

FRL

AC/BC

AFC/BFC

AFR/BFR

AF/BF

AR/BR

AL/BL

SR

SDR

AC

AW

AF

AR

AL

F3

F2

F1

F

R

L

USFRL

USFRL/L

USFR

USF

USR

USL

QSL

QTY

QIU

QTYH

QSLH

QFRH

AFF

AF(Big)

AL(Big)

AR(Big)

AD402

AH402

AD-5

IR

ITV

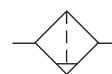
ACR

F804

PG



Symbol



Product feature

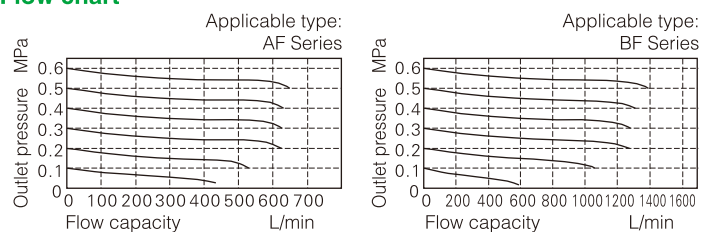
AF series

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

Flow chart



Selection of drain mode

The drain modes of different series are different; Please refer to AC/BC for details.

Ordering code

Model	Drain type	Thread type
AF A Series filter	Blank: Semi-auto drain	Blank PT
BF B Series filter	M: Manual drain	G G
	Blank: Semi-auto drain	T NPT
	M: Manual drain	
	A: Automatic drain	

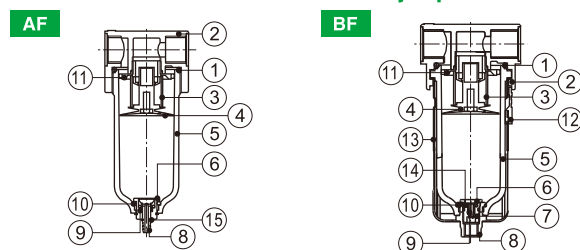
Port size	Filtering grade
Series	
AF	1500: 1/8"
	2000: 1/4"
BF	2000: 1/4"
	3000: 3/8"
	4000: 1/2"
	Blank 40μm
	W 5μm

Specification

Model	AF1500	AF2000	BF2000	BF3000	BF4000
Fluid	Air				
Port size	1/8"	1/4"	1/4"	3/8"	1/2"
Filtering grade	40μm or 5μm				
Pressure range	Semi-auto and automatic drain: 0.15~1.0MPa(20~130psi); Manual drain: 0~1.0MPa(7~130psi)				
Proof pressure	1.5MPa(215psi)				
Temperature range	-5~70℃				
Capacity of drain bowl	15CC		60CC		
Weight	140g		330g		

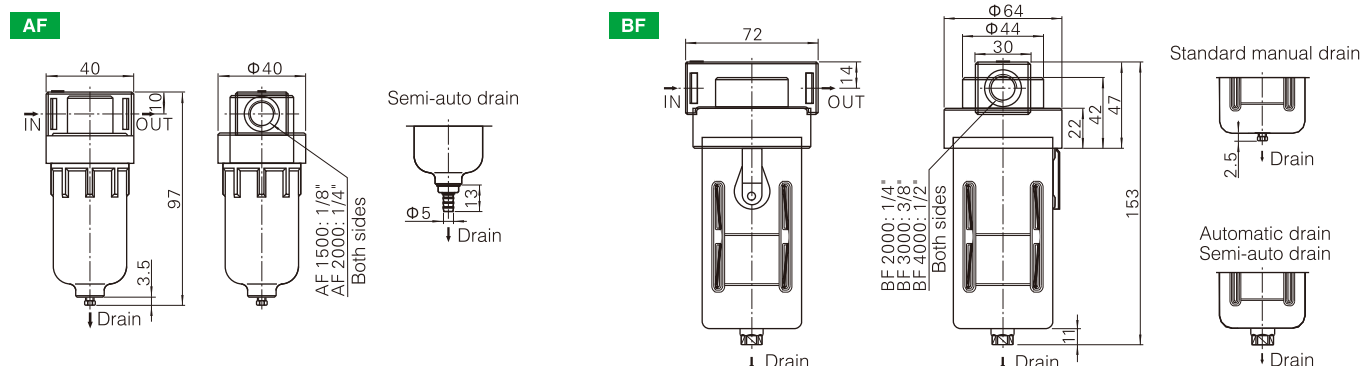
Note: PT thread, G thread and NPT thread are available.

