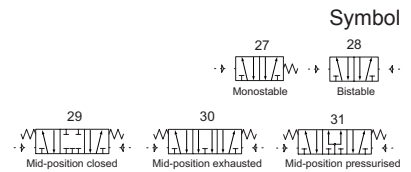




»4A« Series

516.4000–516.5006, 516.6000–516.8006



Product features

Traditional and robust pilot valve series. Suitable for all applications where pneumatic actuators have to be operated. These valves are designed for in-line installation or as mass-produced valves for mounting on a multiple manifold base. Mounting in any position.

The following types are available:

- Five port sizes (M5, 1/8", 1/4", 3/8" and 1/2")
- 5/2 and 5/3-way versions

Valve's specification

Art. No.	Size 100						Size 200					
	516.4000	516.5000	516.6000 516.7000 516.8000	516.4001	516.5001	516.6001 516.7001 516.8001	516.4002	516.5002	516.6002 516.7002 516.8002	516.4003	516.5003	516.6003 516.7003 516.8003
Fluid	Air (to be filtered by $\leq 40 \mu\text{m}$ filter element)											
Acting	Pneumatic control											
Port size	In = Out = M5			In = Out = 1/8"			In = Out = Exhaust = 1/8"			In = Out = 1/4" Exhaust = 1/8"		
Valid area of section	5.5 mm ² (Cv = 0.31)		5.0 mm ² (Cv = 0.28)	12.0 mm ² (Cv = 0.67)		9.0 mm ² (Cv = 0.50)	14.0 mm ² (Cv = 0.78)		12.0 mm ² (Cv = 0.67)	16.0 mm ² (Cv = 0.89)		12.0 mm ² (Cv = 0.67)
Valve type	5 port 2 position		5 port 3 position	5 port 2 position		5 port 3 position	5 port 2 position		5 port 3 position	5 port 2 position		5 port 3 position
Lubrication	Not required											
Operating pressure	1.5 to 8 bar (0.15 to 0.8 MPa; 21 to 114 psi)											
Proof pressure	15 bar (1.5 MPa; 215 psi)											
Temperature	-20 to 70 °C											
Material of body	Aluminium alloy											
Max. frequency	5 cycle/s		3 cycle/s	5 cycle/s		3 cycle/s	5 cycle/s		3 cycle/s	5 cycle/s		3 cycle/s
Weight	85 g	140 g	165 g	85 g	140 g	165 g	185 g	285 g	365 g	185 g	285 g	365 g
Flow rate measurement at P ₁ = 8 bar, P ₂ = 6 bar and pressure drop $\Delta p = 1$ bar	300 L/min		250 L/min	500 L/min		400 L/min	750 L/min		550 L/min	850 L/min		550 L/min

»4A« Series

516.4000–516.5006, 516.6000–516.8006

Valve's specification

Art. No.	Size 300						Size 400		
	516.4004	516.5004	516.6004 516.7004 516.8004	516.4005	516.5005	516.6005 516.7005 516.8005	516.4006	516.5006	516.6006 516.7006 516.8006
Fluid	Air (to be filtered by $\leq 40 \mu\text{m}$ filter element)								
Acting	Pneumatic control								
Port size	In = Out = Exhaust = 1/4"			In = Out = 3/8" Exhaust = 1/4"			In = Out = Exhaust = 1/2"		
Valid area of section	25.0 mm ² (Cv= 1.40)		18.0 mm ² (Cv= 1.00)	30.0 mm ² (Cv= 1.68)		18.0 mm ² (Cv= 1.00)	50.0 mm ² (Cv= 2.79)		30.0 mm ² (Cv= 1.68)
Valve type	5 port 2 position		5 port 3 position	5 port 2 position		5 port 3 position	5 port 2 position		5 port 3 position
Lubrication	Not required								
Operating pressure	1.5 to 8 bar (0.15 to 0.8 MPa; 21 to 114 psi)								
Proof pressure	15 bar (1.5 MPa; 215 psi)								
Temperature	-20 to 70 °C								
Material of body	Aluminium alloy								
Max. frequency	4 cycle/s		3 cycle/s	4 cycle/s		3 cycle/s	3 cycle/s		
Weight	275 g	365 g	505 g	275 g	365 g	505 g	550 g	685 g	735 g
Flow rate measurement at P ₁ = 8 bar, P ₂ = 6 bar and pressure drop $\Delta p = 1$ bar	1300 l/min		950 l/min	1500 l/min		950 l/min	2000 l/min		1600 l/min

