

Valves and solenoid valves Series 4

New models

3/2, 5/2 and 5/3-way CC, CO
Ports: G1/8, G1/4, G3/8, G1/2



SERIES 4 VALVES AND SOLENOID VALVES

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.

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

- » The different ports allow flows from 650 to 4000 Nl/min
- » New models available: with G3/8 ports and 1800 Nl/min flow

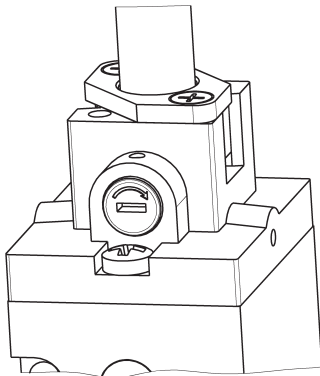
GENERAL DATA

Construction	balanced spool type
Valve functions	3/2 - 5/2 - 5/3-way CC, CO
Materials	AL body and subbases stainless steel spool technopolymer end cover NBR PU seals
Ports	G1/8 - G1/4 - G3/8 - G1/2
Installation	in any position
Operating temperature	0 ÷ 60°C (with dry air at -20°C)
Operating pressure	see table
Medium	filtered air, without lubrication. If lubricated air is used, it is recommended to use ISOVG32 oil. Once applied the lubrication should never be interrupted.

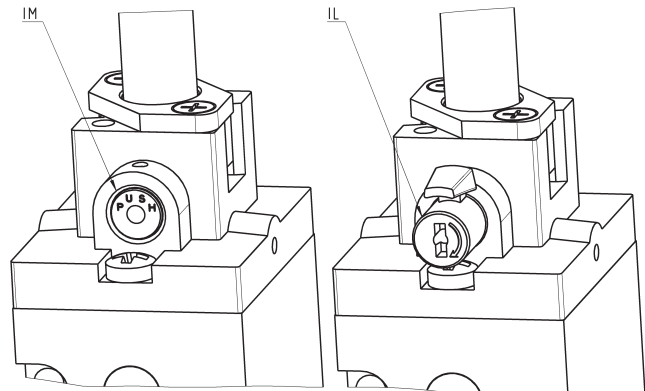
CODING EXAMPLE

4	5	4	-	015	-	22	IL	-	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: 2C = G1/2 2N = G1/2 (high flow) 3 = G3/8 4 = G1/4 8 = G1/8									
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 (only for 452C version)									
IL	TYPE OF MANUAL OVERRIDE: = bistable, standard IL = bistable, lever type (available on demand) IM = monostable (available on demand)									
U7	ENCAPSULATING MATERIAL / SOLENOID DIMENSIONS: A6 = PPS / 32 x 32 (only for 452C version) 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 the dedicated section 2.35)									

TYPES OF MANUAL OVERRIDE



Example of solenoid valve with a bistable standard manual override.

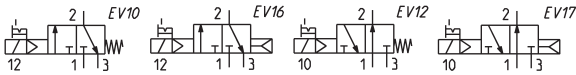
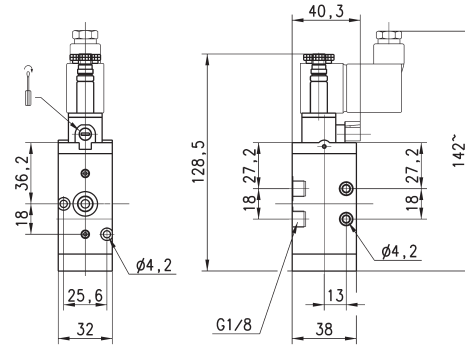


Example of solenoid monostable valve (IM) and bistable valve with a lever type manual override (IL).

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.

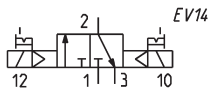
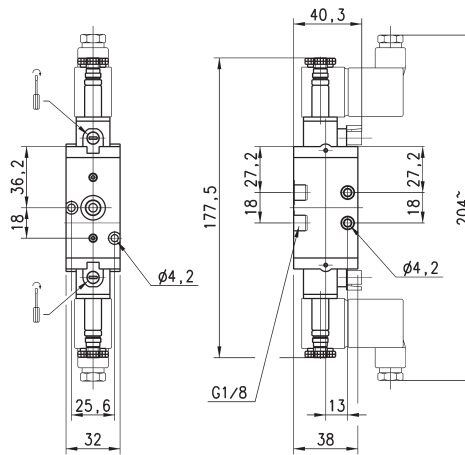


Mod.	Function	Flow rate Qn (NL/min)	Operating pressure (bar)	Symbol
438-015-22	3/2 NC	650	2.5 ÷ 10	EV10
438-016-22	3/2 NC	650	2.5 ÷ 10	EV16
448-015-22	3/2 NO	650	2.5 ÷ 10	EV12
448-016-22	3/2 NO	650	2.5 ÷ 10	EV17

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.

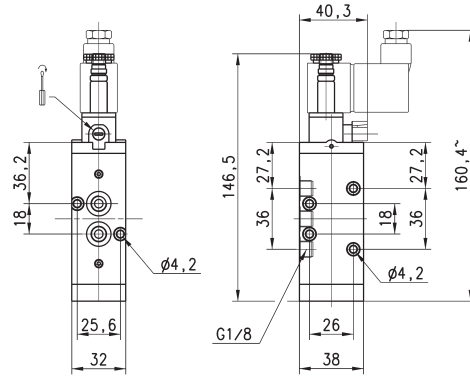
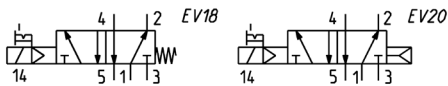


Mod.	Function	Flow rate Qn (NL/min)	Operating pressure (bar)
438-011-22	3/2	650	2 ÷ 10

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.

