

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

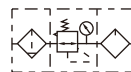
ITV

ACR

F804

PG

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 interference.
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).

Ordering code

AC		2000	M		1		W	
Model		Type code		Scale		Filtering grade		
AC	A Series F.R.L unit	Blank	Standard(0.9MPa)	1	MPa	Blank	40μm	
BC	B Series F.R.L unit	L	Lower pressure(0.4MPa)	2	psi	W	5μm	
Port size		Pressure gauge		3		Thread type		
Series	Port size	Blank	Pressure gauge	4		Thread type		Scale
AC	1500: 1/8"	N	No pressure gauge			Blank	PT	MPa or kgf/cm ² & psi
	2000: 1/4"	Drain type				G	G	bar
	2000: 1/4"	Series	Drain type			T	NPT	psi
	3000: 3/8"	AC	Blank: Semi-auto drain					
	4000: 1/2"		M: Manual drain					
			Blank: Semi-auto drain					
		BC	M: Manual drain					
			A: Automatic drain					

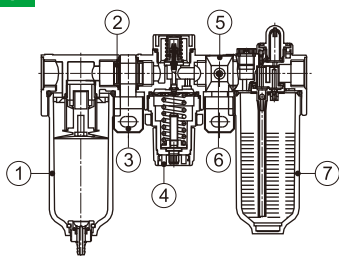
Specification

Model		AC1500	AC2000	BC2000	BC3000	BC4000
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:0.15~0.9MPa(20~130psi); Manual drain: 0.05~0.9MPa(7~130psi)				
Max. pressure		1.0MPa(145psi)				
Proof pressure		1.5MPa(215psi)				
Temperature range		-5~70℃				
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

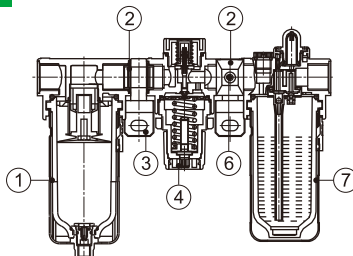
Note: PT thread, G thread and NPT thread are available.

Inner structure

AC

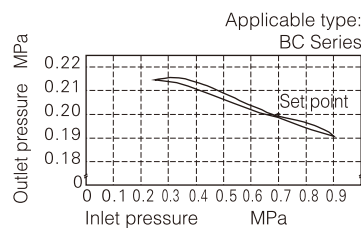
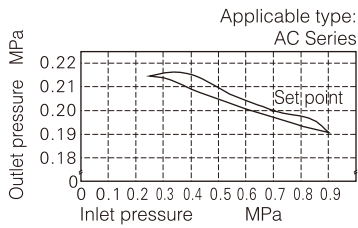


BC

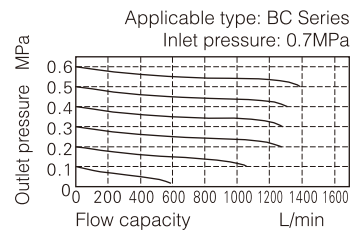
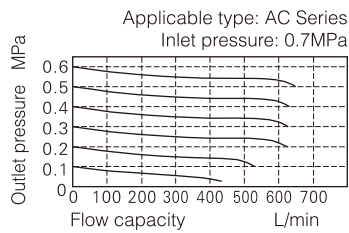


No.	Item
1	AF, BF series filter
2	A, B Series gasket
3	A, B Series bracket
4	AR, BR Series regulator
5	A, B Series fix kit
6	Screw
7	AL, BL Series lubricator

Pressure chart



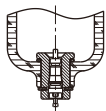
Flow chart



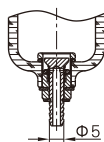
Selection of drain mode

AC

Manual drain



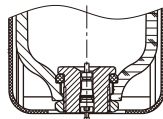
Semi-auto drain



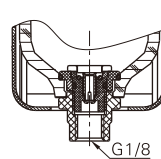
This semi-auto drain can also achieve the function of manual drain
PU tube with an inner diameter of Φ4mm is recommended

BC

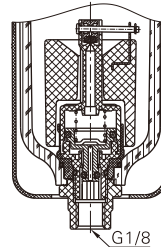
Manual drain



Semi-auto drain

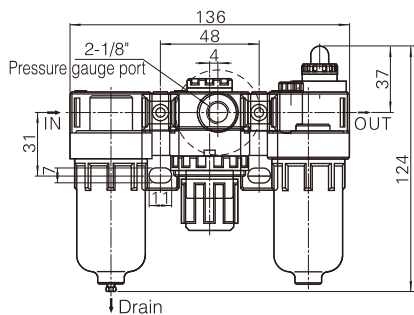


Automatic drain

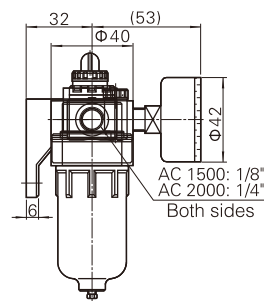
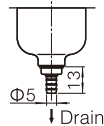


Dimensions

AC

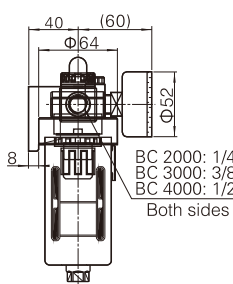
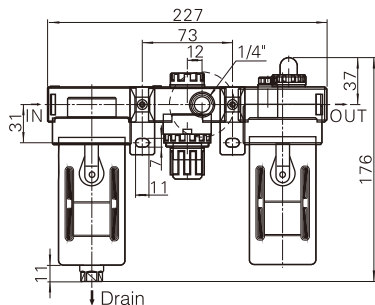


Semi-auto drain



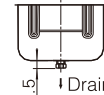
AC 1500: 1/8"
AC 2000: 1/4"
Both sides

BC

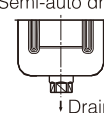


BC 2000: 1/4"
BC 3000: 3/8"
BC 4000: 1/2"
Both sides

Standard manual drain



Automatic drain
Semi-auto drain



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

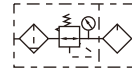
ITV

ACR

F804

PG

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 interference.
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).

