

Info

Selection guide

3.002

Series L-25

3/2- and 5/2-way,
ports on one side,
M5 (10/32 UNF),
160 NI/min (0.163 Cv)

Technical data 3.020
Dimensions 3.022



Series L-28

3/2- and 5/2-way,
ports on one side,
G 1/8, 600 NI/min (0.610 Cv)

Technical data 3.040
Dimensions 3.042

Series P-05

3/2-, 5/2- and 5/3-way,
G 1/8, 750 NI/min (0.762 Cv)

Technical data 3.060
Dimensions 3.062



Series P-07

3/2-, 5/2- and 5/3-way,
G 1/4, 1580 NI/min (1.606 Cv)

Technical data 3.080
Dimensions 3.082

Series P-12

3/2-, 5/2- and 5/3-way,
G 1/2, 3300 NI/min (3.354 Cv)

Technical data 3.100
Dimensions 3.102



Selection guide

Selection of valve series

valve type	port size / flow rate				
	M 5 (10/32 UNF) 160 NI/min (0.163 Cv)	G 1/8 600 NI/min (0.610 Cv)	G 1/8 750 NI/min (0.762 Cv)	G 1/4 1580 NI/min (1.606 Cv)	G 1/2 3300 NI/min (3.354 Cv)
3/2-way single pilot	L-25-310 L-25-311	L-28-310 L-28-311	P-05-310 P-05-311	P-07-310 P-07-311	P-12-310 P-12-311
3/2-way double pilot	L-25-320	L-28-320	P-05-320	P-07-320	P-12-320
3/2-way double pilot dominant			P-05-322	P-07-322	P-12-322
5/2-way single pilot	L-25-510 L-25-511	L-28-510 L-28-511	P-05-510 P-05-511	P-07-510 P-07-511	P-12-510 P-12-511
5/2-way double pilot	L-25-520	L-28-520	P-05-520	P-07-520	P-12-520
5/2-way double pilot dominant			P-05-522	P-07-522	P-12-522
5/3-way center position closed			P-05-530	P-07-530	P-12-530
5/3-way center position exhausted			P-05-533	P-07-533	P-12-533
5/3-way center position pressurized			P-05-534	P-07-534	P-12-534
page	3.020	3.040	3.060	3.080	3.100

Calculation of required flow rate (P = 6 bar/87 psi)

cylinder-Ø		speed				
		0.25 m/s (0.82 ft/sec.)	0.5 m/s (1.64 ft/sec.)	1 m/s (3.28 ft/sec.)	1.5 m/s (4.92 ft/sec.)	2 m/s (6.56 ft/sec.)
mm	(inch)	NI/min (Cv)	NI/min (Cv)	NI/min (Cv)	NI/min (Cv)	NI/min (Cv)
8	(5/16)	5 (0.005)	11 (0.011)	21 (0.021)	32 (0.032)	42 (0.043)
10	(3/8)	8 (0.008)	16 (0.016)	33 (0.033)	49 (0.050)	66 (0.067)
12	(1/2)	12 (0.012)	24 (0.024)	47 (0.048)	71 (0.072)	95 (0.096)
16	(5/8)	21 (0.021)	42 (0.043)	84 (0.088)	127 (0.129)	169 (0.172)
20	(3/4)	33 (0.033)	66 (0.067)	132 (0.134)	198 (0.201)	264 (0.268)
25	(1)	52 (0.053)	103 (0.105)	206 (0.209)	309 (0.314)	412 (0.419)
32	(1 1/4)	84 (0.085)	169 (0.172)	338 (0.343)	506 (0.514)	675 (0.686)
40	(1 1/2)	132 (0.134)	264 (0.268)	528 (0.536)	791 (0.804)	1055 (1.072)
50	(2)	206 (0.209)	412 (0.419)	824 (0.837)	1236 (1.256)	1649 (1.676)
63	(2 1/2)	327 (0.332)	654 (0.665)	1309 (1.330)	1963 (1.995)	2617 (2.659)
80	(3)	528 (0.536)	1055 (1.072)	2110 (2.144)	3165 (3.216)	4220 (4.289)
100	(4)	824 (0.837)	1649 (1.676)	3297 (3.350)	4946 (5.026)	6594 (6.701)
125	(5)	1288 (1.309)	2576 (2.618)	5152 (5.236)	7727 (7.853)	10303 (10.470)
160	(6 1/4)	2110 (2.144)	4220 (4.289)	8440 (8.577)	12660 (12.866)	16881 (17.155)
200	(8)	3297 (3.350)	6594 (6.701)	13188 (13.402)	19782 (20.104)	26376 (26.805)

Flow rates at 100 % utilization. The cylinder-Ø in inch are approximate.

Selection guide

Further functions

valves	pressure inlet arbitrary		control of 2 pressures		valve function**	page
	yes	no	yes	no	2/2-way	
L-25-310	1 + 3	X		X	-	3.020
L-25-311	1 + 3	X		X	-	
L-25-320	X		X		1 or 3	3.021
L-25-510		X		X	-	
L-25-511		X		X*	-	
L-25-520	X		X		1, 2 and 3 or 1, 4 and 5	
L-28-310	1 + 3	X		X	-	3.040
L-28-311	1 + 3	X		X	-	
L-28-320	X		X		1 or 3	3.041
L-28-510		X		X	-	
L-28-511		X		X*	-	
L-28-520	X		X		1, 2 and 3 or 1, 4 and 5	
P-05-310	1 + 3	X		X	-	3.060
P-05-311	1 + 3	X		X	-	
P-05-320	X		X		1 or 3	3.061
P-05-322	X		X		1 or 3	
P-05-510		X		X	-	3.080
P-05-511		X		X*	-	
P-05-520	X		X		1, 2 and 3 or 1, 4 and 5	3.081
P-05-522	X		X		1, 4 and 5	
P-05-530		X		X	-	3.100
P-05-533		X		X	-	
P-05-534		X		X	-	3.101
P-07-310	1 + 3	X		X	-	
P-07-311	1 + 3	X		X	-	
P-07-320	X		X		1 or 3	3.081
P-07-322	X		X		1 or 3	
P-07-510		X		X	-	3.100
P-07-511		X		X*	-	
P-07-520	X		X		1, 2 and 3 or 1, 4 and 5	3.101
P-07-522	X		X		1, 4 and 5	
P-07-530		X		X	-	3.100
P-07-533		X		X	-	
P-07-534		X		X	-	3.101
P-12-310	1 + 3	X		X	-	
P-12-311	X		X		1 or 3	3.100
P-12-320	X		X		1 or 3	
P-12-322	X		X		1 or 3	3.101
P-12-510		X		X	-	
P-12-511		X		X*	-	
P-12-520	X		X		1, 2 and 3 or 1, 4 and 5	3.101
P-12-522	X		X		1, 4 and 5	
P-12-530		X		X	-	3.100
P-12-533		X		X	-	
P-12-534		X		X	-	

The ports are interchangeable if "pressure inlet arbitrary" states "yes". On all 5/2 single pilot valves, pressure supply is possible at ports 3 and 5 simultaneously if the higher pressure is connected to port 3. On all 5/3-way valves pressure inlet must be at port 1.

For alteration from 5/2-way to 3/2-way close port 2 or 4.

* Possible under certain circumstances. Please consult sales office for more information.

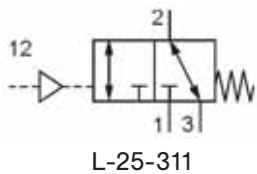
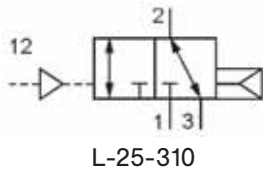
** In order to obtain a 2/2-way valve, plug the stated ports to have either a normally open or normally closed version.

Pneumatically operated valves
3/2-way, M5 (10/32 UNF),
160 NI/min (0.163 Cv)

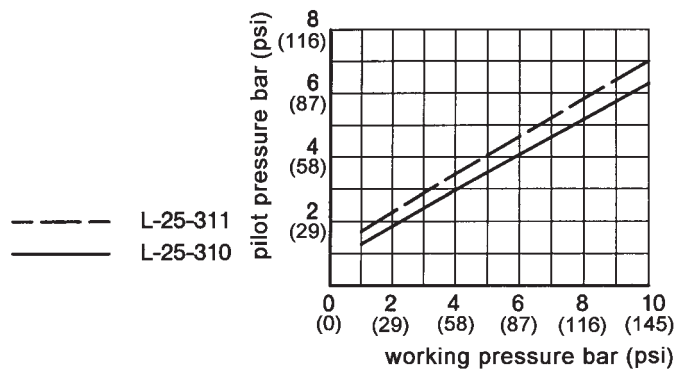


Technical data for series

L-25



L-25-320
 L-25-320-Q



Design and function

Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (10 or 12). The pressure can be connected at 1 (normally closed) or at 3 (normally open).

