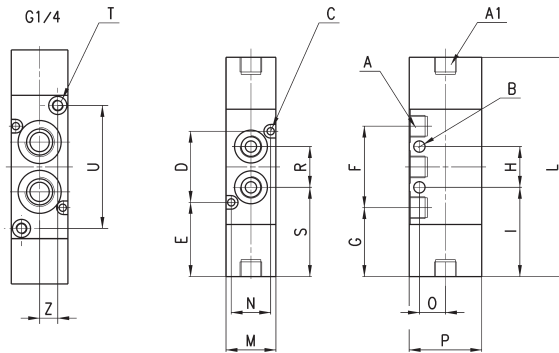
In-line or manifold mounting


**DIMENSIONS**

Mod.	Function	Flow rate (Nl/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

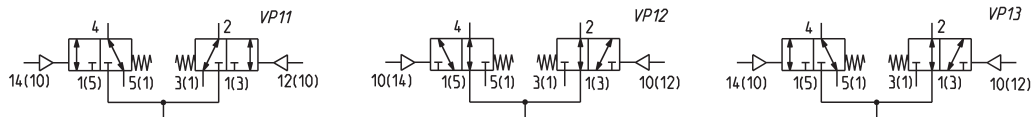
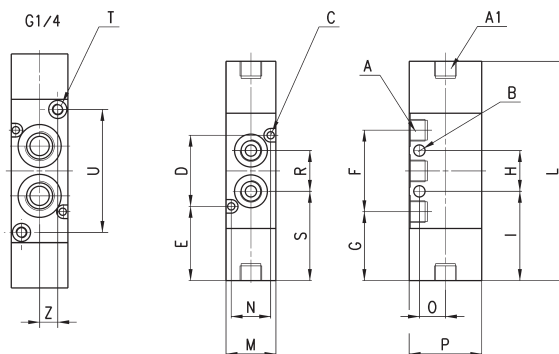


DIMENSIONS

Mod.	Function	Flow rate (NI/min)	Min. pilot press. (bar)	Working pressure (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z	Symbol
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



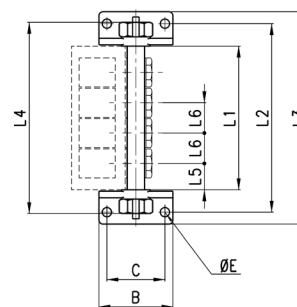
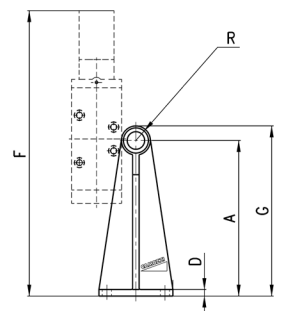
DIMENSIONS

Mod.	Function	Flow rate (NI/min)	min. pilot press. (bar)	Working pressure (bar)	A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z	Symbol
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**

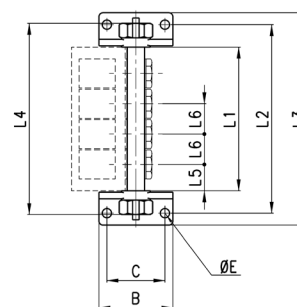
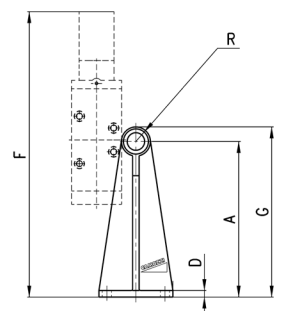
Mod.	Nr of valves	A	B	C	D	ØE	F	G	R	L1	L2	L3	L4	L5	L6	Suitable for Series
CNV-318-2	2	73	56	44	5	7	178	83	G1/4	63	97	115	99	20	23	3 - G1/8
CNV-318-3	3	73	56	44	5	7	178	83	G1/4	86	120	138	119	20	23	3 - G1/8
CNV-318-4	4	73	56	44	5	7	178	83	G1/4	109	143	161	142	20	23	3 - G1/8
CNV-318-5	5	73	56	44	5	7	178	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. 1635-01 and the washers mod. 2661 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**

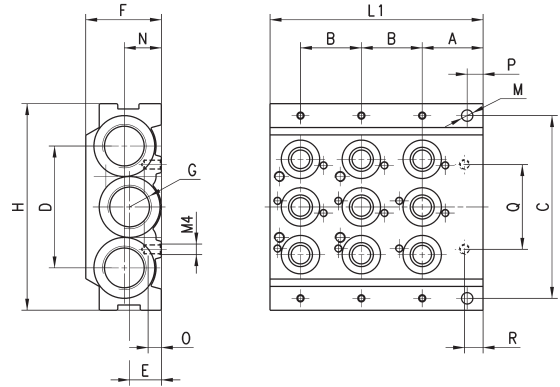
Mod.	Nr of valves	A	B	C	D	ØE	F	G	R	L1	L2	L3	L4	L5	L6	Suitable for Series
CNV-328-2	2	118	56	44	5	7	223	128	G1/4	63	97	115	99	20	23	3 - G1/8
CNV-328-3	3	118	56	44	5	7	223	128	G1/4	86	120	138	119	20	23	3 - G1/8
CNV-328-4	4	118	56	44	5	7	223	128	G1/4	109	143	161	142	20	23	3 - G1/8
CNV-328-5	5	118	56	44	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. 1635-01 and the washers mod. 2661 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