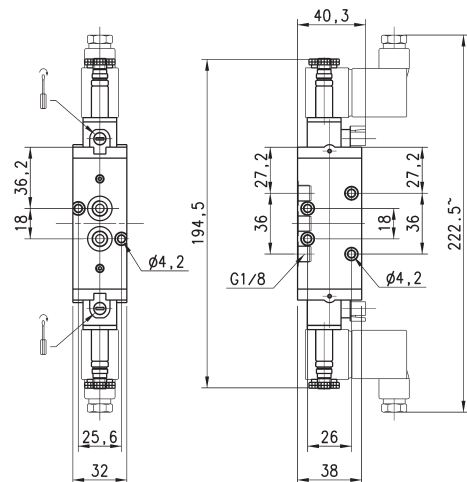
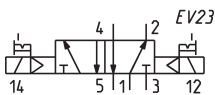


Mod.	Function	Flow rate Qn (NL/min)	Operating pressure (bar)	Symbol
458-015-22	5/2	650	2.5 ÷ 10	EV18
458-016-22	5/2	650	2.5 ÷ 10	EV20
458-015-22IL	5/2	650	2.5 ÷ 10	EV18

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.

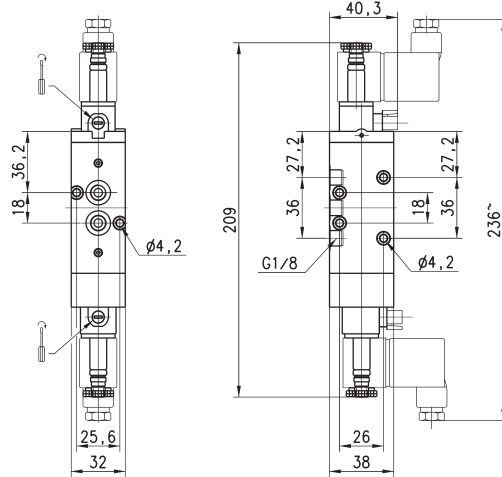
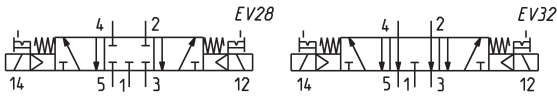


Mod.	Function	Flow rate Qn (NL/min)	Operating pressure (bar)
458-011-22	5/2	650	2 ÷ 10

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



CC = Centres Closed
CO = Centres Open

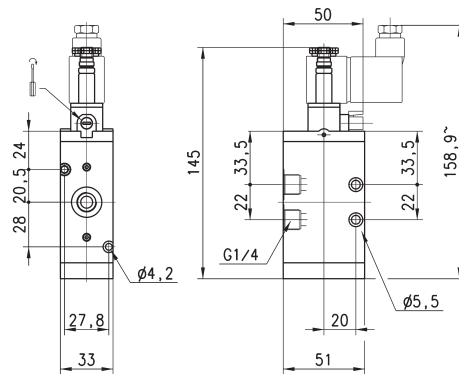
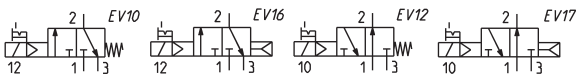


Mod.	Function	Flow rate Qn (NL/min)	Operating pressure (bar)	Symbol
468-011-22	5/3 CC	600	2.5 ÷ 10	EV28
478-011-22	5/3 CO	600	2.5 ÷ 10	EV32

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.

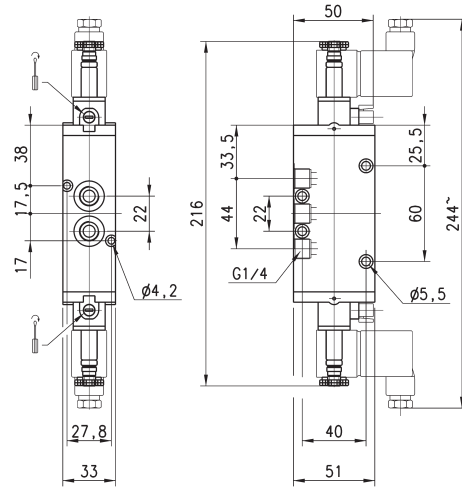
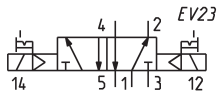


Mod.	Function	Flow rate Qn (NL/min)	Operating pressure (bar)	Symbol
434-015-22	3/2 NC	1250	2.5 ÷ 10	EV10
434-016-22	3/2 NC	1250	2.5 ÷ 10	EV16
444-015-22	3/2 NO	1250	2.5 ÷ 10	EV12
444-016-22	3/2 NO	1250	2.5 ÷ 10	EV17
434-015-22IL	3/2 NC	1250	2.5 ÷ 10	EV10

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.

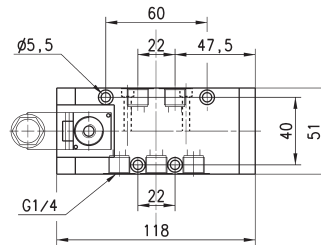
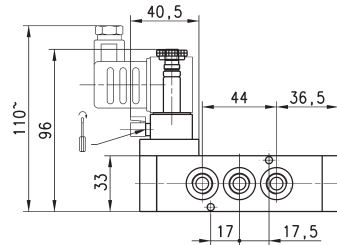
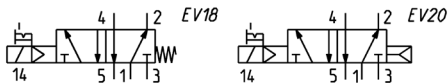


Mod.	Function	Flow rate Qn (l/min)	Operating pressure (bar)
454-011-22	5/2	1250	2 ÷ 10
454-011-22IL	5/2	1250	2 ÷ 10

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.



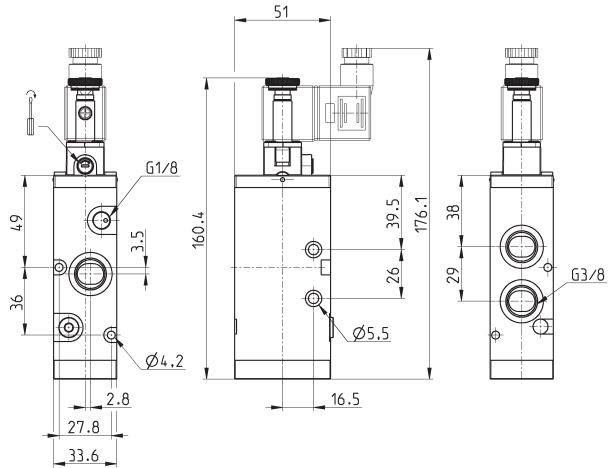
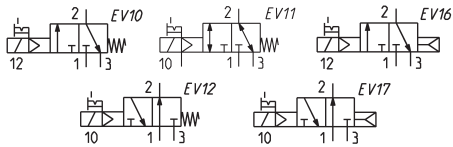
Mod.	Function	Flow rate Qn (l/min)	Operating pressure (bar)	Symbol
454-V15-22	5/2	1250	2.5 ÷ 10	EV18
454-V16-22	5/2	1250	2.5 ÷ 10	EV20

3/2-way solenoid valve, G3/8, monostable Mod. 433... and Mod. 443...

