



## Preparation unit——A、B Series

### ■ Production's series

|   |  |   |
|---|--|---|
| F.R.L Combination: AC, BC Series 154  | FR.L Combination: AFC, BFC Series 156  | Filter & Regulator: AFR, BFR Series 158   |
|    |    |    |
| Filter: AF, BF Series 160   | Regulator: AR, BR Series 161   | Lubricator: AL, BL Series 163   |
|   |   |   |
| Regulator: SR Series 164  | Pressure gauge: GS, GF, GU Series 165  | Pressure controller: PK, AIS Series 166   |
|  |  |  |



### ■ Installation and application

1. Check whether the components have been damaged during transportation before installing and using.
2. Pay attention to whether the flow direction of air (notice "→" direction) and thread type are correct.
3. Please notice whether installation condition accords with technical requirements (such as "working pressure" and "applied temperature range").
4. The medium used or installation environment shall be noticed. The matters with chlorine, carbon compound, aromatic compound and oxidizing acid and alkali shall be avoided to prevent the damage of bowl and oil bowl.
5. Regularly clean or change filter core. Lubricators and regulators shall be in descending order.
6. Keep dust away. The dust cover shall be installed in intake and outlet when the device is dismantled and stored.

# Preparation unit——F.R.L. combination

AIRTAC

AC、BC Series

## Specification

| Model                  |            | AC1500   | AC2000 | BC2000                             | BC3000 | BC4000 |
|------------------------|------------|--|--------|------------------------------------|--------|--------|
| Fluid                  |            | Air  |        |                                    |        |        |
| Port size              |            | 1/8"   | 1/4"   | 1/4"                               | 3/8"   | 1/2"   |
| Filtering grade        |            | 40 μm or 5 μm  |        |                                    |        |        |
| Pressure range         |            | Semi-auto and automatic drain:0.15~0.9MPa(20~130Psi) |        | Manual drain:0.05~0.9MPa(7~130Psi) |        |        |
| Max. pressure          |            | 1.0MPa(145Psi)                                       |        |                                    |        |        |
| Proof pressure         |            | 1.5MPa(215Psi)                                       |        |                                    |        |        |
| Temperature range      |            | -20~70℃  |        |                                    |        |        |
| Capacity of drain bowl |            | 15CC   |        | 60CC                               |        |        |
| Capacity of oil bowl   |            | 25CC   |        | 90CC                               |        |        |
| Recommended            |            | ISO VG 32 or equivalent                              |        |                                    |        |        |
| Weight                 |            | 700g   |        | 900g                               |        |        |
| Constitute             | Filter     | AF1500   | AF2000 | BF2000                             | BF3000 | BF4000 |
|                        | Regulator  | AR1500   | AR2000 | BR2000                             | BR3000 | BR4000 |
|                        | Lubricator | AL1500   | AL2000 | BL2000                             | BL3000 | BL4000 |

## Ordering code

AC 2000 M W □ P

### Model

AC: A Series F.R.L. unit  
BC: B Series F.R.L. unit

### Port size

| Series | Port size  |
|--------|------------|
| AC     | 1500: 1/8" |
|        | 2000: 1/4" |
| BC     | 2000: 1/4" |
|        | 3000: 3/8" |
|        | 4000: 1/2" |

### Drain type

| Series | Drain type             |
|--------|------------------------|
| AC     | Blank: Semi-auto drain |
|        | M: Manual drain        |
| BC     | Blank: Semi-auto drain |
|        | M: Manual drain        |
|        | A: Automatic drain     |

### Thread type

P:PT  
T:NPT  
G:G

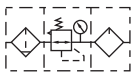
### Scale

Blank: MPa  
P: psi  
B: bar  
Z: Double scale(psi、kgf/cm<sup>2</sup>)

### Filtering grade

Blank: 40 μm  
W: 5 μm

## Symbol

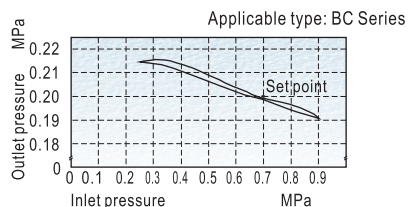
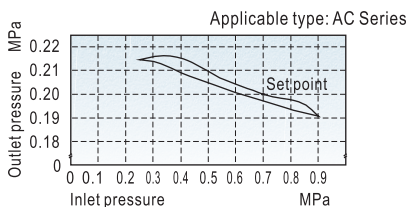


## Product feature

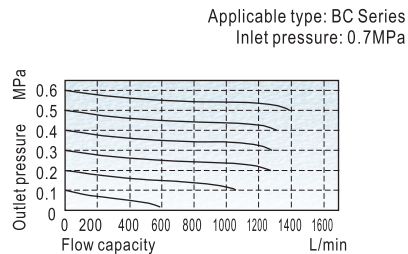
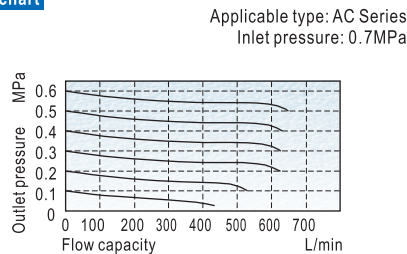
1. The structure is delicate and compact, which is convenient for installation and application.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. The pressure loss is low and the efficiency of water separating is high.
4. The quantity of oil dripping can be directly observed through transparent check-dome.
5. In addition to standard type, lower pressure type is optional (The highest adjustable pressure is 0.4MPa).