Port identification pneumatic valves

	Designation at the valve	Corresponds to ISO 1219-1
Input port	P	1
Output port	A	2
Output port	B	4
Exhaust port	R	3
Exhaust port	S	5
Control port	Y	12
Control port	Z	14

Ordering information

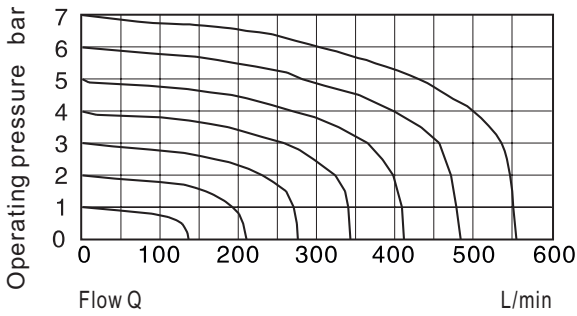
Art. No.	Type
516.4000–516.4006	5/2-way pilot valve, monostable
516.5000–516.5006	5/2-way pilot valve, bistable
516.6000–516.6006	5/3-way pilot valve, mid-position closed
516.7000–516.7006	5/3-way pilot valve, mid-position exhausted
516.8000–516.8006	5/3-way pilot valve, mid-position pressurised

»4A« Series

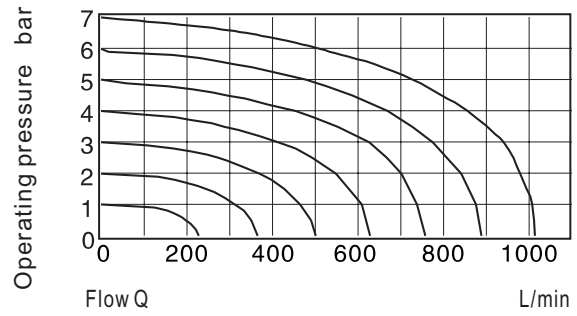
516.4000–516.5006, 516.6000–516.8006

