# Valves and Solenoid valves
Series 4

3/2, 5/2 and 5/3-way CC CO CP
Ports G1/8 - G1/4 - G1/2
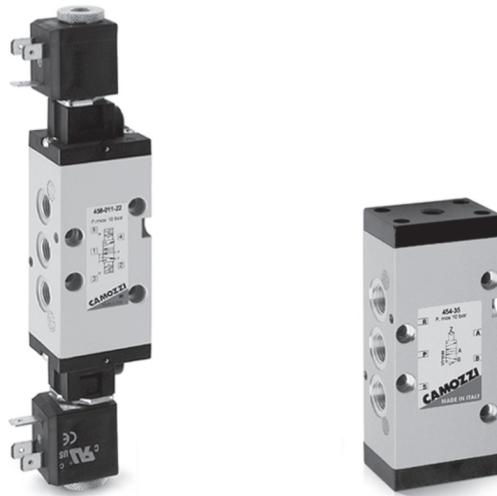
Series 4 solenoid valves have been designed in the 3/2, 5/2, 5/3 versions and with the following two devices of actuation:
- electropneumatically actuated with mechanical spring return
- electropneumatically actuated and return with external and internal air pressure supply

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.

GENERAL DATA

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

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2/2.15.01

CODING EXAMPLE

4	5	4	-	015	-	22	-	U	7	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
015	ACTUATION: 011 = double solenoid (horizontal solenoids) V11 = double solenoid (vertical solenoids) for G1/4 port only 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 G1/2
U	SOLENOID MATERIAL: U = PET G = PA A6 = PPS H8 = PA 6 V0 A8 = PPS
7	SOLENOID DIMENSIONS: 6 = 32 x 32 solo G1/2 7 = 22 x 22 8 = 30 x 30 9 = 22 x 58
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   New
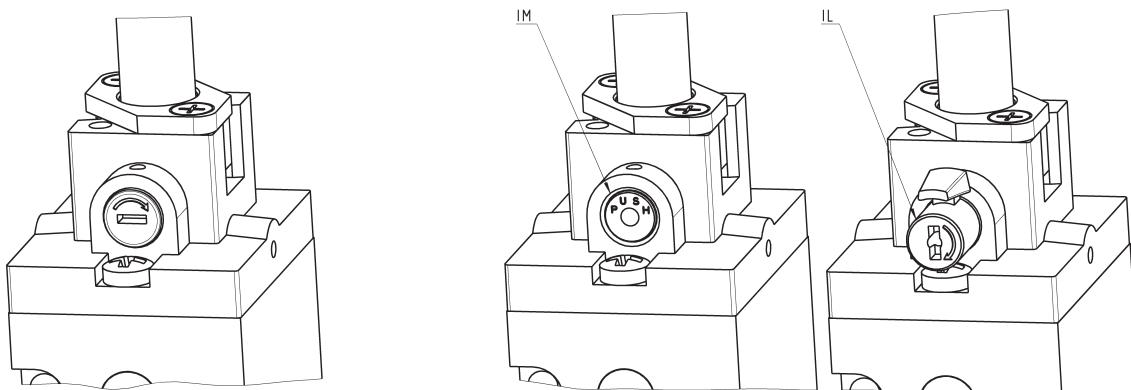
Example of solenoid valve with a bistable standard manual override.

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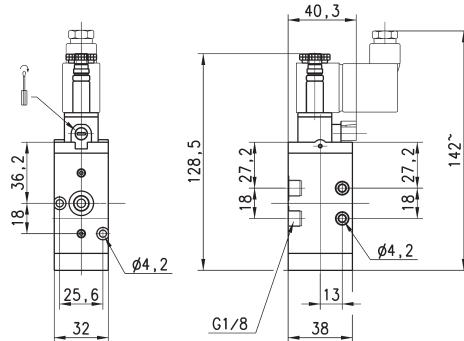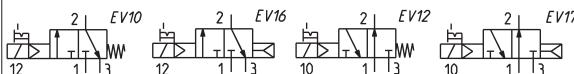
Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)	Symbol
438-015-22	3/2 NC	650	2,5 ÷ 10	EV10
438-016-22	3/2 NC	650	2,5 ÷ 10	EV16
448-015-22	3/2 NO	650	2,5 ÷ 10	EV12
448-016-22	3/2 NO	650	2,5 ÷ 10	EV17

