



Master valve; body piping
Pilot operated 3, 5-port pneumatic valve

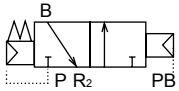
3KA1/4KA1/2/3/4 Series

● Cylinder bore size: $\phi 20$ to $\phi 160$

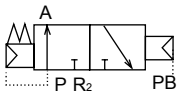


JIS symbol

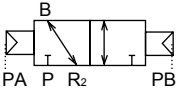
- 3-port valve
2-position NC single



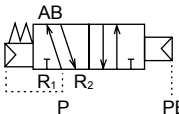
- 2-position NO single



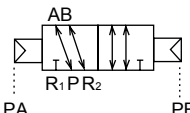
- 2-position double



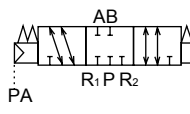
- 5-port valve
2-position single



- 2-position double



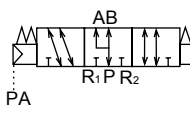
- 3-position all ports closed



- 3-position A/B/R connection



- 3-position P/A/B connection



Common specifications

Descriptions	Content
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.70 (≈ 100 psi, 7 bar)
Min. working pressure MPa	Refer to section on working pressure in table below
Proof pressure MPa	1.05 (≈ 150 psi, 10.5 bar)
Ambient temperature $^{\circ}\text{C}$	-5 (23°F) to 50 (122°F) (no freezing)
Fluid temperature $^{\circ}\text{C}$	5 (41°F) to 50 (122°F)
Lubrication	Not required
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environment.

Individual specifications: body piping (single valve/manifold) 1 MPa \approx 145.0 psi, 1 MPa = 10 bar

Position	Number of solenoids							Model No.	Specifications						
	2-position NC single	2-position NO single	2-position single	2-position double	3-position all ports closed	3-position A/B/R connection	3-position P/A/B connection		Series model No.	*1 Port size				Working pressure MPa	Pilot pressure MPa
										Air supply port: P	Cylinder port A/B	Exhaust Port R1, R2	Pilot port PA/PB		
●	●							3KA1 Series	3KA111	M5	M5	M5	M5	0.15 to 0.7	(0.6 x working pressure + 0.06) to 0.7
●							M3KA111		Rc1/8	Rc1/8	M5	M5			
	●						3KA1111		M5	M5	M5	M5			
		●					M3KA1111		Rc1/8	Rc1/8	Rc1/8	Rc1/8			
			●				3KA121		M5	M5	M5	M5			
				●			M3KA121	Rc1/8	Rc1/8	Rc1/8	Rc1/8				
					●		4KA1 Series	4KA111	M5	M5	M5	M5	0.15 to 0.7	(0.6 x working pressure + 0.06) to 0.7	
								M4KA111	Rc1/8	Rc1/8	Rc1/8				Rc1/8
								4KA121	M5	M5	M5				M5
								M4KA121	Rc1/8	Rc1/8	Rc1/8				Rc1/8
								4KA131	M5	M5	M5				M5
								M4KA131	Rc1/8	Rc1/8	Rc1/8				Rc1/8
								4KA141	M5	M5	M5				M5
								M4KA141	Rc1/8	Rc1/8	Rc1/8				Rc1/8
								4KA151	M5	M5	M5				M5
								M4KA151	Rc1/8	Rc1/8	Rc1/8				Rc1/8
							4KA2 Series	4KA211	Rc1/8	Rc1/8	Rc1/8	M5	0.15 to 0.7	(0.6 x working pressure + 0.06) to 0.7	
								M4KA211	Rc1/4	Rc1/4	Rc1/4				Rc1/4
								4KA221	Rc1/8	Rc1/8	Rc1/8				Rc1/8
								M4KA221	Rc1/4	Rc1/4	Rc1/4				Rc1/4
								4KA231	Rc1/8	Rc1/8	Rc1/8				Rc1/8
								M4KA231	Rc1/4	Rc1/4	Rc1/4				Rc1/4
								4KA241	Rc1/8	Rc1/8	Rc1/8				Rc1/8
								M4KA241	Rc1/4	Rc1/4	Rc1/4				Rc1/4
								4KA251	Rc1/8	Rc1/8	Rc1/8				Rc1/8
								M4KA251	Rc1/4	Rc1/4	Rc1/4				Rc1/4
							4KA3 Series	4KA311	Rc1/4	Rc1/4	Rc1/4	M5	0.15 to 0.7	(0.6 x working pressure + 0.06) to 0.7	
								M4KA311	Rc3/8	Rc3/8	Rc3/8				Rc3/8
								4KA321	Rc1/4	Rc1/4	Rc1/4				Rc1/4
								M4KA321	Rc3/8	Rc3/8	Rc3/8				Rc3/8
								4KA331	Rc1/4	Rc1/4	Rc1/4				Rc1/4
								M4KA331	Rc3/8	Rc3/8	Rc3/8				Rc3/8
								4KA341	Rc1/4	Rc1/4	Rc1/4				Rc1/4
								M4KA341	Rc3/8	Rc3/8	Rc3/8				Rc3/8
								4KA351	Rc1/4	Rc1/4	Rc1/4				Rc1/4
								M4KA351	Rc3/8	Rc3/8	Rc3/8				Rc3/8
							4KA4 Series	4KA411	Rc3/8	Rc3/8	Rc3/8	M5	0.15 to 0.7	(0.6 x working pressure + 0.06) to 0.7	
								M4KA411	Rc1/2	Rc1/2	Rc1/2				Rc1/2
								4KA421	Rc3/8	Rc3/8	Rc3/8				Rc3/8
								M4KA421	Rc1/2	Rc1/2	Rc1/2				Rc1/2
								4KA431	Rc3/8	Rc3/8	Rc3/8				Rc3/8
								M4KA431	Rc1/2	Rc1/2	Rc1/2				Rc1/2
								4KA441	Rc3/8	Rc3/8	Rc3/8				Rc3/8
								M4KA441	Rc1/2	Rc1/2	Rc1/2				Rc1/2
								4KA451	Rc3/8	Rc3/8	Rc3/8				Rc3/8
								M4KA451	Rc1/2	Rc1/2	Rc1/2				Rc1/2

*1: There are options available with the port size other than those in the above table. Refer to the model No. display on page 1326.

