

Piston Poppet Type Air-piloted Valves Rc1/4~1 1/4

375, 501, 750, 1000, 1250 Series

Symbols

Spring return normal type (A type)		
2-port		3-port
NC (normally closed)	NO (normally open)	NC/NO (common for NC and NO)
375A-2 501A-2 750A-2 1000A-2 1250A-2		375A 501A 750A 1000A 1250A

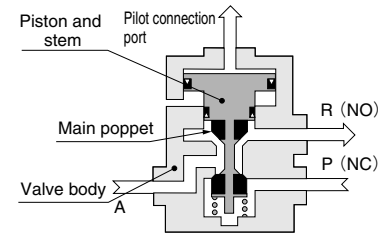
Specifications

Item	Basic model	A type (normal type)				
		375A	501A	750A	1000A	1250A
Port size Rc	Main	3/8	1/2	3/4	1	1 1/4
	Pilot	1/8		1/4		
Effective area [Cv]	mm ²	70 [3.5]	140 [7]	280 [14]		
Media		Air				
Operating pressure range MPa [kgf/cm ²] [psi.]	Main	0~0.9 [0~9.2] [0~131]				
	Pilot	See the table "Minimum Pilot Pressure"				
Proof pressure MPa [kgf/cm ²] [psi.]		1.35 [13.8] [196]				
Operating temp. range (atmosphere and media) °C [°F]		0~60 [32~140]				
Maximum operating frequency Hz		10	3	4		
Lubrication		Required (Turbine Oil Class 1 (ISO VG32) or equivalent)				
Mass kg [lb.]		0.6 [1.3]	1.8 [4.0]	2.7 [6.0]		

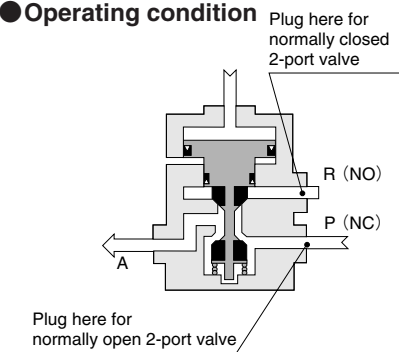
Note: When excessively throttling the R port in operation, set the pilot pressure at the main pressure or higher.

Operating Principles, Major Parts and Materials

● Normal condition



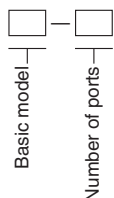
● Operating condition



Parts	Materials
Body	Aluminum alloy (anodized)
Stem	Brass
Poppet seal	Synthetic rubber

Order Codes

A type (normal type)



Basic model

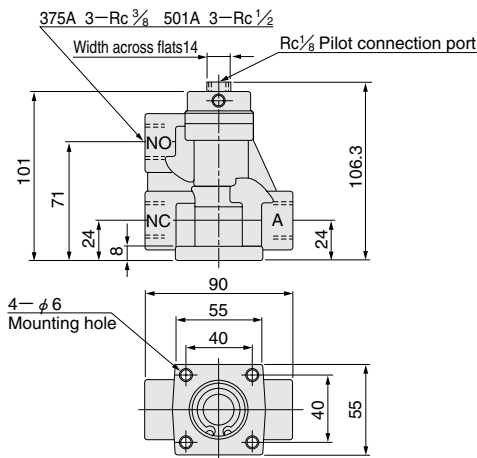
Code	Main port size Rc
375A	3/8
501A	1/2
750A	3/4
1000A	1
1250A	1 1/4

Number of ports

Code	Number of ports
Blank	3 ports
2	2 ports

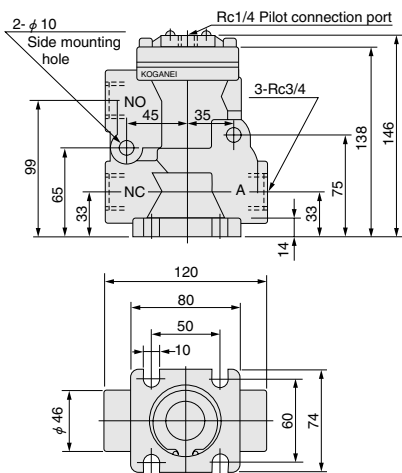
Dimensions (mm)

