



Oil mist filter

# M1000/M3000/M4000/M8000 Series

For measurement and instrumentation, etc. in oil content inhibited circuit.

JIS symbol



CAD DATA AVAILABLE.

## Specifications

Descriptions	M1000	M3000	M4000	M8000
Appearance				
Working fluid	Compressed air			
Working pressure range MPa	0.1 to 1.0			
Withstanding pressure MPa	1.5			
Drain capacity cm <sup>3</sup>	3	45	80	80
Product mass kg	0.096	0.28	0.52	1.35
Standard accessories	Bowl guard			

Mantle Option name		Blank (M type)	S (S type)	X (X type)
Treated flow rate <sup>Note 1</sup> ℓ / min(ANR)	M1000- □	150	150	150
	M3000- □	360	450	450
Primary pressure 0.7MPa	M4000- □	825	1000	1000
At pressure drop 0.01MPa	M8000- □	2600	2900	2900
Ambient temperature range °C		5 to 60		5 to 30
Filtration rating μm		0.01 (nominal value)	0.3	Sucking by activated charcoal <sup>Note 4</sup>
Secondary side oil content density mg/m <sup>3</sup>		0.1 or less <sup>Note 2 Note 3</sup>	1.0 or less <sup>Note 2</sup>	0.03 or less <sup>Note 5</sup>
Mantle (element) replacement		1 year (6000 hours) or pressure drop 0.1MPa		— <sup>Note 6</sup>

Note 1. Use this products within the rated flow range.

If this product is installed onto the place where there are suddenly exceeding rated flow and large pulsation, damaged chips and oil content / drain etc. oil mantle may splash to the secondary side, and may pose problems at the terminal.

Note 2. Where primary side oil content density 30mg/m<sup>3</sup>.

Note 3. Install an oil mist filter (S type) as a pre-filter to prevent soon clogging at the primary side.

Note 4. Activated charcoal particle may flow to the secondary side, so install an air filter (F series) or an oil mist filter (M series M type or S type) to the secondary side.

Note 5. Install an oil mist filter (M series M type) to the primary side.

Note 6. Mantle (element) replacement term may vary per odor density in compressed air, so it is not specified.

Total period from start of installation until oil odor starts smelling is defined as deodorization effective period, and replace mantle (element) regularly.

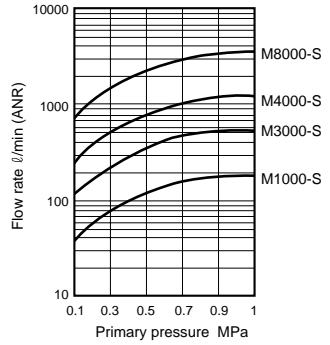
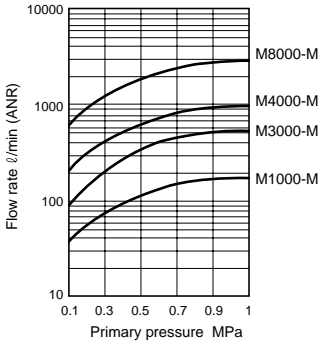
Also, use this products where the primary side air temperature is 30°C or less. A high temperature may drop deodorization effect, so radiate heat during operation.

# Oil Mist Filter

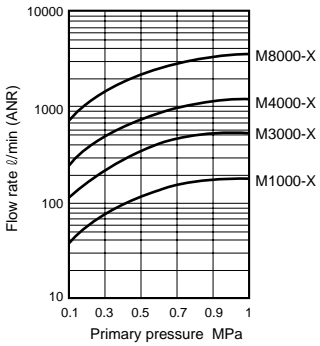
Flow characteristics (max. flow rate)

• M \* 00-M

• M \* 00-S

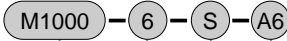


• M \* 00-X



# Oil Mist Filter Series

## How to order



A Model

B Port size

C Option  
 Note 1  
 Note 2  
 Note 3  
 \* Refer to Page 267  
 for explanation on options.

D Attachment  
 Note 4  
 Note 5

A Model	M1000	M3000	M4000	M8000
---------	-------	-------	-------	-------

Symbol	Descriptions				
B Port size					
6	Rc1/8	●			
8	Rc1/4	●	●	●	
10	Rc3/8		●	●	
15	Rc1/2			●	
20	Rc3/4				●
25	Rc1				●

C Option						
Drainage	Blank	With manual drain cock	●	●	●	●
	F1	Automatic drain with manual override (NC type)		●	●	●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl		●	●	●
	M	Metal bowl		●	●	●
Mantle (element)	Blank	M type (nominal 0.01 μm; remaining oil 0.1mg/m <sup>3</sup> )	●	●	●	●
	S	S type (0.3 μm; remaining oil 1.0mg/m <sup>3</sup> )	●	●	●	●
	X	X type (deodorization; remaining oil 0.03mg/m <sup>3</sup> )	●	●	●	●
Differential pressure detection	Blank	No differential pressure detection port	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)				●

D Attachment (attached)					
A6	Rc1/8 piping adapter sets	●			
A8	Rc1/4 piping adapter sets	●	●	●	
A10	Rc3/8 piping adapter sets		●	●	●
A15	Rc1/2 piping adapter sets			●	●
A20	Rc3/4 piping adapter sets				●
A25	Rc1 piping adapter set				●
A32	Rc1 1/4 piping adapter sets				●
B	C type bracket	●	●	●	●

## ⚠ Note on model No. selection

Note 1: Select options per drainage, bowl material, and differential pressure detection sections.

When selecting multiple options, write them from the top.

Note 2: NO type automatic drain is not selected.

Note 3: Min. operation pressure of automatic drain is 0.15MPa.

Note 4: A piping adaptor set A\*00 \*\* (refer to page 586) is attached.

Note 5: Refer to "auxiliary components" (Page 557 to) for attachments.

Also, piping adapter set and C type bracket can not be used together.

## Oil mist filter: How to use optional mantle

### Major recommended circuit

\* S type



### Applications

General industrial air

- Air tool
- Air drill / air driver
- Air grinder
- Labor saving device and components
- Jig tool for compressed air
- Air chuck
- Air vice
- Precision part cleaning air blow

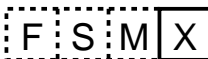
\* M type



Oil free air

- Instrumentation
- Measurement
- Logic control
- Movable element / pure fluid element
- Luxury painting
- Precise industry

\* X type



Deodorization air

- Food industry
- Pharmaceutical industry
- Stirring
- Transportation
- Dry
- Packing
- Air for brewing

## Option symbol and shape of mantle

Option symbol	Appearance shape	
Blank (M type)	End plate	Plastic form Red
	Black	
S (S type)	End plate	Plastic form Red
	Green	
X (X type)	End plate	Punching metal
	Black	

Caution: Specifications and dimensions could be change without notice to improve the products.  
 Please order a part after checking option symbol of model No. of main body

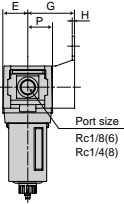
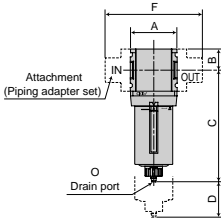
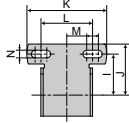
# Oil Mist Filter Series

## Dimensions

- M1000

 (File name: Page 363 or Ending 15)

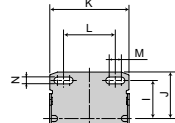
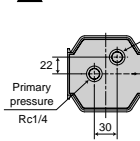
Attachment  
(C type bracket)



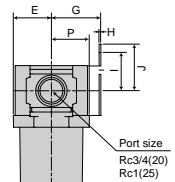
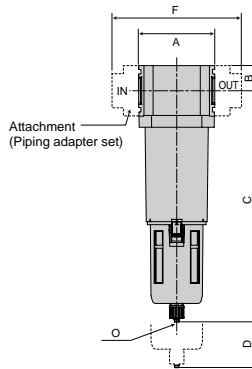
- M8000

 (File name: Page 363 or Ending 15)

Attachment  
(C type bracket)

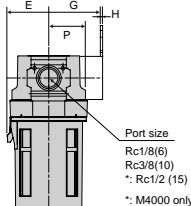
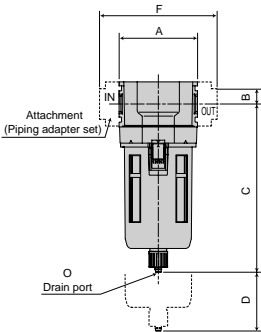
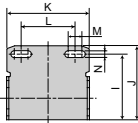


Option  
(With differential pressure detection port)



- M3000
- M4000

 (File name: Page 363 or Ending 15)

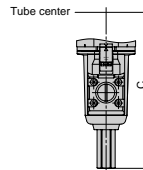


• Types with manual cock and automatic drain are same dimensions for a plastic bowl.

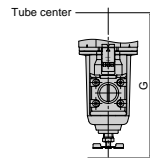
- Metal bowl (option)  
[M3000, M4000, M8000]

 (File name: Page 589 or Ending 20)

Metal manual cock  
With automatic drain



With petcock



	Metal manual cock with automatic drain		With petcock
	C	O	G
M3000	164	Rc1/4	140
M4000	187		166
M8000	318		295

Note: C type bracket and piping adapter set can not be used together.

