





Best Pneumatics 4

Air Filter

Air Filter: AF1000 to 6000	P.1.4-2
Mist Separator: AFM2000/3000/4000	P.1.4-6
Micro Mist Separator: AFD2000/3000/4000	P.1.4-9
Large Flow Air Filter: AF800/900	P.1.4-12



Modular Style Air Filter Series AF

Air Filter Series AF	Model	Port size	Filtration μm	Accessories
	AF1000	M5	5	Bracket Float style auto drain Pressure differential auto-drain
	AF2000	1/8, 1/4		
	AF3000	1/4, 3/8		
	AF4000	1/4, 3/8, 1/2		
	AF4000-06	3/4		
	AF5000	3/4, 1		
	AF6000	1		
	AFM2000	1/8, 1/4	0.3	Bracket Float style auto drain Pressure differential auto-drain
	AFM3000	1/4, 3/8		
	AFM4000	1/4, 3/8, 1/2		
	AFM4000-06	3/4		
	AFD2000	1/8, 1/4	0.01	Bracket Float style auto drain Pressure differential auto-drain
	AFD3000	1/4, 3/8		
	AFD4000	1/4, 3/8, 1/2		
	AFD4000-06	3/4		
	AF800	1 1/4, 1 1/2	5	Float style auto drain
		2		
	AF900			

Air Filter

AF1000 to 6000



AF4000



AF3000

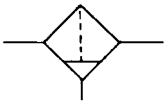


AF2000



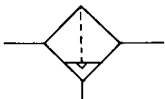
AF1000

JIS symbol



With auto drain

JIS symbol



Standard Specifications

Model	AF1000	AF2000	AF3000	AF4000	AF4000-06	AF5000	AF6000
Port size	M5	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1
Fluid	Air						
Proof pressure	1.5MPa						
Max. operating pressure	1.0MPa						
Ambient and fluid temperature	-5 to 60°C (No freezing)						
Filtration	5µm						
Bowl material	Polycarbonate						
Bowl capacity (cm ³)	2.5	8	23	45	45	45	45
Weight (kg)	0.07	0.19	0.29	0.55	0.58	1.08	1.18
Accessory (Standard)	Bowl guard	—	—	●	●	●	●

Accessory (optional) Part No.

Description	Model	Part No.						
		AF1000	AF2000	AF3000	AF4000	AF4000-06	AF5000	AF6000
Bracket assembly ⁽¹⁾		—	B240A	B340A	B440A	B540A	B640A	B640A
Float style auto drain ⁽²⁾	N.O.	—	—	AD43	AD44	AD44	AD44	AD44
	N.C.	—	—	AD53	AD54	AD54	AD54	AD54
Pressure differential auto drain ⁽³⁾		AD61	AD62	—	—	—	—	—

Note 1) Bracket with two mounting threads.
 Note 2) Min. operating pressure: 0.1MPa (N.O.), 0.15MPa (N.C.)
 Note 3) Min. pressure differential: 0.01MPa

How to Order

E AF 30 00 - F 03 B - 2R

<p>Body size</p> <table border="1"> <tr><td>10</td><td>M5</td></tr> <tr><td>20</td><td>1/8</td></tr> <tr><td>30</td><td>3/8</td></tr> <tr><td>40</td><td>1/2</td></tr> <tr><td>50</td><td>3/4</td></tr> <tr><td>60</td><td>1</td></tr> </table> <p>Thread</p> <table border="1"> <tr><td>—</td><td>Meter thread (M5)</td></tr> <tr><td>—</td><td>Rc(PT)</td></tr> <tr><td>N</td><td>NPT</td></tr> <tr><td>F</td><td>G(PF)</td></tr> </table> <p>Port size</p> <table border="1"> <tr><td>M5</td><td>M5</td></tr> <tr><td>01</td><td>1/8</td></tr> <tr><td>02</td><td>1/4</td></tr> <tr><td>03</td><td>3/8</td></tr> <tr><td>04</td><td>1/2</td></tr> <tr><td>06</td><td>3/4</td></tr> <tr><td>10</td><td>1</td></tr> </table> <p>Ordering source area code</p> <table border="1"> <tr><td>—</td><td>Japan, Asia</td></tr> <tr><td>—</td><td>Australia</td></tr> <tr><td>E</td><td>Europe</td></tr> <tr><td>N</td><td>North America</td></tr> </table>	10	M5	20	1/8	30	3/8	40	1/2	50	3/4	60	1	—	Meter thread (M5)	—	Rc(PT)	N	NPT	F	G(PF)	M5	M5	01	1/8	02	1/4	03	3/8	04	1/2	06	3/4	10	1	—	Japan, Asia	—	Australia	E	Europe	N	North America	<p>Accessory</p> <table border="1"> <thead> <tr> <th>Symbol</th> <th>Description</th> <th>Applicable model</th> </tr> </thead> <tbody> <tr> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>B</td> <td>Bracket</td> <td>AF2000 to AF6000</td> </tr> <tr> <td>C</td> <td>Float auto drain (N.C.)</td> <td>AF3000 to AF6000</td> </tr> <tr> <td>D</td> <td>Float auto drain (N.O.)</td> <td>AF3000 to AF6000</td> </tr> <tr> <td>D</td> <td>Press. differential auto-drain</td> <td>AF1000/ AF2000</td> </tr> </tbody> </table>	Symbol	Description	Applicable model	—	—	—	B	Bracket	AF2000 to AF6000	C	Float auto drain (N.C.)	AF3000 to AF6000	D	Float auto drain (N.O.)	AF3000 to AF6000	D	Press. differential auto-drain	AF1000/ AF2000	<p>Option</p> <table border="1"> <tr><td>2</td><td>Metal bowl</td></tr> <tr><td>6</td><td>Nylon bowl</td></tr> <tr><td>8</td><td>Metal bowl with level gauge (AF3000 to AF6000)</td></tr> <tr><td>C</td><td>With bowl guard (AF2000 only)</td></tr> <tr><td>J</td><td>Drain guide Rc(PT)1/4 (AF3000 to AF6000)*</td></tr> <tr><td>R</td><td>Flow: From right to left</td></tr> <tr><td>W</td><td>With drain cock and barb fitting (AF3000 to AF6000) (For ø6/ø4 nylon)</td></tr> </table> <p>•When specifying more than one symbol, indicate them alphabetically. Ex.) 6RW *Without valve function</p>	2	Metal bowl	6	Nylon bowl	8	Metal bowl with level gauge (AF3000 to AF6000)	C	With bowl guard (AF2000 only)	J	Drain guide Rc(PT)1/4 (AF3000 to AF6000)*	R	Flow: From right to left	W	With drain cock and barb fitting (AF3000 to AF6000) (For ø6/ø4 nylon)
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Combination Table/Accessory and Option

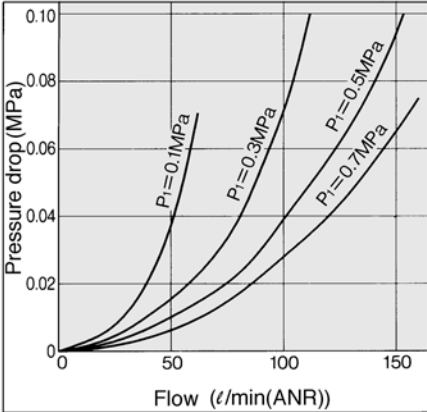
Accessory/Option	Symbol	Option										Applicable filter model				
		D	D	C	2	6	8	C	J	R	W	AF1000	AF2000	AF3000	AF4000 to AF6000	
Pressure differential auto-drain	D				○	○		○			○					
Float style auto drain (N.O.)	D				○	○	○			○					○	○
Float style auto drain (N.C.)	C				○	○	○			○					○	○
Metal bowl	-2	○	○	○						○	○	○	○	○	○	○
Nylon bowl	-6	○	○	○						○	○	○	○	○	○	○
Metal bowl with level gauge	-8		○	○						○	○			○	○	○
Bowl guard	-C	○								○				○		
Drain guide Rc(PT)1/4	-J				○	○	○			○				○	○	○
Flow direction: From right to left	-R	○	○	○	○	○	○	○	○		○	○	○	○	○	○
Barb fitting on One-touch drain cock	-W									○				○	○	○

*Refer to p.1.0-1 and 1.0-2 for FRL precautions.

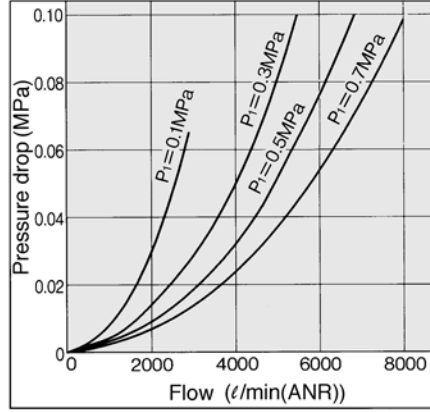
AF1000 to 6000

Flow Characteristics

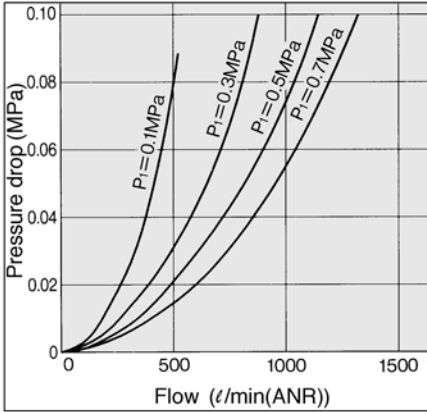
AF1000 M5



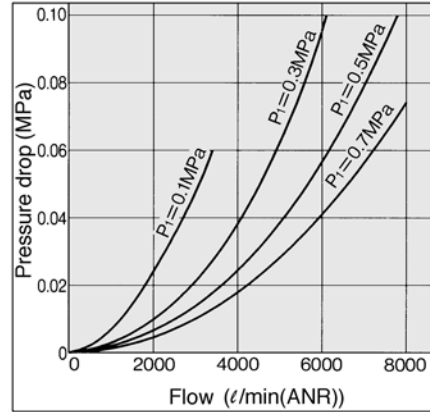
AF4000-06 Rc(PT) 3/4



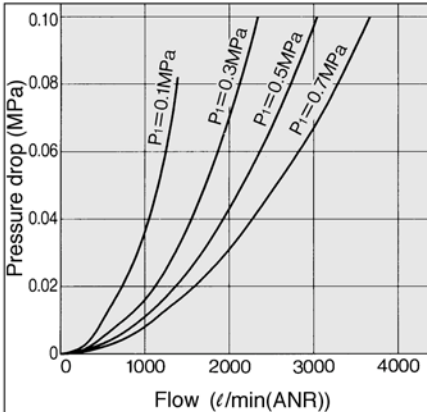
AF2000 Rc(PT) 1/4



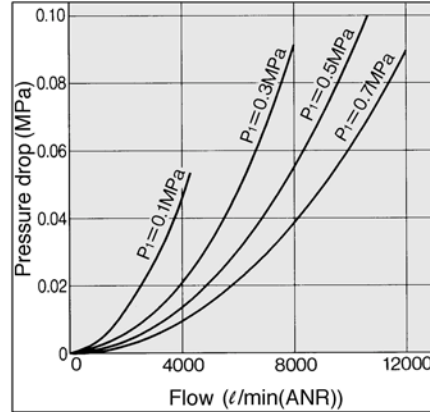
AF5000 Rc(PT) 3/4



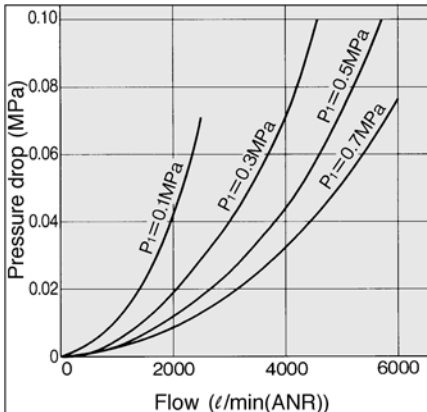
AF3000 Rc(PT) 3/8



AF6000 Rc(PT) 1



AF4000 Rc(PT) 1/2



⚠ Precautions

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalogue and refer to p.1.0-2 and 1.0-3 for precautions on every series.

Maintenance

⚠ Warning

Replace the filter element within 2 years of operation or before the pressure drop reaches 0.1 MPa. Failure to observe this precaution could damage the filter element.

Air Filter AF1000 to 6000

Operation Principle: Float Style Auto Drain

N.O. type: AD43/44

↓ Drain

- **When no pressure is applied internally to the bowl**
Float ① descends due to its own weight and valve ② closes chamber hole ③. Piston ④ is pushed down by spring ⑤, and the drainage passes through chamber hole ⑦ to enter housing ⑧.
- **When the pressure is applied internally to the bowl**
When the pressure is greater than 1kgf/cm², it overcomes the force of spring ⑤, allowing piston ④ to ascend to the position that causes it to be sealed by seal ⑥. Thus, the inside of the bowl is isolated from the outside.
- **When drainage has accumulated**
Float ① ascends through flotation and opens the chamber's hole ③, allowing the pressure to enter the chamber. The force of the internal pressure pushes piston ④ down, and the accumulated drainage passes through chamber hole ⑦ and drain housing ⑧, and is discharged through drain outlet ⑨. After the drainage has been discharged and valve ② closes, the chamber's internal pressure passes through the orifice ⑩ portion of piston ④, and is released externally. Therefore, piston ④ receives the case's internal pressure at its bottom, and with the additional force of spring ⑤, piston ④ is pushed upward, thus returning to the sealing position of seal ⑥.

N.C. type: AD53/54

↓ Drain

- **When no drainage has accumulated**
Float ① descends due to its own weight and valve ② closes the chamber's hole ③. Spring ⑤ pushes piston ④ up to the position that causes it to be sealed by seal ⑥.
- **When drainage has accumulated**
Float ① ascends through flotation and opens the chamber's hole ③, allowing the pressure to enter the chamber. The force of the internal pressure pushes piston ④ down, and the accumulated drainage passes through chamber hole ⑦ and drain housing ⑧, and is discharged through drain outlet ⑨. After the drainage has been discharged and valve ② closes, the chamber's internal pressure passes through the orifice ⑩ portion of piston ④, and is released externally. Therefore, piston ④ receives the case's internal pressure at its bottom, and with the additional force of spring ⑤, piston ④ is pushed upward, thus returning to the sealing position of seal ⑥.

Differential Pressure Auto Drain

AD61/62

- **When no pressure is applied internally to the case**
With piston ② having descended, if a pressure > 0.1 MPa is applied to piston ② inside bowl ①, the hole of valve ④ becomes closed by valve seal ③. While the valve remains closed, the pressure of piston upper chamber ⑤ and lower chamber ⑥ are equalized. As soon as the air is expanded, the pressure in upper chamber ⑤ decreases, thus creating a momentary difference in pressure between upper ⑤ and lower chamber ⑥ and causing piston ② to ascend. Then, the hole of valve ④ opens to discharge (the valve opens even if no drainage has accumulated). The pressure at the bottom of piston ② decreases, causing the pressure in upper chamber ⑤ to become greater than the pressure in lower chamber ⑥. So, piston ② descends, causing the hole of valve ④ to be closed by valve seal ③. When the air consumption rate becomes constant, the pressure between piston upper ⑤ and lower chamber ⑥ becomes equalized and the hole of the valve remains closed.

Construction

AF1000/2000

AF3000/4000

AF5000/6000

Component Parts

No.	Description	Material			Note
		AF1000/2000	AF3000/4000/4000-06	AF5000/6000	
①	Body	Zinc die cast	Aluminum die cast		Platinum silver paint
⑨	Housing	—	—	Aluminum die cast	Platinum silver paint

Replacement Parts

No.	Description	Material	Part No.						
			AF1000	AF2000	AF3000	AF4000	AF4000-06	AF5000	AF6000
②	Filter element	Non-woven fabric	111344	1129116	111585	1116103	1116103	111724	111825
③	Baffle	indicated in ()	111312 (POM)	11295 (PBT)	111522 (PBT)	111622 (PBT)	111622 (PBT)	111727 (ABS)	111824 (ABS)
④	Bowl O ring	NBR	111325	11297	111512	111636	111636	111636	111636
⑤	Bowl assembly ⁽¹⁾	Polycarbonate	C100F	C200F	C300F	C400F	C400F	C400F	C400F
⑥	Deflector	indicated in ()	11133A (POM/ABS)	1129111 (PBT)	11158 (PBT)	11167 (PBT)	11167 (PBT)	111726 (ABS)	111823 (ABS)
⑦	Housing O ring	NBR	—	—	—	—	—	111710	11189
⑧	Packing	NBR	—	—	—	—	—	111711	111810

Note 1) A bowl guard (material: SPCE) is included in the bowl assembly for AF3000-AF6000.

- AC
- AV
- AU
- AF**
- AR
- IR
- VEX
- SRP
- AW
- AMR
- AWM
- AWD
- ITV
- VBA
- G
- AL

AF1000 to 6000

Dimensions

