

MAC VALVES PACIFIC OFFER A WIDE RANGE
OF SHAKO PRODUCTS INCLUDING:

- FILTERS
- REGULATORS
- LUBRICATORS
- FLR COMBINATIONS
- AUTOMATIC DRAINS
- SHUT-OFF VALVES
- COALESCING & VACUUM FILTERS
- PARTS & ACCESSORIES

STAINLESS STEEL OPTIONS AVAILABLE

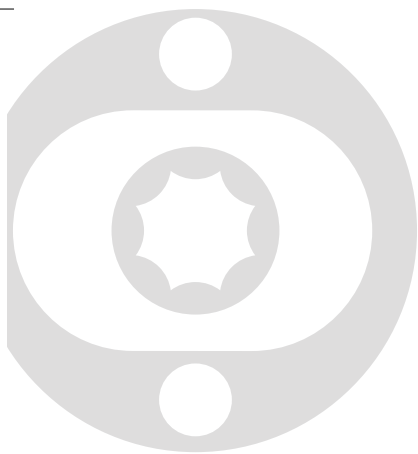


MAC VALVES Pacific Inc.
20 Alfred Street, Onehunga
Auckland, New Zealand
NZ: 0800 770 780
AU: 1800 551 874
fax: 64 (09) 634 9401
e: sales@macvalves.co.nz
w: www.macvalves.co.nz



PRODUCT GUIDE





contents of this product guide

COMPOSITE/ALUMINIUM

FILTERS	
F200A - <i>Miniature</i>	01
UF - <i>Standard & Large</i>	02-03
REGULATORS	
R200 & NR200 - <i>Miniature</i>	04-06
UR - <i>Standard & Large</i>	07
UR - 1 1/2", 2" - <i>Extra Large</i>	08
LUBRICATORS	
L200A - <i>Miniature</i>	09
UL - <i>Standard & Large</i>	10-11
FILTER REGULATORS	
FR500A - <i>Miniature</i>	12
UFR - <i>Standard & Large</i>	13-14
COMBINATION SETS	
FRL700A - F+R+L (3 Unit) & FRL600A - FR+L (2 Unit) - <i>Miniature</i>	15-16
UFRL - F+R+L (3 Unit) - <i>Standard & Large</i>	17-18
UFR/L - FR+L (2 Unit) - <i>Standard & Large</i>	19-23

STAINLESS STEEL (SUS316)

FILTERS	
SSF200 - <i>Miniature</i>	24
USF - <i>Standard</i>	25
REGULATORS	
SSR200 - <i>Miniature</i>	26
USR - <i>Standard & Large</i>	27
LUBRICATORS	
SSL200 - <i>Miniature</i>	28
USL - <i>Standard</i>	29
USLC - <i>Large</i>	30
FILTER REGULATORS	
SSFR500 - <i>Miniature</i>	26*
USFR - <i>Standard</i>	31
USFRC - <i>Large</i>	32
COMBINATION SETS (2 Unit)	
SSFRL600 - FR+L - <i>Miniature</i>	33
USFR/L - FR+L - <i>Standard</i>	34-35
USFR/LC - FR+L - <i>Large</i>	36-37

ADDITIONAL

AD940 - Automatic Drain	38
SHV - Shut-Off Valve	39
UV - Vacuum Filter	40
UMF - Coalescing Filter	41-42

ACCESSORIES	
Pressure Gauge - <i>Standard & Stainless</i>	43
Semi-Auto/Manual Drain	43
Automatic Drain Parts	43
Filter Bowl & Lubricator Bowl	44
Spacer Block	44
Sintered Bronze Element	44
Mounting Bracket	44

OPERATIONAL INSTRUCTIONS

Operation & Instruction	45
Installation	46-47





MINIATURE FILTER (F200A) COMPOSITE



Symbol



Features

- * Remove water and particle effectively.
- * Compact size with effective air service.
- * 40 μ m and 5 μ m filter element are easily interchangeable and replaceable.



How to order

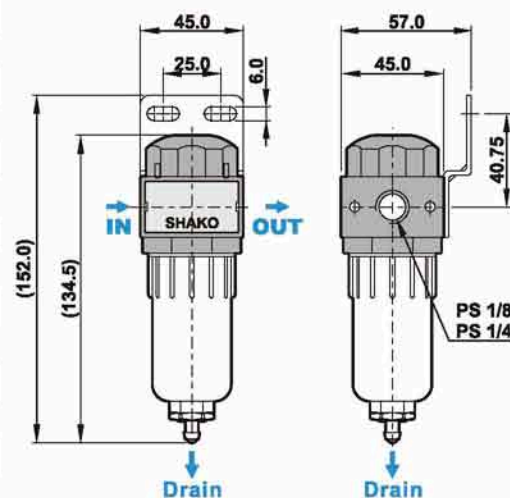
F200A	-	02	N	C	H	B	K				
Miniature Filter		Port size	Thread	Filtration	Drain	Mounting bracket	Bowl guard				
01	1/8" Option	Blank	PS	Blank	5 μ m	Blank	W/O bracket	Blank	W/O guard		
02	1/4" Standard	N	NPT	C	40 μ m	H	Manual drain	B	W/I bracket	K	W/I guard

Specifications

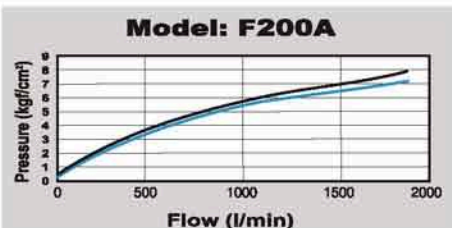
Model	F200A-01	F200A-02
Port size	1/8" [Option]	1/4" [Standard]
Fluid	Compressed air	
Body material	Polycarbonate	
Bowl material	Polycarbonate (Standard)	
Filtration	5 μ m (Standard) - 40 μ m (Option)	
Operating pressure range	0.5 ~ 10 kgf/cm ²	
Max. inlet pressure (Standard bowl)	12 kgf/cm ²	
Max. flow rate l/min (6kgf/cm ²)	1900	
Ambient temperature	-10 $^{\circ}$ C ~ 60 $^{\circ}$ C	
Filter bowl capacity	35cc	
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)	
Net weight	245g	
Accessories	Mounting bracket, Screw x 2	

Dimensions

F200A-01, 02



Flow chart



Note:

- X axis: Flow
- Y axis: Pressure
- Blue line (P0) = Outlet pressure
- Black line (P1) = Inlet pressure
- P1-P0 = Pressure range

STANDARD & LARGE FILTER (UF) COMPOSITE



Symbol



Filter

Features

- * Remove water and particle effectively.
- * 40 μ m and 5 μ m filter element are easily interchangeable and replaceable.



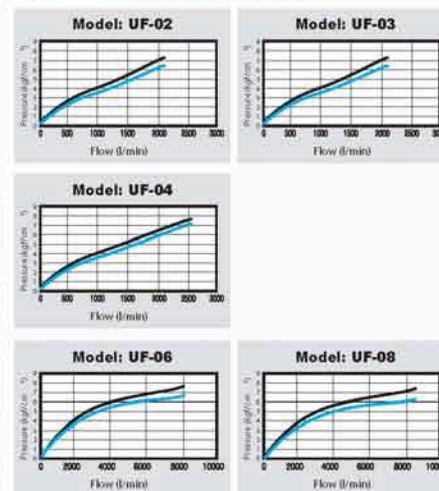
How to order

UF	-	02	N	C	D	B	A				
Filter	Port size	Thread		Filtration		Drain		Mounting		Bowl	
	02 1/4"	Blank	PS	Blank	5 μ m	Blank	Semi-auto drain	Blank	W/O bracket	Blank	Standard bowl
	03 3/8"	N	NPT	C	40 μ m	H	Manual drain	B	W/I bracket	A	Anti-acid & alkali bowl
	04 1/2"					D	Auto drain			AL	Aluminum bowl (1/4"~1/2")
	06 3/4"										
	08 1"										

Specifications

Model	UF-02	UF-03	UF-04	UF-06	UF-08
Port size	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air				
Body material	Aluminum die-cast				
Bowl material	Polycarbonate (Standard), Anti-acid & alkali bowl (Option), Aluminum bowl (Option)				
Filtration	5 μ m (Standard), 40 μ m (Option)				
Operating pressure range	0.5 ~ 10 kgf/cm ²				
Max. operating pressure (Standard bowl)	15 kgf/cm ²				
Max. flow rate l/min (6kgf/cm ²)	2440	2450	3030	8250	8860
Ambient temperature	-10C ~ 60C				
Filter bowl capacity	105cc		210cc		
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)				
Net weight	530g (W/I Aluminum bowl 830g)			1250g	

Flow chart

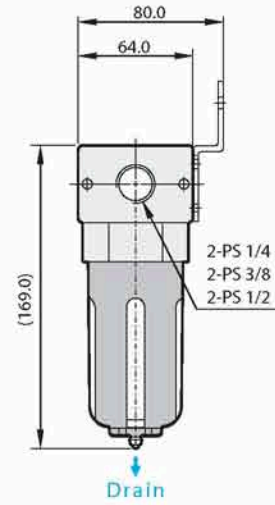
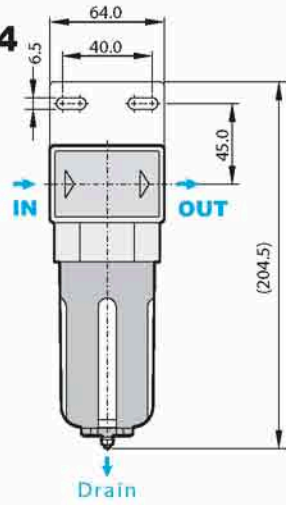


Note:

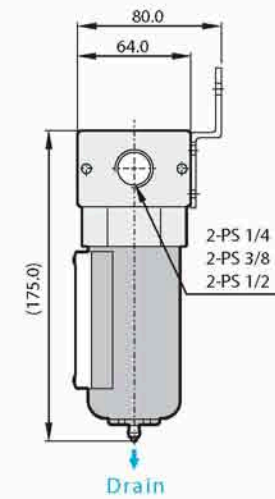
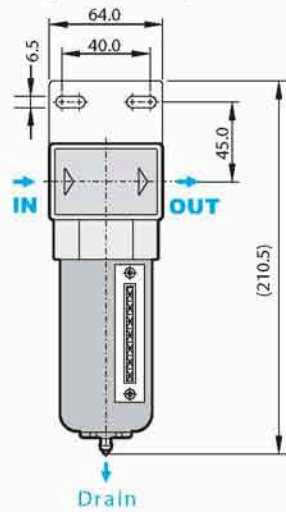
X axis: Flow
Y axis: Pressure
Blue line (P0) = Outlet pressure
Black line (P1) = Inlet pressure
P1-P0=Pressure range

Dimensions

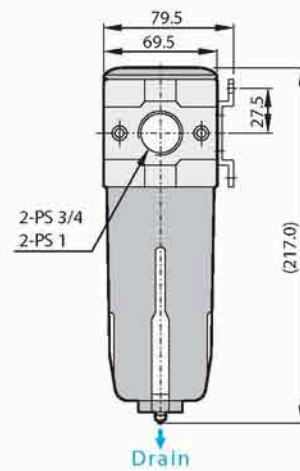
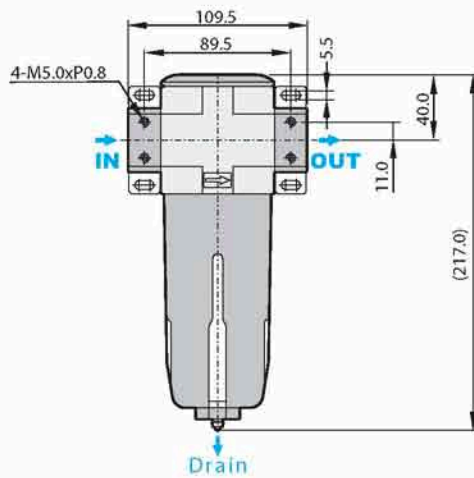
UF-02, 03, 04



UF-02AL, 03AL, 04AL (Aluminum bowl)



UF-06, 08

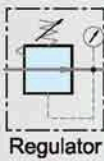


COMPOSITE/ALUMINIUM

MINIATURE REGULATOR (NR200) ALUMINIUM DIES-CAST DIAPHRAGM STYLE



Symbol



Features

- * Diaphragm design provides more accurate and easier pressure setting.
- * Panel mounting is available.



How to order

NR200

02

N

B

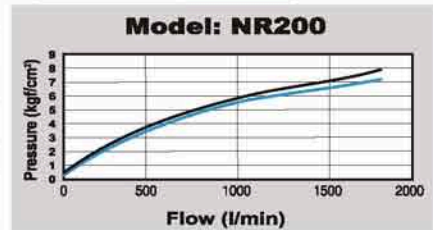
G

NR200	Operating pressure 0.5~8kgf/cm ²	Port size	Thread	Mounting bracket	Pressure gauge
NR200L4	Operating pressure 0~4kgf/cm ²	01 1/8"	Blank PS	Blank W/O bracket	Blank W/O gauge
NR200L2	Operating pressure 0~2 kgf/cm ²	02 1/4"	N NPT	B W/I bracket	G W/I gauge

Specifications

Model	NR200	NR200L4	NR200L2
Port size	1/8", 1/4"		
Fluid	Compressed air		
Regulator construction	Diaphragm		
Body material	Aluminum die-cast		
Operating pressure range	0.5~8 kgf/cm ²	0~4 kgf/cm ²	0~2 kgf/cm ²
Max. inlet pressure	12 kgf/cm ²		
Max. flow rate l/min (6kgf/cm ²)	1500		
Ambient temperature	-10°C ~ 60°C		
Net weight	205g		
Accessories	Plug		

Flow chart

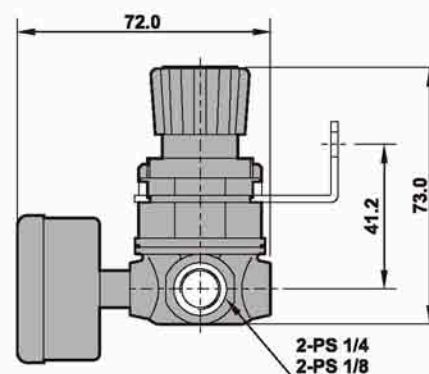
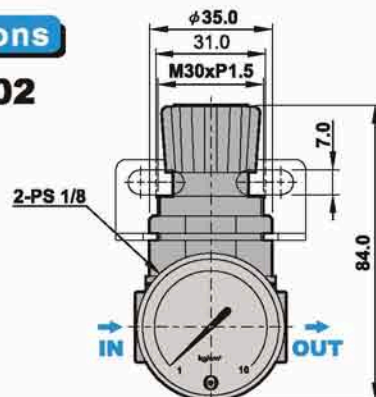


Note:

X axis: Flow
Y axis: Pressure
Blue line (P0) = Outlet pressure
Black line (P1) = Inlet pressure
P1-P0 = Pressure range

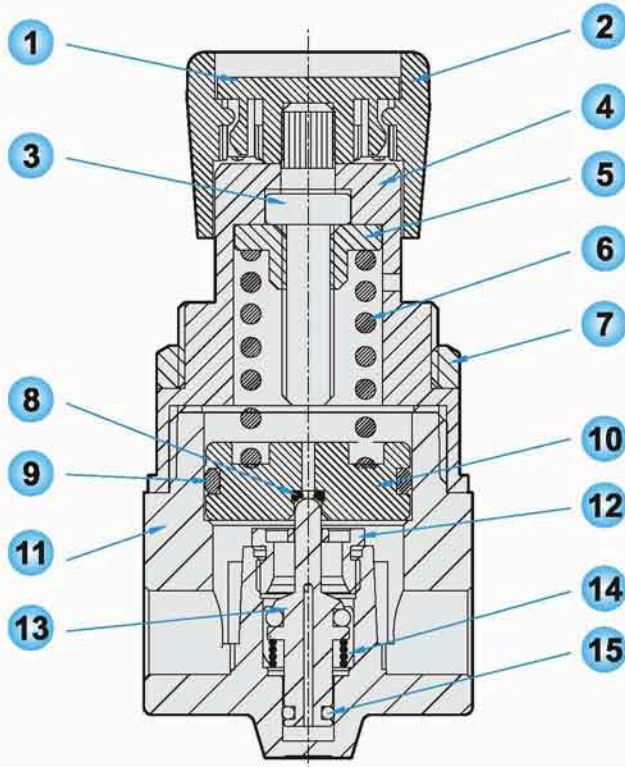
Dimensions

NR200-01, 02



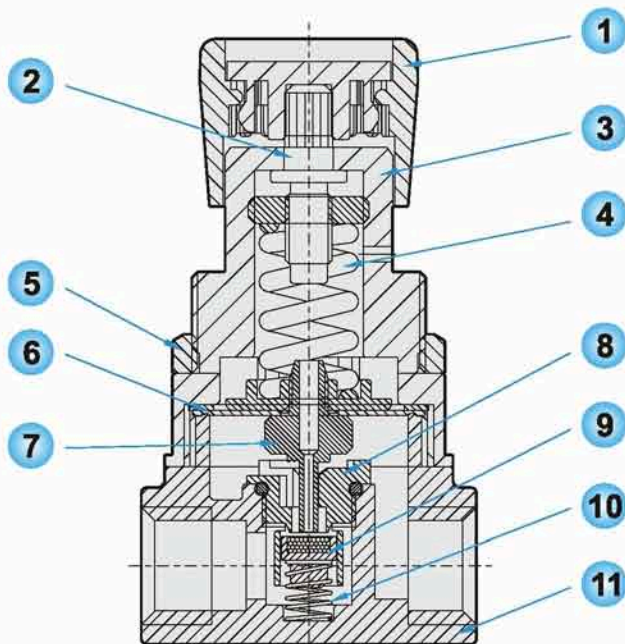
Construction

R200-01, 02



No.	Description	Material
1	Regulator dome	NY
2	Regulator knob	NY
3	Pressure regulating screw	Fe+Ni
4	Regulator base	NY+GF
5	Pressure regulating nut	Cu+Ni
6	Spring	Spring steel
7	Lock nut	NY+GF
8	O-ring	NBR
9	O-ring	NBR
10	Piston	AL
11	Body	ADC12
12	Positioning nut	Cu
13	Regulating needle	Cu
14	Spring	SUS
15	O-ring	NBR

NR200-01, 02



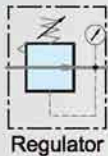
No.	Description	Material
1	Regulator knob	NY
2	Pressure regulating screw	Fe+Ni
3	Regulator base	NY+GF
4	Spring	Spring steel
5	Lock nut	NY+GF
6	Diaphragm	NBR70°
7	Regulating needle	AL
8	Positioning nut	POM
9	Plug	Cu
10	Spring	SUS
11	Body	ADC12

COMPOSITE/ALUMINIUM

STANDARD & LARGE REGULATOR (UR Series) ALUMINIUM DIE-CAST



Symbol



Regulator

Features

- * Accurate and easy pressure setting.
- * Panel mounting is available.