● 375A ● 501A



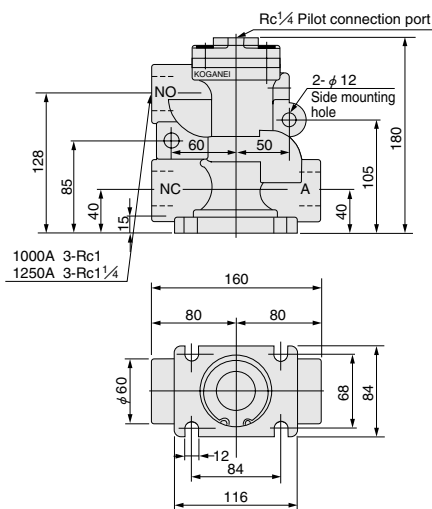
Note: For the normally closed type, the exhaust port (R) is on the NO side.
For the normally open type, the exhaust port (R) is on the NC side. (A type only).

● 750A



Note: For the normally closed type, the exhaust port (R) is on the NO side.
For the normally open type, the exhaust port (R) is on the NC side. (A type only).

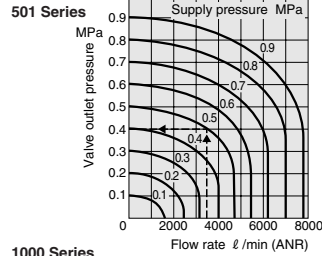
● 1000A ● 1250A



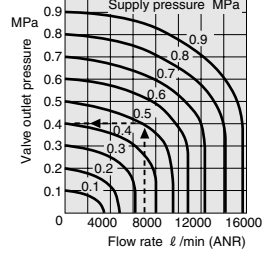
Note: For the normally closed type, the exhaust port (R) is on the NO side.
For the normally open type, the exhaust port (R) is on the NC side. (A type only).

Flow Rate

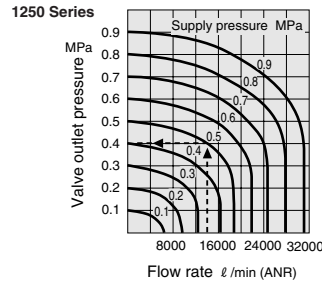
375 Series



750 Series



1000 Series



1MPa = 145psi., 1 ℓ/min = 0.0353ft³/min.

How to read the graph (1000, 1250 series)

When the supply pressure is 0.5MPa [73psi.] and the flow rate is 13900 ℓ/min [491ft³/min.] (ANR), the valve outlet pressure becomes 0.4MPa [58psi.].

Minimum Pilot Pressure

Model		Main pressure					
		0 [0]	0.1 [15]	0.3 [44]	0.5 [73]	0.7 [102]	0.9 [131]
375A	NC	0.1 [15]	0.1 [15]	0.22 [32]	0.33 [48]	0.45 [65]	0.57 [83]
	501A	NO	0.1 [15]	0.1 [15]	0.19 [28]	0.27 [39]	0.36 [52]
750A	NC	0.1 [15]	0.1 [15]	0.23 [33]	0.34 [49]	0.47 [68]	0.59 [86]
	1000A	NO	0.1 [15]	0.1 [15]	0.15 [22]	0.2 [29]	0.25 [36]
1250A	NC	0.1 [15]	0.1 [15]	0.2 [29]	0.29 [42]	0.39 [57]	0.49 [71]
	NO	0.1 [15]	0.1 [15]	0.15 [22]	0.2 [29]	0.25 [36]	0.32 [46]

Time Required for Switching by Pilot Line Length

(Both main and pilot 0.5MPa [73psi.]
Pilot line inner diameter 4mm [0.16in.])

Model		Pilot line length L m [ft.]				
		2 [6.6]	6 [19.7]	10 [32.8]	50 [164]	100 [328]
375A	ON	0.05	0.1	0.15	1.0	2.9
	501A	OFF	0.1	0.2	0.3	1.5
750A	ON	0.05	0.15	0.2	1.2	3.0
	1000A	OFF	0.1	0.3	0.5	2.5
1250A	ON	0.09	0.15	0.2	1.3	3.7
	OFF	0.2	0.4	0.6	3.3	7.5

How to read the table

For example, when using a 10m [32.8ft.] pilot line to send a signal to the 375A type, it takes 0.15 second for the switching operation to turn it on and 0.3 second to turn it off.