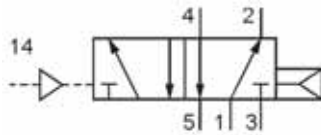
Valve L-25-320 is available for use with vacuum (-0.95 ... 10 bar/-14 ... 175 psi). Order number changes to L-25-320-Q.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

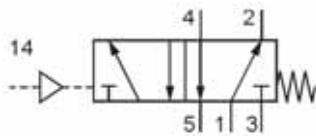
Order number	L-25-310	L-25-311	L-25-320
Function	3/2-way, single pilot air spring return	3/2-way, single pilot spring return	3/2-way, double pilot
Connection	M5 (10/32 UNF)		
Nominal size	3.2 mm		
Flow rate	160 NI/min (0.163 Cv)		
Pressure range	2 ... 10 bar (29 ... 145 psi)	1 ... 10 bar (14 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)
Pilot pressure range	see diagram		2 ... 10 bar (29 ... 145 psi)
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)		
Materials	Body: Al (anodized), Inner parts: Al, brass, stainless steel, Seals: NBR and POM		
Weight	0.065 kg (0.143 lb.)		0.068 kg (0.150 lb.)

Technical data for series

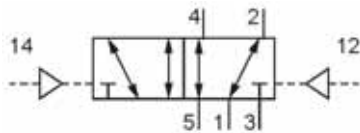
L-25



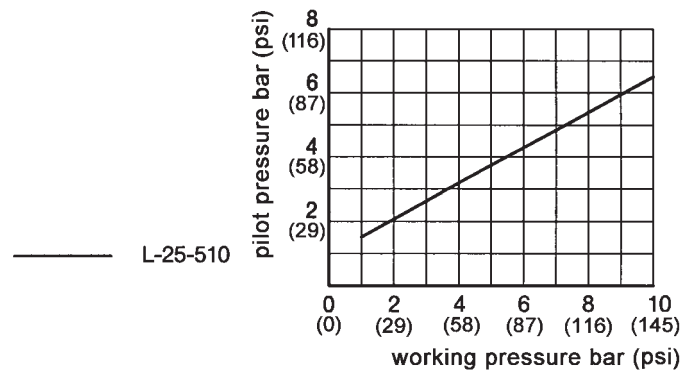
L-25-510



L-25-511



L-25-520
L-25-520-Q



Design and function

Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (12 or 14).

Valve L-25-520 is available for use with vacuum (-0.95 ... 10 bar / -14 ... 175 psi). Order number changes to L-25-520-Q.

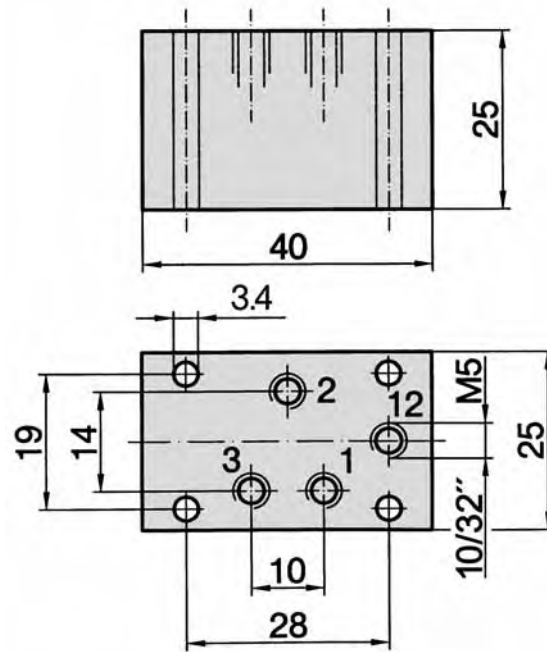
Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

Order number	L-25-510	L-25-511	L-25-520
Function	5/2-way, single pilot air spring return	5/2-way, single pilot spring return	5/2-way, double pilot
Connection	M5 (10/32 UNF)		
Nominal size	3.2 mm		
Flow rate	160 NI/min (0.163 Cv)		
Pressure range	2 ... 10 bar (29 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)
Pilot pressure range	see diagram	3 ... 10 bar (43 ... 145 psi)	2 ... 10 bar (29 ... 145 psi)
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)		
Materials	Body: Al (anodized), Inner parts: Al, brass, stainless steel, Seals: NBR and POM		
Weight	0.084 kg (0.185 lb.)		0.085 kg (0.187 lb.)

Dimensions for series

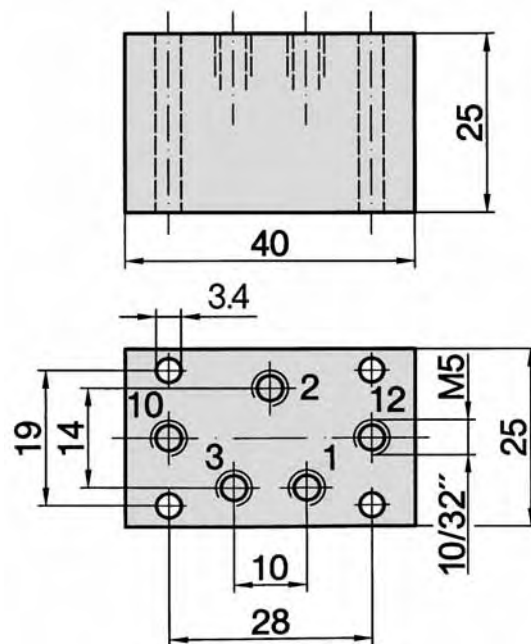
L-25

L-25-310, L-25-311



- 1, 3 = pressure inlet or exhaust
- 2 = outlet
- 12 = pilot port

L-25-320, L-25-320-Q



- 1, 2, 3 = for interchangeable use
- 12, 10 = pilot port

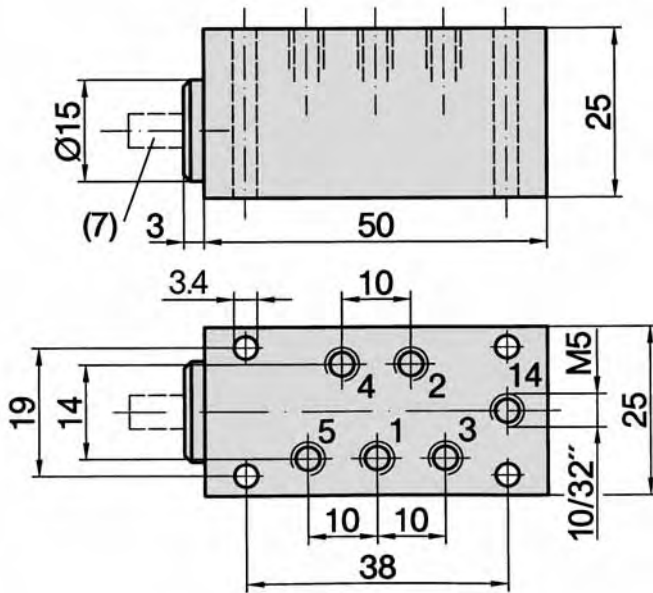
Pneumatically operated valves
5/2-way, M5 (10/32 UNF),
160 NI/min (0.163 Cv)



Dimensions for series

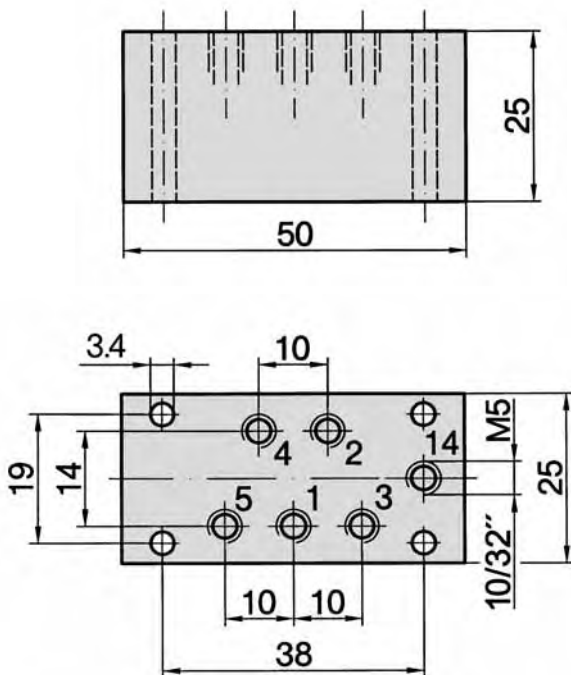
L-25

L-25-511



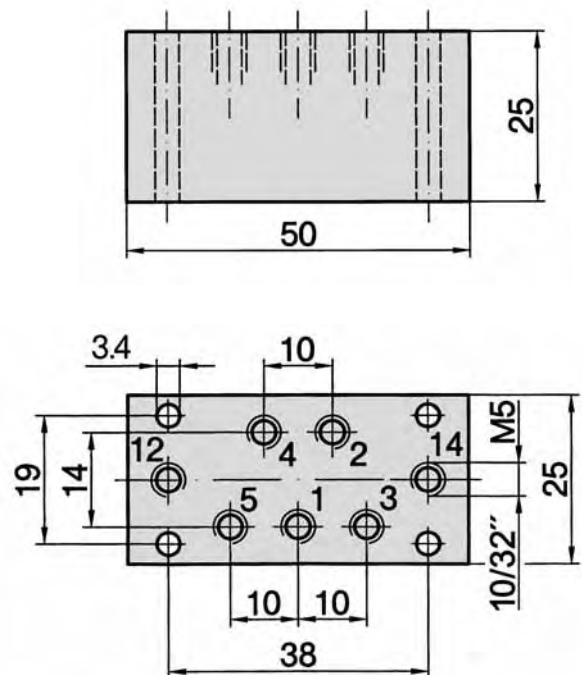
- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- 14 = pilot port
- (7) = position indicator