How to order

UR	-	02		N
Regulator		Port size		Thread
02	1/4"	06	3/4"	Blank PS
03	3/8"	08	1"	N NPT
04	1/2"			

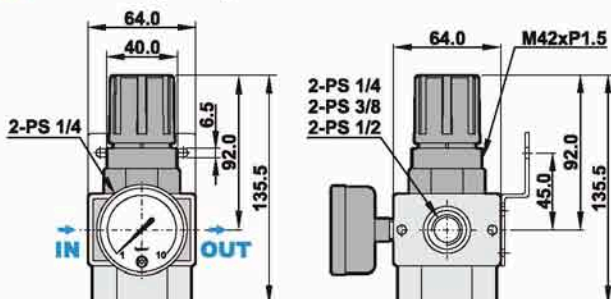


Specifications

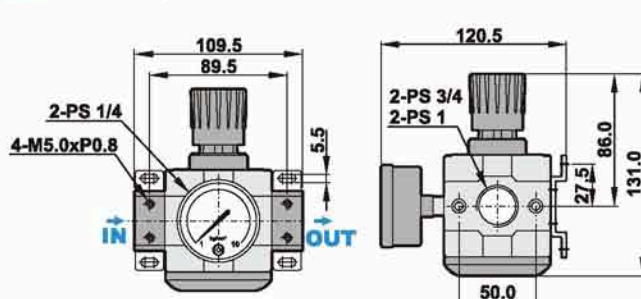
Model	UR-02	UR-03	UR-04	UR-06	UR-08
Port size	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air				
Regulator construction	Piston				
Body material	Aluminum die-cast				
Operating pressure range	0.5 ~ 10 kgf/cm ²				
Max. inlet pressure	15 kgf/cm ²				
Max. flow rate l/min (6kgf/cm ²)	2100	2130	2750	8000	8500
Ambient temperature	-10°C ~ 60°C				
Net weight	740g	730g	720g	1250g	1240g
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 4				

Dimensions

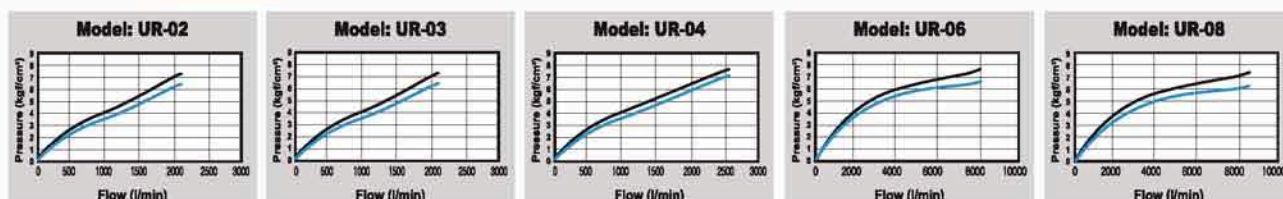
UR-02, 03, 04



UR-06, 08



Flow chart

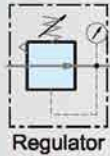


Note: X axis: Flow, Y axis: Pressure, Blue line (P0) = Outlet pressure, Black line (P1) = Inlet pressure, P1-P0 = Pressure range

EXTRA LARGE REGULATOR 1 1/2", 2" (UR Series) ALUMINIUM ALLOY



Symbol



Features

- * Large flow rate (Max. 30000 l/min)
- * Aluminum alloy body, light weight.
- * Pilot regulator is available for remote control.

How to order

UR	
UR	Regulator
UAR	Pilot regulator

20	
Port size	
14	1 1/2"
20	2"

N	
Thread	
Blank	PS
N	NPT

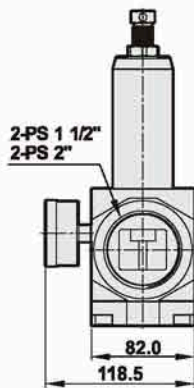
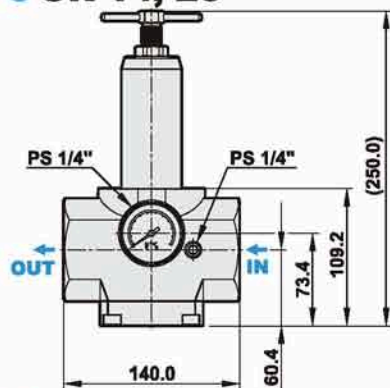


Specifications

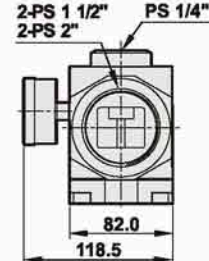
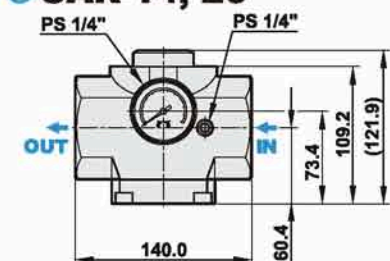
Model	UR-14	UR-20	UAR-14	UAR-20
Port size	1 1/2"	2"	1 1/2"	2"
Fluid	Compressed air			
Regulator construction	Piston			
Operating pressure range	0 ~ 8 kgf/cm ²			
Max. operating pressure	10 kgf/cm ²			
Max. flow rate l/min (6kgf/cm ²)	30000 l/min (input 7 kgf/cm ² output 6 kgf/cm ²)			
Ambient temperature	-10°C ~ 60°C			
Net weight	2.8 kg	2.5 kg	2.2 kg	2.0 kg
Accessories	Pressure gauge, plug			

Dimensions

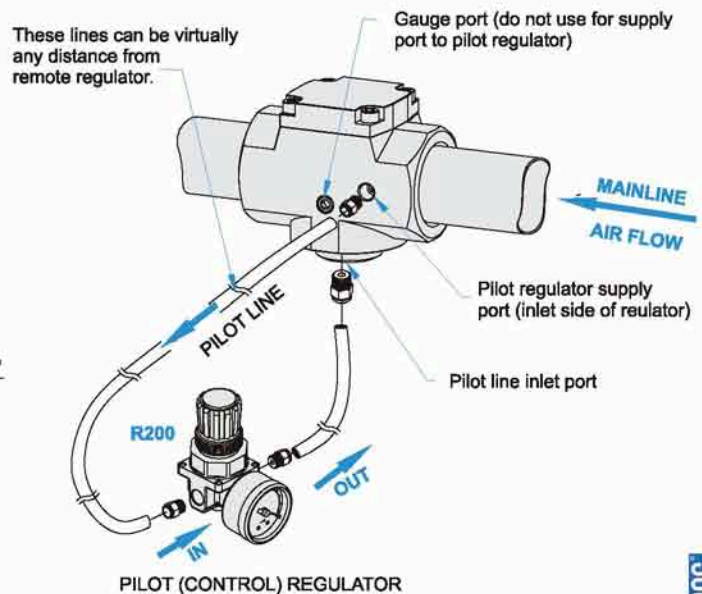
UR-14, 20



UAR-14, 20



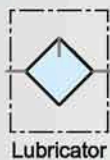
Installation



MINIATURE LUBRICATOR (L200A) COMPOSITE



Symbol



Features

- * Compact size with effective air service.
- * Oil spray in mist ensures good lubrication for machines.



How to order

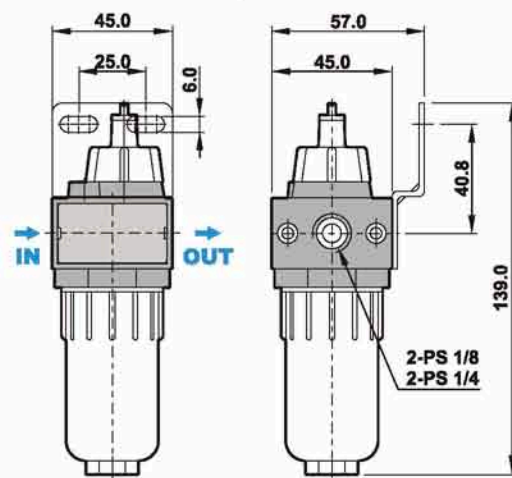
L200A	—	02	N	B	K
Miniature lubricator		Port size	Thread	Mounting bracket	Bowl guard
		01 1/8" Option 02 1/4" Standard	Blank PS N NPT	Blank W/O bracket B W/I bracket	Blank W/O guard K W/I guard

Specifications

Model	L200A-01	L200A-02
Port size	1/8" (Option)	1/4" (Standard)
Fluid	Compressed air	
Body material	Polycarbonate	
Bowl material	Polycarbonate (Standard)	
Operating pressure range	0.5 ~ 10 kgf/cm ²	
Max. inlet pressure	12 kgf/cm ²	
Max. flow rate l/min (6kgf/cm ²)	2449	
Ambient temperature	-10°C ~ 60°C	
Lubricator oil (Recommended)	ISO-VG32	
Lubricator bowl capacity	50cc	
Net weight	165g	
Accessories	Mounting bracket, Screw x 2	

Dimensions

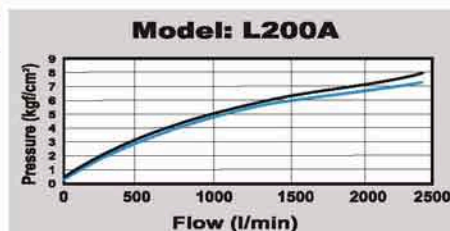
L200A-01, 02



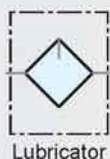
Note:

- X axis: Flow
- Y axis: Pressure
- Blue line (P0) = Outlet pressure
- Black line (P1) = Inlet pressure
- P1-P0 = Pressure range

Flow chart



Symbol



Features

- * Lubricator oil can be replenished without stopping air supply.
- * Oil spray in mist ensures good lubrication for machines.



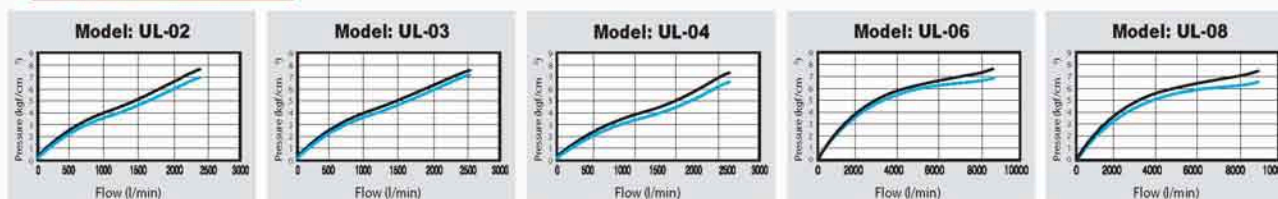
How to order

UL	02	N	B	A
Lubricator	Port size	Thread	Mounting	Bowl
	02 1/4"	Blank PS	Blank W/O bracket	Blank Standard bowl
	03 3/8"	N NPT	B W/ bracket	A Anti-acid & alkali bowl
	04 1/2"			AL Aluminum bowl (1/4"~1/2")
	06 3/4"			
	08 1"			

Specifications

Model	UL-02	UL-03	UL-04	UL-06	UL-08
Port size	1 / 4 "	3 / 8 "	1 / 2 "	3 / 4 "	1 "
Fluid	Compressed air				
Body material	Aluminum die-cast				
Bowl material	Polycarbonate (Standard), Anti-acid & alkali bowl (Option), Aluminum bowl (Option)				
Operating pressure range	0.5 ~ 10 kgf/cm ²				
Max. operating pressure (Standard bowl)	15 kgf/cm ²				
Max. flow rate l/min (6kgf/cm ²)	2490	2525	4310	8400	9000
Ambient temperature	-10C ~ 60C				
Lubricator oil (Recommended)	ISO-VG32				
Lubricator bowl capacity	125cc			235cc	
Net weight	500g (W/I Aluminum bowl 800g)			1095g	

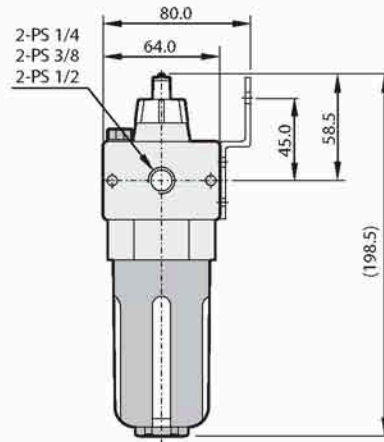
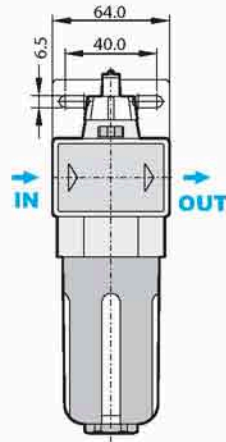
Flow chart



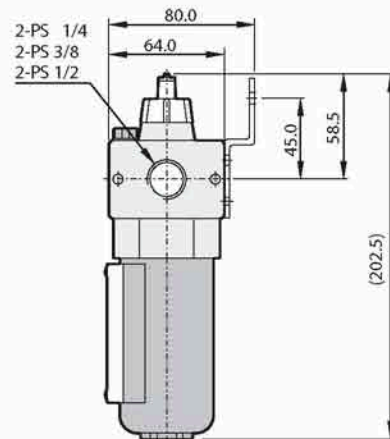
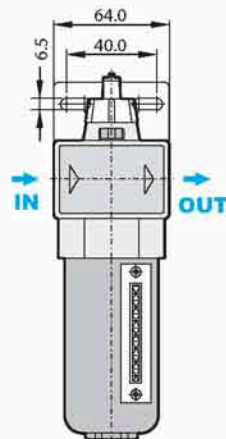
Note: X axis: Flow, Y axis: Pressure, Blue line (P0) = Outlet pressure, Black line (P1) = Inlet pressure, P1-P0=Pressure range

— Dimensions

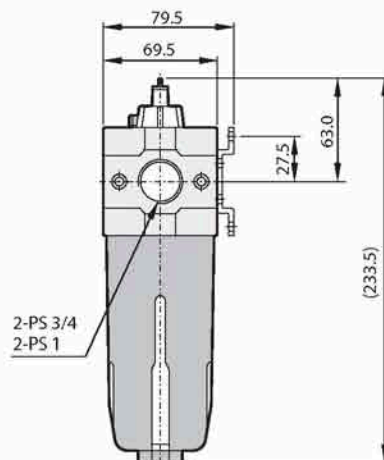
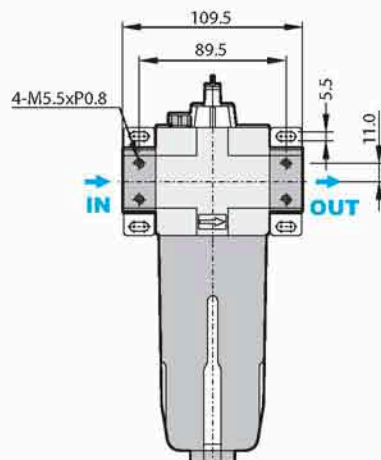
● UL-02, 03, 04



● UL-02AL, 03AL, 04AL (Aluminum bowl)



● UL-06, 08

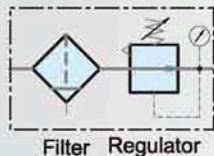


COMPOSITE/ALUMINIUM

MINIATURE FILTER REGULATOR (FR500A) COMPOSITE



Symbol



Features

- Remove water and particle effectively.
- Compact size with effective air service.
- 40 μ m and 5 μ m filter element are easily interchangeable and replaceable.
- Accurate and easy pressure setting.