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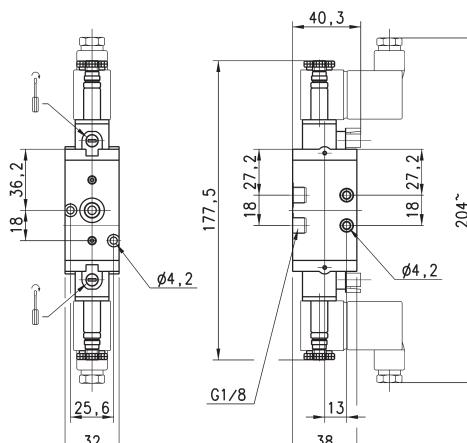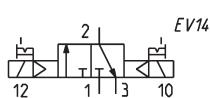
Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)
438-011-22	3/2	650	2 ÷ 10

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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.

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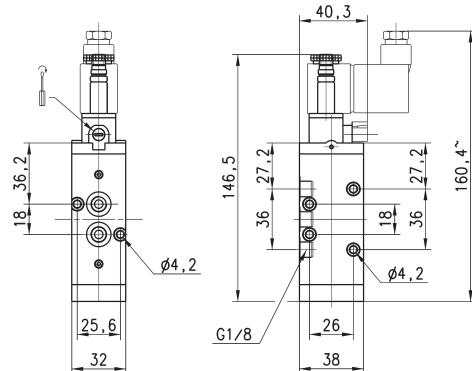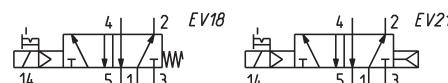
Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)	Symbol
458-015-22	5/2	650	2,5 ÷ 10	EV18
458-016-22	5/2	650	2,5 ÷ 10	EV21

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.

EV23
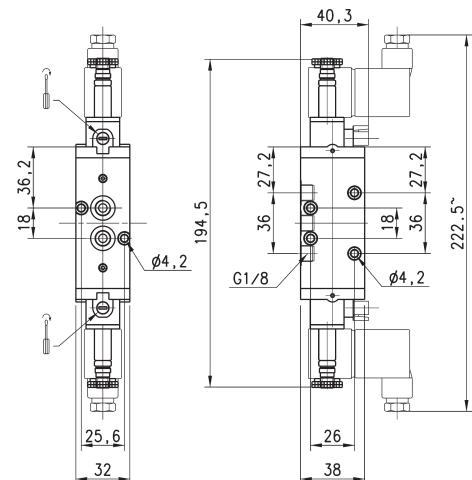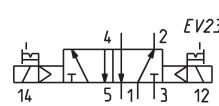
Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)
458-011-22	5/2	650	2 ÷ 10

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

CC = Centres Closed
CO = Centres Open
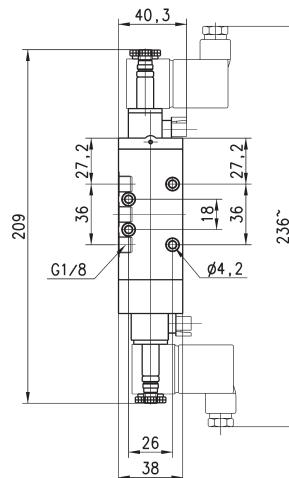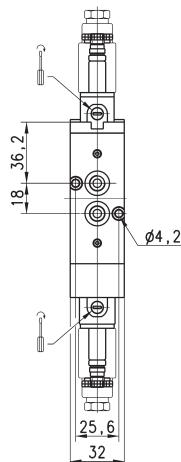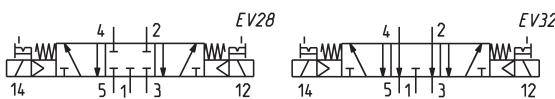
EV28

