

Inline clean filter

FCS500 Series

● Port size: Rc1/8, Rc1/4, R1/8, R1/4
push-in fitting $\varnothing 4/\varnothing 6/\varnothing 8$

JIS symbol



Specifications

Descriptions	Standard element resin	Male thread piping	P9 element stainless steel	
	FCS500- (*1) (*2)	FCS500- (*1) (*2)	FCS500-66-P90 FCS500-66-P94	FCS500-88-P90 FCS500-88-P94
Working fluid	Compressed air, N ₂			
IN side port size (*1)	Select from $\varnothing 4$, $\varnothing 6$ and $\varnothing 8$	Select from $\varnothing 4$, $\varnothing 6$, $\varnothing 8$, R1/8 and R1/4	Rc1/8	Rc1/4
OUT side port size (*2)			Rc1/8	Rc1/4
Proof pressure MPa	1.5	1.5	2.25[air], 1.5[N ₂]	
Differential pressure proof MPa	0.5 (0.2 at 45 to 50 °C) *3	0.5 (0.2 at 45 to 50 °C) *3	0.5	
Working pressure MPa	-0.095 to 0.99 *2 *4	-0.095 to 0.99 *2 *4	-0.095 to 1.5 (air), -0.095 to 0.99 (N ₂) *5	
Ambient temperature/fluid temperature °C	5 to 50		5 to 45	
Filtration rating μm	0.01 (removal efficiency 99.99%)			
Processing flow rate l/min (ANR) *1	50 (H8H8 type: 80)	50 (H88A and 8AH8 types: 80)	50	80
Weight g	45	45	100	100
Material	Body	Polyamide	Polyamide, aluminum (alumite treatment)	
	Case	Transparent polyamide	Transparent polyamide	
	Element	Polypropylene + urethane		
Assembling/inspection/packageing	Integrated production in cleanroom			
Cleaning	Degreasing and cleaning			

*1: Initial flow rate at primary pressure 0.7 MPa and pressure drop 0.03 MPa.

*2: Max. working pressure varies with working temperature. Check graphs showing the relationship.

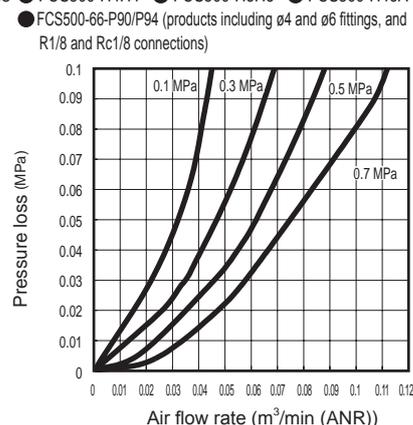
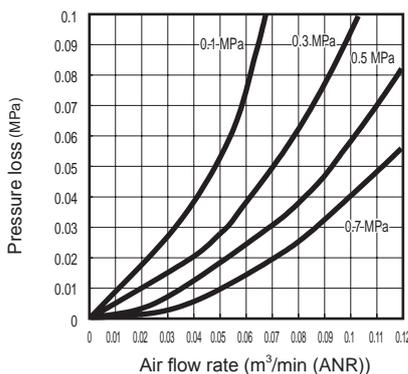
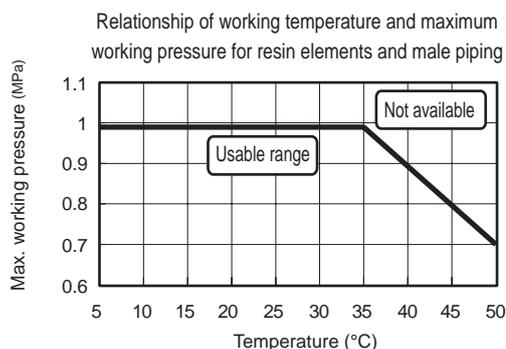
*3: 0.5 [0.2 MPa at 45 to 50 °C]

*4: -0.095 to 0.99

*5: -0.095 to 1.5 [air], -0.095 to 0.99 [N₂]

Flow characteristics

● FCS500-H8H8 ● FCS500-H88A ● FCS500-8AH8 ● FCS500-H4H4 ● FCS500-H6H6 ● FCS500-H46A
● FCS500-88-P90/P94



How to order

● Resin

FCS500 — **H4** **H4**

Model No.
(clean room specifications)
(oil-prohibited specifications)

A IN side
port size

B OUT side
port size

A IN side port size

H4	ø4
H6	ø6
H8	ø8
6A	R1/8
8A	R1/4

B OUT side port size

H4	ø4
H6	ø6
H8	ø8
6A	R1/8
8A	R1/4

Note 1: Two screws (M2.5 × 25) and two flat washers are included with the product.
(These are not included when 6A or 8A is selected for IN or OUT side connection port size.)