Ordering code

AFC	2000	M	1	W
Model		Type code	Scale	Filtering grade
AFC A Series FR.L unit		Blank Standard(0.9MPa)	1 MPa	Blank 40µm
BFC B Series FR.L unit		L Lower pressure(0.4MPa)	2 psi	W 5µm
Port size		Pressure gauge	3 bar	Thread type
Series Port size		Blank Pressure gauge	4 Double scale (psi, kgf/cm ²)	Thread type Scale
AFC 1500: 1/8"		N No pressure gauge		Blank PT MPa or kgf/cm ² & psi
2000: 1/4"		Drain type		G G bar
2000: 1/4"		Series Drain type		T NPT psi
BFC 3000: 3/8"		AFC Blank: Semi-auto drain		
4000: 1/2"		M: Manual drain		
		Blank: Semi-auto drain		
		BFC M: Manual drain		
		A: Automatic drain		

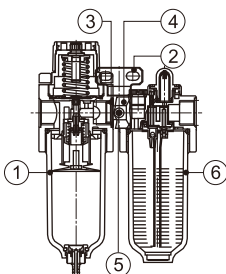
Specification

Model	AFC1500	AFC2000	BFC2000	BFC3000	BFC4000
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: 0.15~0.9MPa(20~130psi); Manual drain: 0.05~0.9MPa(7~130psi)				
Max. pressure	1.0MPa(145psi)				
Proof pressure	1.5MPa(215psi)				
Temperature range	-5~70°C				
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	AFR 1500	AFR 2000	BFR 2000	BFR 3000
	Lubricator	AL 1500	AL2000	BL 2000	BL 3000

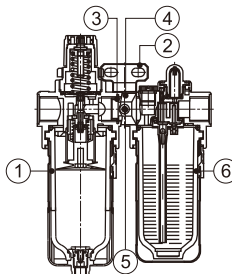
Note: PT thread, G thread and NPT thread are available.

Inner structure

AFC

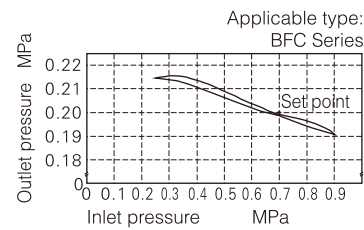
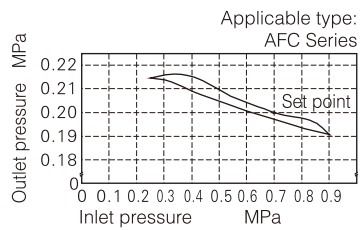


BFC

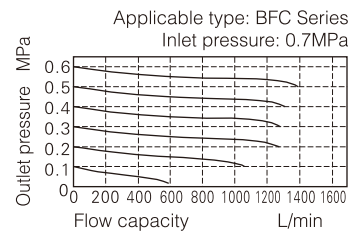
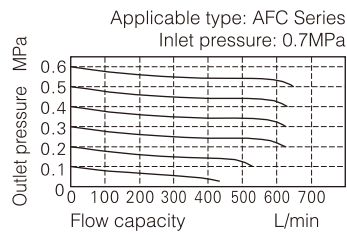


No.	Item
1	AFF, BFF series filter & regulator
2	A, B Series bracket
3	A, B Series gasket
4	A, B series fixed kit
5	Screw
6	AL, BL Series lubricator

Pressure chart



Flow chart

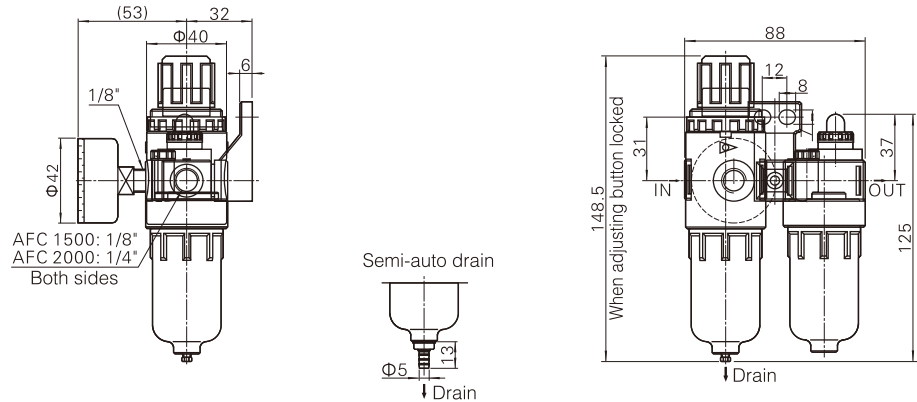


Selection of drain mode

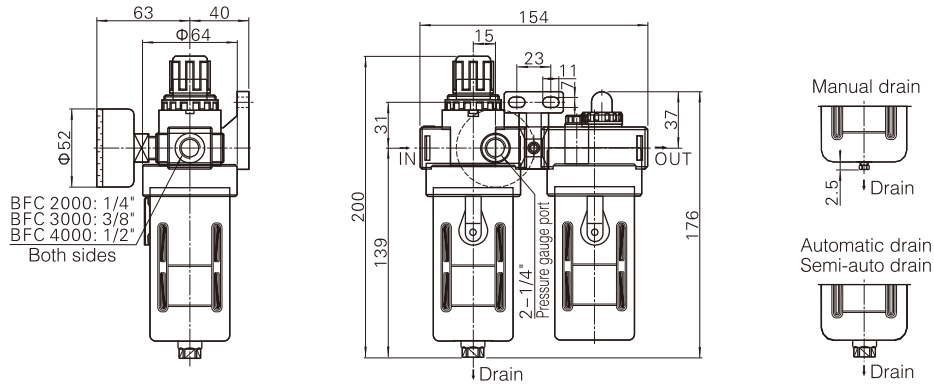
The drain modes of different series are different.
Please refer to AC/BC for details.

Dimensions

AFC



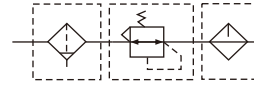
BFC



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



Symbol



Ordering code

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

Specification

Model	Manual drain	AC1000-M5	AC2000-02	AC3000-02	AC3000-03	AC4000-03	AC4000-04	AC4000-06	AC5000-06	AC5000-10
	Automatic drain	AC1000-M5D	AC2000-02D	AC3000-02D	AC3000-03D	AC4000-03D	AC4000-04D	AC4000-06D	AC5000-06D	AC5000-10D
Port size		M5x8	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"
Pressure gauge size		1/16"	1/8"	1/8"	1/8"	1/4"	1/4"	1/4"	1/4"	1/4"
Rated flow (L/min)		90	500	2000	2000	4000	4000	4500	5000	5000
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								
Recommended oil		Turbine No. 1 oil ISO VG32								
Cup material		Polycarbonate								
Cup protective cover		AC1000~2000(Without) AC3000~5000(With)								
Pressure range		AC1000: 0.05-0.7MPa(0.51~7.1kgf/cm ²); AC2000~5000: 0.05~0.85MPa(0.51~8.7kgf/cm ²)								
Valve type		With overflow								
Assembly	Filter	AF1000	AF2000	AF3000	AF3000	AF4000	AF4000	AF4000	AF5000	AF5000
	Regulator	AR1000	AR2000	AR3000	AR3000	AR4000	AR4000	AR4000	AR5000	AR5000
	Lubricator	AL1000	AL2000	AL3000	AL3000	AL4000	AL4000	AL4000	AL5000	AL5000
Weight(kg)		0.26	0.74	1.18	1.18	2.14	2.14	2.47	3.82	3.82