## Dimensions table

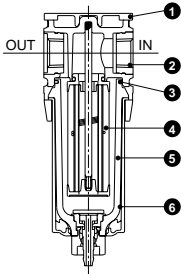
Model No.	A	B	C	D	E	F	Bracket dimension								O (barbed joint applicable tube)	P
							G	H	I	J	K	L	M	N		
M1000	40	18	96	60	21.5	83	40	2	35	43.5	68	44	10	6.4	4 mm dia. Soft nylon tube	21.5
M3000	63	22.5	147	60	34.5	103	45	2.3	45	53.5	67	34.5	16.5	7	Inner diameter 5.7 to 8 dia. Soft nylon tube	31.5
M4000	80	22.5	170	60	42.5	<sup>120</sup> Rc1/4 130	55	2.3	45	53.5	84	55	14	7	5 mm dia.	37.5
M8000	100	33	301	200	50	<sup>170</sup> Rc1/4 176	65	2.3	50	61	104	68	16	9	Soft vinyl tube	50

# Oil Mist Filter

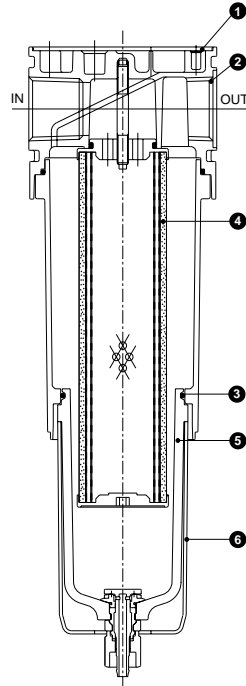
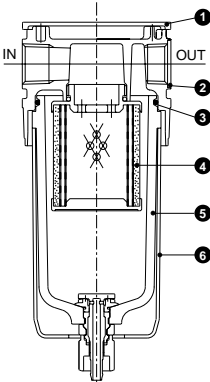
## Internal structure and parts list

• M1000

• M8000



• M3000 / M4000



No.	Part name	Material			
		M1000	M3000	M4000	M8000
1	Plate cover	ABS resin			
2	Body	Polyamide resin	Aluminum ally die casting		
3	O ring <small>Note 1</small>	Special nitrile rubber			
4	Mantle assembly	—			
5	Bowl assembly	Polycarbonate resin, polyacetal resin and urethane rubber resin			
6	Bowl guard	Polyamide resin	Polyamide resin		

Note 1: O ring of M1000 has the special shape.

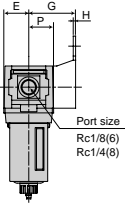
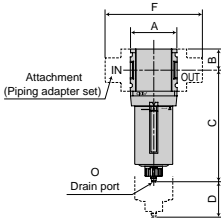
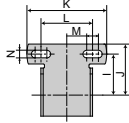
# Oil Mist Filter Series

## Dimensions

### M1000

 (File name: Page 363 or Ending 15)

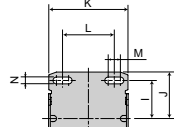
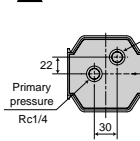
Attachment  
(C type bracket)



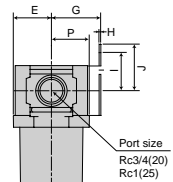
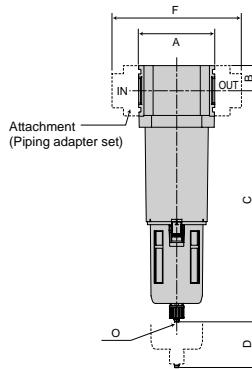
### M8000

 (File name: Page 363 or Ending 15)

Attachment  
(C type bracket)



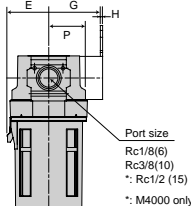
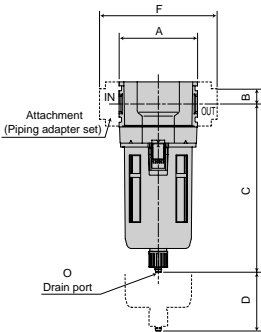
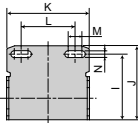
Option  
(With differential pressure detection port)



### M3000

### M4000

 (File name: Page 363 or Ending 15)



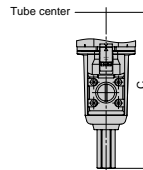
• Types with manual cock and automatic drain are same dimensions for a plastic bowl.