New



These solenoid valves, which have electropneumatic actuation and spring return, are available in the NC (closed) or NO (open) version. The E15 version can work both NC and NO.



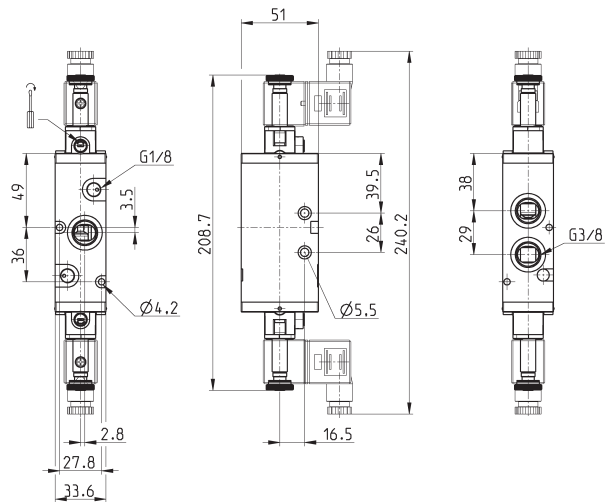
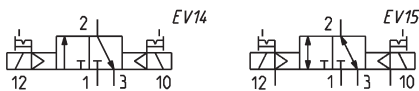
Mod.	Function	Flow Qn (NL/min)	Working pressure (bar)	Min. pilot pressure (bar)	Symbol
433-015-22	3/2 NC	1800	2.5 ÷ 10	-	EV10
433-E15-22	3/2	1800	-0.9 ÷ 10	2.5	EV11
433-016-22	3/2 NC	1800	2.5 ÷ 10	-	EV16
443-015-22	3/2 NO	1800	2.5 ÷ 10	-	EV12
443-016-22	3/2 NO	1800	2.5 ÷ 10	-	EV17

3/2-way solenoid valve, G3/8, bistable - Mod. 433...

New



These solenoid valves, which have electropneumatic actuation and return, assume the NC (closed) or NO (open) position depending on the last pulse received. The E11 version can work both NC and NO.



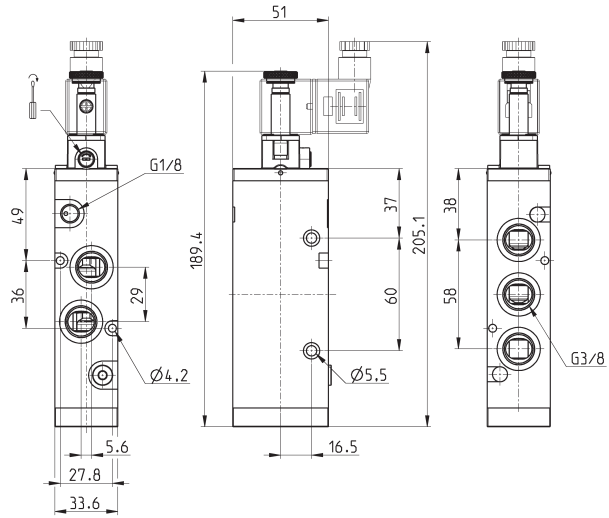
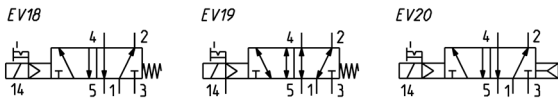
Mod.	Function	Flow Qn (NL/min)	Working pressure (bar)	Min. pilot pressure (bar)	Symbol
433-011-22	3/2	1800	2 ÷ 10	-	EV14
433-E11-22	3/2	1800	-0.9 ÷ 10	2	EV15

5/2-way solenoid valve, G3/8, monostable - Mod. 453...

New



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



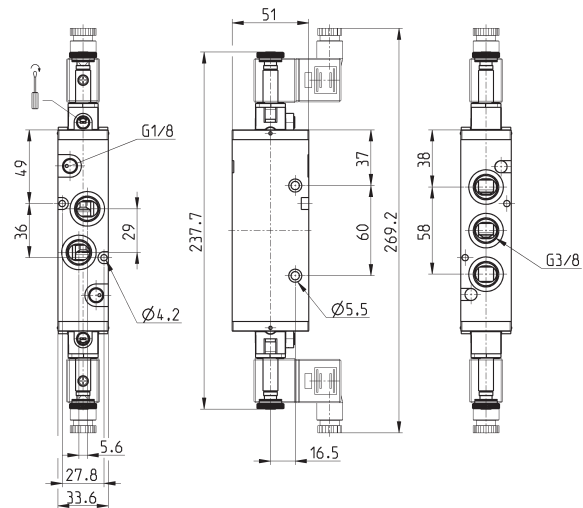
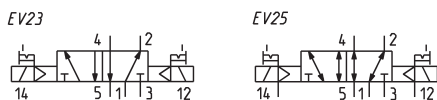
Mod.	Function	Flow Qn (NL/min)	Working pressure (bar)	Min. pilot pressure (bar)	Symbol
453-015-22	5/2	1800	2.5 ÷ 10	-	EV18
453-E15-22	5/2	1800	-0.9 ÷ 10	2.5	EV19
453-016-22	5/2	1800	2.5 ÷ 10	-	EV20

5/2-way solenoid valve, G3/8, bistable - Mod. 453...