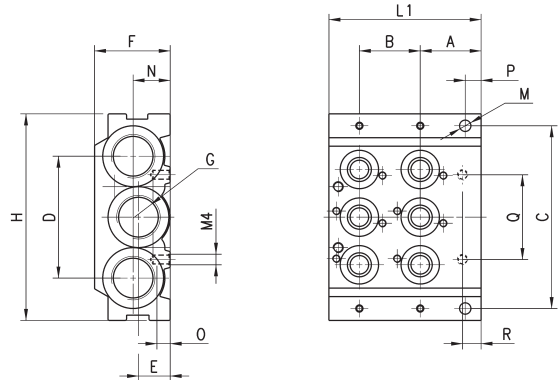
Mod.	A	B	C	D	E	F	H	L1	M	N	O	P	Q	R	G
<b>CNVL-3H3</b>	23	23	69,5	46	12	29	78	80,5	4,3	14	5	6	32	7	3/8
<b>CNVL-4H3</b>	26	26	88	60	14	29	98	91	4,3	-	5	5	38	7	1/2

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

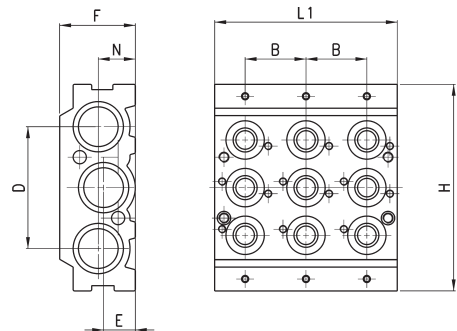
Mod.	A	B	C	D	E	F	H	L1	M	N	O	P	Q	R	G
<b>CNVL-3H2</b>	23	23	69,5	46	12	29	78	57,5	4,3	14	5	6	32	7	3/8
<b>CNVL-4H2</b>	26	26	88	60	14	29	98	65	4,3	-	5	5	38	7	1/2

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



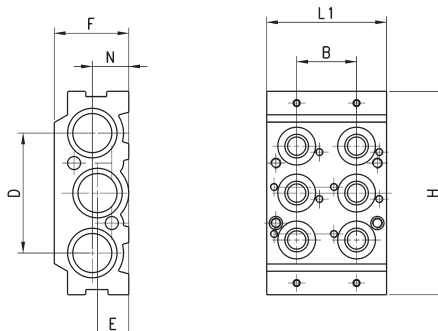
DIMENSIONS

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

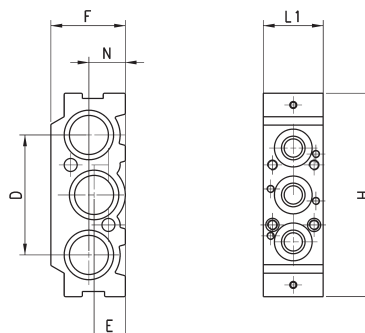

**DIMENSIONS**

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

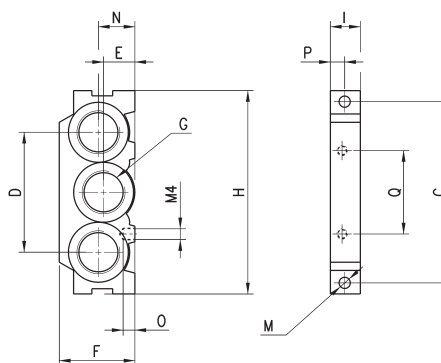

**DIMENSIONS**

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

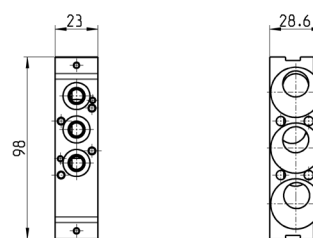

**DIMENSIONS**

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.

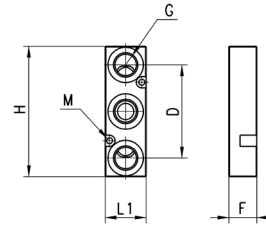
**CNVL-4H-3H**

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

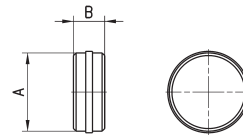
CNVL-3P: for Series 3, G1/8  
 CNVL-4P: for Series 3, G1/4

### Separation diaphragm



For separation of channel: 1 - 3 - 5.

The following is supplied:  
 1x diaphragm



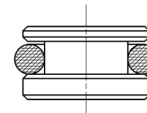
DIMENSIONS		
Mod.	A	B
<b>CNVL-3H-TP</b>	15.6	6
<b>CNVL-4H-TP</b>	23.8	8

CNVL-3H-TP: for Series 3, G1/8  
 CNVL-4H-TP: 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>
<b>TCNVL/5</b>

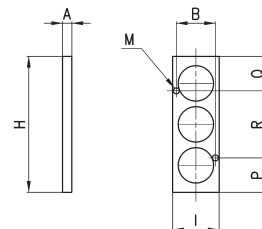
TCNVL/3: for Series 3, G1/8  
 TCNVL/5: for Series 3, G1/4

### 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



DIMENSIONS								
Mod.	A	B	H	I	M	P	Q	R
<b>CNVL/1</b>	5	17.4	52	22	3.2	10.3	10.3	31.4
<b>CNVL/4</b>	5	21	73	25	3.2	18.5	18.5	36

CNVL/1: for Series 3, G1/8  
 CNVL/4: 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

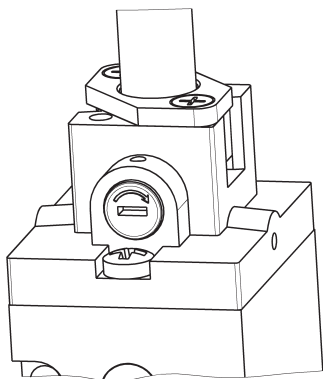
## GENERAL DATA

<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.