EV32

Mod.	Function	Flow rate (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.
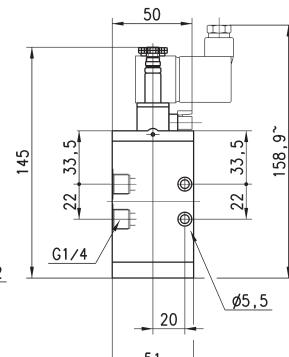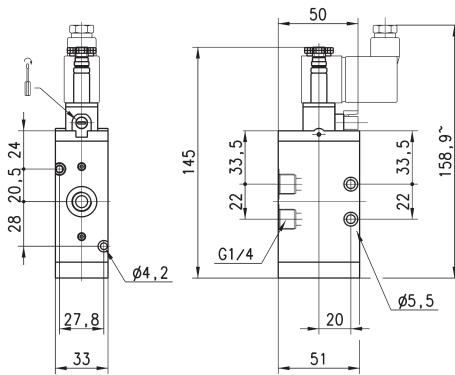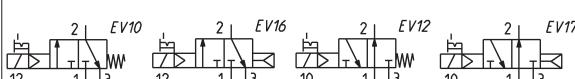
EV10

EV16

EV12

EV17

Mod.	Function	Flow rate (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

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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.
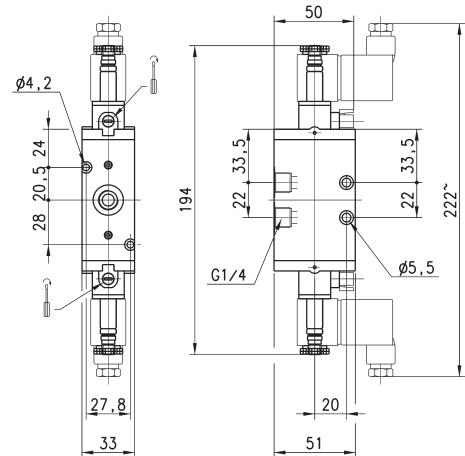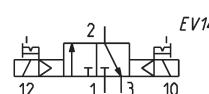
| Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)
434-011-22	3/2	1250	2 ÷ 10

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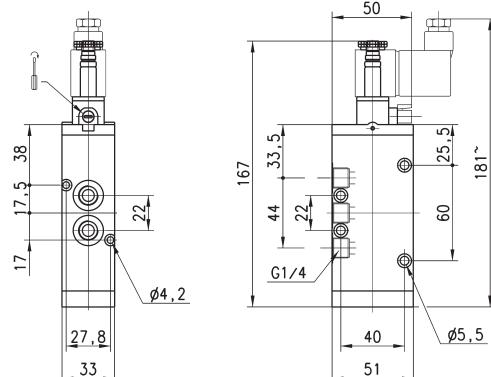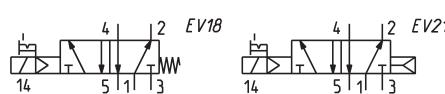
Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)	Symbol
454-015-22	5/2	1250	2,5 ÷ 10	EV18
454-016-22	5/2	1250	2,5 ÷ 10	EV21

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CONTROL

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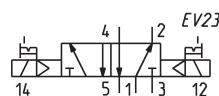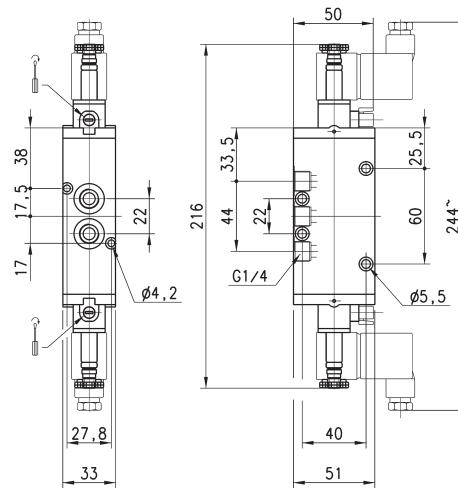
Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)
454-011-22	5/2	1250	2 ÷ 10