3KA1/4KA1 to 4 Series

Master valve; body piping

Flow characteristics

Series	Model No.	Port size	C[dm ³ /(s·bar)]	b
3KA1	3KA111	M5	0.65	0.37
	M3KA111		0.69	0.29
	3KA1111		0.65	0.37
	M3KA1111		0.69	0.29
	3KA121		0.65	0.37
	M3KA121		0.69	0.29
4KA1	4KA111	M5	0.65	0.37
	M4KA111		0.69	0.29
	4KA121		0.65	0.37
	M4KA121		0.69	0.29
	4KA131		0.60	0.32
	M4KA131		0.69	0.29
	4KA141		0.68	0.39
	M4KA141		0.97	0.31
	4KA151		0.61	0.36
	M4KA151		0.73	0.30
4KA2	4KA211	Rc1/8	2.6	0.43
	M4KA211		2.6	0.25
	4KA221		2.6	0.43
	M4KA221		2.6	0.25
	4KA231		2.3	0.43
	M4KA231		2.4	0.32
	4KA241		2.9	0.34
	M4KA241		3.0	0.16
	4KA251		2.3	0.42
	M4KA251		2.4	0.31
4KA3	4KA311	Rc1/4	5.6	0.49
	M4KA311		5.6	0.39
	4KA321		5.6	0.49
	M4KA321		5.6	0.39
	4KA331		4.1	0.60
	M4KA331		4.1	0.51
	4KA341		4.1	0.62
	M4KA341		5.9	0.37
	4KA351		4.2	0.68
	M4KA351		4.1	0.56
4KA4	4KA411	Rc3/8	9.8	0.49
	M4KA411		9.7	0.29
	4KA421		9.8	0.49
	M4KA421		9.7	0.29
	4KA431		8.2	0.54
	M4KA431		8.3	0.40
	4KA441		11	0.50
	M4KA441		11	0.30
	4KA451		8.4	0.54
	M4KA451		8.7	0.46

*1: Effective cross-sectional area "S" and sonic conductance "C" are converted as $S \approx 5.0 \times C$.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

3KA1/4KA1 to 4 Series

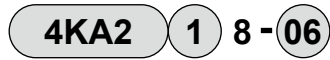
Master valve; body piping

How to order

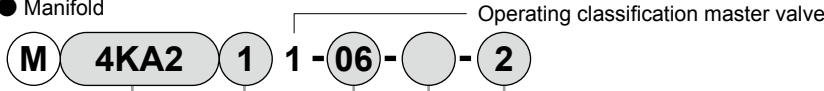
- Single master valve



- Single master valve for manifold (gasket, mounting screws attached)



- Manifold



A Model No.				
3 KA1	4 KA1	4 KA2	4 KA3	4 KA4

Code	Content					
B Solenoid position						
1	2-position NC single	●				
11	2-position NO single	●				
1	2-position single		●	●	●	●
2	2-position double	●	●	●	●	●
3	3-position all ports closed		●	●	●	●
4	3-position A/B/R connection		●	●	●	●
5	3-position P/A/B connection		●	●	●	●
8	2/3 position mix manifold *1		●	●	●	●

C Port size						
Port	P/A/B port (Single valve)	R1/R2 port (single valve) (1)=M5 (2)=Rc1/8 (3)=Rc1/4 (4)=Rc3/8				
	A/B Port (Manifold)	P/R1/R2 port (manifold) (1)=Rc1/8 (2)=Rc1/4 (3)=Rc3/8 (4)=Rc1/2				
M5	M5	(1)	(1)			
06	Rc1/8			(2)		
08	Rc1/4				(3)	
10	Rc3/8					(4)
GS 4	φ 4 Push-in fitting	(1)	(1)			
GS 6	φ 6 Push-in fitting	(1)	(1)	(2)		
GS 8	φ 8 Push-in fitting			(2)	(3)	
GS10	φ 10 Push-in fitting				(3)	(4)
GS12	φ 12 Push-in fitting					(4)

D Other options						
Blank	None	●	●	●	●	●
P	Mounting plate (Dedicated for 2-position single of single master valve)	●	●	●	●	●

E Station No.						
2 to 15	2 stations to 15 stations				●	●
2 to 20	2 stations to 20 stations	●	●	●		

[Example of model No.]

4KA311-08-P

- A Model: 4KA3
- B Solenoid position : 2-position single
- C Port size : Rc1/4
- D Other options : Mounting plate

⚠ Precautions for model No. selection

- *1: 8 is appropriate for the manifold assembly. Read the following for how to list the combination.
- *2: With regard to the printed model No., although the model No. when placing an order is "4KA□□8", the model No. listed on the product name plate will be "4KA□□1".

[Mix manifold]

- How to list combination descriptions

When selecting a combination manifold (write 8 from B), list the code (refer to table 1) for required functions and the arrangement No. (numbering up to specified station No. with left side as 1) in the field for remarks below the normal model No. display as shown in the example.