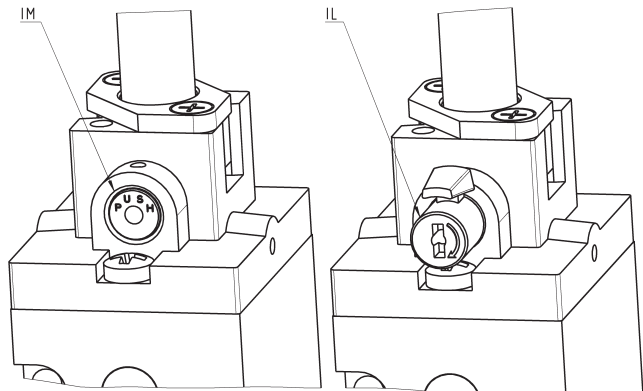


CODING EXAMPLE									
4	5	4	-	015	-	22	-	U7	7
4	SERIES								
5	NUMBER OF WAYS - POSITIONS: 3 = 3/2 NC 4 = 3/2 NO 5 = 5/2 6 = 5/3 CC 7 = 5/3 CO								
4	PORTS: 8 = G1/8 4 = G1/4 2C = G1/2 2N = G1/2 (high flow)								
015	ACTUATION: 011 = double solenoid (horizontal solenoids) V11 = double solenoid (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								
22	SOLENOID INTERFACE:: 22 = mech. sol. 22 x 22 50 = mech. sol. 32 x 32 (G1/2 only)								
U7	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								
7	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.

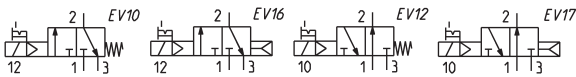
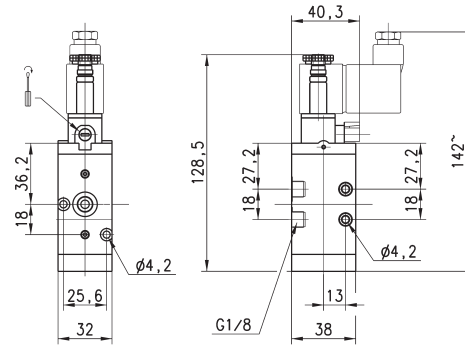


Example of solenoid monostable valve (IM) and bistable valve with a lever type manual override (IL). Both versions are available on demand. To order them it is necessary to add IM or IL at the end of the code. Code ex.: 454-015-22-U77IL.



### 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.

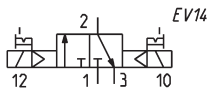
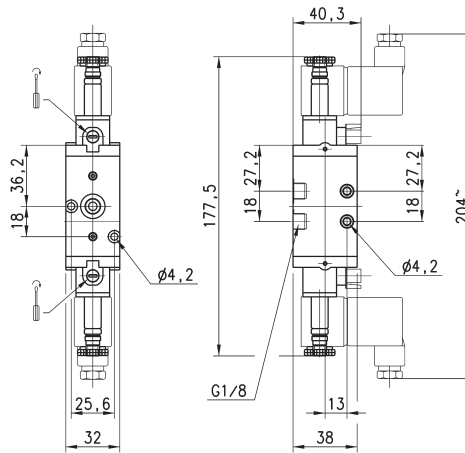


Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)	Symbol
438-015-22	3/2 NC	650	2,5 ± 10	EV10
438-016-22	3/2 NC	650	2,5 ± 10	EV16
448-015-22	3/2 NO	650	2,5 ± 10	EV12
448-016-22	3/2 NO	650	2,5 ± 10	EV17



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

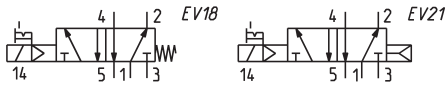
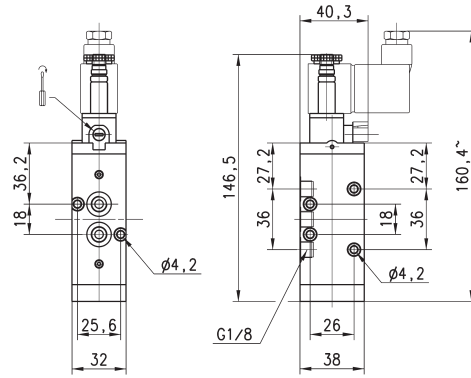
These solenoid valves, which have electropneumatic actuation and return, assume the NC (closed) or NO (open) operating status depending on the last pulse received.



Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)
438-011-22	3/2	650	2 ± 10

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

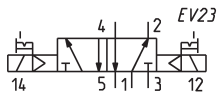
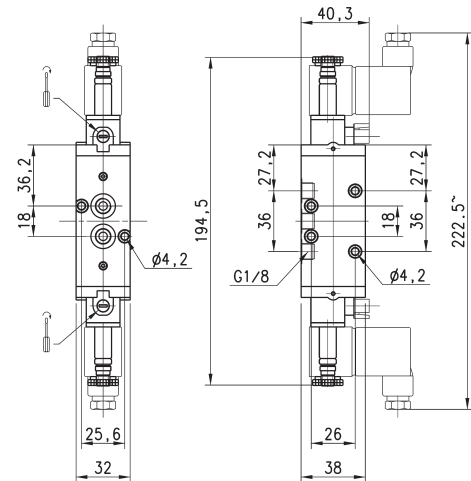
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



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...