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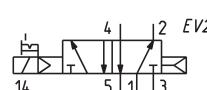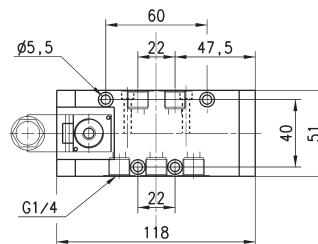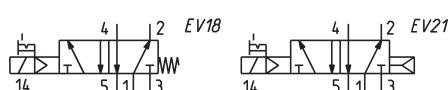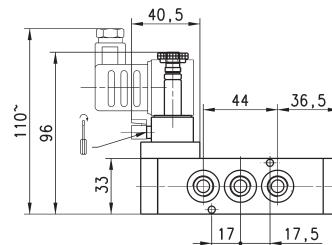
Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)	Symbol
454-V15-22	5/2	1250	2,5 ÷ 10	EV18
454-V16-22	5/2	1250	2,5 ÷ 10	EV21

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CONTROL

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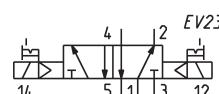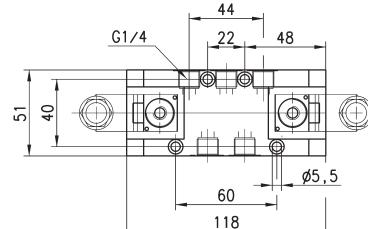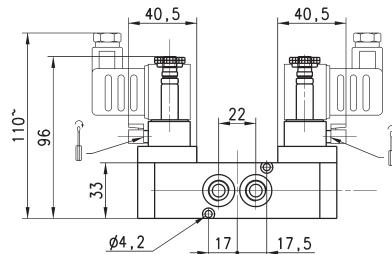
Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)
454-V11-22	5/2	1250	2 ÷ 10

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

CC = Centres Closed
CO = Centres Open
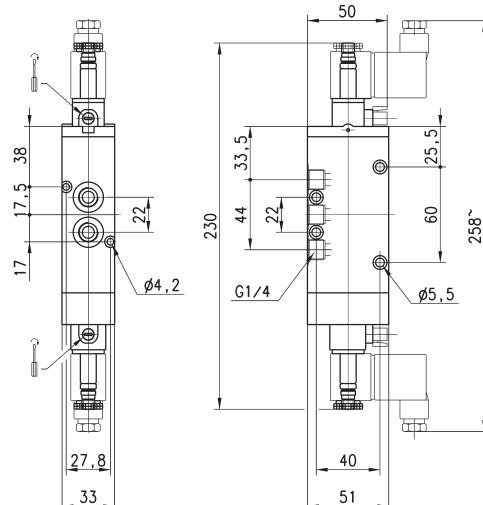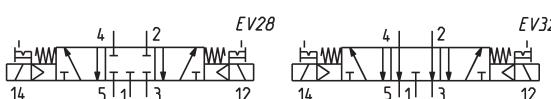
Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)	Symbol
464-011-22	5/3 CC	1250	3 ÷ 10	EV28
474-011-22	5/3 CO	1250	3 ÷ 10	EV32