Note 2: When using male thread piping for both IN and OUT sides, confirm that piping does not apply a lateral load or bending torque during mounting.

● Stainless steel

FCS500 — **88** — **B** — **P90**

Model No.
(clean room specifications)
(oil-prohibited specifications)

A Port size

B Attached

C
Clean room
specifications

A Port size

66	IN side/OUT side port size Rc1/8
88	IN side/OUT side port size Rc1/4

B Attached

Blank	None
B	Bracket, set screw

C Clean room specifications

	Structure/treatment	Material restriction
P90	Stainless steel material used, oil prohibited	-
P94	Stainless steel material used, oil prohibited	Copper-based/silicon-based/halogen-based materials (fluorine, chlorine, bromine) are prohibited

Note: " P94 " is custom order.

Weight: 6 g

● Bracket model No.

FCS500-B

(Bracket × 1, set screw (M4 × 6) × 2)

SCPD3

SCM

SSD2

MDC2

SMG

LCM

LCR

LCG

LCX

STM

STG

STR2

MRL2

GRC

Cylinder
Switch

MN3E
MN4E

4GA/B

M4GA/B

MN4GA/B

F.R.(module
unit)

**Clean
F.R**

Precision
R

Press gauge
Diff. press gauge

Electro-
pneumatic R

Speed
controller

Auxiliary
valve

Fitting/
tube

Clean
air unit

Pressure
sensor

Flow rate
sensor

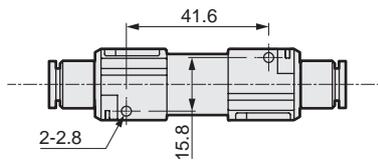
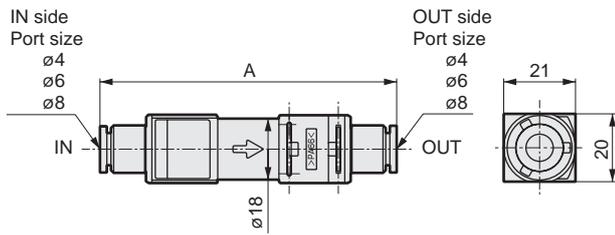
Valve for
air blow

Ending

Dimensions

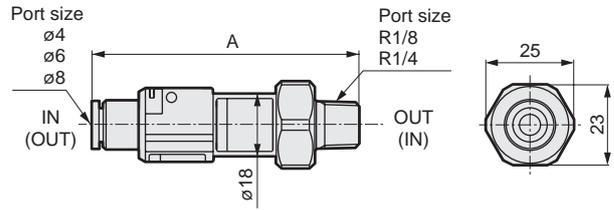
● Resin

Port size
IN side (cartridge fitting) - OUT side (cartridge fitting)