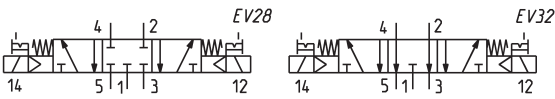
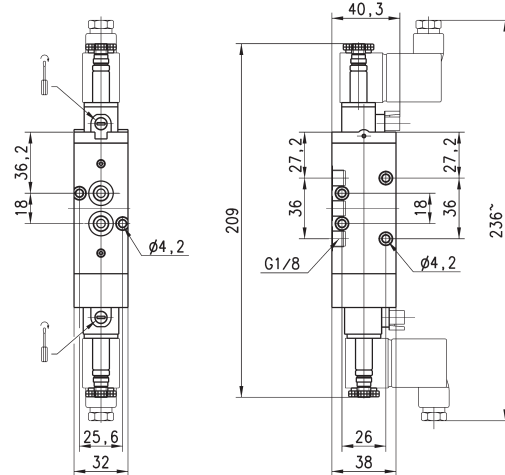
These solenoid valves, with electropneumatic actuation and return, are suitable for operating double-acting cylinders.



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...

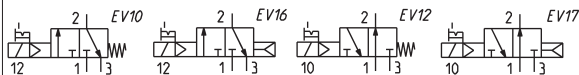
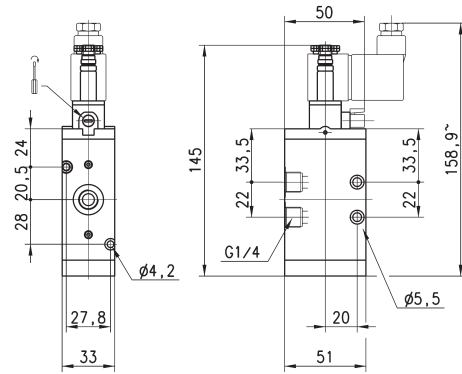
CC = Centres Closed  
CO = Centres Open



Mod.	Function	Flow rate Qn (Nl/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.

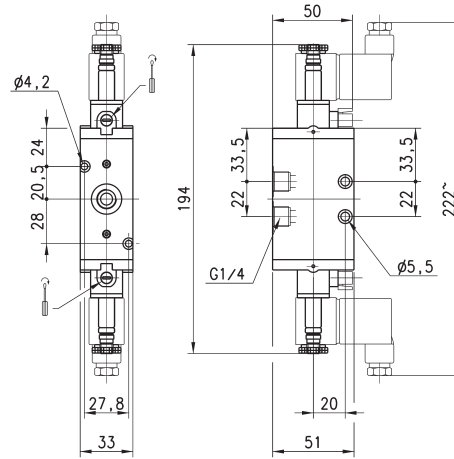
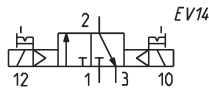


Mod.	Function	Flow rate Qn (Nl/min)	Operating pressure (bar)	Symbol
434-015-22	3/2 NC	1250	2 + 10	EV10
434-016-22	3/2 NC	1250	2 + 10	EV16
444-015-22	3/2 NO	1250	2 + 10	EV12
444-016-22	3/2 NO	1250	2 + 10	EV17

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.

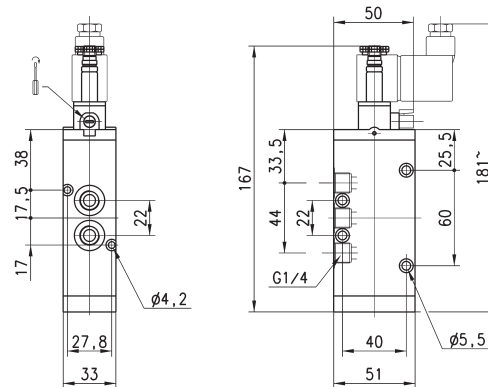
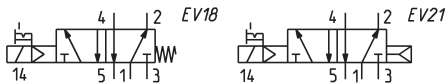


Mod.	Function	Flow rate Qn (NI/min)	Operating pressure (bar)
434-011-22	3/2	1250	2 + 10

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



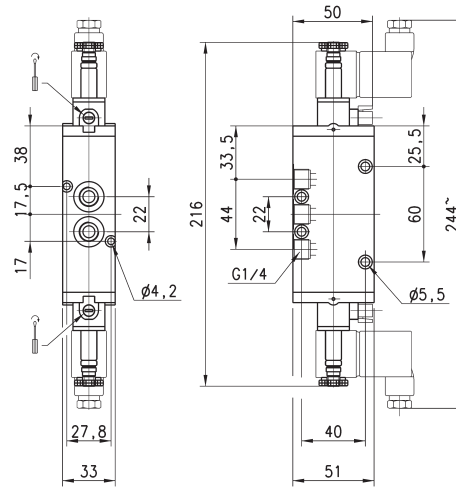
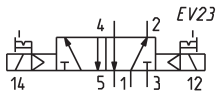
These solenoid valves, which have electropneumatic actuation and spring return, are suitable for operating double-acting cylinders.