New



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



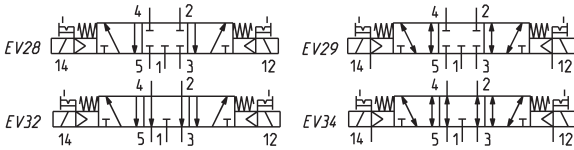
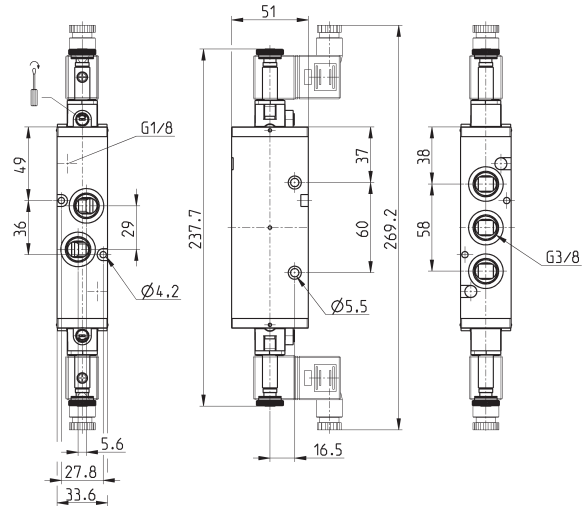
Mod.	Function	Flow Qn (NL/min)	Working pressure (bar)	Min. pilot pressure (bar)	Symbol
453-011-22	5/2	1800	2 ÷ 10	-	EV23
453-E11-22	5/2	1800	-0.9 ÷ 10	2	EV25

5/3-way solenoid valve, G3/8 - Mod. 463-... and 473-...

New



CC = Centres Closed
CO = Centres Open

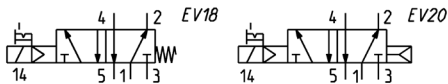
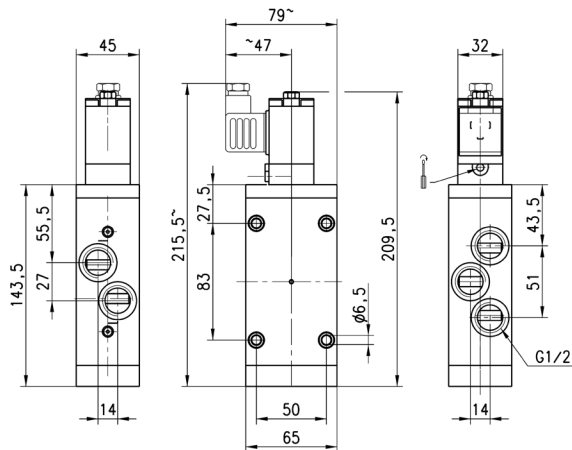


Mod.	Function	Flow Qn (NL/min)	Working pressure (bar)	Min. pilot pressure (bar)	Symbol
463-011-22	5/3 CC	1600	2.5 ÷ 10	-	EV28
463-E11-22	5/3 CC	1600	-0.9 ÷ 10	2.5	EV29
473-011-22	5/3 CO	1600	2.5 ÷ 10	-	EV32
473-E11-22	5/3 CO	1600	-0.9 ÷ 10	2.5	EV34

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.

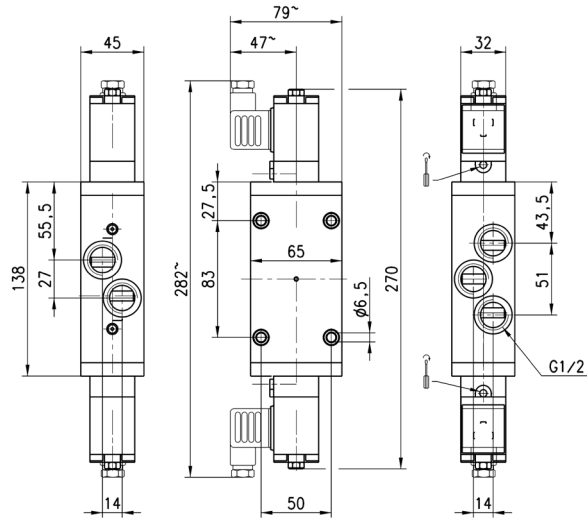
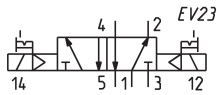


Mod.	Function	Flow rate Qn (NL/min)	Operating pressure (bar)	Symbol
452C-015-50-A6*	5/2	2500	2.5 ÷ 10	EV18 * choose the desired voltage
452C-016-50-A6*	5/2	2500	2.5 ÷ 10	EV20 * choose the desired voltage
452C-015	5/2	2500	2.5 ÷ 10	* choose the desired voltage
452C-015-22	5/2	2500	2.5 ÷ 10	* choose the desired voltage
452C-016	5/2	2500	2.5 ÷ 10	* 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.



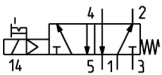
Mod.	Function	Flow rate Qn (NL/min)	Operating pressure (bar)	
452C-011-50-A6*	5/2	2500	2 ÷ 10	* choose the desired voltage
452C-011-22	5/2	2500	2 ÷ 10	* choose the desired voltage
452C-011	5/2	2500	2 ÷ 10	* choose the desired voltage

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

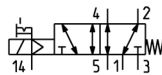


These solenoid valves, which have electropneumatic actuation and spring or pneumatic spring return are suitable for operating double-acting cylinders.

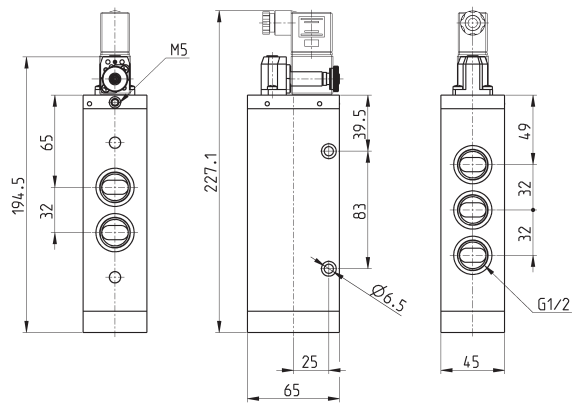
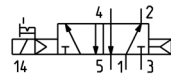
EV18



EV19



EV20



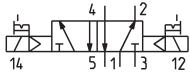
Mod.	Function	Flow rate Qn (NL/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-015-22	5/2	4000	-	2.5 ÷ 10	EV18
452N-016-22	5/2	4000	-	2.5 ÷ 10	EV20
452N-E15-22	5/2	4000	2.5	-0.9 ÷ 10	EV19