[Table 1]

Code	Function
S1	2-position single
S2	2-position double
S3	3-position all ports closed
S4	3-position A/B/R connection
S5	2-position P/A/B connection
MP	Masking plate

1	2	3	4	5	6	7
(S1)	(S2)	(S3)	(S3)	(S2)	(S1)	(S4)
2-position single	2-position double	3-position all ports closed	3-position all ports closed	2-position double	2-position single	3-position A/B/R connection

S1 S2 S3 S4 S5 MP

2 2 2 1 0 0

Example

The model No. when a combination manifold (7 stations) of an arrangement such as that on the left is configured with 4KA3 and A/B port: Rc1/8, upwards piping

M4KA381-06-7-2 2 2 1 0 0

S1=1, 6 S2=2, 5 S3=3, 4 S4=7
Code Position

3KA1/4KA1 Series

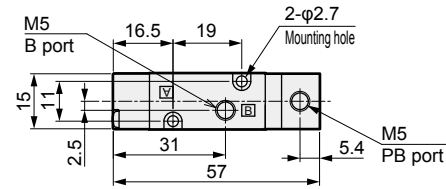
Master valve; body piping

Dimensions

3-port valve

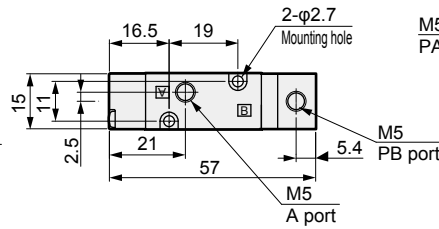
3KA111

● 2-position single NC



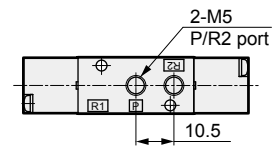
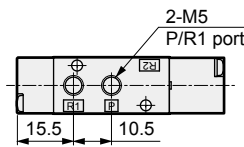
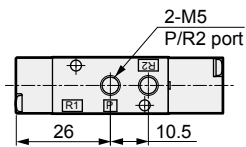
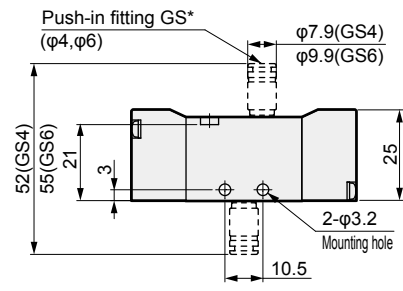
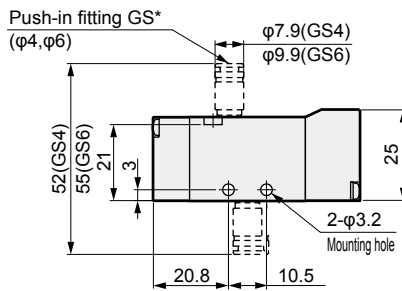
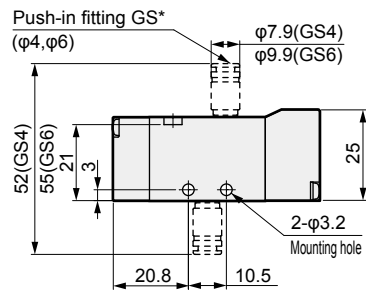
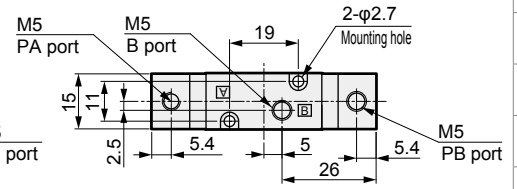
3KA1111

● 2-position single NO



3KA121

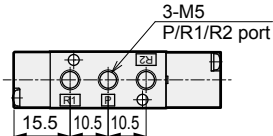
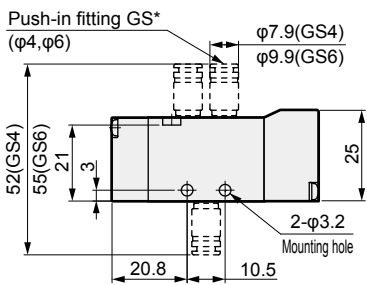
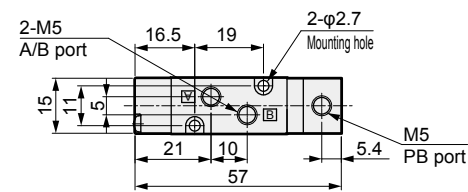
● 2-position double



5-port valve

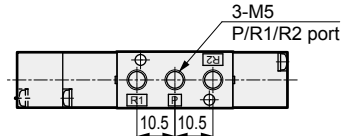
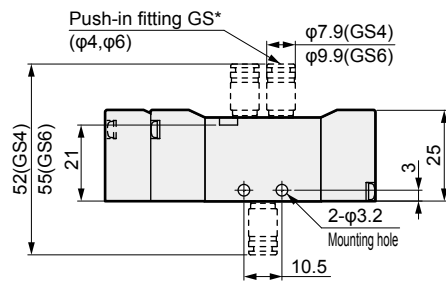
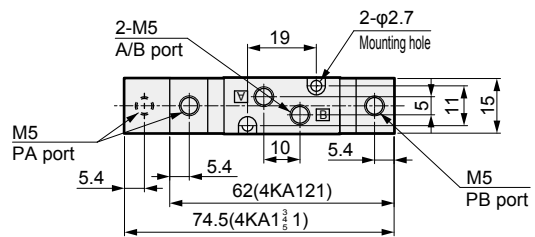
4KA111

● 2-position single



4KA1²/₃4¹/₅

● 2-position double/3 position



* Refer to pages 1246 and 1248 for type with mounting plate (P).