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...**

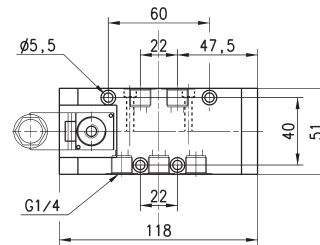
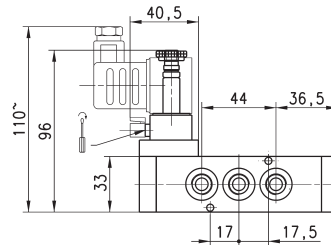
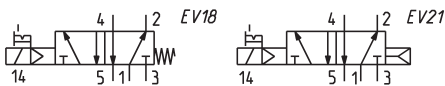
These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



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...**

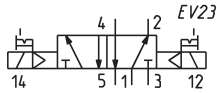
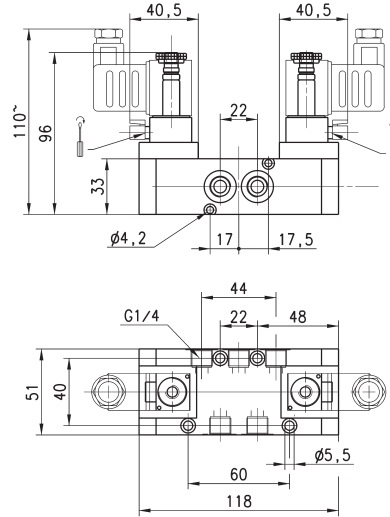
These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.



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...

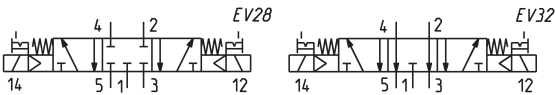
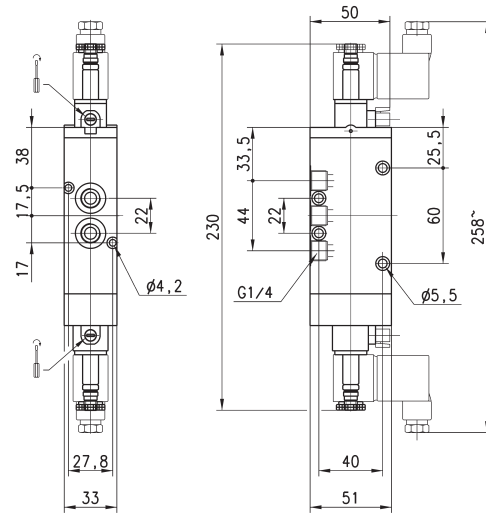
These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



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...

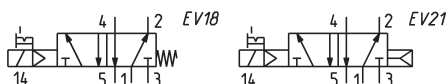
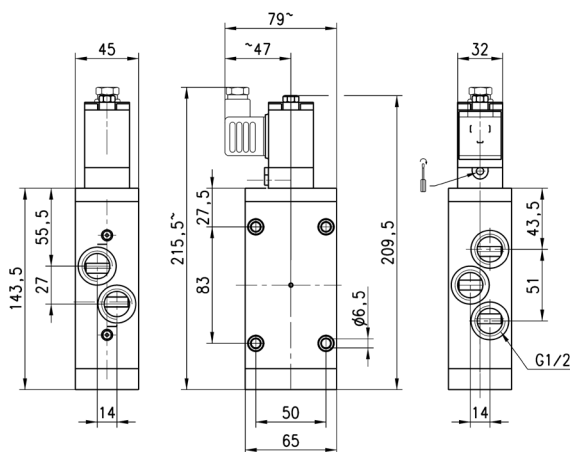
CC = Centres Closed  
CO = Centres Open



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...**

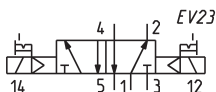
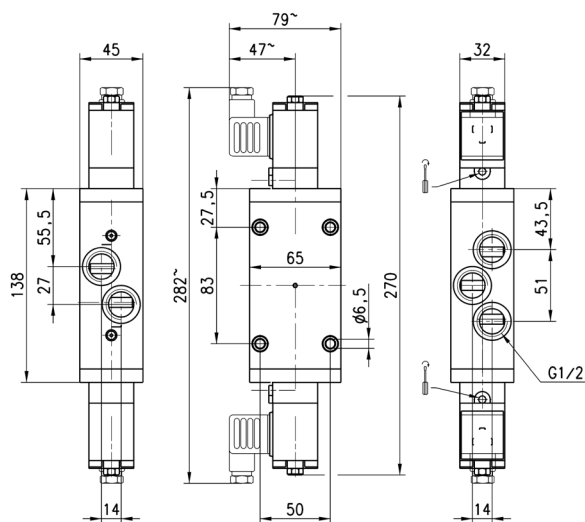

These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.



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

**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

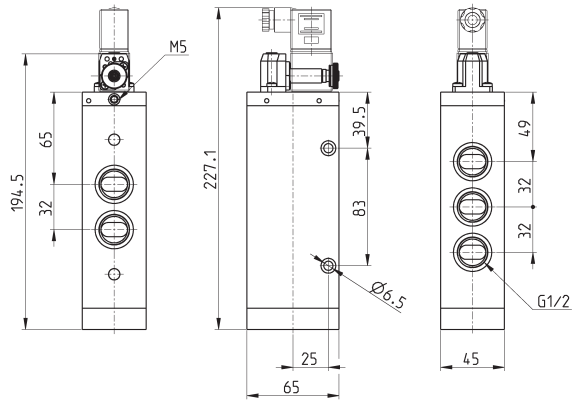


5/2-way solenoid valve, G1/2, monostable - Mod. 452N-...