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.
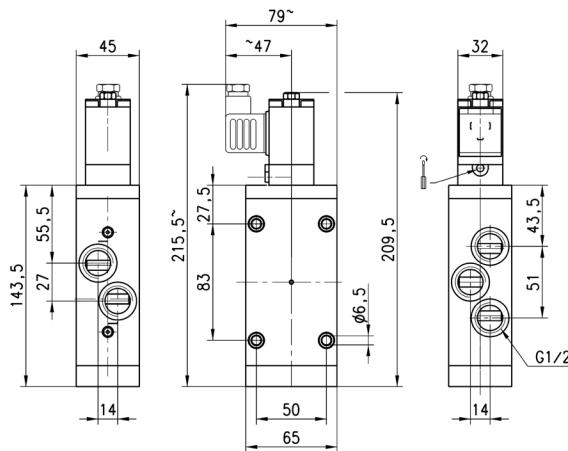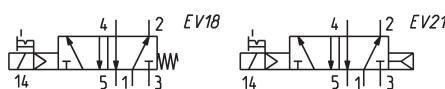

Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)	Symbol
452C-015-50-A6*	5/2	2500	2,5 ÷ 10	EV18
452C-016-50-A6*	5/2	2500	2,5 ÷ 10	EV21

## 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.
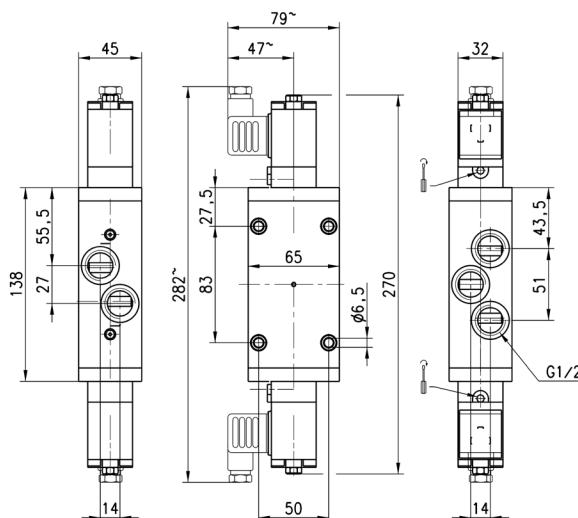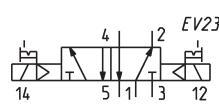

| Mod.	Function	Flow rate (Nl/min)	Operating pressure (bar)
452C-011-50-A6*	5/2	2500	2 ÷ 10

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3/2-way valve, G1/8 port, monostable
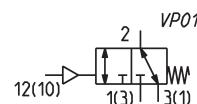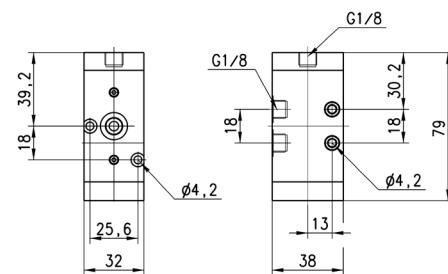
Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)
438-35	in-line/on manifold	3/2 NC	700	2,5	0 ÷ 10

5/2-way valve, G1/8 port, monostable
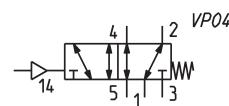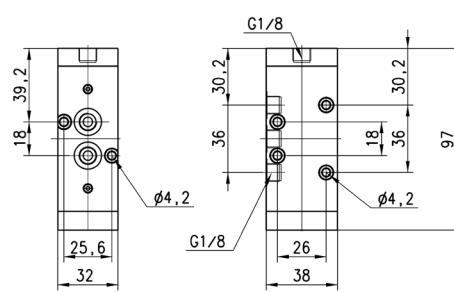
Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)
458-35	in-line/on manifold	5/2	700	2,5	0 ÷ 10

3/2-way valve, G1/8 port, bistable
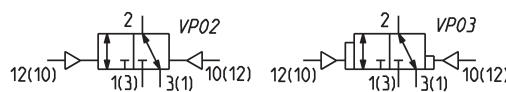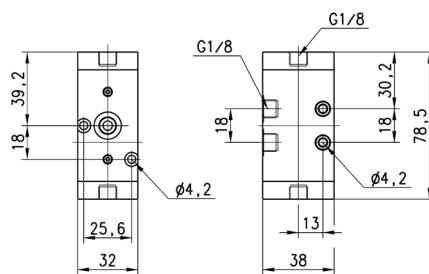
VP02

