

Series 521



Series 521

The AVENTICS Series 521 is a line of solenoid air-operated, mini-spool valves that are ideal for piloting pneumatic cylinders. The valves have high-quality coils resistant to heat and moisture and suitable for high ambient temperatures and harsh environments. They can be mounted on joinable subbases for manifold applications. The AVENTICS Series 521 valves are suitable for automotive, case packing, packaging, and tire manufacturing applications.

- Anodised aluminium G1/4-tapped body with NBR seals for extended service life
- Non-breathing construction where the spring return chambers of the single- or double-acting actuator are collected with the solenoid valve exhaust
- Handles lubricated or non-lubricated air or neutral gas
- Ambient temperature range 5° C to 50° C
- Satisfies all relevant EU Directives



Product overview

	Page
Electrically operated	
5/2-directional valve, Series 521, with spring return.....	4
Single Solenoid - Soft seal	
5/2-directional valve, Series 521, with air spring return.....	6
Single Solenoid - Soft seal	
5/2-directional valve, Series 521, double solenoid.....	8
Double Solenoid - Soft seal	
5/3-directional valve, Series 521.....	10
Double Solenoid - Soft seal	
Pneumatically operated	
5/2-directional valve, Series 521.....	12
Soft seal	
5/2-directional valve, Series 521, with air spring return.....	14
Double Air Pilot - Soft seal	
5/3-directional valve, Series 521.....	16
Soft seal	
Accessories overview Mechanical accessories	
Base plate, Series 335.....	18

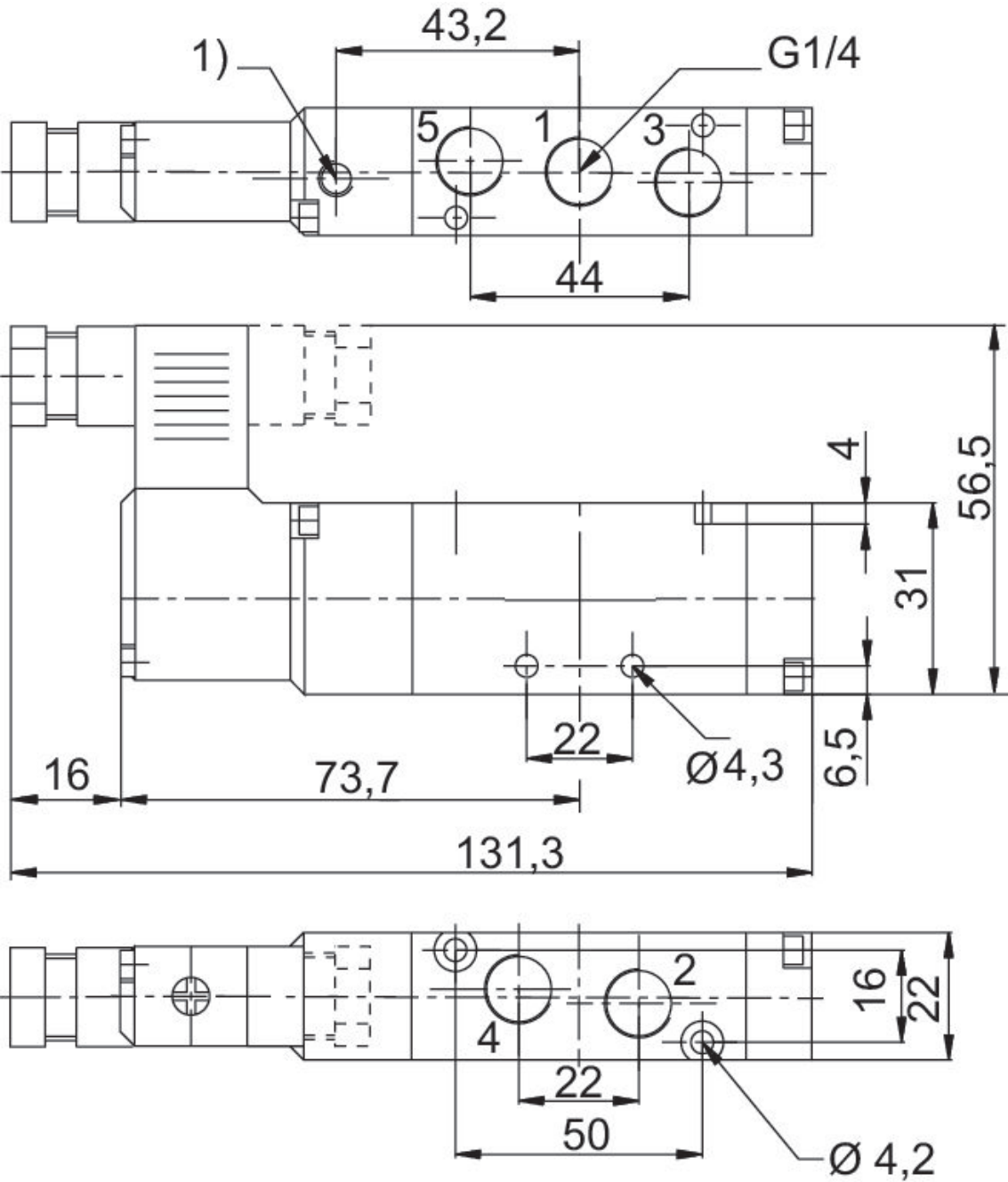
5/2-directional valve, Series 521, with spring return

Flow: 1050 l/min
Activation: Electrically
Control pressure min./max.: 1.5 bar ... 8 bar
Duty cycle: 100 %
Type: Spool valve
Ambient temperature min./max.: 5 °C ... 50 °C
Working pressure min./max.: 1.5 bar ... 8 bar



	Manual override	Switching principle	Operational voltage	Pilot	Power con- sumption DC [W]	Part No.
	without detent	5/2, with spring return	24 V DC	Internal	1.6	52100401

Dimensions



1) Pilot Exhaust

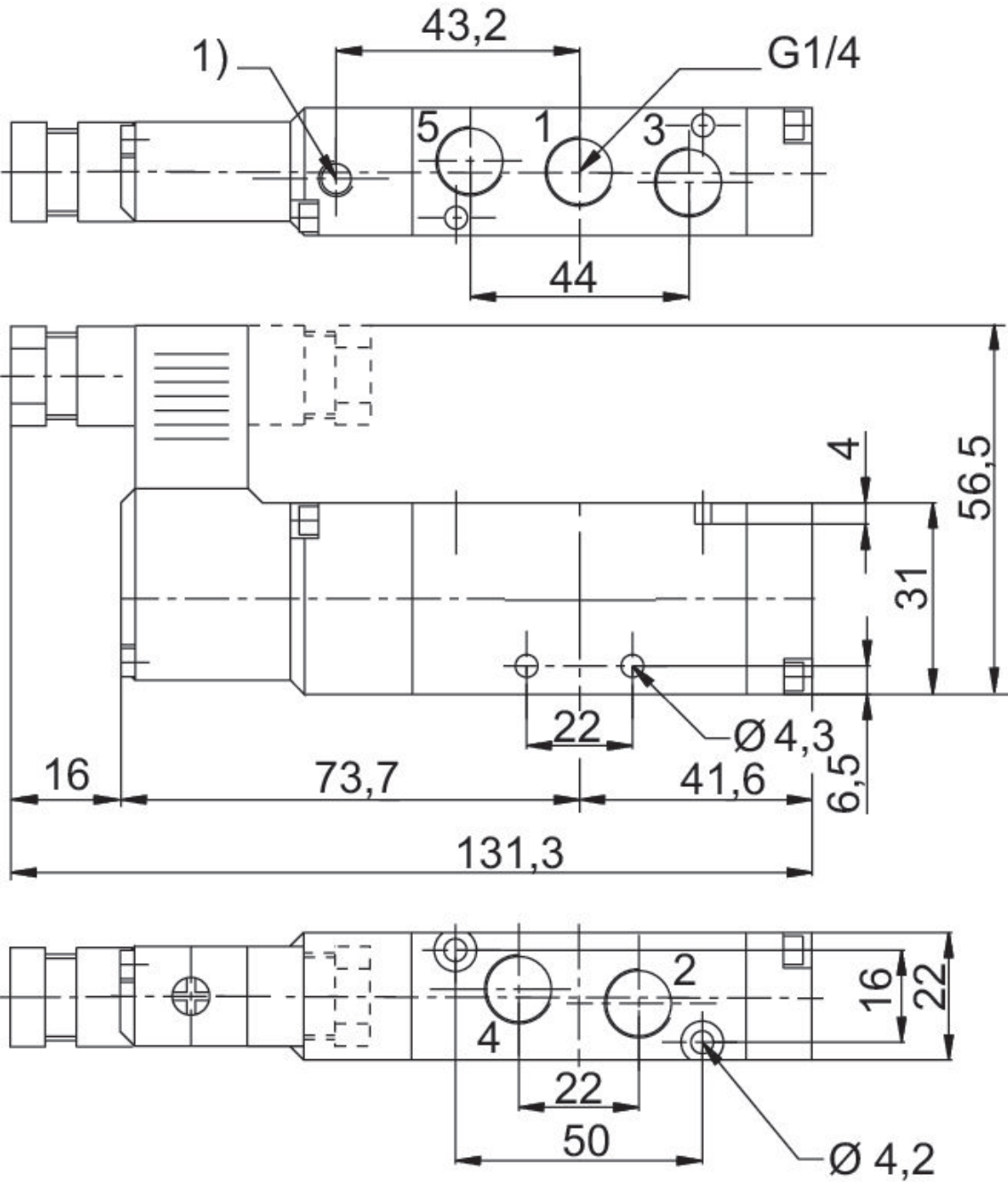
5/2-directional valve, Series 521, with air spring return

Flow: 1050 l/min
Activation: Electrically
Control pressure min./max.: 1.5 bar ... 8 bar
Duty cycle: 100 %
Type: Spool valve
Ambient temperature min./max.: 5 °C ... 50 °C
Working pressure min./max.: 1.5 bar ... 8 bar



	Manual override	Switching principle	Operational voltage	Pilot	Power consumption DC [W]	Part No.
	without detent	5/2, with air spring return, with differential piston	24 V AC	Internal		52100002
	without detent	5/2, with air spring return, with differential piston	110 V AC	Internal		52100003
	without detent	5/2, with air spring return, with differential piston	230 V AC	Internal		52100004
	without detent	5/2, with air spring return, with differential piston	24 V DC	Internal	1.6	52100001

Dimensions



1) Pilot Exhaust

5/2-directional valve, Series 521, double solenoid

Flow: 1050 l/min
Activation: Electrically
Control pressure min./max.: 1.5 bar ... 8 bar
Duty cycle: 100 %
Type: Spool valve
Ambient temperature min./max.: 5 °C ... 50 °C
Working pressure min./max.: 1.5 bar ... 8 bar



	Manual override	Switching principle	Operational voltage	Pilot	Power con- sumption DC [W]	Part No.
	without detent	5/2, double solenoid	24 V AC	Internal		52100006
	without detent	5/2, double solenoid	110 V AC	Internal		52100007
	without detent	5/2, double solenoid	230 V AC	Internal		52100008
	without detent	5/2, double solenoid	24 V DC	Internal	1.6	52100005

Technical drawing of a mechanical component, showing three views: front, side, and top.

Front View (Top): Shows a central body with three circular features. Dimensions: 44 (distance between first two circles), 43,2 (distance from first circle to center), 43,2 (distance from second circle to center). A label '1)' points to a feature on the left, and 'G1/4' points to a feature on the right.

Side View (Middle): Shows the profile of the component. Dimensions: 16 (left flange width), 73,7 (main body length), 179,5 (total length), 6,5 (bottom flange thickness), 31 (main body height), 4 (top flange thickness), 56,5 (total height). A label 'Ø 4,3' points to a hole in the main body.

Top View (Bottom): Shows the top of the component. Dimensions: 22 (distance from left edge to first hole), 50 (distance between first two holes), 16 (distance from second hole to right edge), 4 (thickness). A label 'Ø 4,2' points to a hole in the main body.

AVENTICS



EMERSON™

5/3-directional valve, Series 521

Flow: 1050 l/min
Activation: Electrically
Control pressure min./max.: 1.5 bar ... 8 bar
Duty cycle: 100 %
Type: Spool valve
Ambient temperature min./max.: 5 °C ... 50 °C
Working pressure min./max.: 1.5 bar ... 8 bar



	Manual override	Valve function	Switching principle	Operational voltage	Pilot	Power con- sumption DC [W]	Part No.
		Closed Center	5/3, closed center	24 V AC	Internal		52100010
		Closed Center	5/3, closed center	110 V AC	Internal		52100011
		Closed Center	5/3, closed center	230 V AC	Internal		52100012
		Closed Center	5/3, closed center	24 V DC	Internal	1.6	52100009
		Pressurized Center	5/3, pressurized center	24 V AC	Internal		52100126
		Pressurized Center	5/3, pressurized center	110 V AC	Internal		52100127
		Pressurized Center	5/3, pressurized center	230 V AC	Internal		52100128
		Pressurized Center	5/3, pressurized center	24 V DC	Internal	1.6	52100129
		Exhausted Center	5/3, exhausted center	24 V AC	Internal		52100087
		Exhausted Center	5/3, exhausted center	110 V AC	Internal		52100088
		Exhausted Center	5/3, exhausted center	230 V AC	Internal		52100089
		Exhausted Center	5/3, exhausted center	24 V DC	Internal	1.6	52100090

Technical drawing of a mechanical assembly, showing three views: front, side, and top.

Front View (Top): Shows a horizontal assembly. Key dimensions include 43,2, 44, 52,1, and 4. A callout '1)' points to a feature on the left, and 'G1/4' points to a feature on the right.

Side View (Middle): Shows a vertical assembly. Key dimensions include 16, 73,7, 82,6, 16, 188,3, 6,5, 31, 4, and 56,5. A callout 'Ø 4,3' points to a feature in the center.

Top View (Bottom): Shows a horizontal assembly. Key dimensions include 22, 50, 16, and 4. A callout 'Ø 4,2' points to a feature in the center.

AVENTICS

EMERSON

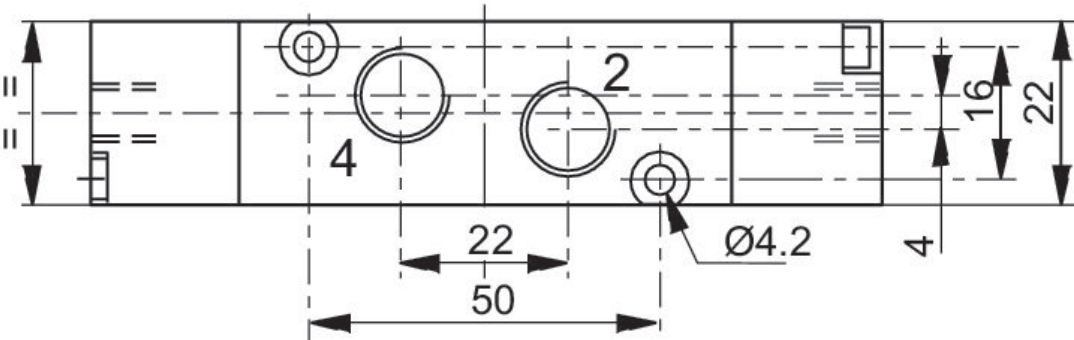
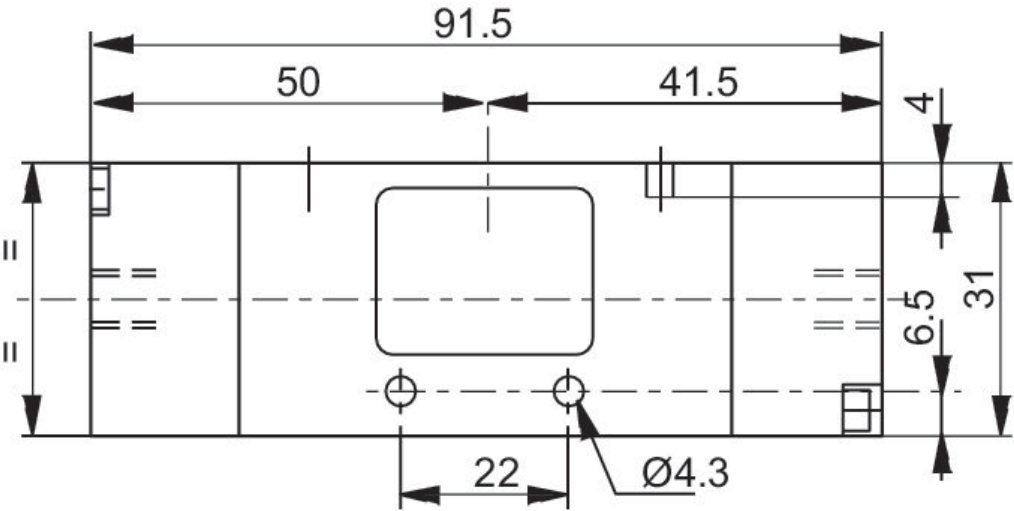
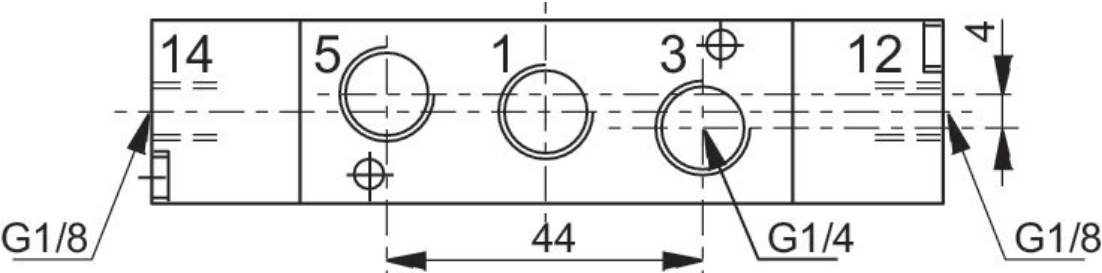
5/2-directional valve, Series 521

Flow: 1050 l/min
Activation: Pneumatically
Control pressure min./max.: 1.5 bar ... 8 bar
Type: Spool valve
Ambient temperature min./max.: 5 °C ... 50 °C
Working pressure min./max.: 8 bar



	Switching principle	Compressed air connection input	Compressed air connection output	Min. control pressure [bar]	Max. control pressure [bar]	Pilot	Part No.
	5/2, with air spring return, with differential piston	G 1/4	G 1/4	1.5	8	External	52100077

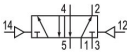
Dimensions

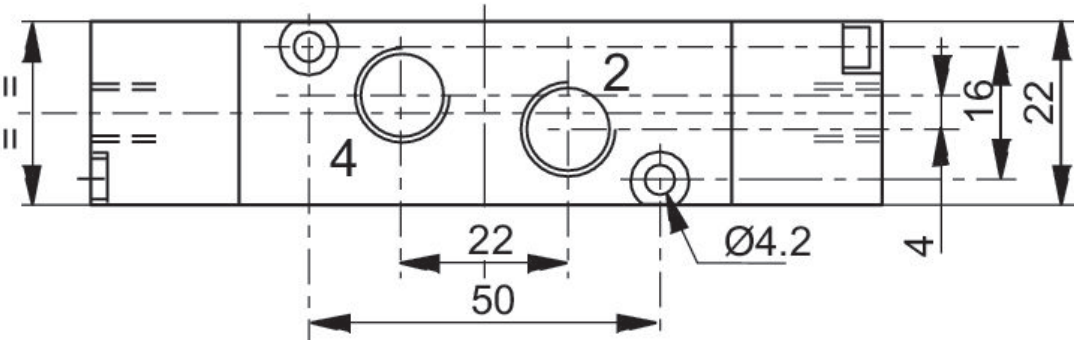
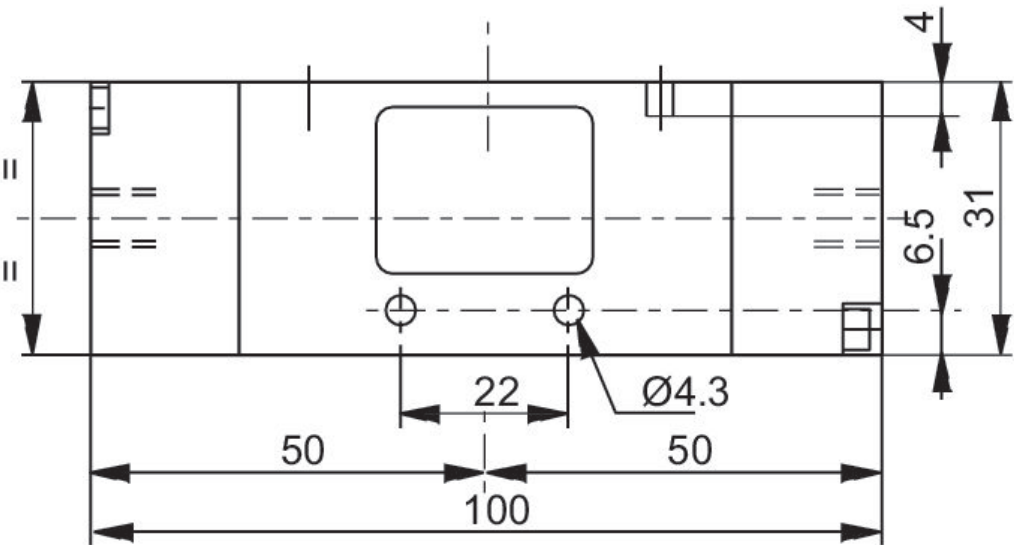
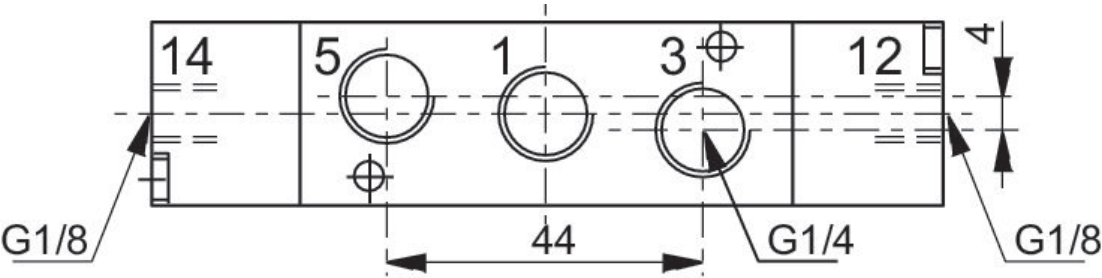


5/2-directional valve, Series 521, with air spring return

Flow: 1050 l/min
Activation: Pneumatically
Control pressure min./max.: 1.5 bar ... 8 bar
Type: Spool valve
Ambient temperature min./max.: 5 °C ... 50 °C
Working pressure min./max.: 8 bar



	Switching principle	Compressed air connection input	Compressed air connection output	Min. control pressure [bar]	Max. control pressure [bar]	Pilot	Part No.
	5/2, double air pilot	G 1/4	G 1/4	1.5	8	External	52100078



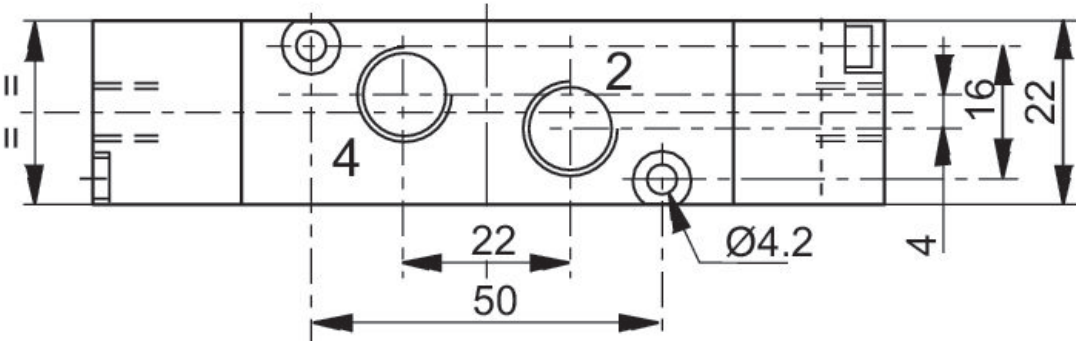
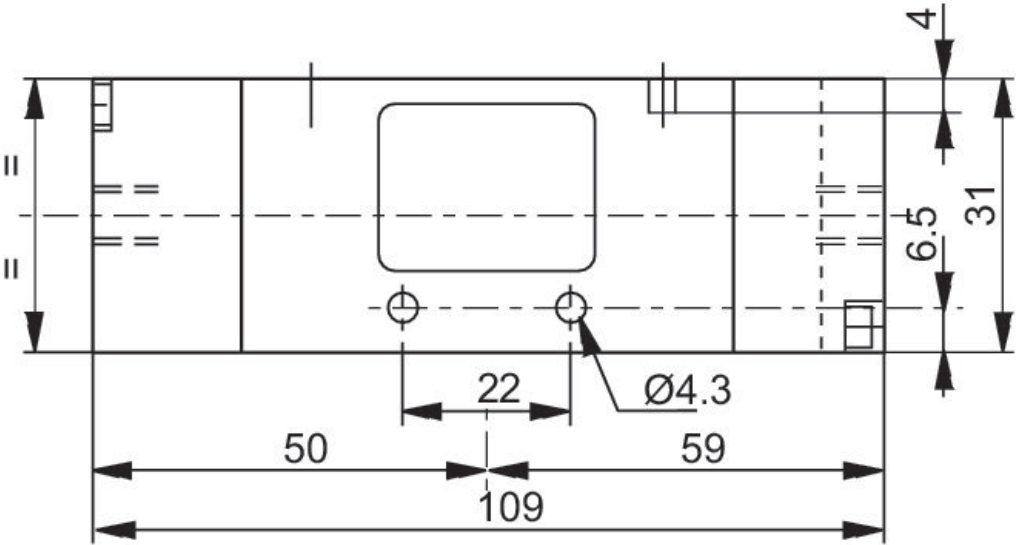
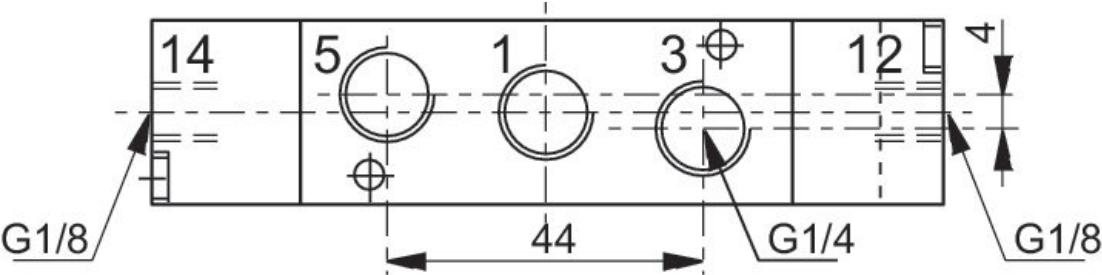
5/3-directional valve, Series 521

Activation: Pneumatically
Control pressure min./max.: 1.5 bar ... 8 bar
Type: Spool valve
Ambient temperature min./max.: 5 °C ... 50 °C
Working pressure min./max.: 0 bar ... 8 bar



	Version	Switching principle	Compressed air connection input	Compressed air connection output	Min. control pressure [bar]	Max. control pressure [bar]	Pilot	Part No.
	Closed Center	5/3, closed center	G 1/4	G 1/4	1.5	8	External	52100079
	Pressurized Center	5/3, pressurized center	G 1/4	G 1/4	1.5	8	External	52100142
	Exhausted Center	5/3, exhausted center	G 1/4	G 1/4	1.5	8	External	52100082

Dimensions

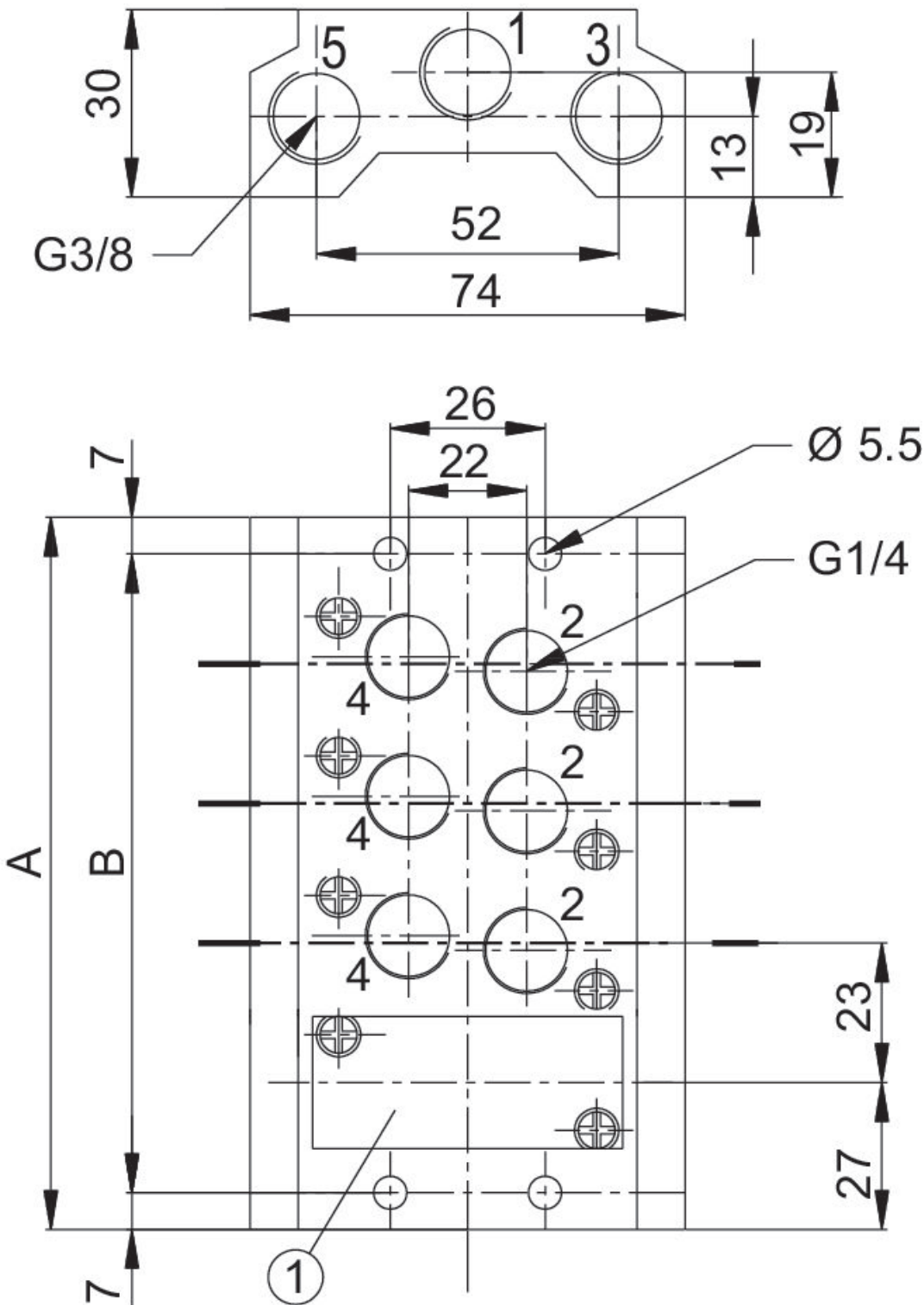


Base plate, Series 335



Min. ambient temperature [°C]	Max. ambient temperature [°C]	Compressed air connection input	Compressed air connection output	Compressed air connection, exhaust	Max. number of valve positions	Part No.
5	50	G 3/8	G 1/4	G 3/8	2	35500342
5	50	G 3/8	G 1/4	G 3/8	3	35500343
5	50	G 3/8	G 1/4	G 3/8	4	35500344
5	50	G 3/8	G 1/4	G 3/8	5	35500345
5	50	G 3/8	G 1/4	G 3/8	6	35500346
5	50	G 3/8	G 1/4	G 3/8	7	35500347
5	50	G 3/8	G 1/4	G 3/8	8	35500348
5	50	G 3/8	G 1/4	G 3/8	9	35500349
5	50	G 3/8	G 1/4	G 3/8	10	35500350

Dimensions



1) Blanking plate

Part No.	A	B
35500342	77	63
35500343	100	86
35500344	123	109
35500345	146	132
35500346	169	155
35500347	192	178
35500348	215	201
35500349	238	224
35500350	261	247

Efficient pneumatic solutions, our program:
cylinders and drives, valves and valve systems,
air supply management, proportional pressure
control valves



Visit us: www.Emerson.com/aventics
Your local contact: Emerson.com/contactus

-  Emerson.com
-  Facebook.com/EmersonAutomationSolutions
-  LinkedIn.com/company/Emerson-Automation-Solutions
-  Twitter.com/EMR_Automation



The Emerson logo is a trademark and service mark of Emerson Electric Co. AVENTICS is a registered trademark of one of the Emerson family of companies. All other trademarks are the property of their respective owners. © 2020 Emerson Electric Co. All rights reserved.



CONSIDER IT SOLVED[®]