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

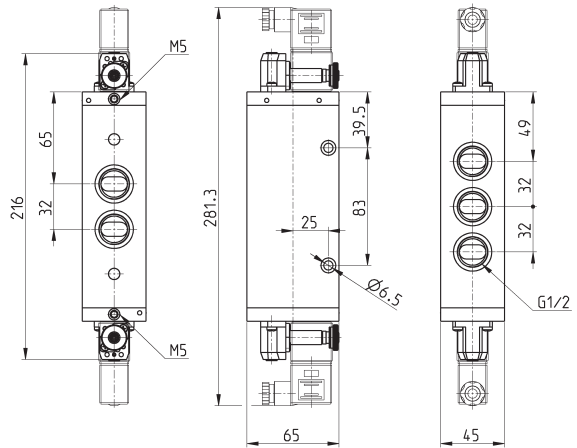
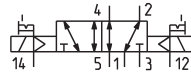


These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.

EV23



EV25



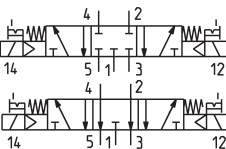
Mod.	Function	Flow rate Qn (NL/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452N-011-22	5/2	4000	-	2 ÷ 10	EV23
452N-E11-22	5/2	4000	2	-0.9 ÷ 10	EV25

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

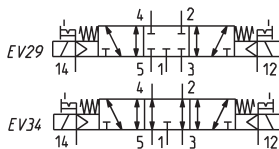


These solenoid valves, which have electropneumatic actuation and return, are suitable for operating double-acting cylinders.

EV28



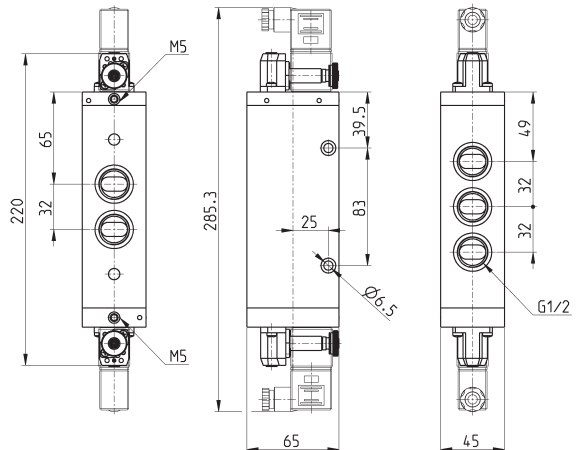
EV29



EV32

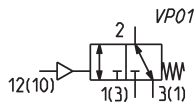
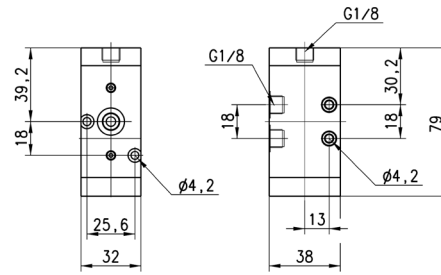


EV34



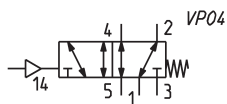
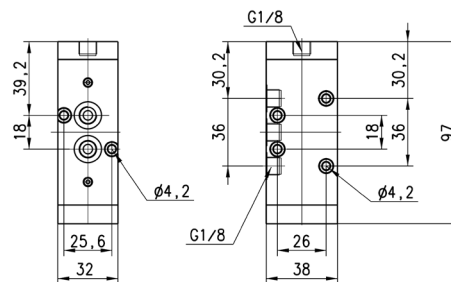
Mod.	Function	Flow rate Qn (NL/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
462N-011-22	5/3 CC	3300	-	2.5 ÷ 10	EV28
462N-E11-22	5/3 CC	3300	2.5	-0.9 ÷ 10	EV29
472N-011-22	5/3 CO	3300	-	2.5 ÷ 10	EV32
472N-E11-22	5/3 CO	3300	2.5	-0.9 ÷ 10	EV34

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



Mod.	Mounting	Function	Flow rate Qn (NL/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

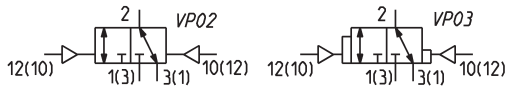
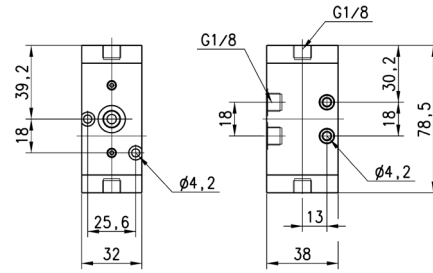


Mod.	Mounting	Function	Flow rate Qn (NL/min)	Min. pilot pressure (bar)	Working pressure (bar)
458-35	in-line/manifold	5/2	700	2.5	-0.9 ÷ 10

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

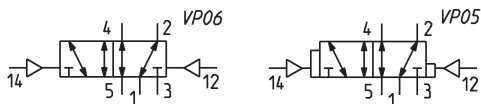
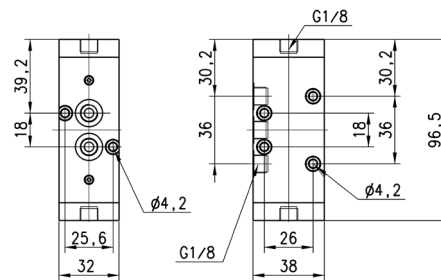


These valves can work NC or NO according to the last pilot signal.