VP03

Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
438-33	in-line/on manifold	3/2	700	2	0 ÷ 10	VP02
438-34	in-line/on manifold	3/2	700	2	0 ÷ 10	VP03

5/2-way valve, G1/8 port, bistable
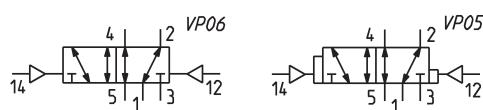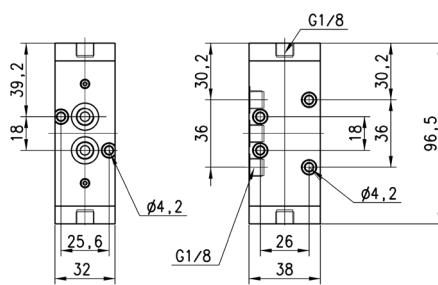
VP06

VP05

Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
458-33	in-line/on manifold	5/2	700	2	0 ÷ 10	VP06
458-34	in-line/on manifold	5/2	700	2	0 ÷ 10	VP05

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3/2-way valve, G1/4 port, monostable

VP01

12(10) — 2 — 3(1)
1(3)
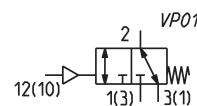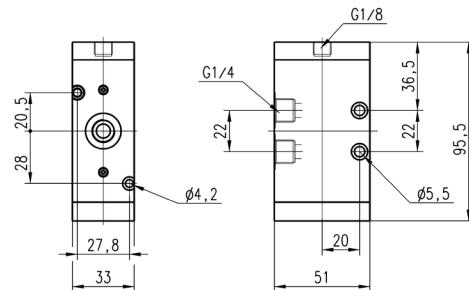
Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)
434-35	in-line/on manifold	3/2 NC	1250	2,5	0 ÷ 10

5/2-way valve, G1/4 port, monostable

VP04

14 — 4 2 — 5 1 3
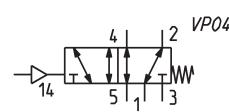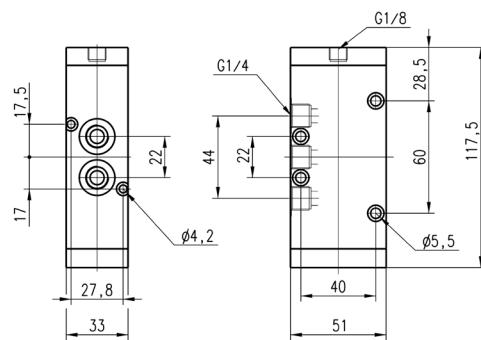
Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)
454-35	in-line/on manifold	5/2	1250	2,5	0 ÷ 10

3/2-way valve, G1/4 port, bistable
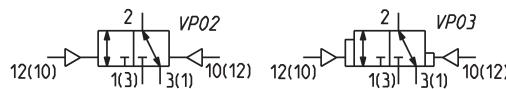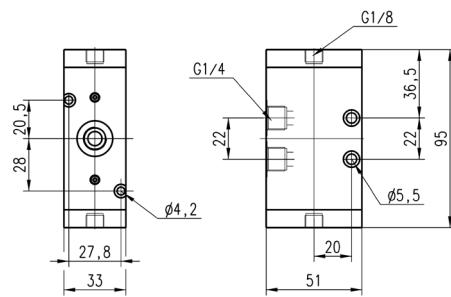
| Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
434-33	in-line/on manifold	3/2 NC	1250	2	0 ÷ 10	VP02
434-34	in-line/on manifold	3/2 NC	1250	2	0 ÷ 10	VP03