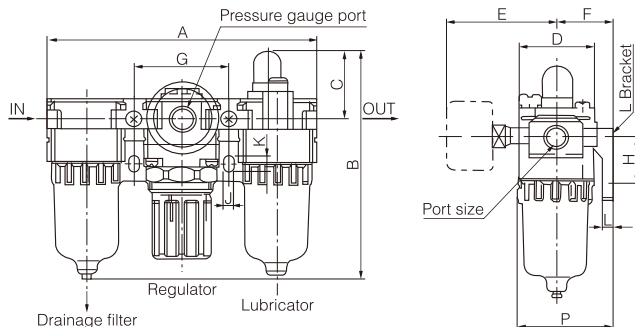
Note: 1. there are 2, 10, 20, 40, 70, 100μm to choose from;

2. Standard automatic drainage for normally open (N.O.), AC3000~5000 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);

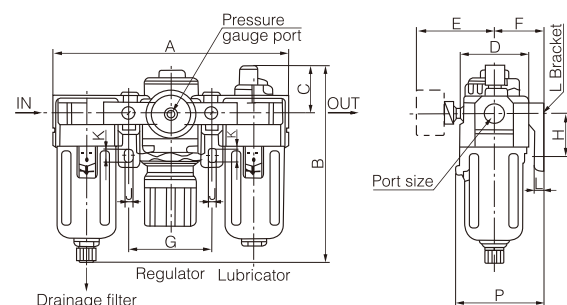
3. Supply pressure is 0.7MPa (7.1kgf/cm²) case.

Dimensions

AC1000-2000



AC3000-5000

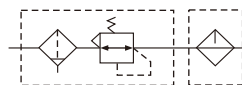


Model	Port size	A	B	C	D	E	F	G	H	J	K	L	P	B(Automatic drain)
AC1000	M5x0.8	91	84.5	25.5	25	26	25	33	20	4.5	7.5	5	38.5	105
AC2000	1/4"	140	125	38	40	56.8	30	50	24	5.5	8.5	5	50	147.5
AC3000	1/4"-3/8"	181	156.5	38	53	60.8	41	64	35	7	11	7	70.5	194
AC4000	3/8"-1/2"	238	191.5	41	70	65.5	50	84	40	9	13	7	88	229
AC4000-06	3/4"	253	193	40.5	70	69.5	50	89	40	9	13	7	88	230.5
AC5000	3/4"-1"	300	271.5	48	90	75.5	70	105	50	12	16	10	115	309.5

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



Symbol



Ordering code

AC	2010	02	D
Model	Port size		
AC A Series FR.L unit	M5	M5	Blank
Series code	02	1/4"	A
	03	3/8"	D
	04	1/2"	
	06	3/4"	
	10	1"	
1010	1000 Series		
2010	2000 Series		
3010	3000 Series		
4010	4000 Series		
5010	5000 Series		

Specification

Model	Manual drain	AC1010-M5	AC2010-02	AC3010-02	AC3010-03	AC4010-03	AC4010-04	AC4010-06	AC5010-06	AC5010-10
	Automatic drain	AC1010-M5D	AC2010-02D	AC3010-02D	AC3010-03D	AC4010-03D	AC4010-04D	AC4010-06D	AC5010-06D	AC5010-10D
Port size		M5×8	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"
Pressure gauge size		1/16"	1/8"	1/8"	1/8"	1/8"	1/4"	1/4"	1/4"	1/4"
Rated flow (L/min)		90	500	1700	1700	3000	3000	3000	4000	4000
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								
Recommended oil		Turbine No. 1 oil ISO VG32								
Cup material		Polycarbonate								
Cup protective cover		AC1010~2010(Without) AC3010~5010(With)								
Pressure range		AC1010: 0.05~0.7MPa(0.51~7.1kgf/cm ²); AC2010~5010: 0.05~0.85MPa(0.51~8.7kgf/cm ²)								
Valve type		With overflow								
Assembly	Filter regulator	AW1000	AW2000	AF3000	AF3000	AF4000	AF4000	AF4000	AF5000	AF5000
	Lubricator	AL1000	AL2000	AL3000	AL3000	AL4000	AL4000	AL4000	AL5000	AL5000
Weight(kg)		0.22	0.66	0.98	0.98	1.93	1.93	1.99	3.2	3.2

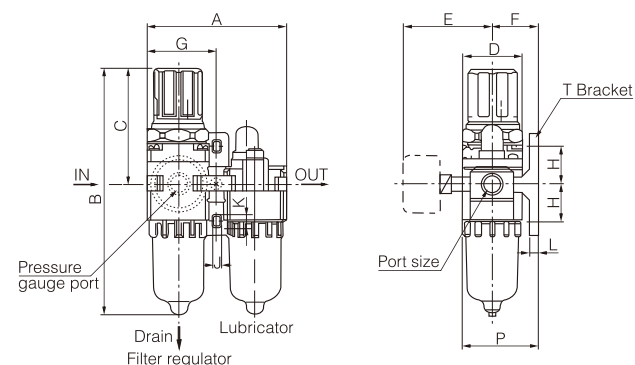
Note: 1. there are 2, 10, 20, 40, 70, 100μm to choose from;

2. Standard automatic drainage for normally open (N.O.), AC3010~5010 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);

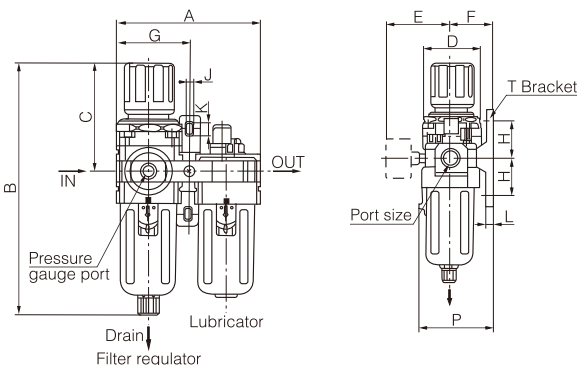
3. Supply pressure is 0.7MPa (7.1kgf/cm²) case.