Flow chart

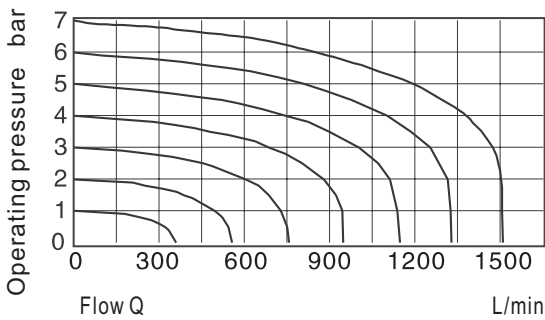
516.4000



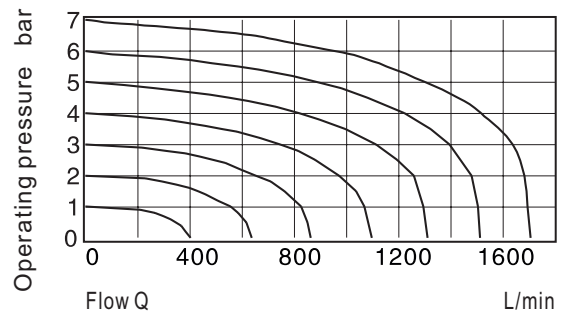
516.4001



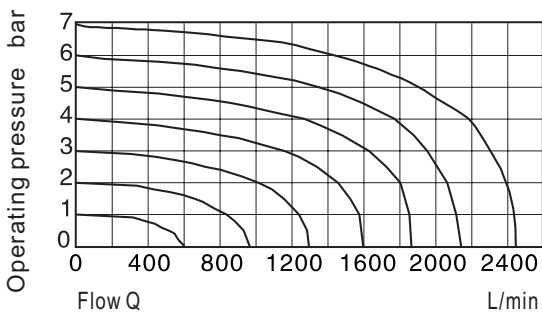
516.4002



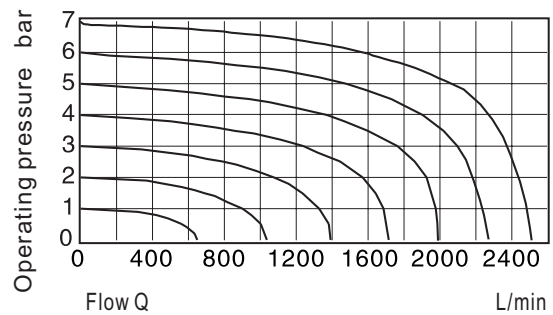
516.4003



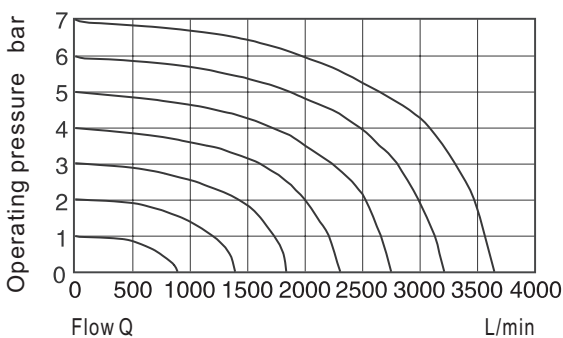
516.4004



516.4005



516.4006

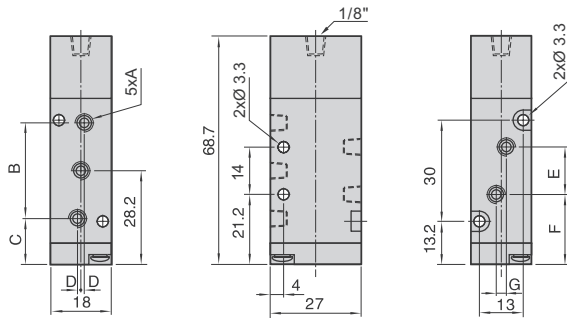


»4A« Series

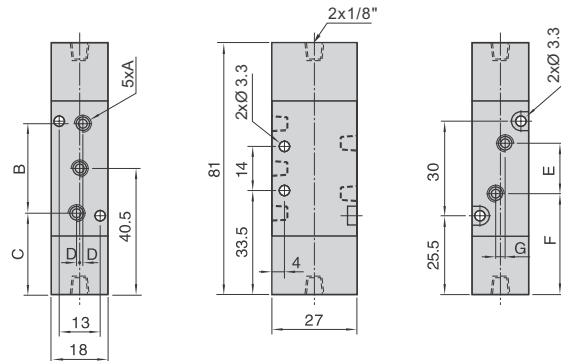
516.4000–516.5006, 516.6000–516.8006

Dimensions

516.4000, 516.4001
(Size 100)



516.5000, 516.5001
(Size 100)



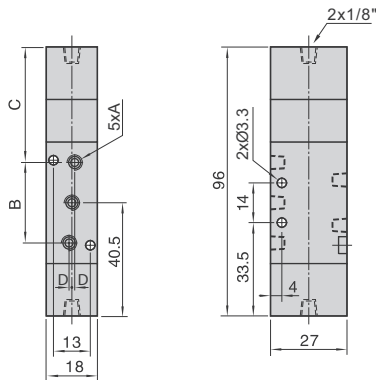
Art. No.	A	B	C	D	E	F	G
516.4000	M5x0.8	27	14.7	0	14	21.2	0
516.4001	1/8" ¹⁾	28	14.2	1	16	20.2	3