How to order

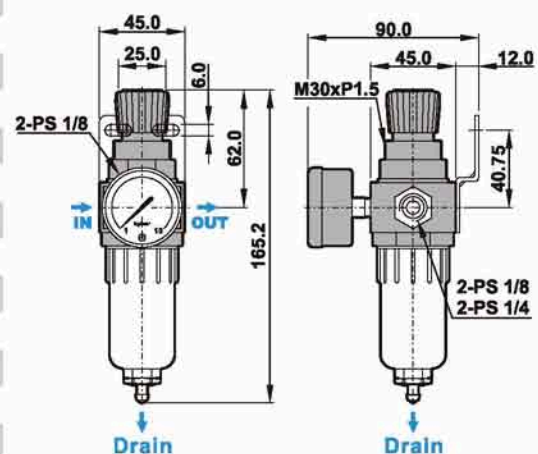
FR500A	—	02	N	C	H	K
Miniature Filter Regulator		Port size	Thread	Filtration	Drain	Bowl guard
		01 1/8" Option 02 1/4" Standard	Blank PS N NPT	Blank 5 μ m C 40 μ m	Blank Semi-auto drain H Manual drain	Blank W/O guard K W/I guard

Specifications

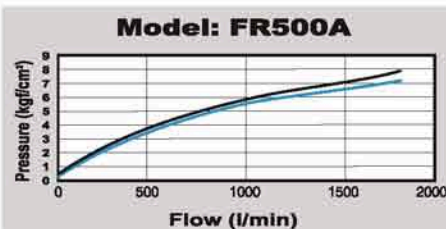
Model	FR500A-01	FR500A-02
Port size	1/8" [Option]	1/4" [Standard]
Fluid	Compressed air	
Regulator construction	Diaphragm	
Body material	Polycarbonate	
Bowl material	Polycarbonate (Standard)	
Filtration	5 μ m (Standard) · 40 μ m (Option)	
Operating pressure range	0.5 ~ 10 kgf/cm ²	
Max. inlet pressure (Standard bowl)	12 kgf/cm ²	
Max. flow rate l/min (6kgf/cm ²)	1840	1940
Ambient temperature	-10 $^{\circ}$ C ~ 60 $^{\circ}$ C	
Filter bowl capacity	35cc	
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)	
Net weight	370g	
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 2	

Dimensions

FR500A-01, 02



Flow chart



Note:

- X axis: Flow
- Y axis: Pressure
- Blue line (P0) = Outlet pressure
- Black line (P1) = Inlet pressure
- P1-P0=Pressure range

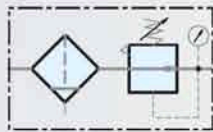
MAC

VALVES

STANDARD & LARGE FILTER REGULATOR (UFR) ALUMINIUM DIE-CAST/COMPOSITE

SHAKO

Symbol



Filter Regulator

Features

- * Remove water and particle effectively.
- * 40 μ m and 5 μ m filter element are easily interchangeable and replaceable.
- * Accurate and easy pressure setting.



Patent number in Taiwan : 684011
Patent number in China : ZL200420019530. 2
Patent category : Pressure regulating constructions

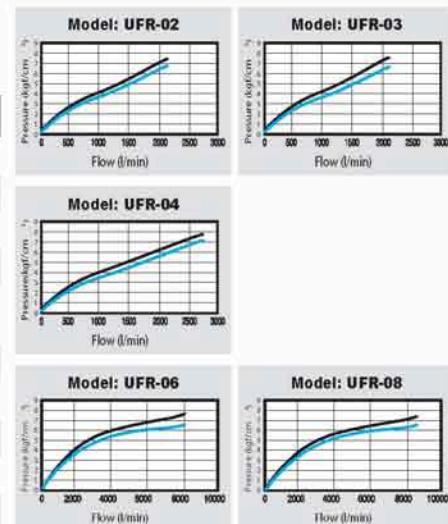
How to order

UFR	02	N	C	D	A
Filter Regulator	Port size	Thread	Filtration	Drain	Bowl
	02 1/4"	Blank PS	Blank 5 μ m	Blank Semi-auto drain	Blank Standard bowl
	03 3/8"	N NPT	C 40 μ m	H Manual drain	A Anti-acid & alkali bowl
	04 1/2"			D Auto drain	AL Aluminum bowl (1/4"~1/2")
	06 3/4"				
	08 1"				

Specifications

Model	UFR-02	UFR-03	UFR-04	UFR-06	UFR-08
Port size	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air				
Regulator construction	Piston				
Body material	Aluminum die-cast				
Bowl material	Polycarbonate (Standard), Anti-acid & alkali bowl (Option), Aluminum bowl (Option)				
Filtration	5 μ m (Standard), 40 μ m (Option)				
Operating pressure range	0.5 ~ 10 kgf/cm ²				
Max. operating pressure (Standard bowl)	15 kgf/cm ²				
Max. flow rate l/min (6kgf/cm ²)	2080	2100	2600	7940	8200
Ambient temperature	-10C ~ 60C				
Lubricator oil (Recommended)	ISO-VG32				
Filter bowl capacity	105cc		210cc		
Lubricator bowl capacity	125cc		235cc		
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)				
Net weight	930g (W/I Aluminum bowl, 1230g)			1360g	
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 4				

Flow chart



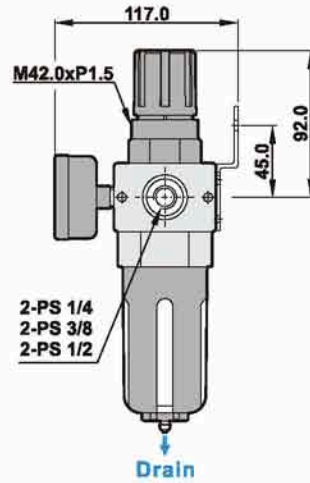
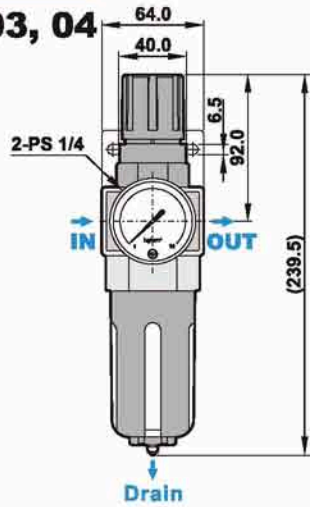
Note:

X axis: Flow
Y axis: Pressure
Blue line (P0) = Outlet pressure
Black line (P1) = Inlet pressure
P1-P0=Pressure range

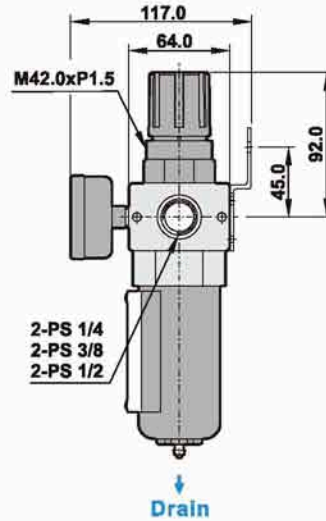
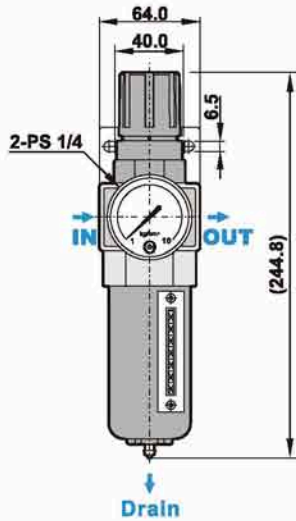
COMPOSITE/ALUMINIUM

Dimensions

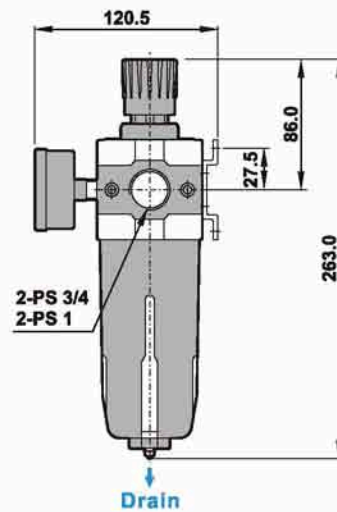
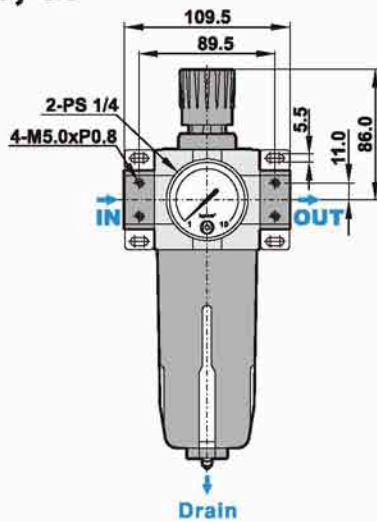
UFR-02, 03, 04



UFR-02AL, 03AL, 04AL (Aluminum bowl)



UFR-06, 08

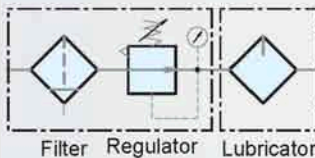
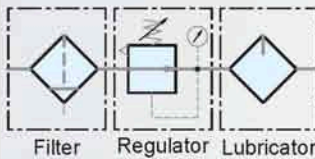


COMPOSITE/ALUMINIUM

MINIATURE FRL/FR-L COMBINATION (FRL700A/FRL600A) COMPOSITE



Symbol



Features

- * Remove water and particle effectively.
- * Compact size with effective air service.
- * 40 μ m and 5 μ m filter element are easily interchangeable and replaceable.
- * Accurate and easy pressure setting.
- * Oil spray in mist ensures good lubrication for machines.
- * Strict quality control offers product stable quality and long life.

Miniature FRL A type patent
 Patent number in Taiwan:1888494
 Patent number in the US.: US6.733.044
 Patent number in China: 538716

How to order

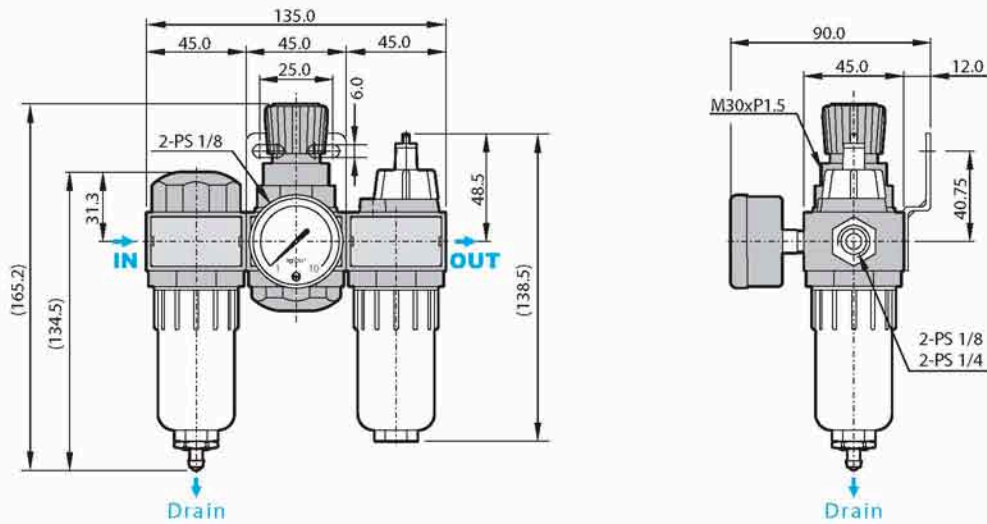
FRL700A		-	02	N	C	H	K
FRL700A	Miniature Filter+Regulator+Lubricator	Port size	Thread	Filtration	Drain	Bowl guard	
FRL600A	Miniature Filter Regulator+Lubricator	01 1/8" Option	Blank PS N NPT	Blank 5 μ m C 40 μ m	Blank Semi-auto drain H Manual drain	Blank W/O guard K W/I guard	
		02 1/4" Standard					

Specifications

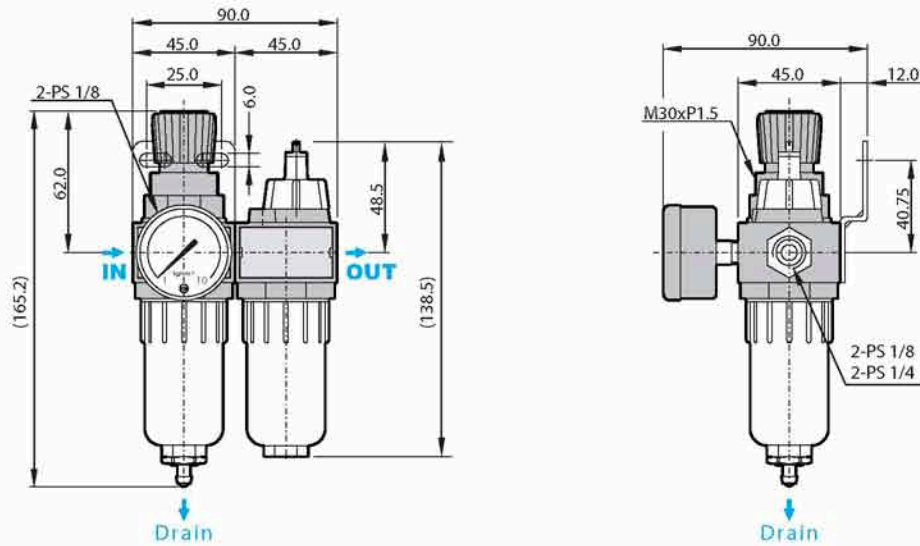
Model	FRL700A-01	FRL700A-02	FRL600A-01	FRL600A-02
Port size	1/8" (Option)	1/4" (Standard)	1/8" (Option)	1/4" (Standard)
Fluid	Compressed air			
Regulator construction	Diaphragm			
Body material	Polycarbonate			
Bowl material	Polycarbonate (Standard)			
Filtration	5 μ m (Standard), 40 μ m (Option)			
Operating pressure range	0.5 ~ 10 kgf/cm ²			
Max. inlet pressure (Standard bowl)	12 kgf/cm ²			
Max. flow rate l/min (6kgf/cm ²)	1850		1650	1850
Ambient temperature	-10C ~ 60C			
Lubricator oil (Recommended)	ISO-VG32			
Filter bowl capacity	35cc			
Lubricator bowl capacity	50cc			
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)			
Net weight	810g		560g	
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 2			

— Dimensions

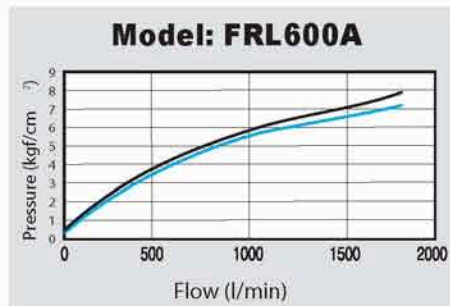
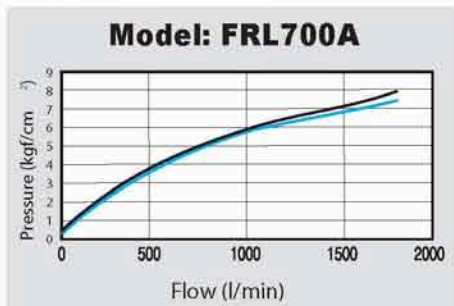
● FRL700A-01, 02



● FRL600A-01, 02



— Flow chart



Note:

- X axis: Flow
- Y axis: Pressure
- Blue line (P0) = Outlet pressure
- Black line (P1) = Inlet pressure
- P1-P0= Pressure range

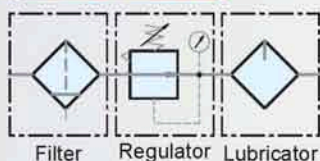
COMPOSITE/ALUMINIUM

MAC

VALVES

STANDARD & LARGE FRL COMBINATION (UFRL) F+R+L (3 Unit Style) ALUMINIUM DIE-CAST/COMPOSITE

Symbol



Features

- * Remove water and particle effectively
- * 40 μ m and 5 μ m filter element are easily interchangeable and replaceable.
- * Accurate and easy pressure setting.
- * Lubricator oil can be replenished without stopping air supply.
- * Oil spray in mist ensures good lubrication for machines.
- * Anti-acid & alkali bowl and aluminum bowl provide excellent protection in organic chemistry working environments. (Please contact MVP for more enquires.)