L-25-510



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- 14 = pilot port

L-25-520, L-25-520-Q



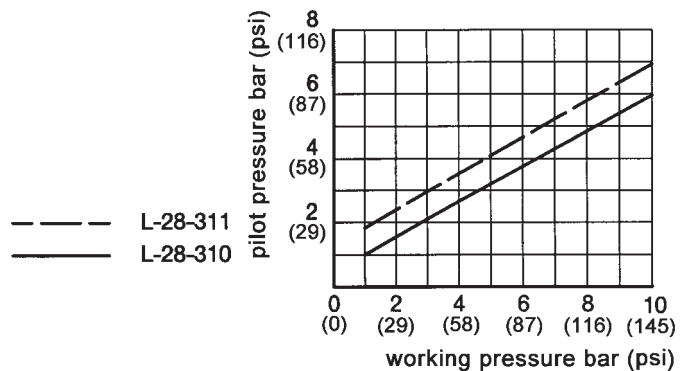
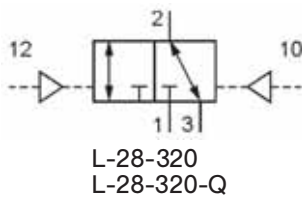
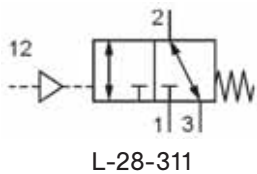
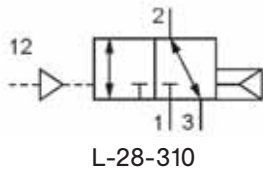
- 1, 2, 3, 4, 5 = for interchangeable use
- 12, 14 = pilot port

Pneumatically operated valves
3/2-way, G 1/8,
600 NI/min (0.610 Cv)



Technical data for series

L-28



Design and function

Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (10 or 12). The pressure can be connected at 1 (normally closed) or at 3 (normally open).

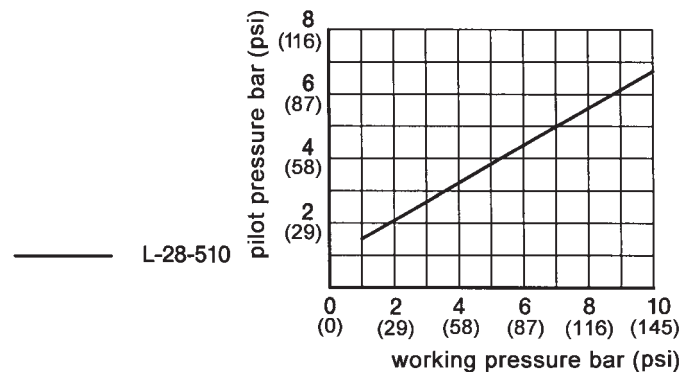
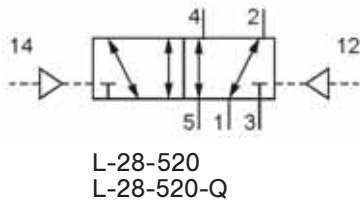
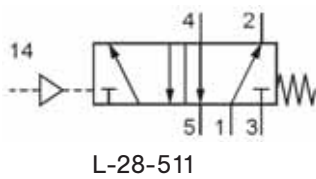
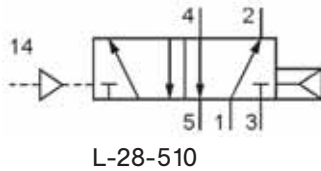
Valve L-28-320 is available for use with vacuum (-0.95 ... 10 bar/-14 ... 175 psi). Order number changes to L-28-320-Q.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

Order number	L-28-310	L-28-311	L-28-320
Function	3/2-way, single pilot air spring return	3/2-way, single pilot spring return	3/2-way, double pilot
Connection	G 1/8		
Nominal size	6 mm		
Flow rate	600 NI/min (0.610 Cv)		
Pressure range	2 ... 10 bar (29 ... 145 psi)	1 ... 10 bar (14 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)
Pilot pressure range	see diagram		2 ... 10 bar (29 ... 145 psi)
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)		
Materials	Body: Al (anodized), Inner parts: Al, brass, stainless steel, Seals: NBR and POM		
Weight	0.192 kg (0.423 lb.)		0.195 kg (0.430 lb.)

Technical data for series

L-28



Design and function

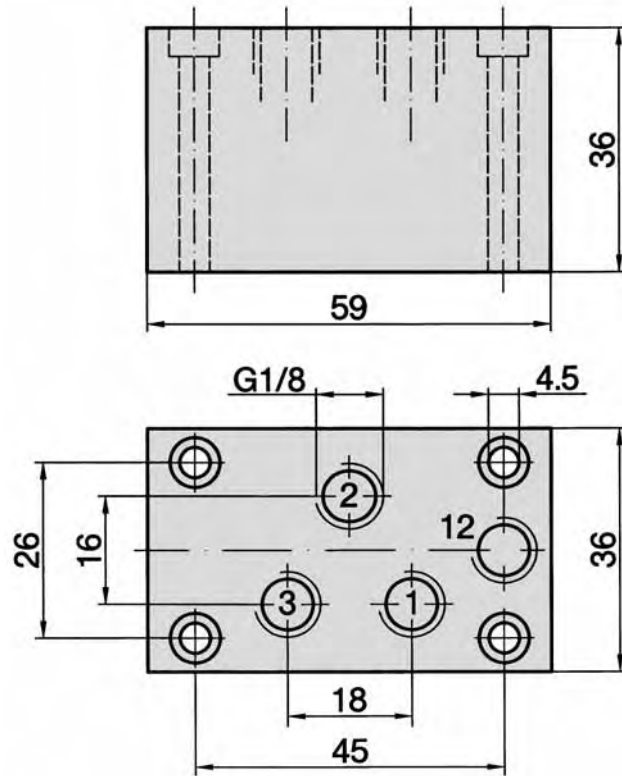
Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (12 or 14). Valve L-28-520 is available for use with vacuum (-0.95 ... 10 bar/-14 ... 175 psi). Order number changes to L-28-520-Q. Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

Order number	L-28-510	L-28-511	L-28-520
Function	5/2-way, single pilot air spring return	5/2-way, single pilot spring return	5/2-way, double pilot
Connection	G 1/8		
Nominal size	6 mm		
Flow rate	600 NI/min (0.610 Cv)		
Pressure range	2 ... 10 bar (29 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)
Pilot pressure range	see diagram	3 ... 10 bar (43 ... 145 psi)	2 ... 10 bar (29 ... 145 psi)
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)		
Materials	Body: Al (anodized), Inner parts: Al, brass, stainless steel, Seals: NBR and POM		
Weight	0.254 kg (0.560 lb.)		0.250 kg (0.551 lb.)