Mod.	Mounting	Function	Flow rate Qn (NL/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

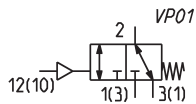
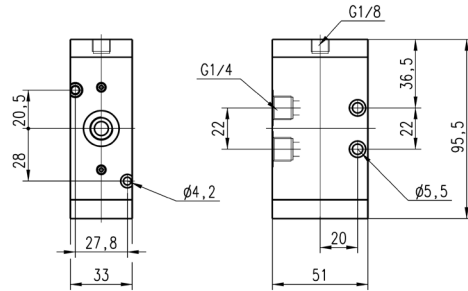


Mod.	Mounting	Function	Flow rate Qn (NL/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
458-33	in-line/on manifold	5/2	700	2	-0.9 ÷ 10	VP06
458-34	in-line/on manifold	5/2	700	2	-0.9 ÷ 10	VP05

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

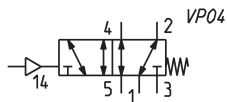
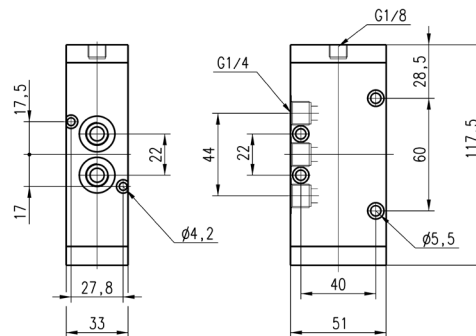


This valve can work NC or NO depending on where the power supply is connected.



Mod.	Mounting	Function	Flow rate Qn (NL/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

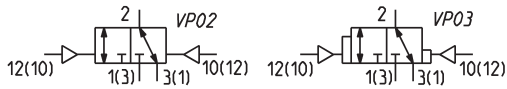
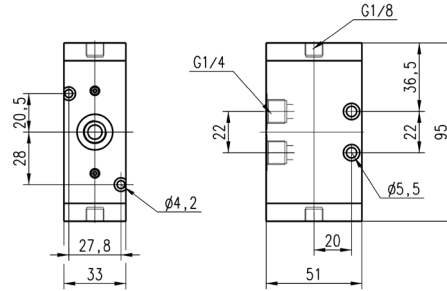


Mod.	Mounting	Function	Flow rate Qn (NL/min)	Min. pilot pressure (bar)	Working pressure (bar)
454-35	in-line/on manifold	5/2	1250	2.5	-0.9 ÷ 10

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

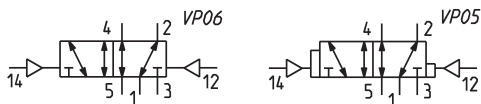
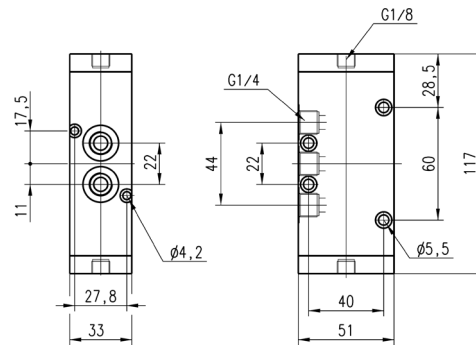


These valves can work NC or NO according to the last pilot signal.



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

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



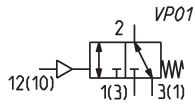
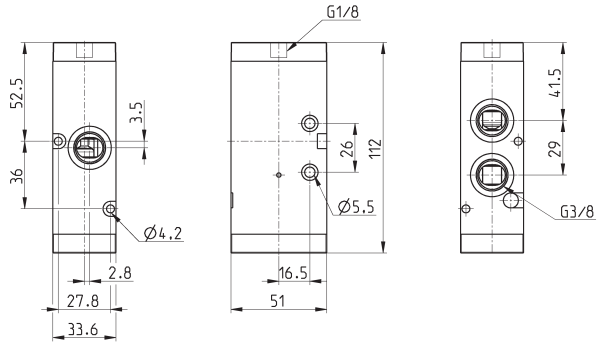
Mod.	Mounting	Function	Flow rate Qn (NL/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
454-33	in-line/on manifold	5/2	1250	2	-0.9 ÷ 10	VP06
454-34	in-line/on manifold	5/2	1250	2	-0.9 ÷ 10	VP05

3/2-way valve, G3/8 port, monostable Mod. 433-35

New



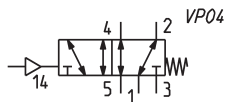
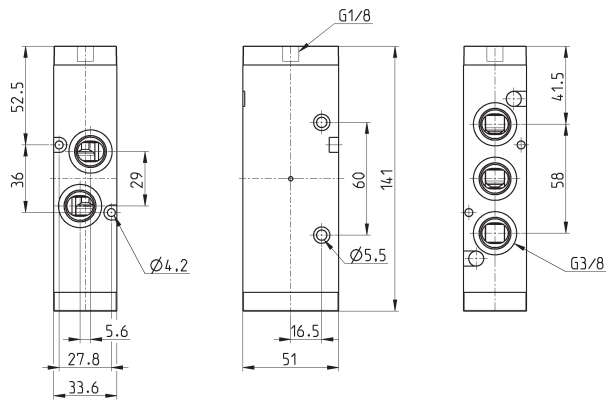
This valve can work NC or NO depending on where the power supply is connected.



Mod.	Mounting	Function	Flow rate Qn (NL/min)	min. pilot Pressure (bar)	Working pressure (bar)
433-35	in-line/on manifold	3/2 NC	1800	2.5	-0.9 ÷ 10

5/2-way valve, G3/8 port, monostable Mod. 453-35

New



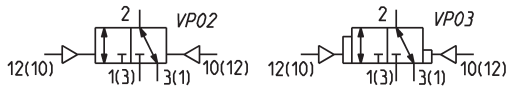
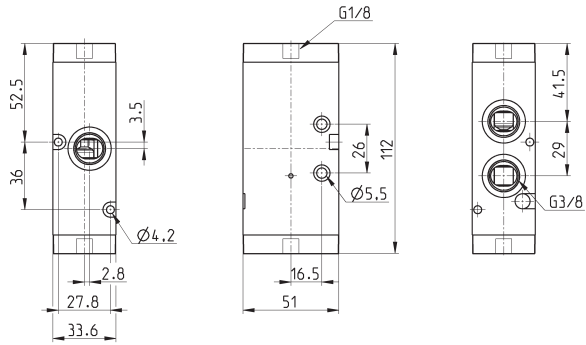
Mod.	Mounting	Function	Flow rate Qn (NL/min)	Min. pilot pressure (bar)	Working pressure (bar)
453-35	in-line/on manifold	5/2	1800	2.5	-0.9 ÷ 10