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4KA2/3 Series

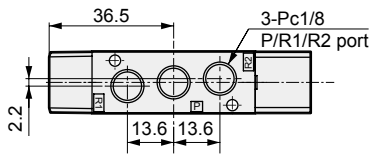
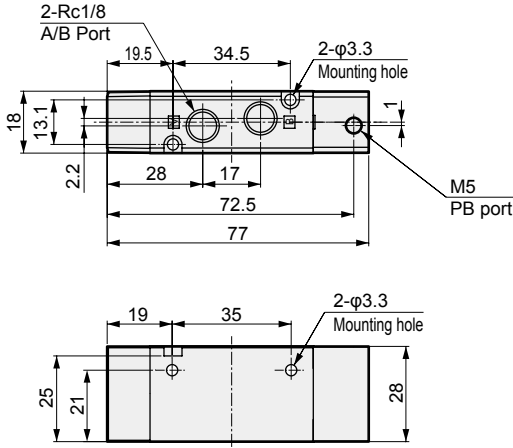
Master valve; body piping

Dimensions

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

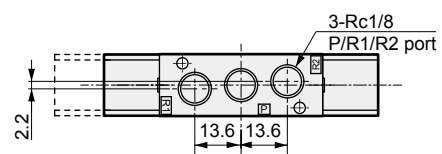
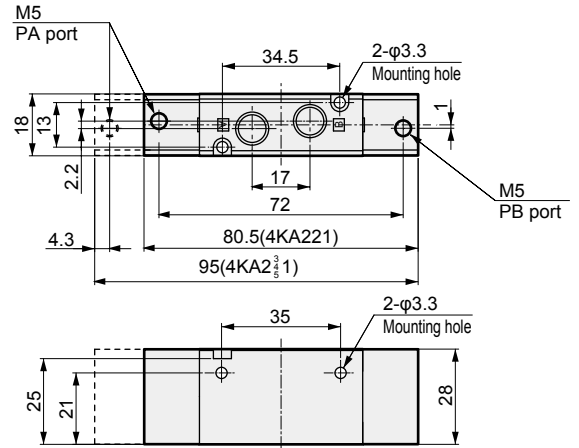
4KA211

● 2-position single



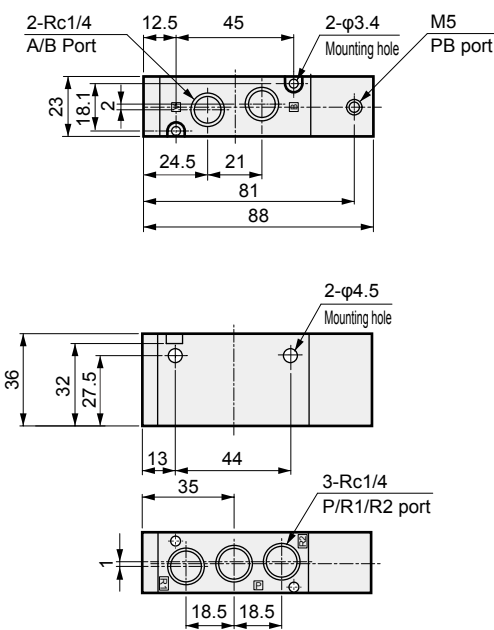
4KA2²/₃1

● 2-position double/3 position



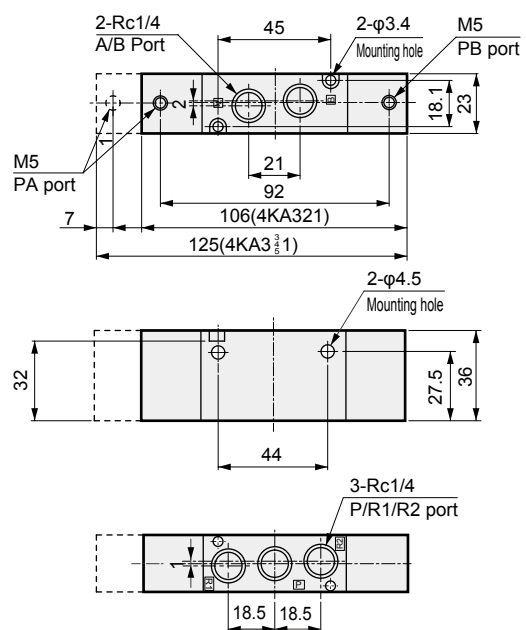
4KA311

● 2-position single



4KA3²/₃1

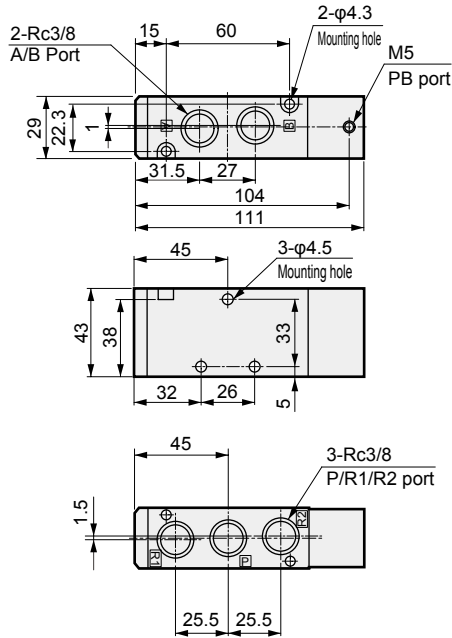
● 2-position double/3 position



Dimensions

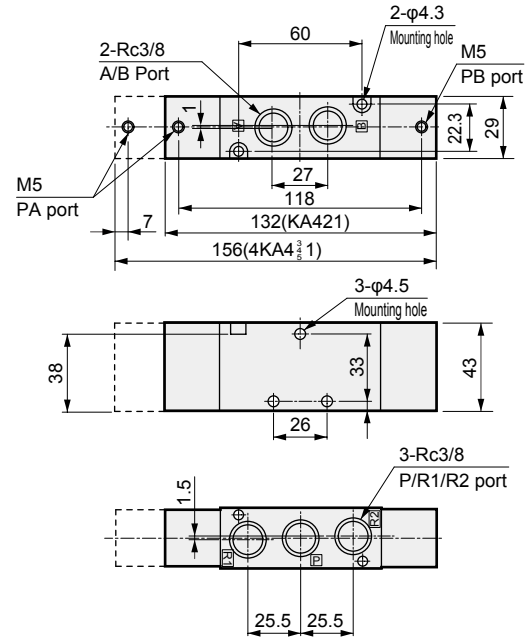
4KA411

- 2-position single



4KA4²/₃/₄/₅1

- 2-position double/3 position



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

* Refer to pages 1250, 1252, 1254 for type with mounting plate (P).