Dimensions for series

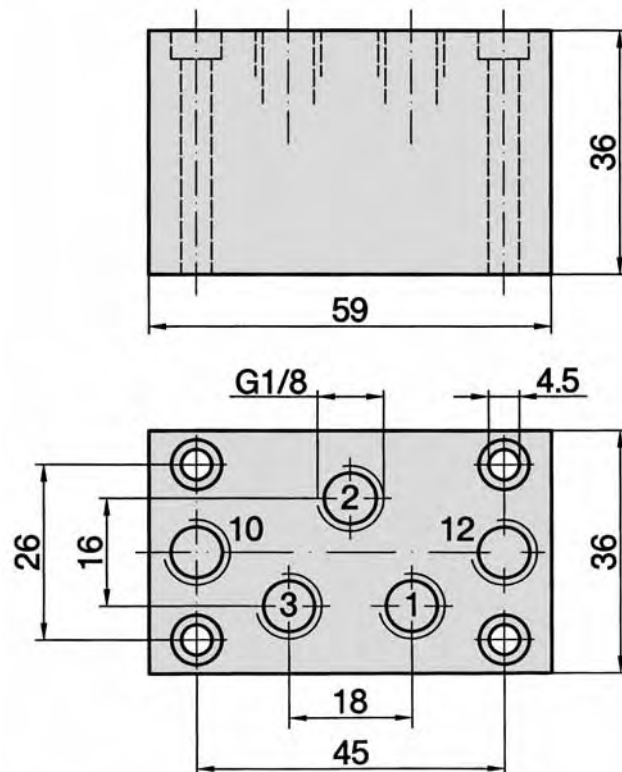
L-28

L-28-310, L-28-311



- 1, 3 = pressure inlet or exhaust
- 2 = outlet
- 12 = pilot port

L-28-320, L-28-320-Q

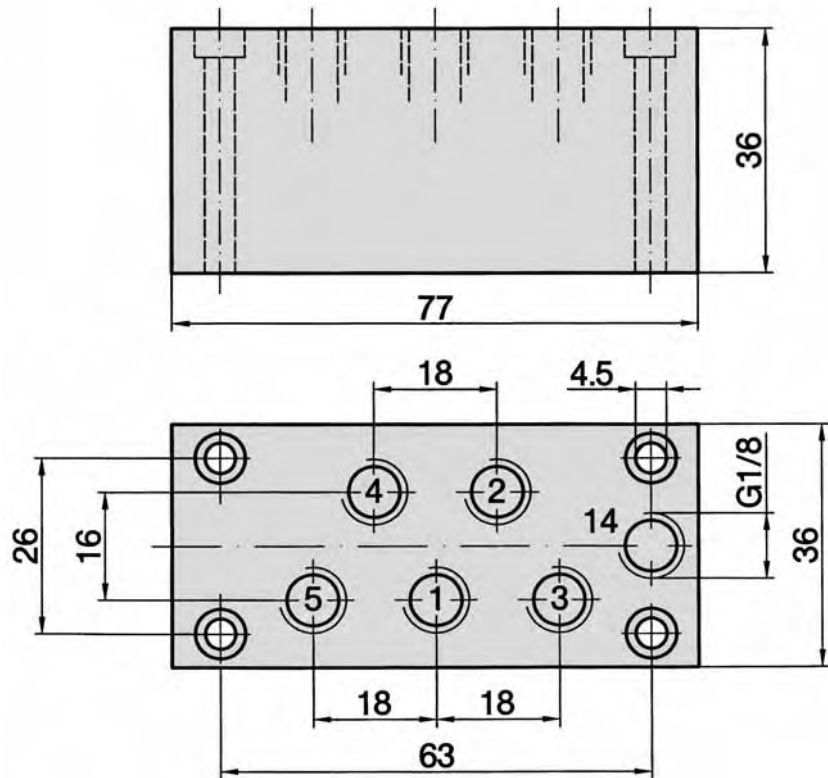


- 1, 2, 3 = for interchangeable use
- 12, 10 = pilot port

Dimensions for series

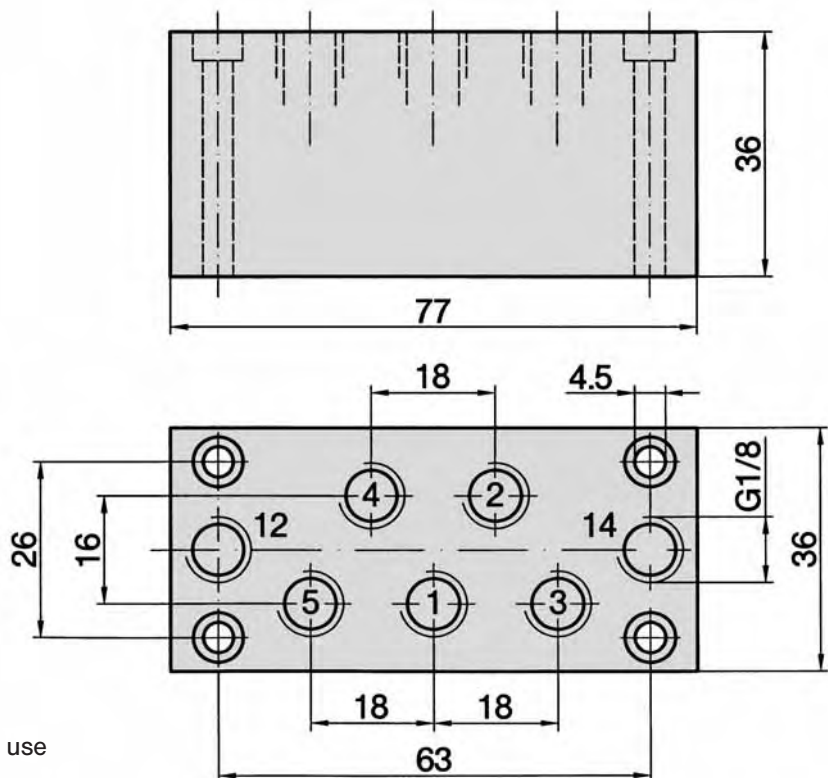
L-28

L-28-510, L-28-511



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- 14 = pilot port

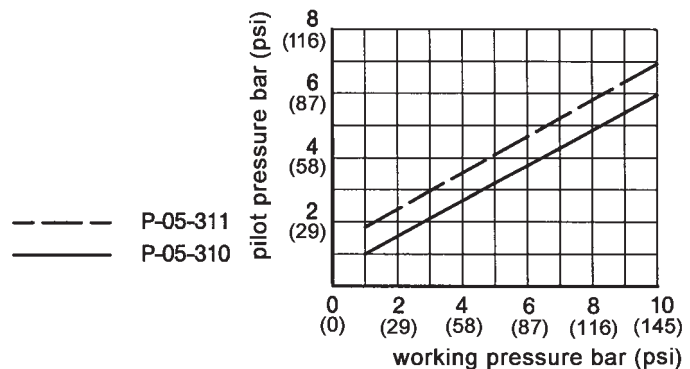
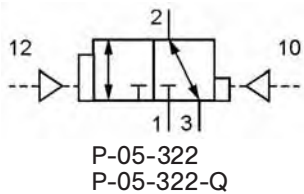
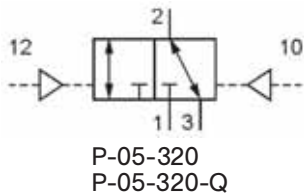
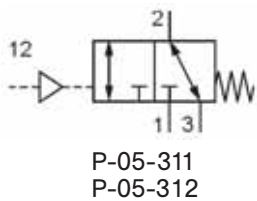
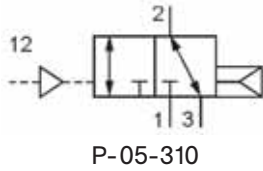
L-28-520, L-28-520-Q



- 1, 2, 3, 4, 5 = for interchangeable use
- 12, 14 = pilot port

Technical data for series

P-05



Design and function

Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (10 or 12).

Valve P-05-311 is available for use with vacuum, order number P-05-312.

The pressure can be connected at 1 (normally closed) or at 3 (normally open).

For manifold mounting see series R-181/n (page 4.116).

Valve P-05-320 and P-05-322 is available for use with vacuum (-0.95 ... 10 bar/-14 ... 175 psi).

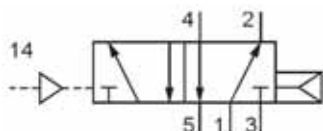
Order number changes to P-05-320-Q and P-05-322-Q.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

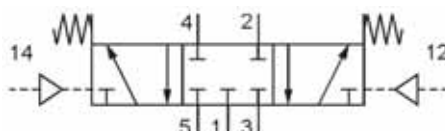
Order number	P-05-310	P-05-311	P-05-312	P-05-320	P-05-322
Function	3/2-way single pilot air spring return	3/2-way single pilot spring return		3/2-way double pilot	3/2-way double pilot dominant
Connection	G 1/8				
Nominal size	6 mm				
Flow rate	750 NI/min (0.762 Cv)				
Pressure range	2 ... 10 bar (29 ... 145 psi)	1 ... 10 bar (14 ... 145 psi)	- 0.95 ... 10 bar (- 14 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)	
Pilot pressure range	see diagram		2 ... 10 bar (29 ... 145 psi)		
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)				
Materials	Body: Al (anodized), Inner parts: Al, brass, stainless steel, Seals: NBR and POM				
Weight	0.156 kg (0.344 lb.)	0.158 kg (0.348 lb.)	0.195 kg (0.430 lb.)	0.200 kg (0.441 lb.)	

Technical data for series

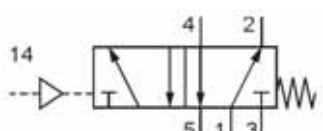
P-05



P-05-510



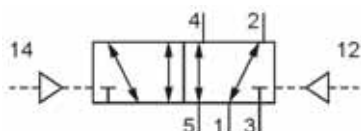
P-05-530



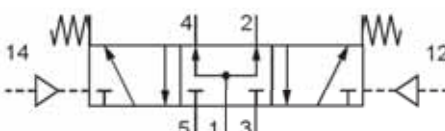
P-05-511



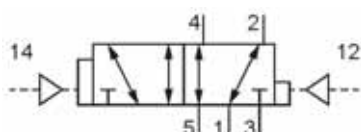
P-05-533



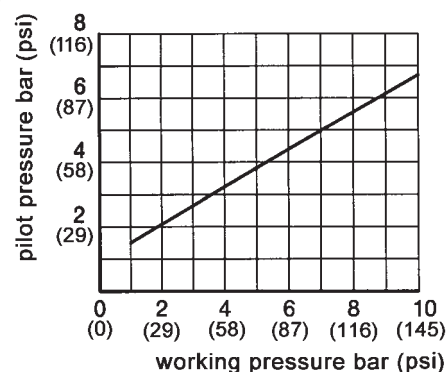
P-05-520
P-05-520-Q



P-05-534



P-05-522
P-05-522-Q



Design and function

Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (12 or 14).

For manifold mounting see series R-181/n (page 4.116) resp. R-183/n (page 4.117).

Valve P-05-520 and P-05-522 is available for use with vacuum (-0.95 ... 10 bar / -14 ... 175 psi).

Order number changes to P-05-520-Q and P-05-522-Q.