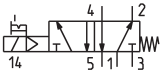
New models



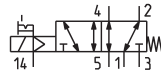
These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.



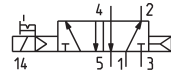
EV18



EV19



EV21



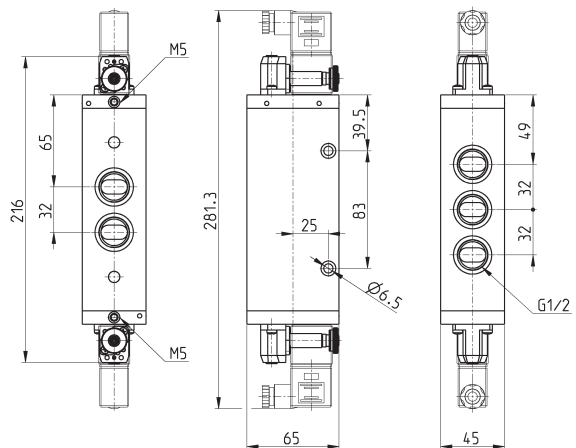
Mod.	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-015-22	5/2	4000	-	2.5 + 10	EV18
452N-016-22	5/2	4000	-	2 + 10	EV21
452N-E15-22	5/2	4000	2.5	-0.9 + 10	EV19

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

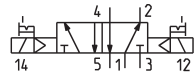
New models



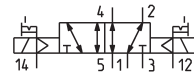
These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.



EV23



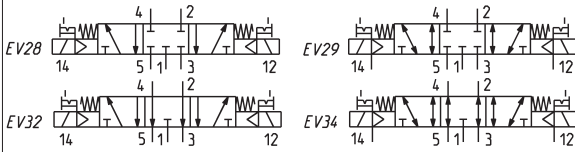
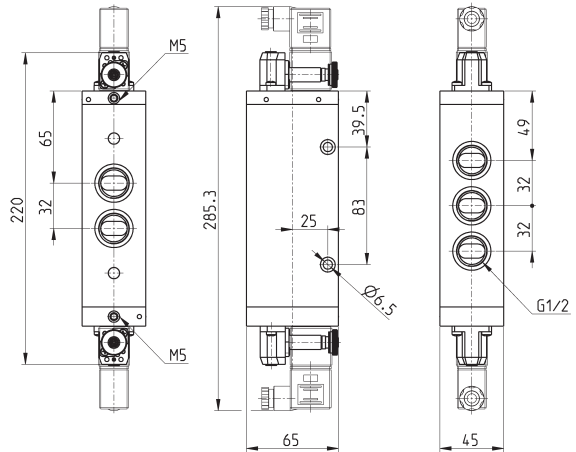
EV25



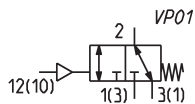
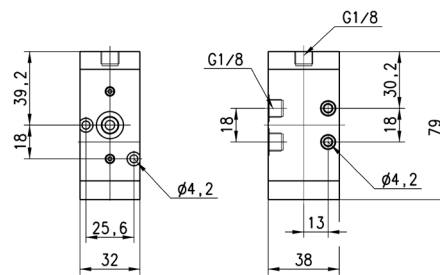
Mod.	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-011-22	5/2	4000	-	2 + 10	EV23
452N-E11-22	5/2	4000	2	-0.9 + 10	EV25

**5/2-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.

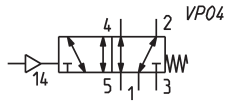
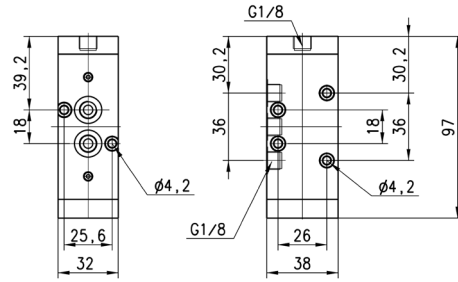


Mod.	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
<b>462N-011-22</b>	5/3 CC	3300	-	2 + 10	EV28
<b>462N-E11-22</b>	5/3 CC	3300	2	-0.9 + 10	EV29
<b>472N-011-22</b>	5/3 CO	3300	-	2 + 10	EV32
<b>472N-E11-22</b>	5/3 CO	3300	2	-0.9 + 10	EV34

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


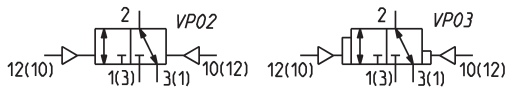
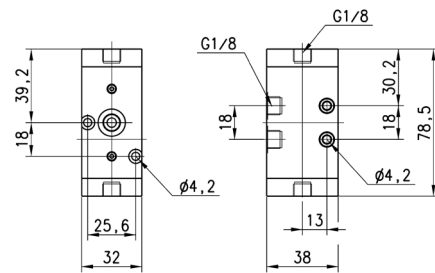
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
<b>438-35</b>	in-line/on manifold	3/2 NC	700	2.5	-0.9 + 10

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



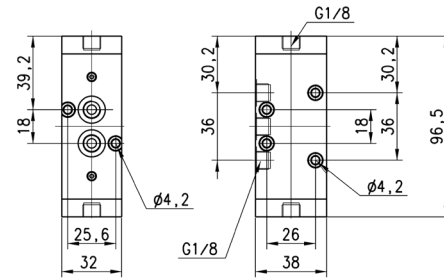
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
458-35	in-line/manifold	5/2	700	2.5	-0.9 + 10

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



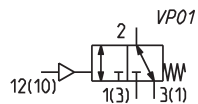
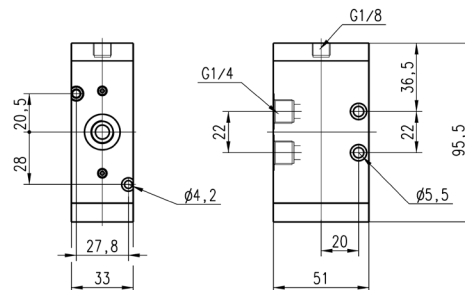
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
438-33	in-line/on manifold	3/2	700	2	-0.9 + 10	VP02
438-34	in-line/on manifold	3/2	700	2	-0.9 + 10	VP03

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



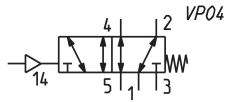
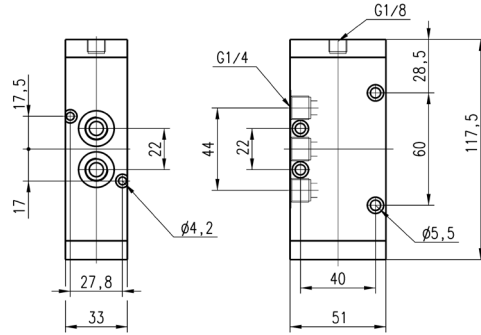
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
458-33	in-line/on manifold	5/2	700	2	-0.9 + 10	VP06
458-34	in-line/on manifold	5/2	700	2	-0.9 + 10	VP05

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



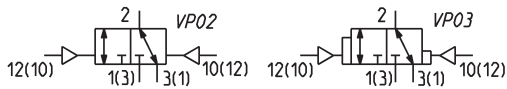
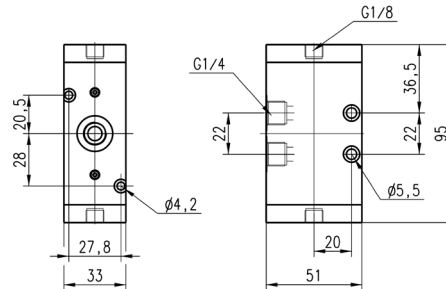
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
434-35	in-line/on manifold	3/2 NC	1250	2.5	-0.9 + 10

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



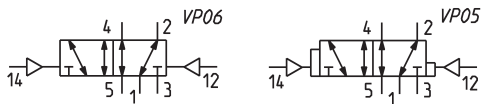
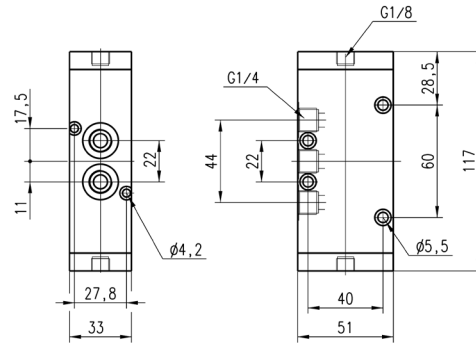
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
454-35	in-line/on manifold	5/2	1250	2.5	-0.9 + 10

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

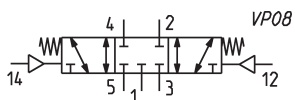
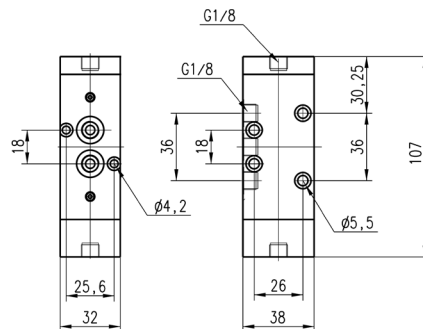
## 5/2-way valve, G1/4 port, bistable Mod. 454



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

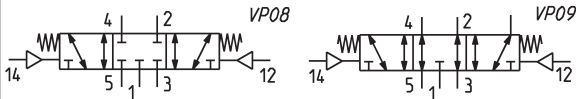
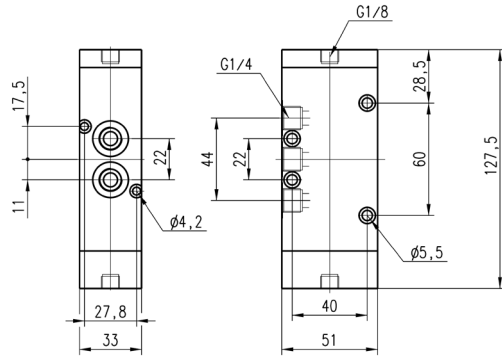
CC = Centres Closed



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

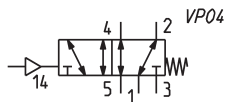
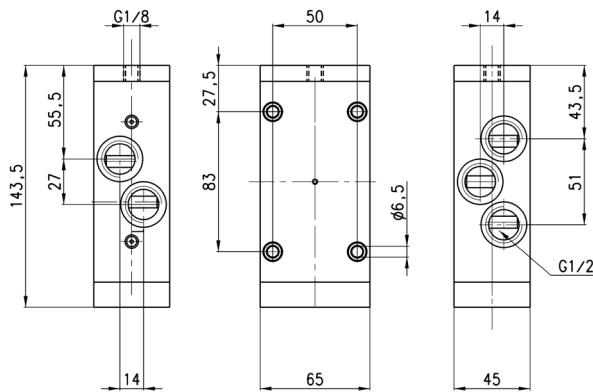
5/3-way CC CO valve, G1/4, monostable, central stable position