Master valve sub-plate piping
Pilot operated 3, 5-port pneumatic valve

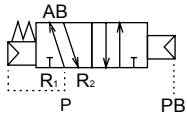
4KB1/2/3/4 Series

● Cylinder bore size: $\phi 20$ to $\phi 160$

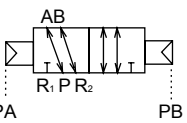


JIS symbol

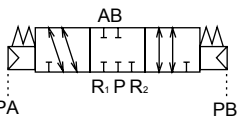
● 5-port valve
2-position single



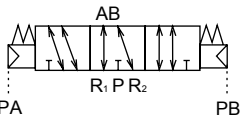
2-position double



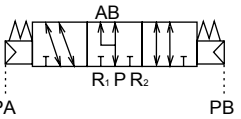
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



4KB1 only R1, R2
Common exhaust

Common specifications

Descriptions	Content
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.70 (≈ 100 psi, 7 bar)
Min. working pressure MPa	Refer to section on working pressure in table below
Ambient temperature $^{\circ}\text{C}$	-5 (23 $^{\circ}\text{F}$) to 50 (122 $^{\circ}\text{F}$)
Fluid temperature $^{\circ}\text{C}$	5 (41 $^{\circ}\text{F}$) to 50 (122 $^{\circ}\text{F}$)
Lubrication	Not required
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environment.

Individual specifications: sub-plate piping (single valve/manifold) 1 MPa \approx 145.0 psi, 1 MPa = 10 bar

Position No. of solenoids	Model No.	Specifications					
		*1 Port size				Working pressure MPa	Pilot pressure MPa
		Air supply port P	Cylinder port A/B	Exhaust port R1/R2	Pilot port PA/PB		
2-position single	Series Model No.						
2-position double							
3-position all ports closed							
3-position A/B/R connection							
3-position P/A/B connection							
●	4KB1 Series	Rc1/8	M5/Rc1/8	Rc1/8	M5	0.15 to 0.7	(0.6 x working pressure + 0.06) to 0.7
●	4KB2 Series	Rc1/8	M5/Rc1/8	Rc1/8	M5	0 to 0.7	0.2 to 0.7
●	4KB3 Series	Rc1/4	M5/Rc1/8	Rc1/4	M5	0.15 to 0.7	(0.6 x working pressure + 0.06) to 0.7
●	4KB4 Series	Rc3/8	M5/Rc1/8	Rc3/8	M5	0 to 0.7	0.2 to 0.7

*1: There are options available with the port size other than those in the above table. Refer to the model No. display on page 1332.

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

Flow characteristics

Series	Model No.	Port size	C[dm ³ /(s·bar)]	b
4KB1	4KB111	Rc1/8	0.89	0.44
	M4KB111	M5/Rc1/8	0.71	0.25
	4KB121	Rc1/8	0.89	0.44
	M4KB121	M5/Rc1/8	0.71	0.25
	4KB131	Rc1/8	0.63	0.50
	M4KB131	M5/Rc1/8	0.60	0.23
	4KB141	Rc1/8	1.2	0.29
	M4KB141	M5/Rc1/8	0.81	0.25
	4KB151	Rc1/8	0.75	0.39
M4KB151	M5/Rc1/8	0.67	0.32	
4KB2	4KB211	Rc1/8	2.7	0.24
	M4KB211		2.1	0.13
	4KB221		2.7	0.24
	M4KB221		2.1	0.13
	4KB231		2.4	0.29
	M4KB231		1.8	0.11
	4KB241		3	0.27
	M4KB241		2	0.17
	4KB251		2.4	0.34
	M4KB251		1.8	0.23
4KB3	4KB311	Rc1/4	6.3	0.26
	M4KB311		4.5	0.11
	4KB321		6.3	0.26
	M4KB321		4.5	0.11
	4KB331		5.6	0.27
	M4KB331		4.4	0.21
	4KB341		6.6	0.20
	M4KB341		4.8	0.18
	4KB351		5.9	0.27
M4KB351	4.3	0.20		
4KB4	4KB411	Rc3/8	12	0.24
	M4KB411		8.9	0.22
	4KB421		12	0.24
	M4KB421		8.9	0.22
	4KB431		11	0.27
	M4KB431		8.9	0.24
	4KB441		13	0.21
	M4KB441		9.4	0.23
	4KB451		10	0.22
	M4KB451		8.6	0.20

*1: Effective cross-sectional area "S" and sonic conductance "C" are converted as $S \approx 5.0 \times C$.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4KB1 to 4 Series

Master valve; sub-plate piping

How to order

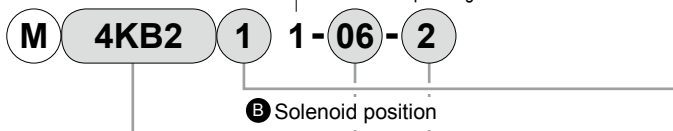
- Single master valve

4KB2 (1) 1-06

- Single master valve for manifold (gasket, mounting screws attached)

4KB2 (1) 8-00

- Manifold



A Model No.

B Solenoid position

C Port size

[Example of model No.]

4KB311-08

A Model: 4KB3

B Solenoid position : 2-position single

C Port size : Rc1/4

Precautions for model No. selection

*1: 8 is appropriate for the manifold assembly.

Read the following for how to list the combination.

*2: H6 and H8 can be manufactured with up to 10 stations.

D Station No.

[Mix manifold]

- How to list combination descriptions

When selecting a combination manifold (write 8 from B), list the code (refer to table 1) for required functions and the arrangement No. (numbering up to specified station No. with left side as 1) in the field for remarks below the normal model No. display as shown in the example.