5/2-way valve, G1/4 port, bistable
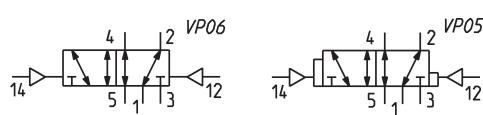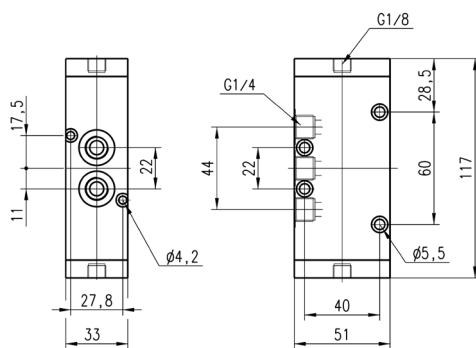
Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
454-33	in-line/on manifold	5/2	1250	2	0 ÷ 10	VP06
454-34	in-line/on manifold	5/2	1250	2	0 ÷ 10	VP05

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CONTROL

2

CONTROL

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

CC = Centres Closed

VP08
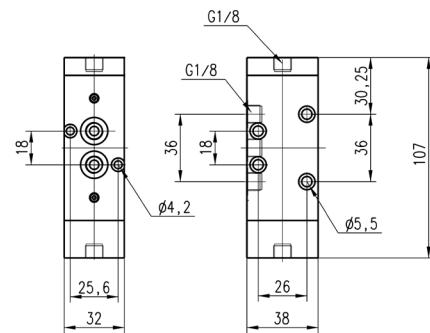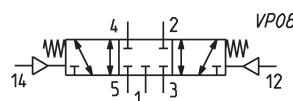
Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)
468-33	in-line/on manifold	5/3 CC	700	2,5	0 ÷ 10

5/3-way CC CO valve, G1/4, monostable, central stable position
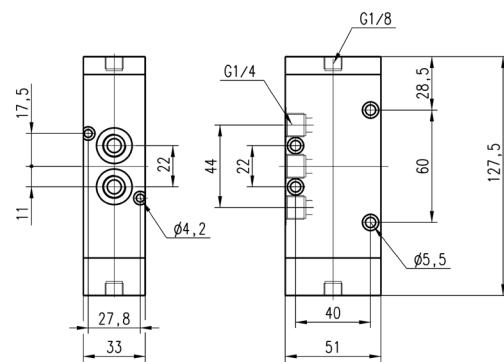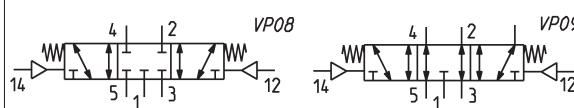
CC = Centres Closed
CO = Centres Open

VP08   VP09

Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
464-33	in-line/on manifold	5/3 CC	1250	2,5	0 ÷ 10	VP08
474-33	in-line/on manifold	5/3 CO	1200	2,5	0 ÷ 10	VP09

5/2-way valve, G1/2 port, monostable

VP04
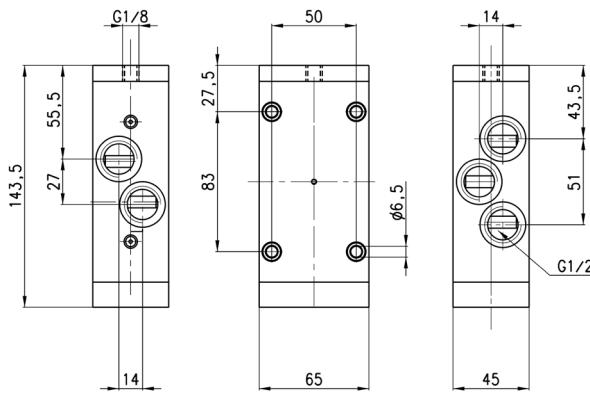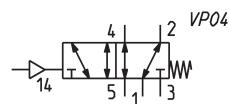
Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)
452C-35	in-line	5/2	2500	2,5	0 ÷ 10