3/2-way valve, G3/8 port, bistable Mod. 433

New



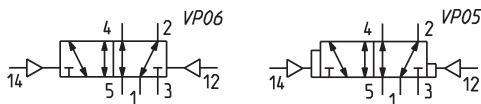
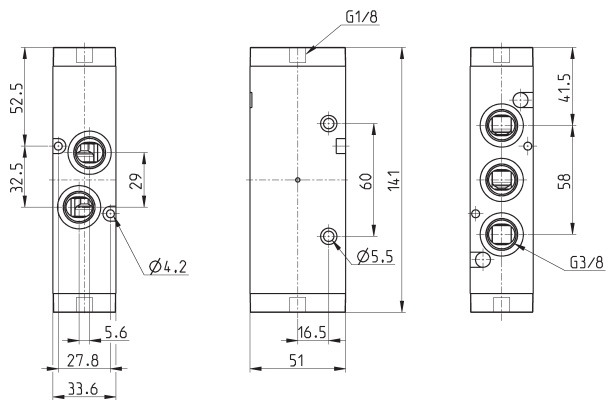
These valves can work NC or NO according to the last pilot signal.



Mod.	Mounting	Function	Flow rate Qn (NL/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
433-33	in-line/on manifold	3/2 NC	1800	2	-0.9 ÷ 10	VP02
433-34	in-line/on manifold	3/2 NC	1800	2	-0.9 ÷ 10	VP03

5/2-way valve, G3/8 port, bistable Mod. 453

New

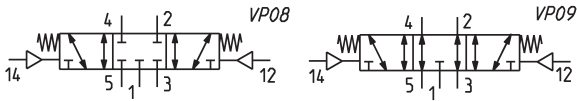
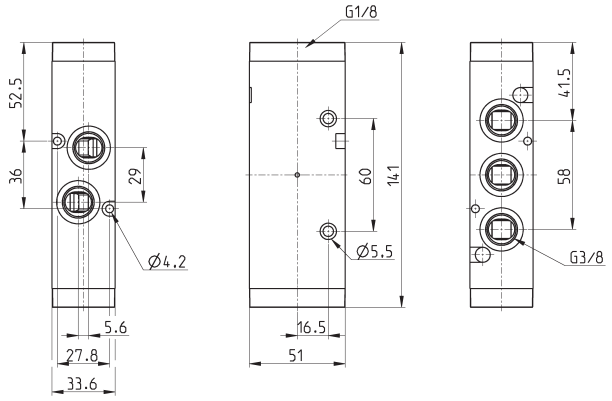


Mod.	Mounting	Function	Flow rate Qn (NL/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
453-33	in-line/on manifold	5/2	1800	2	-0.9 ÷ 10	VP06
453-34	in-line/on manifold	5/2	1800	2	-0.9 ÷ 10	VP05

5/3-way CC CO valve, G3/8, monostable, central stable position

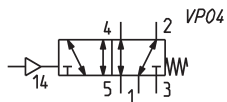
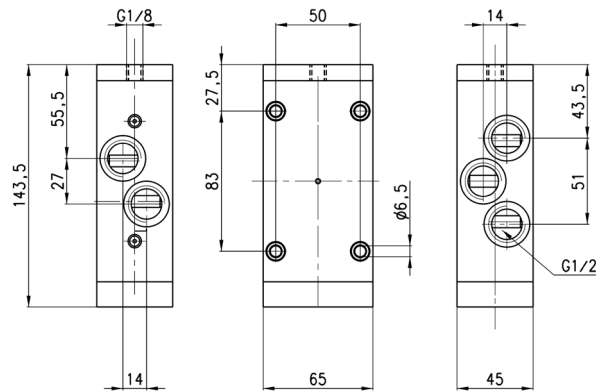


CC = Centres Closed
CO = Centres Open



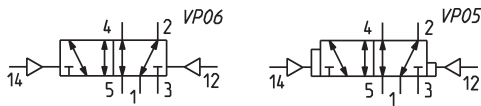
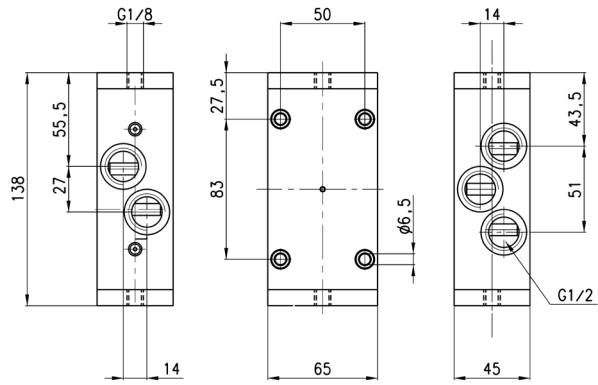
Mod.	Mounting	Function	Flow rate Qn (NL/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
463-33	in-line/on manifold	5/3 CC	1600	2.5	-0.9 ÷ 10	VP08
473-33	in-line/on manifold	5/3 CO	1600	2.5	-0.9 ÷ 10	VP09

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



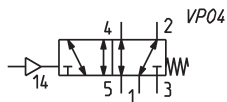
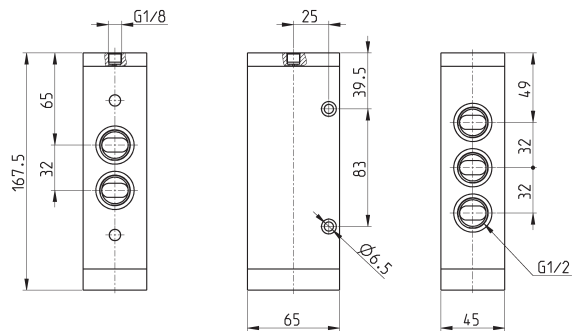
Mod.	Mounting	Function	Flow rate Qn (NL/min)	Min. pilot pressure (bar)	Working pressure (bar)
452C-35	in-line	5/2	2500	2.5	-0.9 ÷ 10