[Table 1]

Code	Function
S1	2-position single
S2	2-position double
S3	3-position all ports closed
S4	3-position A/B/R connection
S5	2-position P/A/B connection
MP	Masking plate

1	2	3	4	5	6	7
(S1)	(S2)	(S3)	(S3)	(S2)	(S1)	(S4)
2-position single	2-position double	3-position All ports closed	3-position All ports closed	2-position double	2-position single	3-position A/B/R connection

S1 S2 S3 S4 S5 MP

2 2 2 1 0 0

Example

The model No. when a combination manifold (7 stations) of an arrangement such as that on the left is configured with 4KB3 and A/B port: Rc1/8, sideways piping

M4KB381-06-7-2 2 2 1 0 0

S1=1, 6 S2=2, 5 S3=3, 4 S4=7
Code Position

- With a mix manifold, when using 10 or more actuators of the same model No., specify using the codes in the table below.

Actuator quantity	10	11	12	13	14	15	16	17	18	19
Code	A	B	C	D	E	F	G	H	I	J

Code	Content	A Model No.			
		4KB1	4KB2	4KB3	4KB4
B Solenoid position					
1	2-position single	●	●	●	●
2	2-position double	●	●	●	●
3	3-position all ports closed	●	●	●	●
4	3-position A/B/R connection	●	●	●	●
5	3-position P/A/B connection	●	●	●	●
8	2-position/3-position mix manifold *1	●	●	●	●

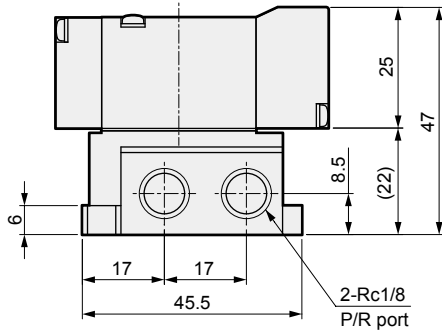
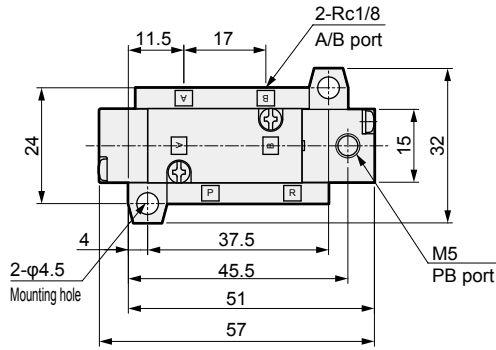
C Port size					
Port	P/A/B port (Single valves)	R1/R2 port (single valve) (1)=Rc1/8 (2)=Rc1/4 (3)=Rc3/8 (4)=Rc1/2			
		06	Rc1/8	(1)	(2)
08	Rc1/4		(2)	(2)	
10	Rc3/8			(3)	(3)
15	Rc1/2				(4)
Port	A/B port (Manifold)	P/R1/R2 port (manifold) (1)=Rc1/8 (2)=Rc1/4 (3)=Rc3/8 (4)=Rc1/2			
		M5	M5 *2	(1)	
06	Rc1/8	(1)	(2)		
08	Rc1/4		(2)	(3)	
10	Rc3/8			(3)	(4)
15	Rc1/2				(4)
M5Y	M5 (rear piping)	(1)			
06Y	Rc1/8 (rear piping)		(2)		
08Y	Rc1/4 (rear piping)			(3)	
10Y	Rc3/8 (rear piping)				(4)
H6	φ6 push-in fitting *2	(1)	(2)		
H8	φ8 push-in fitting *2		(2)	(3)	
H10	φ10 push-in fitting			(3)	(4)
H12	φ12 push-in fitting				(4)

D Station No.					
2 to 12	2 stations to 12 stations				●
2 to 15	2 stations to 15 stations			●	
2 to 20	2 stations to 20 stations	●	●		

Dimensions

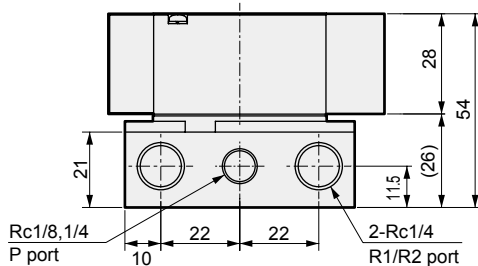
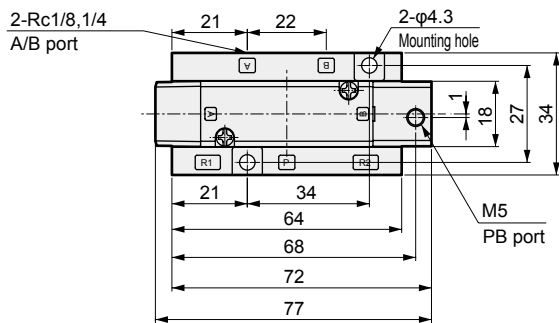
4KB111

- 2-position single



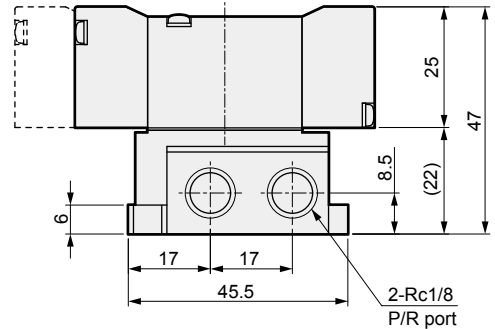
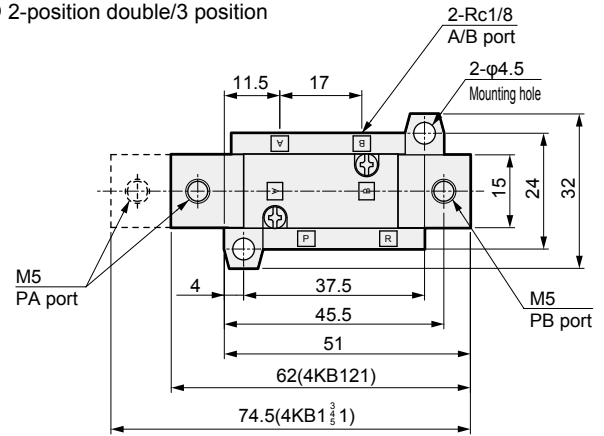
4KB211

- 2-position single



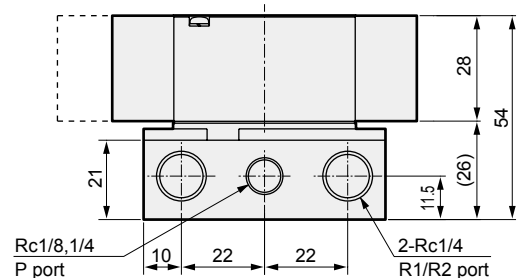
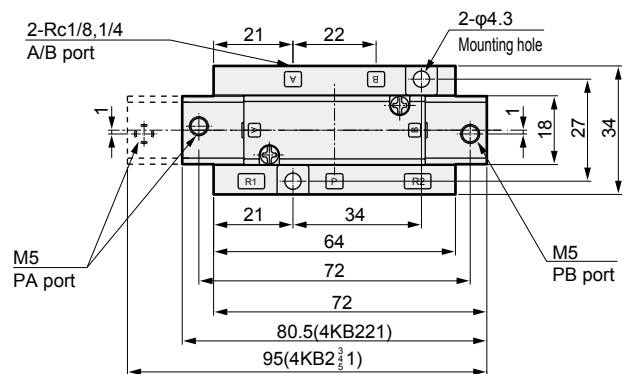
4KB1²₄³₅1

- 2-position double/3 position



4KB2²₄³₅1

- 2-position double/3 position



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4KB3/4 Series

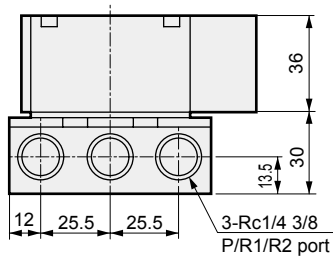
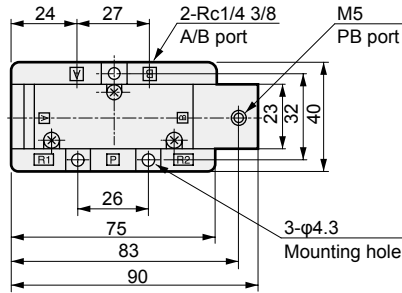
Master valve; sub-plate piping

Dimensions

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

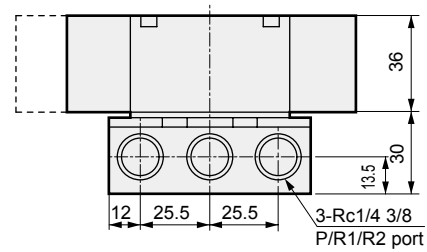
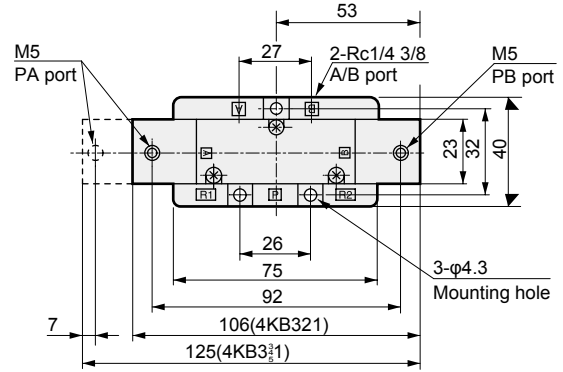
4KB311

● 2-position single



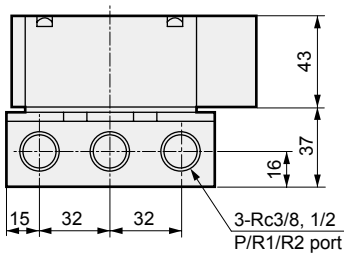
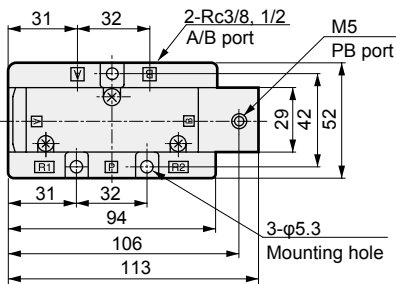
4KB3²/₄1

● 2-position double/3 position



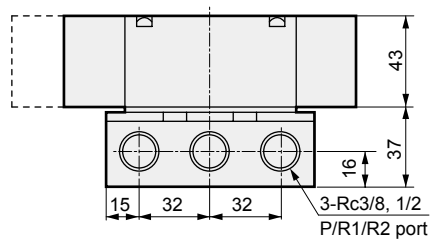
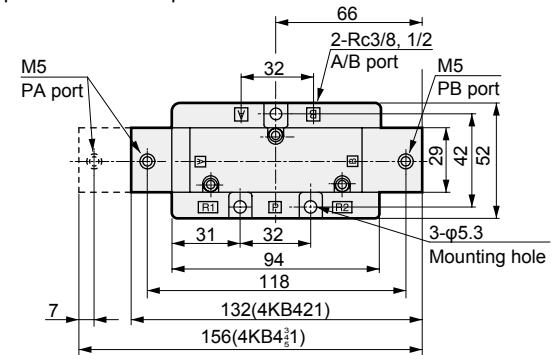
4KB411