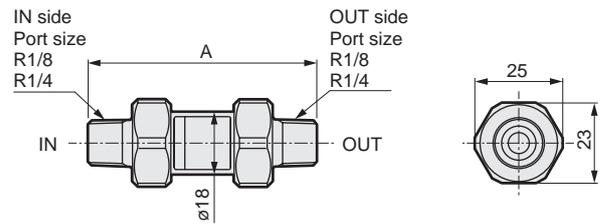


● Male thread piping

Port size
Cartridge fitting - male thread

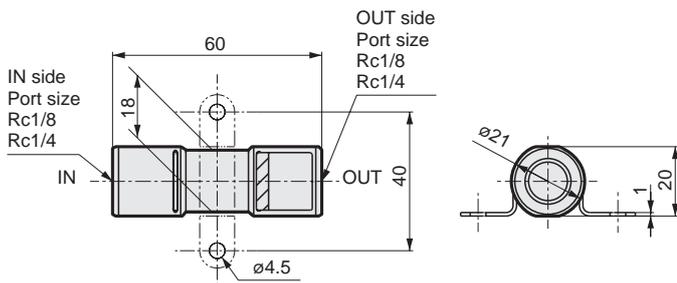


Port size
Male thread - male thread



Model No.	FCS500 (standard element, resin/male thread piping)													
Port size model No.	H4H4	H4H6 H6H4	H4H8 H8H4	H46A 6AH4	H48A H86A 6AH8 8AH4	6A6A	6A8A 8A6A	H6H6	H6H8 H8H6	H66A 6AH6	H68A 8AH6	8A8A	8AH8 H88A	H8H8
Dimension A	80.5	83	84	69.5	73	58.5	62	85	86	72	75	65	76	87

● Stainless steel



MEMO

SCPD3

SCM

SSD2

MDC2

SMG

LCM

LCR

LCG

LCX

STM

STG

STR2

MRL2

GRC

Cylinder
Switch

MN3E
MN4E

4GA/B

M4GA/B

MN4GA/B

F.R.(module
unit)

**Clean
F.R**

Precision
R

Press.gauge
Diff.press.gauge

Electro-
pneumatic R

Speed
controller

Auxiliary
valve

Fitting/
tube

Clean
air unit

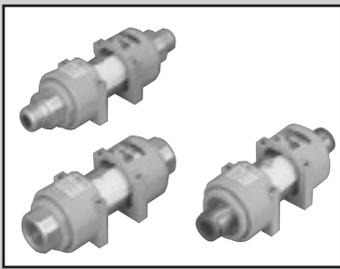
Pressure
sensor

Flow rate
sensor

Valve for
air blow

Ending

SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder switch
MN3E
MN4E
4GA/B
M4GA/B
MN4GA/B
FR (module unit)
Clean FR
Precision R
Press gauge
Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending



Inline clean filter

FCS1000 Series

- Port size: Rc1/4, Rc3/8, R1/4, R3/8
Push-in fitting $\varnothing 8/\varnothing 10/\varnothing 12$

JIS symbol



Specifications

Descriptions	Resin		Stainless steel (custom order)	
	FCS1000-(*1) (*2)		FCS1000-(*1) (*2)-P90 FCS1000-(*1) (*2)-P94	
Working fluid	Compressed air, N ₂			
IN side port size (*1)	Select from push-in fittings $\varnothing 8, \varnothing 10, \varnothing 12,$ R1/4, R3/8, Rc1/4 and Rc3/8		Select from Rc1/4 and Rc3/8	
OUT side port size (*2)				
Proof pressure	MPa	1.5	2.25 (compressed air), 1.5 (N ₂)	
Differential pressure proof	MPa	0.5		
Working pressure	MPa	-0.095 to 0.99	-0.095 to 1.5 (compressed air), -0.095 to 0.99 (N ₂) *2	
Ambient temperature/fluid temperature	°C	5 to 45		
Filtration rating	μm	0.01 (removal efficiency 99.99%)		
Processing flow rate	ℓ/min (ANR)	300 to 400 *1		
Material	Body	Polyamide	Stainless steel	
	Case	Transparent polyamide	Stainless steel	
	Element	Polypropylene + urethane		
Assembling/inspection/packaging	Integrated production in cleanroom			
Cleaning	Degreasing and cleaning			

*1: Initial flow rate at primary pressure 0.7 MPa and pressure drop 0.03 MPa. (Depending on load.)

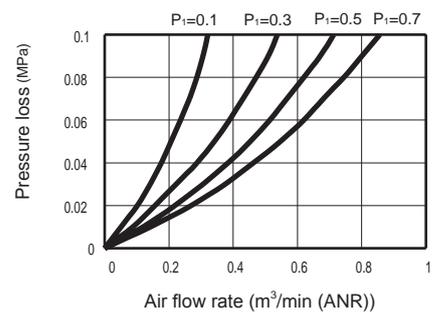
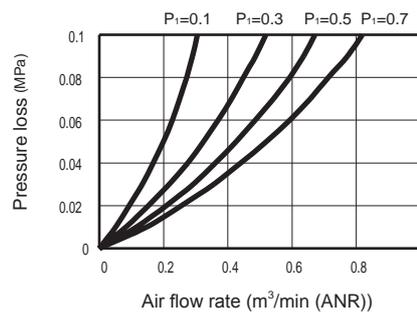
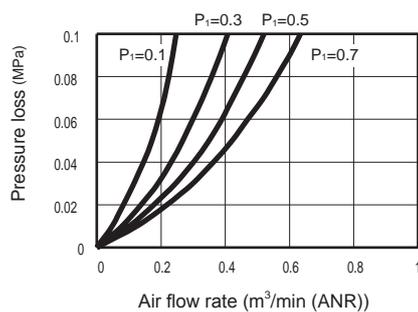
*2: -0.095 to 1.5 [air], -0.095 to 0.99 [N₂]

Flow characteristics

- FCS1000-H8H8
- FCS1000-8A8A

- FCS1000-H10H10
- FCS1000-10A10A
- FCS1000-88
- FCS1000-88-P90/P94

- FCS1000-H12H12
- FCS1000-1010
- FCS1000-1010-P90/P94



How to order

● Resin

FCS1000 – **H8** **H8**

Model No.
(clean room specifications)
(oil-prohibited specifications)

A IN side
port size

B OUT side
port size

A IN side port size

H8	ø8
H10	ø10
H12	ø12
8A	R1/4
10A	R3/8
8	Rc1/4
10	Rc3/8

B OUT side port size

H8	ø8
H10	ø10
H12	ø12
8A	R1/4
10A	R3/8
8	Rc1/4
10	Rc3/8

Note 1: Two set screws (M3 x 40), two plain washers, and two spring washers are included with the product.

● Stainless steel (custom order)

FCS1000 – **8** **8** – **P90**

Model No.
(clean room specifications)
(oil-prohibited specifications)

A IN side
port size

B OUT side
port size

C Clean room
specifications

A IN side port size

8	Rc1/4
10	Rc3/8

B OUT side port size

8	Rc1/4
10	Rc3/8

C Clean room specifications

	Structure/treatment	Material restriction
P90	Stainless steel material used, oil prohibited	-
P94	Stainless steel material used, oil prohibited	Copper-based/silicon-based/halogen-based materials (fluorine, chlorine, bromine) are prohibited

● Discrete model for replacement element (1 element, 2 O-rings)

- For resin : **FCS1000-E**
- Stainless steel

For P90 : **FCS1000-E-P90** (custom order)

For P94 : **FCS1000-E-P94** (custom order)

SCPD3

SCM

SSD2

MDC2

SMG

LCM

LCR

LCG

LCX

STM

STG

STR2

MRL2

GRC

Cylinder
Switch

MN3E
MN4E

4GA/B

M4GA/B

MN4GA/B

F.R.(module
unit)

**Clean
F.R**

Precision
R

Press gauge
Diff. press gauge

Electro-
pneumatic R

Speed
controller

Auxiliary
valve

Fitting/
tube

Clean
air unit

Pressure
sensor

Flow rate
sensor

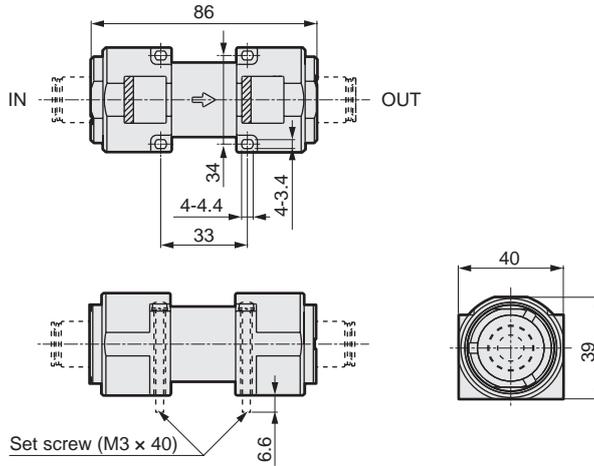
Valve for
air blow

Ending

FCS1000 Series

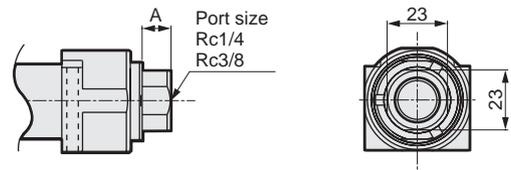
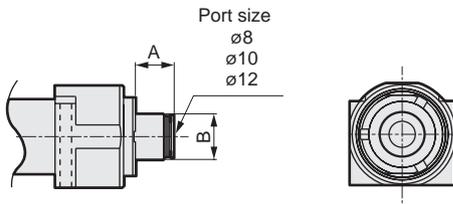
Dimensions

