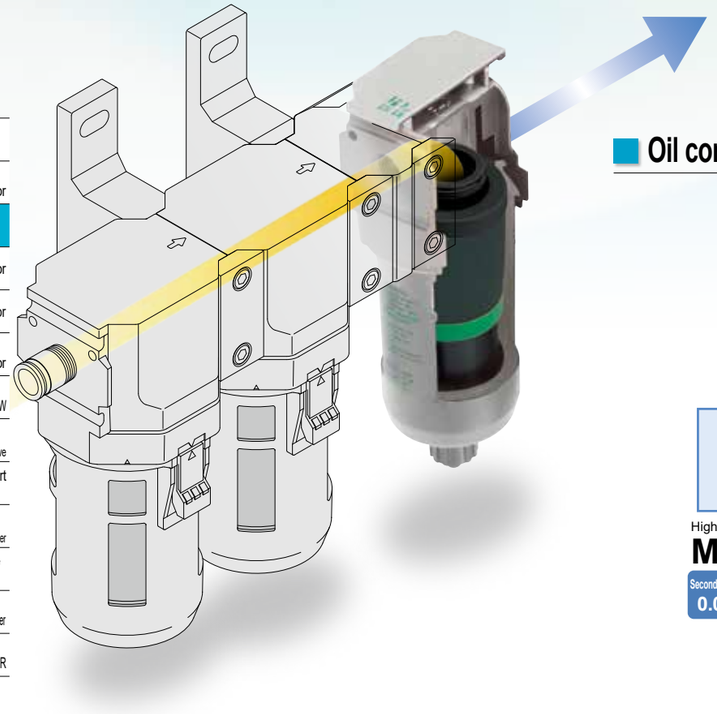
MX□000-W Series

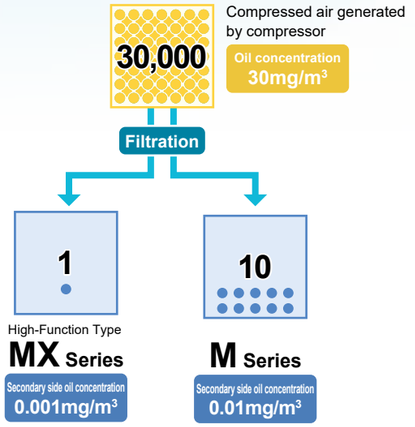
High Performance, 10 Times Oil Removal Capacity

Highly efficient oil removing mantle removes oil up to a secondary oil concentration 0.001 mg/m³

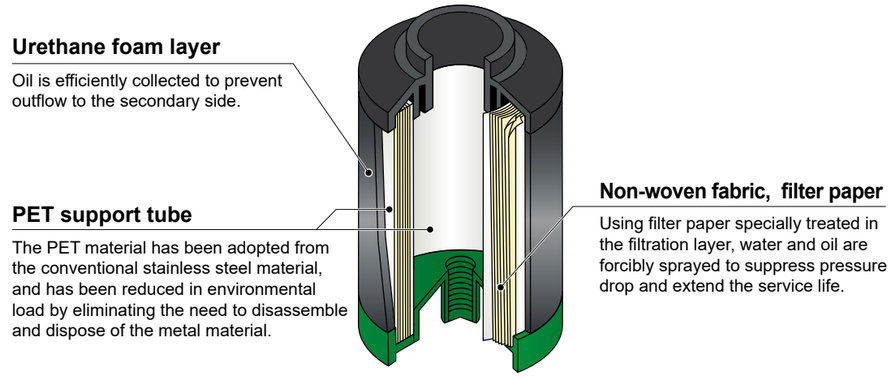
MX Series high-performance oil mist filter with x10 (compared to oil mist filter M Series) oil removal.



Oil concentration level of compressed air



Mantle structural explanation



Secondary oil content 0.001mg/m³ or less

The highly efficient oil removing mantle removes oil up to the secondary oil concentration of 0.001 mg/m³ at 21 °C.
* Equivalent to ISO 8573-1 : 2010 oil concentration class 0

Enabling module connection

Like Filter F Series and Oil Mist Filter M Series, systemization by module connection is possible.

High-precision filtration

Removes impurities down to 0.01 µm.

Broad flow rate

Five types are available to match flow rates, MX1000, 3000, 4000, 6000, and 8000.

Long service life/low pressure loss

Since the porosity in the fibers of the mantle (element) is high, pressure loss is low and life is long.

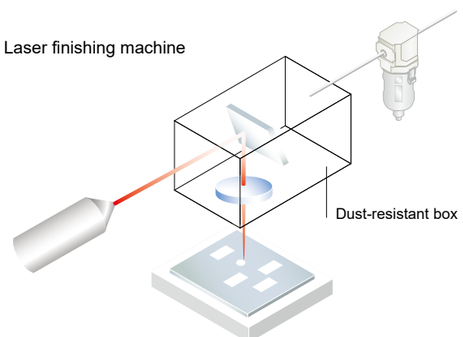
Suitable for clean rooms

P70 Series is available.
(3000, 4000, 6000 Series available)

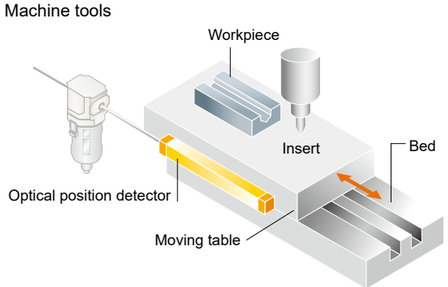
Further expanding high-purity oil-free air applications

Ideal for various applications requiring high purity oil-less air, such as laser processing machines, optical positioning devices, food/pharmaceutical production lines.

- Laser finishing machine



- Machine tools



High-performance oil mist filter MX Series variation

Series		Filtration µm	Secondary Side Oil Concentration mg/m³ (At 21 °C)	Flow Rate L/min (ANR) 1000 Series	3000 Series	4000 Series	6000 Series	8000 Series	Operating Temperature Range °C
MX Series		0.01	0.001 or less	75	180	370	670	1490	5 to 60
M Series	M Type	0.01	0.01 or less	150	360	825	1270	2600	5 to 60
	S Type	0.3	0.5 or less	150	450	1000	1400	2900	5 to 60
	X Type	Activated Carbon Adsorption	0.003 or less	150	450	1000	1400	2900	5 to 30



High Performance Oil Mist Filter Standard White Series

MX1000/MX3000/MX4000/ MX6000/MX8000-W Series

Secondary oil content 0.001 mg/m^3

Ideal for optical devices such as optical positioning devices and laser processing machines.

● Port Size : 1/8 to 1

Circuit Diagram Symbol

RoHS

Model No. Notation

MX1000 - 6 - W - Z - A6W

❶ Model No. ❷ Port Size ❸ Piping thread type ❹ Option ❺ Display Unit ❻ Pipe adaptor set (included) ❼ Bracket (included)

❷ Port Size

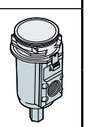
Code	Content	❶Model No. MX1000	MX3000	MX4000	MX6000	MX8000
6	1/8	●				
8	1/4	●	●	●		
10	3/8		●	●		
15	1/2			●		
20	3/4				●	●
25	1				●	●

❸ Piping thread type

Code	Content
Blank	Rc Thread
N	NPT thread
G	G Thread

*1 : G threads and NPT threads are available for IN, OUT and drain outlet (metal bowl with auto-drain).

❹ Option

Type	Code	Content	
Drain Discharge	Blank	With Manual Drain Cock	
*2 *3	F1	Auto Drain with Manual Override (NC : No discharge when not pressurized) (MX3000 to MX8000 Series)	
Bowl Material	Blank	Polycarbonate Bowl	
	Z	Nylon Bowl	
	M	Metal bowl (MX3000 to MX8000 Series)	
	M1	Metal bowl with manual drain cock (MX3000 to MX8000 Series)	
Differential pressure detection	Blank	No Differential Pressure Detection Port	
	Q	With differential pressure detection port (Rc1/4) (MX6000, MX8000 Series)	
Flow Direction	Blank	Standard Flow (Left → Right)	
	X1	Reverse Flow (Right → Left)	

*1 : Select options for the drainage, bowl material and differential pressure detection Items. When selecting options across multiple items, list them in order from the top.
*2 : NO type auto drain cannot be selected.
*3 : Refer to P. 540 for the auto-drain usage conditions.

* Refer to P.28 for the explanation of options.

Clean Specification (Catalog No. CB-033SAA)

• Dust generation prevention structure usable in clean rooms

MX□000 - · · · · - P7□

Food Manufacturing Process Compliant Specification (Catalog No. CC-1271AA)

• Uses food-grade lubricant usable in food manufacturing processes, and resin/rubber materials conforming to the Food Sanitation Act

MX□000 - · · · · - FP□

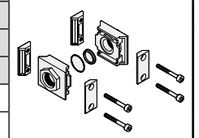
❺ Display Unit

Code	Content
Blank	MPa Display (Rc Thread), psi Display (NPT Thread), bar Display (G Thread)
J1	MPa Display (NPT Thread, G Thread)

❻ Pipe adaptor set (included)

For details, see P. 536.

Code	Content	❶ Model No. MX1000	MX3000	MX4000	MX6000	MX8000
Blank	None Attached	●	●	●	●	●
A6□W	1/8 Piping Adapter Set	●				
A8□W	1/4 Piping Adapter Set	●	●	●		
A10□W	3/8 Piping Adapter Set	●	●	●		
A15□W	1/2 Piping Adapter Set		●	●		
A20□W	3/4 Piping Adapter Set			●	●	●
A25□W	1 Piping Adapter Set				●	●
A32□W	1 1/4 Piping Adapter Set				●	●



*1 : The piping adapter set and C-type bracket cannot be used simultaneously.
*2 : The piping adapter set comes with a joiner set.

*Adapter Thread Type

Code	Content
Blank	Rc Thread
N	NPT thread
G	G Thread

❼ Bracket (included)

For details, see P. 532.

Code	Content	
Blank	None Attached	
BW	C-type Bracket	

Specifications

Item	MX1000-W	MX3000-W	MX4000-W	MX6000-W	MX8000-W
Appearance					
Operating Fluid	Compressed Air				
Operating Pressure MPa	0.1 to 1.0 *2				
Proof Pressure MPa	1.5				
Ambient/Fluid Temperatures °C	5 to 60				
Filtration Rating μm	0.01 (Nominal Value)				
Secondary Side Oil Concentration mg/m³	0.001 or less *3				
Maximum Flow Rate L/min (ANR) *1	75	180	370	670	1480
Drain capacity cm³	3	45	80	80	80
Port Size Rc, NPT, G	1/8, 1/4 (3/8 uses adapter)	1/4, 3/8 (1/2 uses adapter)	1/4, 3/8, 1/2 (3/4 uses adapter)	3/4, 1 (1 1/4 uses adapter)	3/4, 1 (1 1/4 uses adapter)
Weight kg	0.096	0.28	0.52	0.95	1.35
Mantle (Element) Replacement	1 year (6000 hours) or pressure drop 0.1 MPa				
Standard Accessories	Bowl Guard				

*1 : Values when primary pressure is 0.7 MPa and pressure drop is 0.01 MPa. Please use within the maximum processing flow rate. If installed temporarily above the maximum processing flow rate or in a place with large pulsations, it may cause damage to the mantle, scattering of oil and drainage to the secondary side, and cause malfunction at the end.

*2 : In the case of auto drain "F1", the minimum operating pressure is 0.15 MPa.

*3 : The secondary oil content is the value when the primary oil content is 30 mg/m³, the inlet air temperature is 21 °C, and before the oil is saturated.

*4 : Install an oil mist filter (S type) as a pre-filter on the primary side to prevent premature clogging.

Option Weight Table

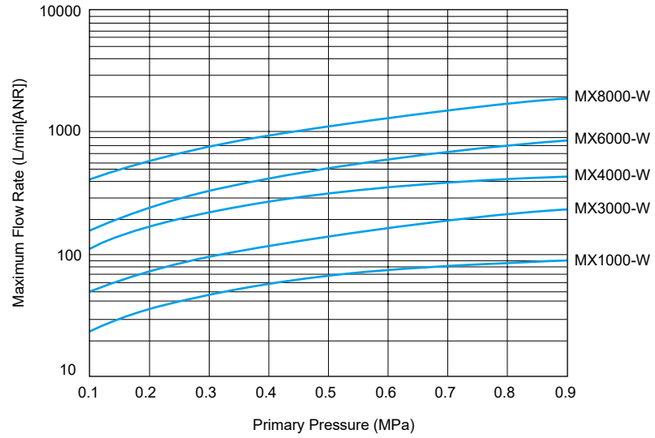
* Add to the Weight of the standard component.

Unit : kg

Code	Drain Discharge	Bowl Material		Piping Adapter Set							Bracket
	F1	M	M1	A6□W	A8□W	A10□W	A15□W	A20□W	A25□W	A32□W	BW
MX1000	0.007			0.09	0.09	0.09					0.1
MX3000	0.02	0.1	0.1		0.16	0.16	0.16				0.17
MX4000	0.02	0.1	0.1		0.16	0.16	0.16	0.16			0.21
MX6000	0.02	0.1	0.1					0.53	0.53	0.53	0.34
MX8000	0.02	0.1	0.1					0.53	0.53	0.53	0.36

Flow Characteristics (Maximum Processing Flow Rate)

● MX□000-W



Oil Mist Filter : Differentiation of Optional Mantles

Main Recommended Circuit	Application Examples	
◆S type F S	General Industrial Air (Secondary Side Oil Concentration 0.5 mg/m³ or less)	• Pneumatic Tools Pneumatic Drill/Pneumatic Screwdriver Pneumatic Grinder • For Labor Saving Components • Pneumatic Jigs and Tools • Air Chuck • Air Vise • Air for Precision Parts Cleaning
◆M type F S M	Oil-less Air (Secondary Side Oil Concentration 0.01 mg/m³ or less)	• For Instrumentation • For Measurement • For Sequence Control Moving Element/Fluidic Element • High-grade Painting • Precision Industry
◆X type F S M X	Deodorizing Air (Secondary Side Oil Concentration 0.003 mg/m³ or less)	• Food Industry • Pharmaceutical Industry • Stirring • Transport • Drying • Packaging • Brewing Air
◆MX type F S MX	Super oil-free air (Secondary Side Oil Concentration 0.001 mg/m³ or less)	• Optical Positioning Device • Laser Processing Machine

Caution : The secondary oil content is the value when the primary oil content is 30 mg/m³, the inlet air temperature is 21 °C, and before the oil is saturated. When using MX, be sure to use the S or M-type oil mist filter in the previous stage.

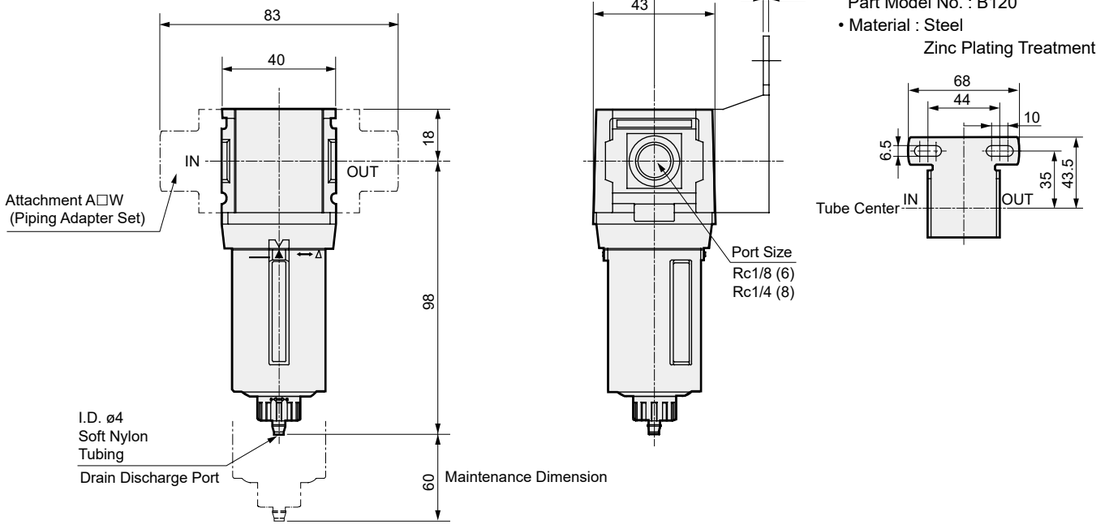
Mantle Option Codes and Shapes

	Option Code	Appearance Shape
M□000-W	Blank (M Type)	End Plate Black; Plastic foam black
	S (S Type)	End Plate Green; Plastic foam black
	X (X Type)	End Plate Black; Non-woven white
MX□000-W		Black / End Plate Black / Green; Plastic foam black

Note) Subject to change due to product improvements. Especially when ordering parts, please check the option Code of the product model number displayed on the main body before ordering.

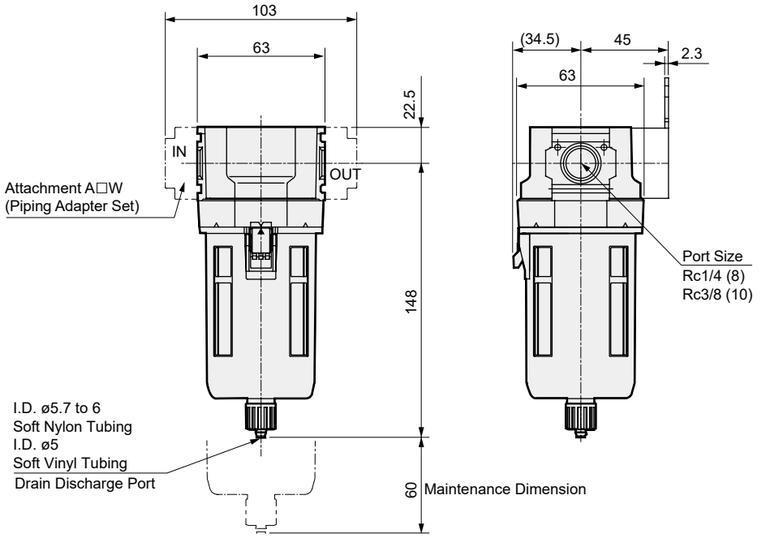
Dimensions

●MX1000-W

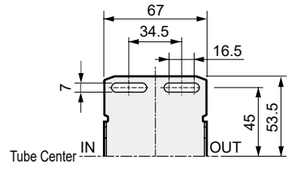


• Attachment
C-type Bracket (-BW)
Part Model No. : B120
• Material : Steel
Zinc Plating Treatment

●MX3000-W



• Attachment
C-type Bracket (-BW)
Part Model No. : B320
• Material : Steel
Zinc Plating Treatment

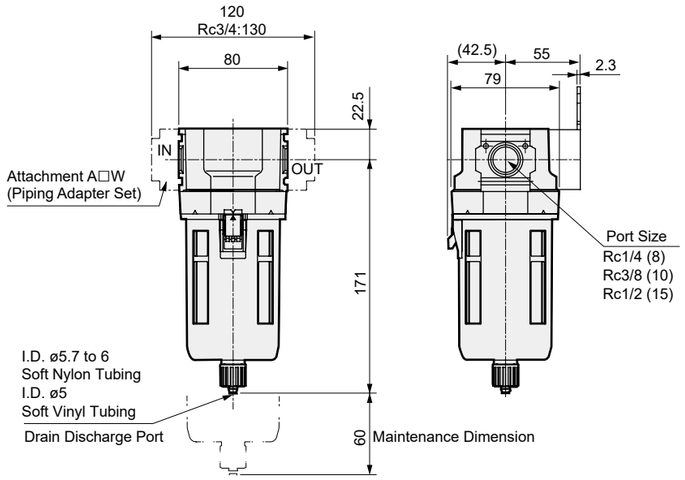


● For plastic bowl, dimensions are the same for manual cock and with auto drain.

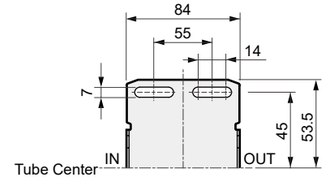
Note) Simultaneous use of C-type bracket and piping adapter set is not possible for attachments.

Dimensions

●MX4000-W

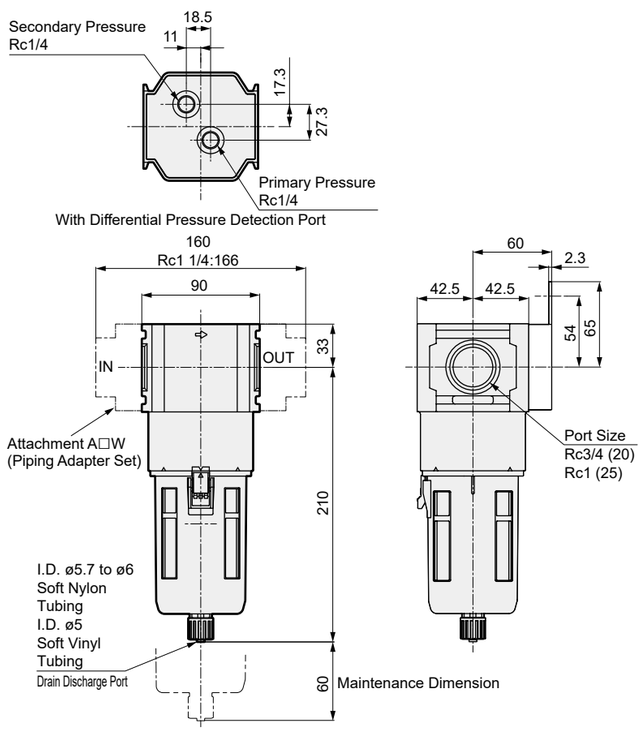


• Attachment
C-type Bracket (-BW)
Part Model No. : B420
• Material : Steel
Zinc Plating Treatment

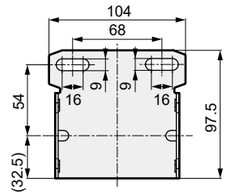


● For plastic bowl, dimensions are the same for manual cock and with auto drain.

●MX6000-W



• Attachment
C-type Bracket (-BW)
Part Model No. : B620
• Material : Steel
Zinc Plating Treatment

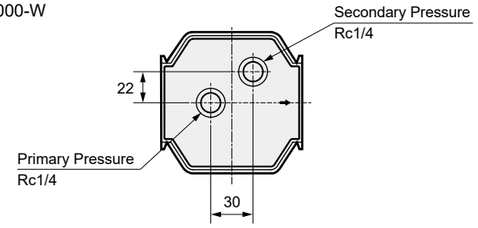


● For plastic bowl, dimensions are the same for manual cock and with auto drain.

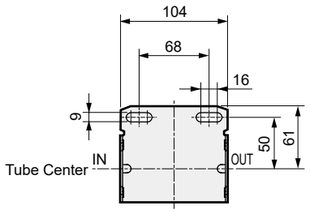
Note) Simultaneous use of C-type bracket and piping adapter set is not possible for attachments.

Dimensions

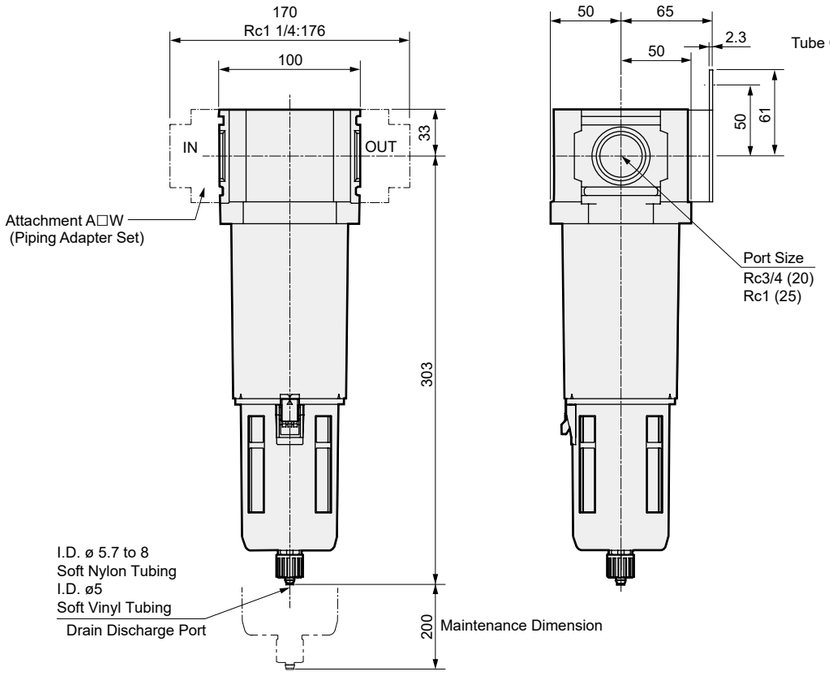
●MX8000-W



• Attachment
C-type Bracket (-BW)
Part Model No. : B820
• Material : Steel
Zinc Plating Treatment