Inner structure and material of major parts



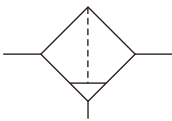
No.	Item	Material	No.	Item	Material
1	Drain bowl O-ring	NBR	8	Drain pillar	POM
2	Body	Aluminum alloy	9	Return spring	Stainless steel
3	Filter element	40μm Makrolon fiber	10	Gasket	POM
		5μm Agglomerated by bronze grain	11	Air guider	POM
4	Umbrella baffle	POM	12	Bowl guard switch	POM
5	Drain bowl	PC	13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

Dimensions





Symbol



Ordering code

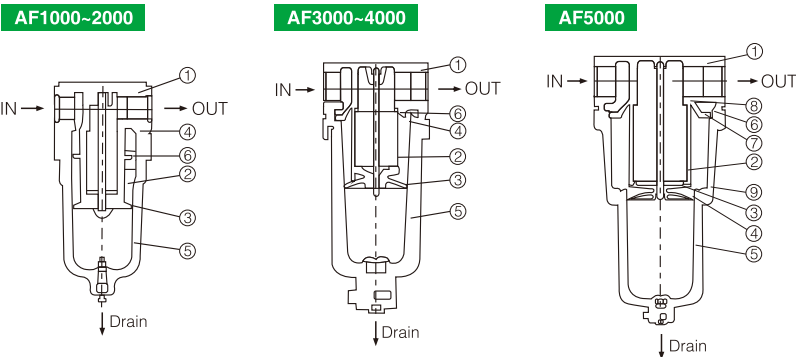
AF	2000	02	D
Model	Series code	Port size	Drain method
AF A Series filter	1000 1000 Series	M5 M5	Blank Manual drain
	2000 2000 Series	02 1/4"	A Semi-auto drain
	3000 3000 Series	03 3/8"	D Automatic drain
	4000 4000 Series	04 1/2"	
	5000 5000 Series	06 3/4"	
		10 1"	

Specification

Model	Manual drain	AF1000-M5	AF2000-02	AF3000-02	AF3000-03	AF4000-03	AF4000-04	AF4000-06	AF5000-06	AF5000-10
	Automatic drain	AF1000-M5D	AF2000-02D	AF3000-02D	AF3000-03D	AF4000-03D	AF4000-04D	AF4000-06D	AF5000-06D	AF5000-10D
Port size		M5x8	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"
Cup capacity		4	15	20	20	45	45	45	130	130
Rated flow (L/min)		110	750	1500	1500	4000	4000	6000	7000	7000
Proof pressure		1.5MPa{15.3kgf/cm ² }								
Max. pressure		1.0MPa{10.2kgf/cm ² }								
Temperature range		5~60℃								
Filtering grade		5μm or 40μm								
Cup material		Polycarbonate								
Cup protective cover		AF1000~2000(Without) AF3000~5000(With)								
Assembly	Manual drain	C100F	C200F	C300F	C300F	C400F	C400F	C400F	C400F	C400F
	Automatic drain	AD61	AD62	AD43	AD43	AD44	AD44	AD44	AD44	AD44
Weight(kg)		0.07	0.19	0.29	0.29	0.55	0.55	0.58	1.08	1.08

Note: 1. there are 2, 10, 20, 40, 70, 100μm to choose from;
2. Standard automatic drainage for normally open (N.O.), AF3000~5000 also has normally closed (N.C.) to choose from, and the lowest use pressure: normally open -0.1MPa (1kgf/cm²), normally closed -0.15MPa (1.5kgf/cm²);
3. Supply pressure is 0.7MPa (7.1kgf/cm²) case.

Inner structure



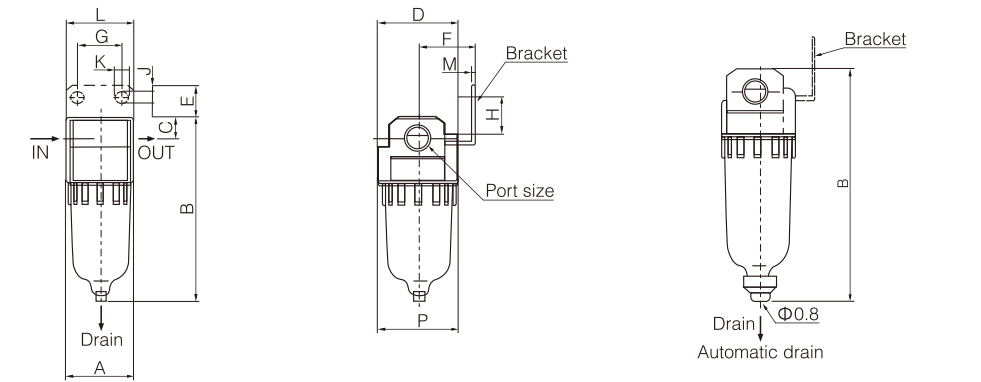
Main prtts

No.	Parts name	Material
1	Valve body	Aluminum die casting
2	Filter element	Brass
3	Drain board	ABS
4	O-ring	Rubber
5	Water storage cup (Protective cover)	Polycarbonate (Cold rolled sheet)
6	Whirlwind blade	ABS
7	O-ring	Rubber
8	Sealing washer	Rubber
9	Middle part	Aluminum die casting