(Values in mm, exception ¹⁾ = inch)

Art. No.	A	B	C	D	E	F	G
516.5000	M5x0.8	27	27	0	14	33.5	0
516.5001	1/8" ¹⁾	28	26.5	1	16	32.5	3

(Values in mm, exception ¹⁾ = inch)

516.6000, 516.6001, 516.7000, 516.7001, 516.8000, 516.8001
(Size 100)



Art. No.	A	B	C	D	E	F	G
516.6000	M5x0.8	27	42	0	14	33.5	0
516.7000							
516.8000							
516.6001	1/8" ¹⁾	28	41.5	1	16	32.5	3
516.7001							
516.8001							

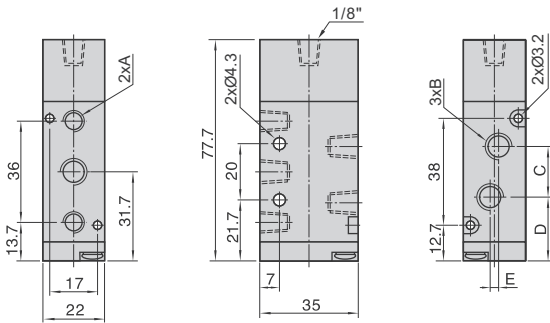
(Values in mm, exception ¹⁾ = inch)

»4A« Series

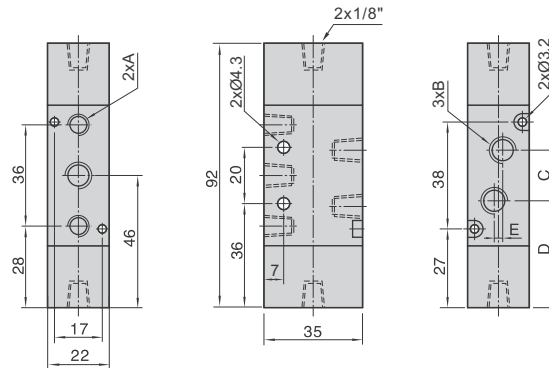
516.4000–516.5006, 516.6000–516.8006

Dimensions

516.4002, 516.4003
(Size 200)



516.5002, 516.5003
(Size 200)



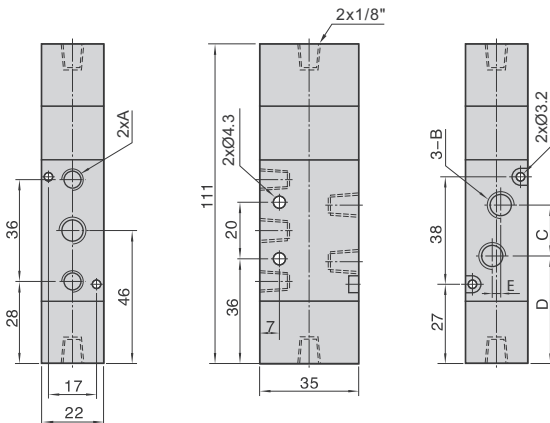
Art. No.	A	B	C	D	E
516.4002	1/8"	1/8"	18	22.7	0
516.4003	1/8"	1/4"	21	21.2	3

Art. No.	A	B	C	D	E
516.5002	1/8"	1/8"	18	37	0
516.5003	1/8"	1/4"	21	35.5	3

(Values in mm, exception A, B = inch)

(Values in mm, exception A, B = inch)

516.6002, 516.6003, 516.7002, 516.7003, 516.8002, 516.8003
(Size 200)



Art. No.	A	B	C	D	E
516.6002	1/8"	1/8"	18	37	0
516.7002					
516.8002					
516.6003	1/8"	1/4"	21	35.5	3
516.7003					
516.8003					