CC = Centres Closed  
CO = Centres Open



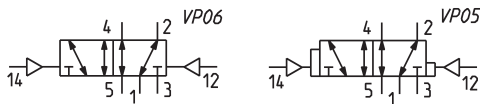
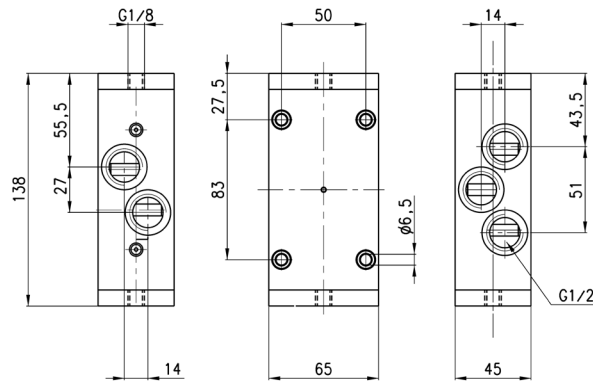
Mod.	Mounting	Function	Flow rate Qn (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
464-33	in-line/on manifold	5/3 CC	1250	2.5	-0.9 + 10	VP08
474-33	in-line/on manifold	5/3 CO	1200	2.5	-0.9 + 10	VP09

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



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

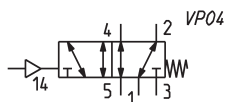
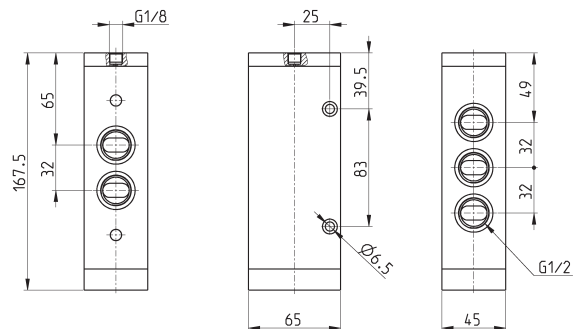
## 5/2-way valve, G1/2 port, bistable Mod. 452C



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

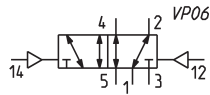
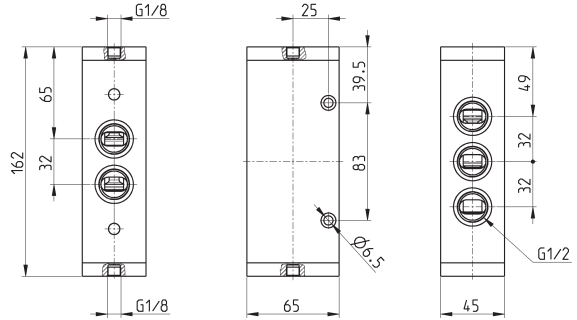


Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)
452N-35	in-line	5/2	4000	2.5	-0.9 + 10



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

New model



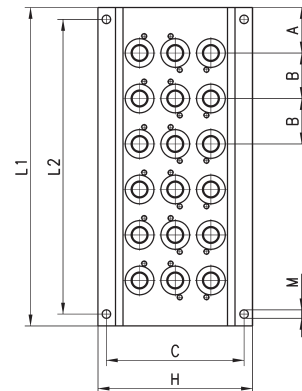
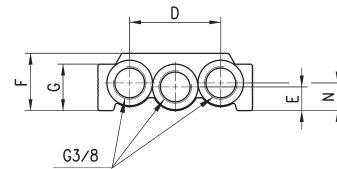
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-33	in-line	5/2	4000	2	-0.9 + 10	VP06

Manifold base with common exhausts

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

The following is supplied with:

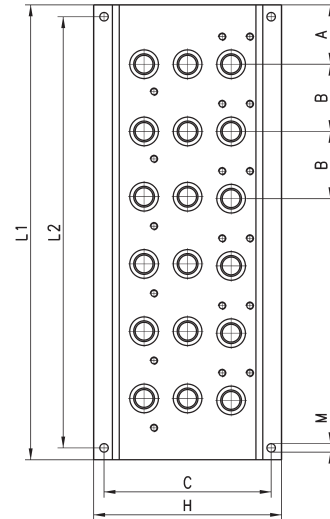
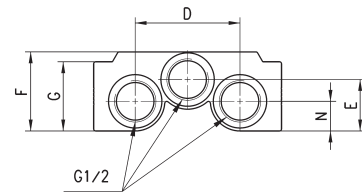
- 1x manifold
- 1x pair of fixing screws for valve position
- 1x interface seal for valve positions
- 2x guides for valve position



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**

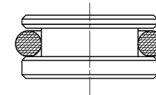
For valves Series 4, G1/4 (3/2, 5/2 or 5/3-way)  
 The following is supplied :  
 1x manifold  
 1x pair of fixing screws for valve position  
 1x interface seal for valve positions  
 2x guides for valve position



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



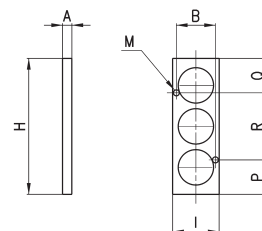
Mod.
<b>TCNVL/3</b>
<b>TCNVL/5</b>

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	32.5	4.2	7.5	3.5	59

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