## Pressure and feature of flow

### Pressure chart



### Flow chart



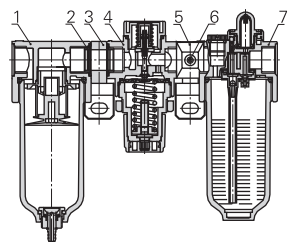
Preparation unit——F.R.L. combination



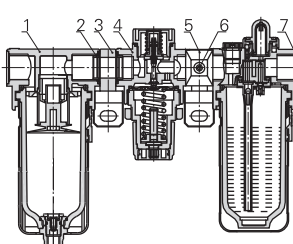
AC、BC Series

Inner structure

AC

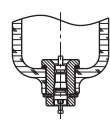
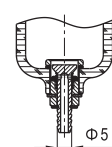
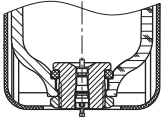
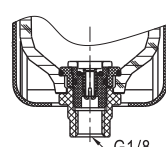
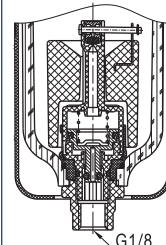


BC



|     |                         |     |                          |
|-----|-------------------------|-----|--------------------------|
| No. | Item                    | No. | Item                     |
| 1   | AF, BF Series filter    | 5   | A, B Series fix kit      |
| 2   | A, B Series gasket      | 6   | Screw                    |
| 3   | A, B Series bracket     | 7   | AL, BL Series lubricator |
| 4   | AR, BR Series regulator |     |                          |

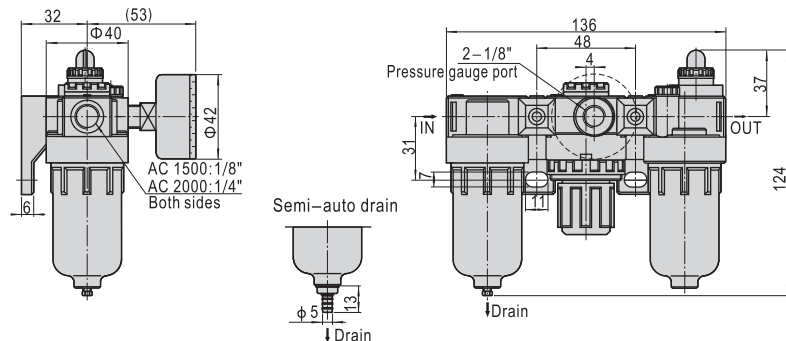
Selection of drain mode

| A1500, 2000 Series  |   | B2000, 3000, 4000 Series  |   |   |
|---|---|---|---|---|
| Manual drain  | Semi-auto drain   | Manual drain  | Semi-auto drain   | Automatic drain   |
|  | <p>This semi-auto drain can also achieve the function of manual drain</p>  <p>PU tube with an inner diameter of <math>\Phi 4\text{mm}</math> is recommended</p> |  |  <p>G1/8</p> |  <p>G1/8</p> |



Dimensions

AC

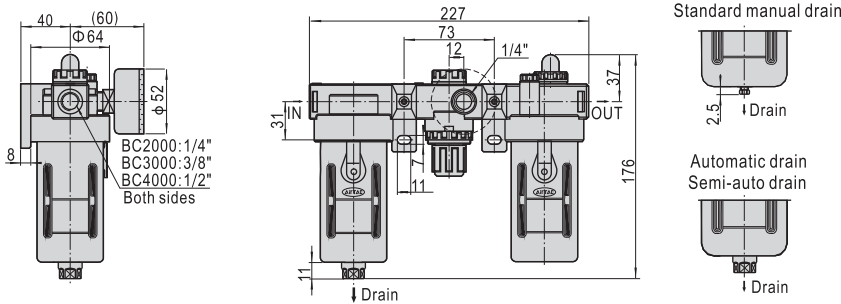


AC 1500: 1/8"  
AC 2000: 1/4"  
Both sides

Semi-auto drain

Drain

BC



BC2000: 1/4"  
BC3000: 3/8"  
BC4000: 1/2"  
Both sides

Standard manual drain

Automatic drain

Semi-auto drain

Drain



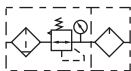
# Preparation unit——F.R.L. combination

AIRTAC

AFC、BFC Series



## Symbol



## Product feature

- 1. The structure is delicate and compact, which is convenient for installation and application.
- 2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
- 3. The pressure loss is low and the efficiency of water separating is high.
- 4. The quantity of oil dripping can be directly observed through transparent check dome.
- 5. In addition to standard type, lower pressure type is optional (The highest adjustable pressure is 0.4MPa).

## Specification

| Model                  |                  | AFC1500  | AFC2000 | BFC2000 | BFC3000 | BFC4000 |
|------------------------|------------------|--|---------|---------|---------|---------|
| Fluid                  |                  | Air  |         |         |         |         |
| Port size              |                  | 1/8"   | 1/4"    | 1/4"    | 3/8"    | 1/2"    |
| Filtering grade        |                  | 40 μ m or 5 μ m  |         |         |         |         |
| Pressure range         |                  | Semi-auto and automatic drain:0.15~0.9MPa(20~130Psi)    Manual drain:0.05~0.9MPa(7~130Psi) |         |         |         |         |
| Max. pressure          |                  | 1.0MPa(145Psi)   |         |         |         |         |
| Proof pressure         |                  | 1.5MPa(215Psi)   |         |         |         |         |
| Temperature range      |                  | -20~70℃  |         |         |         |         |
| Capacity of drain bowl |                  | 15CC   |         | 60CC    |         |         |
| Capacity of oil bowl   |                  | 25CC   |         | 90CC    |         |         |
| Recommended lubricant  |                  | ISO VG 32 or equivalent  |         |         |         |         |
| Weight                 |                  | 500g   |         | 700g    |         |         |
| Constitute             | Filter-Regulator | AFR1500  | AFR2000 | BFR2000 | BFR3000 | BFR4000 |
|                        | Lubricator       | AL1500   | AL2000  | BL2000  | BL3000  | BL4000  |

## Ordering code

AFC 2000 M W □ P

### Model

AFC: A Series F.R.L unit  
BFC: B Series F.R.L unit

### Port size

| Series     | Port size  |
|------------|------------|
| AFC        | 1500: 1/8" |
|            | 2000: 1/4" |
| BFC        | 2000: 1/4" |
|            | 3000: 3/8" |
| 4000: 1/2" |            |

### Drain type

| Series             | Drain type             |
|--------------------|------------------------|
| AFC                | Blank: Semi-auto drain |
|                    | M: Manual drain        |
| BFC                | Blank: Semi-auto drain |
|                    | M: Manual drain        |
| A: Automatic drain |                        |

### Thread type

P: PT  
T: NPT  
G: G

### Scale

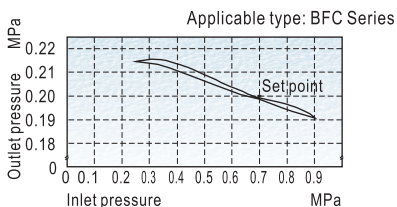
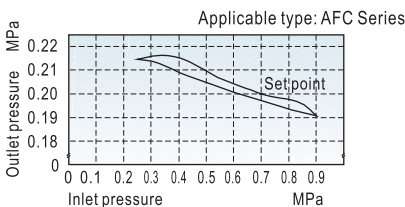
Blank: MPa  
P: psi  
B: bar  
Z: Double scale(psi、kgf/cm<sup>2</sup>)

### Filtering grade

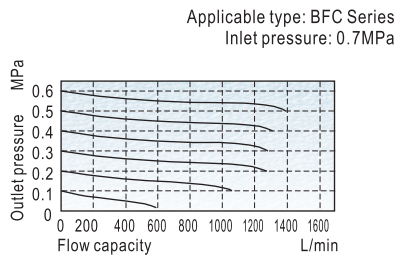
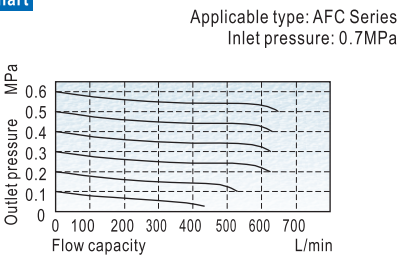
Blank: 40 μm  
W: 5 μm

## Pressure and feature of flow

### Pressure chart



### Flow chart



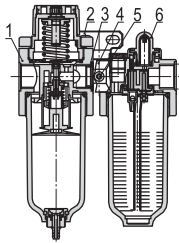
Preparation unit——F.R.L. combination

AIRTAC

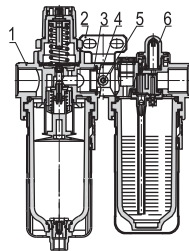
AFC、BFC Series

Inner structure

AFC



BFC



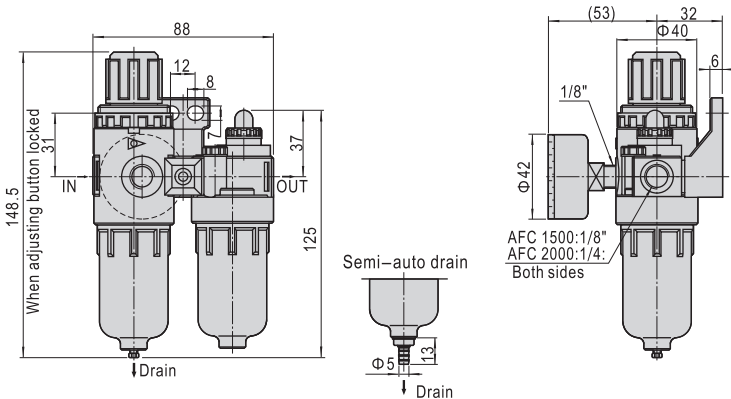
| No. | Item                               |
|-----|------------------------------------|
| 1   | AFR, BFR Series filter & regulator |
| 2   | A, B Series bracket                |
| 3   | A, B Series gasket                 |
| 4   | A, B Series fixed kit              |
| 5   | Screw                              |
| 6   | AL, BL Series lubricator           |

Selection of drain mode

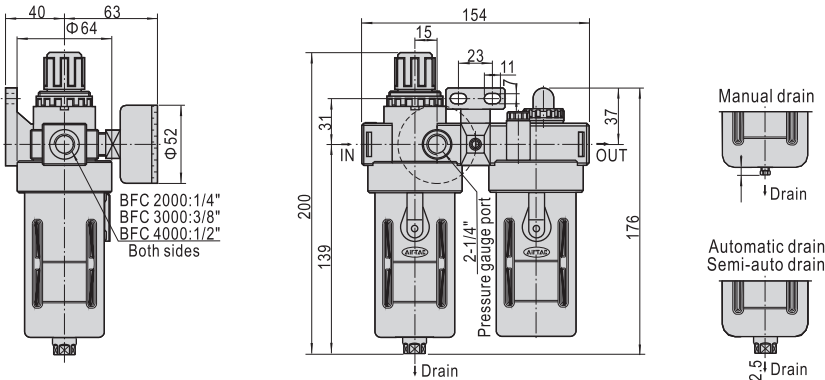
The drain modes of different series are different.  
Pleaserefer to P 155 for details.

Dimensions

AFC



BFC



AFC  
BFC

# Preparation unit——Filter & regulator

AIRTAC

AFR、BFR Series



## Symbol



## Product feature

1. The structure is delicate and compact, which is convenient for installation and application.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. The pressure loss is low and the efficiency of water separating is high;
4. In addition to standard type, lower pressure type is optional(The highest adjustable pressure is 0.4MPa).

## Specification

| Model                  | AFR1500   | AFR2000 | BFR2000 | BFR3000 | BFR4000 |
|------------------------|---|---------|---------|---------|---------|
| Fluid                  | Air   |         |         |         |         |
| Port size              | 1/8"  | 1/4"    | 1/4"    | 3/8"    | 1/2"    |
| Filtering grade        | 40 μm or 5 μm   |         |         |         |         |
| Pressure range         | Semi-auto and automatic drain:0.15~0.9MPa(20~130Psi) Manual drain:0.05~0.9MPa(7~130Psi) |         |         |         |         |
| Max. pressure          | 1.0MPa(145Psi)  |         |         |         |         |
| Proof pressure         | 1.5MPa(215Psi)  |         |         |         |         |
| Temperature range      | -20~70℃   |         |         |         |         |
| Capacity of drain bowl | 15CC  |         | 60CC    |         |         |
| Weight                 | 260g  |         | 400g    |         |         |

## Ordering code

AFR 2000 M W □ P

### Model

AFR: A Series Filter & regulator  
BFR: B Series Filter & regulator

### Port size

| Series     | Port size  |
|------------|------------|
| AFR        | 1500: 1/8" |
|            | 2000: 1/4" |
| BFR        | 2000: 1/4" |
|            | 3000: 3/8" |
| 4000: 1/2" |            |

### Drain type

| Series             | Drain type             |
|--------------------|------------------------|
| AFR                | Blank: Semi-auto drain |
|                    | M: Manual drain        |
| BFR                | Blank: Semi-auto drain |
|                    | M: Manual drain        |
| A: Automatic drain |                        |

### Thread type

P: PT  
T: NPT  
G: G

### Scale

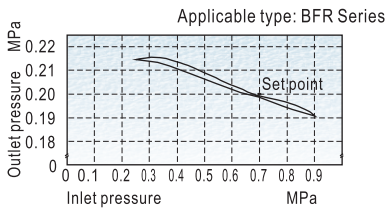
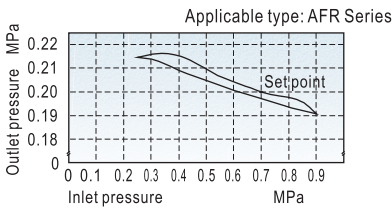
Blank:MPa  
P: psi  
B: bar  
Z: Double scale(psi、kgf/cm<sup>2</sup>)

### Filtering grade

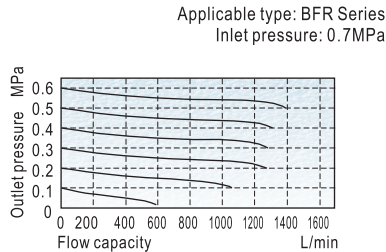
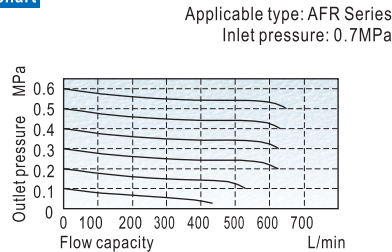
Blank: 40 μm  
W: 5 μm

## Pressure and feature of flow

### Pressure chart



### Flow chart



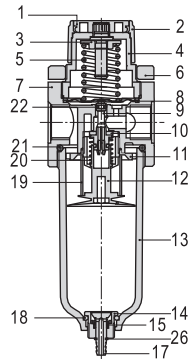
# Preparation unit—Filter & regulator

**AIRTAC**

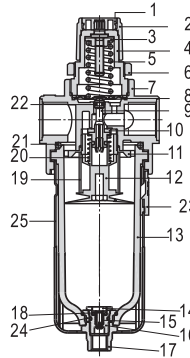
## AFR、BFR Series

### Inner structure and Material of major parts    Dimensions

#### AFR

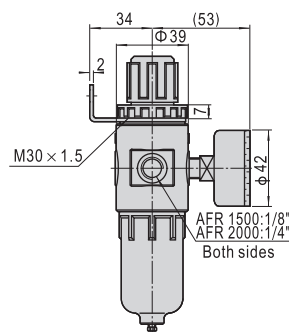


#### BFR

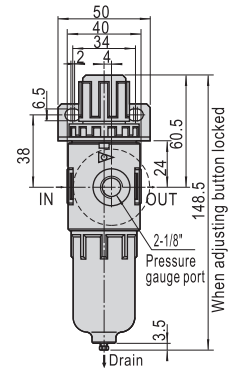
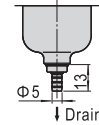


| No. | Item              | Material  |
|-----|-------------------|---|
| 1   | Push button       | POM   |
| 2   | Adjusting button  | POM   |
| 3   | Adjusting nut     | Steel   |
| 4   | Adjusting seat    | POM   |
| 5   | Adjusting spring  | SWC   |
| 6   | Fixed ring        | POM   |
| 7   | Body              | Aluminum alloy  |
| 8   | Diaphragm         | SUS304 & rubber   |
| 9   | Balance needle    | POM   |
| 10  | needle gasket     | Aluminum alloy & rubber                                     |
| 11  | Air guider        | POM   |
| 12  | Umbrella baffle   | POM   |
| 13  | Drain bowl        | PC  |
| 14  | Drain kit         | POM   |
| 15  | Return spring     | Stainless steel   |
| 16  | Drain seat        | POM   |
| 17  | Drain pillar      | POM   |
| 18  | Drain O-ring      | NBR   |
| 19  | Filter element    | 5 μ m Makrolon fiber<br>40 μ m Agglomerated by bronze grain |
| 20  | Return spring     | Stainless steel   |
| 21  | Drain bowl O-ring | NBR   |
| 22  | Needle O-ring     | NBR   |
| 23  | Bowl guard switch | POM   |
| 24  | Gasket            | POM   |
| 25  | Bowl guard        | PA66  |
| 26  | Clip              | Spring steel  |

#### AFR

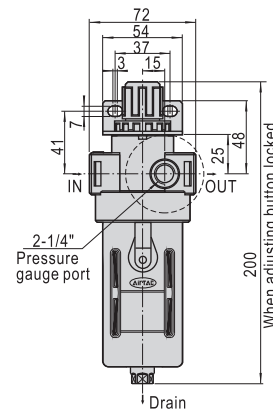
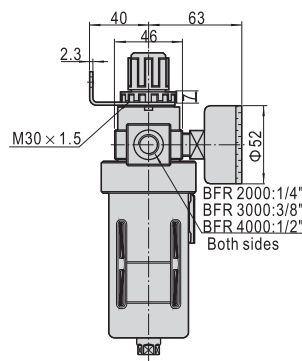


Semi-auto drain

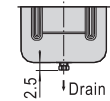


When adjusting button locked

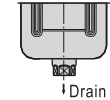
#### BFR



Manual drain



Automatic drain  
Semi-auto drain



### Selection of drain mode

The drain modes of different series are different.  
Please refer to P 155 for details.



AFR  
BFR



Preparation unit——Filter



AF、BF Series



Symbol



Product feature

AF series

- 1. The structure is delicate and compact.
- 2. The pressure loss is low and the efficiency of water separating is high;
- 3. The filter precision includes 5 μm and 40 μm (optional);

BF series

- 1. The pressure loss is low and the efficiency of water separating is high.
- 2. The bowl has high-strength plastic shields outside, which is more safe and reliable to use.
- 3. The filter precision includes 5 μm and 40 μm (optional).

Inner structure and material of major parts

| AF  |                   | BF              |                              |
|-----|-------------------|-----------------|------------------------------|
|     |                   |                 |                              |
| No. | Item              | Material        |                              |
| 1   | Drain bowl O-ring | NBR             |                              |
| 2   | Body              | Aluminum alloy  |                              |
| 3   | Filter element    | 5 μm            | Makrolon fiber               |
|     |                   | 40 μm           | Agglomerated by bronze grain |
| 4   | Umbrella baffle   | POM             |                              |
| 5   | Drain bowl        | PC              |                              |
| 6   | Drain kit         | POM             |                              |
| 7   | Drain seat        | POM             |                              |
| 8   | Drain pillar      | POM             |                              |
| 9   | Return spring     | Stainless steel |                              |
| 10  | Gasket            | POM             |                              |
| 11  | Air guider        | POM             |                              |
| 12  | Bowl guard switch | POM             |                              |
| 13  | Bowl guard        | PA6             |                              |
| 14  | Drain seat O-ring | NBR             |                              |
| 15  | Clip              | Spring steel    |                              |

Selection of drain mode

The drain modes of different series are different.  
Please refer to P155 for details.

Specification

| Model                  | AF1500  | AF2000 | BF2000 | BF3000 | BF4000 |
|------------------------|---|--------|--------|--------|--------|
| Fluid                  | Air   |        |        |        |        |
| Port size              | 1/8"  | 1/4"   | 1/4"   | 3/8"   | 1/2"   |
| Filtering grade        | 40 μm or 5 μm   |        |        |        |        |
| Pressure range         | Semi-auto and automatic drain: 0.15~0.9MPa(20~130Psi) Manual drain: 0.05~0.9MPa(7~130Psi) |        |        |        |        |
| Proof pressure         | 1.5MPa(215Psi)  |        |        |        |        |
| Temperature range      | -20~70℃   |        |        |        |        |
| Capacity of drain bowl | 15CC  |        | 60CC   |        |        |
| Weight                 | 140g  |        | 330g   |        |        |

Ordering code

AF 2000 M W P

Model

AF: A Series Filter

BF: B Series Filter

Port size

Series

Port size

1500: 1/8"

2000: 1/4"

2000: 1/4"

3000: 3/8"

4000: 1/2"

AF

BF

Thread type

P: PT

T: NPT

G: G

Filtering grade

Blank: 40 μ m

W: 5 μ m

Drain type

Series

Drain type

Blank: Semi-auto drain

M: Manual drain

Blank: Semi-auto drain

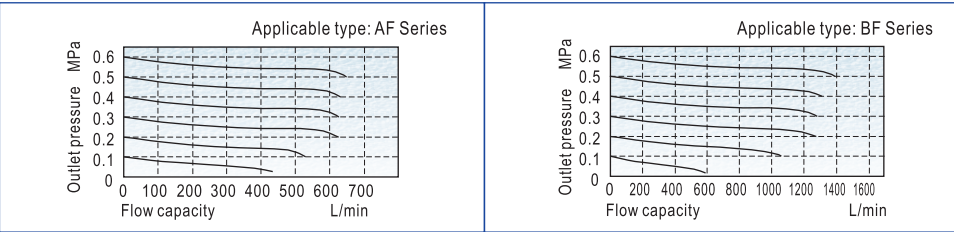
M: Manual drain

A: Automatic drain

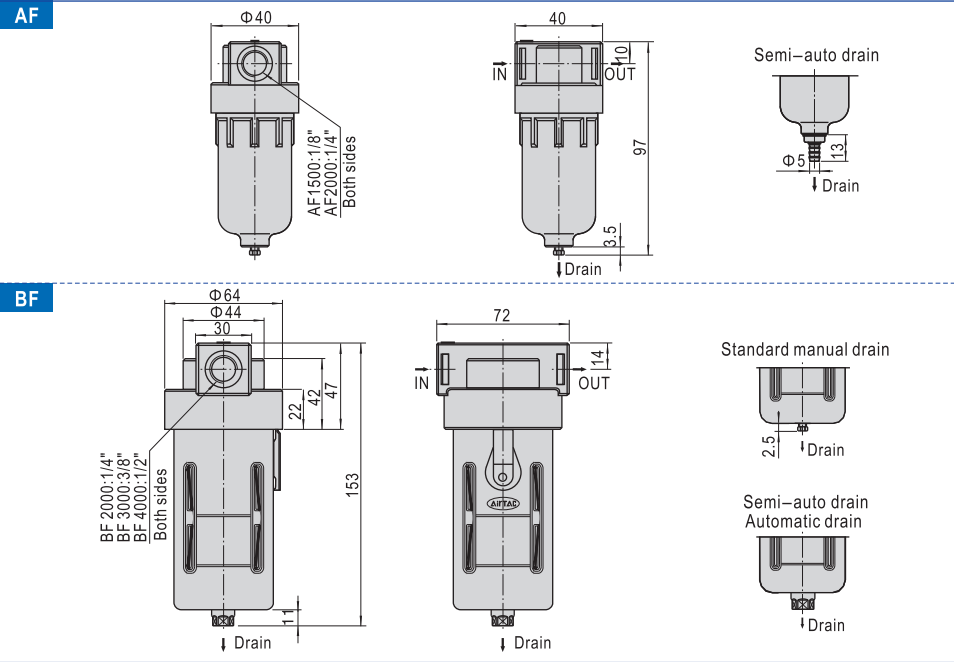
AF

BF

Flow chart



Dimensions





# Preparation unit——Regulator

AIRTAC

## AR、BR Series

### Specification

| Model             | Ar1500                | AR2000 | BR2000 | BR3000 | BR4000 |
|-------------------|-----------------------|--------|--------|--------|--------|
| Fluid             | Air                   |        |        |        |        |
| Port size         | 1/8"                  | 1/4"   | 1/4"   | 3/8"   | 1/2"   |
| Pressure range    | 0.05~0.9MPa(7~130Psi) |        |        |        |        |
| Max. pressure     | 1.0MPa(145Psi)        |        |        |        |        |
| Proof pressure    | 1.5MPa(215Psi)        |        |        |        |        |
| Temperature range | -20~70℃               |        |        |        |        |
| Weight            | 200g                  |        | 230g   |        |        |

### Ordering code

AR 2000 L □ P

Model

AR: A Series Regulator

BR: B Series Regulator

Port size

| Series | Port size  |
|--------|------------|
| AR     | 1500: 1/8" |
|        | 2000: 1/4" |
| BR     | 2000: 1/4" |
|        | 3000: 3/8" |
|        | 4000: 1/2" |

Type code

Blank: Standard(0.9MPa)

L: Lower pressure(0.4MPa)

Thread type

P: PT

T: NPT

G: G

Scale

Blank: MPa

P: psi

B: bar

Z: Double scale(psi、kgf/cm<sup>2</sup>)



### Symbol

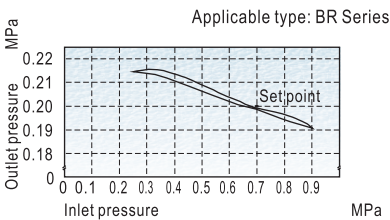
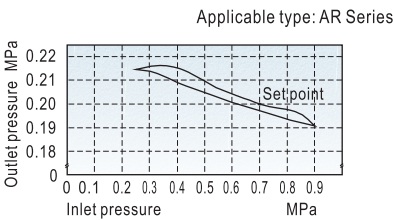


### Product feature

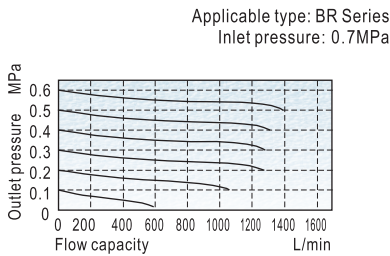
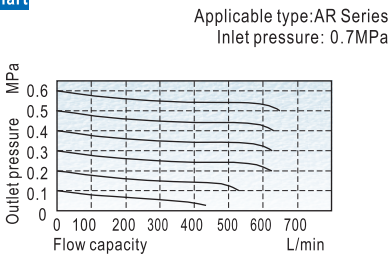
1. The structure is delicate and compact, which is convenient for installation and application.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. In addition to standard type, lower pressure type is optional (The highest adjustable pressure is 0.4MPa).

### Pressure and feature of flow

#### Pressure chart



#### Flow chart



# Preparation unit——Regulator

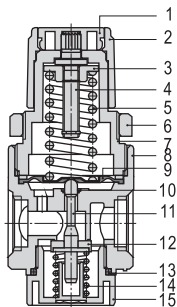


## AR、BR Series

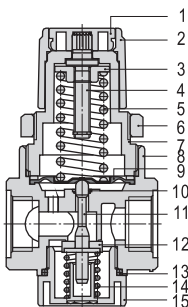
### Inner structure and material of major parts

### Dimensions

AR

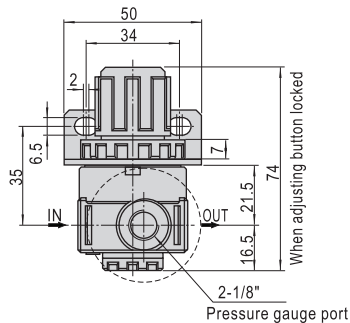
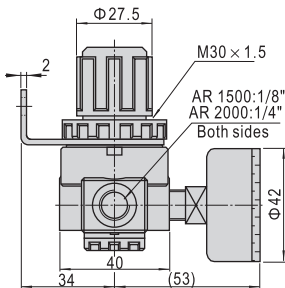


BR

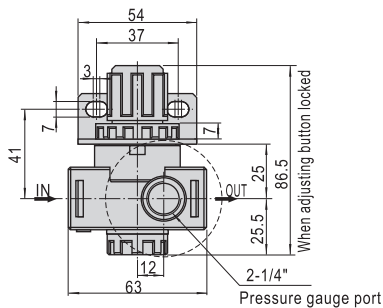
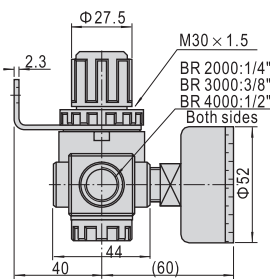


| No. | Item             | Material                |
|-----|------------------|-------------------------|
| 1   | Push button      | POM                     |
| 2   | Adjusting button | POM                     |
| 3   | Adjusting nut    | Steel                   |
| 4   | Adjusting pillar | Steel                   |
| 5   | Adjusting spring | SWC                     |
| 6   | Fixed ring       | POM                     |
| 7   | Adjusting seat   | POM                     |
| 8   | Body             | Aluminum alloy          |
| 9   | Diaphragm        | SUS304 & rubber         |
| 10  | Needle O-ring    | NBR                     |
| 11  | Balance needle   | POM                     |
| 12  | Needle gasket    | Aluminum alloy & rubber |
| 13  | Cap O-ring       | NBR                     |
| 14  | Return spring    | Stainless steel         |
| 15  | Regulator cap    | POM                     |

AR



BR



# Preparation unit——Lubricator

AIRTAC

## AL、BL Series

### Specification

| Model                | AL1500                  | AL2000 | BL2000 | BL3000 | BL4000 |
|----------------------|-------------------------|--------|--------|--------|--------|
| Fluid                | Air                     |        |        |        |        |
| Port size            | 1/8"                    | 1/4"   | 1/4"   | 3/8"   | 1/2"   |
| Pressure range       | 0.05~0.9MPa(7~130Psi)   |        |        |        |        |
| Proof pressure       | 1.5MPa(215Psi)          |        |        |        |        |
| Temperature range    | -20~70℃                 |        |        |        |        |
| Capacity of oil bowl | 25CC                    |        | 90CC   |        |        |
| Recommended          | ISO VG 32 or equivalent |        |        |        |        |
| Weight               | 170g                    |        | 250g   |        |        |