5/2-way valve, G1/2 port, bistable
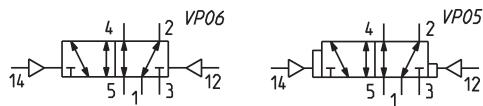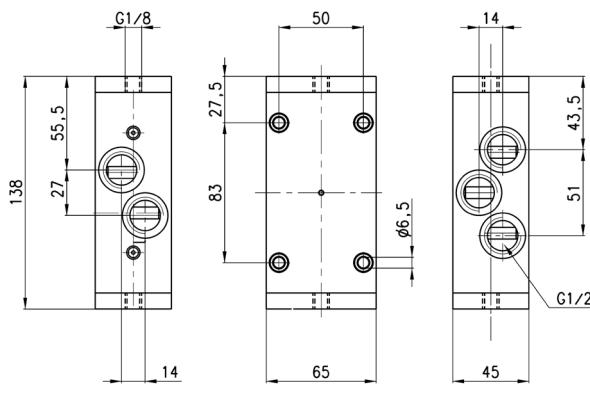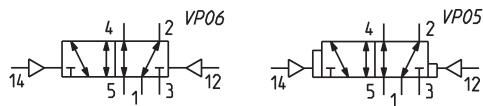
VP06   *VP05*

Mod.	Mounting	Function	Flow rate (Nl/min)	min. pilot Pressure (bar)	Working pressure (bar)	Symbol
452C-33	in-line	5/2	2500	2	0 ÷ 10	VP06
452C-34	in-line	5/2	2500	2	0 ÷ 10	VP05

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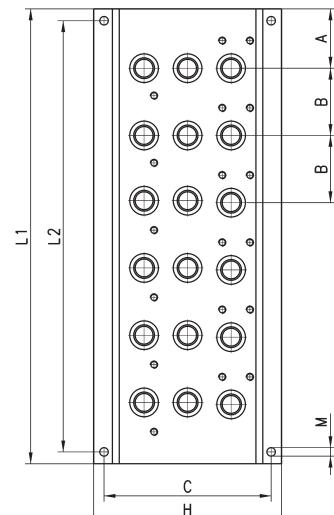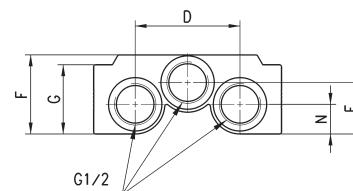
	DIMENSIONS											
Mod.	A	B	C	D	E	F	G	H	L1	L2	M	N
CNVL-52	30	34	84,5	53	26	40	35	95	94	82	4,3	15
CNVL-53	30	34	84,5	53	26	40	35	95	128	116	4,3	15
CNVL-54	30	34	84,5	53	26	40	35	95	162	150	4,3	15
CNVL-55	30	34	84,5	53	26	40	35	95	196	184	4,3	15
CNVL-56	30	34	84,5	53	26	40	35	95	230	218	4,3	15

Blanking plate for CNVL manifolds

The plate closes the positions that are not used.
The following is supplied:
2x fixing screws
3x O-Rings
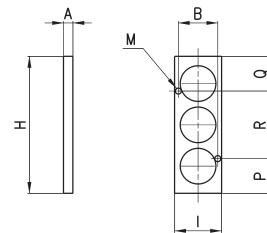
DIMENSIONS									
Mod.		A	B	H	I	M	P	Q	R
CNVL/2	(series 4-1/8)	5	25,6	52	32	4,2	17	17	18
CNVL/3	(series 4-1/4)	5	27,8	70	32,5	4,2	7,5	3,5	59

Blanking plug for TCNVL manifolds

The following is supplied:
1x blanking plug
1x O-Ring
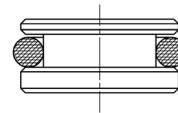
DIMENSIONS	
Mod.	Series
TCNVL/3	4 G1/8
TCNVL/5	4 G1/4

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2/2.15.17