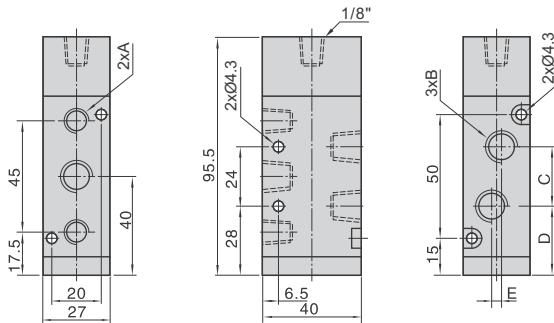
(Values in mm, exception ¹⁾ = inch)

»4A« Series

516.4000–516.5006, 516.6000–516.8006

Dimensions

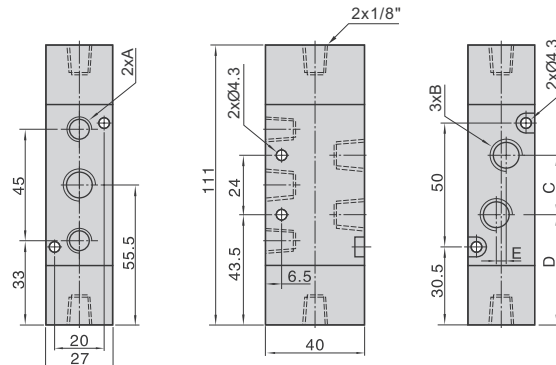
516.4004, 516.4005
(Size 300)



Art. No.	A	B	C	D	E
516.4004	1/4"	1/4"	22	29	0
516.4005	1/4"	3/8"	24	28	4

(Values in mm, exception A, B = inch)

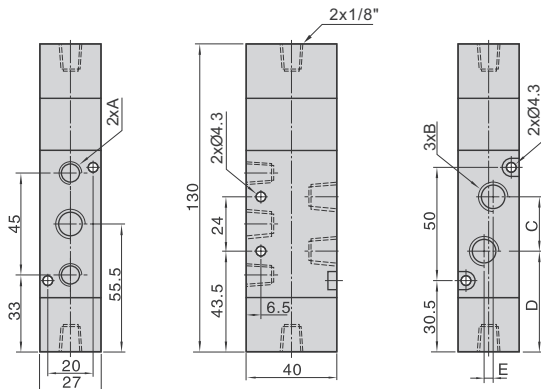
516.5004, 516.5005
(Size 300)



Art. No.	A	B	C	D	E
516.5004	1/4"	1/4"	22	44.5	0
516.5005	1/4"	3/8"	24	43.5	4

(Values in mm, exception A, B = inch)

516.6004, 516.6005, 516.7004, 516.7005, 516.8004, 516.8005
(Size 300)



Art. No.	A	B	C	D	E
516.6004					
516.7004	1/4"	1/4"	22	44.5	0
516.8004					
516.6003					
516.7005	1/4"	3/8"	24	43.5	4
516.8005					

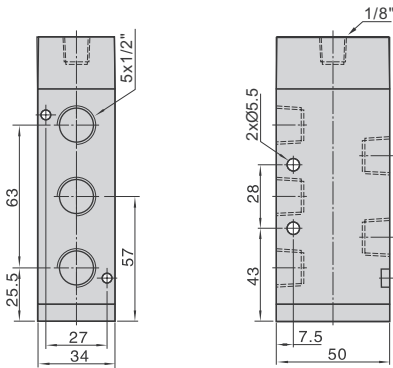
(Values in mm, exception A, B = inch)