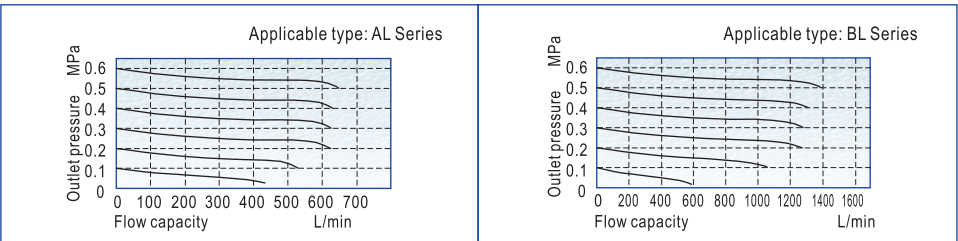
### Ordering code

#### AL 2000 P

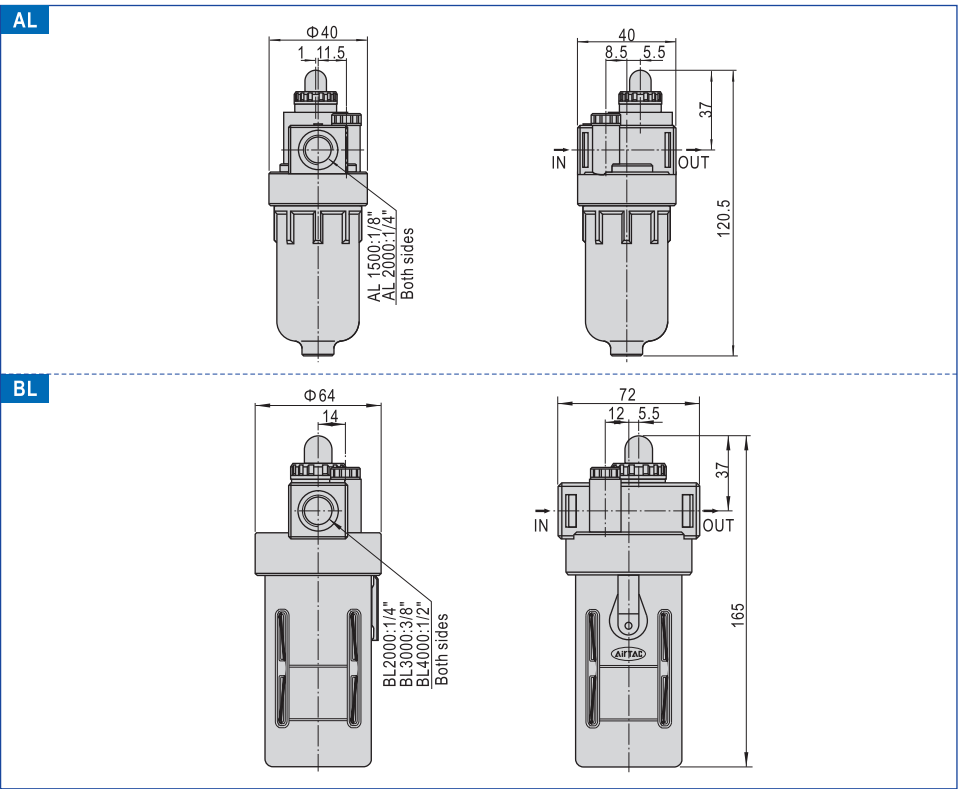
| Model                   | Thread type |
|-------------------------|-------------|
| AL: A Series lubricator | P: PT       |
| BL: B Series lubricator | T: NPT      |
|                         | G: G        |

| Port size |            |
|-----------|------------|
| Series    | Port size  |
| AL        | 1500: 1/8" |
|           | 2000: 1/4" |
| BL        | 2000: 1/4" |
|           | 3000: 3/8" |
|           | 4000: 1/2" |

### Flow chart



### Dimensions



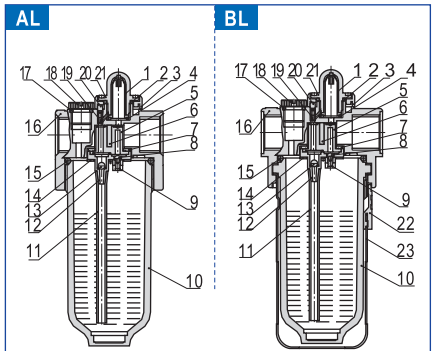
### Symbol



### Product feature

1. The structure is delicate and compact.
2. The quantity of oil dripping can be directly observed through transparent inspection sheet.
3. BL has high-strength plastic shields, which is more safe and reliable to use.
4. The pressure loss and the flow of miststart is low.

### Inner structure and material of major parts



| No. | Item                   | Material        |
|-----|------------------------|-----------------|
| 1   | Drip pipe              | PC              |
| 2   | Dripper O-ring         | NBR             |
| 3   | Oil adjusting dial     | POM             |
| 4   | Adjusting ring         | NBR             |
| 5   | Lubricator seat        | POM             |
| 6   | Partition              | PU              |
| 7   | Lubricator kit gasket  | NBR             |
| 8   | Adjustor               | HDPE            |
| 9   | Return spring          | Stainless steel |
| 10  | Oil bowl               | PC              |
| 11  | Sunk tube              | PU              |
| 12  | Lubricator kit         | POM             |
| 13  | Ball                   | Stainless steel |
| 14  | Lubricator fixed plate | SPCC            |
| 15  | Oil bowl O-ring        | NBR             |
| 16  | Body                   | Aluminum alloy  |
| 17  | Oil filling nut O-ring | NBR             |
| 18  | Oil filling plug       | Steel           |
| 19  | Needle spring          | Stainless steel |
| 20  | Injector pin           | Bronze          |
| 21  | Check-dome             | PC              |
| 22  | Bowl guard switch      | POM             |
| 23  | Bowl guard             | PA6             |