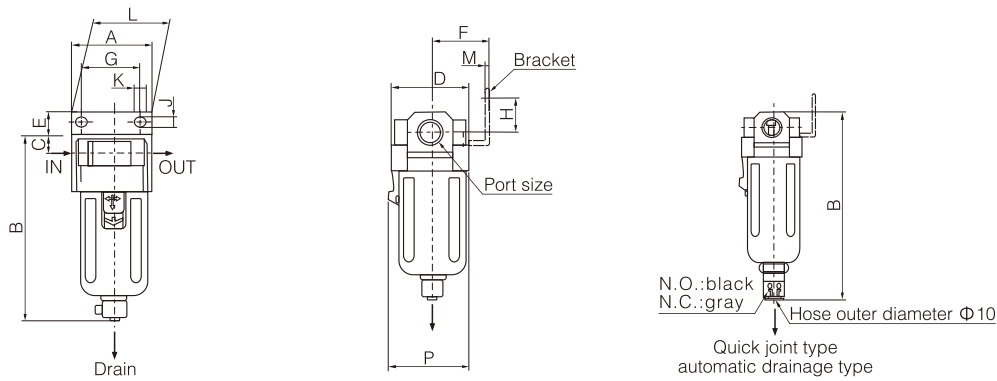
FRL
AC/BC
AFC/BFC
AFR/BFR
AF/BF
AR/BR
AL/BL
SR
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F3
F2
F1
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USFRL
USFR/L
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Dimensions

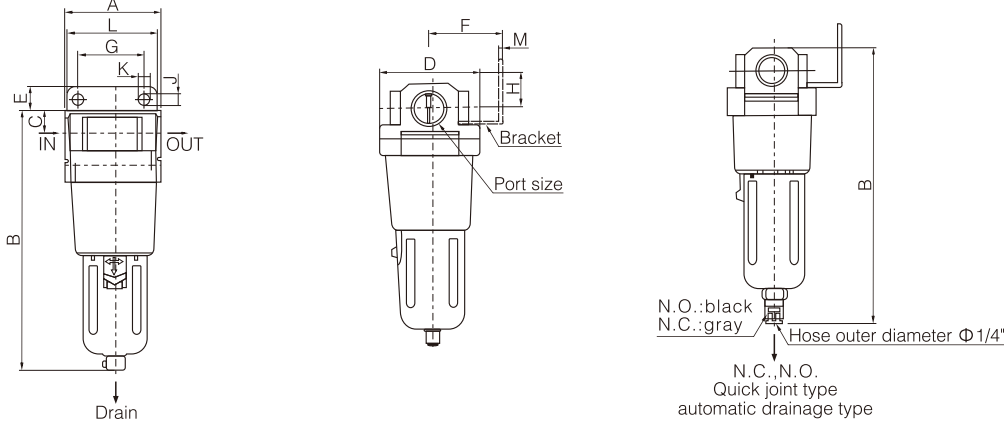
AF1000-2000



AF3000-4000



AF5000

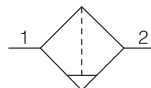


Model	Port size	A	B	C	D	E	F	G	H	J	K	L	M	P	B(Automatic drain)
AF1000	M5×0.8	25	66	7	25	-	-	-	-	-	-	-	-	26.5	86.5
AF2000	1/4"	40	97.5	11	40	17	30	27	22	5.4	8.4	40	2.3	40	120.5
AF3000	1/4":3/8"	53	132.5	14	53	16	41	40	23	6.5	8	53	2.3	56	170
AF4000	3/8":1/2"	70	168.5	18	70	17	50	54	26	8.5	10.5	70	2.3	73	206
AF4000-06	3/4"	75	172.5	20	70	14	50	54	25	8.5	10.5	70	2.3	73	210
AF5000	3/4":1"	90	247.5	24	90	23	70	66	35	11	13	90	3.2	90	285.5

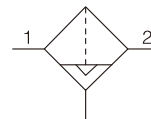


Symbol

Manual rotary condensate drain



Semi or fully automatic condensate drain



Installation and use

The F with water separator cleans the compressed air of fluid oil, condensation and dirt particles, for special application, the standard 40µm filter element may easily be replaced by a 5µm filter element.

Ordering code

F		5M	MINI	H	E
Series	Port size	Grade of filtration	Size	Condensate drain	Shell material
F Filter	1/8"	Blank 40µm	MICRO	Blank Turned manually	Blank Zinc
	1/4"	5M 5µm	MINI	H Semi-automatic	E Alu.
	3/8"		MIDI	A Fully automatic	
	1/2"		MAXI		
	3/4"				
	1"				

Specification

Size		MICRO					MINI			MIDI				MAXI		
Pneumatic connection		M5	M7	1/8"	QS4	QS6	1/8"	1/4"	3/8"	1/4"	3/8"	1/2"	3/4"	1/2"	3/4"	1"
Operating medium		Compressed air														
Design		Sintered filter with centrifugal separation														
Type of mounting		Via accessories														
		In-line installation														
Assembly position		Vertical ±5°														
Grade of filtration (µm)		5					5 (or) 40									
Max. condensate volume (cm³)		3					22			43				80		
Input pressure (bar)																
Condensate drain	Turned manually	1...10					2...16									
	Semi-automatic	1...10					-									
	Fully automatic	-					2...12									

Note: This product conforms with ISO 1179-1 standard and the ISO 228-1 standard.