How to order

UFRL	-	02	N	C	D	A	SB
F.R.L combination	Port size	Thread	Filtration	Drain	Bowl	Spacer block	
Filter+Regulator +Lubricator	02 1/4" 03 3/8" 04 1/2" 06 3/4" 08 1"	Blank PS N NPT	Blank 5 μ m C 40 μ m	Blank Semi-auto drain H Manual drain D Auto drain	Blank Standard bowl A Anti-acid & alkali bowl AL Aluminum bowl (1/4"~1/2")		

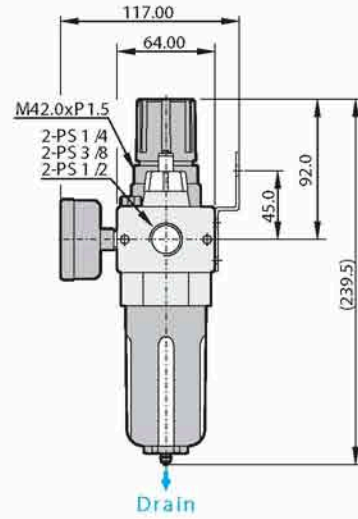
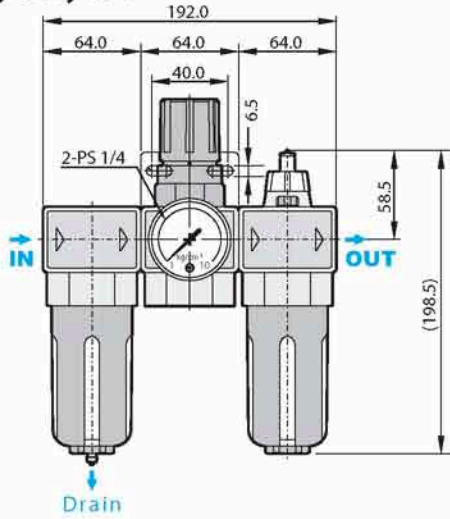
Specifications

Model	UFRL-02	UFRL-03	UFRL-04	UFRL-06	UFRL-08
Port size	1 / 4 "	3 / 8 "	1 / 2 "	3 / 4 "	1 "
Fluid	Compressed air				
Regulator construction	Piston				
Body material	Aluminum die-cast				
Bowl material	Polycarbonate (Standard), Anti-acid & alkali bowl (Option), Aluminum bowl (Option)				
Filtration	5 μ m (Standard), 40 μ m (Option)				
Operating pressure range	0.5 ~ 10 kgf/cm ²				
Max. operating pressure (Standard bowl)	15 kgf/cm ²				
Max. flow rate l/min (6kgf/cm ²)	2080	2100	2600	7940	8200
Ambient temperature	-10C ~ 60C				
Lubricator oil (Recommended)	ISO-VG32				
Filter bowl capacity	105cc		210cc		
Lubricator bowl capacity	125cc		235cc		
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)				
Net weight	1800g (AL Aluminum bowl 2100g)			2650g	
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 4				

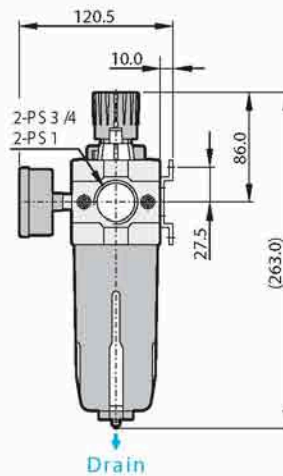
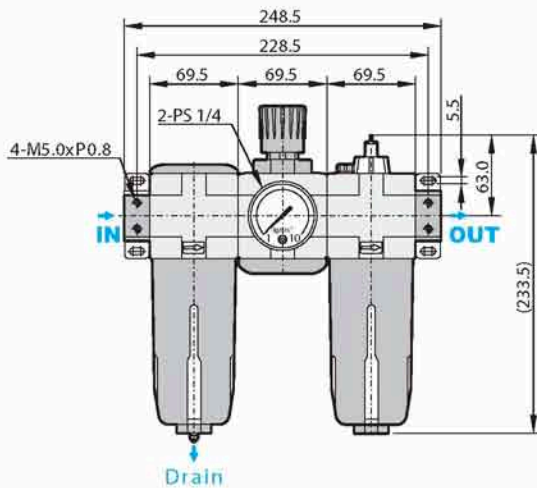
COMPOSITE/ALUMINIUM

Dimensions

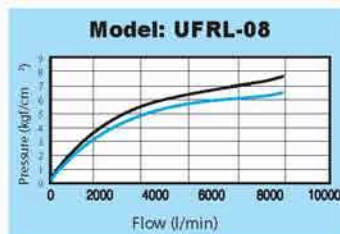
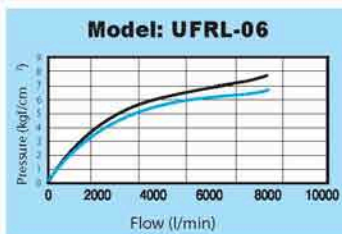
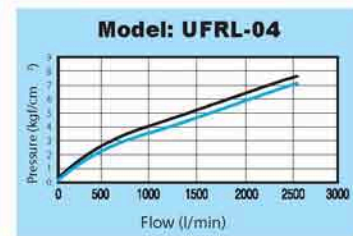
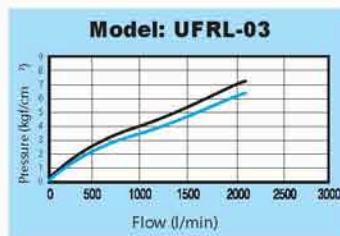
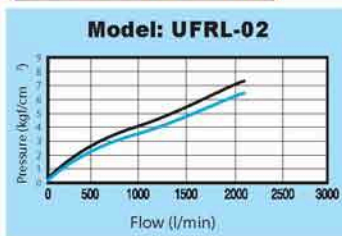
UFRL-02, 03, 04



UFRL-06, 08



Flow chart



Note:

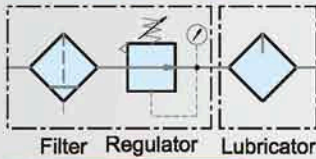
X axis: Flow
 Y axis: Pressure
 Blue line (P0) = Outlet pressure
 Black line (P1) = Inlet pressure
 P1-P0=Pressure range

COMPOSITE/ALUMINIUM

STANDARD & LARGE FR/L COMBINATION (UFR/L) FR+L (2 Unit Style) ALUMINIUM DIE-CAST/COMPOSITE



Symbol



Features

- * Remove water and particle effectively.
- * 40 μm and 5 μm filter element are easily interchangeable and replaceable.
- * Accurate and easy pressure setting.
- * Lubricator oil can be replenished without stopping air supply.
- * Oil spray in mist ensures good lubrication for machines.
- * Anti-acid & alkali bowl and aluminum bowl provide excellent protection in organic chemistry working environments. (Please contact our sales for more enquires.)



How to order

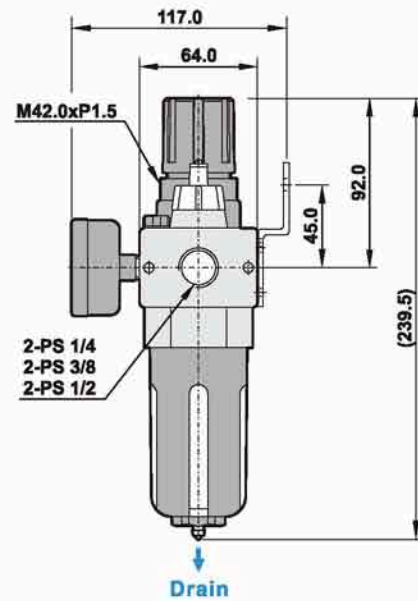
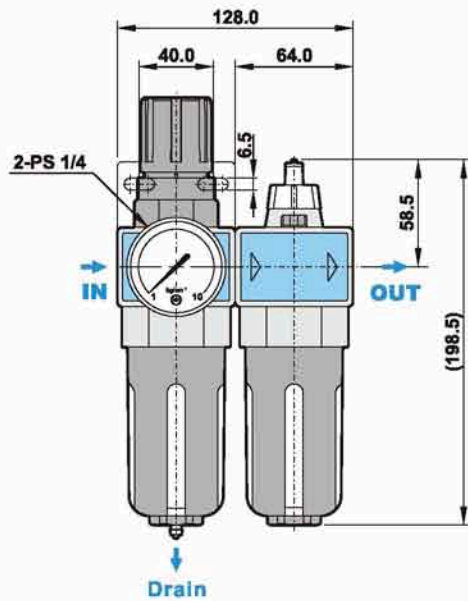
UFR/L	-	02	N	C	D	A	SB			
F.R.L combination	Port size	Thread		Filtration		Drain		Bowl		Spacer block
Filter Regulator +Lubricator	02 1/4"	Blank	PS	Blank	5 μm	Blank	Semi-auto drain	Blank	Standard bowl	
	03 3/8"	N	NPT	C	40 μm	H	Manual drain	A	Anti-acid & alkali bowl	
	04 1/2"					D	Auto drain	AL	Aluminum bowl (1/4"~1/2")	
	06 3/4"									
	08 1"									

Specifications

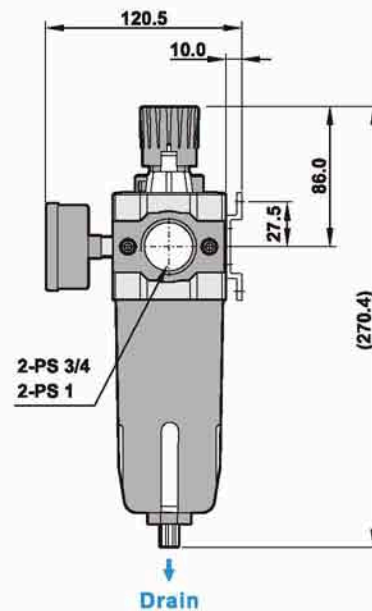
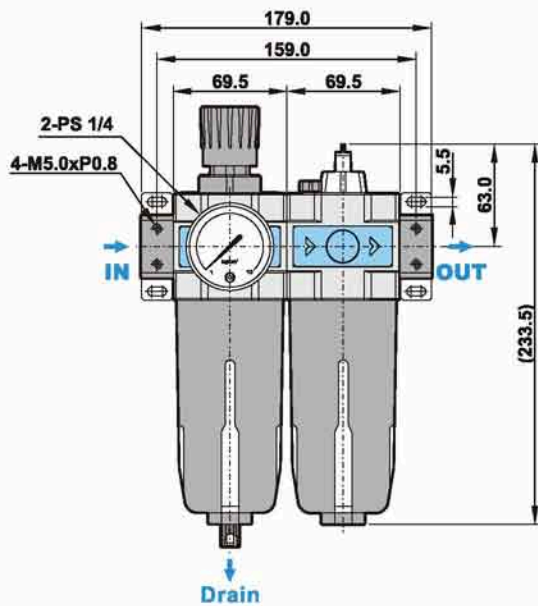
Model	UFR/L-02	UFR/L-03	UFR/L-04	UFR/L-06	UFR/L-08
Port size	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air				
Regulator construction	Piston				
Body material	Aluminum die-cast				
Bowl material	Polycarbonate (Standard), Anti-acid & alkali bowl (Option), Aluminum bowl (Option)				
Filtration	5 μm (Standard) - 40 μm (Option)				
Operating pressure range	0.5 ~ 10 kgf/cm ²				
Max. operating pressure (Standard bowl)	15 kgf/cm ²				
Max. flow rate l/min (6kgf/cm ²)	2080	2100	2600	7940	8200
Ambient temperature	-10°C ~ 60°C				
Lubricator oil (Recommended)	ISO-VG32				
Filter bowl capacity	105cc			210cc	
Lubricator bowl capacity	125cc			235cc	
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)				
Net weight	1480g (AL Aluminum bowl 1780g)			2145g	
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 4				

— Dimensions

● UFR/L-02, 03, 04



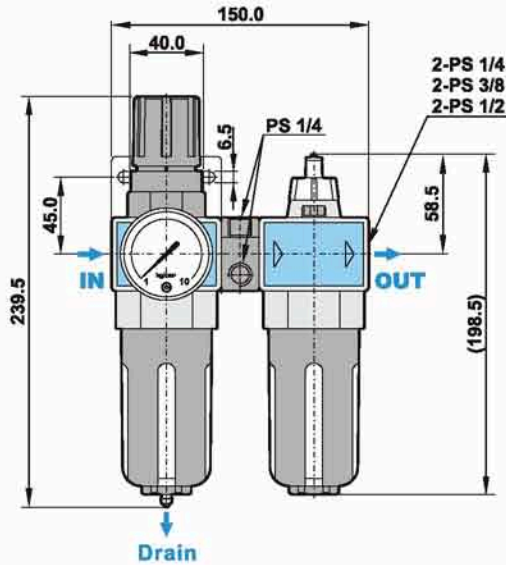
● UFR/L-06, 08



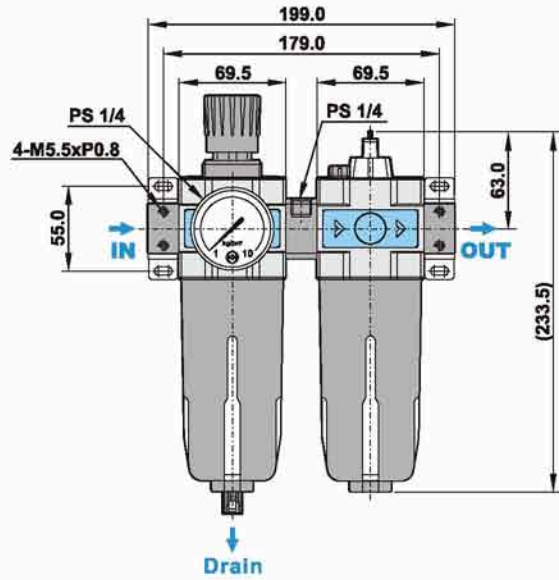
COMPOSITE/ALUMINIUM

Dimensions

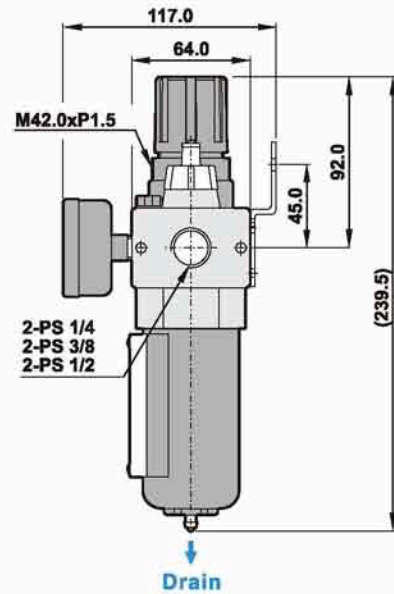
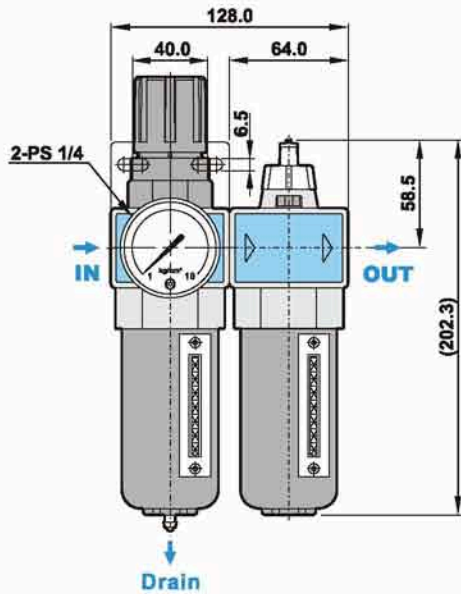
UFR/L-02, 03, 04SB (Spacer block)



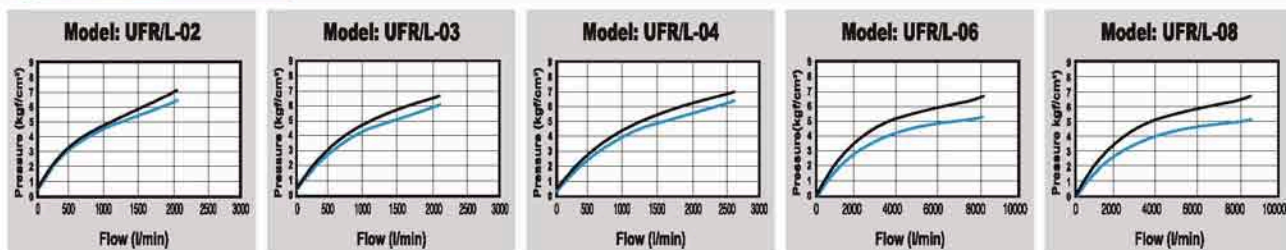
UFR/L-06, 08SB (Spacer block)



UFR/L-02AL, 03AL, 04AL (Aluminum bowl)



Flow chart

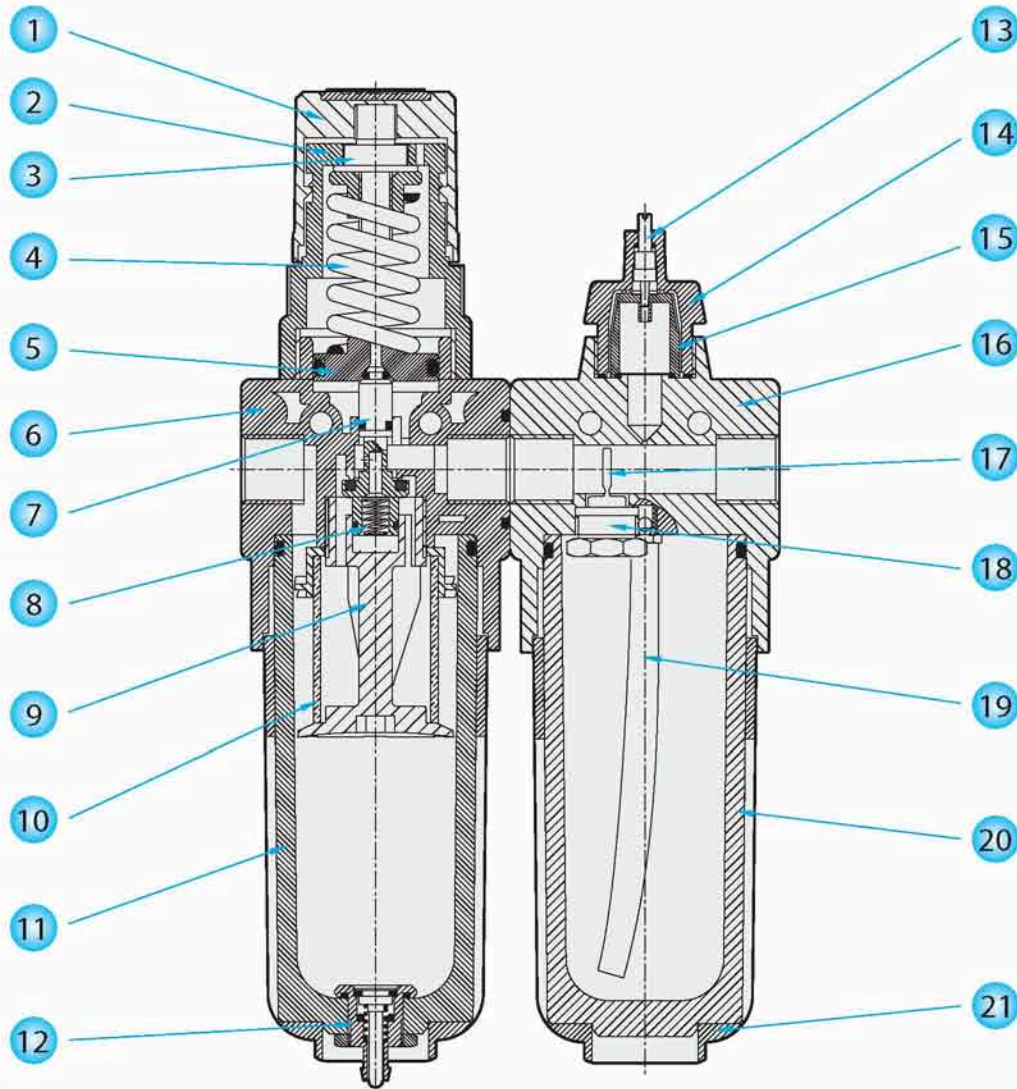


Note: X axis: Flow, Y axis: Pressure, Blue line (P0) = Outlet pressure, Black line (P1) = Inlet pressure, P1-P0=Pressure range

COMPOSITE/ALUMINIUM

Construction

UFR/L-02, 03, 04



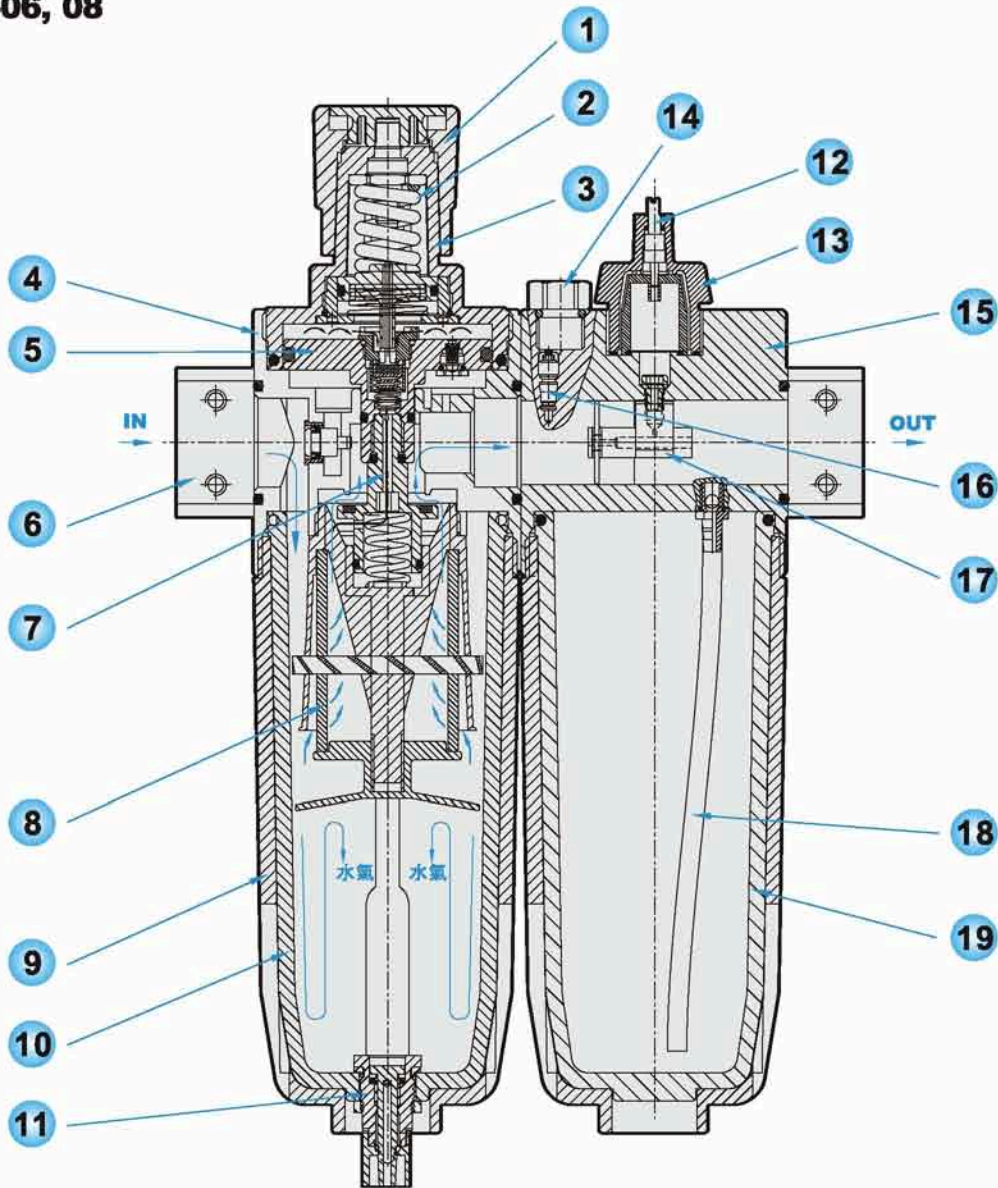
COMPOSITE/ALUMINIUM

No.	Description	Material
1	Pressure regulating knob	NY
2	Regulator base	NY+GF
3	Pressure regulating screw	Fe+Ni
4	Pressure regulating spring	Spring steel+Ni
5	Piston	Cu+Ni
6	Regulator body	ADC12
7	Regulating needle	Cu+NBR
8	Spring	SUS304
9	Filter element holder	NY
10	Filter element	Cu
11	Filter bowl	PC

No.	Description	Material
12	Semi-auto drain	Cu+Ni
13	Oil adjusting screw	Cu+Ni
14	Oil viewer	GV4H
15	Oil dropping orifice	PC
16	Lubricator body	ADC12
17	Damper	PU
18	Plug	Cu
19	Oil pipe	PU
20	Lubricator bowl	PC
21	Bowl guard	NY

Construction

UFR/L-06, 08



COMPOSITE/ALUMINIUM

No.	Description	Material
1	Pressure regulating knob	NY
2	Spring	Spring steel+Ni
3	Regulator base	NY+GF
4	Regulator body	ADC12
5	Piston	AL
6	Adaptor	ADC12
7	Pressure regulating needle	Cu+NBR
8	Filter element	Cu
9	Bowl guard	NY+GF
10	Filter bowl	PC

No.	Description	Material
11	Semi-auto drain	POM
12	Oil adjusting screw	Cu+Ni
13	Oil viewer	GV4H
14	Oil filling plug	Cu+Ni
15	Lubricator body	ADC12
16	Check valve	Cu
17	Oil dropping orifice	Cu
18	Oil pipe	PU
19	Lubricator bowl	PC

MINIATURE FILTER (SSF200) STAINLESS STEEL



Symbol



Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Suitable for semi-conductor industry.
- * Effectively removes water and particle.
- * Strict quality control.
- * Light weight, compact size for space saving.



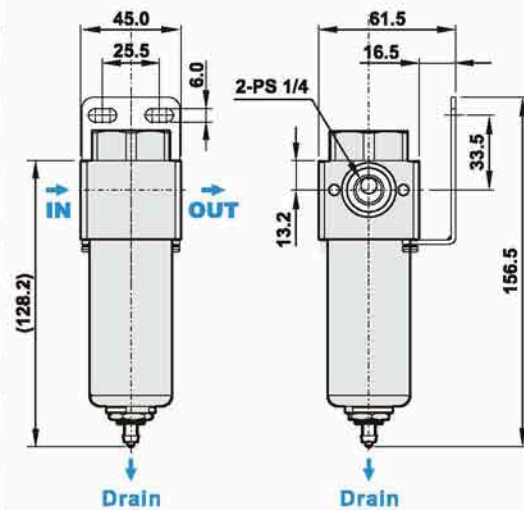
How to order

SSF200	—	02	N	H
Stainless steel SUS316 Miniature F.R.L.		Port size	Thread	Drain
Miniature Filter		02 1/4"	Blank PS N NPT	Blank Semi-auto drain H Manual drain D Auto drain

Specifications

Model	SSF200
Port size	1/4"
Fluid	Compressed air
Body material	Stainless steel SUS316
Bowl material	Stainless steel SUS316
Filter element material	Stainless steel SUS316
Filtration	5 μ m (Standard) 、40 μ m (Option)
Operating pressure range	0.5 ~ 20 kgf/cm ²
Max. inlet pressure	30 kgf/cm ²
Max. flow rate	1900 l/min
Ambient temperature	-10 $^{\circ}$ C ~ 60 $^{\circ}$ C
Filter bowl capacity	105cc
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)
Net weight	1260g
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 2

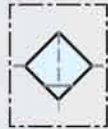
Dimensions



STAINLESS STEEL



Symbol



Filter

Features

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



How to order

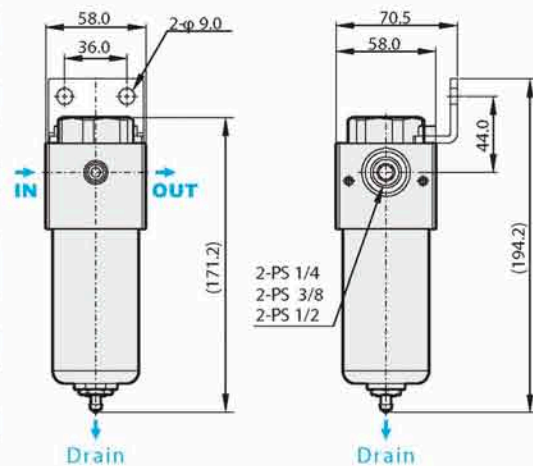
US	F	04	N	C	H
SUS316 Stainless steel	Filter	Port size	Thread	Filtration	Drain
		02 1/4" (Option)	Blank PS	Blank 5μm	Blank Semi-auto drain
		03 3/8"	N NPT	C 40μm	H Manual drain
		04 1/2"			D Auto drain

Specifications

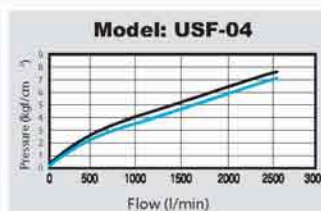
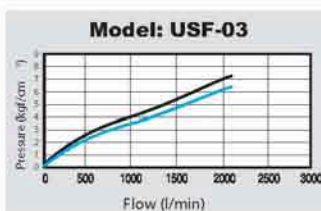
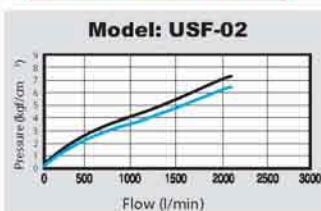
Model	USF-02	USF-03	USF-04
Port size	1/4" (Option)	3/8"	1/2"
Fluid	Compressed air		
Body material	Stainless steel SUS316		
Bowl material	Stainless steel SUS316		
Filter element material	Stainless steel SUS316		
Filtration	5μm (Standard), 40μm (Option)		
Operating pressure range	0.5 ~ 30 kgf/cm ²		
Max. inlet pressure	60 kgf/cm ²		
Max. flow rate l/min (6kgf/cm ²)	2440	2450	3030
Ambient temperature	-10C ~ 70C		
Filter bowl capacity	110cc		
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)		
Net weight	1650 g		
Accessories	Mounting bracket, Screw x 2		

Dimensions

USF-02, 03, 04



Flow chart

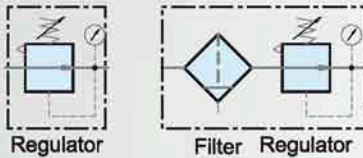


Note:

- X axis: Flow
- Y axis: Pressure
- Blue line (P0) = Outlet pressure
- Black line (P1) = Inlet pressure
- P1-P0 = Pressure range

MINIATURE REGULATOR & FILTER REGULATOR (SSR200/SSFR500) STAINLESS STEEL

Symbol



Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Suitable for semi-conductor industry.
- * Large flow rate and effectively removes water and particle.
- * Accurate and sensitive pressure setting.
- * Light weight, compact size for space saving.



How to order

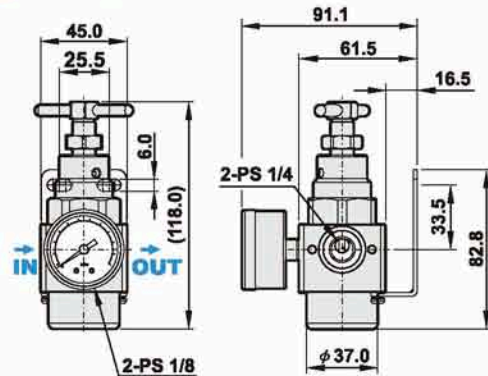
SSR200		02	N	H
Stainless steel SUS316 Miniature F.R.L.		Port size	Thread	Drain
SSR200	Miniature Regulator	02 1/4"	Blank PS N NPT	Blank Semi-auto drain H Manual drain D Auto drain Only for SSFR500
SSFR500	Miniature Filter Regulator			

Specifications

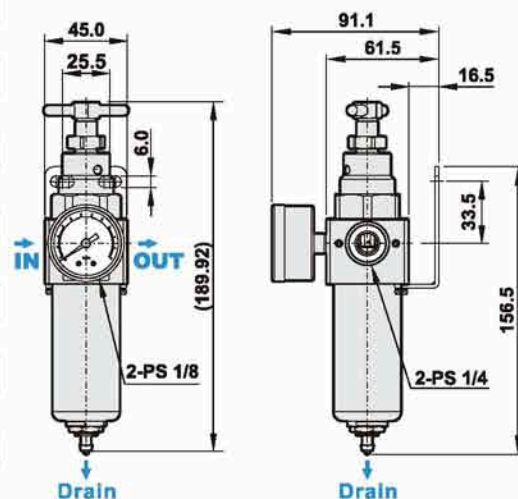
Model	SSR200	SSFR500
Port size	1/4"	
Fluid	Compressed air	
Regulator construction	Piston	
Body material	Stainless steel SUS316	
Bowl material	—	Stainless steel SUS316
Pressure gauge material	Case: Stainless steel SUS304, Thread: Stainless steel SUS316	
Filter element material	—	Stainless steel SUS316
Filtration	—	5µm (Standard) - 40µm (Option)
Operating pressure range	0.5 ~ 20 kgf/cm ²	
Max. inlet pressure	30 kgf/cm ²	
Max. flow rate (6kgf/cm ²)	1850 l/min	
Ambient temperature	-10°C ~ 60°C	
Filter bowl capacity	—	105cc
Standard drain	—	Semi-auto drain (Drains below 0.5kgf/cm ²)
Net weight	1200g	1380g
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 2	

Dimensions

SSR200



SSFR500

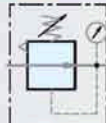


STAINLESS STEEL

STANDARD (LARGE ON REQUEST) REGULATOR (USR) STAINLESS STEEL



Symbol



Regulator

Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Suitable for semi-conductor industry.
- * Accurate and sensitive pressure setting.
- * Strict quality control.



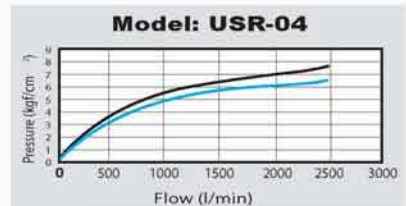
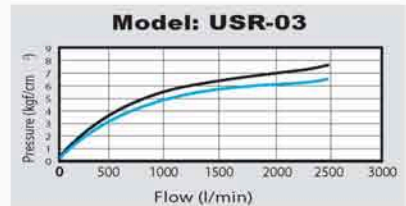
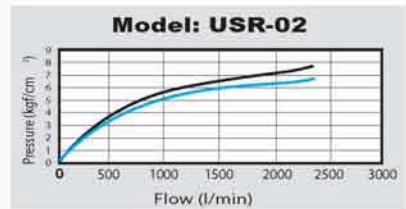
How to order

US	R	04	N
SUS316 Stainless steel	Regulator	Port size	Thread
		02 1/4" (Option)	Blank PS
		03 3/8"	N NPT
		04 1/2"	

Specifications

Model	USR-02	USR-03	USR-04
Port size	1 / 4" (Option)	3 / 8"	1 / 2"
Fluid	Compressed air		
Regulator construction	Piston		
Body material	Stainless steel SUS316		
Pressure gauge material	Case: Stainless steel SUS304, Thread: Stainless steel SUS316		
Operating pressure range	0.5 ~ 30 kgf/cm ²		
Max. inlet pressure	60 kgf/cm ²		
Max. flow rate l/min (6kgf/cm ²)	1950	2250	2520
Ambient temperature	-10C ~ 70C		
Net weight	1400g		
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 2		

Flow chart

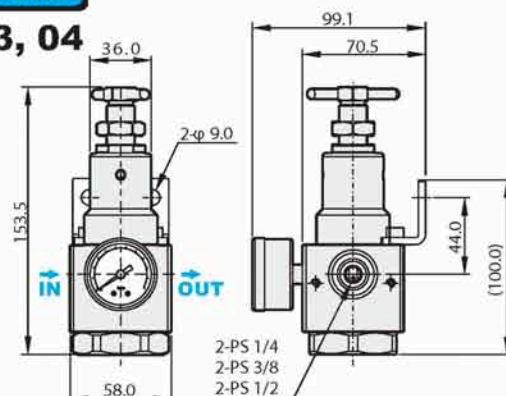


Note:

X axis: Flow
Y axis: Pressure
Blue line (P0) = Outlet pressure
Black line (P1) = Inlet pressure
P1-P0 = Pressure range

Dimensions

USR-02, 03, 04



MINIATURE LUBRICATOR (SSL200) STAINLESS STEEL



Symbol



Lubricator

Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Suitable for semi-conductor industry.
- * Lubricator oil can be replenished without stopping air supply.
- * Oil spray in mist ensures good lubrication for machines.
- * Light weight, compact size for space saving.



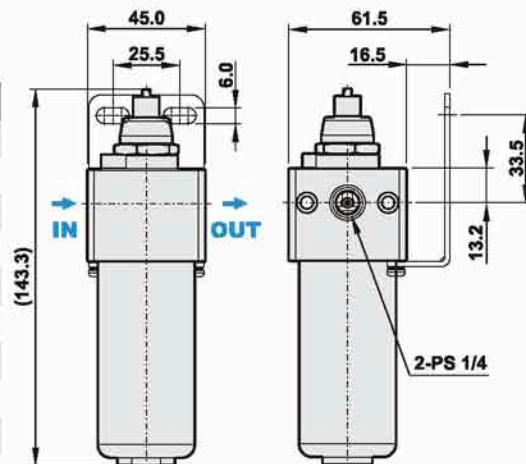
How to order

SSL200	—	02	N
Stainless steel SUS316 miniature F.R.L		Port size	Thread
Miniature Lubricator		02 1/4"	Blank PS N NPT

Dimensions

Specifications

Model	SSL200
Port size	1/4"
Fluid	Compressed air
Body material	Stainless steel SUS316
Bowl material	Stainless steel SUS316
Operating pressure range	0.5 ~ 20 kgf/cm ²
Max. inlet pressure	30 kgf/cm ²
Max. flow rate	2500 l/min
Ambient temperature	-10°C ~ 60°C
Lubricator oil (Recommended)	ISO-VG32
Lubricator bowl capacity	125cc
Net weight	1200g
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 2



STAINLESS STEEL



Symbol



Lubricator

Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Lubricator oil can be replenished without stopping air supply.
- * Oil spray in mist ensures good lubrication for machines.



Patent number in China :
ZL200620055734.0

How to order

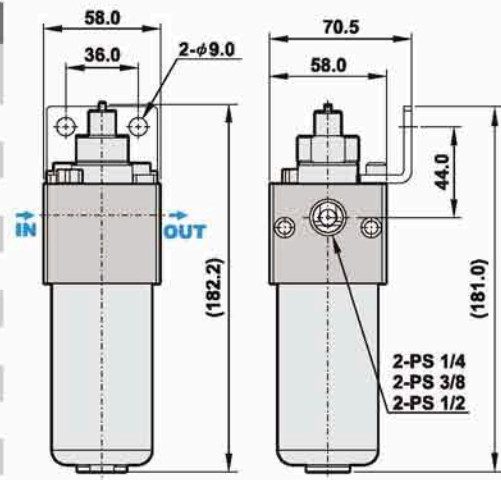
US	L	04	N
SUS316 Stainless steel	Lubricator	Port size	Thread
		02 1/4" (Option)	Blank PS
		03 3/8"	N NPT
		04 1/2"	

Specifications

Model	USL-02	USL-03	USL-04
Port size	1/4" (Option)	3/8"	1/2"
Fluid	Compressed air		
Body material	Stainless steel SUS316		
Bowl material	Stainless steel SUS316		
Operating pressure range	0.5 ~ 30 kgf/cm ² (Max)		
Max. inlet pressure	60 kgf/cm ²		
Max. flow rate l/min (6kgf/cm ²)	2500	2525	4100
Ambient temperature	-10°C ~ 70°C		
Lubricator oil (Recommended)	ISO-VG32		
Lubricator bowl capacity	130cc		
Net weight	1750g		
Accessories	Mounting bracket, Screw x 2		

Dimensions

USL-02, 03, 04





Symbol



Lubricator

Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Suitable for semi-conductor industry.
- * Lubricator oil can be replenished without stopping air supply.
- * Oil spray in mist ensures good lubrication for machines.



How to order

US
SUS316
Stainless steel

LC
Lubricator

—

06
Port size
06 3/4"
08 1"

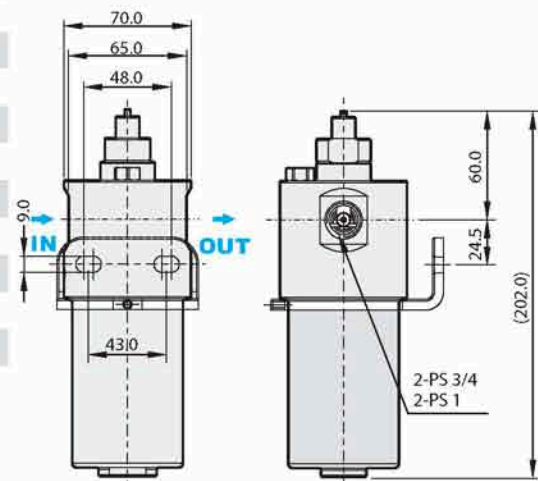
N
Thread
Blank PS
N NPT

Specifications

Model	USLC-06	USLC-08
Port size	3 / 4 "	1 "
Fluid	Compressed air	
Body material	Stainless steel SUS316	
Bowl material	Stainless steel SUS316	
Operating pressure range	0.5 ~ 60 kgf/cm ²	
Lubricator bowl capacity	200cc	
Max. inlet pressure	70 kgf/cm ²	
Max. flow rate l/min (6kgf/cm ²)	7250	7650
Lubricator oil (Recommended)	ISO-VG32	
Ambient temperature	-10C ~ 70C	
Net weight	2500g	

Dimensions

USLC-06, 08

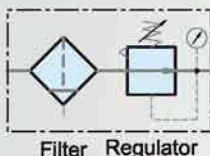


STAINLESS STEEL

STANDARD (MINIATURE ON pg26) FILTER REGULATOR (USFR) STAINLESS STEEL



Symbol



Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Suitable for semi-conductor industry.
- * The product effectively removes water and particle.
- * Accurate and sensitive pressure setting.



Patent number in China :
ZL200620055734.0

How to order

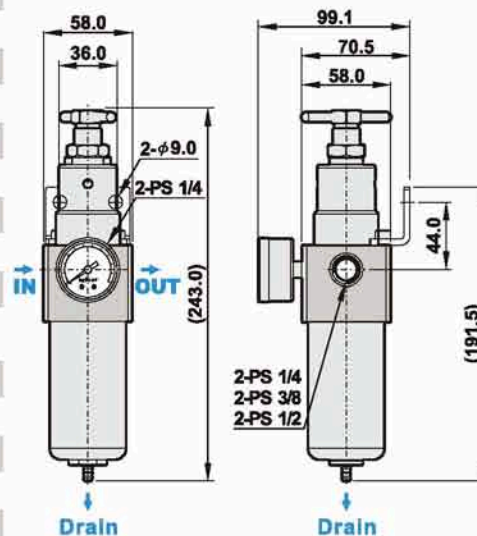
US	FR	04	N	C	H
SUS316 Stainless steel	Filter Regulator	Port size	Thread	Filtration	Drain
		02 1/4" (Option)	Blank PS	Blank 5μm	Blank Semi-auto drain
		03 3/8"	N NPT	C 40μm	H Manual drain
		04 1/2"			D Auto drain

Specifications

Model	USFR-02	USFR-03	USFR-04
Port size	1/4" (Option)	3/8"	1/2"
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	0.5 ~ 30 kgf/cm ² (Max)		
Max. inlet pressure	60 kgf/cm ²		
Max. flow rate l/min (6kgf/cm ²)	2200	2500	3800
Ambient temperature	-10°C ~ 70°C		
Filter bowl capacity	110cc		
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)		
Net weight	2000g		
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 2		

Dimensions

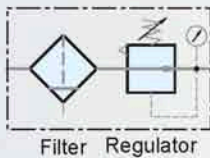
USFR-02, 03, 04



LARGE FILTER REGULATOR (USFRC) STAINLESS STEEL



Symbol



Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Suitable for semi-conductor industry.
- * Large flow rate and effectively removes water and particle.
- * Accurate and sensitive pressure setting.



How to order

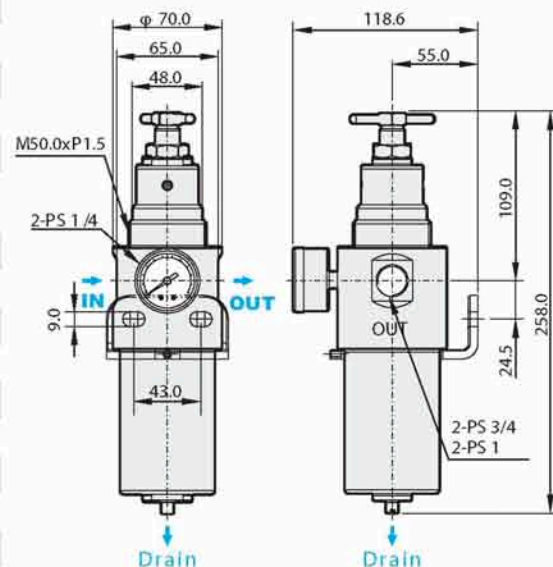
US	FRC	06	N	C	H
SUS316 Stainless steel	Filter Regulator	Port size	Thread	Filtration	Drain
		06 3/4"	Blank PS	Blank 5µm	H Manual drain
		08 1"	N NPT	C 40µm	

Specifications

Model	USFRC-06	USFRC-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	0.5 ~ 30 kgf/cm ²	
Max. inlet pressure	60 kgf/cm ²	
Max. flow rate Vmin (6kgf/cm ²)	7250	7650
Ambient temperature	-10C ~ 70C	
Filter bowl capacity	200cc	
Standard drain	Manual drain	
Net weight	3000g	
Accessories	Pressure gauge, Plug, Mounting bracket	

Dimensions

USFRC-06, 08

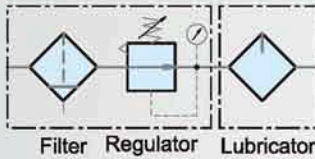


STAINLESS STEEL

MINIATURE FR/L COMBINATION (2 UNIT) (SSFRL600) STAINLESS STEEL



Symbol



Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Suitable for semi-conductor industry.
- * Large flow rate and effectively removes water and particle.
- * Accurate and sensitive pressure setting.
- * Lubricator oil can be replenished without stopping air supply.
- * Oil spray in mist ensures good lubrication for machines.
- * Light weight, compact size for space saving.



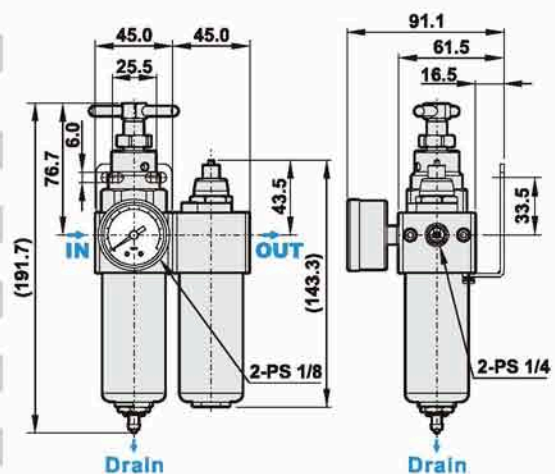
How to order

SSFRL600	—	02	N	H
Stainless steel SUS316 miniature		Port size	Thread	
Miniature Filter Regulator+Lubricator		02 1/4"	Blank PS	Blank Semi-auto drain
			N NPT	H Manual drain
				D Auto drain

Specifications

Model	SSFRL600
Port size	1/4"
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
Filter element material	Stainless steel SUS316
Filtration	5μm (Standard) · 40μm (Option)
Operating pressure range	0.5 ~ 20 kgf/cm ²
Max. inlet pressure	30 kgf/cm ²
Max. flow rate l/min (6kgf/cm ²)	1850 l/min
Ambient temperature	-10°C ~ 60°C
Lubricator oil (Recommended)	ISO-VG32
Filter bowl capacity	105cc
Lubricator bowl capacity	125cc
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)
Net weight	2660g
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 2

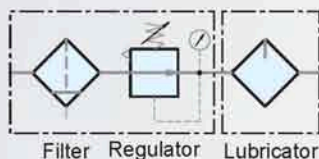
Dimensions



STANDARD FR/L COMBINATION (2 UNITS) (USFR/L) STAINLESS STEEL



Symbol



Features

- * For high pressure use, corrosion and chemical resistance.
- * Good performance in chemically working environments and outdoor facility.
- * Suitable for semi-conductor industry.
- * The product effectively removes water and particle.
- * Accurate and sensitive pressure setting.
- * Lubricator oil can be replenished without stopping air supply.
- * Oil spray in mist ensures good lubrication for machines.



How to order

US	FR / L	-	04	N	C	H			
SUS316 Stainless steel	Filter R egulator+L ubricator		Port size	Thread		Filtration	Drain		
			02 1/4" (Option)	Blank	PS	Blank	5μm	Blank	Semi-auto drain
			03 3/8"	N	NPT	C	40μm	H	Manual drain
			04 1/2"					D	Auto drain

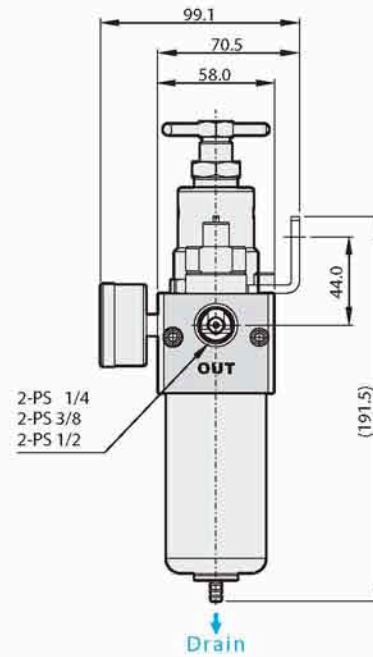
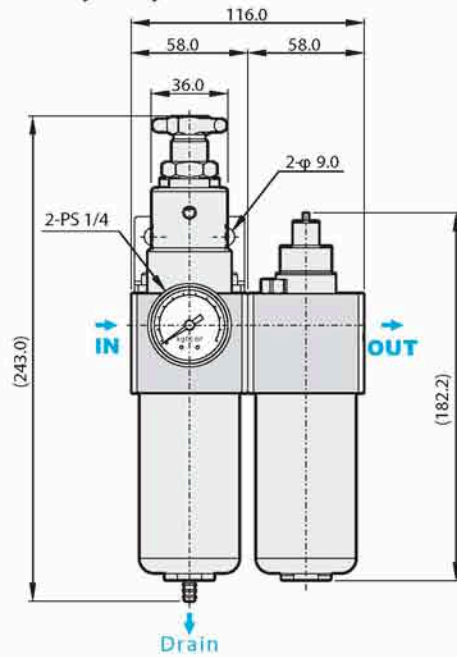
Specifications

Model	USFR / L-02	USFR / L-03	USFR / L-04
Port size	1 / 4 "(Option)	3 / 8 "	1 / 2 "
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	0.5 ~ 30 kgf/cm ²		
Max. inlet pressure	60 kgf/cm ²		
Max. flow rate l/min (6kgf/cm ²)	2080	2200	2500
Ambient temperature	-10C ~ 70C		
Lubricator oil (Recommended)	ISO-VG32		
Filter bowl capacity	110cc		
Lubricator bowl capacity	130cc		
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)		
Net weight	3800g	3870g	3840g
Accessories	Pressure gauge, Mounting bracket, Plug, Screw x 2		

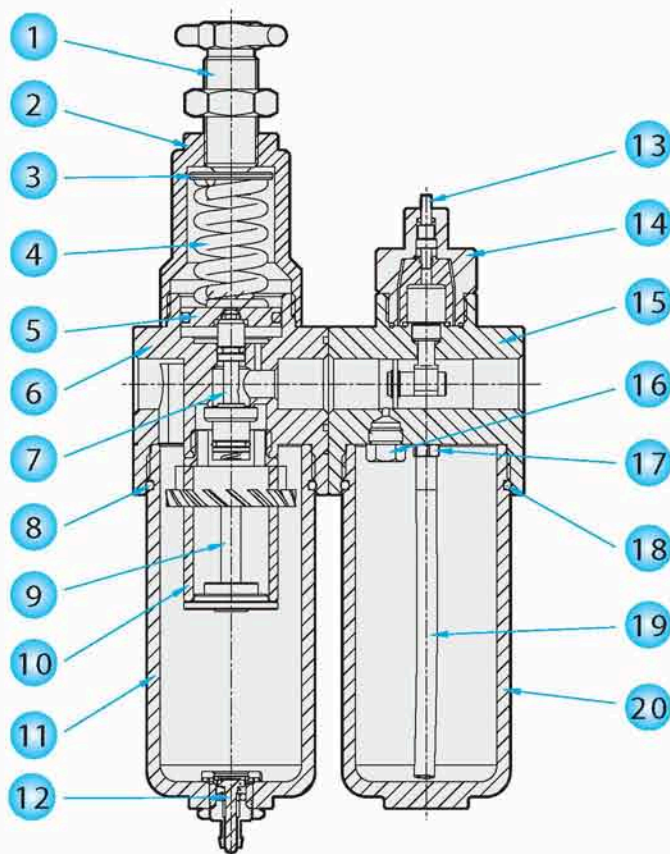
STAINLESS STEEL

Dimensions

USFR/L-02, 03, 04



Construction



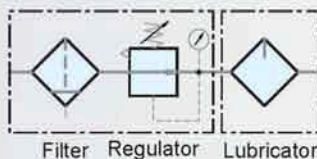
No.	Description	Material
1	Pressure regulating screw	SUS316
2	Regulator base	SUS316
3	Disc gasket	SUS303
4	Spring	SUS303
5	Piston	SUS303
6	Regulator body	SUS316
7	Pressure regulating needle	SUS303
8	O-ring	VITON
9	Filter element holder	SUS303
10	Filter element	SUS316
11	Filter bowl	SUS316
12	Drain	Cu+Ni
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

STAINLESS STEEL

LARGE FR/L COMBINATION (2 UNIT) (USFR/L) STAINLESS STEEL



Symbol



Features

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



How to order

US	FR/L	C - 06	N	C	H	
SUS316 Stainless steel	Filter Regulator+Lubricator	Series	Port size	Thread	Filtration	Drain
		C Series	06 3/4" 08 1"	Blank PS N NPT	Blank 5μm C 40μm	H Manual drain

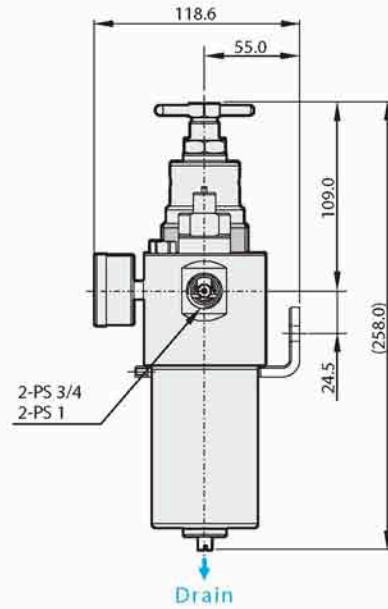
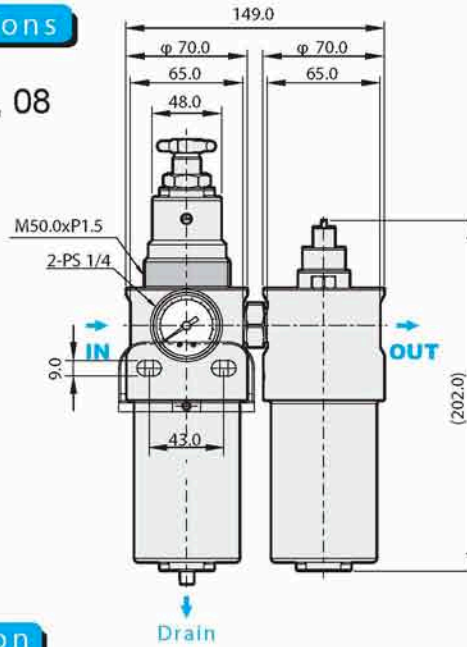
Specifications

Model	USFR/LC-06	USFR/LC-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	0.5 ~ 30 kgf/cm ²	
Max. inlet pressure	60 kgf/cm ²	
Max. flow rate l/min (6kgf/cm ²)	7250	7600
Ambient temperature	-10C ~ 70C	
Lubricator oil (Recommended)	ISO-VG32	
Nipple size and material	1/2" SUS316	
Filter bowl capacity	200cc	
Lubricator bowl capacity	220cc	
Standard drain	Manual drain	
Net weight	5500g	
Accessories	Pressure gauge, Plug, Mounting bracket	

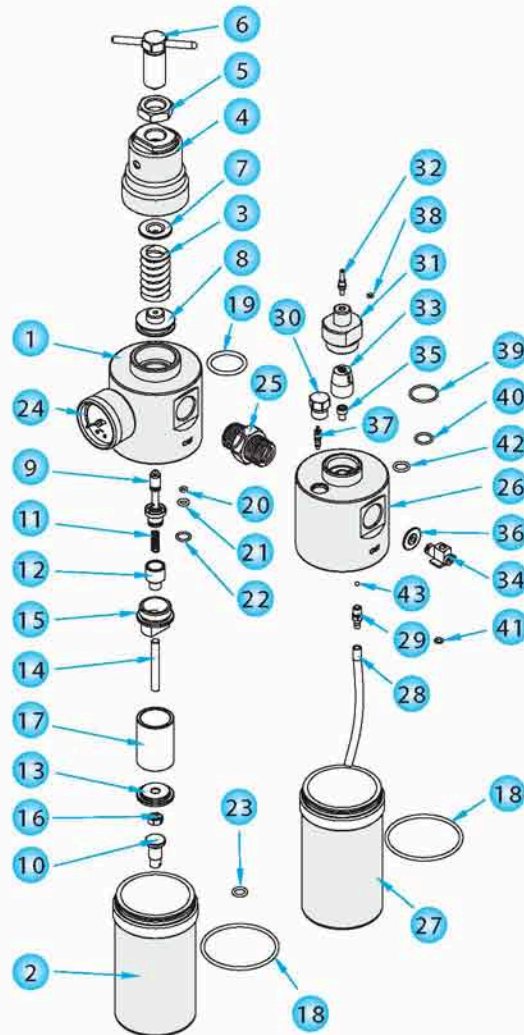
STAINLESS STEEL

Dimensions

USFR/LC-06, 08



Explosion



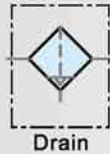
No.	Description	Material	No.	Description	Material
1	Filter Regulator body	SUS316	23	O-ring	VITON
2	Filter bowl	SUS316	24	Pressure gauge	Stainless Steel
3	Pressure regulating spring	SUS304	25	Nipple	Stainless Steel
4	Stainless steel regulator base	SUS316	26	Lubricator body	SUS316
5	Nut	SUS316	27	Lubricator bowl	SUS316
6	Pressure regulating screw	SUS316	28	Oil pipe	PU
7	Disc gasket	SUS316	29	Oil pipe fitting	SUS316
8	Piston	SUS316	30	Oil filling plug	SUS316
9	Pressure regulating needle	SUS316	31	Oil adjusting knob	SUS316
10	Manual drain	SUS316	32	Oil adjusting screw	SUS316
11	Spring	SUS304	33	Oil dropping orifice	SUS316
12	Needle holder	SUS316	34	Oil spraying orifice	SUS316
13	Plate	SUS316	35	Screw	SUS316
14	Bolt	SUS316	36	Damper	VITON
15	Spring holder	SUS316	37	Check valve	Stainless Steel
16	Nut	SUS316	38	O-ring	VITON
17	Filter element	SUS316	39	O-ring	VITON
18	O-ring	VITON	40	O-ring	VITON
19	O-ring	VITON	41	O-ring	VITON
20	O-ring	VITON	42	O-ring	VITON
21	O-ring	VITON	43	Steel ball 3mm	SUS316
22	O-ring	VITON			

STAINLESS STEEL

ADDITIONAL - STANDARD & LARGE AUTOMATIC DRAIN (AD940) ALUMINIUM DIE-CAST/COMPOSITE



Symbol



Features

- * AD940 series effectively and quickly drains water.
- * Special internal construction prevents vacuum occurred.

How to order

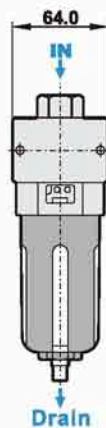
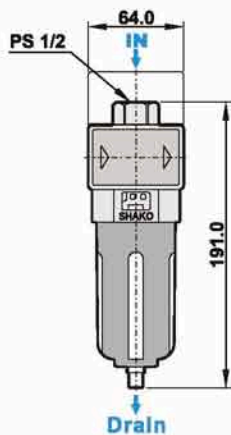
AD940	—	04	N	AL
Automatic drain		Port size	Thread	Bowl
		04 1/2"	Blank PS	Blank Standard bowl
		06 3/4"	N NPT	AL Aluminum bowl (only for 1/2")
		08 1"		

Specifications

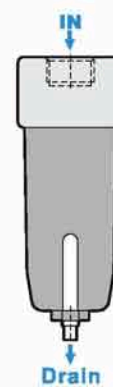
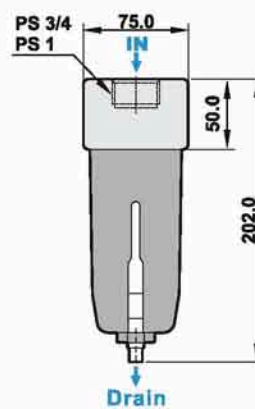
Model	AD940-04	AD940-06	AD940-08
Port size	1/2"	3/4"	1"
Fluid	Compressed air		
Body material	Aluminum die-cast		
Bowl material	Polycarbonate (Standard), Aluminum bowl (Option)		
Operating pressure range	0.5 ~ 10 kgf/cm ²		
Max. inlet pressure	12 kgf/cm ²		
Ambient temperature	-10°C ~ 60°C		
Filter bowl capacity	105cc		210cc
Net weight	500g		400g

Dimensions

AD940-04



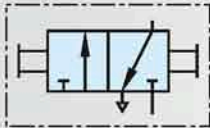
AD940-06, 08



ADDITIONAL

ADDITIONAL - STANDARD SHUT-OFF VALVE (SHV) ALUMINIUM DIE-CAST/COMPOSITE

Symbol



Features

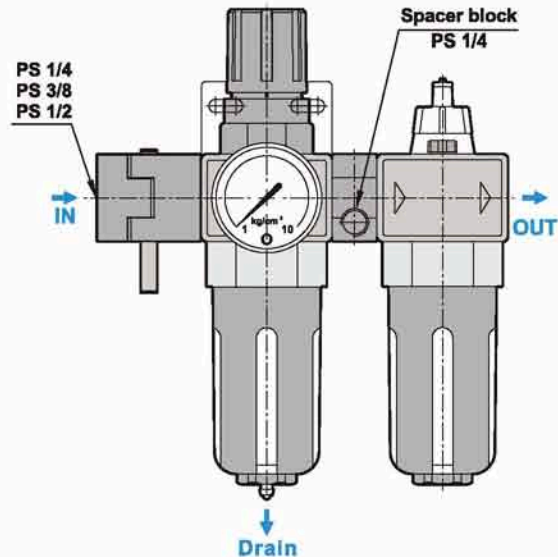
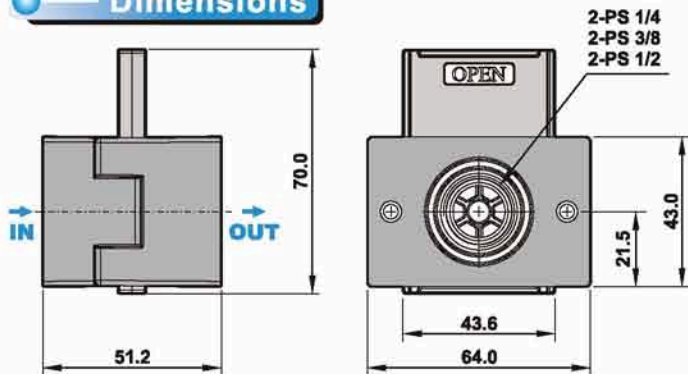
- * The valve cut air source effectively and quickly.
- * Hole lockable design to increase safety.
- * Positioning mechanism ensures to cut air supply entirely.
- * See following drawing for connection with FRL.



How to order

SHV	02	N
Shut-off valve	Port size	Thread
SHV 3/2 way	02 1/4"	Blank PS
	03 3/8"	N NPT
	04 1/2"	

Dimensions



Specifications

Model	SHV-02	SHV-03	SHV-04
Port size	1/4"	3/8"	1/2"
Fluid	Compressed air		
Body material	Aluminum die-cast		
Shut-off panel material	Polycarbonate		
Operating pressure range	0.5 ~ 12 kgf/cm ²		
Max. inlet pressure	15 kgf/cm ²		
CV value	4.0	8.0	8.0
Ambient temperature	-10°C ~ 60°C		
Net weight	350g		

ADDITIONAL - STANDARD VACUUM FILTER (UV) ALUMINIUM DIE-CAST/COMPOSITE



Symbol



Features

- * UV series removes particle effectively.
- * 40 μ m and 5 μ m filter element are easily interchangeable and replaceable.

How to order

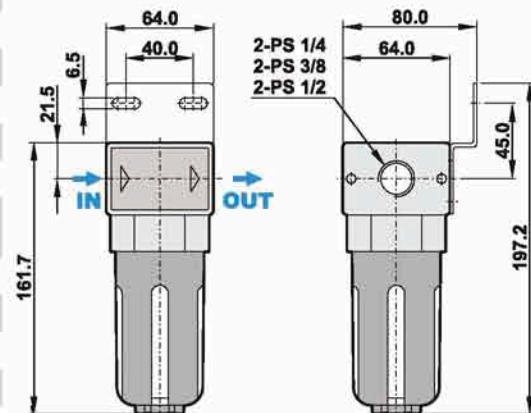
UV	02	N	C	B	A
Vacuum filter	Port size	Thread	Filtration	Mounting bracket	Bowl
	02 1/4"	Blank PS	Blank 5 μ m	Blank W/O bracket	Blank Standard bowl
	03 3/8"	N NPT	C 40 μ m	B W/I bracket	A Anti-acid & alkali bowl
	04 1/2"				AL Aluminum bowl (1/4"~1/2")

Specifications

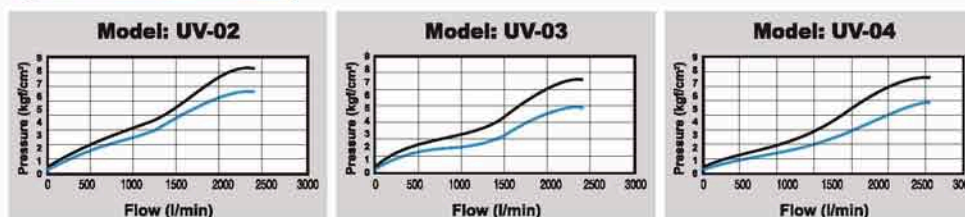
Model	UV-02	UV-03	UV-04
Port size	1/4"	3/8"	1/2"
Fluid	Compressed air		
Body material	Aluminum die-cast		
Bowl material	Polycarbonate (Standard)		
Filtration	5 μ m (Standard) - 40 μ m (Option)		
Operating pressure range	0.5 ~ 10 kgf/cm ²		
Max. operating pressure (Standard bowl)	15 kgf/cm ²		
Max. flow rate l/min (6kgf/cm ²)	2440	2450	3030
Ambient temperature	-10 $^{\circ}$ C ~ 60 $^{\circ}$ C		
Filter bowl capacity	105cc		
Net weight	530g		

Dimensions

UV-02, 03, 04



Flow chart



Note:

- X axis: Flow
- Y axis: Pressure
- Blue line (P0) = Outlet pressure
- Black line (P1) = Inlet pressure
- P1-P0 = Pressure range

ADDITIONAL

ADDITIONAL - STANDARD & LARGE COALESCING FILTER (UMF) ALUMINIUM DIE-CAST/COMPOSITE



Symbol



Features

- * UMF series effectively removes oil, water, carbon and particle.
- * With 0.01 μ m glass fiber filter element.
- * High quality control ensures stable running and long life.
- * Convenient to see air quality from pressure indicator, prevent the filter element from clogging.

Note: Please install air filter UF series upstream to extend life of filter element.



How to order

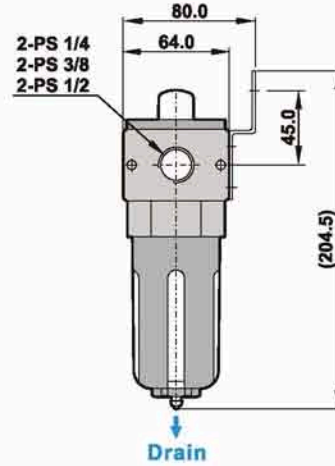
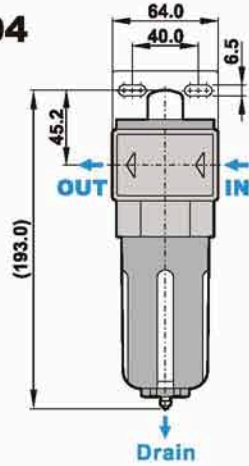
UMF		- 02		N		C		H		B		A	
Coalescing filter		Port size		Thread		Filtration		Drain		Mounting bracket		Bowl	
02	1/4"	Blank	PS	Blank	0.01 μ m	Blank	Semi-auto drain	Blank	W/O bracket	Blank	Standard bowl		
03	3/8"	N	NPT		Activated	H	Manual drain	B	W/I bracket	A	Anti-acid & alkali bowl		
04	1/2"			C	charcoal					AL	Aluminum bowl (1/4"~1/2")		
06	3/4"				filter element								
08	1"												

Specifications

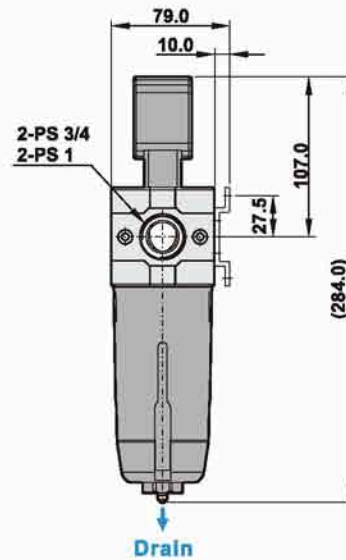
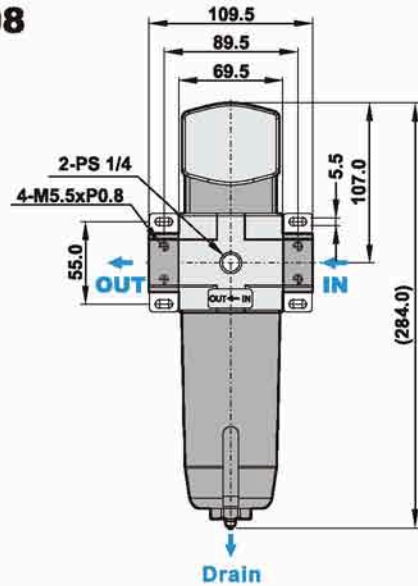
Model	UMF-02	UMF-03	UMF-04	UMF-06	UMF-08
Port size	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air				
Body material	Aluminum die-cast				
Bowl material	Polycarbonate (Standard), Anti-acid & alkali bowl (Option), Aluminum bowl (Option)				
Filtration	0.01 μ m(Standard)				
Operating pressure range	0.5 ~ 10 kgf/cm ²				
Max. inlet pressure	15 kgf/cm ²				
Max. flow rate l/min(6kgf/cm ²)	2050	2100	2150	3800	3850
Ambient temperature	-10 $^{\circ}$ C ~ 60 $^{\circ}$ C				
Filter bowl capacity		65cc		115cc	
Standard drain	Semi-auto drain (Drains below 0.5kgf/cm ²)				
Net weight		600g		1200g	

Dimensions

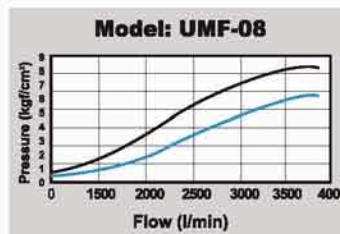
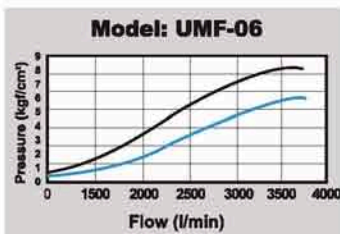
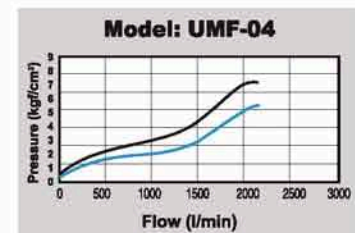
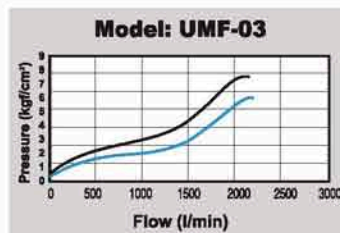
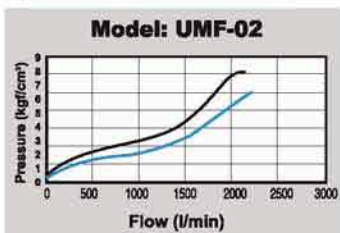
UMF-02, 03, 04



UMF-06, 08



Flow chart



Note:

X axis: Flow
 Y axis: Pressure
 Blue line (P0) = Outlet pressure
 Black line (P1) = Inlet pressure
 P1-P0= Pressure range

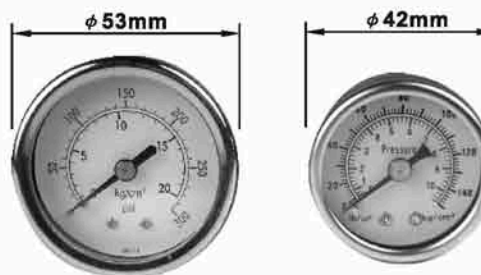
ADDITIONAL

Pressure gauge

Part no.	Application	Dimension
KUX0000020	Miniature FRL series	1/8", ϕ 42mm
KUX0000030	Standard FRL series 1/4", 3/8", 1/2", 3/4", 1"	1/4", ϕ 53mm



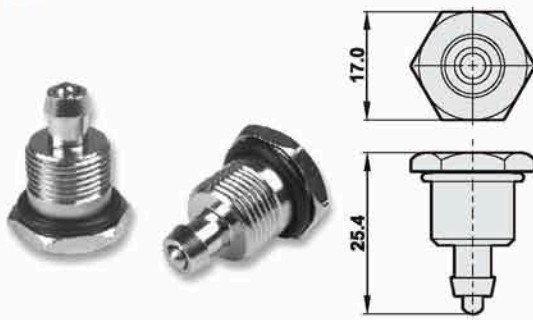
Part no.	Application	Dimension/Material
KUX0000046	USFR Stainless steel FRL series	2" x 20kg x 1/4", SUS316
KUX0000050	SSFR Miniature stainless steel FRL series	2" x 10kg x 1/8", SUS316



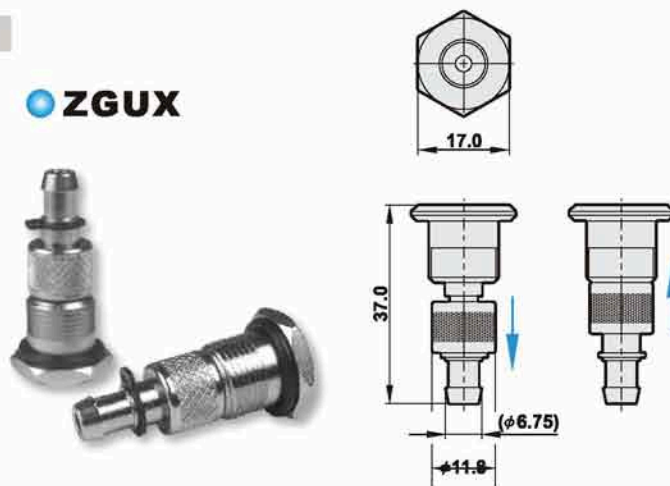
Semi-auto/Manual drain

Part no.	Type	Port size
ZGUX-1	Semi-auto	6mm (PU tube)
ZGUX	Manual	6mm (PU tube)

ZGUX-1



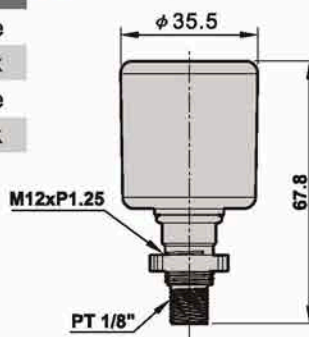
ZGUX



Automatic drain

Part no.	Thread	Color
DA-014	14mm (Male thread)	White
DA-014W	14mm (Male thread)	Black
DA-014N	14mm (Female thread)	White
DA-014NW	14mm (Female thread)	Black

DA-014, DA-014W



Feature

1. Completely drain water together with polluted particles and oils at once without remnants on filter bowl.
2. Automatically remove remaining water on filter bowl after air pressure is shut off.
3. Working pressure: 2~8kgs/cm²
Discharge capacity: 10~15cc each time (12 times/min.)

* Patent number in Taiwan: 096216673

Filter bowl & Lubricator bowl

Part no.	Application	Content
ZGL200B	Lubricator bowl for FRL700A, FRL600A, L200A	Bowl with o-ring
ZGUL-06B	Lubricator bowl for UFR/L-06, 08	Bowl with o-ring
ZGUL-02B	Lubricator bowl for UFR/L-02, 03, 04	Bowl with o-ring
ZGUL-02BA	Anti-acid & alkali lubricator bowl for UFR/L-02, 03, 04	Bowl with o-ring
ZGUL-02BAL	Aluminum lubricator bowl for UFR/L-02, 03, 04	Bowl with o-ring
ZGF200B	Filter bowl for FRL700A, FRL600A, F200A	Bowl with o-ring
ZGUF-06B	Filter bowl for UFR/L-06, 08	Bowl with o-ring
ZGUF-02B	Filter bowl for UFR/L-02, 03, 04	Bowl with o-ring
ZGUF-02BA	Anti-acid & alkali filter bowl for UFR/L-02, 03, 04	Bowl with o-ring
ZGUF-02BAL	Aluminum filter bowl for UFR/L-02, 03, 04	Bowl with o-ring
ZGF200BB	Filter bowl for FRL700B, FRL600B, F200B	Bowl with o-ring
ZGL200BB	Lubricator bowl for FRL700B, FRL600B, L200B	Bowl with o-ring
ZGUSF-04B	SUS316 Filter bowl for USFR stainless steel series	Bowl with o-ring
ZGUSF-02B	SUS316 Filter bowl for SSFR Miniature stainless steel series	Bowl with o-ring



Spacer block

Part no.	Application	Content
ZGUFRO2SB	UFR/L-02, 03, 04	Block, O-ring, Screw, Washer, Plug
ZGUFRO6SB	UFR/L-06, 08 series	Block, O-ring, Screw, Washer, Plug



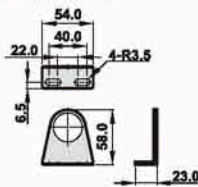
Sintered bronze element

Part no.	Application	Remark
KUS0032041	40µm, FRL600(A,B), F200(A,B), FR500(A,B)	
KUS0032042	5µm, FRL600(A,B), F200(A,B), FR500(A,B)	
KUN0010035	40µm, UFR/L-02, 03, 04	φ 28
KUN0010036	5µm, UFR/L-02, 03, 04	φ 28
KUB0008060	40µm, UFR/L-06, 08	
KUB0008061	5µm, UFR/L-06, 08	

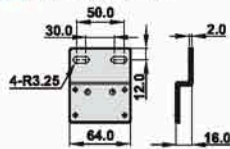


Mounting bracket

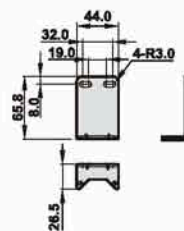
ZGFR200MB



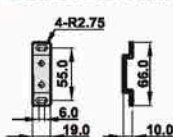
ZGUFRL-02MB



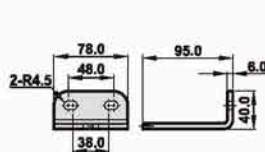
ZGSSFR500MB ZGUFRL500MB ZGUFRL500BMB



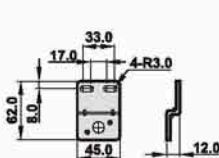
ZGUFRL-06MB



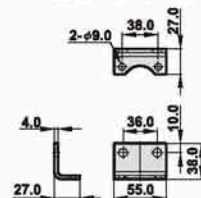
ZGUSFRC-08MB



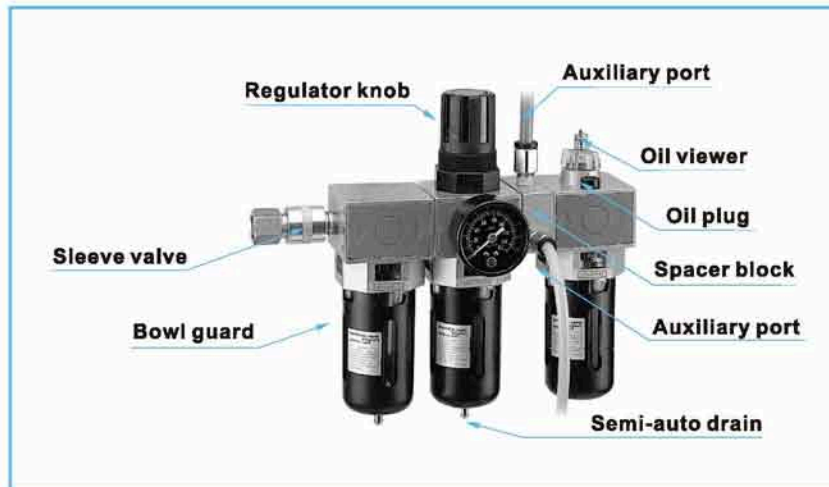
ZGUFRL500AMB



ZGUSFR/L-04MSB



Part no.	Application	Material
ZGFR200MB	R200	Metal plated
ZGUFRL-02MB	UF-02,03,04 / UL-02,03,04 / UR-02,03,04 / UFR/L-02,03,04	Metal plated
ZGUFRL-06MB	UF-06,08 / UL-06,08 / UR-06,08 / UFR-06,08 / UFR/L-06,08 / UMF-06,08 / URL-06,08	Metal plated
ZGFR500MB	FR500-02 / FRL600-02 / F200	Metal plated
ZGFR500AMB	FR500A / FRL600A / FRL700A	Metal plated
ZGFR500BMB	FR500B / FRL600B / FRL700B / L200B / R200B	Metal plated
ZGSSFR500MB	SSFR500-02 / SSFR600-02	Stainless steel
ZGUSFRC-08MB	USFR/LC-06,08 / USFR-06,08 / USFLC-06,08	Stainless steel
ZGUSFR/L-04MSB	USF-02,03,04 / USL-02,03,04 / USR-02,03,04 / USFR-02,03,04 / USFRL-02,03,04	Stainless steel



Adjusting oil spray

Use screw driver to adjust oil spray.
Turn oil adjusting screw clockwise to increase oil spray.
Turn oil adjusting screw counter-clockwise to decrease oil spray.



The way to fill oil

Open oil plug, fill oil directly without cut off air supply.
ISO VG32 lubricator oil is highly recommended.



How to use sleeve valve

Pull backward to stop air and release residual air pressure.
Push forward to open air line.



Pressure regulating

Pull up regulator knob and turn it clockwise to increase pressure.
Pull up regulator knob and turn it counter-clockwise to decrease pressure.



Semi-auto drain

The water drain automatically when air pressure in filter bowl is below 0.5kgf/cm².

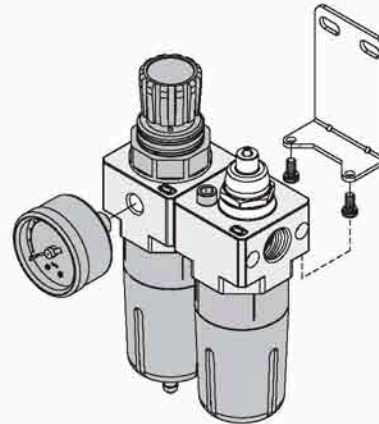


Bowl & Bowl guard

Turn counter-clockwise to take off bowl and bowl guard.
High quality material provides product long-life and easy maintenance.

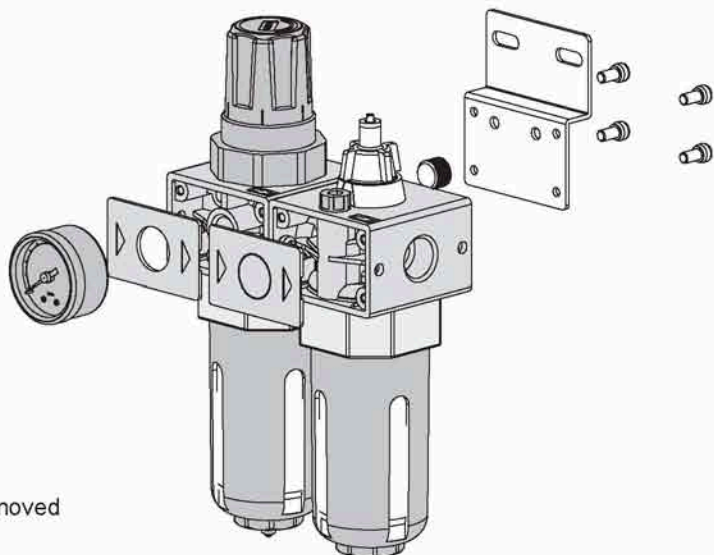
FRL600B

- The product can be installed by mounting bracket or purchasing lock nut as optional accessory for panel mounting in any direction.
- The miniature design is for space saving especially for installation in a limited room.
- Install anti-acid & alkali bowl to increase capability of chemical corrosion resistance.



UFR/L-02,03,04

- Installation
Open rear blue plate on FRL body, and screw mounting bracket (the accessory of FRL) on the rear body tightly. (See attached drawing)
- Operation
(A)Filter/Regulator
 1. Automatic exhaust as standard type.
 2. Piston plus balance spring construction can offer better pressure control.
 3. Turn regulator knob clockwise to increase air pressure, turn regulator knob counter-clockwise to decrease air pressure.
 4. High quality filter possesses 5 micron sintered bronze elements
 5. The water collected in filter bowl can be easily removed by semi-auto drain.

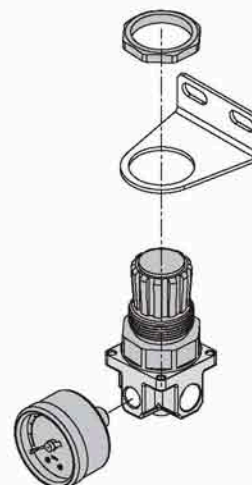


(B)Lubricator

After compressed air goes through regulator, the air pressure gets into lubricator bowl and draw lubricator oil into oil pipe. The oil adjusting screw on top of oil viewer is used to adjust flow of oil dropped, then the oil drop into sprayer and mix with compressed air.

R-200

- Miniature regulator is able to be installed with pressure gauge and mounting bracket, panel nut is optional for panel mounting.
- Miniature regulator offers more accurate pressure regulating, please pull up regulator knob and turn it clockwise for pressure setting.



Operation/Cautions

A. Regulator

Pull up regulator knob and turn it clockwise to increase air pressure, turn it counter-clockwise to decrease air pressure. Push regulator knob back for lock the knob.

B. Lubricator

- Open oil plug to fill lubricator oil.
- Please turn off air supply if lubricator bowl is taken off for oil refill.
- ISO VG32 lubricator oil is highly recommended, it is able to lubricate pneumatic components in system, reduce damaged rate, also extend life of operation.

C. Filter

- Semi-auto drain (standard): Drain automatically when air pressure below 0.5kgf/cm².
- Manual drain (Optional): Use hand to remove water anytime.
- Automatic drain: Drain automatically when full water in filter bowl makes float rise.
- If air pressure drop too much from inlet to outlet, please clean or change filter element to ensure the filter running well.

Spacer block installation

When there is no need to use lubricator in working environments, it is available to install spacer block on FRL combination.

1. Connect spacer block with fitting and tube as attached drawing shown.
2. Open blue beauty plate as attached drawing shown.
3. Use screw driver to take apart filter regulator and lubricator, and lock spacer block between filter regulator and lubricator.

● UFR/L02, 03, 04

Spacer block Part number: ZGUFR02SB

● UFR/L06, 08

Spacer block
Part number: ZGUFR06SB