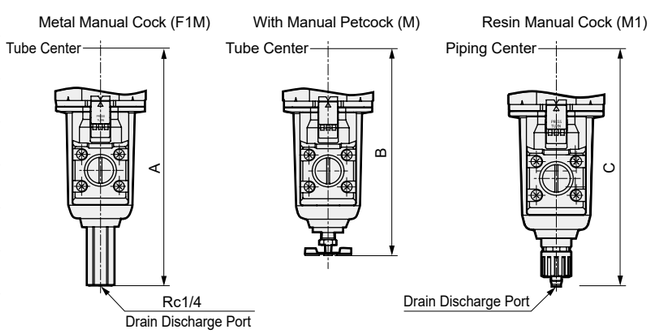


Option
(With Differential Pressure Detection Port)



● For plastic bowl, dimensions are the same for manual cock and with auto drain.

● Metal Bowl (Option)
[MX3000-W, MX4000-W, MX6000-W, MX8000-W]



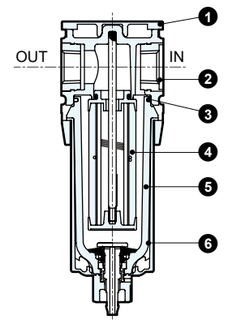
● Material of the metal bowl is aluminum die-casting.

Dimension Table

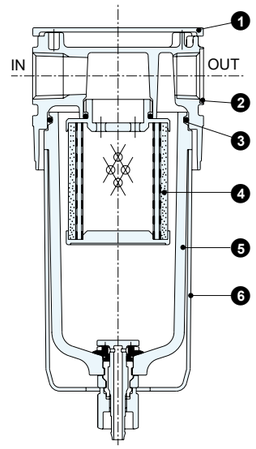
Model No.	F1M	M	M1
	A	B	C
MX3000-W	164	143.5	154
MX4000-W	187	166.5	177
MX6000-W	226	205	216
MX8000-W	319	298	309

Internal Structure Diagram/Material

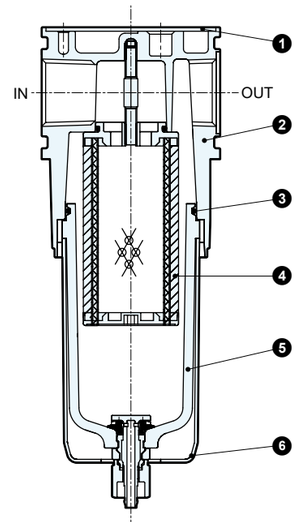
●MX1000-W



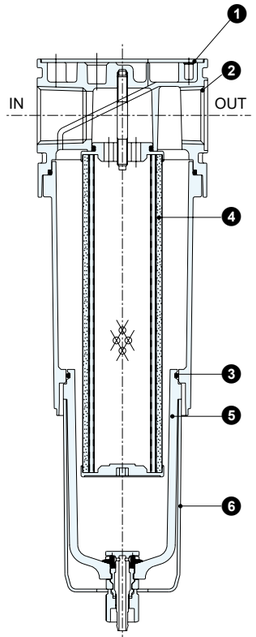
●MX3000-W·MX4000-W



●MX6000-W



●MX8000-W



No.	Part Name	Material				
		MX1000-W	MX3000-W	MX4000-W	MX6000-W	MX8000-W
1	Plate Cover	ABS Resin				
2	Body	Polyamide resin	Aluminum Alloy Die-casting			
3	O-ring *1	Special Nitrile Rubber				
4	Mantle Assembly	-				
5	Bowl Assembly	Polycarbonate Resin, Polyacetal Resin, Urethane Resin				
6	Bowl Guard	Polyamide resin	Polyamide Resin, Steel			

*1 : The O-ring of MX1000-W is a special shape.

For maintenance parts, please visit the CKD Component Products Site
(https://www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.