● 2-position single



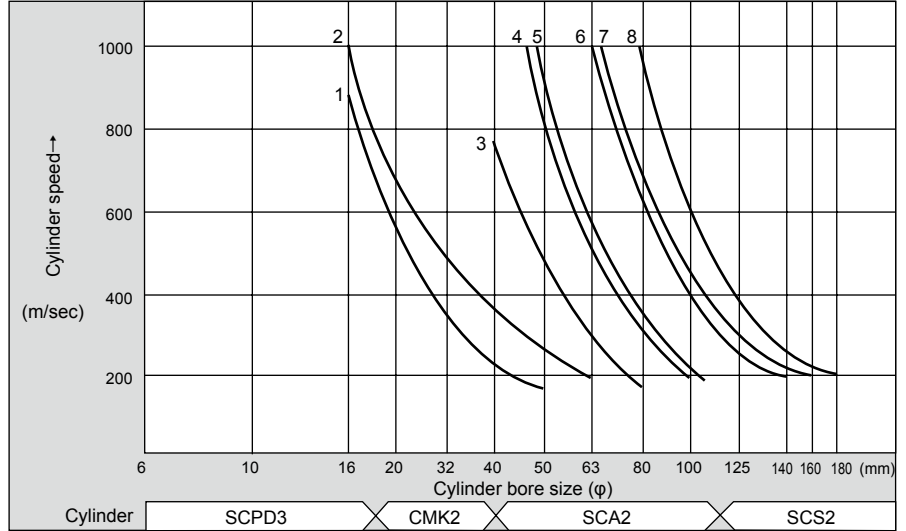
4KB4²/₄1

● 2-position double/3 position



The cylinder average speed is obtained from the combination of 4K_B Series and piping system.

Example: For the system when moving SCA2-63 with a speed of 500 mm/sec, system "4" devices can be selected. For clean air system components, select system "4" devices with which a required flow rate of 520 l/min or more will flow.



Standard system table

System No.	Valve	Speed controller	Silencer	Piping (1m)	Composite effective sectional area (mm ²)	Required flow rate (l/min)
1	4KA1 $\frac{1}{2}$ -M5	SC-M5-S	SL-M5	φ4 × φ2.5	1.6	115
2	4KB1 $\frac{1}{2}$ -06	SC1-6	SLW-6S	φ6 × φ4	3.2	215
3	4KA2 $\frac{1}{2}$ -06	SC1-6	SLW-6S	φ6 × φ4	4.8	346
4	4KB2 $\frac{1}{2}$ -08	SC1-8	SLW-8S	φ8 × φ5.7	8	581
5	4KA3 $\frac{1}{2}$ -08	SC1-8	SLW-8S	φ8 × φ5.7	9.1	660
6	4KB3 $\frac{1}{2}$ -10	SC1-10	SLW-10L	φ10 × φ7.2	16.5	1285
7	4KA4 $\frac{1}{2}$ -10	SC1-10	SLW-10L	φ10 × φ7.2	19	1289
8	4KB4 $\frac{1}{2}$ -15	SC1-15	SLW-15A	φ12 × φ8.9	25.8	1749

*1: The required flow rate is the condition for when the pressure is 0.5 MPa.

*2: Effective cross-sectional area "S" and sonic conductance "C" are converted as $S \approx 5.0 \times C$.

Clean air system components

Part name	Model No.	Port size	Max. flow rate l/min (ANR)
F.R.L. combination	C1000-6-W	Rc 1/8	450
	C1000-8-W	Rc 1/4	630
	C3000-8-W	Rc 1/4	1280
	C3000-10-W	Rc 3/8	1750
	C4000-8-W	Rc 1/4	1430
	C4000-10-W	Rc 3/8	2400
	C4000-15-W	Rc 1/2	3000
	C8000-20-W	Rc 3/4	7000
C8000-25(-A32)-W	Rc1(Rc1 1/4)	7500	
F.R. unit	W1000-6-W	Rc 1/8	830
	W1000-8-W	Rc 1/4	1150
	W3000-8-W	Rc 1/4	2150
	W3000-10-W	Rc 3/8	2430
	W4000-8-W	Rc 1/4	2500
	W4000-10-W	Rc 3/8	4350
	W4000-15(-A20)-W	Rc 1/2, Rc 3/4	4750
	W8000-20-W	Rc 3/4	10000
W8000-25(-A32)-W	Rc1(Rc1 1/4)	10000	
Air filter (F)	F1000-6-W	Rc 1/8	460
	F1000-8-W	Rc 1/4	610
	F3000-8-W	Rc 1/4	1230
	F3000-10-W	Rc 3/8	1500
	F4000-8-W	Rc 1/4	1320
	F4000-10-W	Rc 3/8	2140
	F4000-15(-A20)-W	Rc 1/2 (Rc 3/4)	3000
	F8000-20-W	Rc 3/4	6400
F8000-25(-A32)-W	Rc1(Rc1 1/4)	6800	

Part name	Model No.	Port size	Max. flow rate l/min (ANR)
Regulator (R)	R1000-6-W	Rc 1/8	770
	R1000-8-W	Rc 1/4	1350
	R3000-8-W	Rc 1/4	2000
	R3000-10-W	Rc 3/8	2600
	R4000-8-W	Rc 1/4	2500
	R4000-10-W	Rc 3/8	4400
	R4000-15-W	Rc 1/2 (Rc 3/4)	5000
	R8000-20-W	Rc 3/4	14000
	R8000-25(-A32)-W	Rc1(Rc1 1/4)	11000
	Lubricator (L)	L1000-6-W	Rc 1/8
L1000-8-W		Rc 1/4	700
L3000-8-W		Rc 1/4	1100
L3000-10-W		Rc 3/8	2250
L4000-8-W		Rc 1/4	1000
L4000-10-W		Rc 3/8	1700
L4000-15(-A20)-W		Rc 1/2 (Rc 3/4)	2700
L8000-20-W		Rc 3/4	6300
L8000-25(-A32)-W	Rc1(Rc1 1/4)	10000	

(Note)

Max. flow rate: Flow rates for FRL, FR, and R when primary pressure is 0.7 MPa, set pressure is 0.5 MPa, and pressure drop is 0.1 MPa. Flow rate for F when primary pressure is 0.7 MPa and pressure drop is 0.02 MPa. Flow rate for L when primary pressure is 0.5 MPa and pressure drop is 0.03 MPa.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/
LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/
NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending