

MODULAR FRL SYSTEM

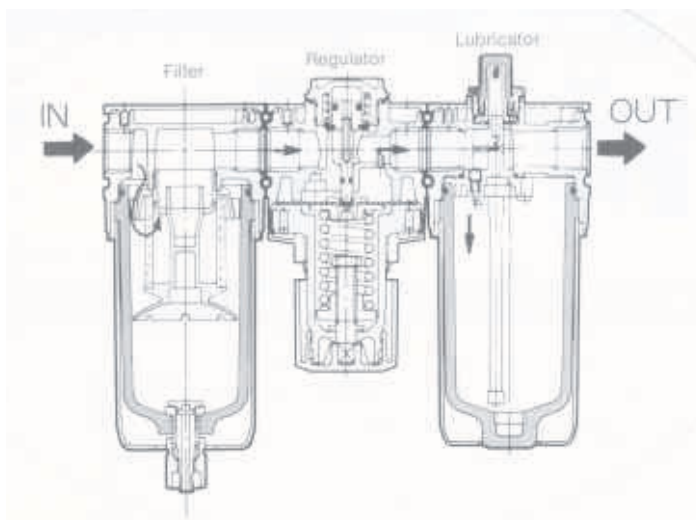


1377 pg 148

FEATURES

- Modular
- Bracket as a standard
- Flush square gauge
- On line refilling of lubricator
- 25 l filtration standard
- Plastic guard for bowls
- Precision regulation
- Drain can be terminates by PU tubing
- Oil filter provides as a standard in lubricator bowl

INTERNAL STRUCTURE



Part No.



FEATURES

- High flow filter
- High efficient Air swivel for moisture removal
- Ease of Maintenance



- Rugged ease of use
- Quick change clamp
- Assembly can be used to multiply the units
- Aluminum pressure die cast for heavy use



- On line lubrication
- Precise setting of lubrication
- Bowl can be refilled on line by opening refill screw partially or completely

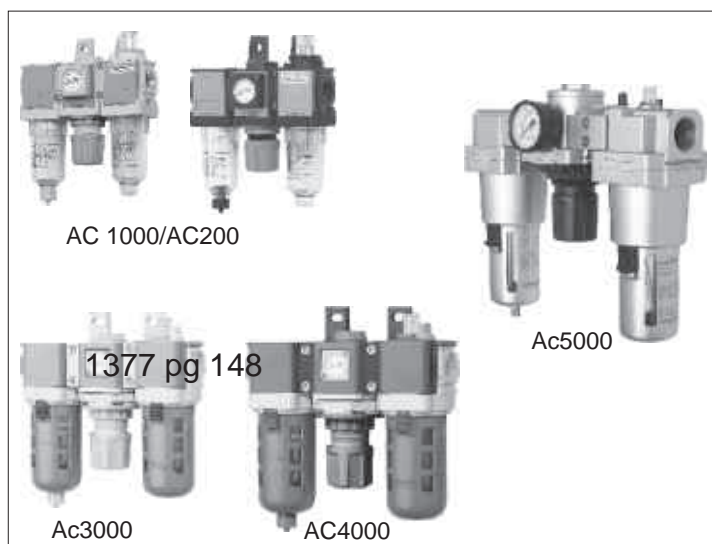


- Fine filter to avoid chocking of lubrication path
- High quality of flow rates are maintained due to filtration

PNEUMATIC SCIENCE & TECHNOLOGY

F.R.L. EQUIPMENT

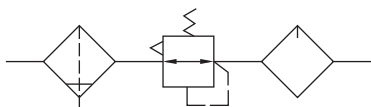
AC SERIES F+R+L



CHARACTERISTICS

1. Compact size, light weight, good performance, easy use, charming appearance.
2. It adopts the modular connection, it may be used individually or by combination with easy installation. The embedded pressure gauge shortens the mounting time.
3. Manual drain, semi-auto drain (water discharged automatically while air turning off) and fully auto drain for your selection
4. The precision air regulator has fine flow-pressure characteristics. The hand wheel with self-locking function is fit for any vibration environment.
5. The lubricator utilizes the novel drops control mechanism to fulfill the oil adding with air on. The inside flow sensor ensures the low atomizing flow, thin oil mist particles and long transmission distance.

SYMBOL



SPECIFICATION

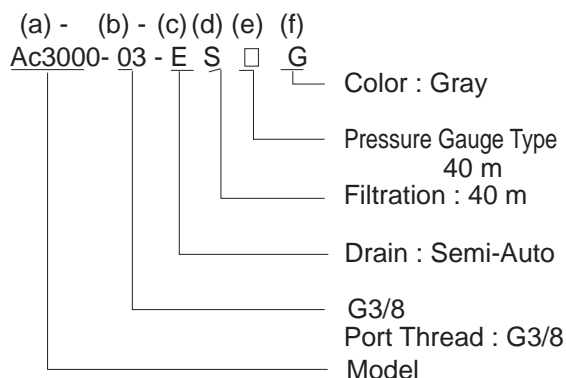
Model		AC1000/AC2000	Ac3000	Ac4000	AC5000
Operating Pressure	MPa	1.0			
Max Pressure	Mpa	1.5			
Operating Temperature	°C	0.60			
Filtration	Pm	5 or 40			
Set Pressure	Mpa	0.05-0.85			
Minimum Flow Oil Drop	m ³ /min(ANR)	0.015	0.03	0.065	0.19
Overflow Pressure	Mpa	Set Pressure+0.05			
Max Oil Leve	ml	20	85	170	-
Waste Bowl Capacity	ml	12	45	80	-
Oil Recommended		Turbine Oil NO. 1 (ISO VG 32) (NO Spindle oil is allowed)			
Port Thread	G	1/8, 1/4	1/4, 3/8, 1/2	3/8, 1/2, (3/4 For reduced joint)	3/4, 1

Caution

Note : 1. Assemble and disassemble the plastic bowl guard when it is confirmed that there's no load in control system.
2. The minimum drop flow refers to the drop flow of 5 turbine oil every minute on the basis of the pressure set at 0.5MPa

PNEUMATIC SCIENCE & TECHNOLOGY

PRODUCT CODE SYSTEM



(a) Model	(b) Port Thread		(c) Drain		(d) Filtration		(e) Pressure Gauge		(f) Color	
AC1000	01	G1/8	Blank	Manual	Blank	5µm	Blank	Without Gauge	Blank	Blank
AC2000	02	G1/4					S	GS-27 Square		
AC3000	03	G3/8	E	Semi-Auto	Blank	5µm	S	GS-27 Square	Blank	Blank
	04	G1/2								
AC4000	03	G3/8	A	Auto	S	40µm	R	GR-40 Round	G	Gray
	04	G1/2								
	06	G3/4								
Ac5000	06	G3/4			S	40µm	GR-50/Round			
	10	1								

F+R+L COMBINATION

Model	Port Thread	Modular			Operating Pressure (Mpa)	Set Pressure (Mpa)	Max Air Flow m ³ /min(ANR)
		Filter	Regulator	Lubricator			
AC1000-01	G1/8	AF1000-01	AR1000-01	AL1000-01			0.35
AC2000-02	G1/4	AF2000-02	AR2000-02	AL2000-02			0.6
AC3000-02	G1/4	AF3000-02	AR3000-02	AL3000-02			1.2
AC3000-03	G3/8	AF3000-03	AR3000-03	AL3000-03			1.7
AC3000-04	G1/2	AF3000-04	AR3000-04	AL3000-04			1.9
AC4000-03	G3/8	AF4000-03	AR4000-03	AL4000-03	1.0	0.05-0.85	2.0
AC4000-04	G1/2	AF4000-04	AR4000-04	AL4000-04			2.5
AC4000-06	G3/4	AF4000-06	AR4000-06	AL4000-06			2.8
AC5000-06	G3/4	AF5000-06	AR5000-06	AL4000-06			5.0
AC5000-10	G1	AF5000-10	AR5000-10	AL4000-10			5.0

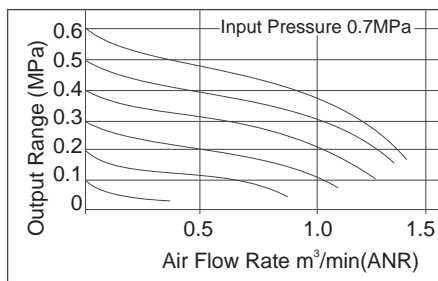
* 0.7MPa, 0.5MPa, 0.1MPa

* At 0.5MPa set pressure, 0.7 Mpa Input side pressure, 0.1MPa pressure drop

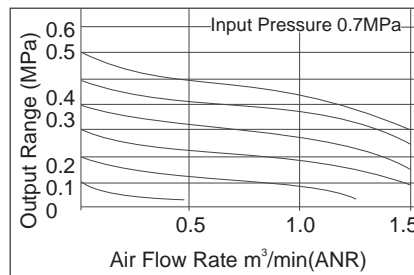
PNEUMATIC SCIENCE & TECHNOLOGY

FLOW CHARACTERISTIC

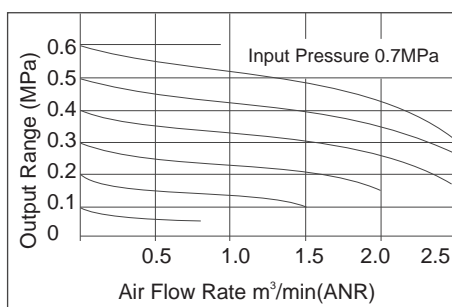
AC1000-01



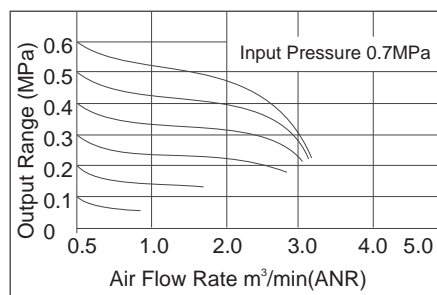
AC2000-02



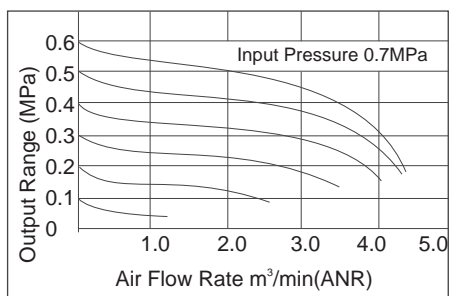
AC3000-02



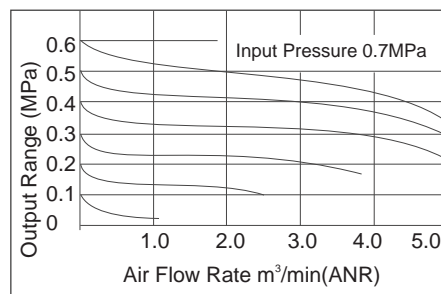
AC3000-03



AC4000-04



AC4000-06

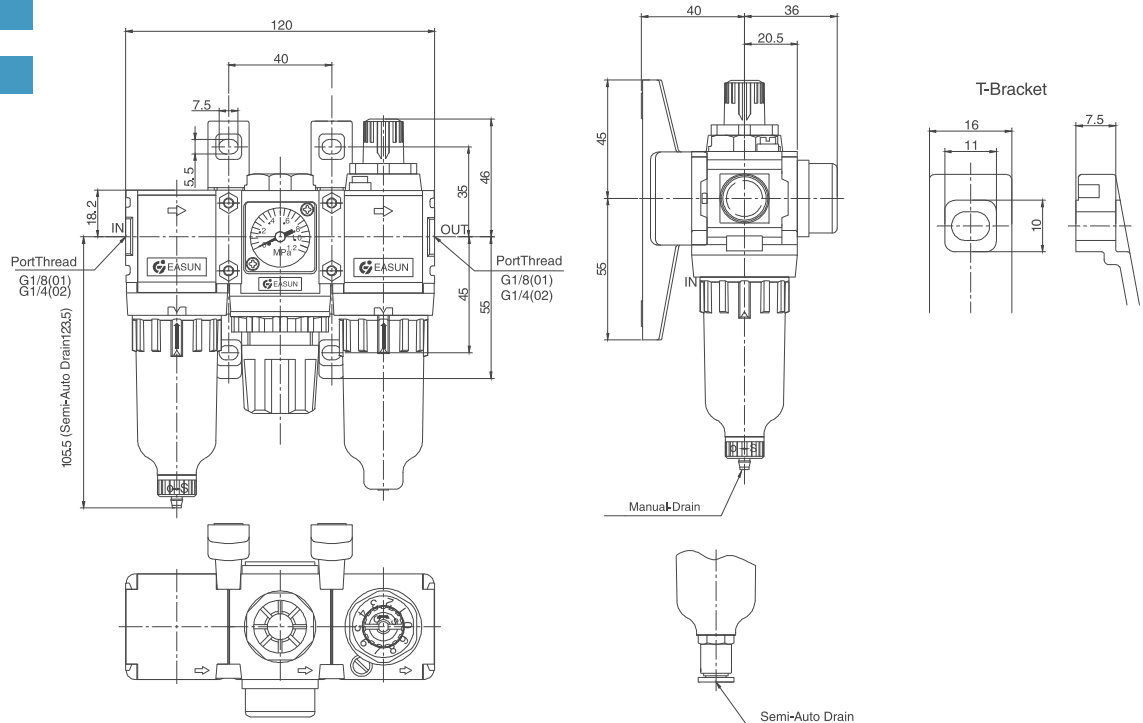


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DIMENSIONS

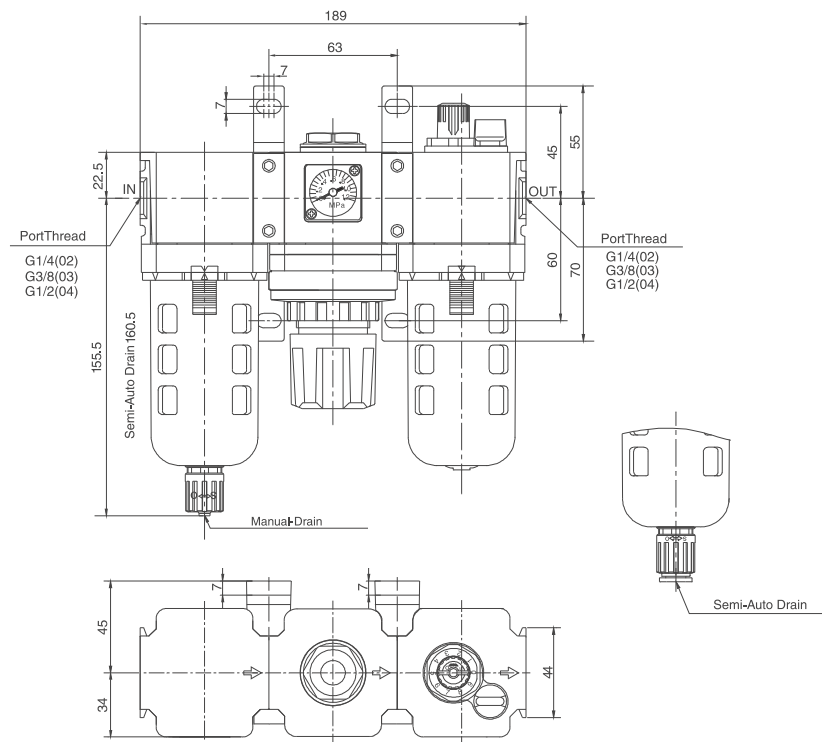
AC1000

AC2000



Note : Manual drain or automatic drain can insert IDØ4 PU tube at drain outlet Semi-Auto drain can insert IDØ6PU tube at drain outlet.

AC3000

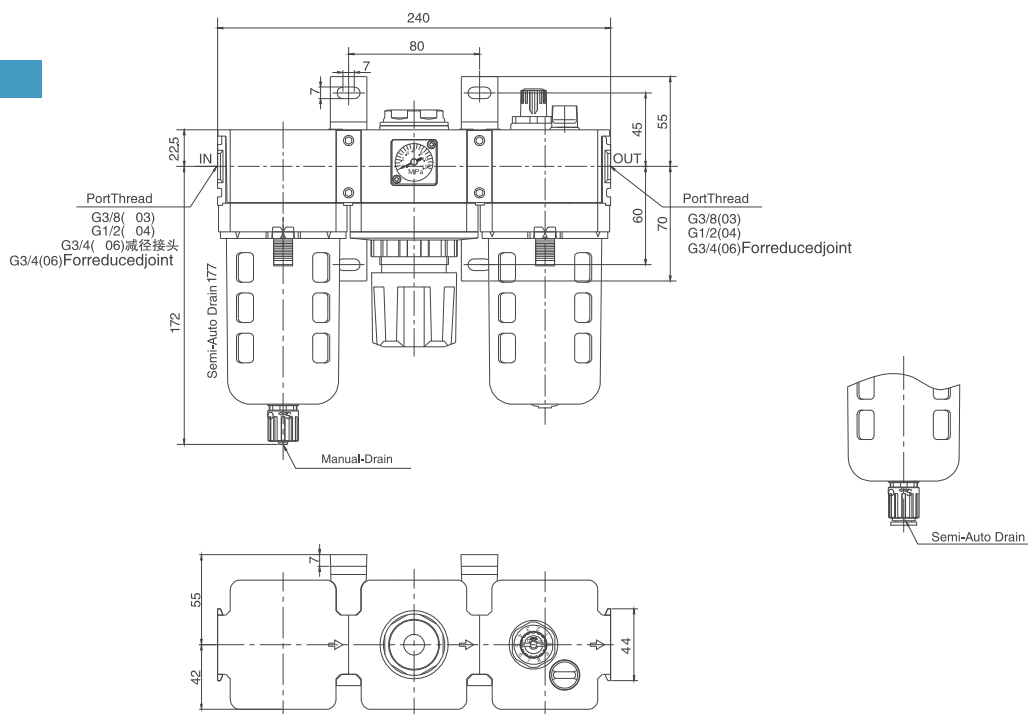


Note : Manual drain or automatic drain can insert IDØ5 PU tube at drain outlet Semi-Auto drain can insert IDØ8PU tube at drain outlet.