Dimensions

AC1010-2010



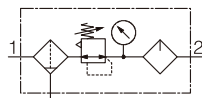
AC3010-5010



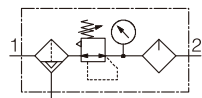
Model	Port size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	B(Automatic drain)
AC1010	M5×0.8	58	109.5	50.5	25	26	25	29	20	4.5	7.5	5	17.5	16	38.5	130
AC2010	1/4"	90	164.5	78	40	56.8	30	45	24	5.5	8.5	5	22	23	50	187.5
AC3010	1/4"-3/8"	117	211	92.5	53	60.8	41	58.5	35	7	11	7	34.2	26	70.5	248.5
AC4010	3/8"-1/2"	154	262.5	112	70	70.5	50	77	40	9	13	7	42.2	33	88	300
AC4010-06	3/4"	164	267	114	70	70.5	50	82	40	9	13	7	46.2	36	88	304
AC5010	3/4"-1"	195	338	116	90	75.5	69.8	97.5	50	12	16	10.5	55.2	40	115	-



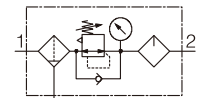
Symbol



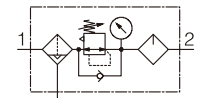
F3-...-MICRO/MINI/MIDI
Manual rotary condensate drain,
with pressure gauge



Semi or fully automatic condensate drain,
with pressure gauge



F3-...-MAXI
Manual rotary condensate drain,
with pressure gauge



Fully automatic condensate drain,
with pressure gauge

Ordering code

F	3		5M	7	MINI	H	E
Series	Function code	Port size	Grade of filtration	Working pressure	Size	Condensate drain	Shell material
F F Series	F.R.L. combination	1/8"	Blank 40µm	Blank 12bar	MICRO	Blank Turned manually	Blank Zinc
		1/4"	5M 5µm	7 7bar	MINI	H Semi-automatic	E Alu.
		3/8"			MIDI	A Fully automatic	
		1/2"			MAXI		
		3/4"					
		1"					

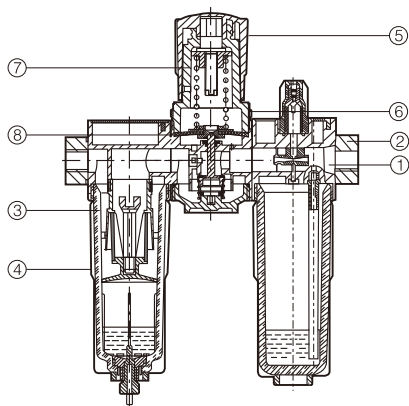
Installation and use

The F3 consisted of F+R+L, each unit can be ordered separately. The filter 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. The R maintain inputting operating pressure constantly despite fluctuation in line pressure and the amount of air consumed. The proportional lubricator adds a regulated quantity of oil to the filtered air. The oil-mist mixed proportionally to the flow and oil can be added during operation. The oil drip rate is controlled by the adjustable knob. Normally, 1 to 12 drops/1000L of the air is sufficient.

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		Filter regulator, with/without pressure gauge														
		Proportional standard mist lubricator														
Type of mounting		Via accessories														
		In-line installation														
Assembly position		Vertical ±5°														
Regulator lock		Rotary knob with lock														
		-					Rotary knob with lock									
Grade of filtration (µm)		5					5 (or) 40							0.4		
Max. hysteresis (bar)		0.3					0.2									
Pressure regulation range (bar)		0.5...7					0.5...7									
							0.5...12									
Pressure indication		Via pressure gauge														
		M5 Prepared					1/8" Prepared			1/4" Prepared				1/4" Prepared		
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									

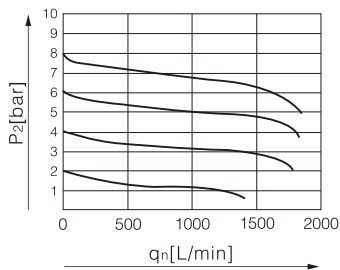
Inner structure



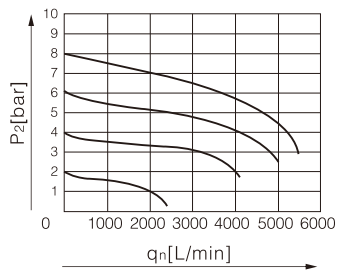
No.	Item	Material
1	Casting	Die-casting zinc alloy
2	Connecting plate	Die-casting aluminum alloy
3	Filter bowl	Polycarbonate
4	Protecting cover	Aluminum
5	Adjustable knob	POM
6	Knurled nut	Aluminum
7	Valve cover	POM
8	Diaphragm	NBR
	Seal	NBR

Standard flow rate chart

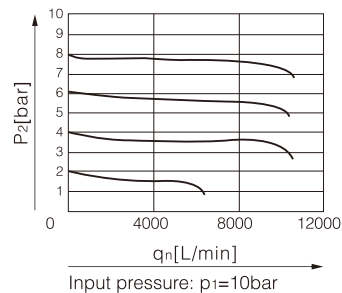
F3-1/4-MINI



F3-1/2-MIDI

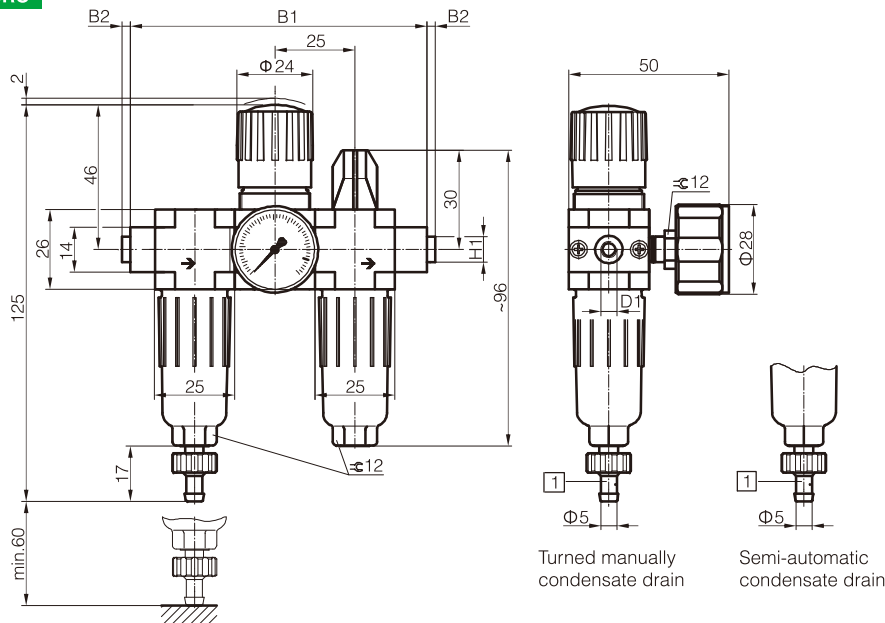


F3-1-MAXI



Dimensions

MICRO

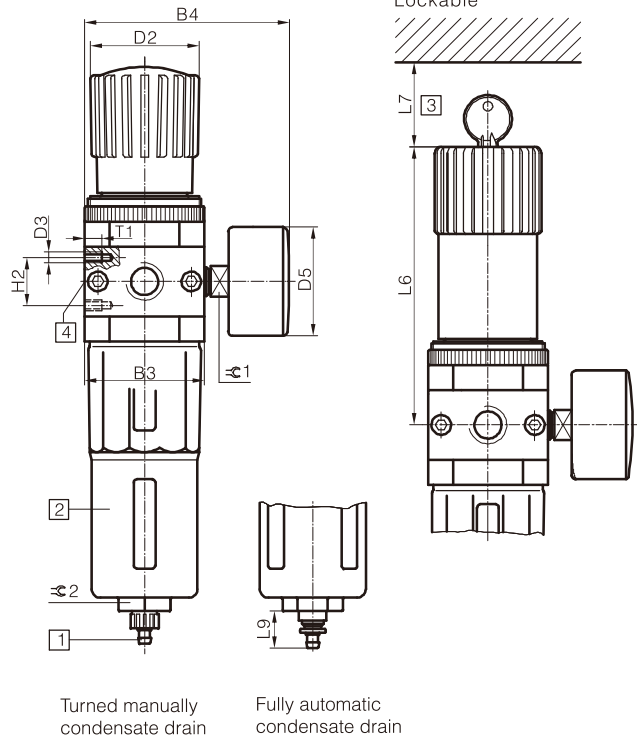
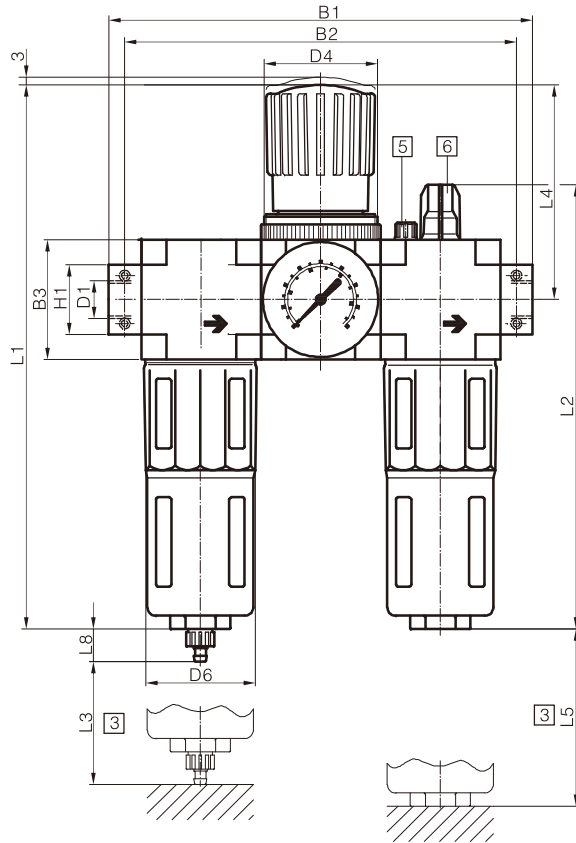


Model	B1	B2	D1	H1
F3-M5-D-7-5M-MICRO(H)	75	-	M5	-
F3-M7-D-7-5M-MICRO(H)B			M7	
F3-1/8-D-7-5M-MICRO(H)			1/8"	
F3-QS4-D-7-5M-MICRO(H)	95	~2.5	QS4	~8
F3-QS6-D-7-5M-MICRO(H)			QS6	~10

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

MINI/MIDI/MAXI



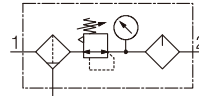
- 1 Barbed fitting for plastic tubing type PCN-4 2 Metal bowl guard 3 Installation dimensions → Flow direction
4 Second pressure gauge connection 5 Exhausting screw for oil reservoir 6 Oil adjusting screw

Model	B1	B2	B3	B4	D1	D2Φ	D3	D4	D5Φ	D6Φ	H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9	T1	±1	±2
MINI																								
F3-1/8-D-MINI	144	120	40	76	1/8"	31	M4	M36×1.5	41	38	20	11	193	169	60	69	100	98	60	15	19	7	14	22
F3-1/4-D-MINI					1/4"																			
F3-3/8-D-MINI					3/8"																			
MIDI																								
F3-1/4-D-MIDI	195	165	55	95	1/4"	50	M5	M52×1.5	50	52	32	22	250	204	80	99	120	130	60	15	19	8	14	24
F3-3/8-D-MIDI					3/8"																			
F3-1/2-D-MIDI					1/2"																			
F3-3/4-D-MIDI					3/4"																			
MAXI																								
F3-1/2-D-MAXL	228	198	66	107	1/2"	31	M5	M36×1.5	50	65	32	22	252	228	90	82	150	111	60	15	19	8	14	24
F3-1/2-D-DI-MAXL						49		M52×1.5					275			105		135						
F3-3/4-D-MAXL						31		M36×1.5					252			82		111						
F3-3/4-D-DI-MAXL					49	M52×1.5		275					105			135								
F3-1-D-MAXL	248				1"	31		M36×1.5			40		252			82		111						
F3-1-D-DI-MAXL						49		M52×1.5					275			105		135						

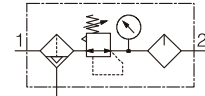
Note: This product conforms with ISO 1179-1 standard and the ISO 228-1 standard.



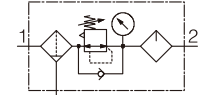
Symbol



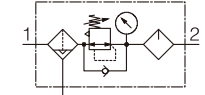
F2...-MICRO/MINI/MIDI
Manual rotary condensate drain,
with pressure gauge



Semi or fully automatic condensate drain,
with pressure gauge



F2...-MAXI
Manual rotary condensate drain,
with pressure gauge



Fully automatic condensate drain,
with pressure gauge

Ordering code

F		2				5M		7		MINI		H		E	
Series		Function code		Port size		Grade of filtration		Working pressure		Size		Condensate drain		Shell material	
F	F Series	FR.L. combination		1/8"		Blank	40µm	Blank	12bar	MICRO		Blank	Turned manually	Blank	Zinc
				1/4"		5M	5µm	7	7bar	MINI		H	Semi-automatic	E	Alu.
				3/8"						MIDI		A	Fully automatic		
				1/2"						MAXI					
				3/4"											
				1"											

Installation and use

The F2 consisted of F1 and L, each unit can be ordered separately. The F with water separator, Cleans the compressed air of fluid oil, condensation and dirt particles. For special applicaton, the standard 40µm filter element may easily be replaced by a 5µm filter element. The R maintain inputting operating pressure constantly despite fluctuation in line pressure and the amount of air consumed. The proportional lubricator adds a regulated quantity of oil to the filtered air. The oil-mist mixed proportionlly to the flow and oil can be added during operation. The oil drip rate is controlled by the adjustable knob. Normally, 1 to 12 drops/1000L of the air is sufficient.

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		Filter regulator, with/without pressure gauge														
		Proportional standard mist lubricator														
Type of mounting		Via accessories														
		In-line installation														
Assembly position		Vertical ±5°														
Regulator lock		Rotary knob with lock														
		-					Rotary knob with lock									
Grade of filtration (µm)		5					5 (or) 40								0.4	
Max. hysteresis (bar)		0.3					0.2									
Pressure regulation range (bar)		0.5...7					0.5...7									
							0.5...12									
Pressure indication		Via pressure gauge														
		M5 Prepared					1/8" Prepared			1/4" Prepared				1/4" Prepared		
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									

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

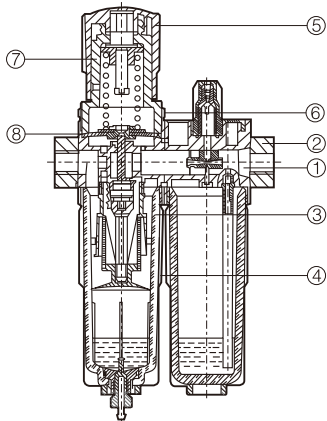
ACR

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

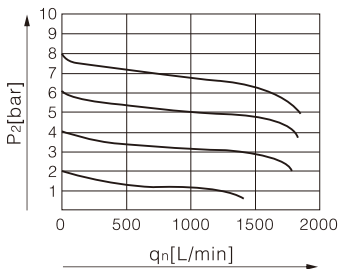
Inner structure



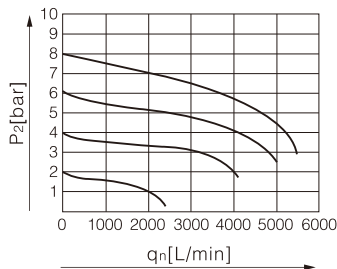
No.	Item	Material
1	Casting	Die-casting zinc alloy
2	Connecting plate	Die-casting aluminum alloy
3	Filter bowl	Polycarbonate
4	Protecting cover	Aluminum
5	Adjustable knob	POM
6	Knurled nut	Aluminum
7	Valve cover	POM
8	Diaphragm	NBR
	Seal	NBR

Standard flow rate chart

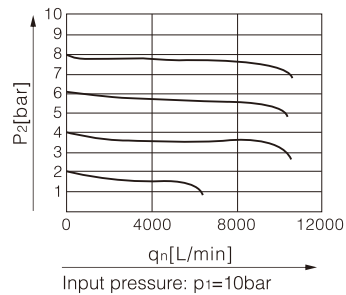
F2-1/4-MINI



F2-1/2-MIDI

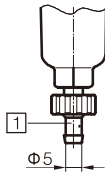
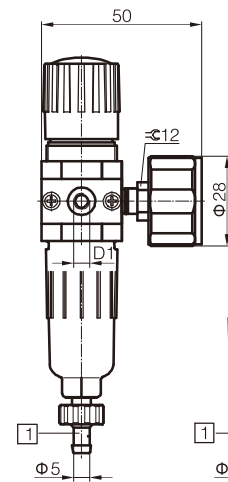
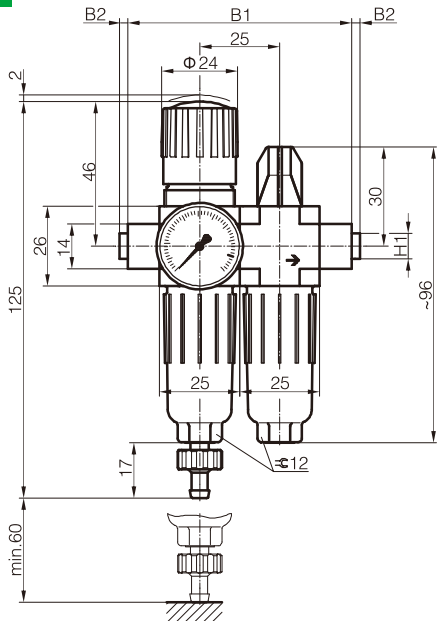


F2-1-MAXI



Dimensions

MICRO



Turned manually
condensate drain

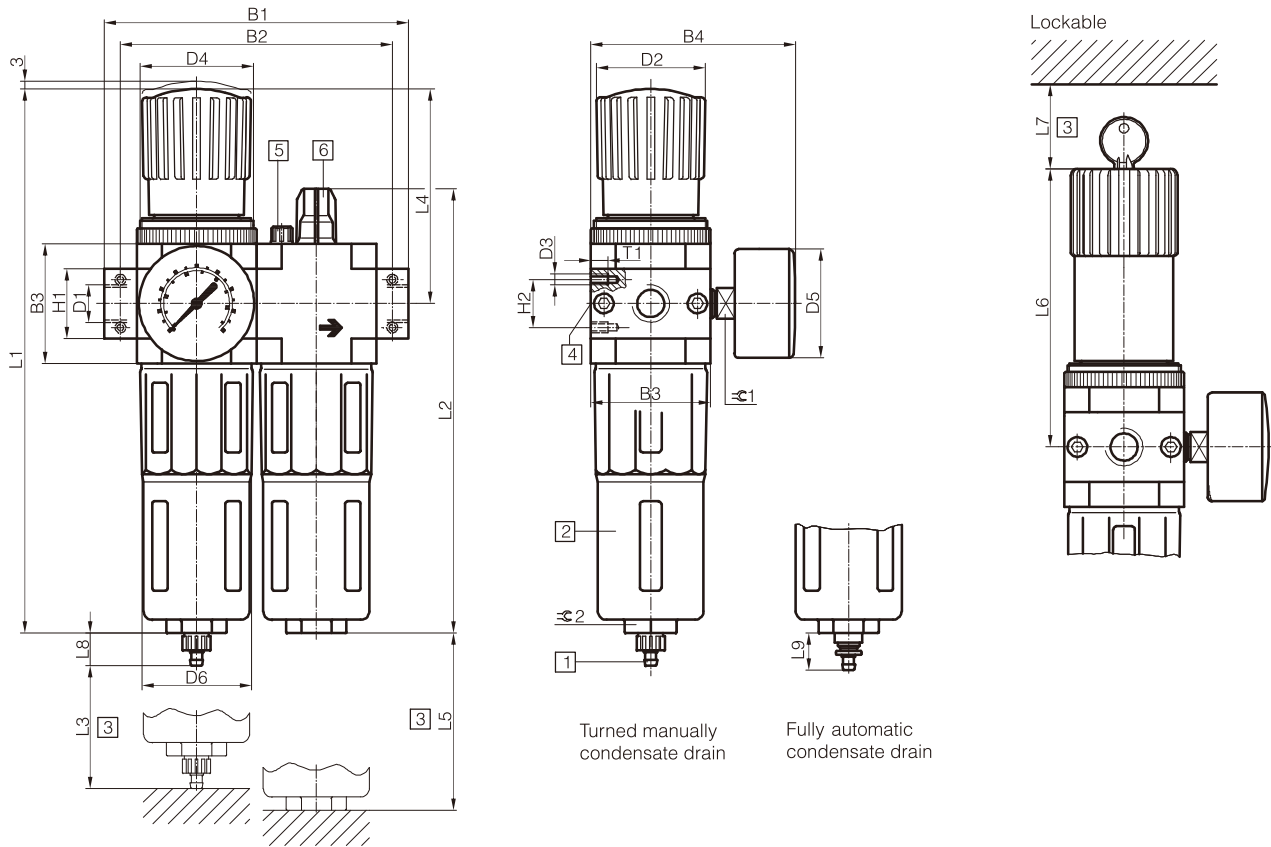
Semi-automatic
condensate drain

1 Barbed fitting for plastic tubing type PCN-4

➔ Flow direction

Model	B1	B2	D1	H1
F2-M5-D-7-5M-MICRO(H)	50	-	M5	-
F2-M7-D-7-5M-MICRO(H)B			M7	
F2-1/8-D-7-5M-MICRO(H)	70	~2.5	1/8"	~8
F2-QS4-D-7-5M-MICRO(H)			QS4	
F2-QS6-D-7-5M-MICRO(H)			QS6	

MINI/MIDI/MAXI



- 1 Barbed fitting for plastic tubing type PCN-4 2 Metal bowl guard 3 Installation dimensions → Flow direction
 4 Second pressure gauge connection 5 Exhausting screw for oil reservoir 6 Oil adjusting screw

Model	B1	B2	B3	B4	D1	D2Φ	D3	D4	D5Φ	D6Φ	H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9	T1	≈1	≈2	
MINI																									
F2-1/8-D-MINI	104	92	40	76	1/8"	31	M4	M36×1.5	41	38	20	11	193	169	60	69	100	98	60	15	19	7	14	22	
F2-1/4-D-MINI					1/4"																				
F2-3/8-D-MINI					3/8"																				
MIDI																									
F2-1/4-D-MIDI	140	125	55	95	1/4"	50	M5	M52×1.5	50	52	32	22	250	204	80	99	120	130	60	15	19	8	14	24	
F2-3/8-D-MIDI					3/8"																				
F2-1/2-D-MIDI					1/2"																				
F2-3/4-D-MIDI					3/4"																				
MAXI																									
F2-1/2-D-MAXL	162	146	66	107	1/2"	31	M5	M36×1.5	50	65	32	22	252	228	90	82	150	111	60	15	19	8	14	24	
F2-1/2-D-DI-MAXL					49	M52×1.5		275					105			135									
F2-3/4-D-MAXL					3/4"	31		M36×1.5					252			82		111							
F2-3/4-D-DI-MAXL					49	M52×1.5		275					105			135									
F2-1-D-MAXL	182	157			1"	31		M36×1.5			40		252			82		111							
F2-1-D-DI-MAXL					49	M52×1.5		275					105			135									

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

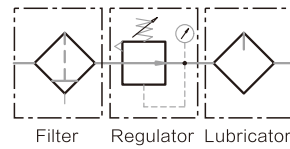
FRL

AC/BC
 AFC/BFC
 AFR/BFR
 AF/BF
 AR/BR
 AL/BL
 SR
 SDR
 AC
 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

Symbol



* Lubricator oil (Recommended): ISO-VG32

Product feature

1. For high pressure use, corrosion and chemical resistance.
2. Good performance for outdoor facility.
3. Suitable for semi-conductor industry.
4. Large flow rate and effectively removes water and particle.
5. Accurate and sensitive pressure setting.
6. Lubricator oil can be replenished without stopping air supply.
7. Oil spray in mist ensures good lubrication for machines.

Ordering code

USFRL		B		- 06		N		C		H		W	
Model		Pressure		Port size		Thread		Filtration		Drain		Bowl viewer	
USFRL	Stainless steel F.R.L combination	Blank	12~28kgf/cm ²	06	3/4"	Blank	G	Blank	5μm	Blank	Semi-auto drain	Blank	W/O Viewer
		B	0.5~12kgf/cm ²	08	1"	N	NPT	C	40μm	H	Manual drain	W	Viewer (See *Remark below)
						R	Rc			D	Auto drain (Working pressure: 0.5~9.9 kgf/cm ²)		

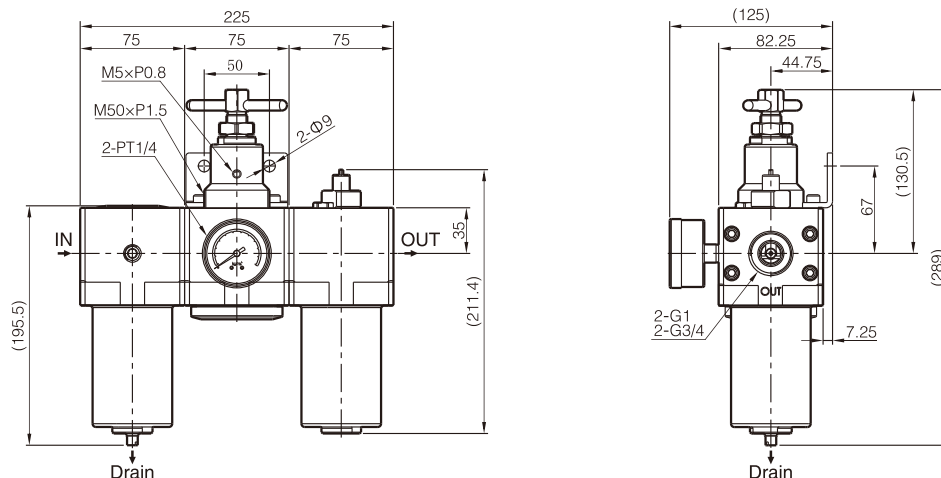
* Remark: Only for USFRLB (0.5~12kgf/cm²).
* Spring: USFRLB = SUS303
USFRL = Alloy steel

Specification

Model	USFRL-06	USFRL-08
Port size	3/4"	1"
Fluid	Compressed air	
Regulator construction	Piston	
Body material	Stainless steel SUS316	
Bowl material	Stainless steel SUS316	
Pressure gauge material	Case: Stainless steel SUS304, Thread: Stainless steel SUS316	
Filtration/Element material	5μm (Standard) Stainless steel SUS316	
Operating pressure range	USFRLB: 0.5~12 kgf/cm ² , USFRL: 12~28 kgf/cm ²	
Max. inlet pressure	60 kgf/cm ² (Bowl viewer: 15 kgf/cm ²)	
Max. flow rate l/min (ANR)	B7600/15200	B8000/15600
Ambient temperature	-10°C~70°C	
Filter bowl capacity	200cc	
Lubricator bowl capacity	220cc	
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)	
Net weight	10340g	
Accessories	Pressure gauge (0~20kg), Plug, Mounting bracket set	
Option	Pressure gauge (0~10kg), Pressure gauge (0~30kg)	

Dimensions

USFRL-06, 08

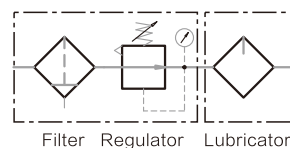


FRL
AC/BC
AFC/BFC
AFR/BFR
AF/BF
AR/BR
AL/BL
SR
SDR
AC
AW
AF
AR
AL
F3
F2
F1
F
R
L
USFRL
USFR/L
USFR
USF
USR
USL
QSL
QTY
QIU
QTYH
QSLH
QFRH
AFF
AF(Big)
AL(Big)
AR(Big)
AD402
AH402
AD-5
IR
ITV
ACR
F804
PG



* Lubricator oil (Recommended): ISO-VG32

Symbol



Product feature

1. For high pressure use, corrosion and chemical resistance.
2. Good performance for outdoor facility.
3. Suitable for semi-conductor industry.
4. Large flow rate and effectively removes water and particle.
5. Accurate and sensitive pressure setting.
6. Lubricator oil can be replenished without stopping air supply.
7. Oil spray in mist ensures good lubrication for machines.

Ordering code

USFR/L		B		-		02		N		C		H		W	
Model		Pressure		Port size		Thread		Filtration		Drain		Bowl viewer			
USFR/L	Stainless steel	Blank	12~30kgf/cm ²	02	1/4"	Blank	G	Blank	5μm	Blank	Semi-auto drain	Blank	W/O Viewer		
	F.R.L combination		(for 1/4", 3/8", 1/2")	03	3/8"	N	NPT	C	40μm	H	Manual drain	W	Viewer (for 3/4", 1") (See *Remark below)		
		12~28kgf/cm ²	04	1/2"	R	Rc			D	Auto drain (Working pressure: 0.5~9.9 kgf/cm ²)					
		0.5~12kgf/cm ²	06	3/4"											
		B		08	1"										

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

* Spring: USFR/LB = SUS303
USFR/L = Alloy steel

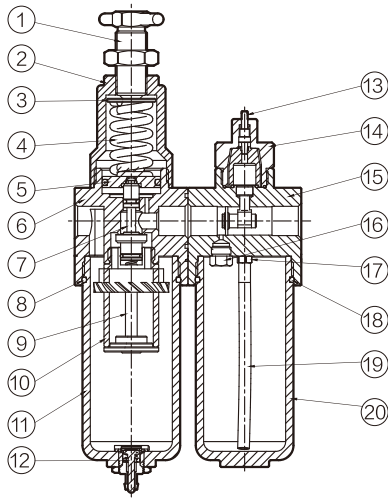
* Remark: Only for USFR/LB
(0.5~12kgf/cm²).
* Spring: USFR/LB = SUS303
USFR/L = Alloy steel

Specification

Model	USFR/L-02	USFR/L-03	USFR/L-04	USFR/L-06	USFR/L-08
Port size	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air				
Regulator construction	Piston				
Body material	Stainless steel SUS316				
Bowl material	Stainless steel SUS316				
Pressure gauge material	Case: Stainless steel SUS304, Thread: Stainless steel SUS316				
Filtration/Element material	5μm (Standard) Stainless steel SUS316				
Operating pressure range	USFR/LB: 0.5~12 kgf/cm ² USFR/L: 12~30 kgf/cm ²			USFR/LB: 0.5~12 kgf/cm ² USFR/L: 12~28 kgf/cm ²	
Max. inlet pressure	60 kgf/cm ² (Bowl viewer: 15 kgf/cm ²)				
Max. flow rate l/min (ANR)	2080	2200	2500	B7600/15200	B8000/15200
Ambient temperature	-10℃~70℃				
Filter bowl capacity	110cc			200cc	
Lubricator bowl capacity	130cc			220cc	
Standard drain	Semi-auto drain (Drains below 0.5 kgf/cm ²)				
Net weight	3800g	3870g	3840g	7960g	
Accessories	Pressure gauge (0~20kg), Plug, Mounting bracket set				
Option	Pressure gauge (0~10kg), Pressure gauge (0~30kg)				

Inner structure and material of major parts

USFR/L-02,03,04



No.	Item	Material
1	Pressure regulating screw	SUS316
2	Regulator base	SUS316
3	Disc gasket	SUS303
4	Spring	USFR/LB=SUS303, USFR/L=Alloy steel
5	Piston	SUS303
6	Regulator body	SUS316
7	Pressure regulating needle	SUS303
8	O-ring	VITON
9	Filter element holder	SUS303
10	Filter element	SUS316
11	Filter bowl	SUS316
12	Drain	SUS303
13	Oil adjusting screw	SUS316
14	Screw cover	SUS316
15	Lubricator body	SUS316
16	Plug	SUS316
17	Oil pipe fitting	SUS316
18	O-ring	VITON
19	Oil pipe	PU
20	Lubricator bowl	SUS316

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

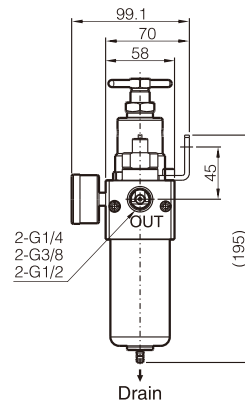
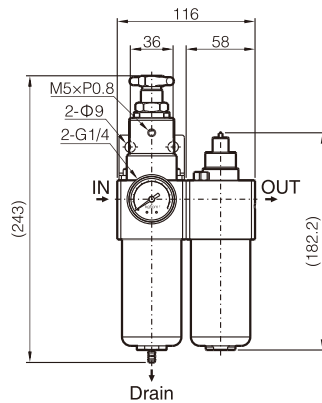
ACR

F804

PG

Dimensions

USFR/L-02, 03, 04



USFR/L-06, 08