Standard nominal flow rate (qn[L/min])

Connection	Female thread		Connecting plate		
	M5	M7	1/8"	QS4	QS6
Micro					
F	170	280	290	170	280

Note: This product conforms with ISO 1179-1 standard and the ISO 228-1 standard.

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AC/BC

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AFR/BFR

AF/BF

AR/BR

AL/BL

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AD402

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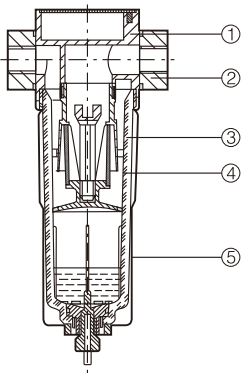
ACR

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FRL
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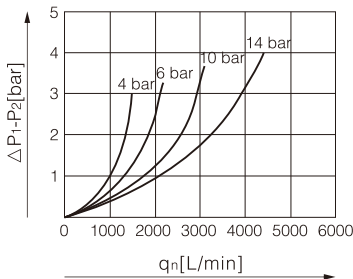
Inner structure



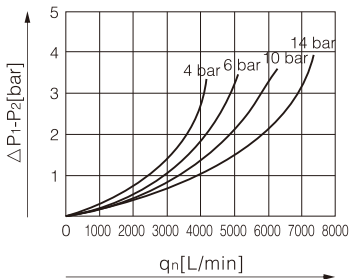
No.	Item	Material
1	Casting	Die-casting zinc
2	Connecting plate	Die-casting zinc/aluminum
3	Filter bowl	Polycarbonate
4	Filter element	PE
5	Metal cover	Aluminum
	Seal	NBR

Standard flow rate chart

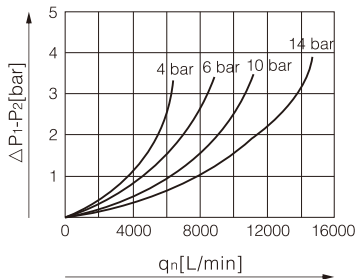
F-1/4-MINI



F-1/2-MIDI

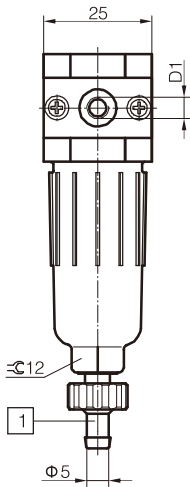
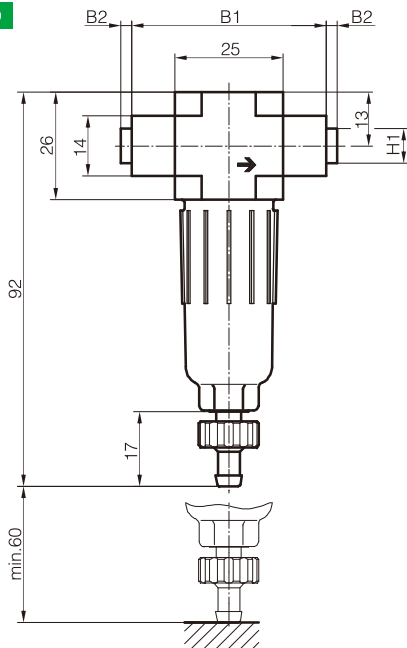


F-1-MAXI

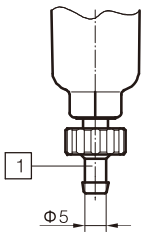


Dimensions

MICRO



Turned manually
condensate drain



Semi-automatic
condensate drain

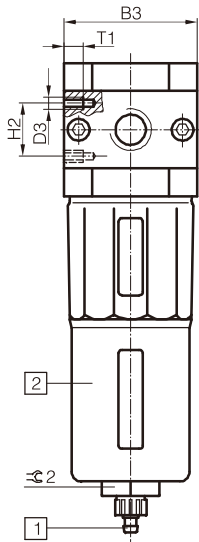
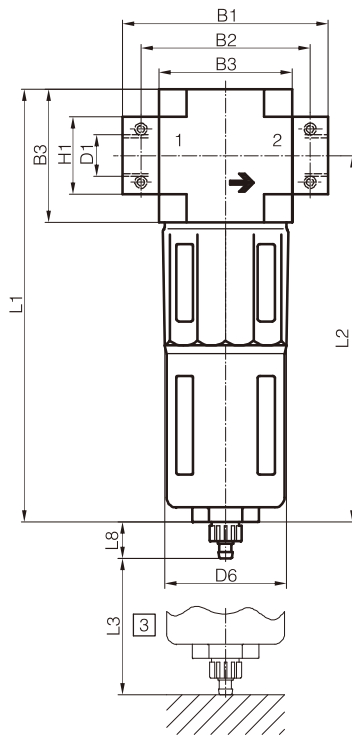
1 Barbed fitting for plastic tubing type PCN-4

➔ Flow direction

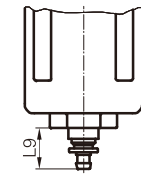
Model	B1	B2	D1	H1
F-M5-D-5M-MICRO(H)	25	-	M5	-
F-M7-D-5M-MICRO(H)B			M7	
F-1/8-D-5M-MICRO(H)	45	~2.5	1/8"	~8
F-QS4-D-5M-MICRO(H)			QS4	
F-QS6-D-5M-MICRO(H)			QS6	