»4A« Series

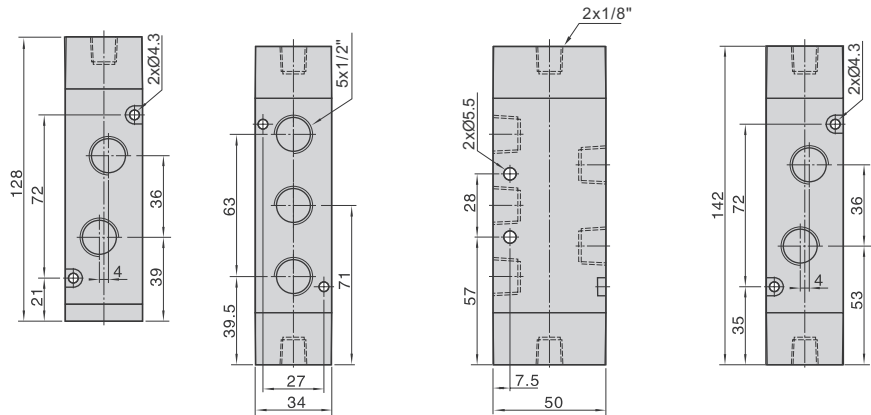
516.4000–516.5006, 516.6000–516.8006

Dimensions (mm)

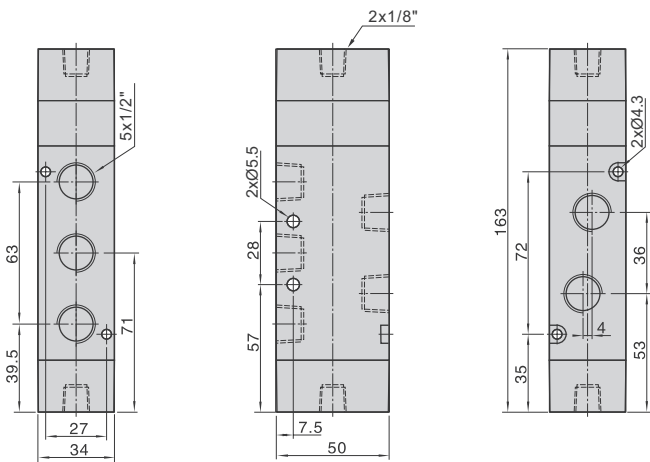
516.4006
(Size 400)



516.5006
(Size 400)



516.6006, 516.7006, 516.8006
(Size 400)

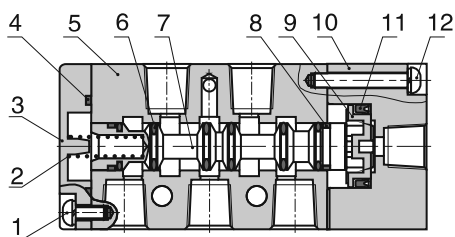


»4A« Series

516.4000–516.5006, 516.6000–516.8006

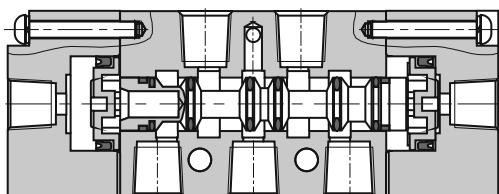
Components and materials

516.4000–516.4006



No.	Item	Material
1	Screw	Steel
2	Spool spring	Stainless steel
3	Cover	Aluminium alloy
4	Gasket	NBR
5	Body	Aluminium alloy
6	Spool O-ring	HNBR
7	Spool	Aluminium alloy
8	Wear ring	PA 66
9	Piston	POM
10	Pilot body	Aluminium alloy
11	Piston O-ring	NBR
12	Screw	Steel

516.5000–516.5006



Ordering information

Art. No.	Ident No.
516.4000	116052
516.4001	116053
516.4002	116054
516.4003	116055
516.4004	116056
516.4005	116057
516.4006	116058
516.5000	116059
516.5001	116060
516.5002	116061
516.5003	116062
516.5004	116063
516.5005	116064
516.5006	116065
516.6000	116066
516.6001	116067
516.6002	116068
516.6003	116069
516.6004	116070
516.6005	116071
516.6006	116072
516.7000	116073
516.7001	116074
516.7002	116075
516.7003	116076
516.7004	116077
516.7005	116078
516.7006	116079
516.8000	116080
516.8001	116081
516.8002	116082
516.8003	116083
516.8004	116084
516.8005	116085
516.8006	116086