### Metal bowl (option)

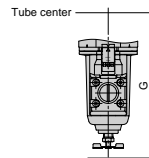
[M3000, M4000, M8000]

 (File name: Page 589 or Ending 20)

Metal manual cock  
With automatic drain



With petcock



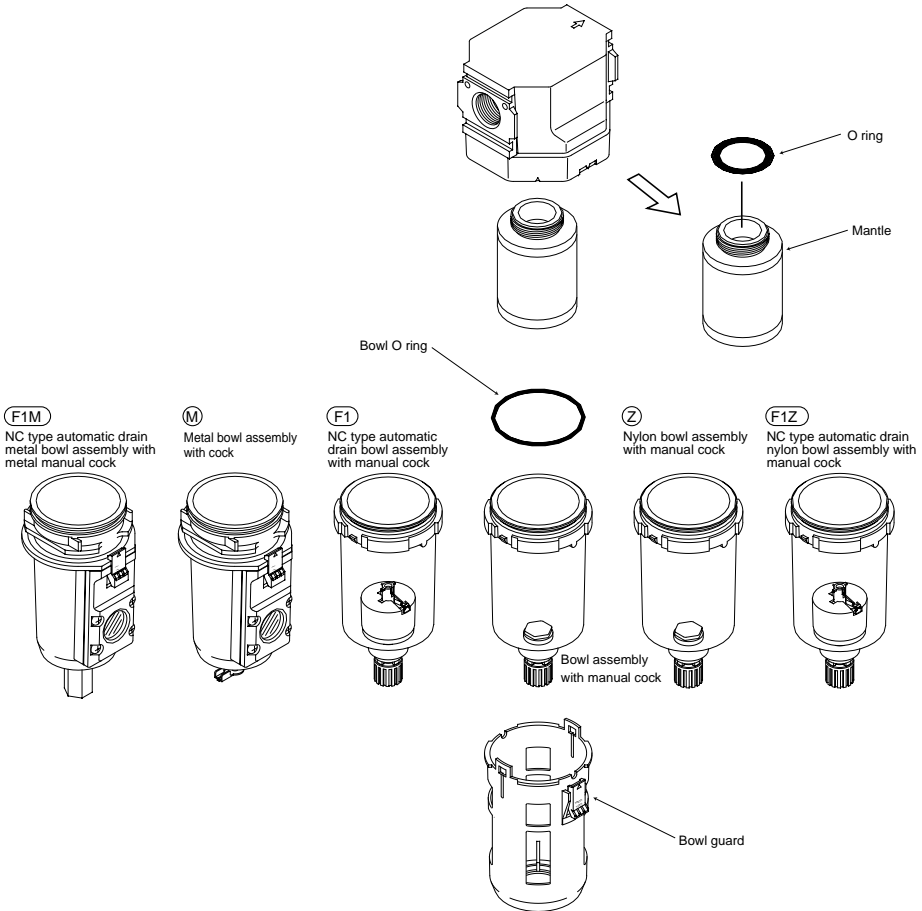
	Metal manual cock with automatic drain		With petcock
	C	O	G
M3000	164	Rc1/4	140
M4000	187		166
M8000	318		295

Note: C type bracket and piping adapter set can not be used together.

## Dimensions table

Model No.	A	B	C	D	E	F	Bracket dimension								O (barbed joint applicable tube)	P
							G	H	I	J	K	L	M	N		
M1000	40	18	96	60	21.5	83	40	2	35	43.5	68	44	10	6.4	4 mm dia. Soft nylon tube	21.5
M3000	63	22.5	147	60	34.5	103	45	2.3	45	53.5	67	34.5	16.5	7	Inner diameter 5.7 to 8 dia. Soft nylon tube	31.5
M4000	80	22.5	170	60	42.5	<sup>120</sup> Rc1/4 130	55	2.3	45	53.5	84	55	14	7	5 mm dia.	37.5
M8000	100	33	301	200	50	<sup>170</sup> Rc1/4 176	65	2.3	50	61	104	68	16	9	Soft vinyl tube	50

## Optional parts table-oil mist filters



### Repair kits model no. (set of O ring, mantle and bowl O ring)

Model	M type	S type	X type
M1000	M1000-KIT	M1000-KIT-S	M1000-KIT-X
M3000	M3000-KIT	M3000-KIT-S	M3000-KIT-X
M4000	M4000-KIT	M4000-KIT-S	M4000-KIT-X
M8000	M8000-KIT	M8000-KIT-S	M8000-KIT-X

### Repair kits model no. (set of O ring and mantle)

Model	M type	S type	X type
M1000	M1000-MANTLE-ASSY	M1000-MANTLE-ASSY-S	M1000-MANTLE-ASSY-X
M3000	M3000-MANTLE-ASSY	M3000-MANTLE-ASSY-S	M3000-MANTLE-ASSY-X
M4000	M4000-MANTLE-ASSY	M4000-MANTLE-ASSY-S	M4000-MANTLE-ASSY-X
M8000	M8000-MANTLE-ASSY	M8000-MANTLE-ASSY-S	M8000-MANTLE-ASSY-X

\*M type repair parts are also compatible with M1000, 3000, 4000, and 8000 series before '98.5, so select a part for M type.

\*Refer to options / parts list of air filter for bowl assembly / bowl guard.