MINI/MIDI/MAXI

With threaded connectin plates

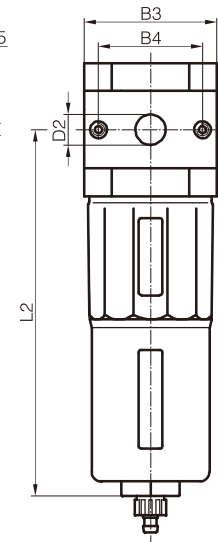
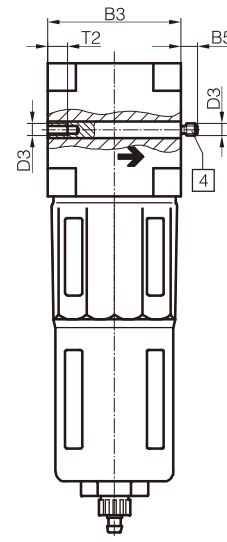


Turned manually
condensate drain



Semi-automatic
condensate drain

Without threaded connecting plates



1 Barbed fitting for plastic tubing type PCN-4

3 Installation dimensions

➔ Flow direction

2 Metal bowl guard

4 Threaded pin(exchangeable)

Model	B1	B2	B3	B4	B5	D1	D2Φ	D3	D6Φ	H1	H2	L1	L2	L3	L8	L9	T1	≤1	≤2
MINI																			
F-1/8-D-MINI	64	52	40	30	-	1/8"	-	M4	38	20	11	144	124	60	15	19	7	-	22
F-1/4-D-MINI	70					1/4"													
F-3/8-D-MINI						3/8"													
F-D-MINI	-	-			5.8	-	11			-	-						-	10	
MIDI																			
F-1/4-D-MIDI	85	70	55	43	-	1/4"	-	M5	52	32	22	179	151	80	15	19	8	-	24
F-3/8-D-MIDI						3/8"													
F-1/2-D-MIDI						1/2"													
F-3/4-D-MIDI						3/4"													
F-D-MIDI	-	-			6.8	-	24			-	-						-	11	
MAXI																			
F-1/2-D-MAXI	96	80	66	46	-	1/2"	-	M5	65	32	22	203	170	90	15	19	8	-	24
F-3/4-D-MAXI						3/4"													
F-1-D-MAXI	116	61				1"				40									
F-D-MAXI	-	-			6.8	-	30			-	-						-	11	

Note: This product conforms with ISO 1179-1 standard and the ISO 228-1 standard.

FRL

AC/BC

AFC/BFC

AFR/BFR

AF/BF

AR/BR

AL/BL

SR

SDR

AC

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AL

F3

F2

F1

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AD-5

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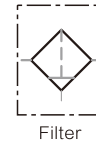
ITV

ACR

F804

PG

Symbol



Product feature

1. For high pressure use, corrosion and chemical resistance.
2. Good performance in chemically working environments and outdoor facility.
3. Suitable for semi-conductor industry.
4. The product effectively removes water and particle.
5. Strict quality control.

Ordering code

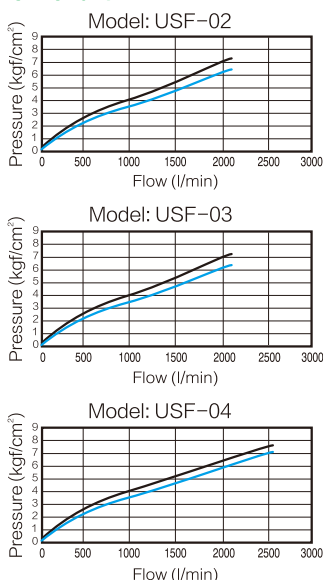
USF	B	-	02	N	C	H	W
Model	Pressure		Port size	Thread	Filtration	Drain	Bowl viewer
USF	Blank		02 1/4"	Blank G	Blank 5μm	Blank Semi-auto drain	Blank W/O Viewer
			03 3/8"	N NPT	C 40μm	H Manual drain	W Viewer (for 3/4", 1") (See *Remark below)
			04 1/2"	R Rc		D Auto drain (Working pressure: 0.5~9.9 kgf/cm ²)	
	B		06 3/4"				
			08 1"				

* Remark: Only for USFB (0.5~12kgf/cm²).