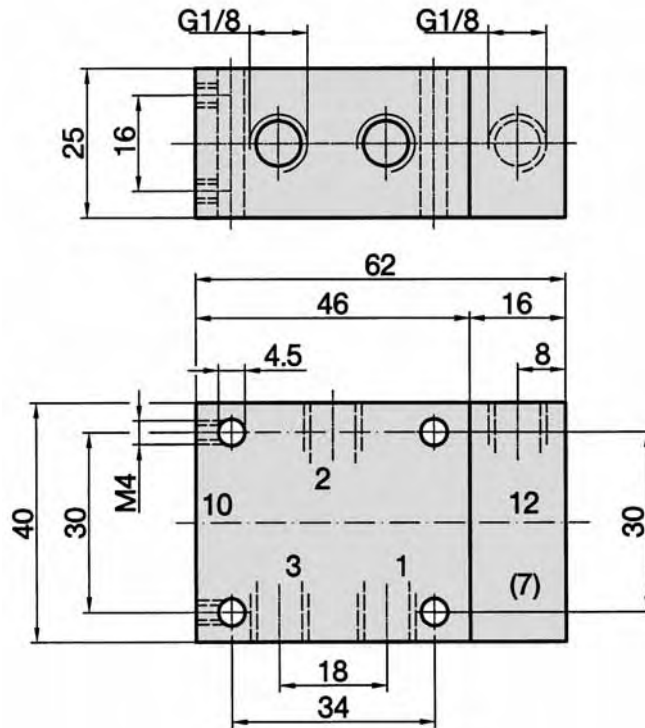
Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

Order number	P-05-510	P-05-511	P-05-520	P-05-522	P-05-530	P-05-533	P-05-534
Function	5/2-way single pilot air spring return	5/2-way single pilot spring return	5/2-way double pilot	5/2-way double pilot dominant	5/3-way center position closed	5/3-way center position exhausted	5/3-way center position pressurized
Connection	G 1/8						
Nominal size	6 mm				5 mm		
Flow rate	750 NI/min (0.762 Cv)				650 NI/min (0.661 Cv)		
Pressure range	2 ... 10 bar (29 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)					
Pilot pressure range	see diagram	3 ... 10 bar (43 ... 145 psi)	2 ... 10 bar (29 ... 145 psi)		3 ... 10 bar (43 ... 145 psi)		
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)						
Materials	Body: Al (anodized), Inner parts: Al, brass, stainless steel, Seals: NBR and POM						
Weight	0.200 kg (0.441 lb.)	0.205 kg (0.452 lb.)	0.245 kg (0.540 lb.)				

Dimensions for series

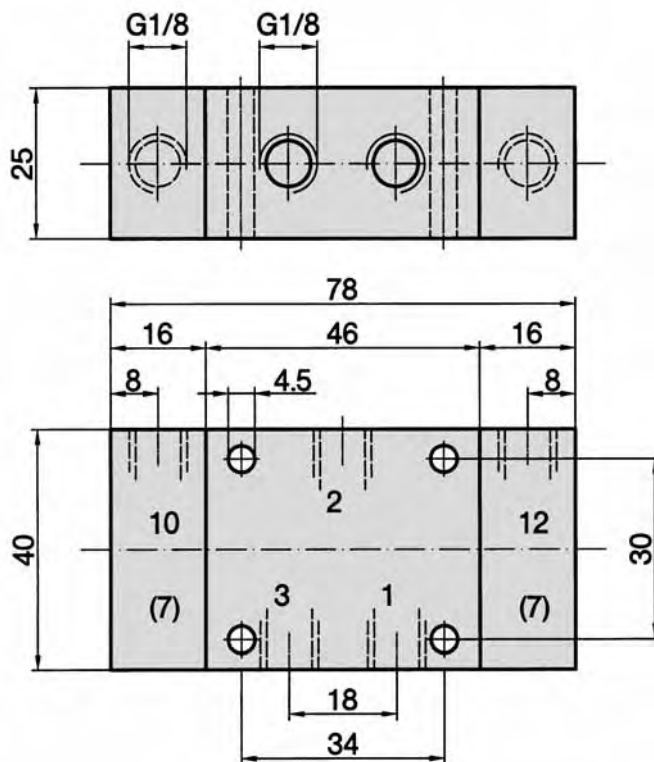
P-05

P-05-310, P-05-311, P-05-312



- 1, 3 = pressure inlet or exhaust
- 2 = outlet
- 12 = pilot port
- (7) = The pilot port can be repositioned by (180°).

P-05-320, P-05-320-Q, P-05-322, P-05-322-Q

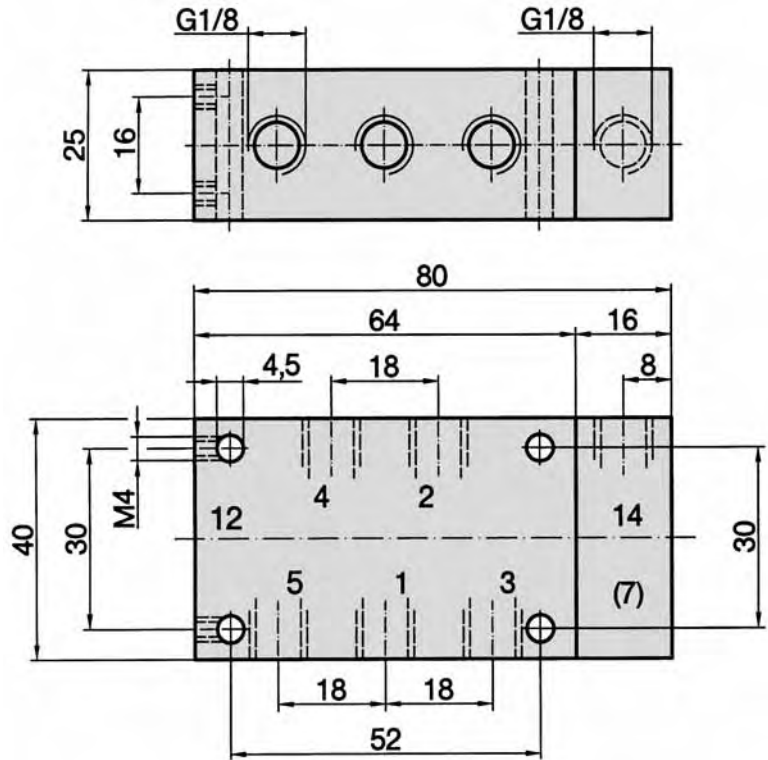


- 1, 2, 3 = for interchangeable use
- 12, 10 = pilot port
- (7) = The pilot port can be repositioned by (180°).

Dimensions for series

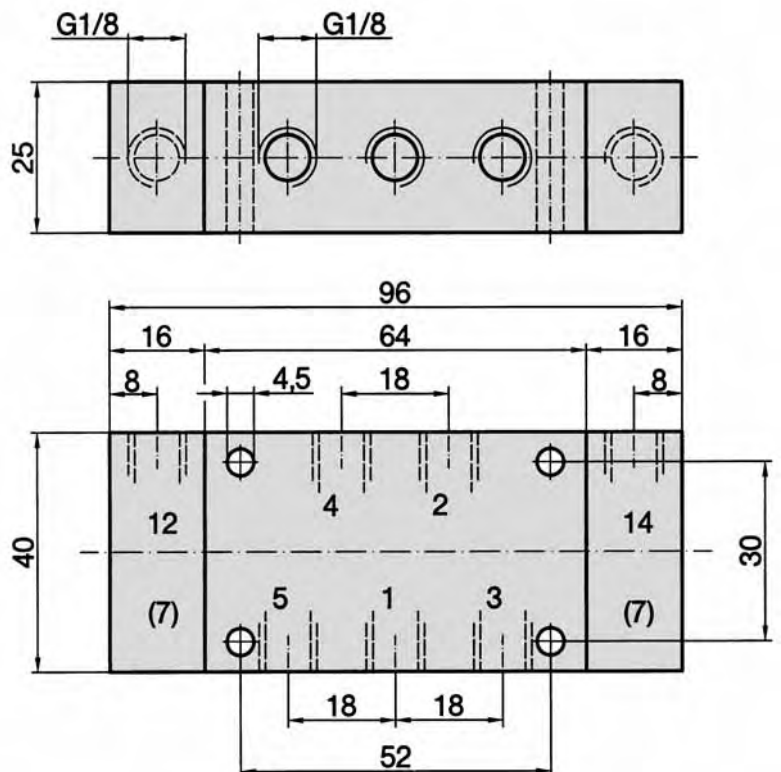
P-05

P-05-510, P-05-511



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- 14 = pilot port
- (7) = The pilot port can be repositioned by (180°).

P-05-520, P-05-520-Q, P-05-522, P-05-522-Q, P-05-530, P-05-533, P-05-534



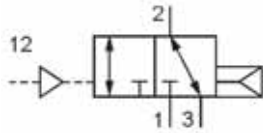
- (7) = The pilot port can be repositioned by (180°).

P-05-520, P-05-520-Q
P-05-522, P-05-522-Q
 1, 2, 3, 4, 5 = for interchangeable use
 12, 14 = pilot port

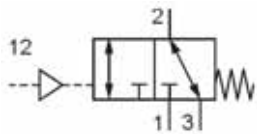
P-05-530, P-05-533, P-05-534
 1 = pressure inlet
 2, 4 = outlets
 3, 5 = exhausts
 12, 14 = pilot port

Technical data for series

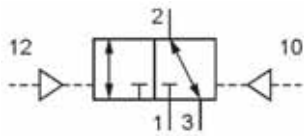
P-07



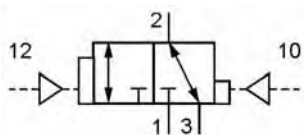
P-07-310



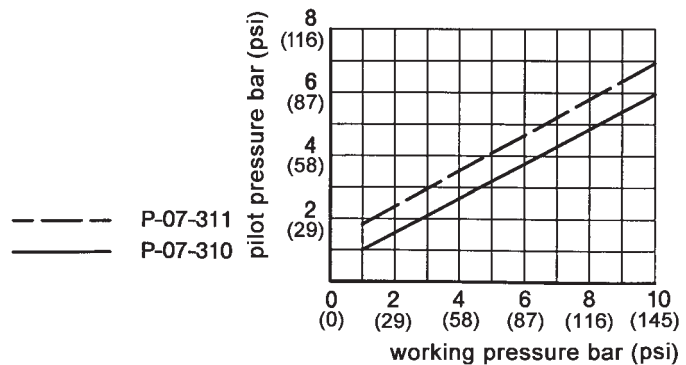
P-07-311
P-07-312



P-07-320
P-07-320-Q



P-07-322
P-07-322-Q



Design and function

Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (10 or 12).

The valve P-07-311 is available for vacuum, order number P-07-312.

The pressure can be connected at 1 (normally closed) or at 3 (normally open).

For manifold mounting see series R-141/n (page 4.156).

Valve P-07-320 and P-07-322 is available for use with vacuum (-0.95 ... 10 bar/-14 ... 175 psi).

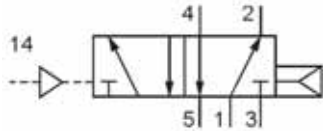
Order number changes to P-07-320-Q and P-07-322-Q.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

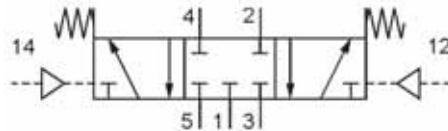
Order number	P-07-310	P-07-311	P-07-312	P-07-320	P-07-322
Function	3/2-way single pilot air spring return	3/2-way single pilot spring return		3/2-way double pilot	3/2-way double pilot dominant
Connection	G 1/4				
Nominal size	9 mm				
Flow rate	1580 NI/min (1.606 Cv)				
Pressure range	1.5 ... 10 bar (22 ... 145 psi)	1 ... 10 bar (14 ... 145 psi)	- 0.95 ... 10 bar (- 14 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)	
Pilot pressure range	see diagram		1.5 ... 10 bar (22 ... 145 psi)		
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)				
Materials	Body: Al (anodized), Inner parts: Al, brass, stainless steel, Seals: NBR and POM				
Weight	0.278 kg (0.613 lb.)	0.281 kg (0.619 lb.)	0.350 kg (0.772 lb.)		

Technical data for series

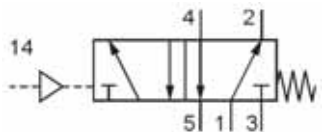
P-07



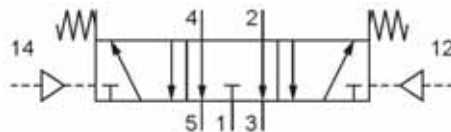
P-07-510



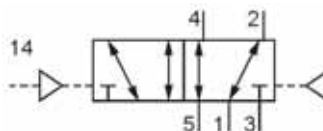
P-07-530



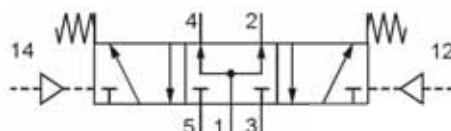
P-07-511



P-07-533



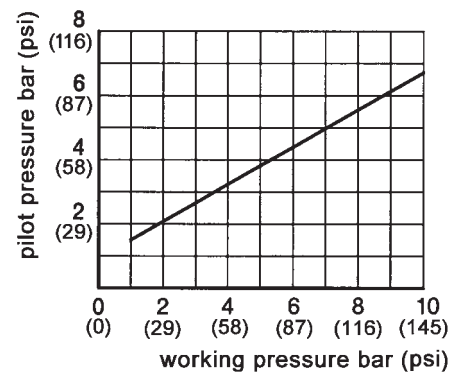
P-07-520
P-07-520-Q



P-07-534



P-07-522
P-07-522-Q



Design and function

Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (12 or 14). For manifold mounting see series R-141/n (page 4.156) resp. R-143/n (page 4.157).

Valve P-07-520 and P-07-522 is available for use with vacuum (-0.95 ... 10 bar/-14 ... 175 psi). Order number changes to P-07-520-Q and P-07-522-Q.

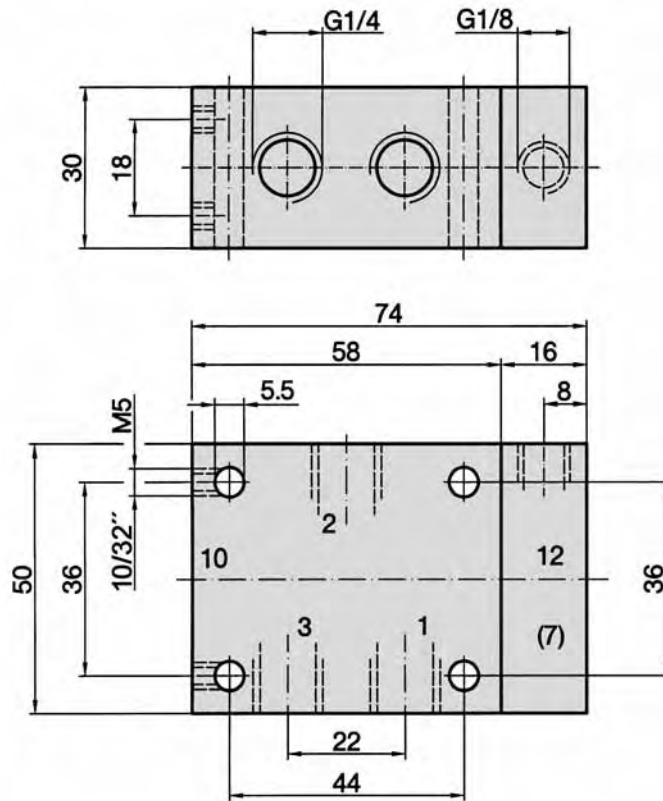
Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

Order number	P-07-510	P-07-511	P-07-520	P-07-522	P-07-530	P-07-533	P-07-534
Function	5/2-way single pilot air spring return	5/2-way single pilot spring return	5/2-way double pilot	5/2-way double pilot dominant	5/3-way center position closed	5/3-way center position exhausted	5/3-way center position pressurized
Connection	G 1/4						
Nominal size	9 mm						
Flow rate	1580 NI/min (1.606 Cv)				1300 NI/min (1.321 Cv)		
Pressure range	1.5 ... 10 bar (22 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)					
Pilot pressure range	see diagram	2.5 ... 10 bar (36 ... 145 psi)	1.5 ... 10 bar (22 ... 145 psi)	3 ... 10 bar (43 ... 145 psi)			
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)						
Materials	Body: Al (anodized), Inner parts: Al, brass, stainless steel, Seals: NBR and POM						
Weight	0.355 kg (0.783 lb.)	0.360 kg (0.794 lb.)	0.420 kg (0.926 lb.)				

Dimensions for series

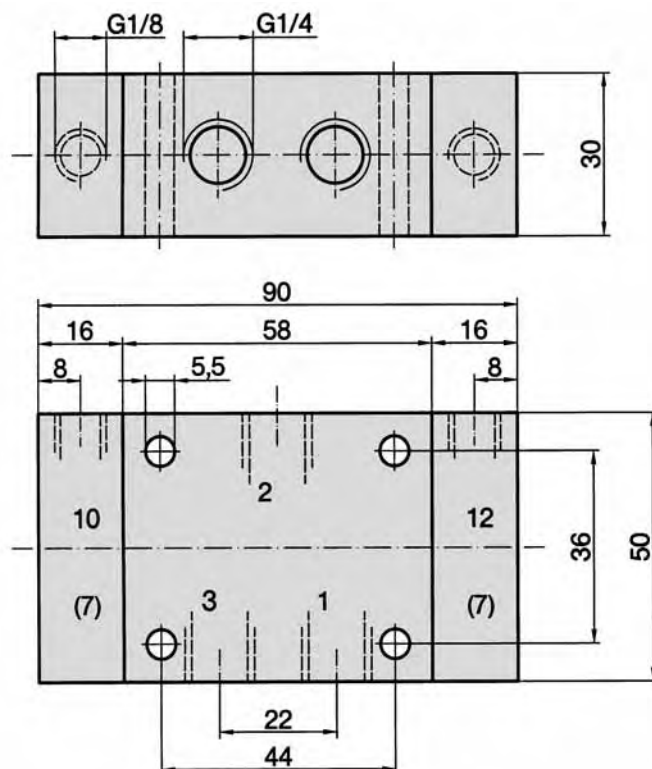
P-07

P-07-310, P-07-311, P-07-312



- 1, 3 = pressure inlet or exhaust
- 2 = outlet
- 12 = pilot port
- (7) = The pilot port can be repositioned by (180°).