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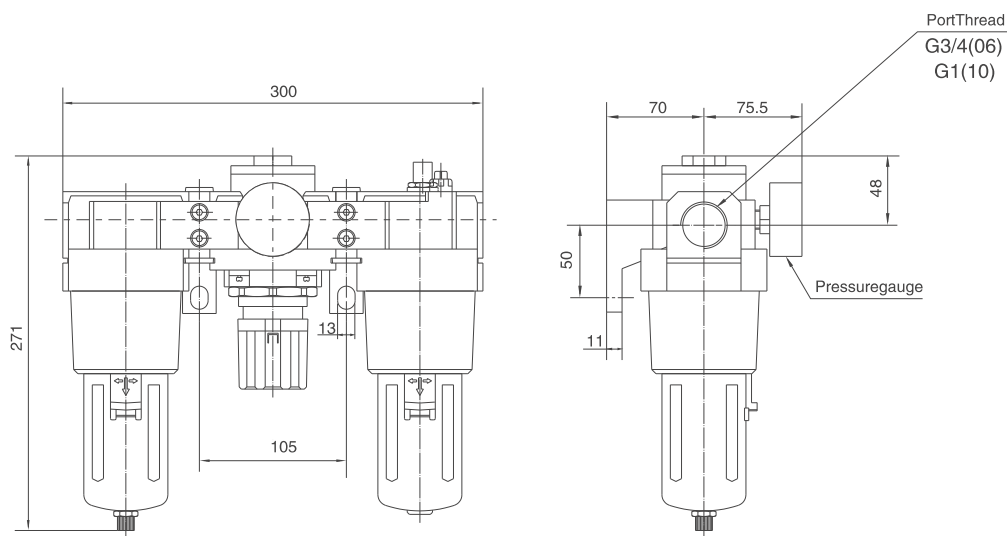
DIMENSIONS

AC4000



Note : Manual drain or automatic drain can insert IDØ5 PU tube at drain outlet Semi-Auto drain can insert IDØ8PU tube at drain outlet.

AC5000



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AC SERIES FR+L



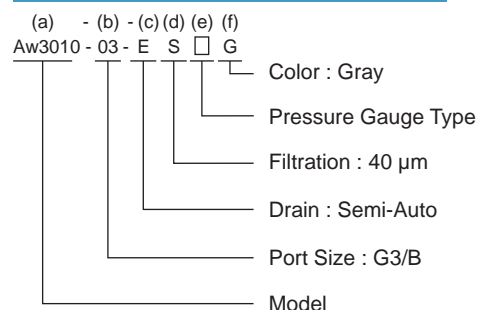
AC1010/AC2010

Ac3010

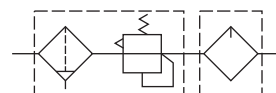
AC4010

Ac5010

PRODUCT CODE SYSTEM



SYMBOL



F.R.L/ FILTER REGULATOR+LUBRICATOR

(a) Model	(b) Port Thread	(c) Drain	(d) Filtration	(e) Pressure Gauge	(f) Color
AC1010	01 G1/8	Blank	Manual	Blank	Without Gauge
AC2010	02 G1/4				
	02 G1/4		Blank 5µm		Blank Black
AC3010	03 G3/8	E	Semi-Auto	S	GS-27 Square
	04 G1/2				
	03 G3/8				
AC4010	04 G1/2			R	GR-40/ Round
	06 G3/4	A	Auto	S	40µm
Ac5010	06 G3/4				GR-50/ Round
	10 G1				

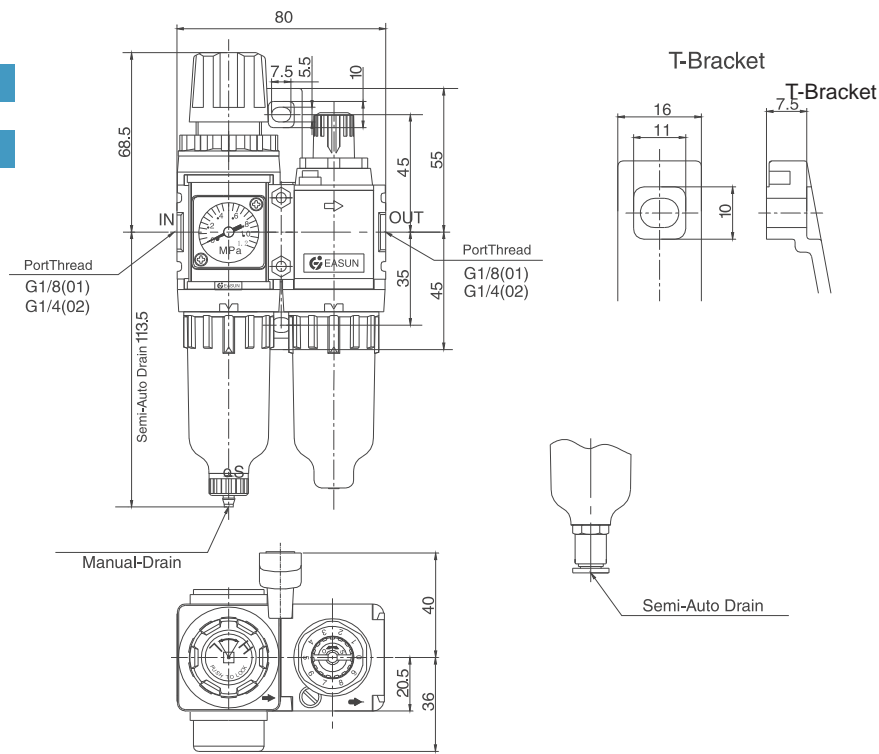
(a) Model	(b) Port Thread	Modular		Operating Pressure (Mpa)	Set Pressure (Mpa)
		Filter Regulator	Lubricator		
AC1010-01	G1/8	AW1000-01	AL1000-01		
AC2010-02	G1/4	AW2000-02	AL2000-02		
AC3010-02	G1/4	AW3000-02	AL3000-02		
AC3010-03	G3/8	AW3000-03	AL3000-03		
AC3010-04	G1/2	AW3000-04	AL3000-04		
AC4010-03	G3/8	AW4000-03	AL4000-03	1.0	0.05-0.85
AC4010-04	G1/2	AW4000-04	AL4000-04		
AC4010-06	G3/4	AW4000-06	AL4000-06		
AC5010-06	G3/4	AW5000-06	AL5000-06		
AC5010-10	G1	AW5000-10	AL5000-10		

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DIMENSIONS

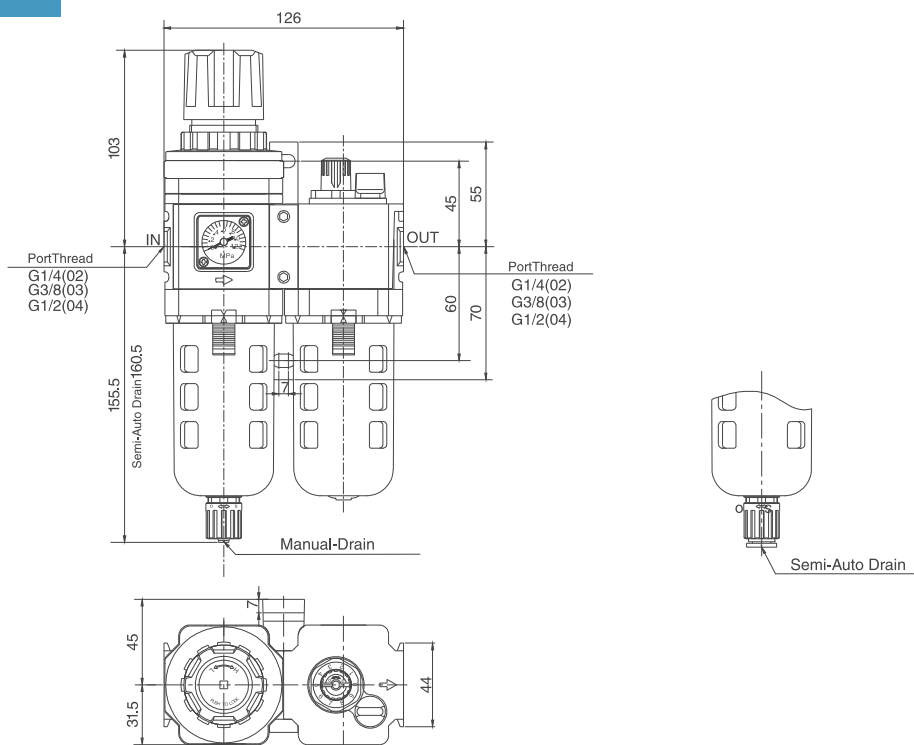
AC1010

AC2010



Note : Manual drain or automatic drain can insert IDØ4 PU tube at drain outlet Semi-Auto drain can insert IDØ6PU tube at drain outlet.