Specification

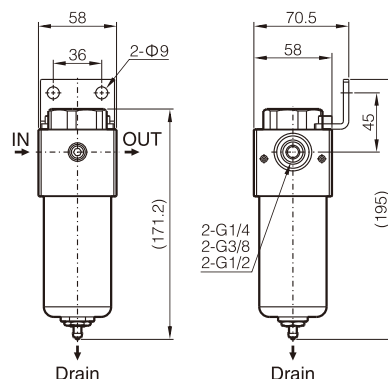
Model	USF-02	USF-03	USF-04	USF-06	USF-08
Port size	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air				
Body material	Stainless steel SUS316				
Bowl material	Stainless steel SUS316				
Filter element material	Stainless steel SUS316				
Filtration	5μm (Standard), 40μm (Option)				
Operating pressure range	USFB: 0.5~12 kgf/cm ² , USF: 0.5~30 kgf/cm ²			USFB: 0.5~12 kgf/cm ² , USF: 0.5~28 kgf/cm ²	
Proof pressure	60 kgf/cm ² (Bowl viewer: 15 kgf/cm ²)				
Max. flow rate l/min (ANR)	2440	2450	3030	B9600/19200	
Ambient temperature	-10℃~70℃				
Filter bowl capacity	110cc			200cc	
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)				
Net weight	1650g			3950g	
Accessories	Mounting bracket set, Plug				

Flow chart

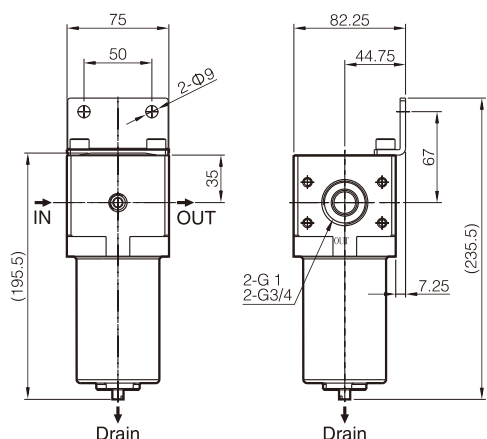


Dimensions

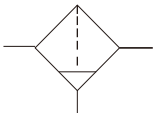
USF-02, 03, 04



USF-06, 08



Symbol



Ordering code

Q	
Series code	
Q	Q Series air treatment component

SL	
Order code	
SL	Air filter

20	
Port size	
6	1/8"
8	1/4"
10	3/8"
15	1/2"
20	3/4"
25	1"
40	1 1/2"

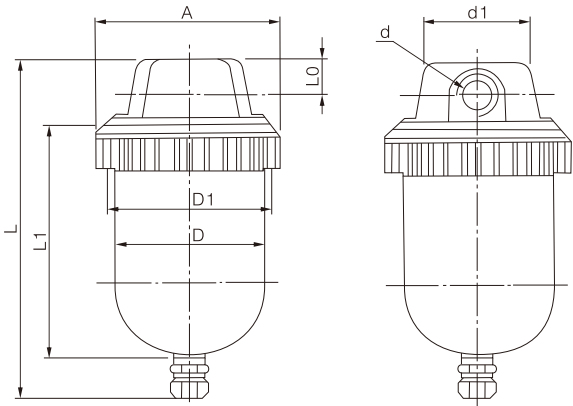
Specification

Model	QSL-6	QSL-8	QSL-10	QSL-15	QSL-20	QSL-25	QSL-40
Working temperature	5~60℃						
Nominal primary pressure	1.0MPa						
Filtrations	50-70μm						
Effective drain	≥85%						

Pressure drop-air flow rate chart

Model	The flow-rate was measured in the condition of 5% pressure drop				
	Air flow-rate(L/min)				
	Primary pressure(MPa)				
	0.25	0.4	0.63	0.8	1.0
QSL-6	200	290	450	360	680
QSL-8	450	720	1100	1460	700
QSL-10	760	1170	1620	2000	2340
QSL-15	1170	1460	2340	2700	3420
QSL-20	1700	2800	4000	4600	5400
QSL-25	2100	3420	5200	5800	6800
QSL-40	2500	4020	6400	7000	8200

Dimensions



Model	Port size d	A	ΦD	ΦD1	Φd1	L0	L1	L ≈
QSL-6	1/8"	90	70	88	55	15	114	160
QSL-8	1/4"							
QSL-10	3/8"							
QSL-15	1/2"	115	90	112	65	23	152	234
QSL-20	3/4"							
QSL-25	1"							
QSL-40	1 1/2"	130	90	130	92	34	228	310

FRL

AC/BC

AFC/BFC

AFR/BFR

AF/BF

AR/BR

AL/BL

SR

SDR

AC

AW

AF

AR

AL

F3

F2

F1

F

R

L

USFRL

USFR/L

USFR

USF

USR

USL

QSL

QTY

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AF(Big)

AL(Big)

AR(Big)

AD402

AH402

AD-5

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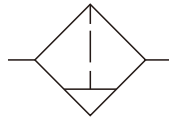
ACR

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Symbol



Specification

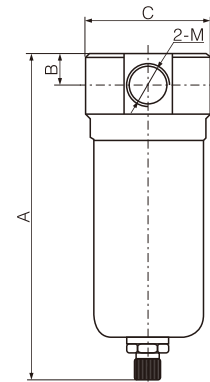
Model	QSLH-08	QSLH-10	QSLH-15	QSLH-20	QSLH-25
Operating fluid	Air or inert gas				
Pipe size	1/4"	3/8"	1/2"	3/4"	1"
Filter precision	20µm or 40µm				
Pressure range	0.15~4.0MPa				
Max. input pressure	4MPa				
Operating temperature	5~80°C				

Note: PT thread, G thread and NPT thread are available.