P-07-320, P-07-320-Q, P-07-322, P-07-322-Q

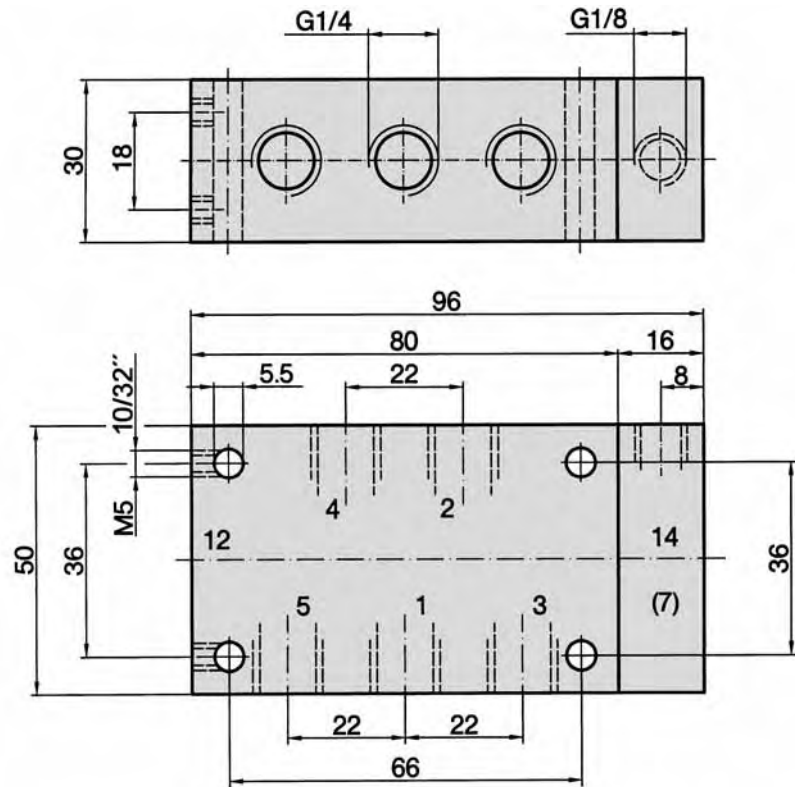


- 1, 2, 3 = for interchangeable use
- 12, 10 = pilot port
- (7) = The pilot port can be repositioned by (180°).

Dimensions for series

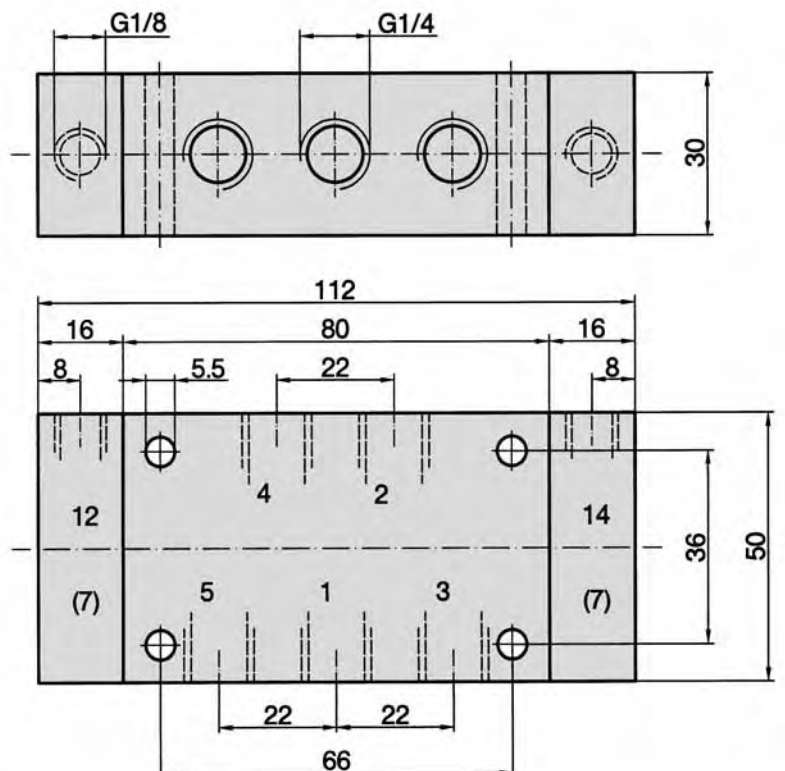
P-07

P-07-510, P-07-511



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- 14 = pilot port
- (7) = The pilot port can be repositioned by (180°).

P-07-520, P-07-520-Q, P-07-522, P-07-522-Q, P-07-530, P-07-533, P-07-534



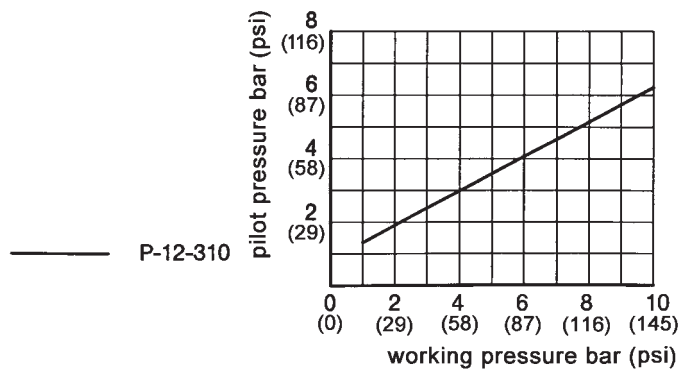
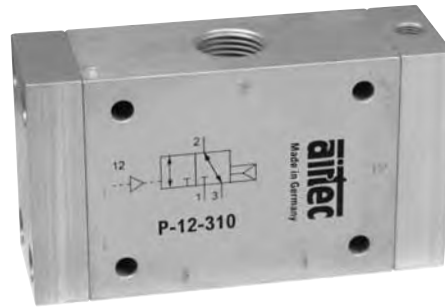
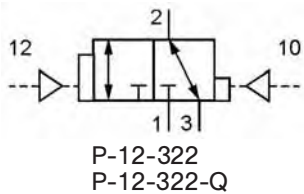
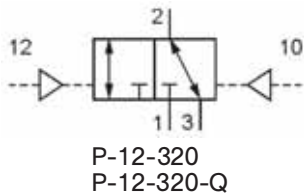
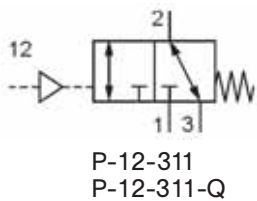
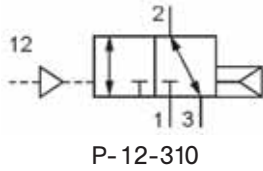
- (7) = The pilot port can be repositioned by (180°).

P-07-520, P-07-520-Q
P-07-522, P-07-522-Q
 1, 2, 3, 4, 5 = for interchangeable use
 12, 14 = pilot port

P-07-530, P-07-533, P-07-534
 1 = pressure inlet
 2, 4 = outlets
 3, 5 = exhausts
 12, 14 = pilot port

Technical data for series

P-12



Design and function

Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (10 or 12). The pressure can be connected at 1 (normally closed) or at 3 (normally open).

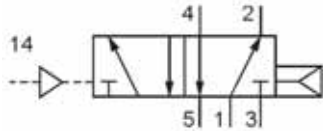
Valve P-12-311, P-12-320 and P-12-322 is available for use with vacuum (-0.95 ... 10 bar / -14 ... 175 psi). Order number changes to P-12-311-Q, P-12-320-Q and P-12-322-Q.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

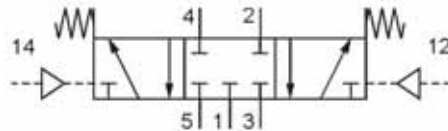
Order number	P-12-310	P-12-311	P-12-320	P-12-322
Function	3/2-way single pilot air spring return	3/2-way single pilot spring return	3/2-way double pilot	3/2-way double pilot dominant
Connection	G 1/2			
Nominal size	14 mm			
Flow rate	3300 NI/min (3.354 Cv)			
Pressure range	1 ... 10 bar (14 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)		
Pilot pressure range	see diagram	2 ... 10 bar (29 ... 145 psi)	1 ... 10 bar (14 ... 145 psi)	
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)			
Materials	Body: Al (anodized), Inner parts: Al, brass, stainless steel, Seals: NBR and POM			
Weight	0.820 kg (1.808 lbs.)	0.830 kg (1.830 lbs.)	0.855 kg (1.885 lbs.)	

Technical data for series

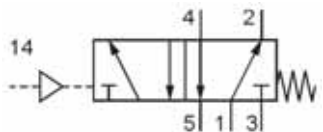
P-12



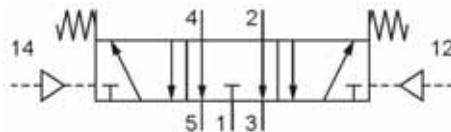
P-12-510



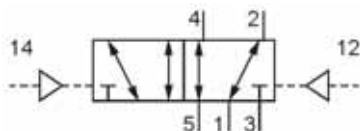
P-12-530



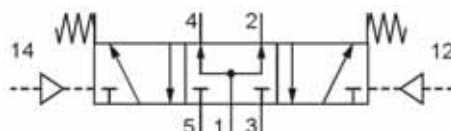
P-012-511



P-12-533



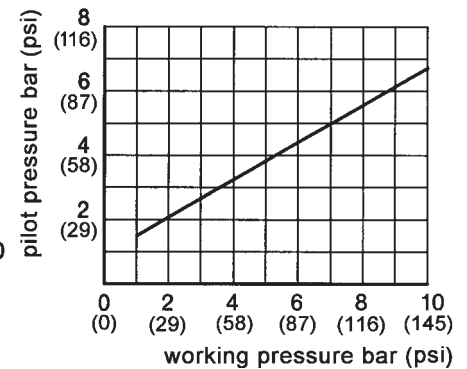
P-12-520
P-12-520-Q



P-12-534



P-12-522
P-12-522-Q



Design and function

Pneumatically operated spool valve. The valve switches upon pressurization of the pilot port (12 or 14).

Valve P-12-520 and P-12-522 is available for use with vacuum (-0.95 ... 10 bar / -14 ... 175 psi).

Order number changes to P-12-520-Q and P-12-522-Q.