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



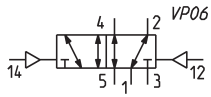
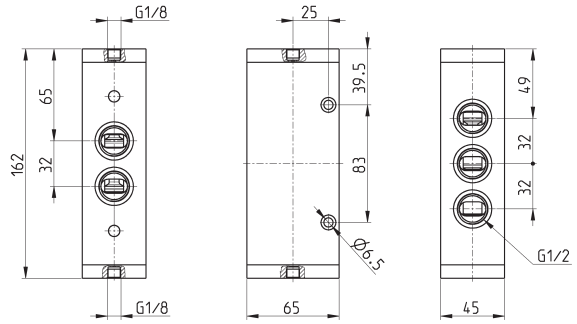
Mod.	Mounting	Function	Flow rate Qn (NI/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452C-33	in-line	5/2	2500	2	-0.9 ÷ 10	VP06
452C-34	in-line	5/2	2500	2	-0.9 ÷ 10	VP05

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



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



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

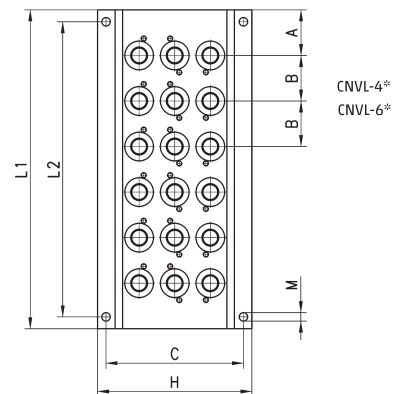
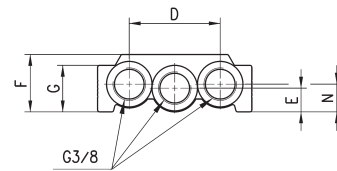
Manifold base with common exhausts



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

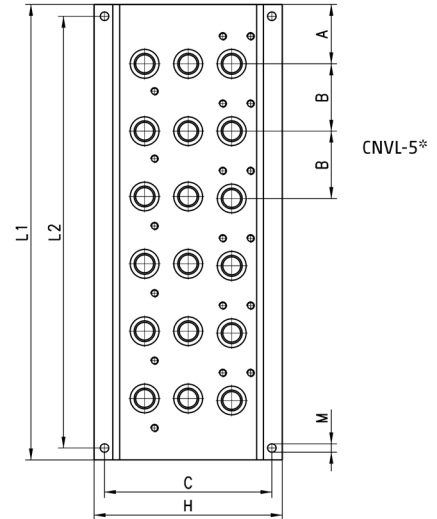
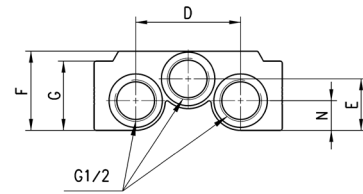


DIMENSIONS												
Mod.	A	B	C	D	E	F	G	H	L1	L2	M	N
CNVL-42	28	33	69.2	46	12	29	23.5	78	89	77	4.3	14
CNVL-43	28	33	69.2	46	12	29	23.5	78	122	110	4.3	14
CNVL-44	28	33	69.2	46	12	29	23.5	78	155	143	4.3	14
CNVL-45	28	33	69.2	46	12	29	23.5	78	188	176	4.3	14
CNVL-46	28	33	69.2	46	12	29	23.5	78	221	209	4.3	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



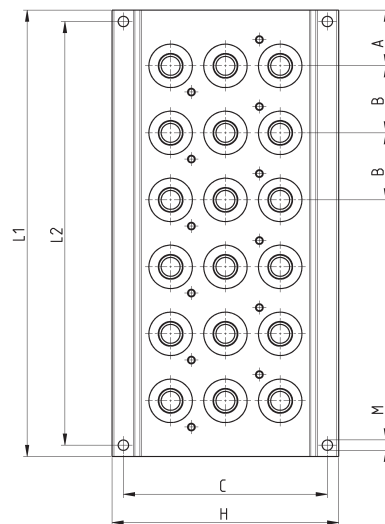
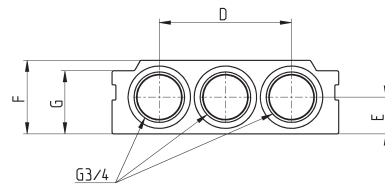
DIMENSIONS												
Mod.	A	B	C	D	E	F	G	H	L1	L2	M	N
CNVL-52	30	34	84.5	53	26	40	35	95	94	82	4.3	15
CNVL-53	30	34	84.5	53	26	40	35	95	128	116	4.3	15
CNVL-54	30	34	84.5	53	26	40	35	95	162	150	4.3	15
CNVL-55	30	34	84.5	53	26	40	35	95	196	184	4.3	15
CNVL-56	30	34	84.5	53	26	40	35	95	230	218	4.3	15

Manifold base with common exhausts

New



For valves Series 4, G3/8 (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



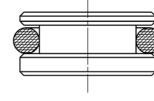
Mod.	A	B	C	D	E	F	G	H	L1	L2	M
CNVL-62	29.5	35	108	70	19.5	39	33.5	120	94.5	82.5	5.5
CNVL-63	29.5	35	108	70	19.5	39	33.5	120	130	118	5.5
CNVL-64	29.5	35	108	70	19.5	39	33.5	120	166	154	5.5
CNVL-65	29.5	35	108	70	19.5	39	33.5	120	201	189	5.5
CNVL-66	29.5	35	108	70	19.5	39	33.5	120	237	225	5.5

Blanking plug Mod. TCNVL for manifolds



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

TCNVL/3: for Series 4, G1/8
TCNVL/5: for Series 4, G1/4
TCNVL/6: for Series 4, G3/8



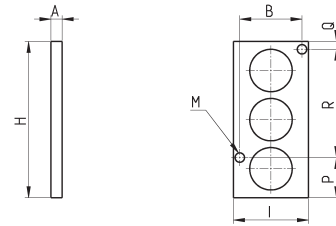
Mod.
TCNVL/3
TCNVL/5
TCNVL/6

Blanking plate Mod. CNVL for manifolds



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

CNVL/2: for Series 4, G1/8
CNVL/3: for Series 4, G1/4
CNVL/6: for Series 4, G3/8



DIMENSIONS								
Mod.	A	B	H	I	M	P	Q	R
CNVL/2	5	25.6	52	32	4.2	17	17	18
CNVL/3	5	27.8	70	33.5	4.2	18	3.5	48.5
CNVL/6	5	27.8	85	33.5	4.2	24.5	24.5	36

It is used to blank vacant positions of a manifold.