Ordering code

QSLH		□		15			
Model		Material		Port size			
QSLH	High pressure filter	Blank	Aluminium	08	1/4"	20	3/4"
		S	Stainless steel	10	3/8"	25	1"
				15	1/2"		

Dimensions

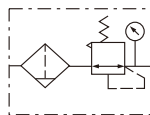


Bore	A	B	C	M
10	160	15	60	3/8"
15	160	15	60	1/2"
20	215	75	90	3/4"
25	215	75	90	1"

QFRH Series High Pressure Fitter & Regulator



Symbol



Specification

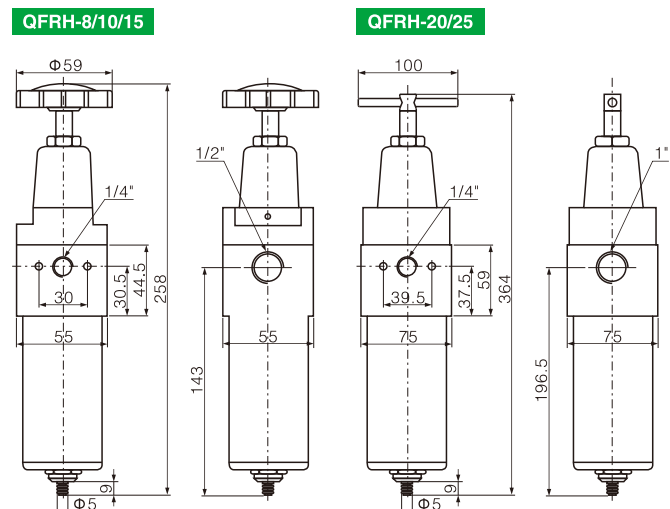
Model	QFRH-08	QFRH-10	QFRH-15	QFRH-20	QFRH-25
Operating fluid	Air or inert gas				
Pipe size	1/4"	3/8"	1/2"	3/4"	1"
Filter precision	20µm or 40µm				
Pressure range	0.05~3.5MPa				
Max. input pressure	4MPa				
Operating temperature	-25~+80°C				

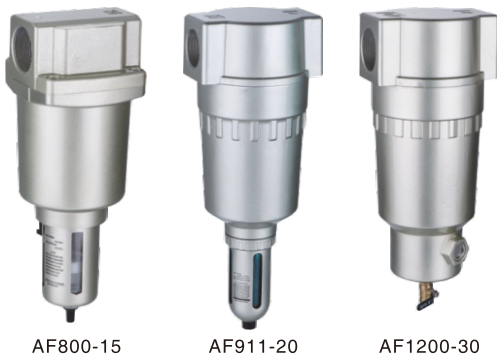
Note: PT thread, G thread and NPT thread are available.

Ordering code

QFRH		-		□		-		15	
Model				Material				Port size	
QFRH	High pressure fitter & regulator	Blank	Aluminium	08	1/4"	20	3/4"		
		S	Stainless steel	10	3/8"	25	1"		
					15	1/2"			

Dimensions





Ordering code

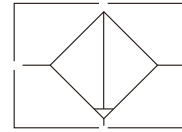
Series	Function	Body size	Automatic drainer	Port size
A	F	9	00	20
	F Filter	8 1½"	00 No automatic drain	15 1½"
		9 2"	11 Automatic drain	20 2"
		12 3"		30 3"

Specification

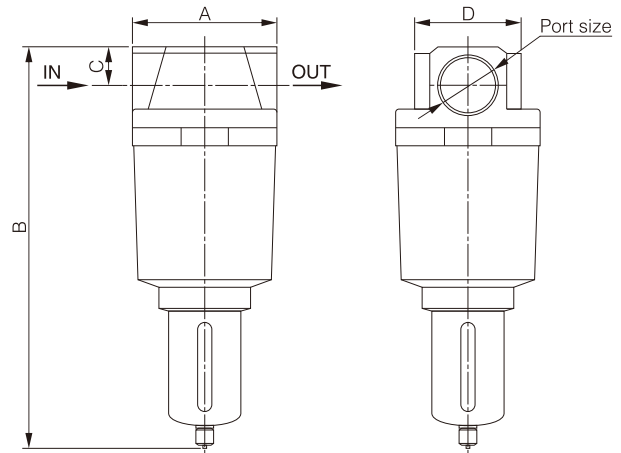
Model	AF800-15	AF900-20	AF1200-30
Port size	1½"	2"	3"
Max. working pressure	1.0MPa		
Ensure pressure resistance	1.5MPa		
Environment & fluid temperature	-5~60°C (Not frozen)		
Filter precision	Standard: 5µm		
Protective cover	Yes		
Material of water cup	PC		
Rating flow (L/min)	12000	20000	28000

Note: PT thread, G thread and NPT thread are available.

Symbol



Dimensions



Model	Port size	Standard specification			
		A	B	C	D
AF800-15	1½"	120	331	31.5	88
AF900-20	2"	200.5	517.5	47	91
AF1200-30	3"	257	600	68	225

AL Series High Flow Rate Lubricator



Ordering code

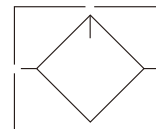
Series	Function	Body size	Port size
A	L	900	20
	L Lubricator	800 1½"	15 1½"
		900 2"	20 2"

Specification

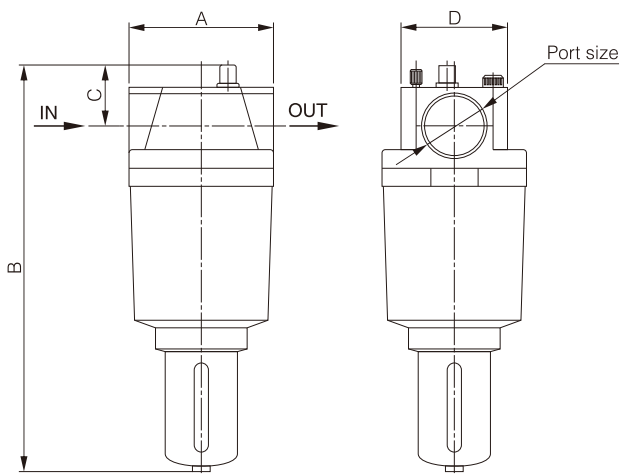
Model	AL800-15	AL900-20
Port size	1½"	2"
Max. working pressure	1.0MPa	
Environment & fluid temperature	-5~60°C (Not frozen)	
Min. flow of oil drop (L/min)	650	1800
Recommended oil	Turbine NO.1 oil ISO VG32	
Protective cover	Yes	

Note: PT thread, G thread and NPT thread are available.

Symbol



Dimensions



Model	Port size	Standard specification			
		A	B	C	D
AL800-15	1½"	120.5	318	47	91
AL900-20	2"	120.5	338	58	91

FRL

AC/BC

AFC/BFC

AFR/BFR

AF/BF

AR/BR

AL/BL

SR

SDR

AC

AW

AF

AR

AL

F3

F2

F1

F

R

L

USFRL

USFR/L

USFR

USF

USR

USL

QSL

QTY

QIU

QTYH

QSLH

QFRH

AFF

AF(Big)

AL(Big)

AR(Big)

AD402

AH402

AD-5

IR

ITV

ACR

F804

PG

FRL
AC/BC
AFC/BFC
AFR/BFR
AF/BF
AR/BR
AL/BL
SR
SDR
AC
AW
AF
AR
AL
F3
F2
F1
F
R
L
USFRL
USFR/L
USFR
USF
USR
USL
QSL
QTY
QIU
QTYH
QSLH
QFRH
AFF
AF(Big)
AL(Big)
AR(Big)
AD402
AH402
AD-5
IR
ITV
ACR
F804
PG



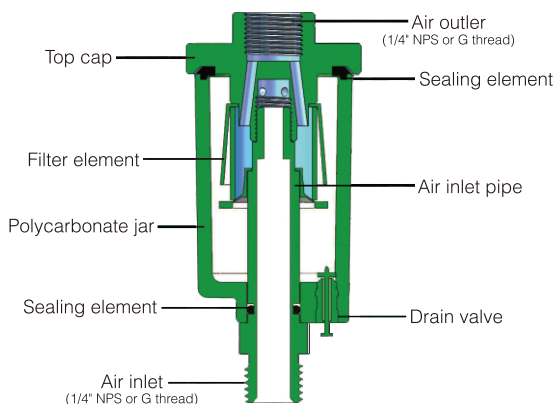
Product feature

1. Directly assembled with small pneumatic tools.
2. Filtrate moisture, airborne solid contaminants such as pipe scale, rust, condensation from airlines.
3. The clear filter bowl allows a visual inspection of condensation and so can be removed through the drain valve at the bottom.
4. 1/4" Thread size for most spray guns-standard 1/4" thread will fit most spray guns and airlines. (NPS or G thread are available).
5. Widely used in the the Woodworking/Furniture making and all industrial work.
6. Compact & Light weight-The whole set is made of high quality aluminum alloy + Polycarbonate, compact design for easy install and operation, light weight for carrying and potable for outdoor work.

Specifications

Material: Aluminum alloy + PC + 100 mesh copper core filter element
Main color: Blue (as pictures shown, red color is available)
Item size: 10x4cm
Pipe size: (the female and male thread) 1/4" (NPS or G)
Working pressure: (1~9) Bar (1-136Psi)
Weight: about 103g

Inner structure



Component material list

Part name	Material
Top cap	Aluminum alloy
Filter element	Copper or PP
Polycarbonate jar	Polycarbonate
Sealing element	NBR
Air inlet	Steel or brass (chrome plated)
Drain valve	Brass

Optional coupling

ISO-B6 Standard type pneumatic quick couplings for america market



Reference quick coupling
Page: **567**

ASIA Standard type pneumatic quick couplings for asia market



Reference quick coupling
Page: **575**

ARO210 Standard type pneumatic quick couplingsfor america market



Reference quick coupling
Page: **574**

EURO 7.6 Standard type pneumatic quick couplingsfor europe market



Reference quick coupling
Page: **572**

Dimensions