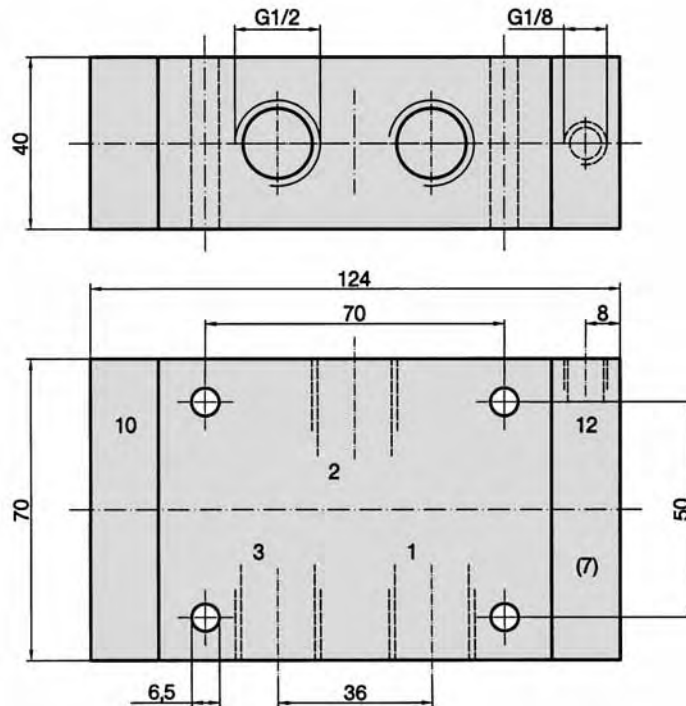
Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

Order number	P-12-510	P-12-511	P-12-520	P-12-522	P-12-530	P-12-533	P-12-534
Function	5/2-way single pilot air spring return	5/2-way single pilot spring return	5/2-way double pilot	5/2-way double pilot dominant	5/3-way center position closed	5/3-way center position exhausted	5/3-way center position pressurized
Connection	G 1/2						
Nominal size	14 mm						
Flow rate	3300 NI/min (3.354 Cv)						
Pressure range	1 ... 10 bar (14 ... 145 psi)	0 ... 10 bar (0 ... 145 psi)					
Pilot pressure range	see diagram	2 ... 10 bar (29 ... 145 psi)	1 ... 10 bar (14 ... 145 psi)	3 ... 10 bar (43 ... 145 psi)			
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)						
Materials	Body: Al (anodized), Inner parts: Al, stainless steel, Seals: NBR and POM						
Weight	1.065 kg (2.348 lbs.)		1.080 kg (2.381 lbs.)				

Dimensions for series

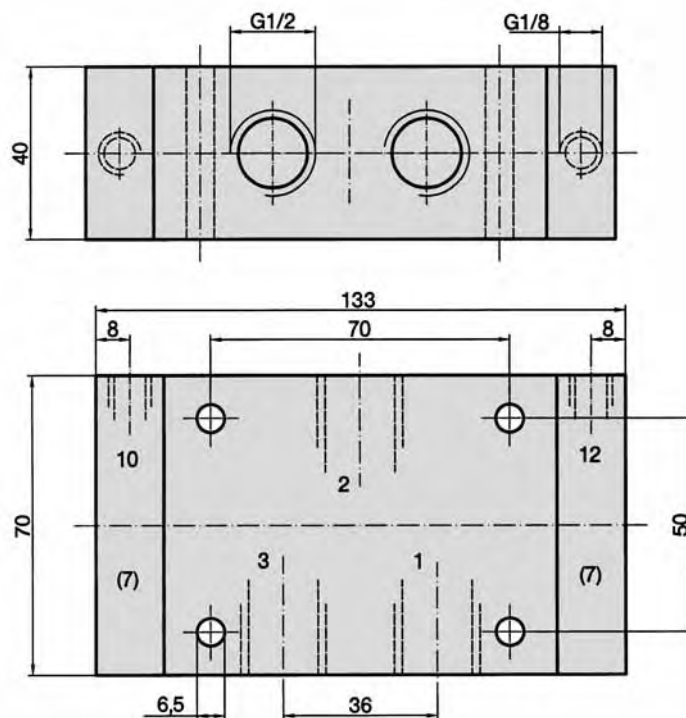
P-12

P-12-310, P-12-311, P-12-311-Q



- 1, 3 = pressure inlet or exhaust
- 2 = outlet
- 12 = pilot port
- (7) = The pilot port can be repositioned by (180°).

P-12-320, P-12-320-Q, P-12-322, P-12-322-Q

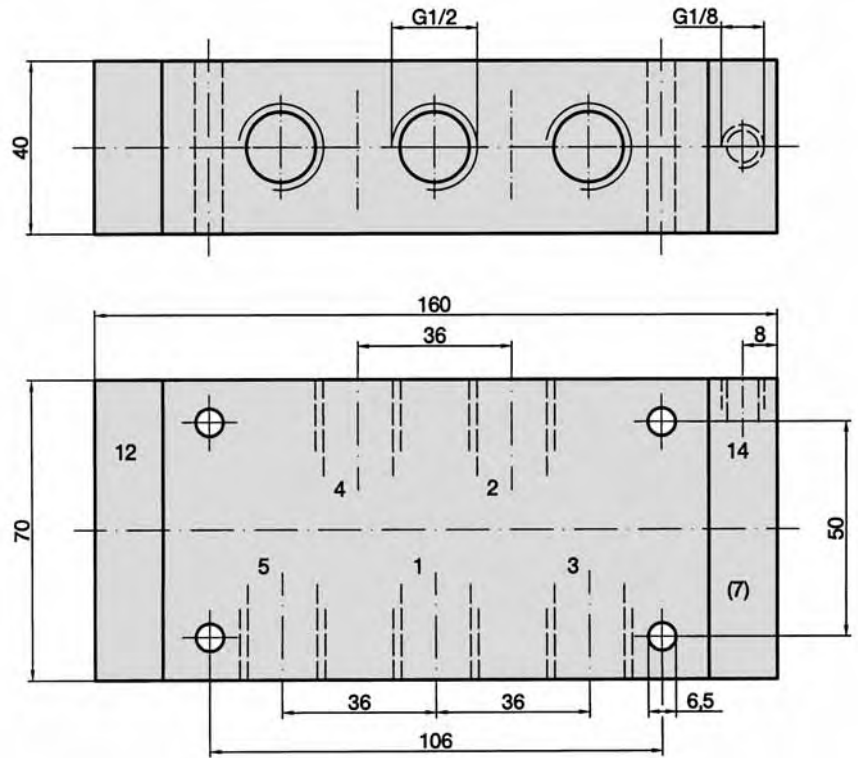


- 1, 2, 3 = for interchangeable use
- 12, 10 = pilot port
- (7) = The pilot port can be repositioned by (180°).

Dimensions for series

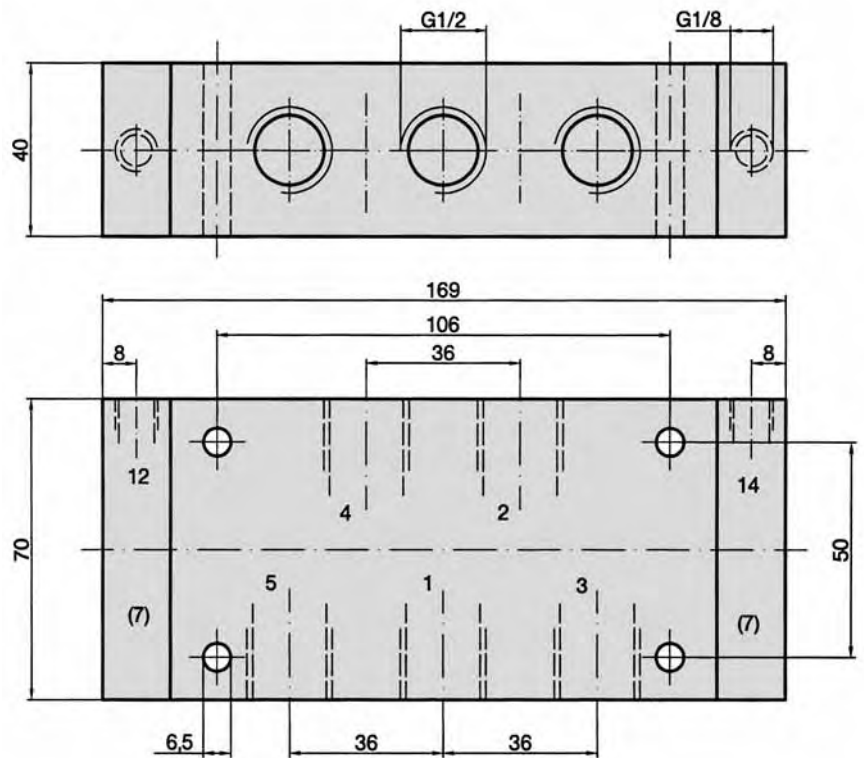
P-12

P-12-510, P-12-511



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- 14 = pilot port
- (7) = The pilot port can be repositioned by (180°).

P-12-520, P-12-520-Q, P-12-522, P-12-522-Q, P-12-530, P-12-533, P-12-534



- (7) = The pilot port can be repositioned by (180°).

P-12-520, P-12-520-Q
P-12-522, P-12-522-Q

- 1, 2, 3, 4, 5 = for interchangeable use
- 12, 14 = pilot port

P-12-530, P-12-533, P-12-534

- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- 12, 14 = pilot port