AC3010

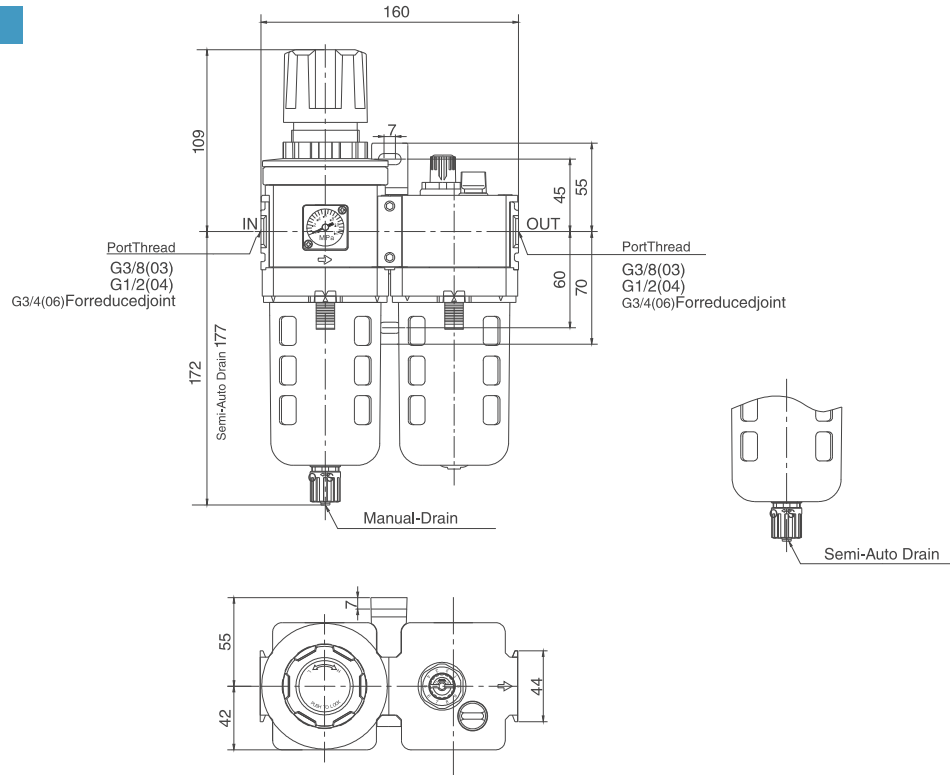


Note : Manual drain or automatic drain can insert IDØ5 PU tube at drain outlet Semi-Auto drain can insert IDØ8PU tube at drain outlet.

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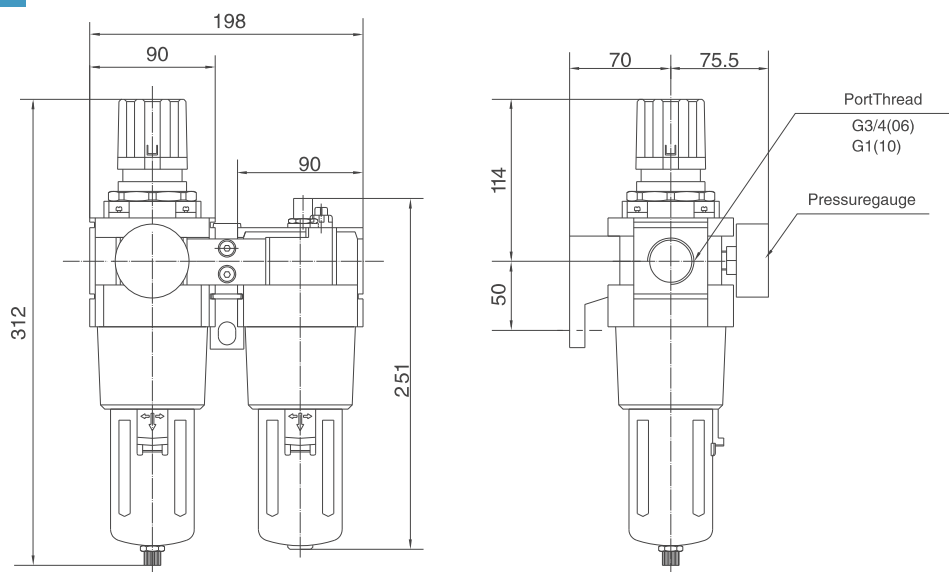
DIMENSIONS

AC4010



Note : Manual drain or automatic drain can insert IDØ5 PU tube at drain outlet Semi-Auto drain can insert IDØ8PU tube at drain outlet.

AC5010

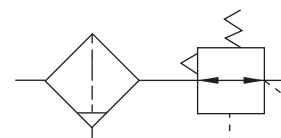


PNEUMATIC SCIENCE & TECHNOLOGY

AW SERIES FILTER REGULATOR



SYMBOL



SPECIFICATION

Model		AC1000/AC2000	Ac3000	Ac4000	AC5000
Operating Pressure	MPa		1.0		
Max Pressure	Mpa		1.5		
Operatint Temperature	°C		0.60		
Filtration	µm		5 or 40		
Set Pressure	Mpa		0.05-0.85		
Overflow Pressure	Mpa		Set Pressure+0.05		
Waste Bowl Capacity	cm ³				
Port Thread	G	12	45	80	
		1/8, 1/4	1/4, 3/8, 1/2	3/8, 1/2, (3/4 For reduced joint)	3/4, 1

Caution Note : Assemble and disassemble the Plastic bowl and bowl guard when it is confirmed that there's nol load in control system.

SPECIFICATION

(a)	(b)	(c)	(d)	(e)	(f)	(g)
Aw3000-03-E-S-□-B3-G						
						Color : Gray
						Mouting Type : L-Bracket
						Pressure Gauge Type
						Filtration : 40 µm
						Drain : Semi-Auto
						Port Size : G3/B
						Model

FILTER REGULATOR

(a) Model	(b) Port Thread	Operating Pressure (Mpa)	Set Pressure (Mpa)	Air Flow *m3/min(ANR)
AW1000-01	G1/8			0.8
AW2000-02	G1/4			1.2
AW3000-02	G1/4			2.2
AW3000-03	G3/8			2.5
AW3000-04	G1/2			3.0
AW4000-03	G3/8	1.0	0.05-0.85	3.5
AW4000-04	G1/2			4.5
AW4000-06	G3/4			5.0
AW5000-06	G3/4			5.0
AW5000-10	G1			5.0

Operating temperature range : 0.60°C
At 0.7MPa supply pressure, 0.5MPa set pressure, 0.1 MPa pressure drop

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COMBINATION

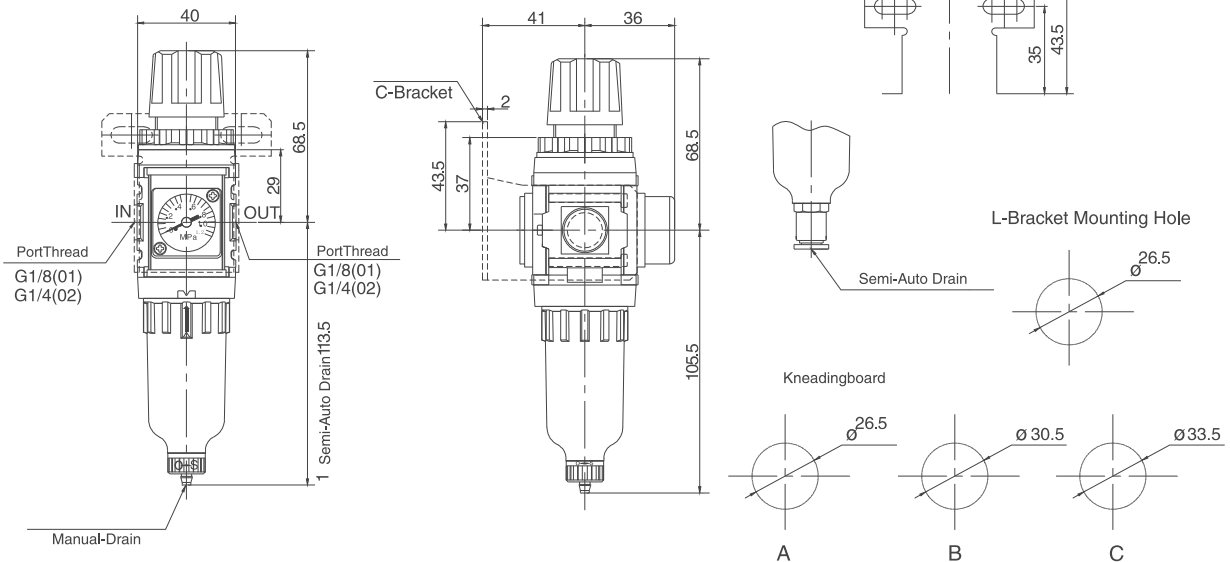
(a) Model	(b) Port Thread		© Drain		(d) Filtration		(e) Pressure Gauge Type		(f) Mouting Type		(g) Color
AW1000	01	G1/8	Blank	Manual			Blank	Without Gauge	Blank	Without Bracket	
AW2000	02	G1/4			Blank	5µm					Blank Black
	02	G1/4									
AW3000	03	G3/8	E	Semi-Auto			S	GS-27 Square	B	C - Bracket	
	04	G1/2									
	03	G3/8									
AW4000	04	G1/2					R	GR-40 Round	B3	L- Bracket	G Gray
	06	G3/4	A	Auto	S	40µm					
Aw5000	06	G3/4									
	10	G1							GR-50/Round		

PNEUMATIC SCIENCE & TECHNOLOGY

DIMENSIONS

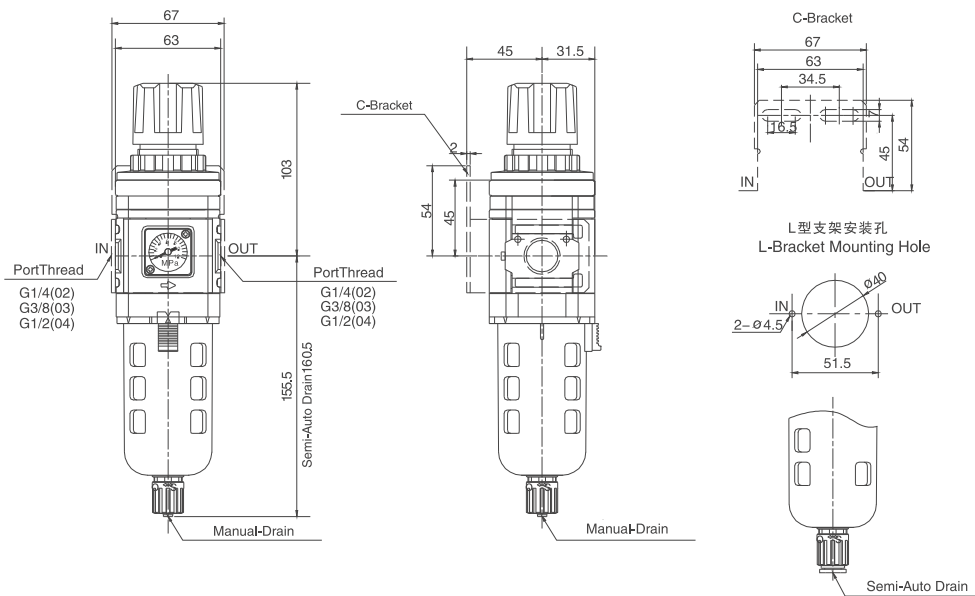
AW1000

AW2000



Note : Manual drain or automatic drain can insert IDØ4 PU tube at drain outlet Semi-Auto drain can insert IDØ6PU tube at drain outlet.

AW3000

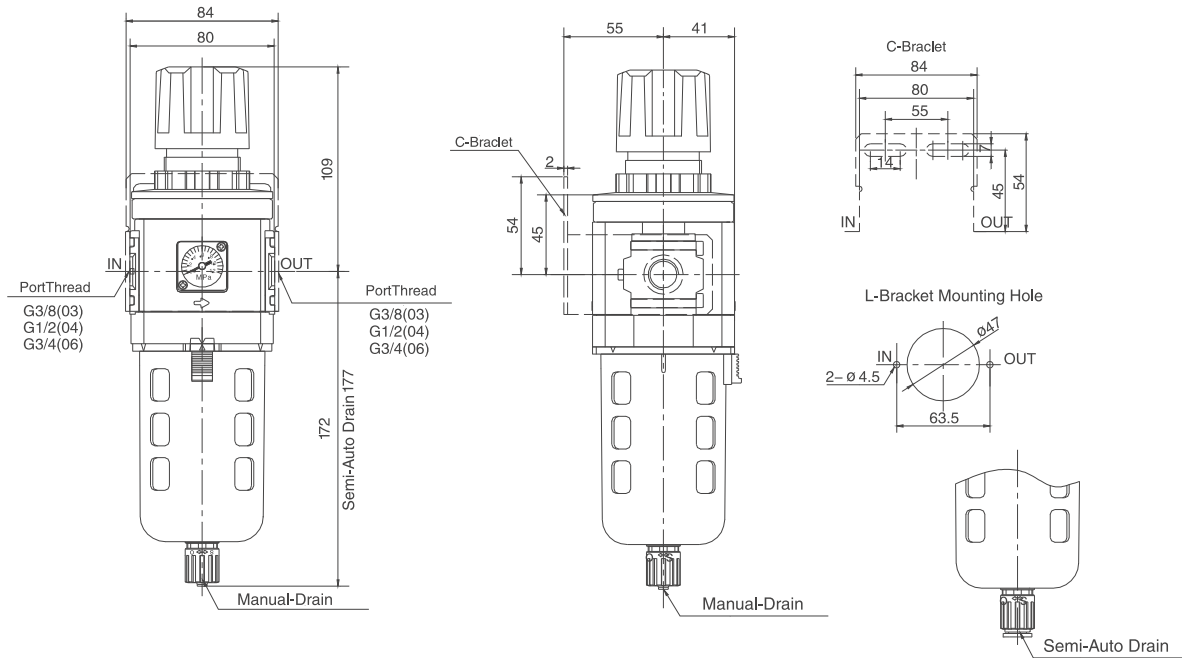


Note : Manual drain or automatic drain can insert IDØ5 PU tube at drain outlet Semi-Auto drain can insert IDØ8PU tube at drain outlet.

PNEUMATIC SCIENCE & TECHNOLOGY

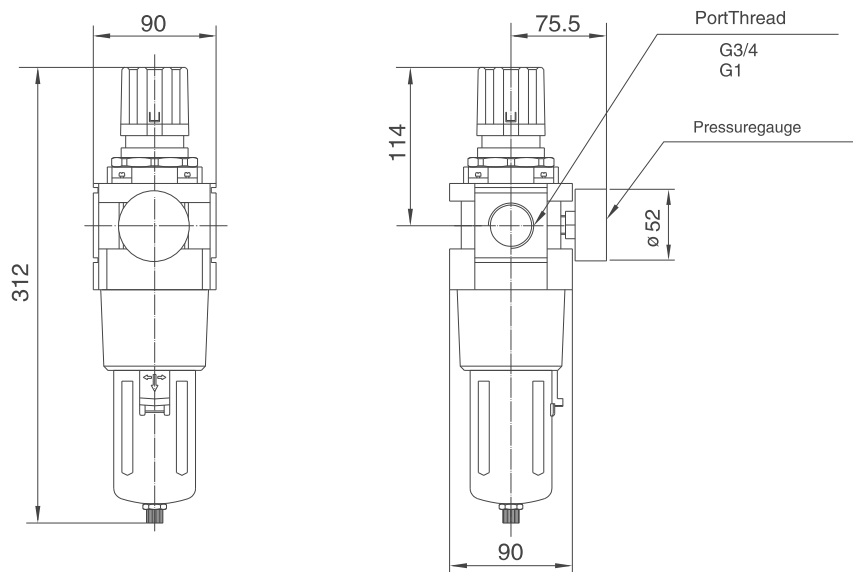
DIMENSIONS

AW4000



Note : Manual drain or automatic drain can insert IDØ5 PU tube at drain outlet Semi-Auto drain can insert IDØ8PU tube at drain outlet.

AW5000

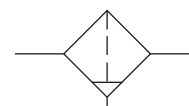


PNEUMATIC SCIENCE & TECHNOLOGY

AF SERIES FILTER (F)



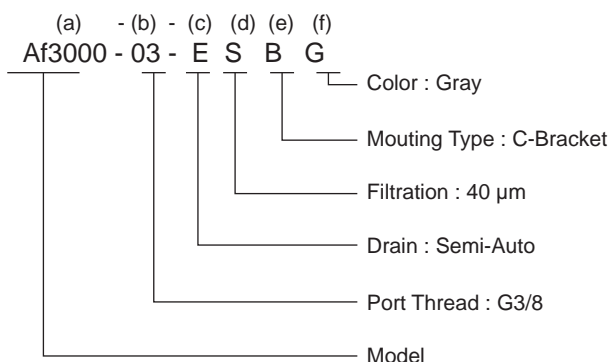
SYMBOL



SPECIFICATION

Model		AF1000/AC2000	AF3000	AF4000	AF5000
Operating Pressure	MPa		1.0		
Max Pressure	Mpa		1.5		
Operatint Temperature	°C		0.60		
Filtration	µm		5 or 40		
Waste Bowl Capacity	cm ³	12	45	80	
Port Thread	G	1/8, 1/4	1/4, 3/8, 1/2	3/8, 1/2, (3/4 For reduced joint)	3/4, 1
Caution		Note : Assemble and disassemble the Plastic bowl and bowl guard when it is confirmed that there's nol load in control system.			

PRODUCT CODE SYSTEM



(a) Model	(b) Port Thread	Operating Pressure (Mpa)	Air Flow *m3/min(ANR)	Filtration (µm)
AF1000-01	G1/8		0.5	
AF2000-02	G1/4		0.65	
AF3000-02	G1/4		1.1	
AF3000-03	G3/8		1.5	
AF3000-04	G1/2		1.8	
AF4000-03	G3/8	1.0	2.0	5 or 40
AF4000-04	G1/2		2.7	
AF4000-06	G3/4		3.0	
AF5000-06	G3/4		7.0	
AF5000-10	1		7.0	

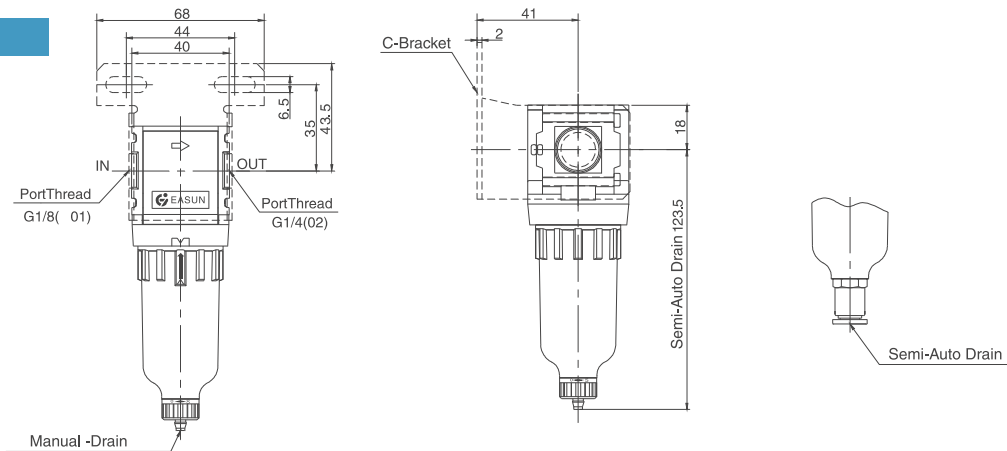
Operating temperature range : 0.60°C
At 0.7MPa supply pressure, 0.5MPa set pressure, 0.02 MPa pressure drop

(a) Model	(b) Port Thread		© Drain		(d) Filtration	(f) Mouting Type	(g) Color		
AF1000	01	G1/8	Blank	Manual					
AF2000	02	G1/4			Blank	5µm	Blank	Without Bracket	Blank
	02	G1/4							Black
AF3000	03	G3/8	E	Semi-Auto					
	04	G1/2							
	03	G3/8				B	C - Bracket	G	Gray
AF4000	04	G1/2							
	06	G3/4	A	Auto	S	40µm			
Af5000	06	G3/4							
	10	G1							

PNEUMATIC SCIENCE & TECHNOLOGY

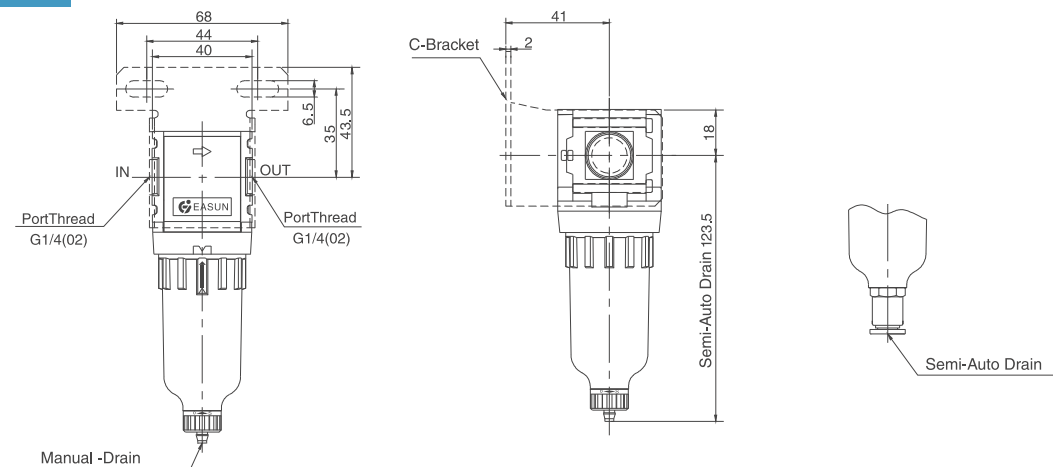
DIMENSIONS

AF1000



Note : Manual drain or automatic drain can insert IDØ4 PU tube at drain outlet Semi-Auto drain can insert IDØ6PU tube at drain outlet.

AF2000

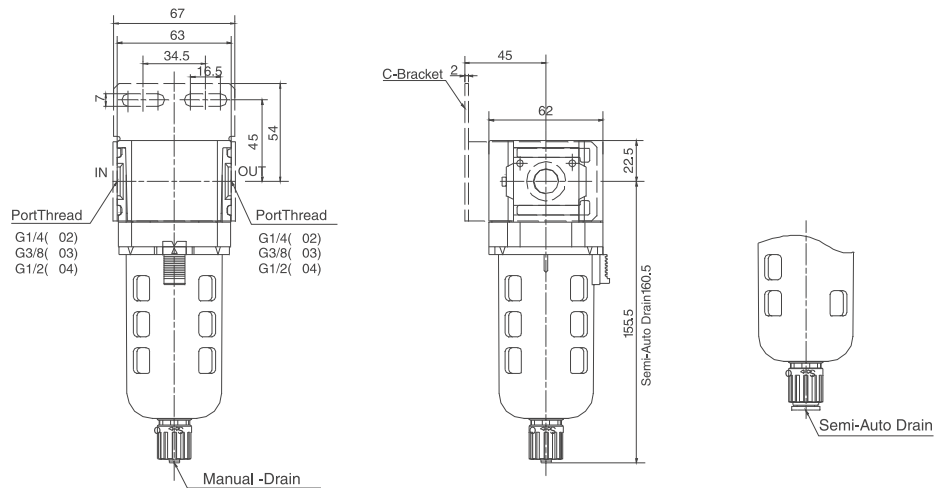


Note : Manual drain or automatic drain can insert IDØ4 PU tube at drain outlet Semi-Auto drain can insert IDØ6PU tube at drain outlet.

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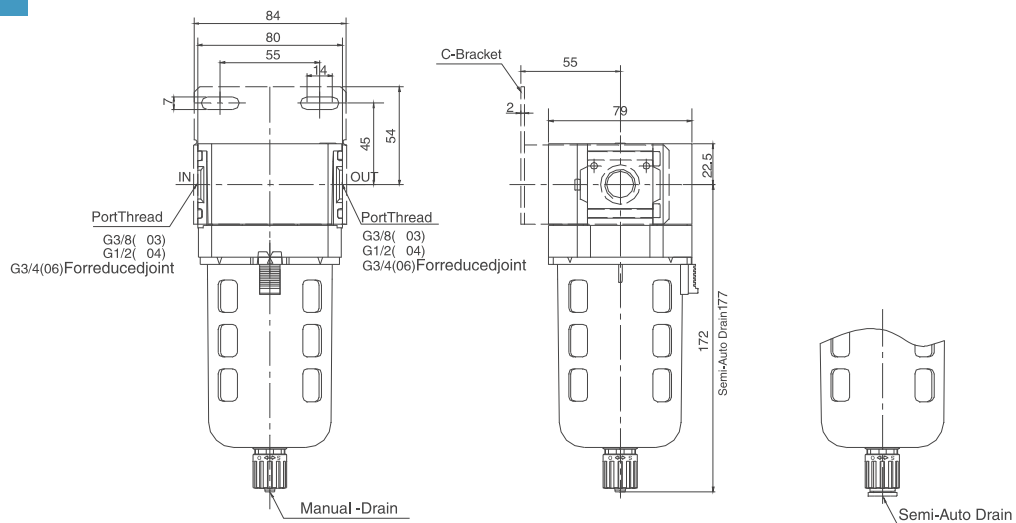
DIMENSIONS

AF3000

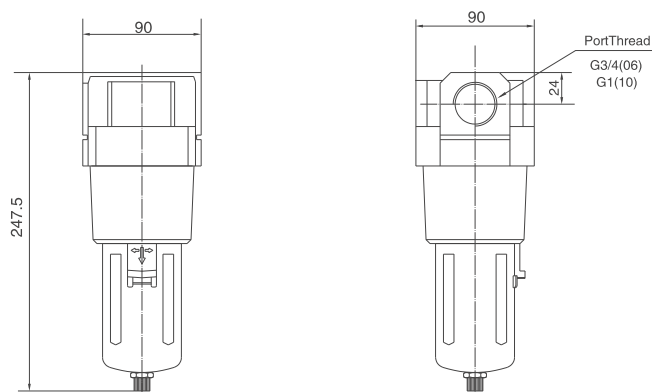


Note : Manual drain or automatic drain can insert IDØ5 PU tube at drain outlet Semi-Auto drain can insert IDØ8PU tube at drain outlet.

AF4000



AF5000



Note : Manual drain or automatic drain can insert IDØ5 PU tube at drain outlet Semi-Auto drain can insert IDØ8PU tube at drain outlet.

PNEUMATIC SCIENCE & TECHNOLOGY

AR SERIES REGULATOR (R)



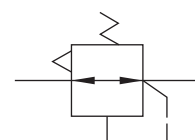
AR1000/AR2000

AR3000

AR4000

AR5000

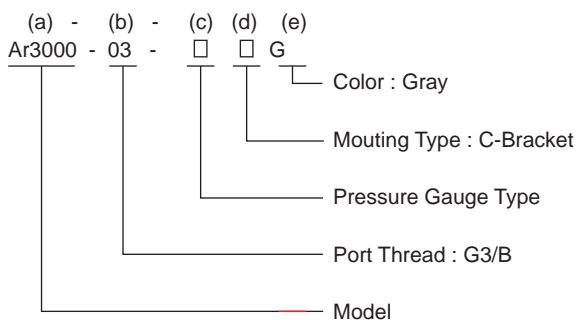
SYMBOL



SPECIFICATION

Model		AR1000/AF2000	AR3000	AR4000	AR5000
Operating Pressure	MPa		1.0		
Max Pressure	Mpa		1.5		
Operating Temperature	°C		0.60		
Set Pressure	Mpa		0.05-0.85		
Overflow Pressure	Mpa		Set Pressure+0.05		
Port Thread	G	1/8, 1/4	1/4, 3/8, 1/2	3/8, 1/2, 3/4 (For reduced joint)	3/4, 1

SPECIFICATION



FILTER

(a) Model	(b) Port Thread	Operating Pressure (Mpa)	Set Pressure (Mpa)	Air Flow *m3/min (ANR)
AR1000-01	G1/8			0.6
AR2000-02	G1/4			1.0
AR3000-02	G1/4			2.1
AR3000-03	G3/8			2.8
AR3000-04	G1/2			3.5
AR4000-03	G3/8	1.0	0.05 or 0.85	4.0
AR4000-04	G1/2			5.0
AR4000-06	G3/4			6.0
AR5000-06	G3/4			8.0
AR5000-10	1			8.0

Operating temperature range : 0.60°C

At 0.7MPa supply pressure, 0.5MPa set pressure, 0.1 MPa pressure drop

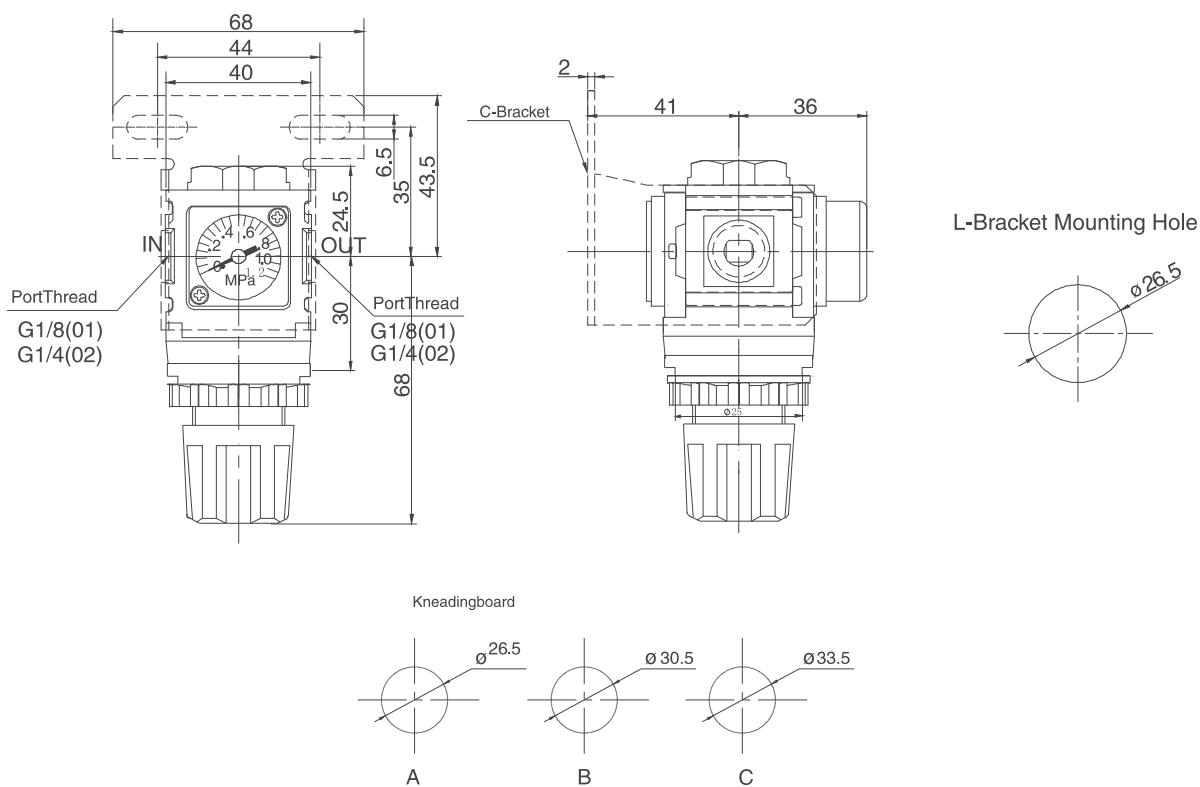
(a) Model	(b) Port Thread	(c) Pressure Gauge Type	(d) Mouting Type	(g) Color
AW1000	01 G1/8	Blank	Without Gauge	Blank
AW2000	02 G1/4			
	02 G1/4			Blank
AW3000	03 G3/8	S	GS-27 Square	B
	04 G1/2			
	03 G3/8			
AW4000	04 G1/2	R	GR-40 Round	B3
	06 G3/4			
AW5000	06 G3/4			
	10 G1		GR-50/Round	

PNEUMATIC SCIENCE & TECHNOLOGY

DIMENSIONS

AR1000

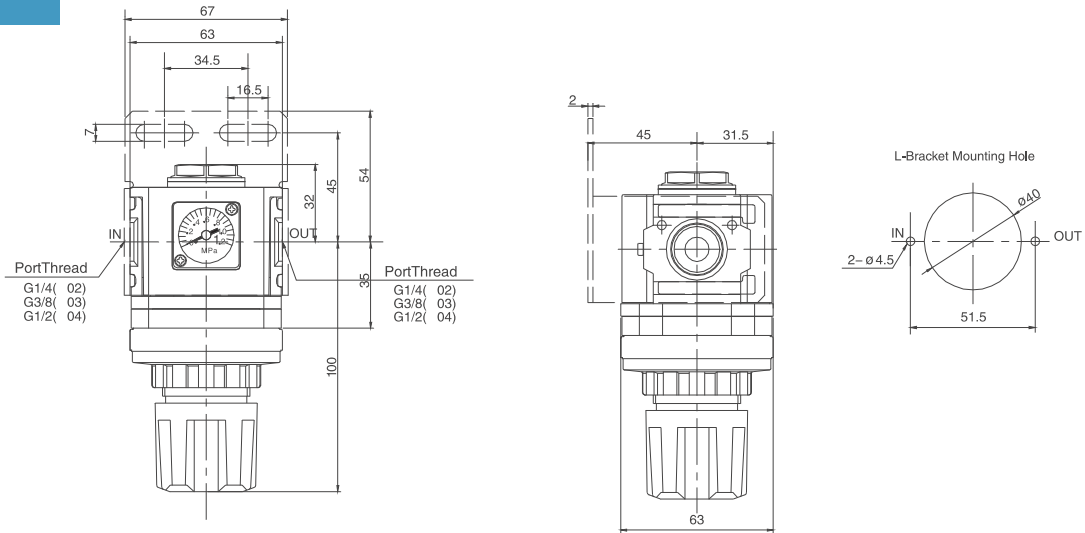
AR2000



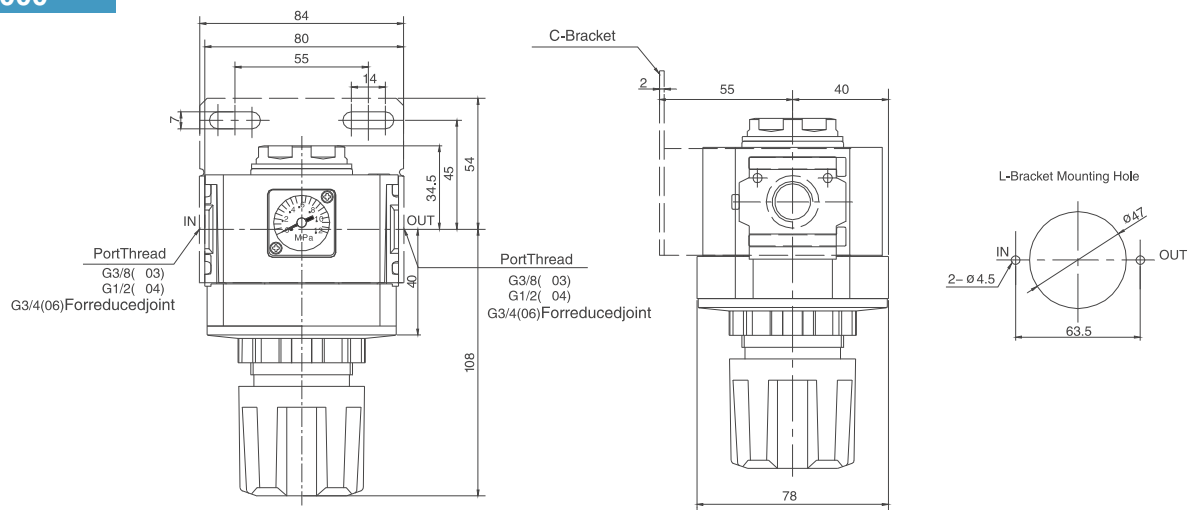
PNEUMATIC SCIENCE & TECHNOLOGY

DIMENSIONS

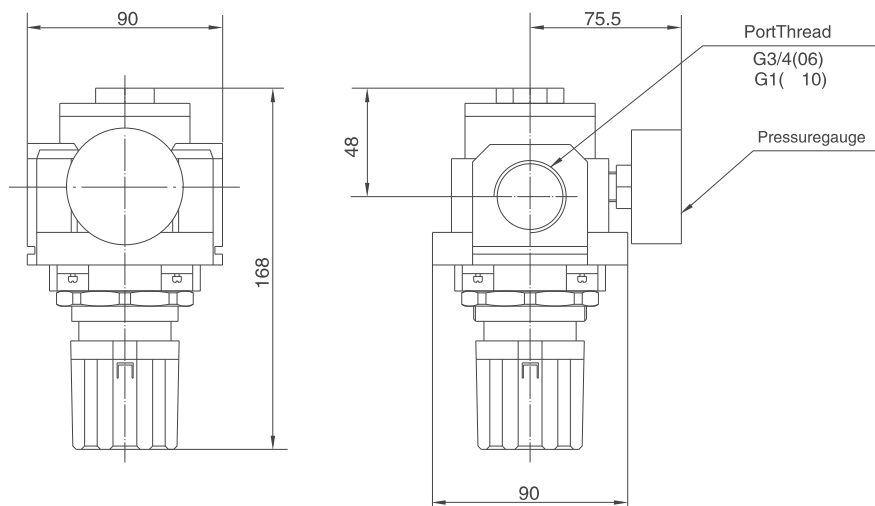
AR3000



AR4000



AR5000

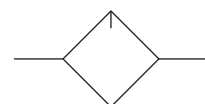


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AL SERIES LUBRICATOR (R)



SYMBOL



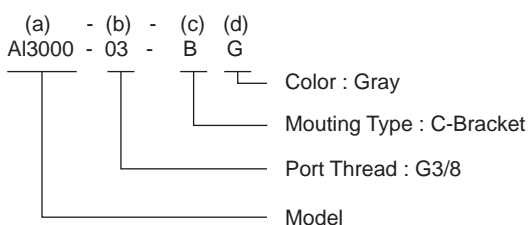
SPECIFICATION

Model		AL1000/AF2000	AL3000	AL4000	AL5000
Operating Pressure	MPa		1.0 (10.2)		
Max Pressure	Mpa		1.5 (15.3)		
Operating Temperature	°C		0.60		
Min Flow For Oil Drop	m ³ /min(ANR)	0.015	0.03		0.085
Max Oil Level		20	85		170
Oil Recommended			Turbine Oil No. 1 (ISO Vg32)		
Port Thread	G	1/8, 1/4	1/4, 3/8, 1/2	3/8, 1/2, (3/4 For reduced joint)	3/4, 1

Caution

Note : 1. Assemble and disassemble the Plastic bowl and bowl guard when it is confirmed that there's no load on the object.
2. The minimum drop flow refers to the drop flow of 5 turbine oil every minute on the basis of the pressure set at 0.5MPa

PRODUCT CODE SYSTEM



LUBRICATOR SERIES

(a) Model	(b) Port Thread	Operating Pressure (Mpa)	Air Flow *m ³ /min(ANR)	Max Oil Level (cm ²)
AL1000-01	G1/8		0.5	20
AL2000-02	G1/4		0.6	
AL3000-02	G1/4		1.2	
AL3000-03	G3/8		1.8	85
AL3000-04	G1/2		2.0	
AL4000-03	G3/8	1.0	2.3	
AL4000-04	G1/2		2.6	170
AL4000-06	G3/4		2.9	
AL5000-06	G3/4		7.0	
AL5000-10	G1		7.0	

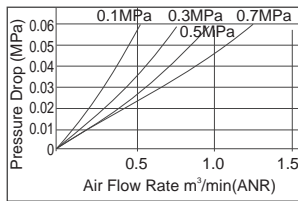
Operating temperature range : 0.60°C
At 0.7MPa supply pressure, 0.5MPa set pressure, 0.1 MPa pressure drop

(a) Model	(b) Port Thread	(d) Mouting	(g) Color
AL1000	01 G1/8		
AL2000	02 G1/4		
AL3000	02 G1/4	Blank Without Bracket	Blank Black
	04 G1/2		
	03 G3/8		
AL4000	04 G1/2	B C - Bracket	G Gray
	06 G3/4		
AL5000	06 G3/4		
	10 G1		

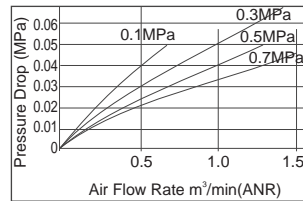
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FLOW DIAGRAMS

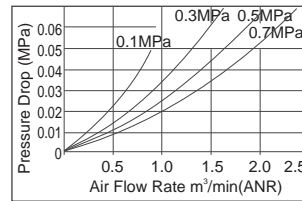
AL1000-01



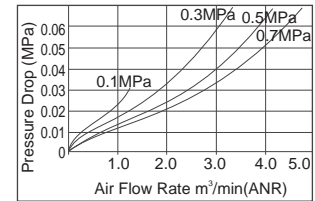
AL2000-02



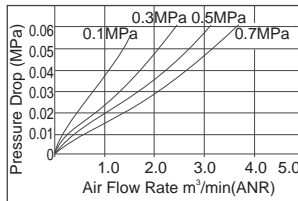
AL3000-02



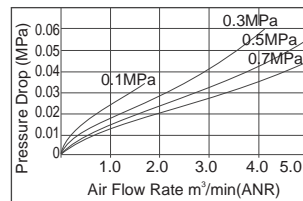
AL3000-03



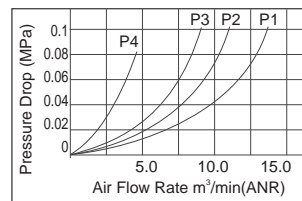
AL4000-03



AL4000-04

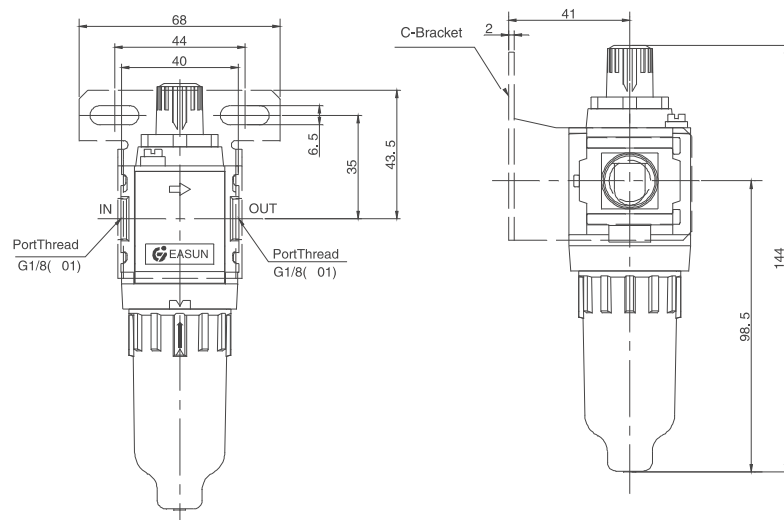


AL5000-06/10

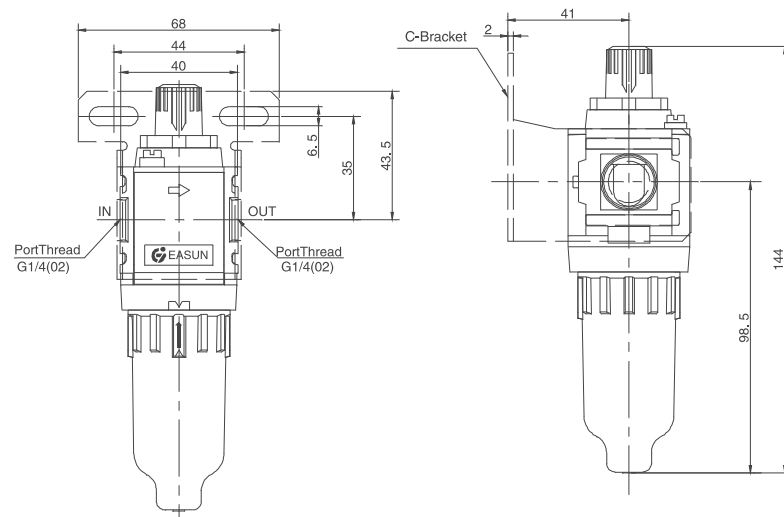


DIMENSIONS

AL1000



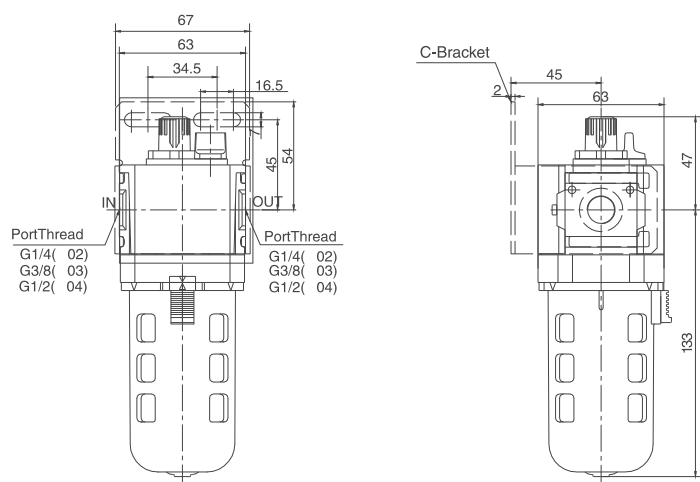
AL2000



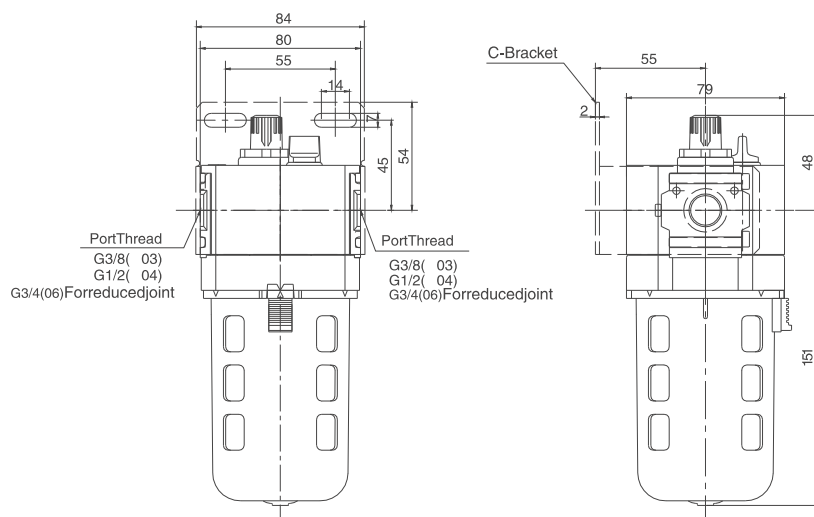
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DIMENSIONS

AL3000



AL4000



AL5000