● Resin

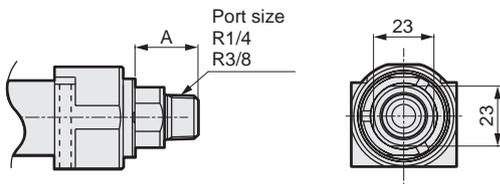


• Push-in fitting (ø8, ø10, ø12)

• Rc screw (Rc1/4, Rc3/8)

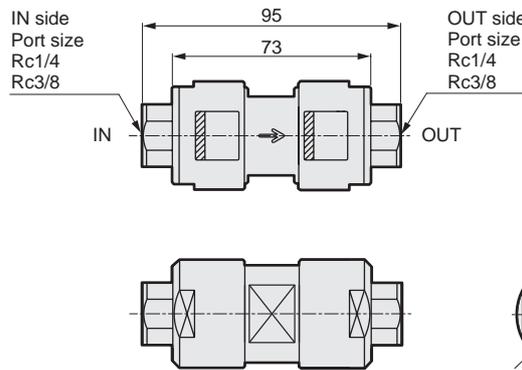


• R thread (R1/4, R3/8)



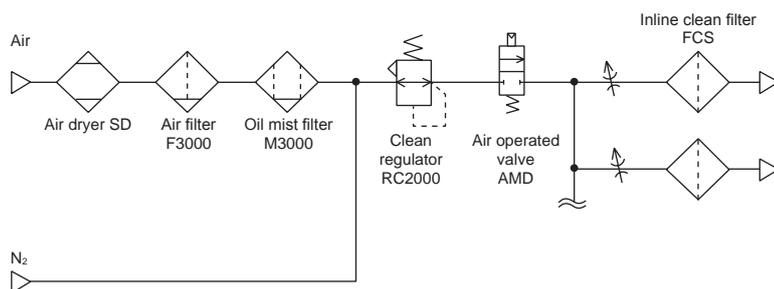
Connection model No.	Port size	A	B
H8	ø8 push-in fitting	12	ø17.5
H10	ø10 push-in fitting	14.5	ø17.5
H12	ø12 push-in fitting	16	ø19.5
8A	R1/4	24	-
10A	R3/8	24	-
8	Rc1/4	11	-
10	Rc3/8	11	-

● Stainless steel

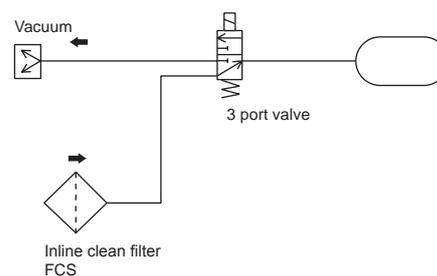


Applications and example of applicable circuit

● Application 1: Use as a precision filtration blow filter to filter out air and N₂ gas and provide clean air.



● Application 2: Use a vacuum break filter to blow in vacuum break circuit and provide clean air.



Custom order

These products are available as custom-made products. Contact CKD Sales Office for details.

FCS500 Connection section integrated

- This integrated connection having no sealed members is ideal for leakage testers.
- Flow rate: 10 l/min (ANR) *1
- Port size : R1/8, R1/4



FCS500 Large flow rate

- FCS500 Series increased flow rate specifications
- Flow rate: 100 to 120 l/min (ANR) *1
- Port size : ø6, ø8 push-in fitting, R1/8, R1/4



FCS500 Radial fitting

- Radial push-in fitting saves space during piping
- Flow rate: 50 to 80 l/min (ANR) *1
- Port size : ø4, ø6, ø8 Radial push-in fitting



FCS1000 Stainless steel large flow rate

- Flow rate: 450 l/min (ANR) *1
- Port size : Rc1/4, Rc3/8



FCS Large flow rate large bore size

- Flow rate : 2000 l/min (ANR) and over *1
- Port size : Rc1
- Body material: Aluminum (alumite treatment)



*1: Initial flow rate at primary pressure 0.7 MPa and pressure drop 0.03 MPa. Contact CKD for other piping methods or port sizes.

SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R.(module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending