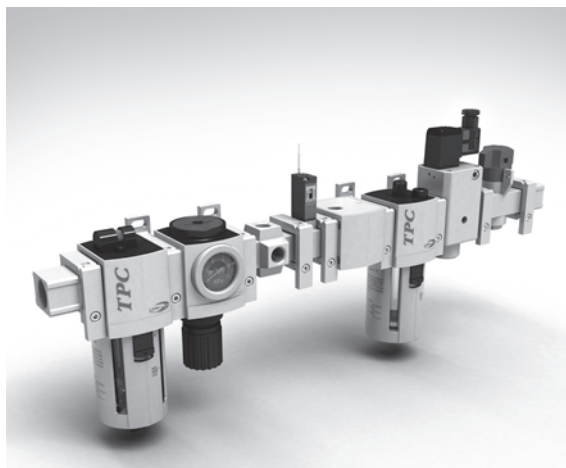


# Air Line Equipment



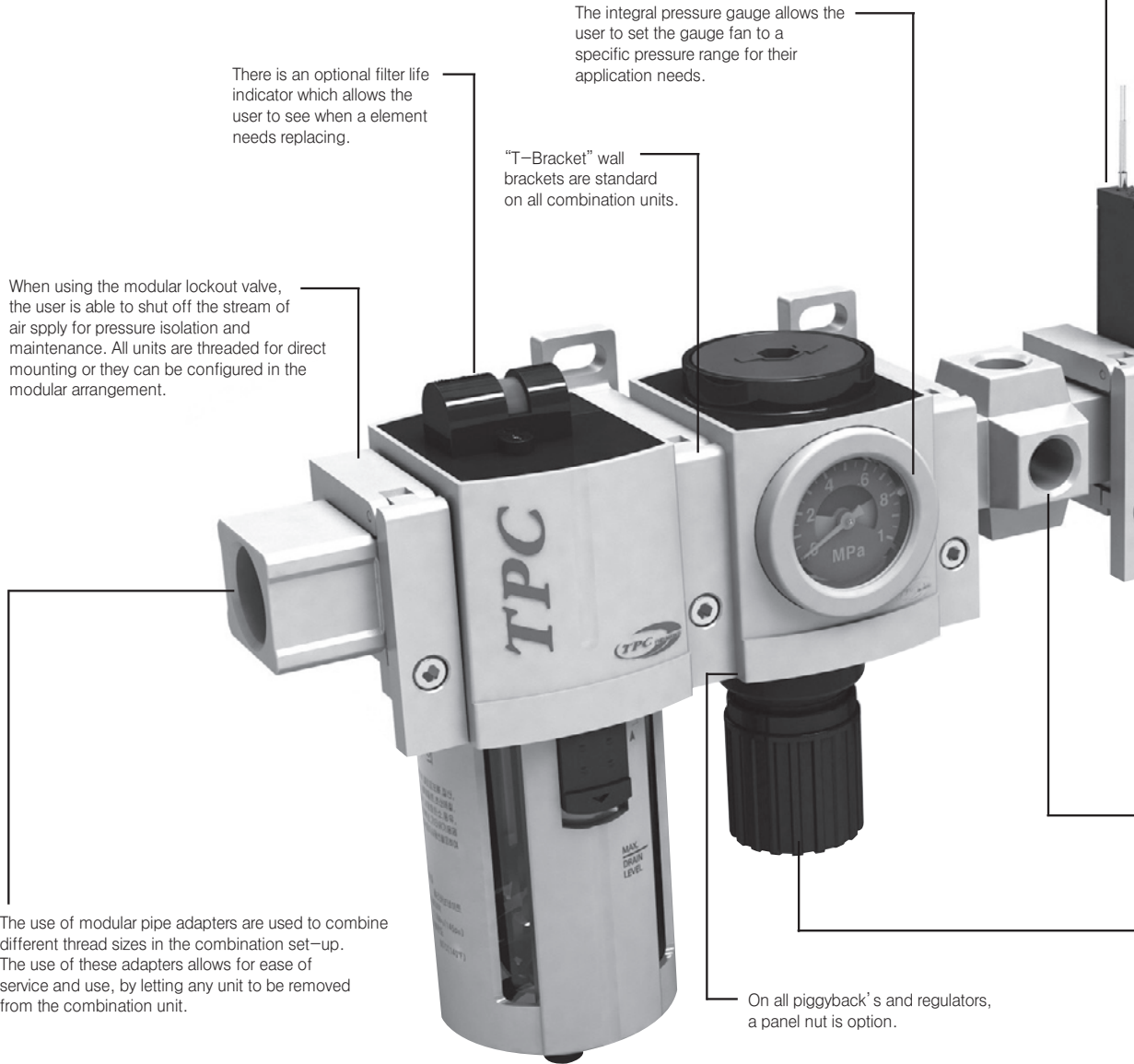

---

● F. R. L (Combination)	
Series PC2, PF2, PR2, PL2, PP2 .....	852
Series PC3, PF3, PR3, PL3, PP3 .....	864
Series PC4, PF4, PR4, PL4, PP4 .....	876
Series PC5, PF5, PR5, PL5, PP5 .....	888
Series PC2~PC5 The Mounting Position of Bracket .....	900
Coalescing Filter PFH(U)2~PFH(U)5 .....	901
Poggyback Coalescing Filter PPH(U)3~PPH(U)4 .....	906
● Modular Lock Valve	
Series PLV .....	910
● Modular Shutoff Valve	
Series PSH .....	912
● Modular Check Valve	
Series PCV .....	916
● Modular Manifold Block	
Series MB .....	918
● Modular Pipe Adapter	
Series PA .....	920
● Slow Start Valve	
Series SSV .....	922
● Pressure Switch	
Series SMS1000 .....	924
● Accessoris	926
● Precision Pressure Regulator	
Series PER 2000, 3000 .....	941
● Vacuum Regulator	
Series PVR3000 .....	945
● Clean Regulator	
Series PNR4000 .....	946

---

※ Specifications in this catalogue may be changed for product performance upgrade without notice.  
Please inquire separately when purchasing the product.

## ■ Modular Type Air Combination



### PC2 Series



1/8" AND 1/4"

### PC3 Series

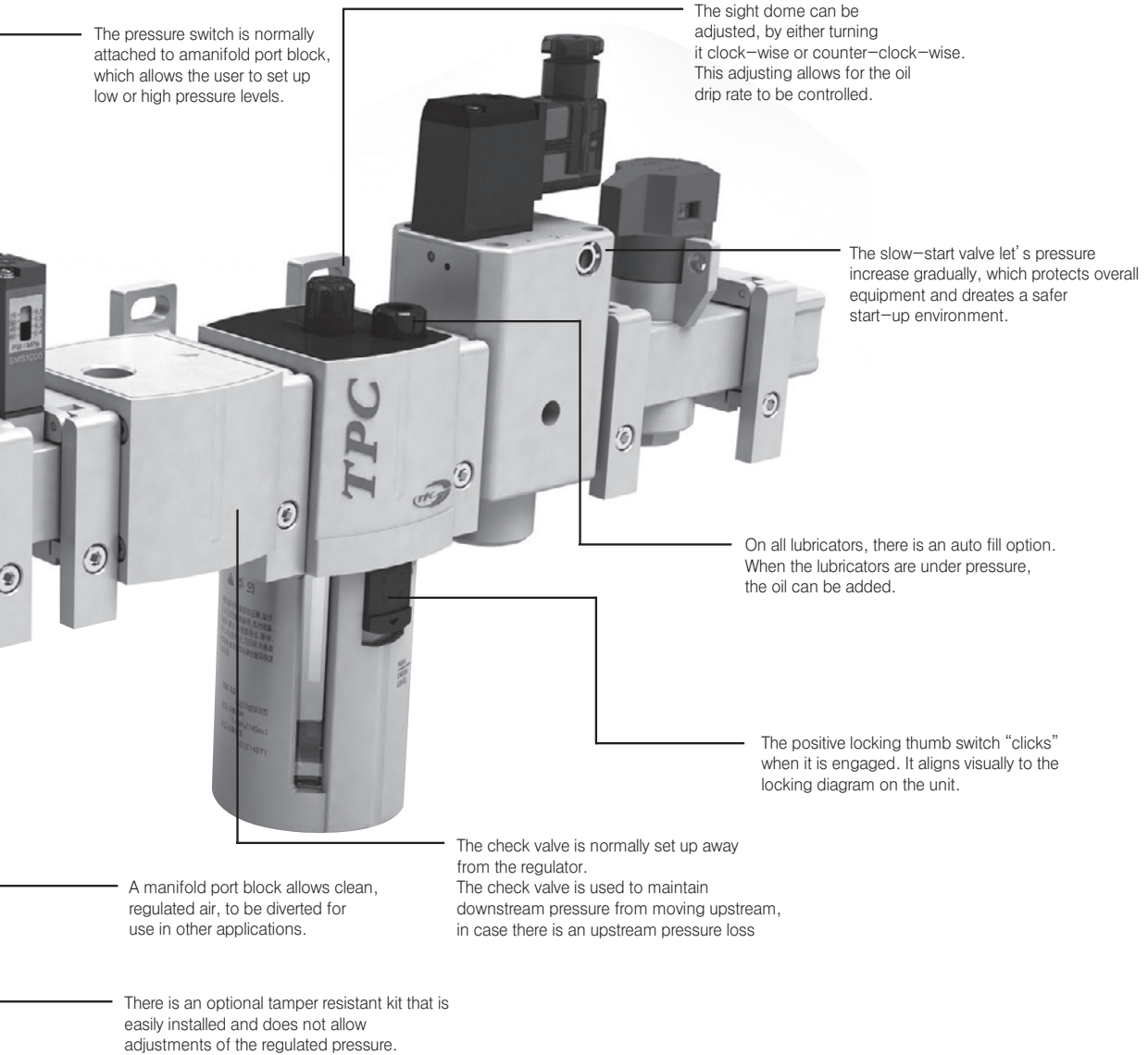


1/4" AND 3/8"

### PC4 Series



3/8" AND 1/2"



The pressure switch is normally attached to a manifold port block, which allows the user to set up low or high pressure levels.

The sight dome can be adjusted, by either turning it clock-wise or counter-clock-wise. This adjusting allows for the oil drip rate to be controlled.

The slow-start valve let's pressure increase gradually, which protects overall equipment and creates a safer start-up environment.

On all lubricators, there is an auto fill option. When the lubricators are under pressure, the oil can be added.

The positive locking thumb switch "clicks" when it is engaged. It aligns visually to the locking diagram on the unit.

The check valve is normally set up away from the regulator. The check valve is used to maintain downstream pressure from moving upstream, in case there is an upstream pressure loss

A manifold port block allows clean, regulated air, to be diverted for use in other applications.

There is an optional tamper resistant kit that is easily installed and does not allow adjustments of the regulated pressure.

### PC5 Series



3/4" AND 1"

### PFH Series



1/8", 1/4", 3/8"  
1/2", 3/4" AND 1"

### PPH Series



1/4", 3/8" AND 1/2"

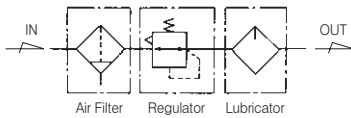
# Series PC2

## Combination 1/8" and 1/4"



PAT

### Symbol



### Standard Specifications

Fluid		Air
Max. Operating Pressure (MPa)		1.0(140psi)
Proof Pressure (MPa)		1.5(200psi)
Set Pressure	Standard	0.05 ~ 1.0(7~140psi)
Range(MPa)	Madd to Order Specifications	0.05~0.2(7~30psi), 0.05~0.47(7~60psi)
Ambient and Fluid Temperature (°C)		-5~60(23~140° F) (Non-freezing)
Flow Capacity ※	1/8"	1,000(35scfm)
(N ℓ /min)	1/4"	1,300(46scfm)
Filtration (μm)		5
Construction		Relieving Sytle
Recommended Oil		ISO VG32 (Turbine Oil 1 Class)
Port Size for Pressure Gauge (Rc (PT), NPT)		1/8"
Weight (kg)		0.49(1.08lb)

※ Test conditions : Supply pressure 0.7MPa(100psi) , Set pressure 0.6MPa(90psi)

### How to Order

**PC 2 A — \* 02 D G — \* — C1M1Z5**

Series  
(Combination Unit)

Components

Blank	Filter-Regulator-Lubricator
A	Piggyback-Lubricator
B	Filter-Regulator
C	Filter-Coalescing Filter(0.3)-Regulator
D	Piggyback-Coalescing Filter(0.3)
E	Filter-Coalescing Filter(0.01)-Regulator
F	Piggyback-Coalescing Filter(0.01)

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

01	1/8
02	1/4

Drain Option

Blank	Manual Push Drain
D	Auto Drain (N.O Type)
D2	Auto Drain
D5	Manual Drain

Note1)

Note1) Min. operating pressure is 0.15MPa(20psi) for Auto Drain (N.O Type)

Pressure Gauge

Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa(140psi)
P	Pressure Range	1.0MPa(140psi)
P2	Pressure Range	0.2MPa(30psi)
P4	Pressure Range	0.4MPa(60psi)

Accessories

Symbol	Port Size	Description	Applicable Series
C1	1/8"	Check Valve	PC2~PC3
C2	1/4"		PC2~PC4
C3	3/8"		PC4
H	-	Shut-off Valve	PC2~PC5
M1	1/8"	Modular Manifold Block Kit	PC2~PC3
M2	1/4"		PC2~PC4
M3	3/8"		PC4
V	-	Lock-out Valve	PC2~PC5
W	-	Modular Pipe Adapter Kit	PC2~PC5
Z1	-	Pressure Switch, AC110V	PC2~PC5
Z5	-	Pressure Switch, DC24V	PC2~PC5

\* Refer to page 900 for how to attach bracket & how to combine the accessories  
\* When specifying more than one symbol, indicate them alphabetically Ex) CIMIZ

Other Option

Blank	Set at 0 to 1.0 MPa, 5μm(140psi) (Standard)		
2	Set at 0 to 0.2 MPa(30psi)	K	Built-in Check Valve
4	Set at 0 to 0.4 MPa(60psi)	R	Flow direction : Right→Left
E	Non-relieving type	T	Tamper Resistant Kit
J2	Filter element - 20μm	U	Regulator (Top mounted)
J4	Filter element - 40μm	XC16	Copper-free

Note2)

Note2,3)

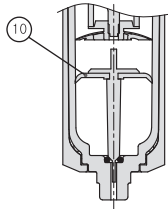
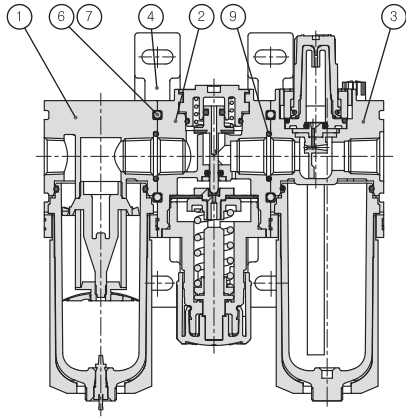
Note2) Refer to page 935 for Built-in check valve, Tamper resistant kit, Note3) Separately packed, Not assembled.

\* If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK

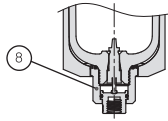
\* Over Max. pressure valve can be set.



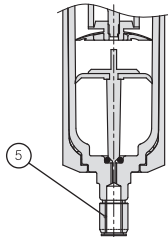
Construction



Auto-Drain Standard Type



Auto-Drain Piping Type



Auto-Drain Piping Type

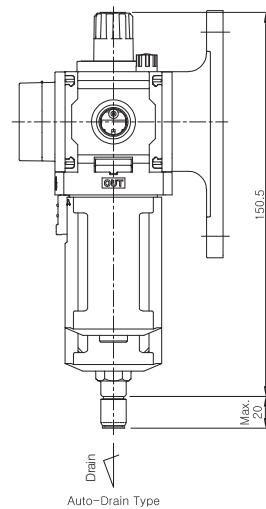
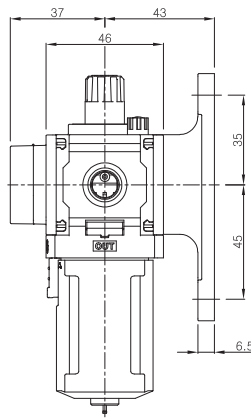
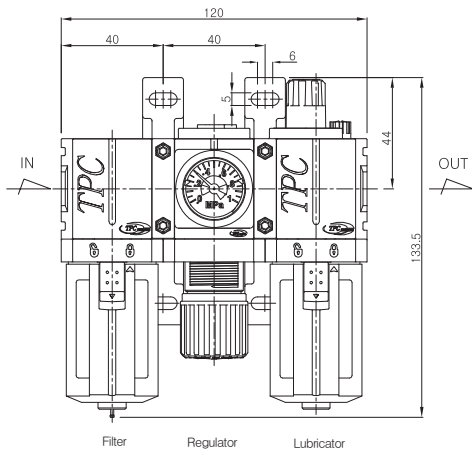
Main Parts/Parts List

No.	Description	Material	Remark
①	Filter Ass'y	-	
②	Regulator Ass'y	-	
③	Lubricator Ass'y	-	
④	Bracket Ass'y	-	
⑤	Fitting	-	
⑥	Connecting Screw	Carbon Steel	
⑦	Connecting Nut	Carbon Steel	
⑧	Manual-Drain Piping Ass'y	-	

Replacement Parts/Parts List

No.	Description	Material	Part No.
⑨	Combination O-ring	NBR	AN015-01
⑩	Auto Bowl Ass'y (Auto-Drain Ass'y Included)	-	PF2-26A002-01

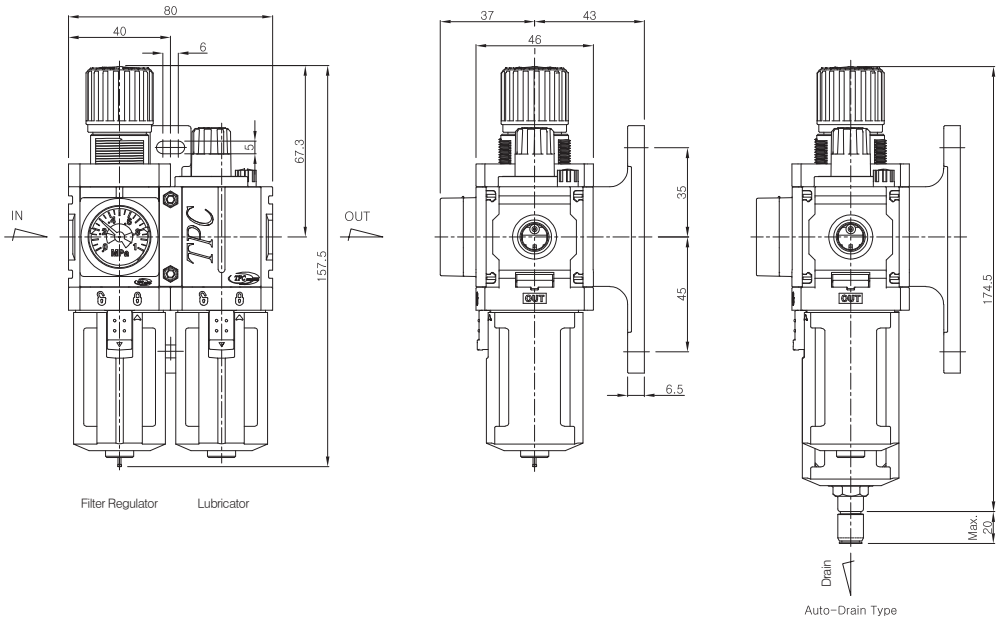
PC2 Dimensions



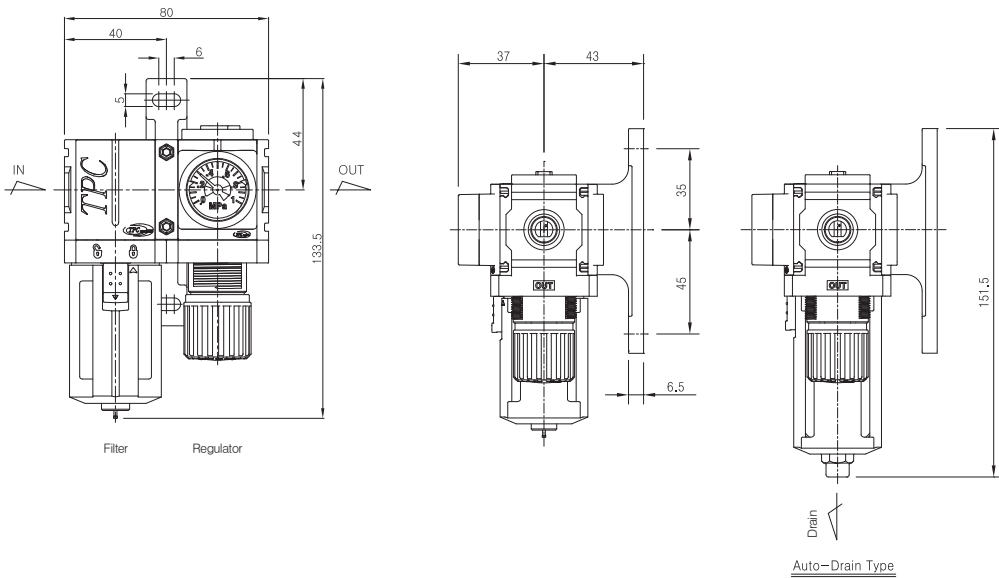
- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PC2

## ■ PC2A Dimensions

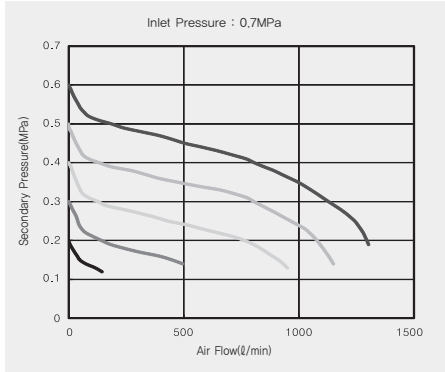


## ■ PC2B Dimensions

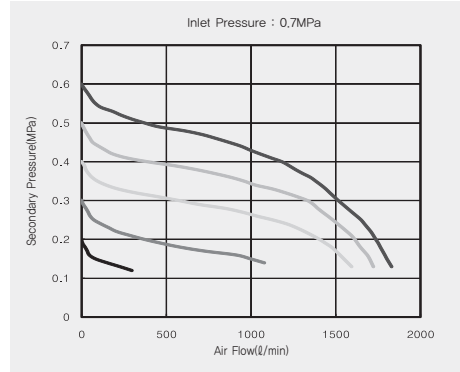


■ PC2 Series Flow Characteristics

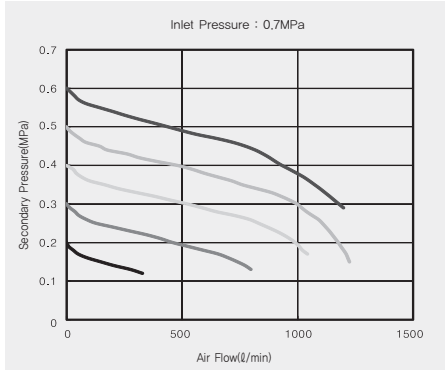
▶ 1/8" PC2



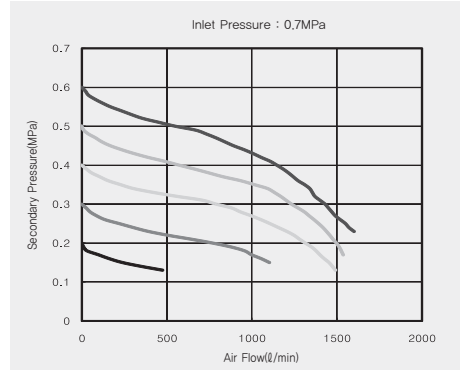
▶ 1/4" PC2



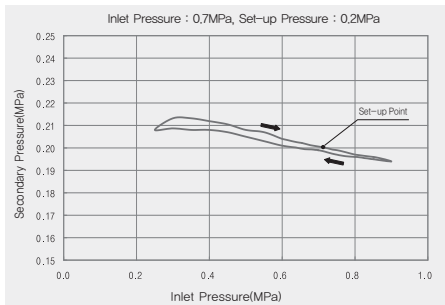
▶ 1/8" PC2A



▶ 1/4" PC2A



■ PC2 Series Pressure Characteristics



PC2

PF2

PR2

PL2

PP2

PC3

PF3

PR3

PL3

PP3

PC4

PF4

PR4

PL4

PP4

PC5

PF5

PR5

PL5

PP5

PFH(U)2~  
PFH(U)5

PPH(U)3~  
PPH(U)4

PLV

PSH

PCV

MB

# Series PF2

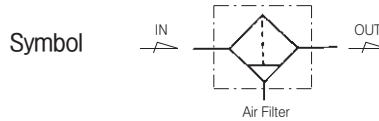
## Filter 1/8" and 1/4"



### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Ambient and Fluid Temperature (°C)	-5~60(Non-freezing)	
Flow Capacity ※ (N ℓ /min)	1/8"	1,100(39scfm)
	1/4"	1,400(50scfm)
Bowl Material	Polycarbonate	
Bowl Guard Material	Nymon	
Filtration (μm)	5	
Drain Capacity (cm <sup>3</sup> )	Manual Drain : 15(0.51oz), Auto Drain : 21(0.71oz)	
Weight (kg)	0.14(0.31lb)	

※ Test conditions : Supply pressure 0.6MPa(90psi), Pressure drop 0.07MPa(10psi)



### How to Order

**PF 2 — \* 02 B D — \***

Series (Filter Unit) — PF 2

Thread — \*

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size — 02

01	1/8
02	1/4

Other Option — \*

Blank	Filter element - 5μm (Standard)		
J2	Filter element - 20μm	R	Flow direction : Right→Left
J4	Filter element - 40μm	XC16	Copper-free

Drain Option — B D

Blank	Manual Push Drain	
D	Auto Drain (N.O Type)	Note1)
D2	Auto Drain (Piping Exhaust)	
D5	Manual Drain (Piping Exhaust)	

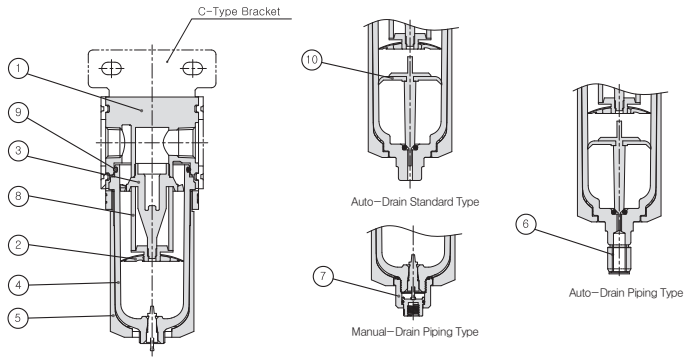
Note1) Min.operating pressure is 0.15MPa(20psi) for Auto Drain (N.O Type)

Bracket Option — \*

Blank	None	
B	Bracket	Note2)

Note2) Separately packed, Not assembled.

## Construction



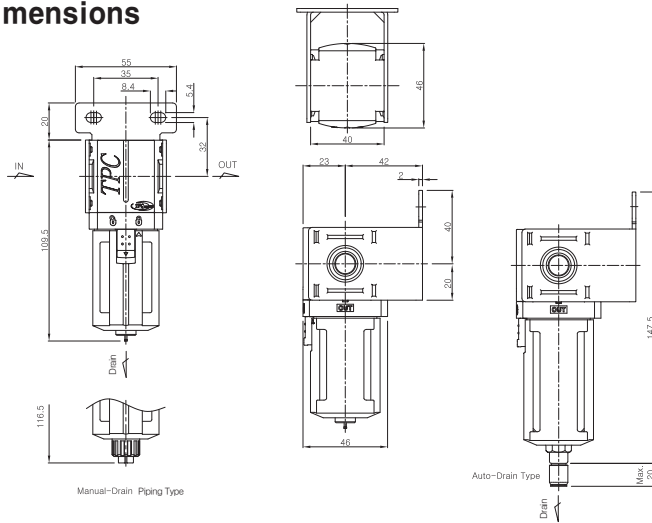
### Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Baffle	Acetal	
③	Deflector	Nylon	
④	Bowl	Polycarbonate	
⑤	Bowl Guard	Nylon	
⑥	Fitting	—	
⑦	Manual Drain Piping Ass'y	—	

### Replacement Parts/Parts List

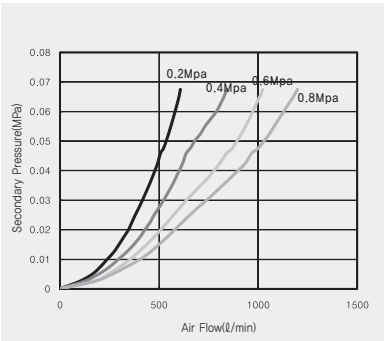
No.	Description	Material	Part No.
⑧	Filter element	Polyethylene	PF2-24-005-01
⑨	Bowl o-ring	NBR	DX2R-53-3000
⑩	Auto Bowl ass'y (Auto-Drain Assy Included)	—	PF2-26A002-01

## Dimensions

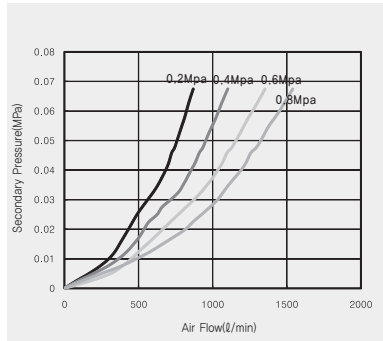


## Flow Characteristics

### ▶ 1/8" PF2



### ▶ 1/4" PF2



PC2

PF2

PR2

PL2

PP2

PC3

PF3

PR3

PL3

PP3

PC4

PF4

PR4

PL4

PP4

PC5

PF5

PR5

PL5

PP5

PFH(U)2~  
PFH(U)5

PPH(U)3~  
PPH(U)4

PLV

PSH

PCV

MB

# Series PR2

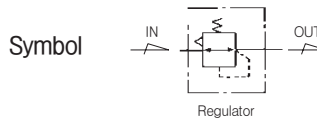
## Regulator 1/8" and 1/4"



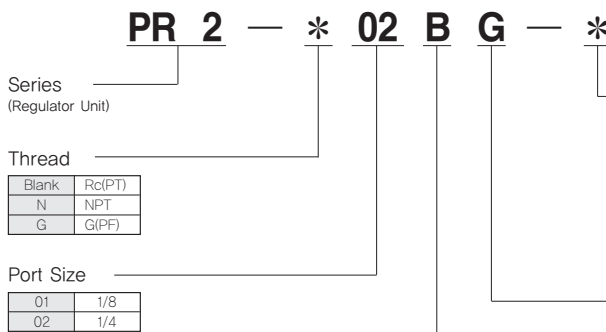
### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure	Standard	0.05~1.0(7~140psi)
Range(MPa)	Madd to Order Specifications	0.05~0.2(7~30psi), 0.05~0.4(7~60psi)
Ambient and Fluid Temperature (°C)	-5~60(23~140°F)(Non-freezing)	
Flow Capacity ※	1/8"	1,300(46scfm)
(N ℓ /min)	1/4"	1,700(60scfm)
Construction	Relieving Style	
Port Size for Pressure Gauge (Rc (PT), NPT)	1/8"	
Weight (kg)	0.18(0.4lb)	

※ Test conditions : Supply pressure 0.7MPa(100psi), Set pressure 0.6MPa(90psi)



### How to Order



#### Other Option

Blank	Set at 0 to 1.0 MPa, Standard	K	Built-in Check Valve	Note1)
2	Set at 0 to 0.2 MPa	R	Flow Direction : Right → Left	
4	Set at 0 to 0.4 MPa	T	Tamper Resistant Kit	Note1,2)
E	Non-Relieving type	XC16	Copper-free	

Note1) Refer to page 935 for Built-in Check Valve, Tamper Resistant Kit.

※ If ordering more than one option, indicate symbols numerically then alphabetically Ex)2EK

※ Over Max. pressure value can be set.

#### Pressure Gauge

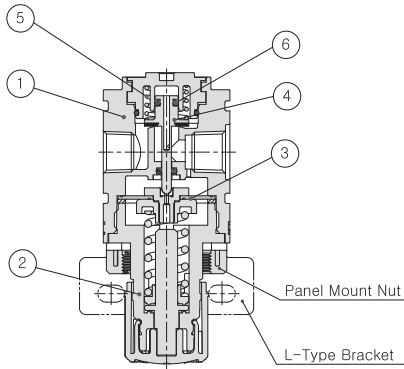
Symbol	Description	Pressure Range
Blank	No-Gauge	
G	Integral Pressure Gauge	1.0MPa(140psi)
P	Pressure Gauge	1.0MPa(140psi)
P2	Pressure Gauge	0.2MPa(30psi)
P4	Pressure Gauge	0.4MPa(60psi)

#### Bracket Option

Blank	None	
B	Bracket + Panel Nut	Note2)
B1	Panel Nut	

Note2) Separately packed, Not assembled

## Construction



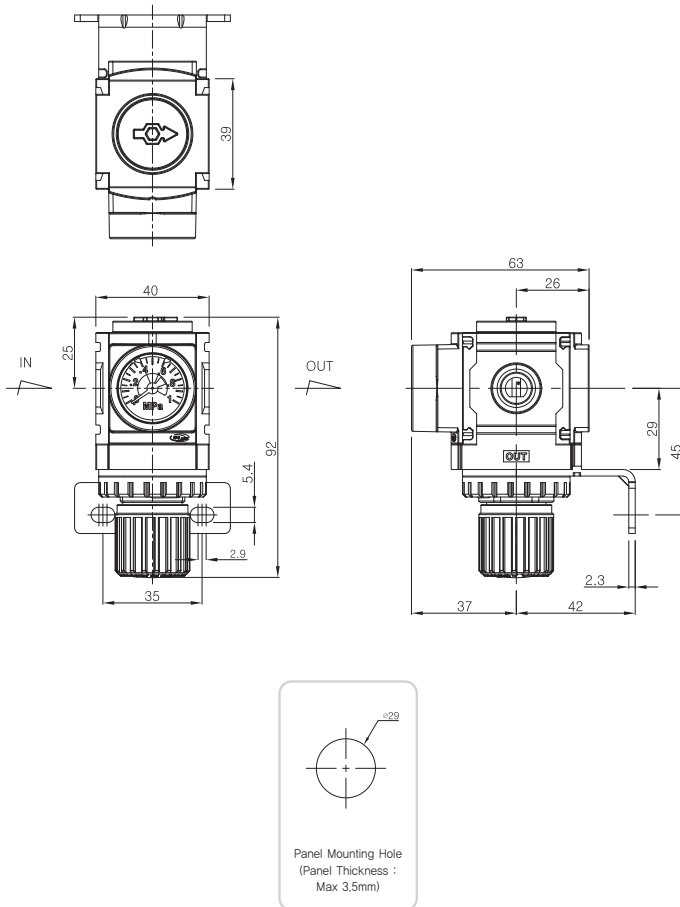
### Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Nylon	

### Replacement Parts/parts List

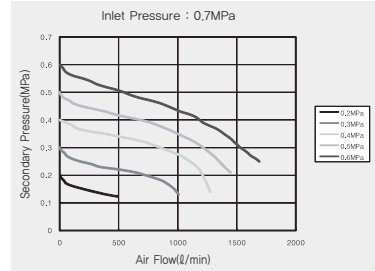
No.	Description	Material	Part No.
③	Diaphragm Ass'y	Nylon+NBR	PR2-11A001-01
④	Valve Ass'y	Brass+NBR	PR2-08-001-01
⑤	Valve Spring	Stainless Steel	PR2-14-001-01
⑥	Valve O-ring	NBR	P4-01

## Dimensions

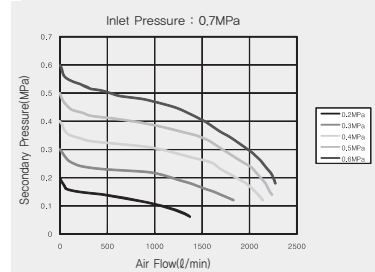


## Flow Characteristics

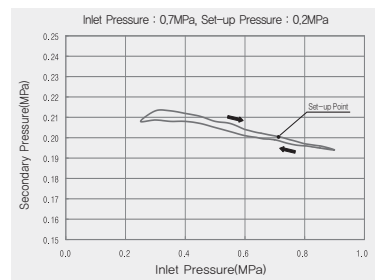
### ▶ 1/8" PR2



### ▶ 1/4" PR2



## Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB



# Series **PL2**

## Lubricator 1/8" and 1/4"

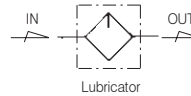


### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Min Operating Flow (N ℓ /min)	15(0.5scfm)(1/4" )	
Bowl Capacity (cm <sup>3</sup> )	18(0.61oz)	
Ambient and Fluid Temperature (°C)	-5~60(23~140°F)(Non-freezing)	
Flow Capacity ※ (N ℓ /min)	1/8"	1,000(32scfm)
	1/4"	1,700(57scfm)
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Recommended Oil	ISO VG32(Turbine Oil 1 Class)	
Weight (kg)	0.14(0.31lb)	

※ Test conditions : Supply pressure 0.6MPa(90psi), Pressure drop 0.05MPa(7psi)

Symbol



### How to Order

**PL 2 — \* 02 B — \***

Series (Lubricator Unit) — **PL 2**

Thread — **02**

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size — **02**

01	1/8
02	1/4

Other Option — **\***

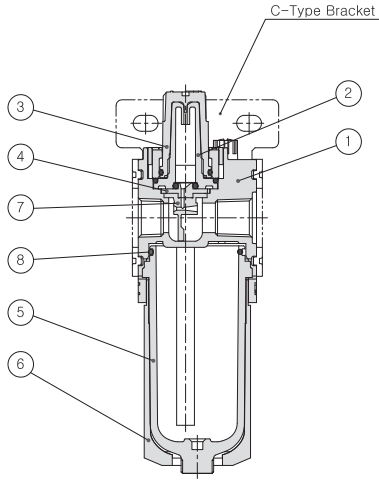
R	Flow Direction : Right→Left
XC16	Copper-Free

Bracket Option — **B**

Blank	None
B	Bracket

Note1) Separately packed, Not assembled.

Construction



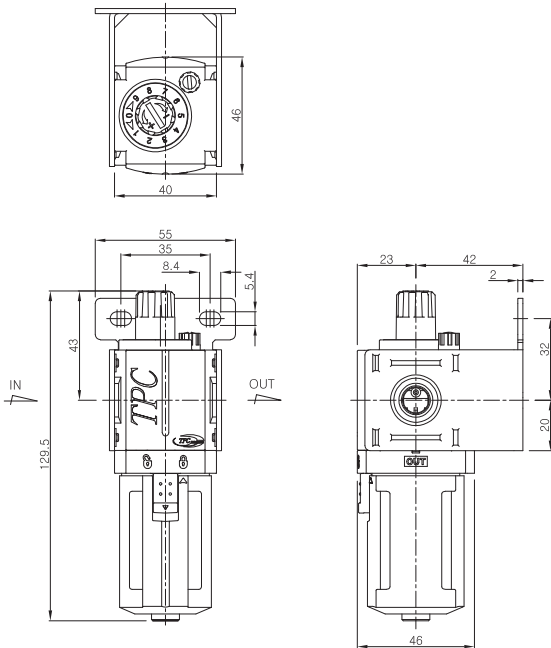
Main Parts/Part List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Inner Sight Dome	Nylon(Clear)	
③	Outer Sight Dome	Nylon(Clear)	
④	Damper Plate	Acetal	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	

Replacement Parts/Parts List

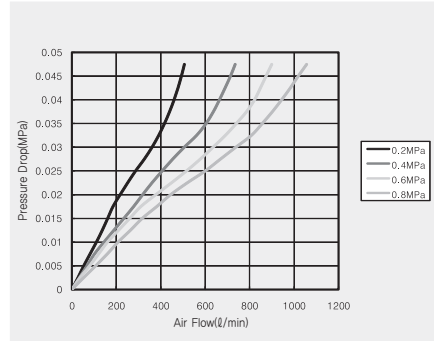
No.	Description	Material	Part No.
⑦	Damper	NBR	PL2-34-001-01
⑧	Bowl O-ring	NBR	DX2R-53-3000

Dimensions

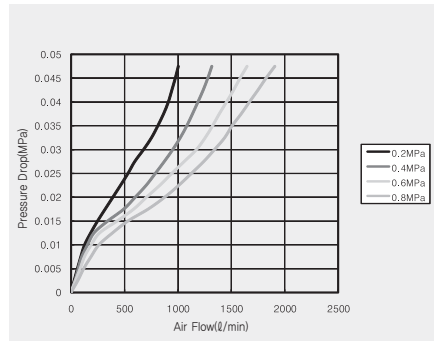


Flow Characteristics

► 1/8" PL2



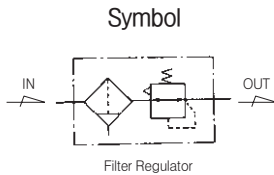
► 1/4" PL2



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PP2

## Piggyback 1/8" and 1/4"



PAT

### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure (MPa)	Standard	0.05~1.0(7~140psi)
	Made to Order Specifications	0.05~0.2(7~30psi), 0.05~0.4(7~60psi)
Ambient and Fluid Temperature (°C)	-5~60(23~140°F)(NON-freezing)	
Flow Capacity ※ (N l /min)	1/8"	1,200(42scfm)
	1/4"	1,300(46scfm)
Filtration (μm)	Standard : 5	
Construction	Relieving Style	
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Drain Capacity (cm <sup>3</sup> )	Manual Drain : 15, Auto Drain : 20	
Weight (kg)	0.23(0.5lb)	

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set 0.6MPa(90psi)

### How to Order

**PP 2 — \* 02 B D G — \***

Series (Piggyback Unit)

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

01	1/8
02	1/4

Bracket Option

Blank	None	Note2)
B	Bracket + Panel Nut	
B1	Panel Nut	

Note2) Separately packed, Not assembled.

#### Other Option

Blank	Set at 0 to 1.0 MPa, 5μm (Standard)				
2	Set at 0 to 0.2 MPa	K	Built-in Check Valve	Note1)	
4	Set at 0 to 0.4 MPa	R	Flow Direction : Right→Left		
E	Non-Relieving Type		T	Tamper Resistant Kit	Note1,2)
J2	Filter element - 20μm		XC16	Copper-free	
J4	Filter element - 40μm				

Note1) Refer to page 935 for Built-in Check Valve, Tamper Resistant Kit.

\* If ordering more than one option, indicate symbols umerically then alphabetically Ex) 2EK

\* Over Max. pressure value can be set.

#### Pressure Gauge

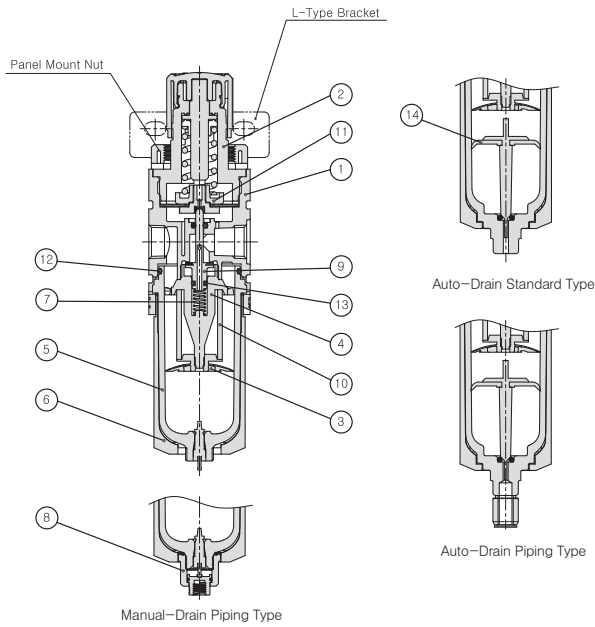
Symbol	Description	Pressure Range
Blank	NO-Gauge	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa(140psi)
P	Pressure Gauge	1.0MPa(140psi)
P2	Pressure Gauge	0.2MPa(30psi)
P4	Pressure Gauge	0.4MPa(60psi)

#### Drain Option

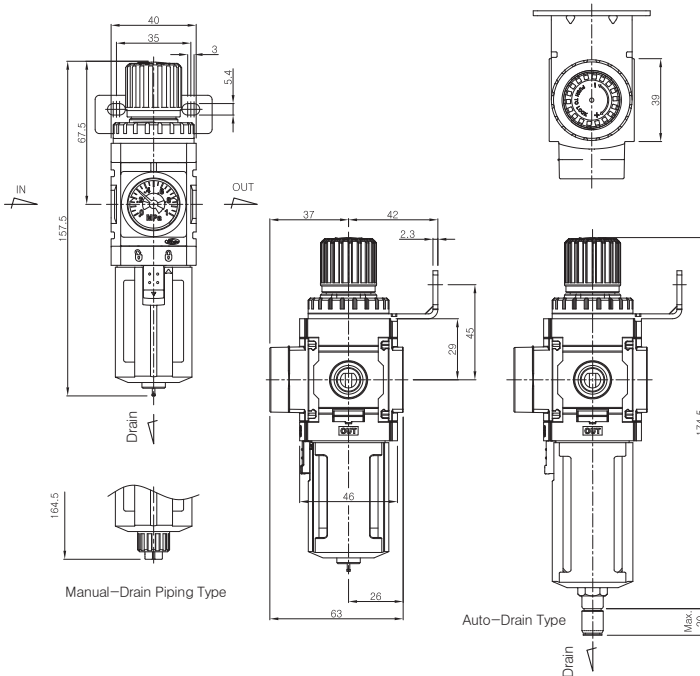
Blank	Manual Push Drain	Note3)
D	Auto Drain (N.O Type)	
D2	Auto Drain	
D5	Manual Drain	

Note3) Min. operating pressure is 0.15MPa(20psi) for Auto Drain(N.O Type)

## Construction



## Dimensions



## Main Parts/Parts List

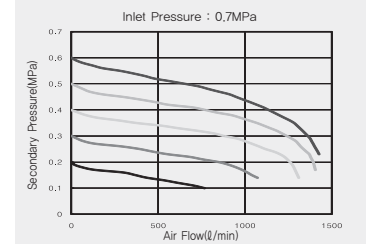
No.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Nylon	
③	Baffle	Acetal	
④	Deflector	Nylon	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	
⑦	Valve Spring	Stainless Steel	
⑧	Manual-Drain Pipe Ass'y	-	

## Replacement Parts/Parts List

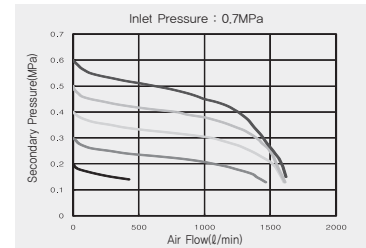
No.	Description	Material	Part No.
⑨	Valve Ass'y	Brass+NBR	PP2-08-001-01
⑩	Filter Element	Polyethylene	PF2-24-005-01
⑪	DiaphrAgm Ass'y	Nylon+NBR	PR2-11A001-01
⑫	Bowl O-ring	NBR	DX2R-53-3000
⑬	Valve O-ring	NBR	S4-01
⑭	Auto Bowl Ass'y (Auto-Drain Ass'y included)	-	PF2-26A002-01

## Flow Characteristics

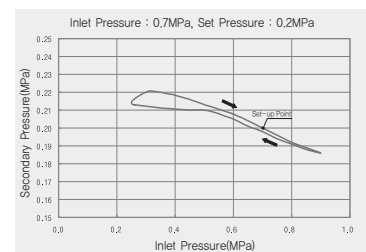
### ▶ 1/8" PP2



### ▶ 1/4" PP2



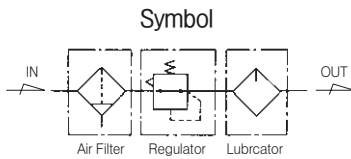
## Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2**
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~  
PFH(U)5
- PPH(U)3~  
PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PC3

## Combination 1/4" and 3/8"



### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure (MPa)	Standard	0.05~1.0(7~140psi)
	Made to Order Specifications	0.05~0.2(7~30psi), 0.05~0.4(7~60psi), 0.05~1.2(7~170psi)
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (NON-freezing)	
Flow Capacity ※ (N ℓ /min)	1/4 "	1,700(60scfm)
	3/8 "	2,400(85scfm)
Filtration (μm)	5	
Construction	Relieving Style	
Recommended Oil	ISO VG32(Turbine Oil 1 Class)	
Port Size for Pressure Gauge (Rc (PT), NPT)	1/8 "	
Weight (kg)	0.99(1.08lb)	

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set pressure 0.6MPa(90psi)

### How to Order

**PC 3 A — \* 03 D G — \* — C1M1Z5**

Series  
(Combination Unit)

Components

Blank	Filter-Regulator-Lubricator
A	Piggyback-Lubricator
B	Filter-Regulator
C	Filter-Coalescing Filter(0.3)-Regulator
D	Piggyback-Coalescing Filter(0.3)
E	Filter-Coalescing Filter(0.01)-Regulator
F	Piggyback-Coalescing Filter(0.01)

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

02	1/4
03	3/8

Drain Option

Blank	Manual Push Drain
D	Auto Drain (N.O Type)

Note1) Min. operating pressure is 0.15MPa (20psi) for Auto Drain (N.O Type)

Pressure Gauge

Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa(140psi)
P	Pressure Gauge	1.0MPa(140psi)
P2	Pressure Gauge	0.2MPa(30psi)
P4	Pressure Gauge	0.4MPa(60psi)

Accessories

Symbol	Port Size	Description	Applicable Series
C1	1/8"	Check Valve	PC2~PC3
C2	1/4"		PC2~PC4
C3	3/8"		PC4
H	-	Shut-off Valve	PC2~PC5
M1	1/8"	Modular Manifold Block Kit	PC2~PC3
M2	1/4"		PC2~PC4
M3	3/8"	PC4	
V	-	Lock-out Valve	PC2~PC5
W	-	Modular Pipe Adapter Kit	PC2~PC5
Z1	-	Pressure Switch, AC110V	PC2~PC5
Z5	-	Pressure Switch, DC24V	PC2~PC5

※ Refer to page 900 for how to attach bracket & how to combine the accessories

※ When specifying more than one symbol, indicate them alphabetically Ex) CIMIZ

Other Option

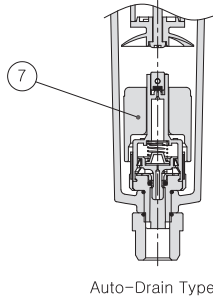
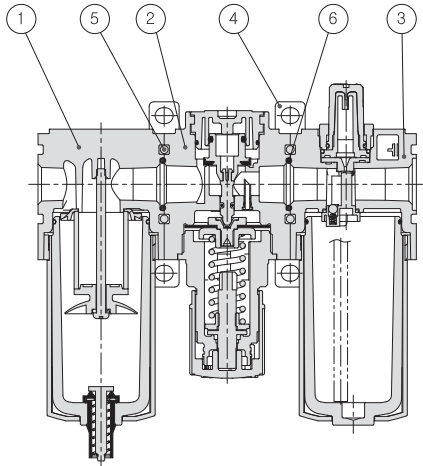
Symbol	Description	Applicable Series
Blank	Set at 0 to 1.0 MPa, 5μm (Standard)	
2	Set at 0 to 0.2 MPa	K Built-in Check Valve
4	Set at 0 to 0.4 MPa	R Flow Direction : Right-Left
12	Set at 0 to 1.2 MPa	T Tamper Resistant Kit
E	Non-Relieving Type	U Regulator (Top Mounted)
J2	Filter element - 20μm	XC16 Copper-free
J4	Filter element - 40μm	

Note2) Refer to page 935 for Built-in Check Valve, Tamper Resistant Kit, Note3) Separately packed, Not assembled.

※ If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK

※ Over Max. pressure value can be set.

## Construction



Auto-Drain Type

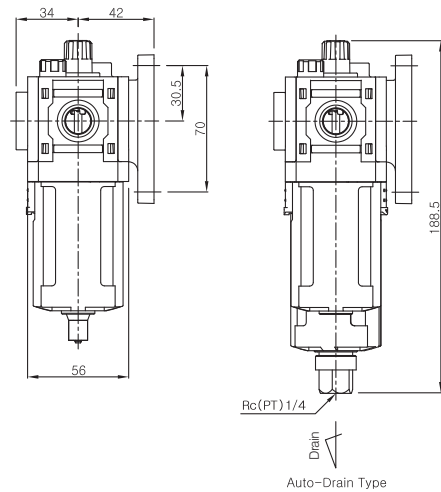
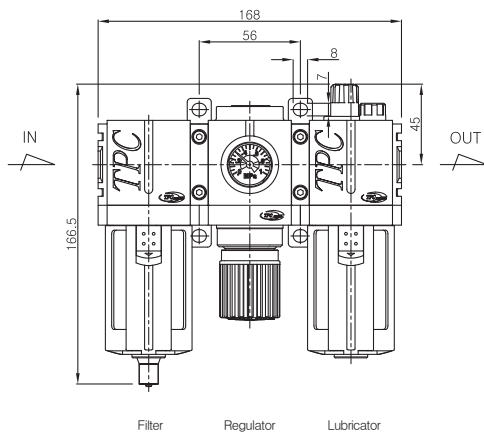
### Main Parts/Parts List

No.	Description	Material	Remark
①	Filter Ass'y	-	
②	Regulator Ass'y	-	
③	Lubricator Ass'y	-	
④	Bracket Ass'y	Aluminum	
⑤	Connecting Screw	Carbon Steel	

### Replacement Parts/Parts List

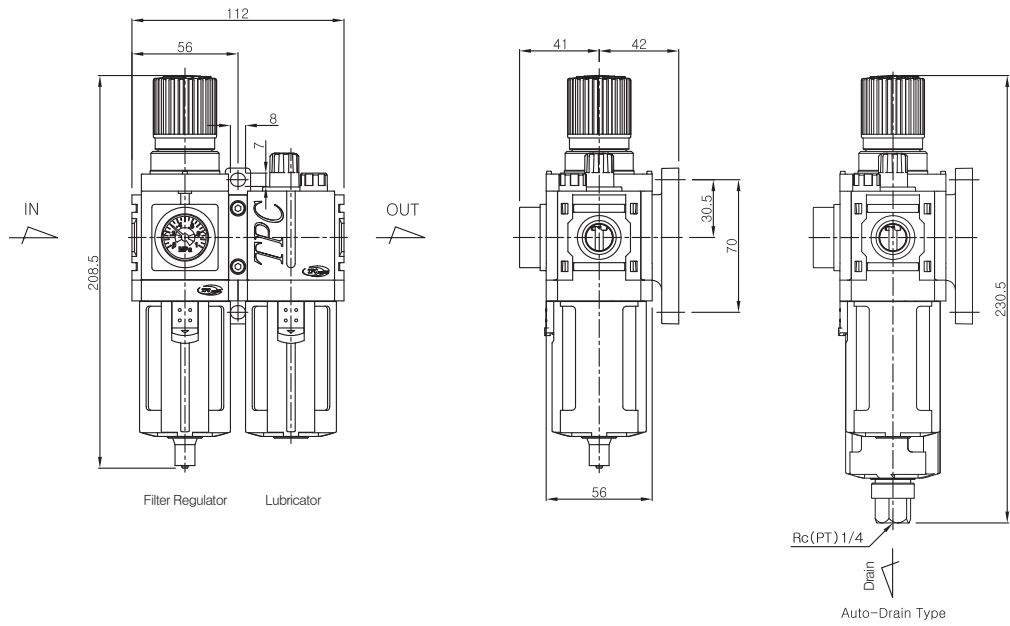
No.	Description	Material	Part No.
⑥	Combination O-ring	NBR	TAR4000-07-6001
⑦	Auto-drain ass'y	-	TAF3000-04A-6008

## PC3 Dimensions

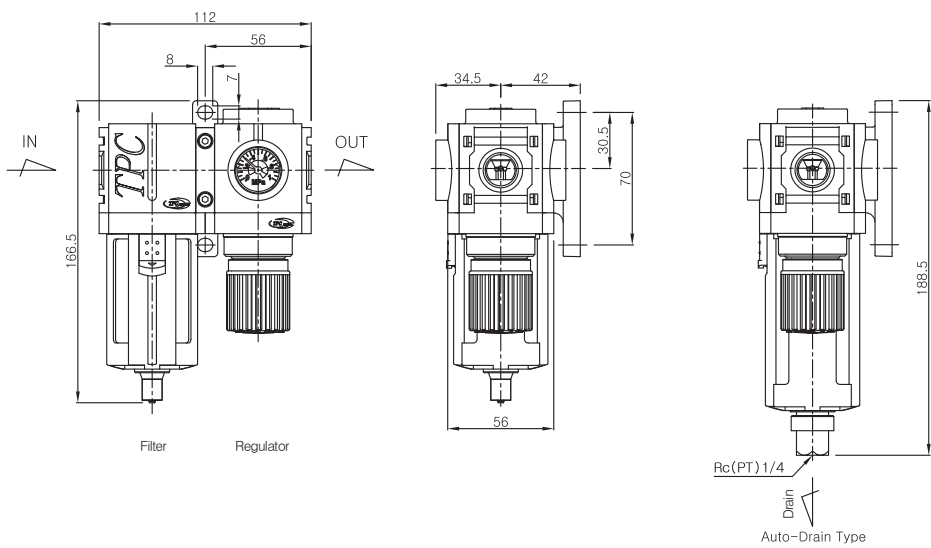


- PC2
- PF2
- PR2
- PL2
- PP2
- PC3**
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~  
PFH(U)5
- PPH(U)3~  
PPH(U)4
- PLV
- PSH
- PCV
- MB

## ■ PC3A Dimensions



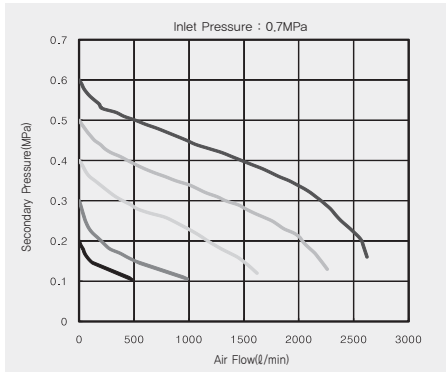
## ■ PC3B Dimensions



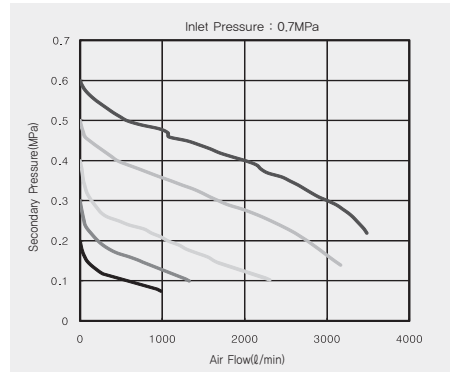


■ PC3 Series Pressure Characteristics

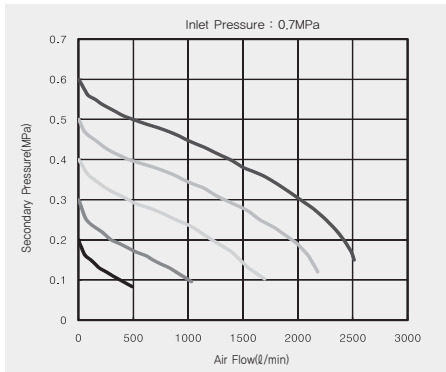
▶ 1/4" PC3



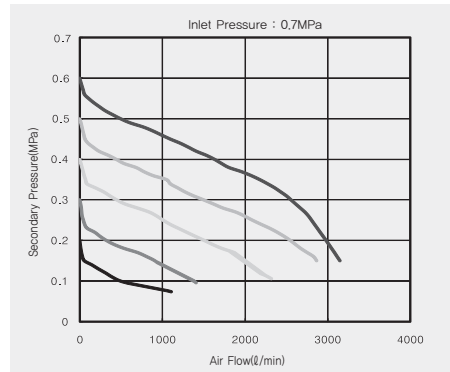
▶ 3/8" PC3



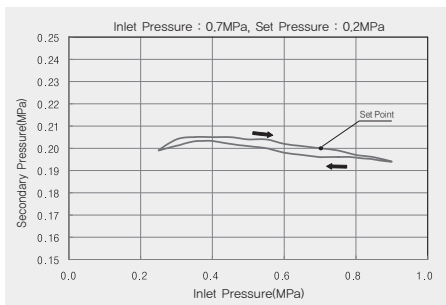
▶ 1/4" PC3A



▶ 3/8" PC3A



■ PC3 Series Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3**
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PF3

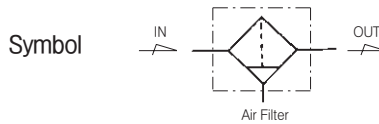
## Filter 1/4" and 3/8"



### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Ambient and Fluid Temperature (°C)	-5~60(23~140° F)(Non-freezing)	
Flow Capacity ※ (N ℓ /min)	1/4 "	2,100(74scfm)
	3/8 "	3,100(109scfm)
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Filtration (μm)	5	
Drain Capacity (cm <sup>3</sup> )	Manual Drain : 38(1.28oz), Auto Drain : 30(1.01oz)	
Weight (kg)	0.24(0.53lb)	

※ Test conditions : Supply pressure 0.6MPa(90psi), Pressure drop 0.07MPa(10psi)



### How to Order

**PF 3 — \* 03 B D — \***

Series (Filter Unit) — PF 3

Thread — \*

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size — 03

02	1/4
03	3/8

Other Option

Blank	Filter element - 5μm	R	Flow direction : Right → Left
J2	Filter element - 20μm	XC16	Copper-free
J4	Filter element - 40μm		

Drain Option

Blank	Manual Drain
D	Auto Drain (N.O Type)

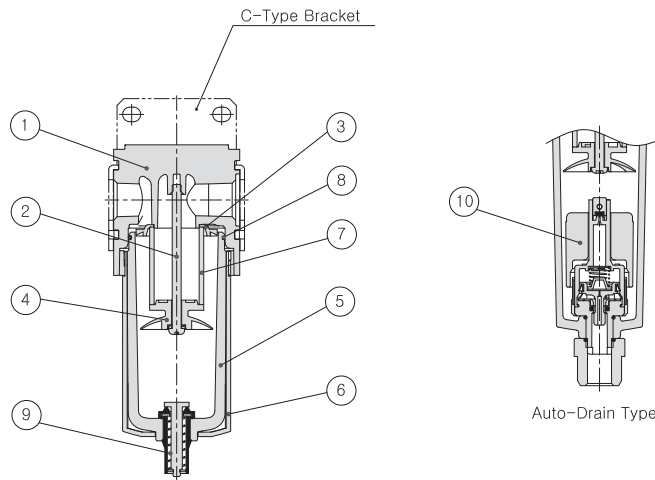
Note1) Min. operating pressure for Auto drain (N.O Type) : 0.15MPa(20psi)

Bracket Option

Blank	None
B	Bracket

Note2) Separately packed, Not assembled.

## Construction



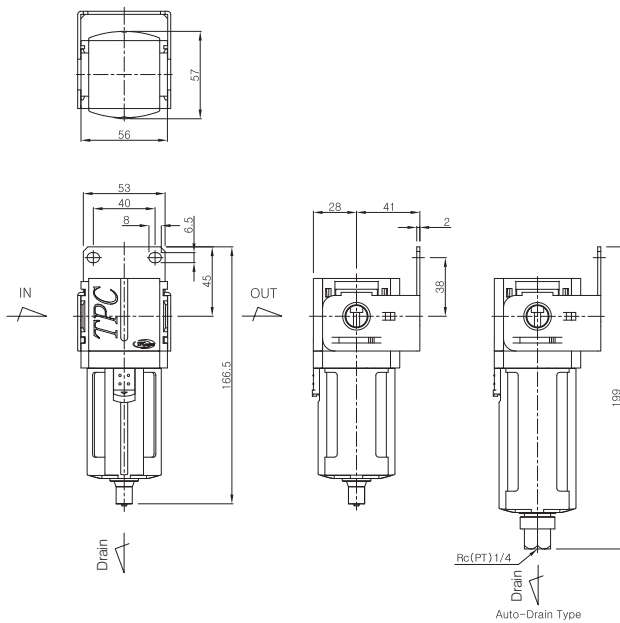
### Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Baffle Screw	Rolled Steel	
③	Deflector	Nylon	
④	Baffle	Acetal	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	

### Replacement Parts/Parts List

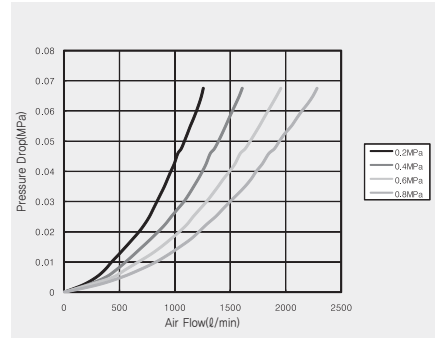
No.	Description	Material	Part No.
⑦	Filter element	Polyethylene	PF3-24-005-01
⑧	Bowl o-ring	NBR	PL3-04-001-01
⑨	Drain ass'y	-	TAF3000-10A-6004
⑩	Auto drain ass'y	-	TAF3000-04A-6008

## Dimensions

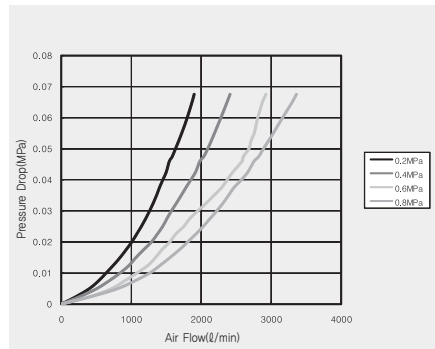


## Flow characteristics

### ▶ 1/4" PF3



### ▶ 3/8" PF3



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)3
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PR3

## Regulator 1/4" and 3/8"

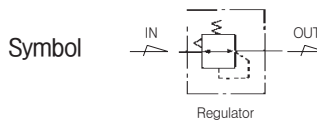


PAT

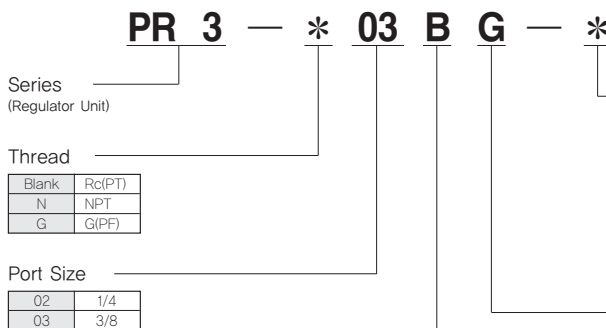
### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure (MPa)	Standard	0.05~1.0(7~140psi)
	Made to Order Specifications	0.05~0.2(7~30psi), 0.05~0.4(7~60psi), 0.05~1.2(7~170psi)
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (Non-freezing)	
Flow Capacity ※ (N l /min)	1/4"	2,500(88scfm)
	3/8"	3,200(113scfm)
Construction	Relieving Style	
Port Size for Pressure Gauge (Rc (PT), NPT)	1/8"	
Weight (kg)	0.32(0.71lb)	

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set pressure 0.6MPa(90psi)



### How to Order



#### Other Option

Blank	Set at 0 to 1.0 MPa, Standard	K	Built-in Check Valve	Note1)
2	Set at 0 to 0.2 MPa	R	Flow Direction : Right → Left	
4	Set at 0 to 0.4 MPa	T	Tamper Resistant Kit	Note1,2)
12	Set at 0 to 1.2 MPa	XC16	Copper-free	
E	Non-Relieving Type			

Note1) Refer to page 935 for Built-in Check Valve, Tamper Resistant Kit.

※ If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK

※ Over Max. pressure value can be set.

#### Pressure Gauge

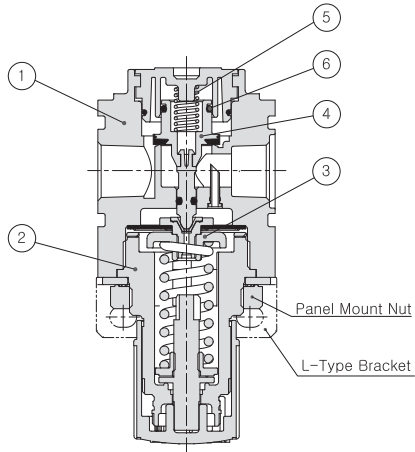
Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa
P	Pressure Gauge	1.0MPa
P2	Pressure Gauge	0.2MPa
P4	Pressure Gauge	0.4MPa

#### Bracket Option

Blank	None	
B	Bracket + Panel Nut	Note2)
B1	Panel Nut	

Note2) Separately packed, Not assembled.

## Construction



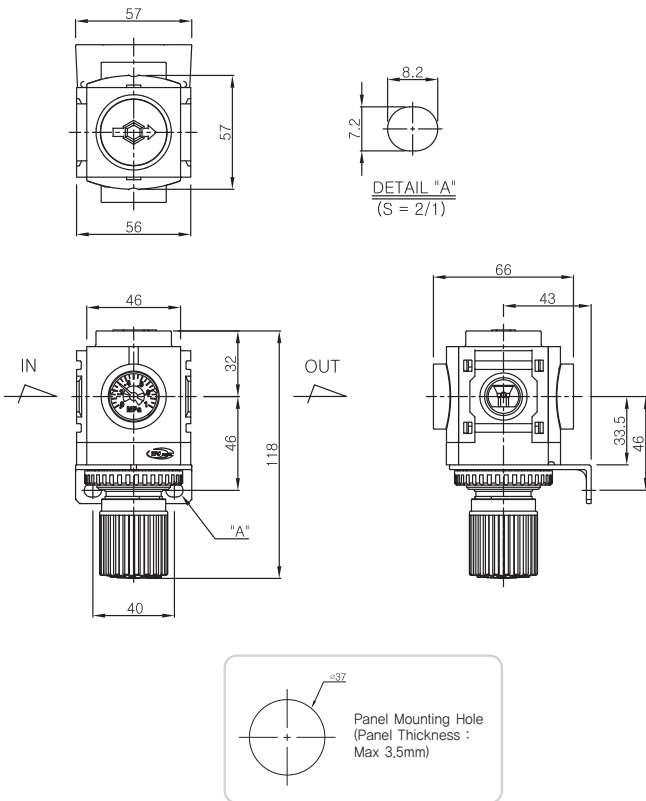
### Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Nylon	

### Replacement Parts/Parts List

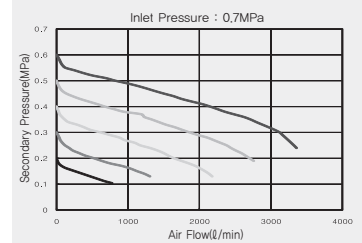
No.	Description	Material	Part No.
③	Diaphragm Ass'y	Nylon+NBR	PR3-11A001-01
④	Valve Ass'y	Nylon+NBR	PP4-08A001-01
⑤	Valve Spring	Stainless Steel	PR3-14-001-01
⑥	Valve O-ring	NBR	PR3-04-001-01

## Dimensions

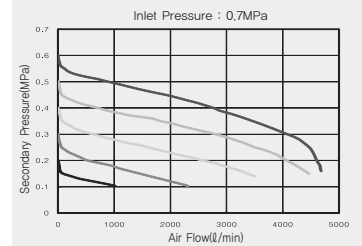


## Flow Characteristics

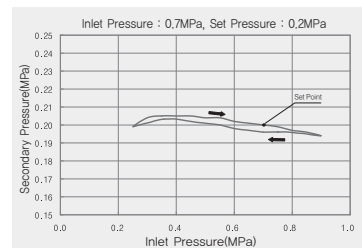
### ▶ 1/4" PR3



### ▶ 3/8" PR3



## Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3**
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~  
PFH(U)5
- PPH(U)3~  
PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series **PL3**

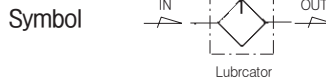
## Lubricator 1/4" and 3/8"



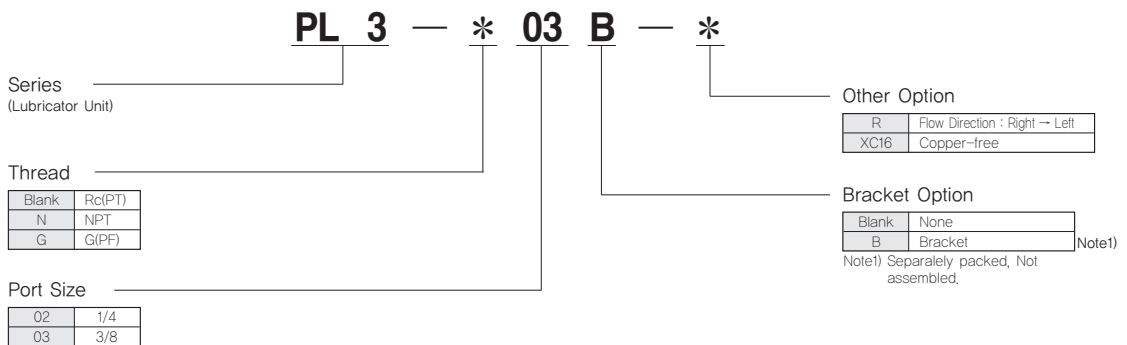
### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Min Operation Flow (N ℓ /min)	40(3/8 ")	
Bowl Capacity (cm <sup>3</sup> )	56(1.89oz)	
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (Non-freezing)	
Flow Capacity ※ (N ℓ /min)	1/4 "	2,100(74scfm)
	3/8 "	3,100(109scfm)
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Recommended Oil	ISO VG32(Turbine Oil 1 Class)	
Weight (kg)	0.26(0.57lb)	

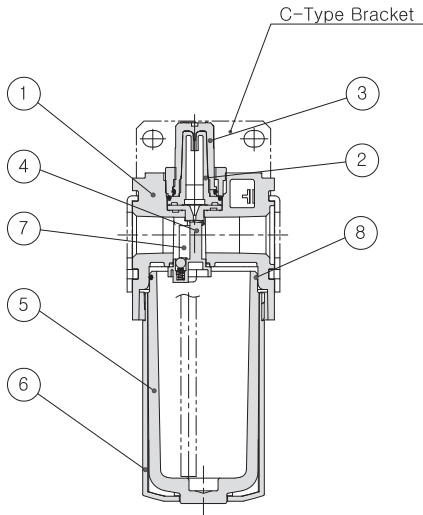
※ Test conditions : Supply pressure 0.6MPa(100psi), Pressure drop 0.05MPa(90psi)



### How to Order



Construction



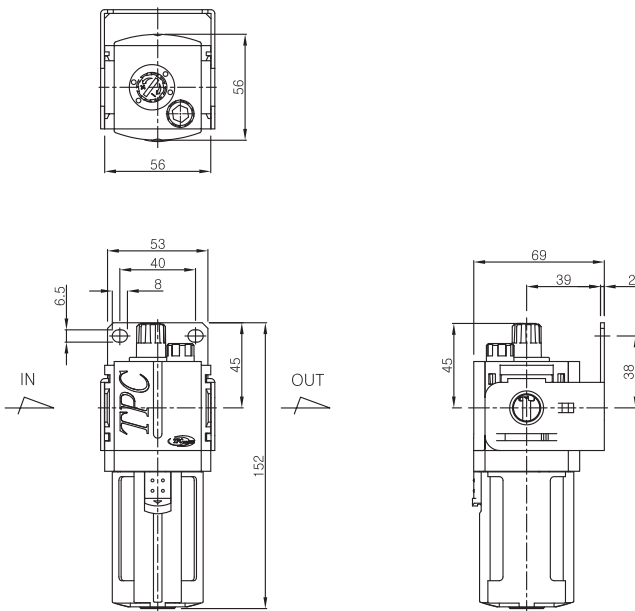
Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Inner Sight dome	Nylon(Transparent)	
③	Outer Sight dome	Nylon(Transparent)	
④	Damper Plate	Acetal	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	

Replacement Parts/Parts List

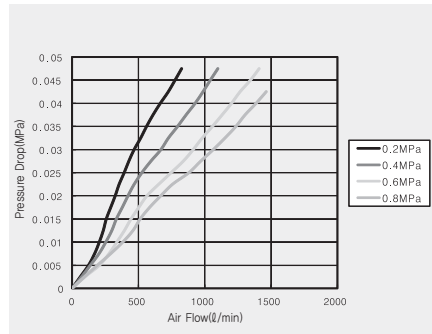
No.	Description	Material	Part No.
⑦	Damper	NBR	PL3-34-001-01
⑧	Bowl O-ring	NBR	PL3-04-001-01

Dimensions

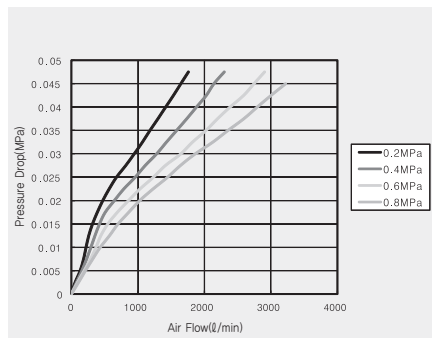


Flow Characteristics

1/4" PL3



3/8" PL3

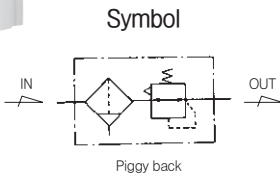


- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3**
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)3
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB



# Series PP3

## Piggyback 1/4" and 3/8"



### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure (MPa)	Standard	0.05~1.0(7~140psi)
	Made to Order Specifications	0.05-0.2(7-30psi), 0.05-0.4(7-60psi), 0.05-1.2(7-170psi)
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (Non-freezing)	
Flow Capacity ※ (N ℓ /min)	1/4"	2,100(74scfm)
	3/8"	2,600(92scfm)
Filtration (μm)	5	
construction	Relieving Style	
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Drain Capacity (cm <sup>3</sup> )	Manual Drian : 38(1.28oz), Auto Drain : 30(1.01oz)	
Weight (kg)	0.49(1.08lb)	

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set pressure 0.6MPa(90psi)

### How to Order

**PP 3 — \* 03 B D G — \***

Series (Piggyback Unit)

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

02	1/4
03	3/8

Bracket Option

Blank	None	Note2)
B	Bracket + Panel Nut	
B1	Panel Nut	

Note2) Separately packed, Not assembled.

#### Other Option

Blank	Set at 0 to 1.0 MPa, 5μm (Standard)		
2	Set at 0 to 0.2 MPa	J4	Filter element - 40μm
4	Set at 0 to 0.4 MPa	K	Built-in Check Valve
12	Set at 0 to 1.2 MPa	R	Flow Direction : Right - Left
E	Non-Relieving Type	T	Tamper Resistant Kit
J2	Filter element - 20μm	XC16	Copper-free

Note1)

Note1,2)

Note1) Refer to page 935 for Built-in Check Valve, Tamper Resistant Kit.

\* If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK

\* Over Max. pressure value can be set.

#### Pressure Gauge

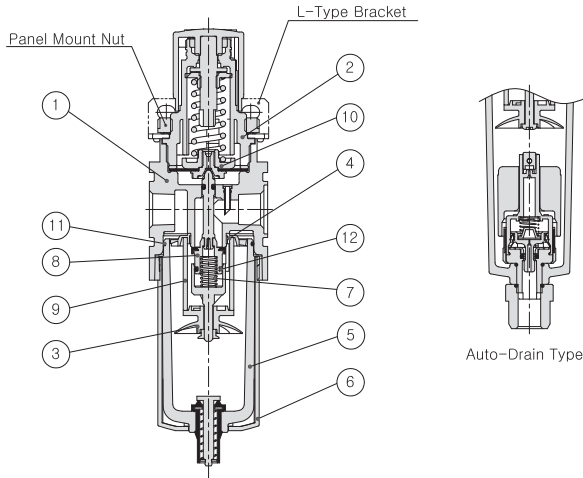
Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa
P	Pressure Gauge	1.0MPa
P2	Pressure Gauge	0.2MPa
P4	Pressure Gauge	0.4MPa

#### Drain Option

Blank	Manual Push Drain	Note3)
D	Auto Drain (N.O. Type)	

Note3) Min. operating pressure is 0.15MPa (20psi) for Auto Drain (N.O. Type)

## Construction



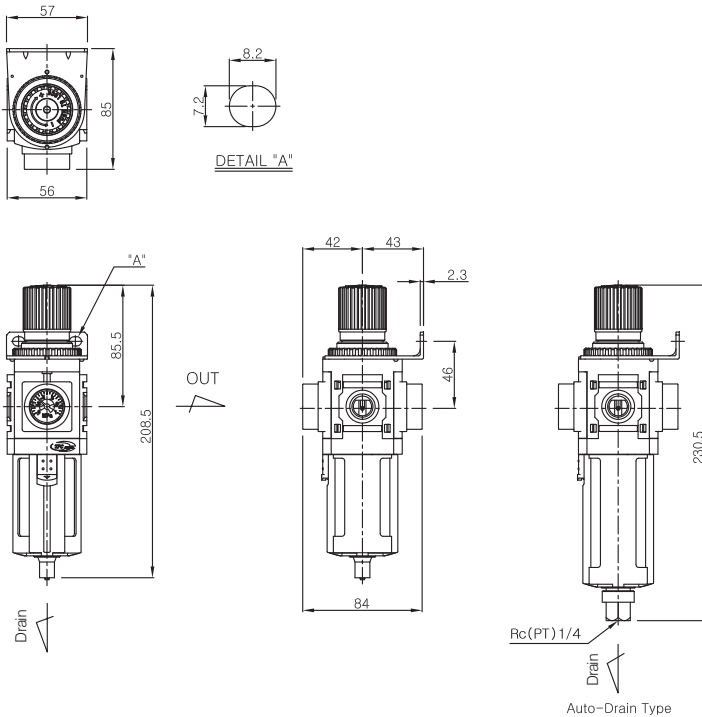
## Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Nylon	
③	Baffle	Acetal	
④	Deflector	Nylon	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	
⑦	Valve Spring	Stainless Steel	

## Replacement Parts/Parts List

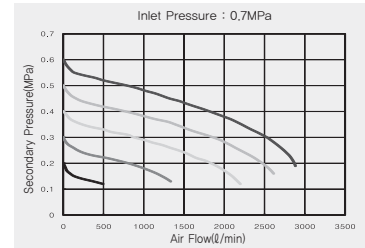
No.	Description	Material	Part No.
⑧	Valve Ass'y	Nylon+NBR	PP3-08A001-01
⑨	Filter Element	Polyethylene	PF3-24-005-01
⑩	Diaphragm Ass'y	Nylon+NBR	PR3-11A001-01
⑪	Bowl O-ring	NBR	PL3-04-001-01
⑫	Valve O-ring	NBR	P10-01

## Dimensions

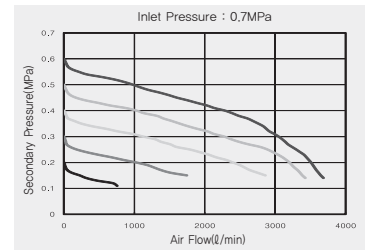


## Flow Characteristics

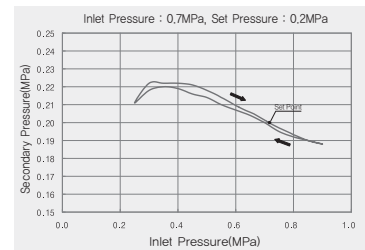
### ▶ 1/4" PP3



### ▶ 3/8" PP3



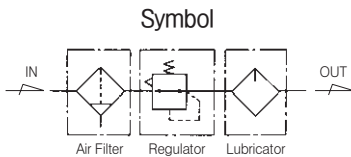
## Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3**
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PC4

## Combination 3/8" and 1/2"



### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure (MPa)	Standard	0.05~1.0(7~140psi)
	Made to Order Specifications	0.05~0.2(7~30psi), 0.05~0.4(7~60psi), 0.05~1.5(7~200psi)
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (Non-freezing)	
Flow Capacity ※ (Nℓ/min)	3/8"	2,800(99scfm)
	1/2"	4,300(152scfm)
Filtration (μm)	5	
Construction	Relieving Style	
Recommended Oil	ISO VG32(Turbine Oil 1 Class)	
Port Size for Pressure Gauge (Rc (PT), NPT)	1/8"	
Weight (kg)	1.88(4.14lb)	

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set pressure 0.6MPa(90psi)

### How to Order

**PC 4 A — \* 04 D G — \* — C3M3Z5**

Series  
(Combination Unit)

Components

Blank	Filter-Regulator-Lubricator
A	Piggyback-Lubricator
B	Filter-Regulator
C	Filter-Coalescing Filter(0.3)-Regulator
D	Piggyback-Coalescing Filter(0.3)
E	Filter-Coalescing Filter(0.01)-Regulator
F	Piggyback-Coalescing Filter(0.01)

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

03	3/8"
04	1/2"

Drain Option

Blank	Manual Push Drain
D	Auto Drain (N.O Type)

Note1) Min. operating pressure is 0.15MPa (20psi) for Auto Drain (N.O Type)

Pressure Gauge

Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa
P	Pressure Gauge	1.0MPa
P2	Pressure Gauge	0.2MPa
P4	Pressure Gauge	0.4MPa

Accessories

Symbol	Port Size	Description	Applicable Series
C1	1/8"	Check Valve	PC2~PC3
C2	1/4"		PC2~PC4
C3	3/8"		PC4
H	-	Shut-off Valve	PC2~PC5
M1	1/8"	Modular Manifold Block Kit	PC2~PC3
M2	1/4"		PC2~PC4
M3	3/8"		PC4
S	-	Slow Start Valve	PC4
V	-	Lock-out Valve	PC2~PC5
W	-	Modular Pipe Adapter Kit	PC2~PC5
Z1	-	Pressure Switch, AC110V	PC2~PC5
Z5	-	Pressure Switch, DC24V	PC2~PC5

Note4)

\* Refer to page 900 for how to attach bracket & how to combine the accessories.  
Note4) When specifying more than one symbol, indicate them alphabetically Ex) C3M3Z

Other Option

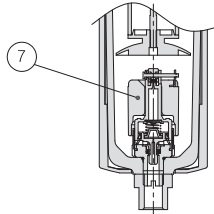
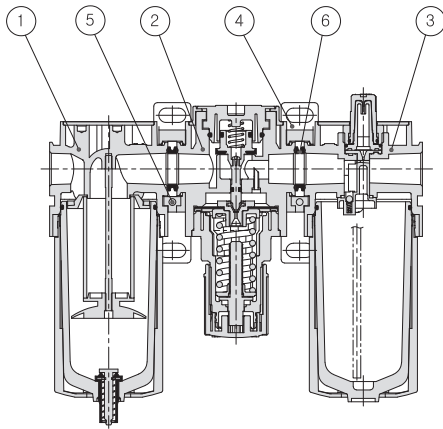
Blank	Set at 0 to 1.0 MPa, 5μm (Standard)		
2	Set at 0 to 0.2 MPa	K	Built-in Check Valve
4	Set at 0 to 0.4 MPa	L	Life Indicator
15	Set at 0 to 1.5 MPa	R	Flow Direction : Right → Left
E	Non-Relieving Type	T	Tamper Resistant Kit
J2	Filter element - 20μm	U	Regulator (Top Mounted)
J4	Filter element - 40μm	XC16	Copper-free

Note1) Refer to page 935 for Built-in Check Valve, Tamper Resistant Kit.

\* If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK

\* Over Max. pressure value can be set.

■ Construction



Auto-Drain Type

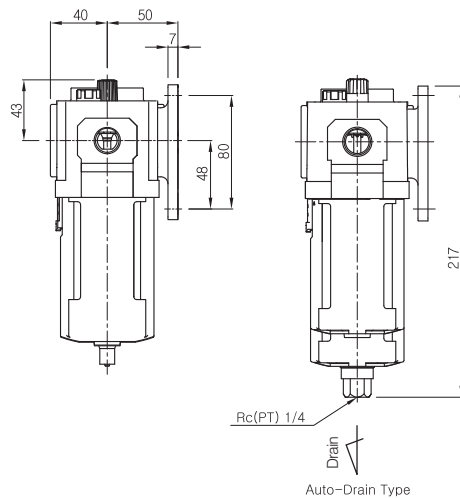
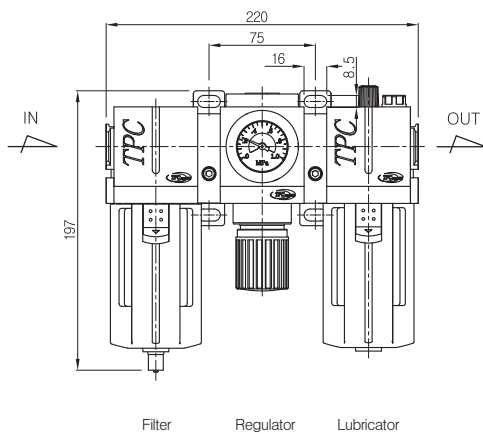
Main Parts/Parts List

No.	Description	Material	Remark
①	Filter Ass'y	-	
②	Regulator Ass'y	-	
③	Lubricator Ass'y	-	
④	Bracket Ass'y	Aluminum	
⑤	Connecting Screw	Carbon steel	

Replacement Parts/Parts List

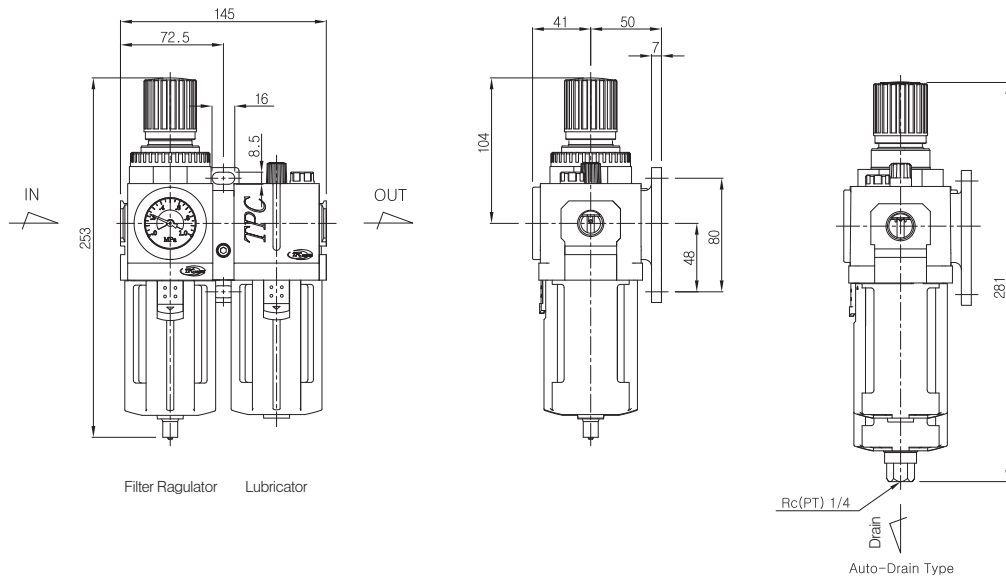
No.	Description	Material	Part No.
⑥	Spacer O-ring	NBR	PC4A-04-001-01
⑦	Auto-Drain ass'y	-	TAF3000-04A-6008

■ PC4 Dimensions

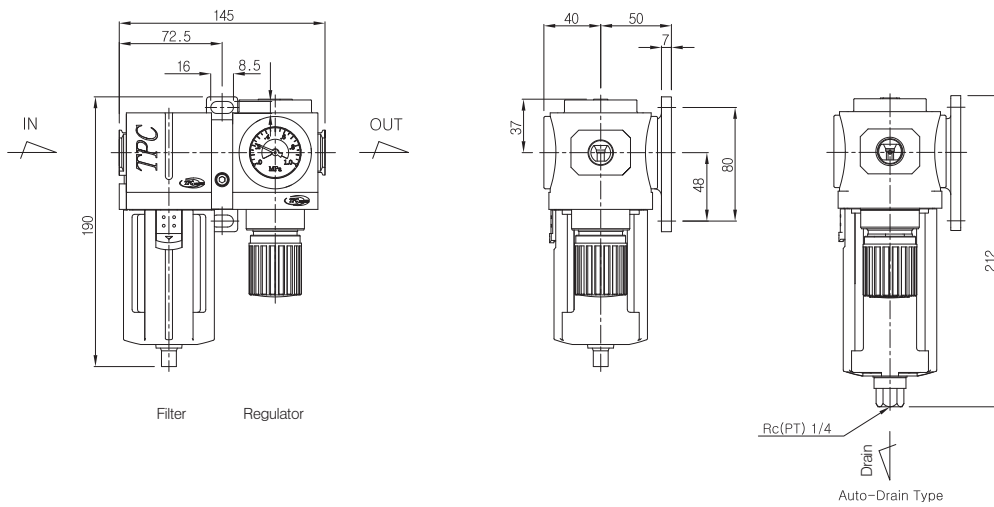


- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

## ■ PC4A Dimensions

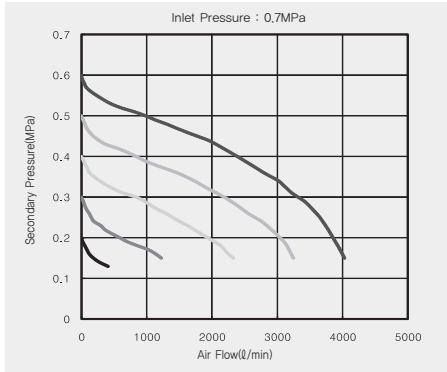


## ■ PC4B Dimensions

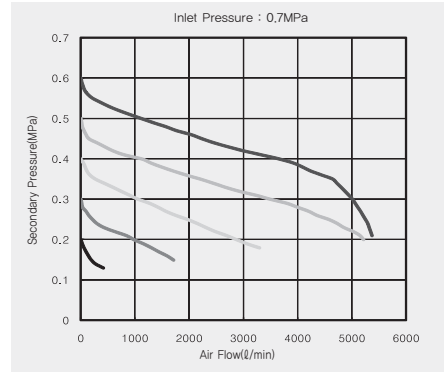


■ PC4 Series Flow Characteristics

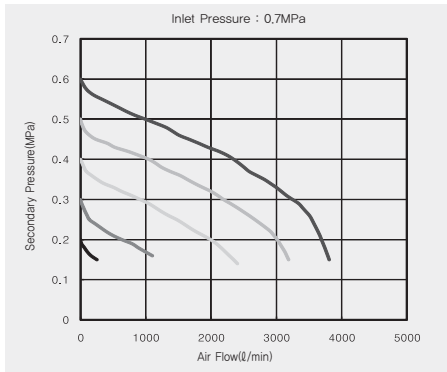
▶ 3/8" PC4



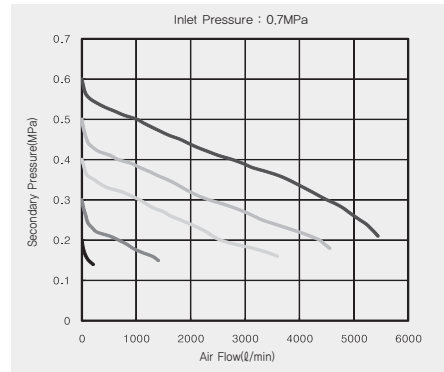
▶ 1/2" PC4



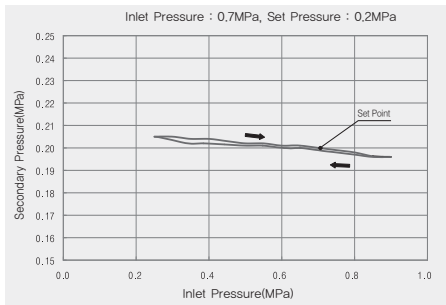
▶ 3/8" PC4A



▶ 1/2" PC4A



■ PC4 Series Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4**
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PF4

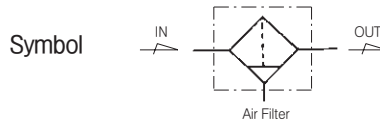
## Filter 3/8" and 1/2"



### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (Non-freezing)	
Flow Capacity ※ (N ℓ /min)	3/8"	4,500(159scfm)
	1/2"	5,600(198scfm)
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Filtration (μm)	5	
Drain Capacity (cm <sup>3</sup> )	Manual Drain : 56(1.89oz), Auto Drain : 68(2.3oz)	
Weight (kg)	0.5	

※ Test conditions : Supply pressure 0.6MPa(90psi), Pressure drop 0.07MPa(10psi)



### How to Order

**PF 4 — \* 04 B D — \***

Series (Filter Unit) — PF 4

Thread — \*

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size — 04

03	3/8
04	1/2

Other Option

Blank	Filter element - 5μm	L	Life Indicator
J2	Filter element - 20μm	R	Flow Direction : Right → Left
J4	Filter element - 40μm	XC16	Copper-free

Drain Option

Blank	Manual Drain
D	Auto Drain (N.O Type)

Note1) Min. operating pressure to Auto drain (N.O Type)

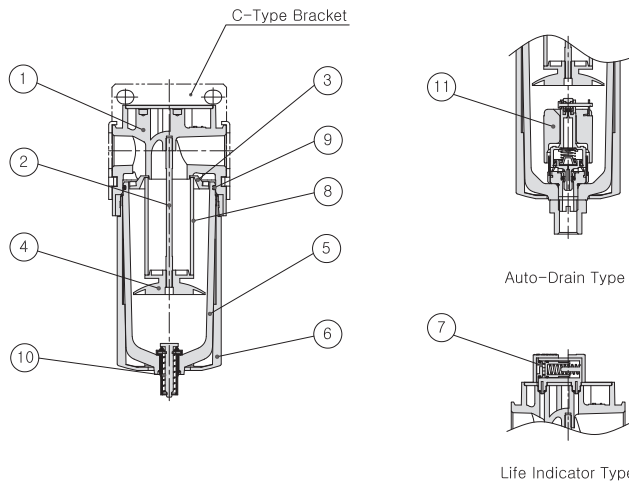
Bracket Option

Blank	None
B	Bracket

Note2) Separately packet, Not assembled.



## Construction



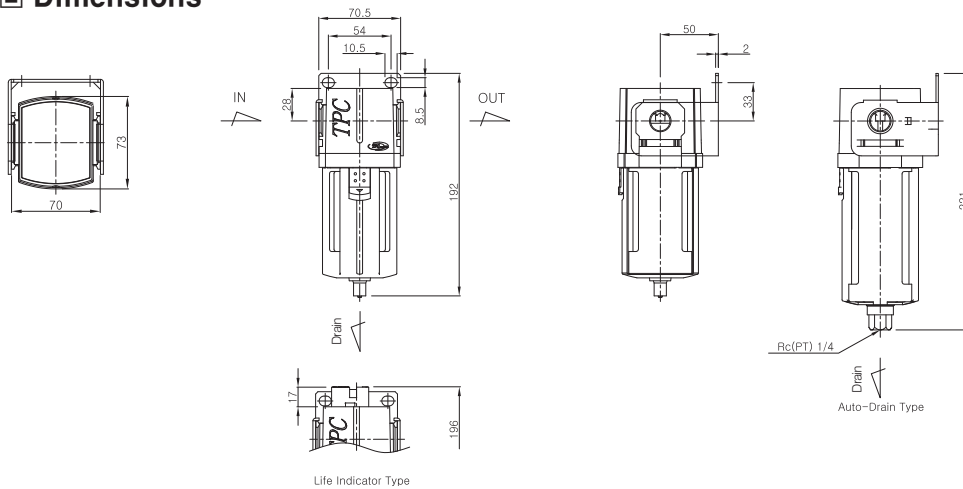
### Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Baffle Screw	Rolled Steel	
③	Deflector	Nylon	
④	Baffle	Acetal	
⑤	Bowl	Ploycarbonate	
⑥	Bowl Guard	Nylon	
⑦	Life Indicator	-	Option

### Replacement Parts/Parts List

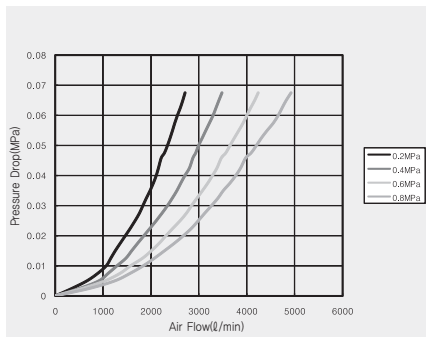
No.	Description	Material	Part No.
⑧	Filter Element	Polyethylene	PF4-24-005-01
⑨	Bowl O-ring	NBR	TAF4000-08-6000
⑩	Drain Ass'y	-	TAF3000-10A-6004
⑪	Auto Drain Ass'y	-	TAF3000-04A-6008

## Dimensions

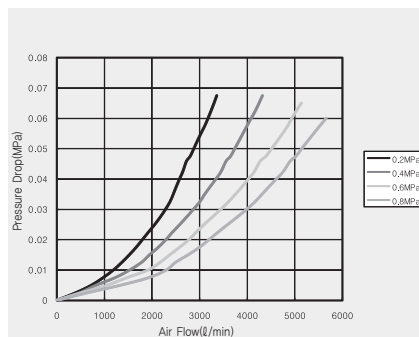


## Flow Characteristics

### ▶ 3/8" PF4



### ▶ 1/2" PF4



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PR4

## Regulator 3/8" and 1/2"

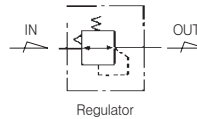


### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure (MPa)	Standard	0.05~1.0(7~140psi)
	Made to Order Specifications	0.05~0.2(7~30psi), 0.05~0.4(7~60psi), 0.05~1.5(7~200psi)
Ambient and Fluid Temperature (°C)	-5~60(23~140°F)(Non-freezing)	
Flow Capacity ※	3/8"	5,100(99scfm)
(N ℓ /min)	1/2"	7,700(152scfm)
Construction	Relieving Style	
Port Size for Pressure Gauge (Rc (PT), NPT)	1/8"	
Weight (kg)	0.56(4.14lb)	

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set pressure 0.6MPa(90psi)

Symbol



### How to Order

**PR 4 — \* 04 B G — \***

Series  
(Regulator Unit)

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

03	3/8
04	1/2

Bracket Option

Blank	None	Note1)
B	Bracket + Panel Nut	
B1	Panel Nut	

Note1) Separately packed, Not assembled.

Other Option

Blank	Set at 0 to 1.0 MPa (Standard)	K	Built-in Check Valve	Note1)
2	Set at 0 to 0.2 MPa	R	Flow Direction : Right → Left	Note1,2)
4	Set at 0 to 0.4 MPa	T	Tamper Resistant Kit	
15	Set at 0 to 1.5 MPa	XC16	Copper-free	
E	Non-Relieving Type			

Note1) Refer to page 935 for Built-in Check Valve, Tamper Resistant Kit.

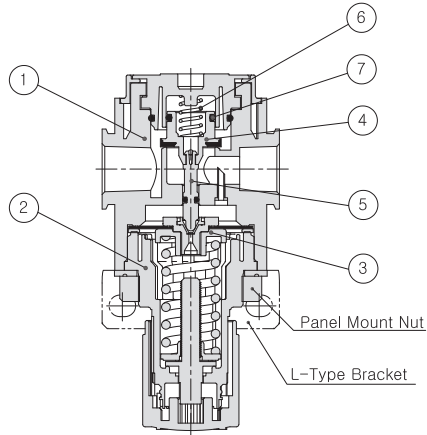
※ If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK

※ Over Max. pressure value can be set.

Pressure Gauge

Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa
P	Pressure Gauge	1.0MPa
P2	Pressure Gauge	0.2MPa
P4	Pressure Gauge	0.4MPa

Construction



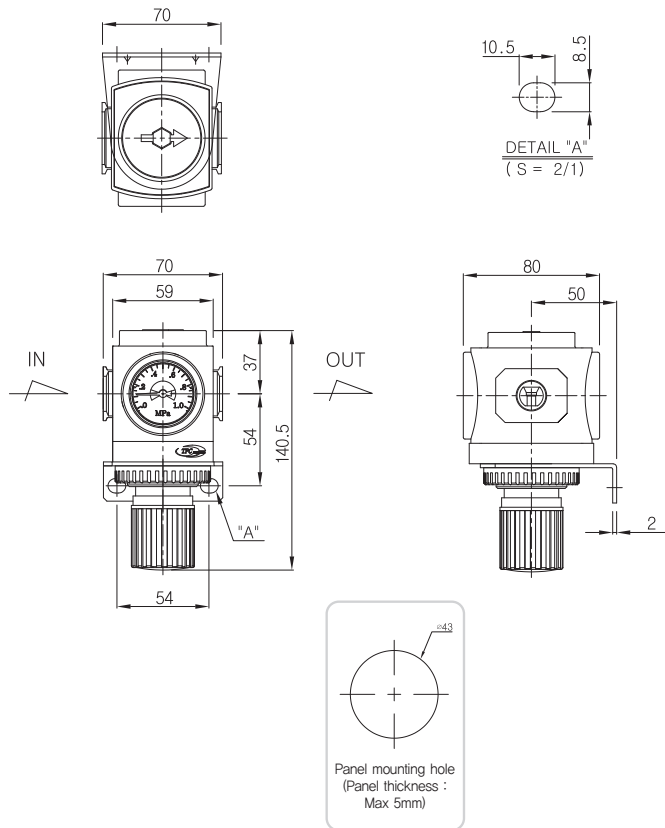
Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Nylon	

Replacement Parts/Parts List

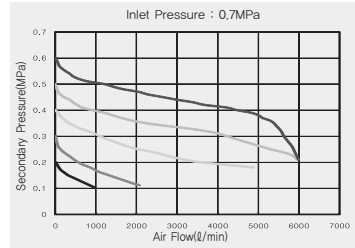
No.	Description	Material	Part No.
③	Diaphragm Assy	Nylon+NBR	PR4-11A001-01
④	Valve Assy	Nylon+NBR	PR4-08A001-01
⑤	Valve Stem	Brass	PR4-09-001-01
⑥	Valve Spring	Stainless Steel	PR4-14-001-01
⑦	Valve O-ring	NBR	P15-01

Dimensions

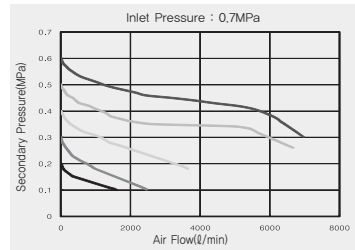


Flow Characteristics

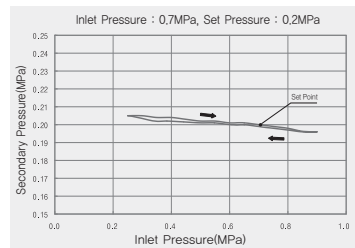
3/8" PR4



1/2" PR4



Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series **PL4**

## Lubricator 3/8" and 1/2"

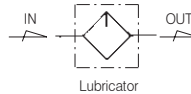


### Standard Specifications

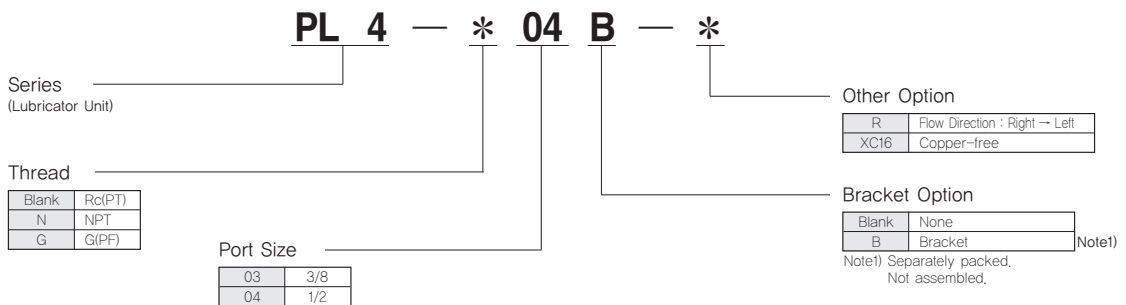
Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Min Operating Flow (N ℓ /min)	50(1.8scfm)(1/2 ~)	
Bowl Capacity (cm <sup>3</sup> )	127(4.29oz)	
Ambient and Fluid Temperature (°C)	-5~60(23~140°F)(Non-freezing)	
Flow Capacity ※ (N ℓ /min)	3/8 ~	2,400(85scfm)
	1/2 ~	4,500(159scfm)
Bowl Material	Poly carbonate	
Bowl Guard Material	Nylon	
Recommended Oil	ISO VG32(Turbine oil 1 class)	
Weight(kg)	0.54(1.19lb)	

※ Test conditions : Supply pressure 0.6MPa(90psi), Pressure drop 0.05MPa(7psi)

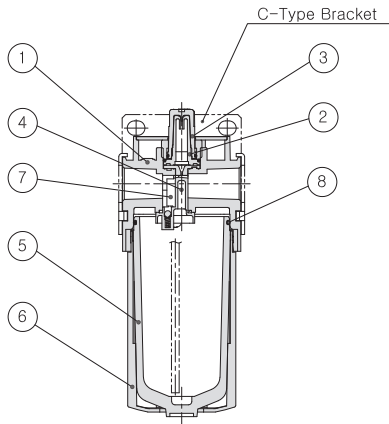
Symbol



### How to Order



Construction



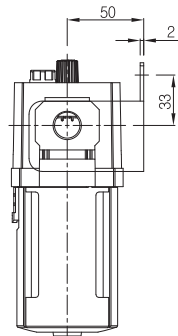
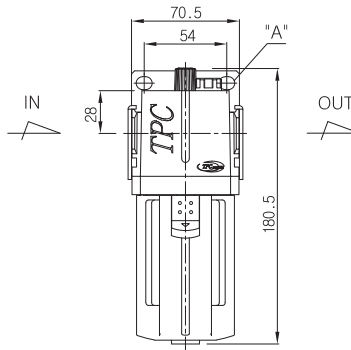
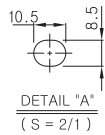
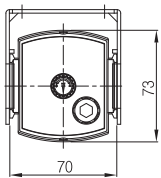
Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Inner Sight Dome	Nylon(Transparent)	
③	Outer Sight Dome	Nylon(Transparent)	
④	Damper Plate	Acetal	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	

Replacement Parts/Parts List

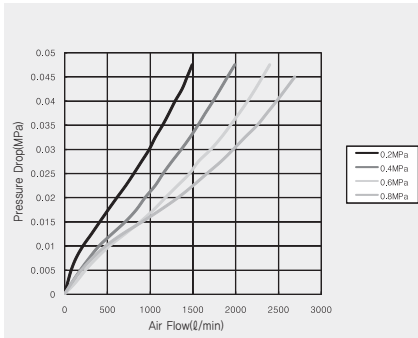
No.	Description	Material	Part No.
⑦	Damper	NBR	PL4000-14-6100-01
⑧	Bowl O-ring	NBR	TAF4000-08-6000

Dimensions

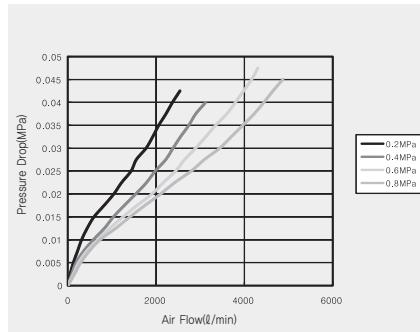


Flow Characteristics

▶ 3/8" PL4



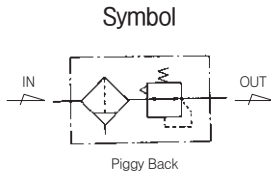
▶ 1/2" PL4



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PP4

## Piggyback 3/8" and 1/2"



### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure	Standard	0.05~1.0(7~140psi)
(MPa)	Made to Order Specifications	0.05-0.2(7-30psi), 0.05-0.4(7-60psi), 0.05-1.5(7-200psi)
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (Non-freezing)	
Flow Capacity ※	3/8"	3,800(134scfm)
(N ℓ /min)	1/2"	4,700(166scfm)
Filtration (μm)	5	
Construction	Relieving Style	
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Drain Capacity (cm <sup>3</sup> )	Manual Drain : 56(1.89oz), Auto Drain : 68(2.3oz)	
Weight (kg)	0.74(1.63lb)	

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set pressure 0.6MPa(90psi)

### How to Order

**PP 4 — \* 04 B D G — \***

Series (Piggyback Unit) — PP 4

Thread — \*

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size — 04

03	3/8
04	1/2

Bracket Option — B

Blank	None
B	Bracket + Panel Net
B1	Panel Net

Note2)

Note1) Separately packed. Not assembled.

#### Other Option

Blank	Set at 0 to 1.0 MPa, 5μm (Standard)		
2	Set at 0 to 0.2 MPa	J4	Filter element - 40μm
4	Set at 0 to 0.4 MPa	K	Built-in Check Valve
15	Set at 0 to 1.5 MPa	R	Flow Direction : Right - Left
E	Non-Relieving Type	T	Tamper Resistant Kit
J2	Filter element - 20μm	XC16	Copper-free

Note1)

Note1,2)

Note1) Refer to page 935 for Built-in Check Valve, Tamper Resistant Kit.

\* If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK

\* Over Max. pressure value can be set.

#### Pressure Gauge

Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa
P	Pressure Gauge	1.0MPa
P2	Pressure Gauge	0.2MPa
P4	Pressure Gauge	0.4MPa

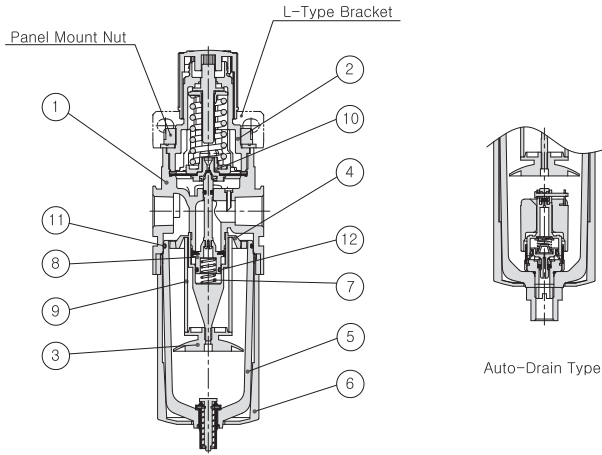
#### Drain Option

Blank	Manual Push Drain
D	Auto Drain (N.O Type)

Note3)

Note3) Min. operating pressure is 0.15MPa (20psi) for Auto Drain (N.O Type)

## Construction



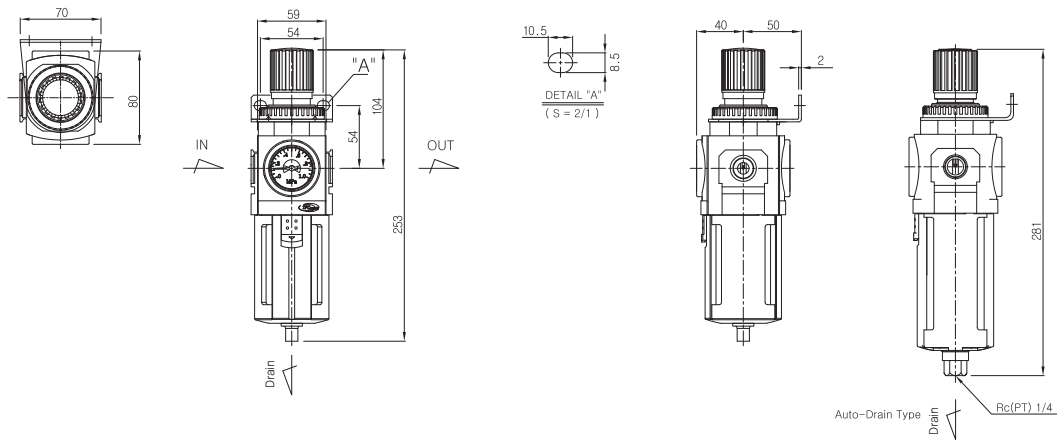
### Main Parts/Parts List

No.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Nylon	
③	Baffle	Acetal	
④	Deflector	Acetal	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	
⑦	Valve Spring	Stainless Steel	

### Replacement Parts/Parts List

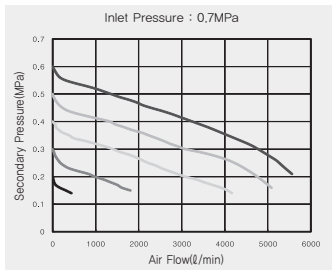
No.	Description	Material	Part No.
⑧	Valve Ass'y	Nylon+NBR	PP4-08A001-01
⑨	Filter Element	Polyethylene	PF4-24-005-01
⑩	Diaphragm Ass'y	Nylon+NBR	PR4-11A001-01
⑪	Bowl O-ring	NBR	TAF4000-08-6000
⑫	Valve O-ring	NBR	PR3-04-001-01

## Dimensions

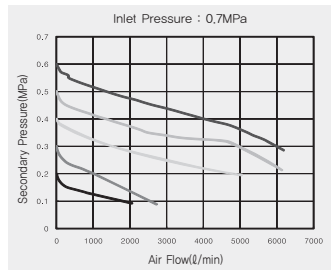


## Flow Characteristics

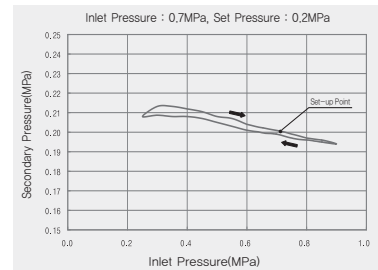
### ▶ 3/8" PP4



### ▶ 1/2" PP4



## Pressure Characteristics



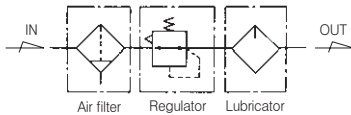
- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4**
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PC5

## Combination 3/4" and 1"



Symbol



### Standard Specifications

Fluid		Air
Max. Operating Pressure (MPa)		1.0(140psi)
Proof Pressure (MPa)		1.5(200psi)
Set Pressure	Standard	0.05 ~ 1.0(7~140psi)
Range(MPa)	Madd to Order Specifications	0.05~0.2(7~30psi), 0.05~0.47(7~60psi), 0.05~1.5(7~200psi)
Ambient and Fluid Temperature (°C)		-5~60(23~140°F) (Non-freezing)
Flow Capacity ※	3/4"	5,700(201scfm)
(N ℓ /min)	1"	6,100(215scfm)
Filtration (μm)		5
Construction		Relieving Sytle
Recommended Oil		ISO VG32 (Turbine Oil 1 Class)
Port Size for Pressure Gauge (Rc (PT), NPT)		1/8"
Weight (kg)		4.06(8.95lb)

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set pressure 0.6MPa(90psi)

### How to Order

**PC 5 A — \* 10 D G — \* — VWZ**

Series  
(Combination Unit)

Components

Blank	Filter-Regulator-Lubricator
A	Piggyback-Lubricator
B	Filter-Regulator
C	Filter-Coalescing Filter(0.3)-Regulator
D	Piggyback-Coalescing Filter(0.3)
E	Filter-Coalescing Filter(0.01)-Regulator
F	Piggyback-Coalescing Filter(0.01)

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

06	3/4
10	1

Drain Option

Blank	Manual Drain
D	Auto Drain (N.O Type)

Note1)

Note1) Min. operating pressure is 0.15MPa(20psi) for Auto Drain (N.O Type)

Pressure Gauge

Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa(140psi)
P	Pressure Gauge	1.0MPa(140psi)
P2	Pressure Gauge	0.2MPa(30psi)
P4	Pressure Gauge	0.4MPa(60psi)

Accessories

Symbol	Port Size	Description	Applicable Series
C1	1/8"	Check Valve	PC2~PC3
C2	1/4"		PC2~PC4
C3	3/8"		PC4
H	-	Shut-off Valve	PC2~PC5
M1	1/8"	Modular Manifold Block Kit	PC2~PC3
M2	1/4"		PC2~PC4
M3	3/8"		PC4
V	-	Lock-out Valve	PC2~PC5
W	-	Modular Pipe Adapter Kit	PC2~PC5
Z1	-	Pressure Switch, AC110V	PC2~PC5
Z5	-	Pressure Switch, DC24V	PC2~PC5

\* Refer to page 900 or how to attach bracket & how to combine the accessories  
\* When specifying more than one symbol, indicate them alphabetically Ex) CIMZ

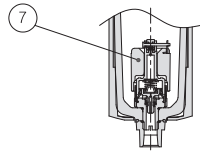
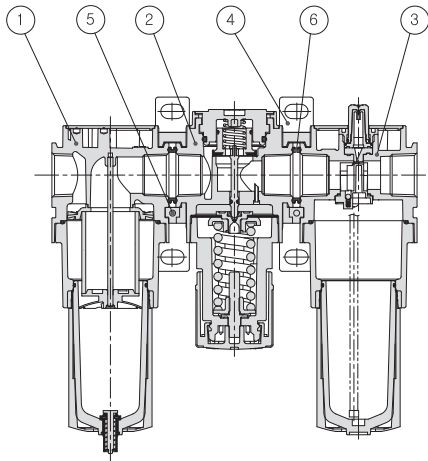
Other Option

Blank	Set at 0 to 1.0 MPa, 5μm (Standard)		
2	Set at 0 to 0.2 MPa	K	Built-in Check Valve
4	Set at 0 to 0.4 MPa	L	Life Indicator
15	Set at 0 to 1.5 MPa	R	Flow direction : Right~Left
E	Non-relieving type	T	Tamper Resistant Kit
J2	Filter element - 20μm	U	Regulator (Top mounted)
J4	Filter element - 40μm	XC16	Copper-free

Note2) Refer to page 935 for Built-in check valve, Tamper resistant kit, Note3) Separately packed, Not assembled.  
\* If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK  
\* Over Max. pressure value can be set.



## Construction



Auto-Drain Type

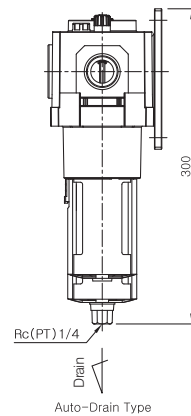
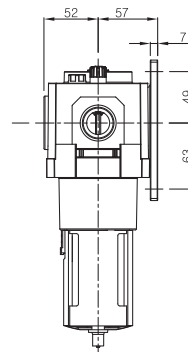
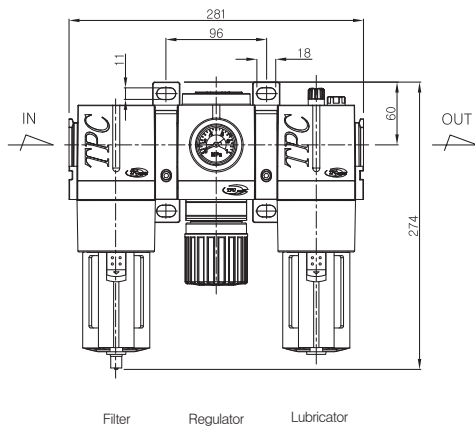
### Main Parts/Parts List

NO.	Description	Material	Remark
①	Filter ass'y	-	
②	Regulator ass'y	-	
③	Lubricator ass'y	-	
④	Bracket ass'y	Aluminum	
⑤	Connecting screw	Carbon Steel	

### Replacement Parts/Parts List

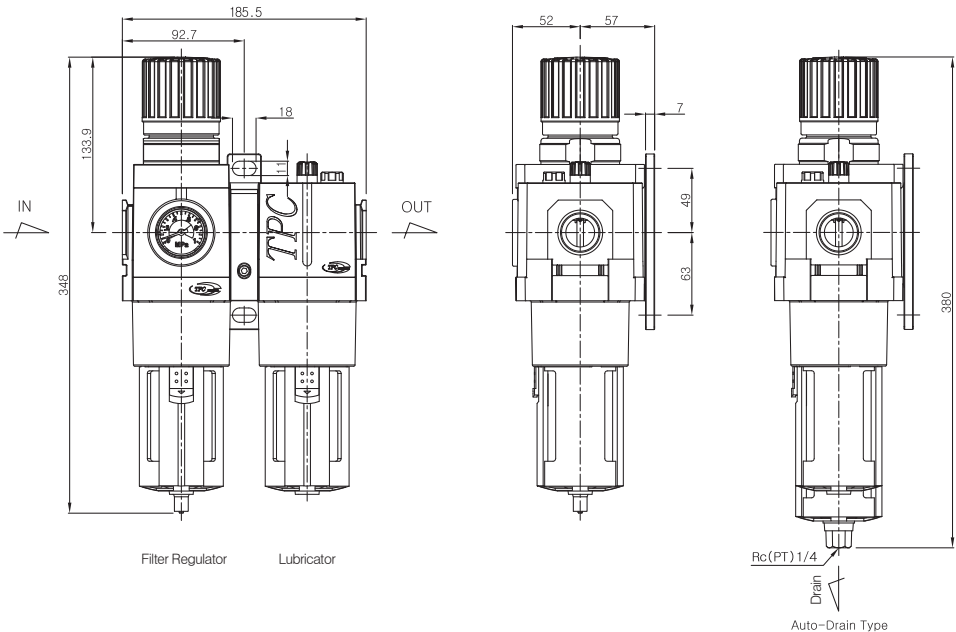
NO.	Description	Material	Part No.
⑥	Spacer O-ring	NBR	PC5-04-001-01
⑦	Auto-drain ass'y	-	TAF3000-04A-6008

## PC5 Dimensions

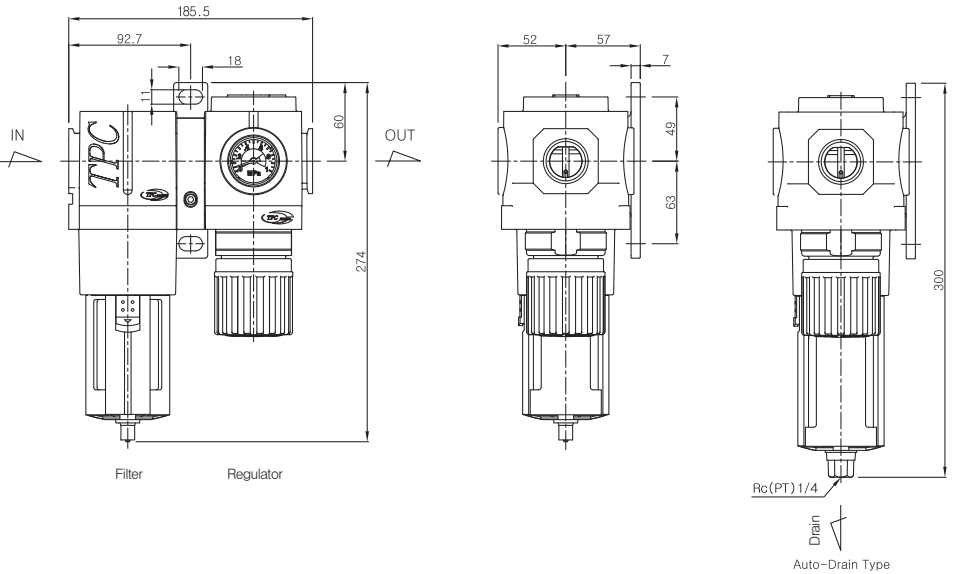


- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5**
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~  
PFH(U)5
- PPH(U)3~  
PPH(U)4
- PLV
- PSH
- PCV
- MB

■ PC5A Dimensions

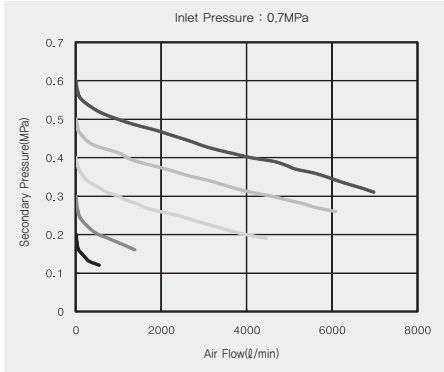


■ PC5B Dimensions

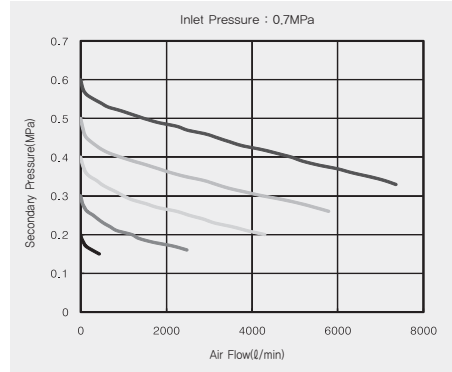


■ PC5 Series Flow Characteristics

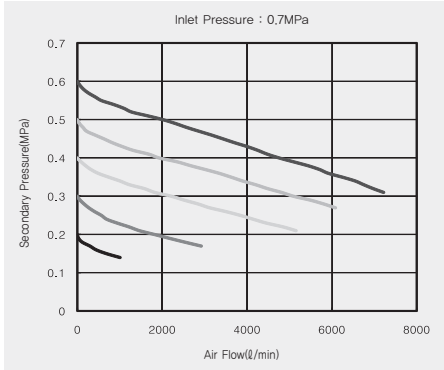
▶ 3/4" PC5



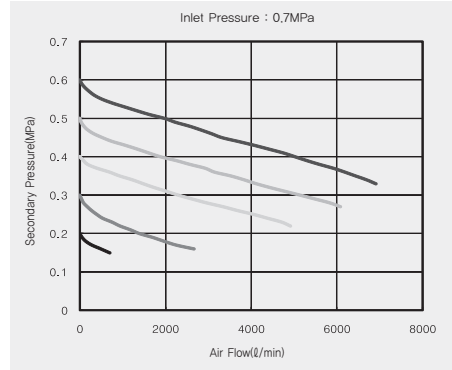
▶ 1" PC5



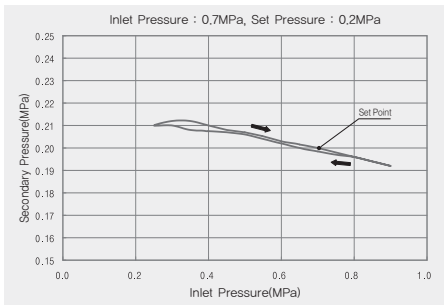
▶ 3/4" PC5A



▶ 1" PC5A



■ PC5 Series Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5**
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~  
PFH(U)5
- PPH(U)3~  
PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PF5

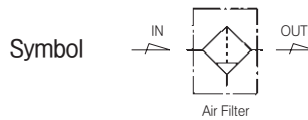
## Filter 3/4" and 1"



### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (Non-freezing)	
Flow Capacity ※	3/4"	8,200(290scfm)
(N ℓ /min)	1"	9,600(339scfm)
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Filtration (μm)	5	
Drain Capacity (cm <sup>3</sup> )	Manual Drain : 156(5.27oz), Auto Drain : 174(5.88oz)	
Weight (kg)	1.10(2.43lb)	

※ Test conditions : Supply pressure 0.6MPa(90psi), pressure drop 0.07MPa(10psi)



### How to Order

**PF 5 — \* 10 B D — \***

Series (Filter Unit) — PF 5

Thread — \*

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size — 10

06	3/4
10	1

Other Option

Blank	Filter element - 5μm	L	Life Indicator
J2	Filter element - 20μm	R	Flow direction : Right-Left
J4	Filter element - 40μm	XC16	Copper-free

Drain Option

Blank	Manual Drain
D	Auto Drain (N.O Type)

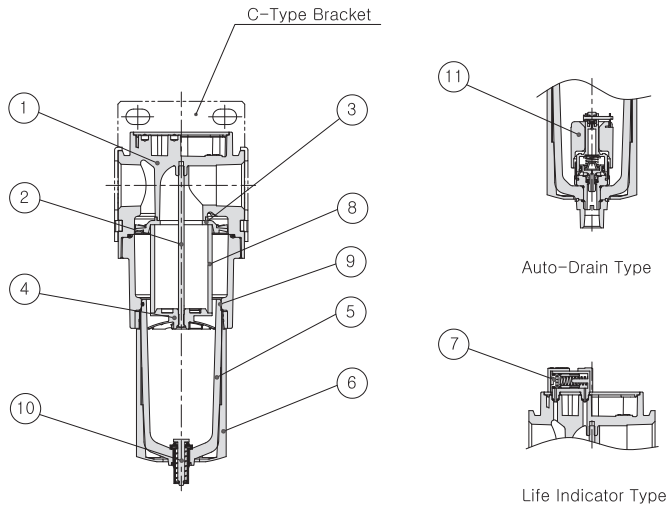
Note1) Min. operating pressure is 0.15MPa(20psi) for Auto Drain (N.O Type)

Bracket Option

Blank	None
B	Bracket

Note2) Separately packed, Not assembled.

## Construction



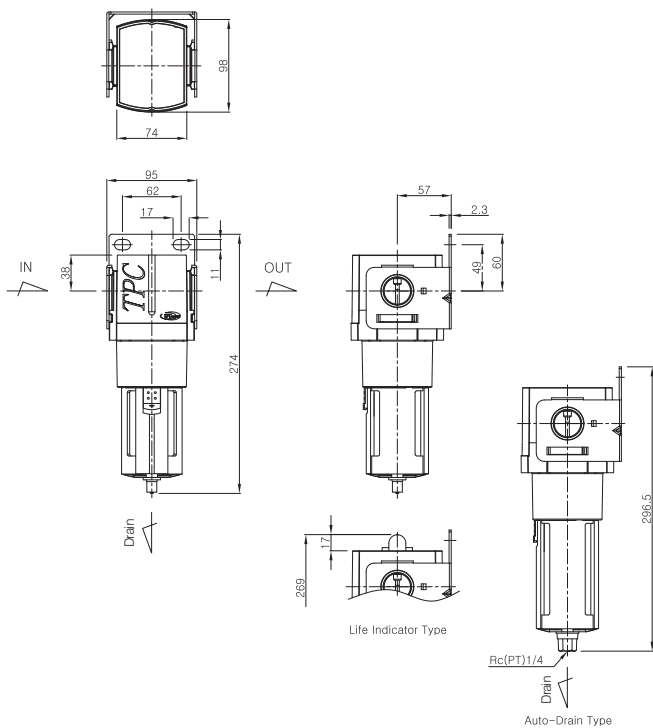
### Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Baffle Screw	Rolled Steel	
③	Deflector	Nylon	
④	Baffle	Acetal	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	
⑦	Life Indicator	-	Option

### Replacement Parts/Parts List

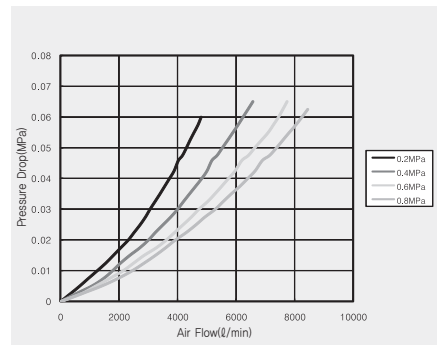
NO.	Description	Material	Part No.
⑧	Filter Element	Polyethylene	PF5-24-005-01
⑨	Bowl O-ring	NBR	TAF4000-08-6000
⑩	Drain Ass'y	-	TAF3000-10A-6004
⑪	Auto Drain Ass'y	-	TAF3000-04A-6008

## Dimensions

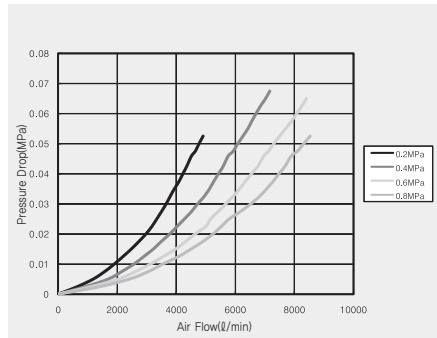


## Flow Characteristics

### ▶ 3/4" PF5



### ▶ 1" PF5



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)3
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PR5

## Regulator 3/4" and 1"

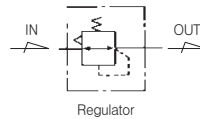


### Standard Specifications

Fluid		Air
Max. Operating Pressure (MPa)		1.0(140psi)
Proof Pressure (MPa)		1.5(200psi)
Set Pressure	Standard	0.05~1.0
Range(MPa)	Madd to Order Specifications	0.05~0.2(7~30psi), 0.05~0.47(7~60psi), 0.05~1.5(7~200psi)
Ambient and Fluid Temperature (°C)		-5~60(23~140°F) (Non-freezing)
Flow Capacity ※	3/4"	8,200(290scfm)
(N ℓ /min)	1"	9,600(339scfm)
Construction		Relieving Sytle
Port Size for Pressure Gauge (Rc (PT), NPT)		1/8"
Weight(kg)		1.46(2.43lb)

※ Test conditions : Supply pressure 0.7MPa(100psi) , pre-set pressure 0.6MPa(90psi)

Symbol



### How to Order

**PR 5** — \* **10 B G** — \*

Series (Regulator Unit) — PR 5

Thread — \*

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size — 10

06	3/4
10	1

Bracket Option — B

Blank	None
B	Bracket + Panel Nut
B1	Panel Nut

Note2) Separately packed, Not assembled.

#### Other Option

Blank	Set at 0 to 1.0 MPa, Standard	K	Built-in Check Valve	Note1)
2	Set at 0 to 0.2 MPa	R	Flow direction : Right→Left	Note1,2)
4	Set at 0 to 0.4 MPa	T	Tamper Resistant Kit	Note1,2)
15	Set at 0 to 1.5 MPa	XC16	Copper-free	
E	Non-Relieving Type			

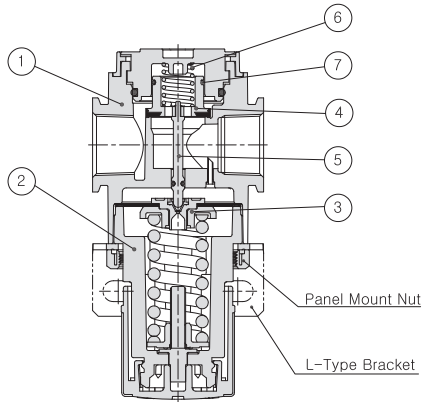
Note1) Refer to page 935 for Built-in check valve, Tamper resistant kit.  
 \* If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK

\* Over Max. pressure value can be set.

#### Pressure Gauge

Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa
P	Pressure Gauge	1.0MPa
P2	Pressure Gauge	0.2MPa
P4	Pressure Gauge	0.4MPa

Construction



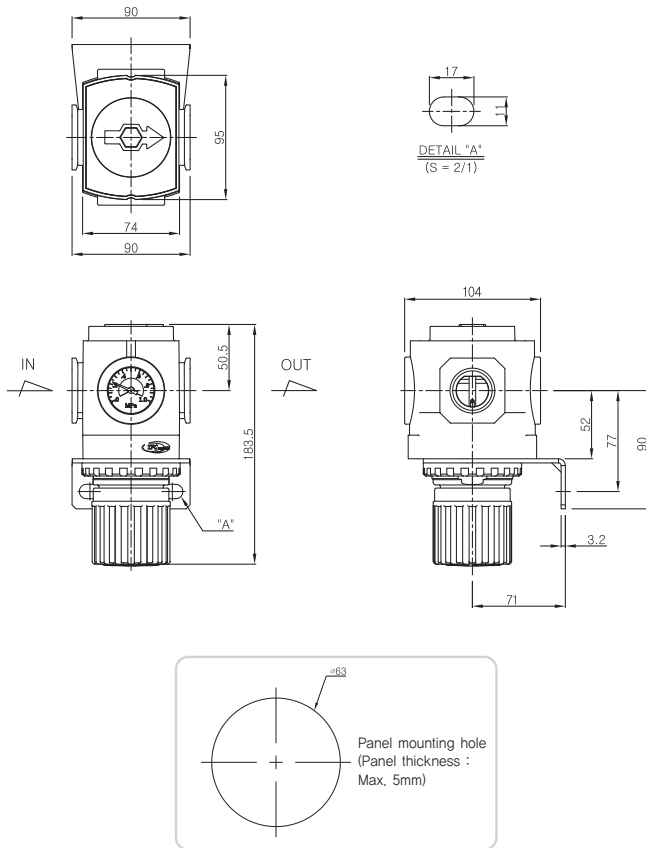
Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Aluminum	

Replacement Parts/Parts List

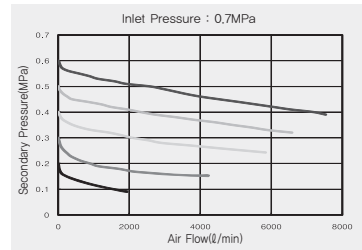
NO.	Description	Material	Part No.
③	Diaphragm Ass'y	Aluminum+NBR	PR5-11A001-01
④	Valve Ass'y	Nylon+NBR	PR5-08A001-01
⑤	Valve Stem	Brass	PR5-09-001-01
⑥	Valve Spring	Stainless Steel	PR5-14-001-01
⑦	Valve O-ring	NBR	S24-01

Dimensions

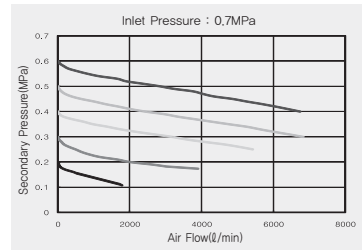


Flow Characteristics

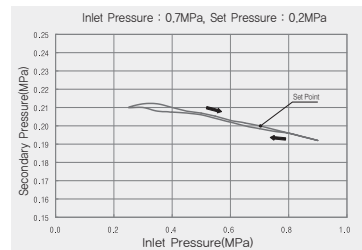
3/4" PR5



1" PR5



Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5**
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series **PL5**

## Lubricator 3/4" and 1"

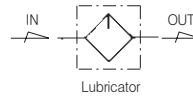


### Standard Specifications

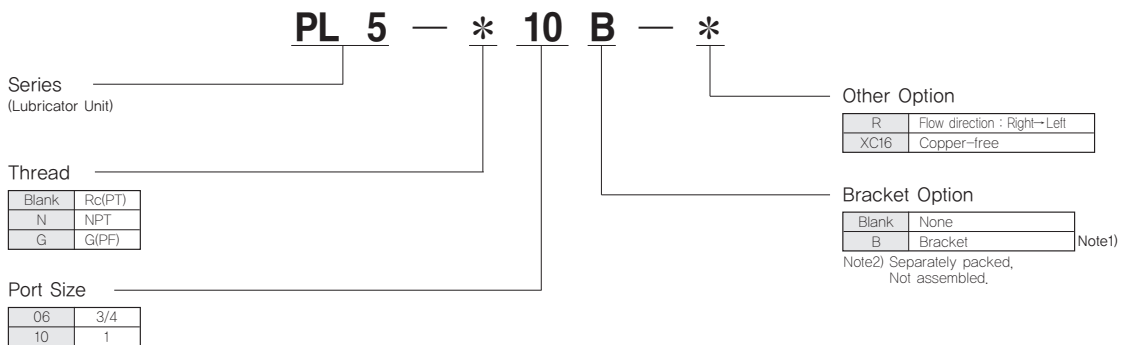
Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Min Operating Flow (N ℓ /min)	150(5.3scfm) (1 ~ )	
Bowl Capacity (cm <sup>3</sup> )	109(3.69oz)	
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (Non-freezing)	
Flow Capacity ※	3/4 ~	9,400(332scfm)
(N ℓ /min)	1 ~	9,900(350scfm)
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Recommended Oil	ISO VG32(Turbine Oil 1 Class)	
Weight(kg)	1.08(2.38lb)	

※ Test conditions : Supply pressure 0.6MPa(90psi) , pressure drop 0.05MPa(7psi)

Symbol

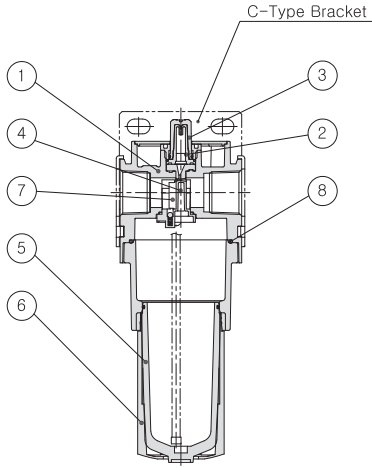


### How to Order





■ Construction



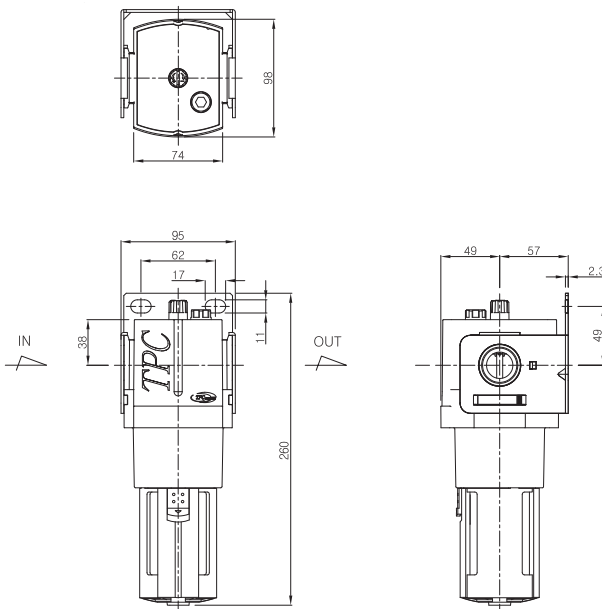
Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Inner Sight dome	Nylon(Transparent)	
③	Outer Sight dome	Nylon(Transparent)	
④	Damper Plate	Acetal	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	

Replacement Parts/Parts List

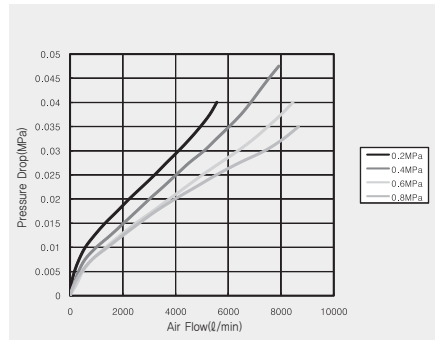
NO.	Description	Material	Part No.
⑦	Damper	NBR	PL5-34-001-01
⑧	Bowl O-ring	NBR	TAF4000-08-6000

■ Dimensions

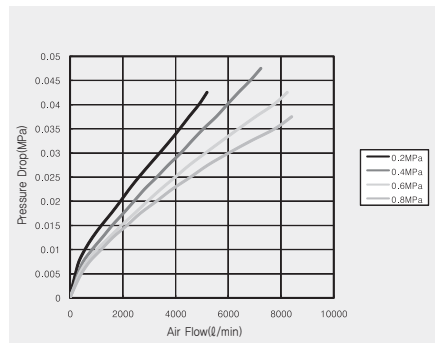


■ Flow Characteristics

▶ 3/4" PL5



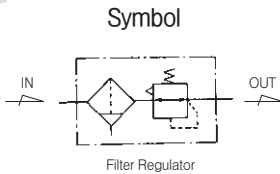
▶ 1" PL5



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~  
PFH(U)5
- PPH(U)3~  
PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PP5

## Piggyback 3/4" and 1"



### Standard Specifications

Fluid	Air	
Max. Operating Pressure (MPa)	1.0(140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure	Standard	0.05~1.0
Range(MPa)	Madd to Order Specifications	0.05~0.2(7~30psi), 0.05~0.47(7~60psi), 0.05~1.5(7~200psi)
Ambient and Fluid Temperature (°C)	-5~60(23~140°F) (Non-freezing)	
Flow Capacity ※	3/4"	9,400(332scfm)
(N l /min)	1"	9,900(350scfm)
Filtration (μm)	5	
Construction	Relieving Sytle	
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Drain Capacity (cm <sup>3</sup> )	Manual Drain : 156(5.27oz), Auto Drain : 174(5.88oz)	
Weight (kg)	2.39(5.27lb)	

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set pressure 0.6MPa(90psi)

### How to Order

**PP 5** — \* **10 B D G** — \*

Series (Piggyback Unit)

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

06	3/4
10	1

Bracket Option

Blank	None
B	Bracket + Panel Nut
B1	Panel Nut

Note2) Separately packed, Not assembled.

#### Other Option

Blank	Set at 0 to 1.0 MPa, 5μm (Standard)		
2	Set at 0 to 0.2 MPa	J4	Filter element - 40μm
4	Set at 0 to 0.4 MPa	K	Built-in Check Valve
15	Set at 0 to 1.5 MPa	R	Flow direction : Right-Left
E	Non-Relieving Type	T	Tamper Resistant Kit
J2	Filter element - 20μm	XC16	Copper-free

Note1)

Note1,2)

Note1) Refer to page 935 for Built-in check valve, Tamper resistant kit.  
\* If ordering more than one option, indicate symbols numerically then alphabetically Ex) 2EK

\* Over Max. pressure value can be set.

#### Pressure Gauge

Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1.0MPa
P	Pressure Gauge	1.0MPa
P2	Pressure Gauge	0.2MPa
P4	Pressure Gauge	0.4MPa

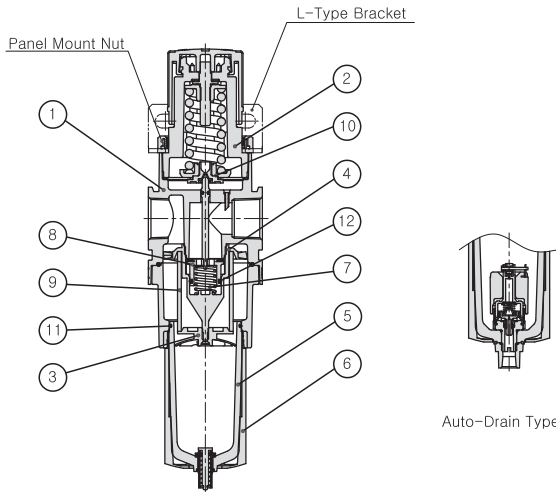
#### Drain Option

Blank	Manual Drain
D	Auto Drain (N.O Type)

Note3)

Note3) Min. operating pressure is 0.15MPa(20psi) for Auto Drain (N.O Type)

## Construction



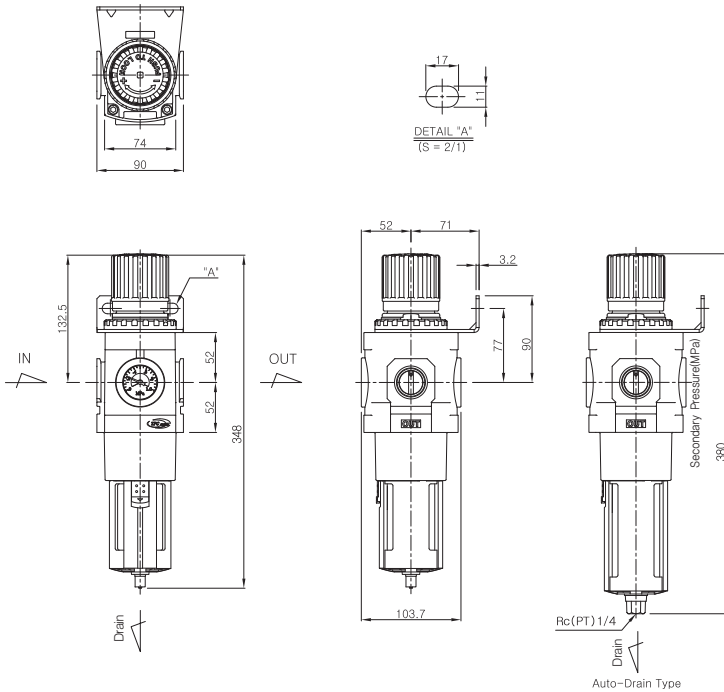
## Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Aluminum	
③	Baffle	Acetal	
④	Deflector	Nylon	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	
⑦	Valve Spring	Stainless Steel	

## Replacement Parts/Parts List

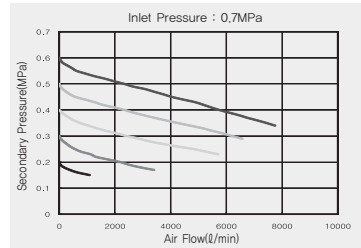
NO.	Description	Material	Part No.
⑧	Valve Ass'y	Brass+NBR	PP5-08A001-01
⑨	Filter Element	Polyethylene	PF5-24-005-01
⑩	Diaphragm Ass'y	Aluminum+NBR	PR5-11A001-01
⑪	Bowl O-ring	NBR	TAF4000-08-6000
⑫	Valve O-ring	NBR	P21-01

## Dimensions

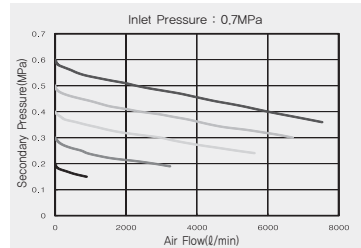


## Flow Characteristics

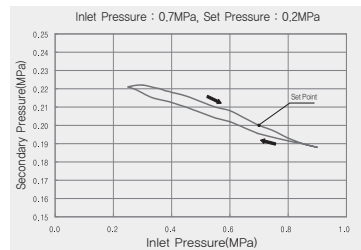
### ▶ 3/4" PP5



### ▶ 1" PP5



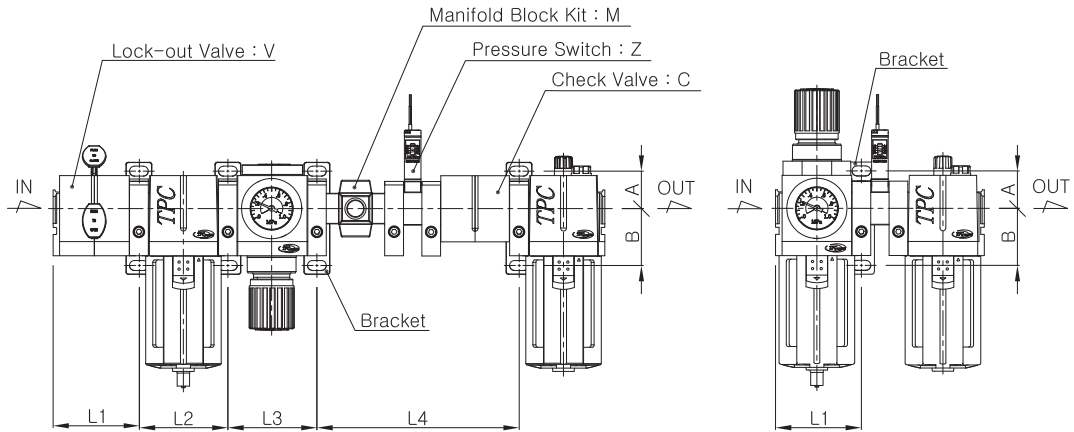
## Pressure Characteristics



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)3
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PC2~PC5

## The Mounting Position of Bracket



Attachment Type	C			M			V			Z			CM			CV				CZ			MV			
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L4	L1	L2	L3	L1	L2	L3	L4
PC2	40	40	40	40	40	40	40	40	40	40	40	12	40	40	80	40	40	40	40	40	40	52	40	40	40	40
PC3	56	56	56	56	56	49	56	56	56	56	56	13	56	56	105	56	56	56	56	56	56	69	56	56	56	49
PC4	72.7	72.7	74.4	72.7	75.4	65.4	72.7	75.4	75.4	72.7	75.4	31.4	72.7	75.4	139.8	72.7	75.4	75.4	74.4	72.7	75.4	105.8	72.7	75.4	75.4	65.4
PC5	-	-	-	-	-	-	92.7	95.4	95.4	92.7	95.4	36.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment Type	MZ			VZ				CMV				CMZ			CVZ				MVZ				CMVZ			
	L1	L2	L3	L1	L2	L3	L4	L1	L2	L3	L4	L1	L2	L3	L1	L2	L3	L4	L1	L2	L3	L4	L1	L2	L3	L4
PC2	40	40	52	40	40	40	12	40	40	40	80	40	40	92	40	40	40	52	40	40	40	52	40	40	40	92
PC3	56	56	62	56	56	56	13	56	56	56	105	56	56	118	56	56	56	69	56	56	56	69	56	56	56	118
PC4	72.7	75.4	96.8	72.7	75.4	75.4	31.4	72.7	75.4	75.4	139.8	72.7	75.4	171.2	72.7	75.4	75.4	105.8	72.7	75.4	75.4	96.8	72.7	75.4	75.4	171.2
PC5	-	-	-	92.7	95.4	95.4	36.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment Type	C		V		Z		CV			CZ		VZ		CVZ		
	L1	L2	L1	L2	L1	L1	L2	L3	L1	L2	L1	L2	L1	L2	L3	
PC2A	40	40	40	40	40	40	40	40	52	40	40	40	40	40	52	
PC3A	56	56	56	56	56	56	56	56	69	56	56	56	56	56	69	
PC4A	72.7	74.4	72.7	75.4	72.7	72.7	75.4	74.4	72.7	105.8	72.7	75.4	72.7	75.4	105.8	
PC5A	-	-	-	-	-	-	-	-	92.7	95.4	-	-	-	-	-	

Attachment Type	M			V			Z			MV			MZ			VZ			MVZ	
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2
PC2B	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
PC3B	56	56	56	56	56	49	56	56	56	56	56	56	56	56	56	56	56	56	56	56
PC4B	72.7	75.4	72.7	75.4	72.7	75.4	72.7	75.4	75.4	72.7	75.4	72.7	75.4	75.4	72.7	75.4	75.4	-	-	
PC5B	-	-	92.7	95.4	92.7	95.4	-	-	-	-	-	92.7	95.4	95.4	-	-	-	-	-	

L1 : Form inlet to the mounting hole of 1st bracket  
 L2 : Form the mounting hole of 1st bracket to 2nd bracket' s  
 L3 : Form the mounting hole of 2nd bracket to 3rd bracket' s  
 L4 : Form the mounting hole of 3rd bracket to 4th bracket' s  
 For the size of A and B, please refer to the dimensions.

# Series PFH(U)2~PFH(U)5

## Coalescing Filter 1/8", 1/4", 3/8", 1/2", 3/4" and 1"

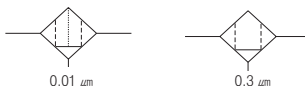


### Standard Specifications

Description	PFH/PFU2	PFH/PFU3	PFH/PFU4	PFH/PFU5	
Max. Operating Pressure (MPa)	1.0(140psi)				
Proof Pressure (MPa)	1.5(200psi)				
Ambient and Fluid Temperature (°C)	-5 ~ 60 (Non-freezing)				
Flow Capacity ※ (N ℓ /min)	1/8" 200	1/4" 450	3/8" 1100	3/4" 1100	
	1/4" (7scfm)	3/8" (16scfm)	1/2" (39scfm)	1" (39scfm)	
Bowl Material	Polycarbonate				
Bowl Guard Material	Nylon				
Filtration (μm)	PFH : 0.3, PFU : 0.01				
Drain	Manual	15(0.51oz)	38(1.28oz)	56(1.89oz)	156(5.27oz)
	Auto	21(0.71oz)	30(1.01oz)	68(2.3oz)	174(5.88oz)
Capacity (cm <sup>3</sup> )					
Weight (kg)	0.14(0.31oz)	0.24(0.53oz)	0.5(1.1oz)	1.1(2.43oz)	

※ Test conditions : Supply pressure 0.6MPa(90psi), pressure drop 0.07MPa(10psi)

Symbol



### How to Order

**PFH 4 — \* 04 B D — \***

Coalescing Filter

PFH	HEPA Filter (Filtration 0.3μm)
PFU	Ultra Filter (Filtration 0.01μm)

Series

2	PC2 Series	4	PC4 Series
3	PC3 Series	5	PC5 Series

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

01	1/8	PC2 Series
02	1/4	PC2,3 Series
03	3/8	PC3,4 Series
04	1/2	PC4 Series
06	3/4	PC5 Series
10	1	PC5 Series

Other Option

Symbol	Description	Applicable Series
L	Life Indicator	PC4~5 Series
R	Flow direction : Right-Left	PC2~5 Series
XC16	Copper-free	PC2~5 Series

Drain Option

Symbol	Description	Applicable Series
Blank	Manual Drain	PC2~PC5
D	Auto Drain (N.O Type)	PC2~PC5
D2	Auto Drain (Piping Exhaust)	PC2
D5	Manual Drain (Piping Exhaust)	PC2

Note1) Min. operating pressure is 0.15MPa(20psi) for Auto Drain (N.O Type)

Bracket Option

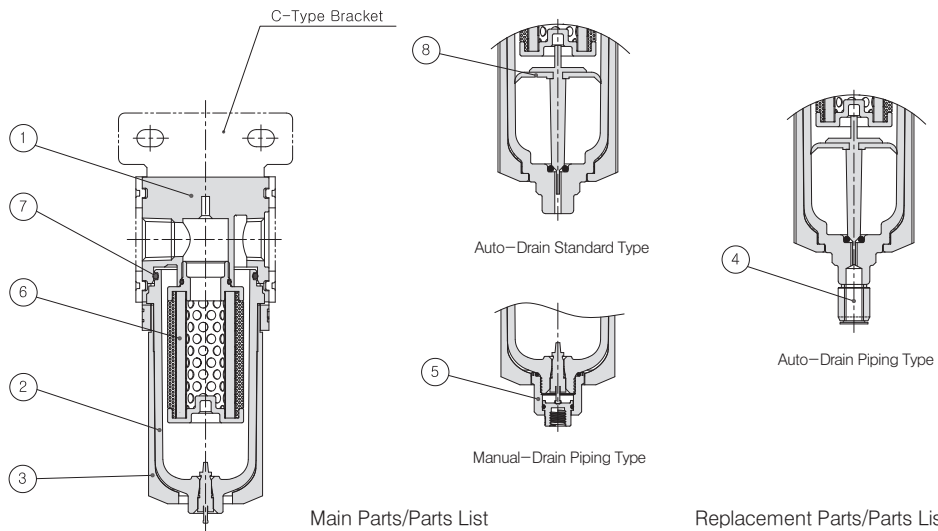
Blank	None
B	Bracket

Note2) Separately packed, Not assembled.

- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PFH(U)2~PFH(U)5

## PFH2 Construction



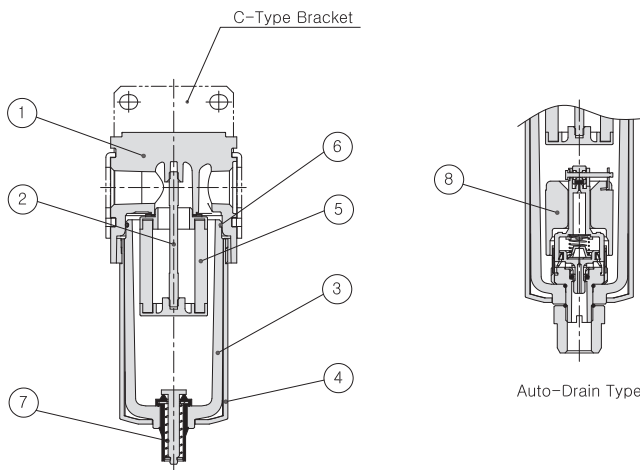
Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Bowl	Polycarbonate	
③	Bowl Guard	Nylon	
④	Fitting	—	
⑤	Manual Drain Piping Assy	—	

Replacement Parts/Parts List

NO.	Description	Material	Part No.
⑥	Coalescing Filter Element Assy	—	PFH2-24A030-01
⑦	Bowl O-ring	NBR	DX2R-53-3000
⑧	Auto Drain Assy	—	PF2-26A002-01

## PFH3 Construction



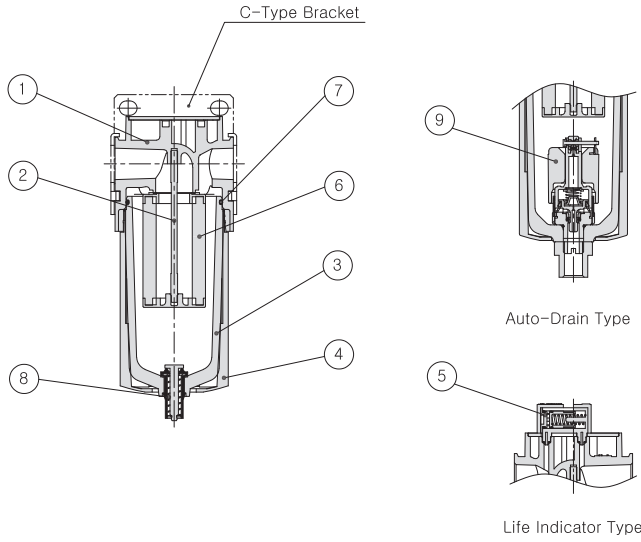
Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Baffle Shaft	Rolled Steel	
③	Bowl	Polycarbonate	
④	Bowl Guard	Nylon	

Replacement Parts/Parts List

NO.	Description	Material	Part No.
⑤	Coalescing Filter Element Assy	—	PFH3000-005A-6081
⑥	Bowl O-ring	NBR	PL3-04-001-01
⑦	Drain Assy	—	TAF3000-10A-6004
⑧	Auto Drain Assy	—	TAF3000-04A-6008

## PFH4 Construction



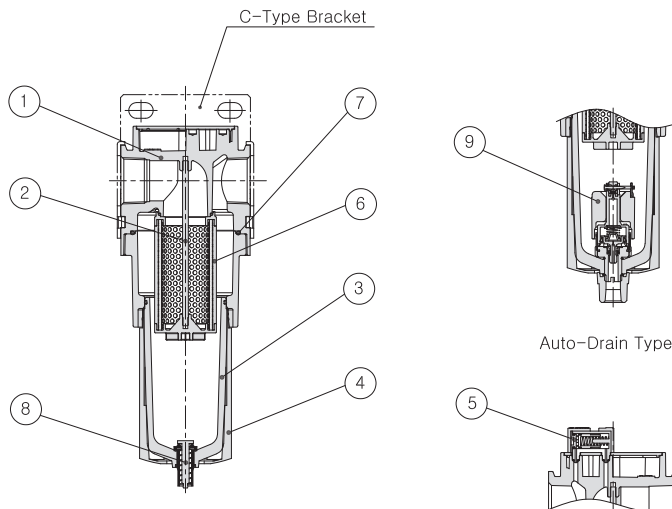
### Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Baffle Shaft	Rolled Steel	
③	Bowl	Polycarbonate	
④	Bowl Guard	Nylon	
⑤	Life Indicator	-	Option

### Replacement Parts/Parts List

NO.	Description	Material	Part No.
⑥	Coalescing Filter Element Ass'y	-	PFH4000-005A-6083
⑦	Bowl O-ring	NBR	TAF4000-08-6000
⑧	Drain Ass'y	-	TAF3000-10A-6004
⑨	Auto Drain Ass'y	-	TAF3000-04A-6008

## PFH5 Construction



### Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Baffle Shaft	Rolled Steel	
③	Bowl	Polycarbonate	
④	Bowl Guard	Nylon	
⑤	Life Indicator	-	Option

### Replacement Parts/Parts List

NO.	Description	Material	Part No.
⑥	Coalescing Filter Element Ass'y	-	PFH5-24A030-01
⑦	Bowl O-ring	NBR	TAF4000-08-6000
⑧	Drain Ass'y	-	TAF3000-10A-6004
⑨	Auto Drain Ass'y	-	TAF3000-04A-6008

PC2

PF2

PR2

PL2

PP2

PC3

PF3

PR3

PL3

PP3

PC4

PF4

PR4

PL4

PP4

PC5

PF5

PR5

PL5

PP5

PFH(U)2~  
PFH(U)5PPH(U)3~  
PPH(U)4

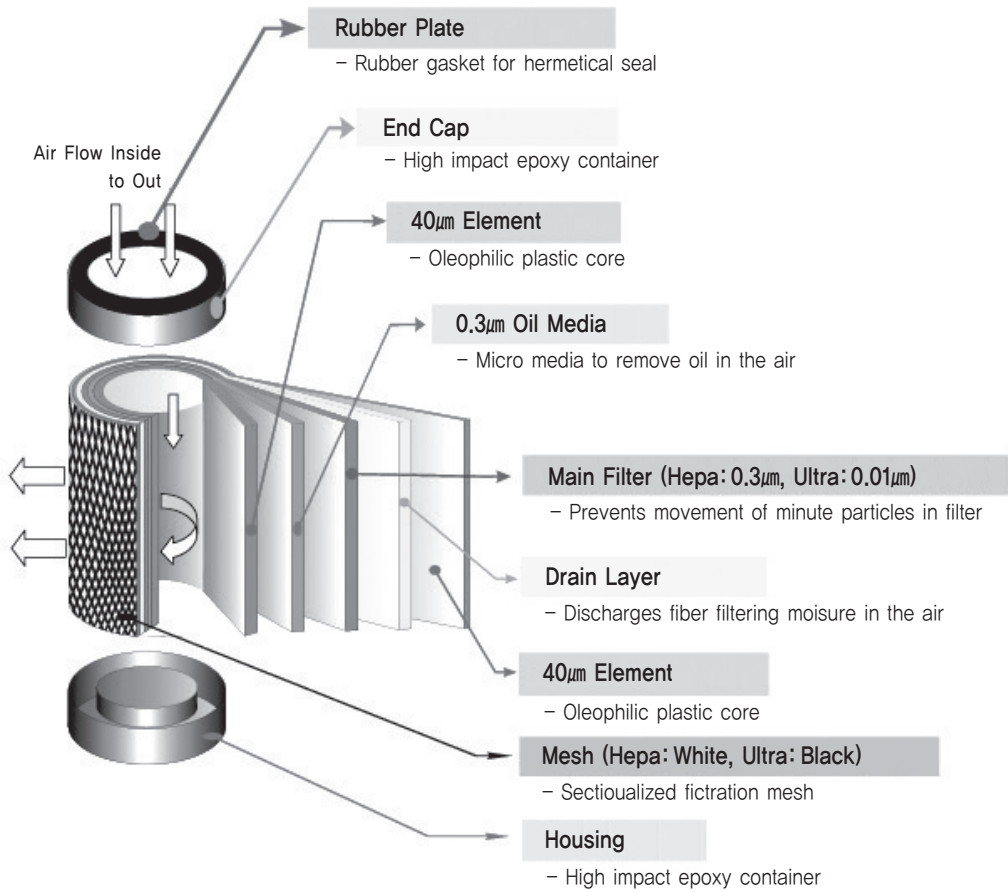
PLV

PSH

PCV

MB

■ Construction of Coalescing Filter Element

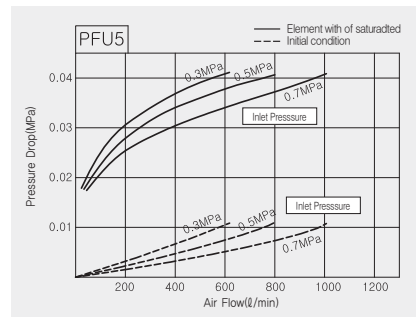
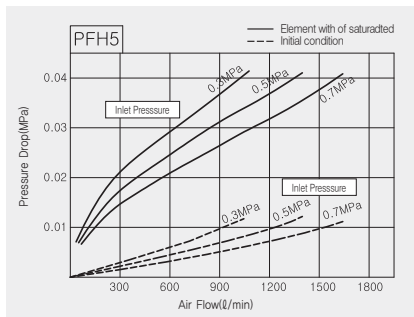
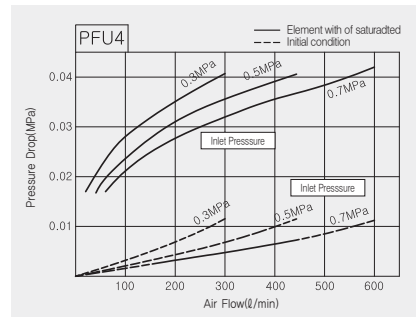
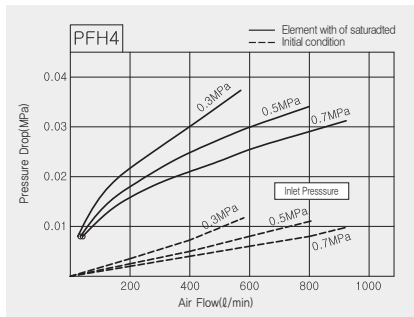
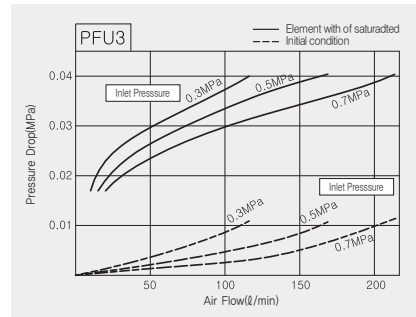
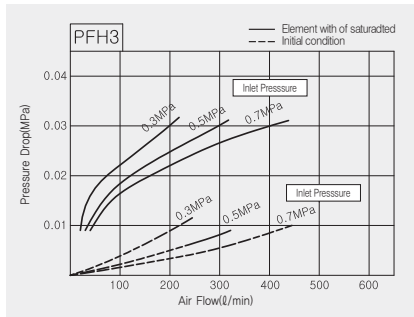
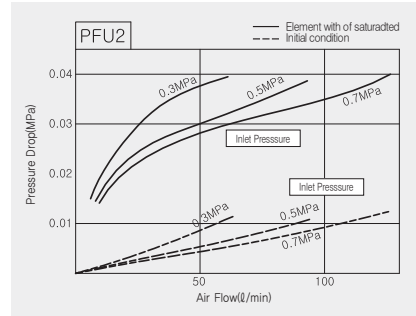
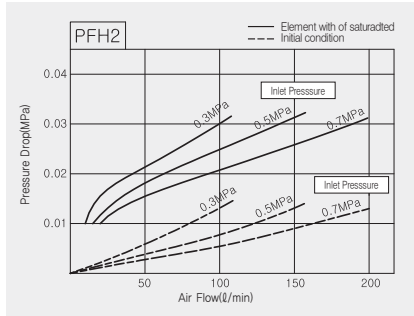


Media Characteristics

NO	Grade	D.O.P Efficiency 0.3 to 0.6µm	Oil Content	Color
1	0.01 µm	99.99%	0.01ppm	White
2	0.3 µm	99.97%	0.05ppm	Black



## Flow Characteristics



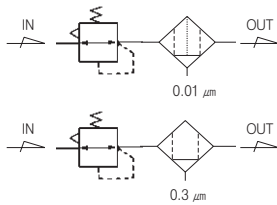
- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PPH(U)3, PPH(U)4

## Piggyback Coalescing Filter 1/4", 3/8" and 1/2"



PAT



### Standard Specifications

Series	PPH/PPU3	PPH/PPU4
Max. Operating Pressure (MPa)	1 (140psi)	
Proof Pressure (MPa)	1.5(200psi)	
Set Pressure	Standard	0.05 ~ 1.0(7~140psi)
Range(MPa)	Madd to Order Specifications	0.05~1.2(7~170psi)   0.05~1.5(7~200psi)
Ambient and Fluid Temperature (°C)	-5 ~ 60(7~140psi) (Non-freezing)	
Flow Capacity (N ℓ /min) ※	1/4" and 3/8" - 300(11scfm)	3/8" and 1/2" - 800(28scfm)
Filtration (μm)	PPH : 0.3, PPU : 0.01	
Construction	Relieving Style	
Bowl Material	Polycarbonate	
Bowl Guard Material	Nylon	
Drain	Manual	38(1.28oz)   56(1.89oz)
	Auto	30(1.01oz)   68(2.3oz)
Capacity (cm <sup>3</sup> )		
Weight (kg)	0.49(1.08oz)	0.74(1.63oz)

※ Test conditions : Supply pressure 0.7MPa(100psi), pre-set pressure 0.6MPa(90psi)

### How to Order

**PPH 4 — \* 04 B D G — \***

Piggyback Coalescing Filter

PPH	HEPA Filter (Filtration 0,3μm)
PPU	Ultra Filter (Filtration 0,01μm)

Series

3	PC3 Series
4	PC4 Series

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Port Size

02	1/4	PC3 Series
03	3/8	PC3, 4 Series
04	1/2	PC4 Series

Bracket Option

Blank	None
B	Bracket + Panel Nut
B1	Panel Nut

Note2) Separately packed, Not assembled.

Other Option

Blank	Set at 0 to 1.0 MPa
12	Set at 0 to 1.2 MPa (PC3 Series)
15	Set at 0 to 1.5 MPa (PC4 Series)
E	Non-Relieving Type
R	Flow direction : Right→Left
T	Tamper Resistant Kit
XC16	Copper-free

Note1,2)

Note1) Refer to page 935 for Tamper Resistant Kit.  
\* If ordering more than one option, indicate symbols numerically then alphabetically Ex) 12RT  
\* Over Max. pressure value can be set.

Pressure Gauge

Symbol	Description	Pressure Range
Blank	None	
G	Integral Pressure Gauge (W/Limit Indicator)	1,0MPa
P	Pressure Range	1,0MPa
P2	Pressure Range	0,2MPa
P4	Pressure Range	0,4MPa

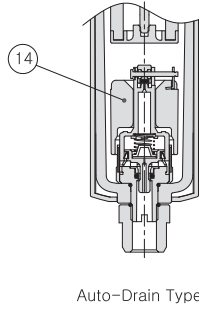
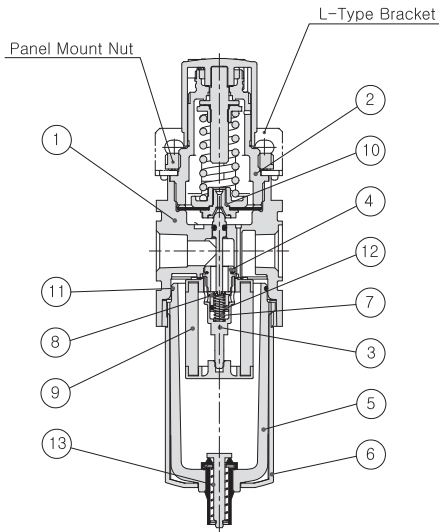
Drain Option

Blank	Manual Push Drain
D	Auto Drain (N.O Type)

Note3)

Note3) Min. operating pressure is 0,15MPa(20psi) for Auto Drain (N.O Type)

## PPH3/PPU3 Construction



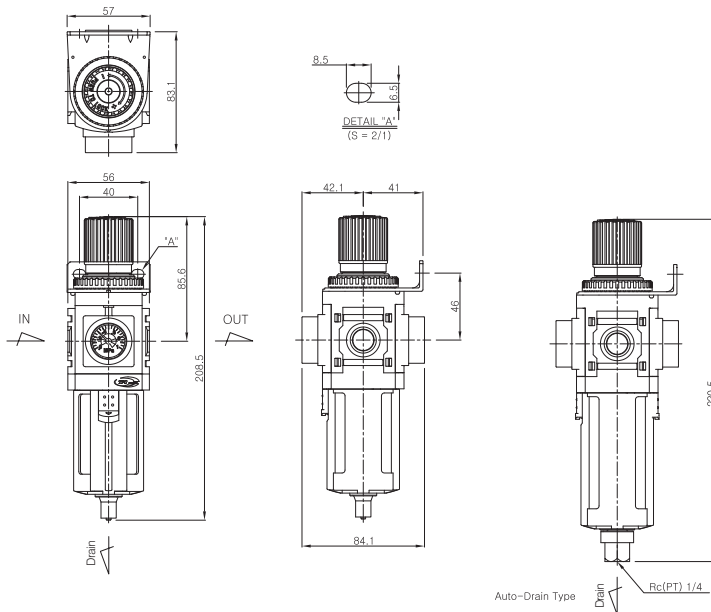
### Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Nylon	
③	Valve Guide	Aluminum	
④	Insert	Aluminum	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	
⑦	Valve Spring	Stainless Steel	

### Replacement Parts/Parts List

NO.	Description	Material	Part No.
⑧	Valve ass'y	Brass+NBR	PPH3-08A001-01
⑨	Coalescing Filter Assy	-	PPH3000-005A-6081
⑩	Diaphragm Assy	Nylon+NBR	PR3-11A001-01
⑪	Bowl O-ring	NBR	PL3-04-001-01
⑫	Valve O-ring	NBR	S6-01
⑬	Drain Assy	-	TAF3000-10A-6004
⑭	Auto-Drain Assy	-	TAF3000-01A-6008

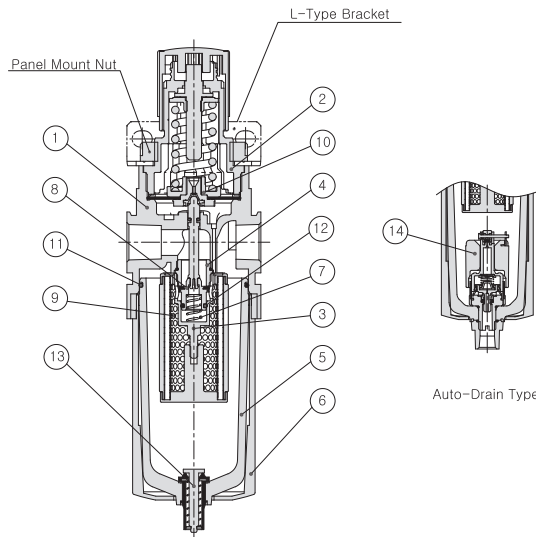
## PPH3/PPU3 Dimensions



- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PPH(U)2~  
PFH(U)5
- PPH(U)3~  
PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series PPH(U)3, PPH(U)4

## PPH4/PPU4 Construction



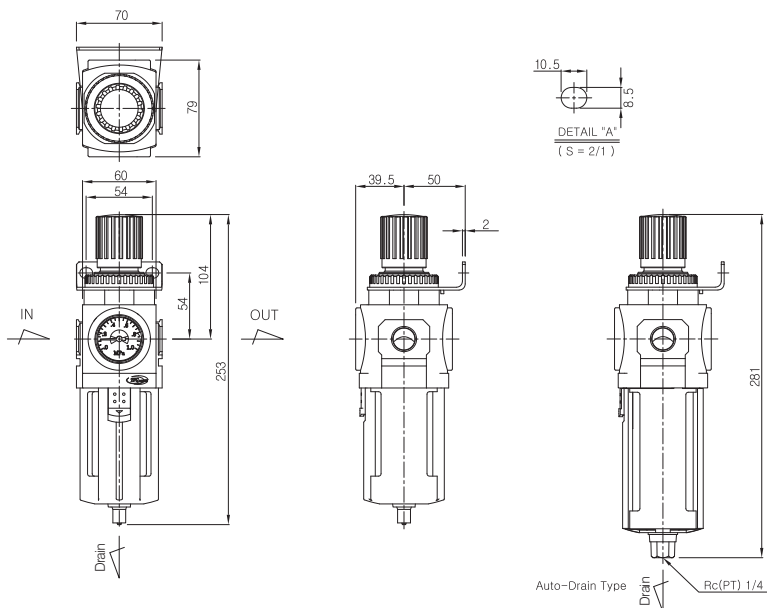
### Main Parts/Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	Bonnet	Nylon	
③	Valve Guide	Aluminum	
④	Insert	Aluminum	
⑤	Bowl	Polycarbonate	
⑥	Bowl Guard	Nylon	
⑦	Valve Spring	Stainless Steel	

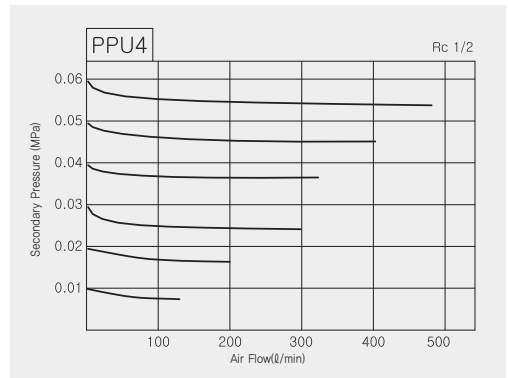
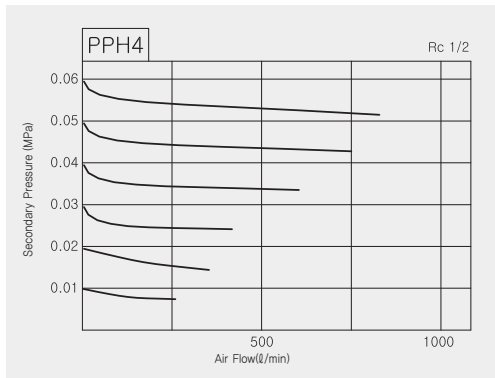
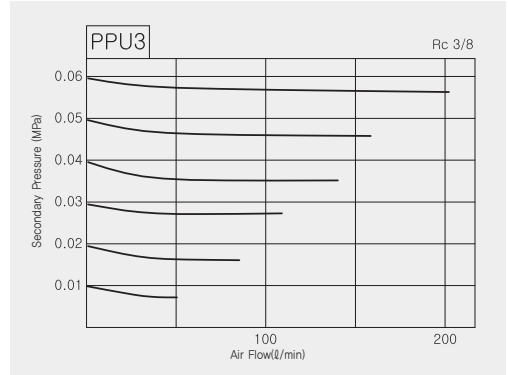
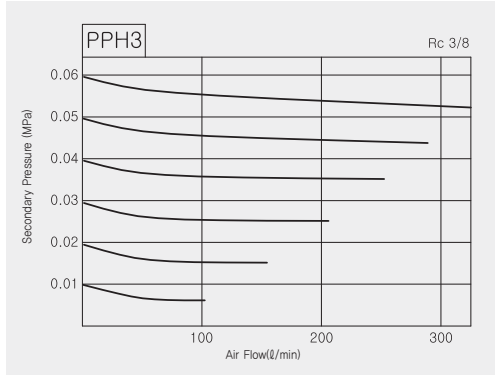
### Replacement Parts/Parts List

NO.	Description	Material	Part No.
⑧	Valve Assy	Nylon+NBR	PP3-08A001-01
⑨	Coalescing Filter Assy	-	PPH4-24A030-01
⑩	Diaphragm Assy	Nylon+NBR	PR4-11A001-01
⑪	Bowl O-ring	NBR	TAF4000-08-6000
⑫	Valve O-ring	NBR	P10-01
⑬	Drain Assy	-	TAF3000-10A-6004
⑭	Auto-Drain Assy	-	TAF3000-01A-6008

## PPH4/PPU4 Dimensions



## ■ Flow Characteristics



PC2

PF2

PR2

PL2

PP2

PC3

PF3

PR3

PL3

PP3

PC4

PF4

PR4

PL4

PP4

PC5

PF5

PR5

PL5

PP5

PFH(U)2~  
PFH(U)5

PPH(U)3~  
PPH(U)4

PLV

PSH

PCV

MB

# Series *PLV*

## Accessories Modular Lock Out Valve

This valve provides a safety lockout to prevent accidental machine start-up. When the slider is shifted into the lockout position, inlet air is blocked and downstream air is exhausted to the atmosphere.

□ PLV2



□ PLV3



□ PLV4



□ PLV5



### ■ Standard Specifications

Specifications	PLV2	PLV3	PLV4	PLV5
Port Size	1/8", 1/4"	1/4", 3/8"	3/8", 1/2"	3/4", 1"
Rc(PT), NPT, G(PF)				
Type of Exhaust	Silencer Exhaust			
Proof Pressure (MPa)	1.5(200psi)			
Max. Operating Pressure (MPa)	1.0(140psi)			
Regulating Range (MPa)	0.05~1.0(7~140psi)			
Ambient and Media Temperature (°C)	-5~60(23~140°F)(Non-freezing)			
Weight (kg)	0.1(0.22lb)	0.24(0.53lb)	0.38(0.84lb)	0.88(1.94lb)

### ■ How to Order

**PLV 4 — \* 04 — \***

Series (Lock-out V/V) — **PLV**

Type of Series — **4**

2	PC2 Series	4	PC4 Series
3	PC3 Series	5	PC5 Series

Thread — **\***

Blank	Rc(PT)
N	NPT
G	G(PF)

Option — **04**

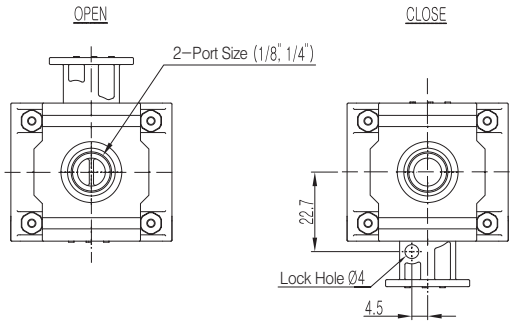
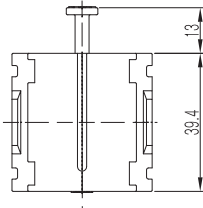
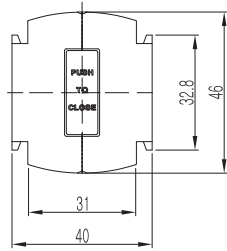
Blank	None
B	Clamp spacer kit

Note1) Separately packed, Not assembled.

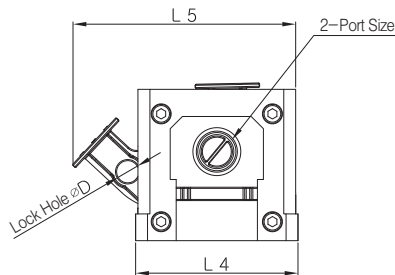
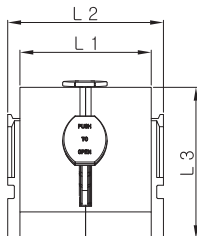
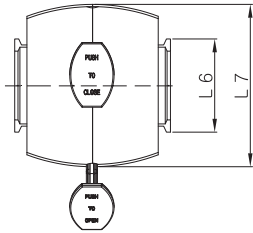
Port Size — **\***

01	1/8	PC2 Series
02	1/4	PC2, 3 Series
03	3/8	PC3, 4 Series
04	1/2	PC4 Series
06	3/4	PC5 Series
10	1	PC5 Series

■ PLV2 Dimensions



■ PLV3, 4, 5 Dimensions



Series	Main Dimensions									Remarks
	Port Size Rc(PT), NPT, G(PF)	L 1	L 2	L 3	L 4	L 5	L 6	L 7	D	
PLV3	1/4, 3/8	46	56	49	56	70.2	33	56	7.5	
PLV4	3/8, 1/2	59	70	68	73	100	41.9	71	10	
PLV5	3/4, 1	74	89	90	98	131.9	49.6	98	10	

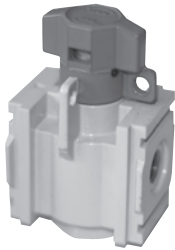
- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~  
PFH(U)5
- PPH(U)3~  
PPH(U)4
- PLV**
- PSH
- PCV
- MB

# Series PSH

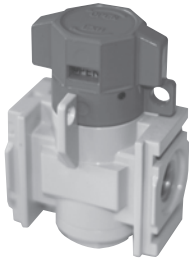
## Accessories Modular Shut-off Valve

- Modular type, easy combination with F.R.L units
- Prevents a mistakes by lock function in exhaust
- Improved exhausting time

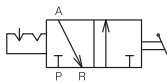
□ PSH2



□ PSH3



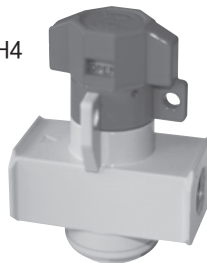
Symbol



### ■ Standard Specifications

Type	PSH2		PSH3		PSH4		PSH5	
Tube Port Size	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Rc(PT), NPT, G(PF)								
Exhaust Port Size	1/8"		1/4"		3/8"		1/2"	
Rc(PT), NPT, G(PF)								
Supply Effective Area (mm <sup>2</sup> )	12	14	30	57	63	106	267	370
Exhaust Effective Area (mm <sup>2</sup> )	11	16	16	30	32	51	98	120
Proof Pressure (MPa)	1.5							
Max. Operating Pressure (MPa)	1.0							
Ambient Temperature (°C)	-5 ~ 60 (Non-Freezing)							
Angle of Knob Operation	90°							
Weight (g)	324		312		406		990	

□ PSH4



□ PSH5



### ■ How to Order

**PSH 4** — \* **04** — \*

Series (Shut-out V/V)

Type of Series

2	PC2 Series	4	PC4 Series
3	PC3 Series	5	PC5 Series

Thread

Blank	Rc(PT)
N	NPT
G	G(PF)

Option

Blank	None
B	Clamp spacer kit

Note)

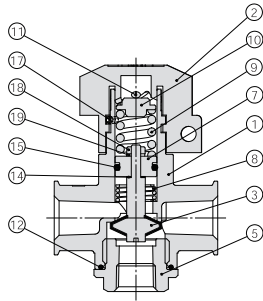
Note) Separately packed, Not assembled

Port Size

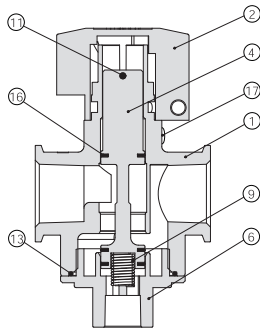
01	1/8	PC2 Series
02	1/4	PC2, 3 Series
03	3/8	PC3, 4 Series
04	1/2	PC4 Series
06	3/4	PC5 Series
10	1	PC5 Series



■ Construction



PSH 2, 3, 4 Series

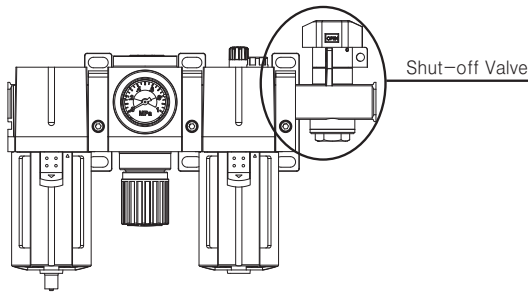


PSH 5 Series

Main Parts List

NO.	Description	Material	Note
①	Body	Zinc	PSH2
		Aluminum	PSH3,4,5
②	Handle	Zinc	
③	Poppet Valve	Brass+NBR	
④	Spool	Aluminum	
⑤	Poppet Valve Guide	Zinc	
⑥	Spool Guide	Zinc	
⑦	Piston	Brass	
⑧	Poppet Valve Spring	Stainless Steel	
⑨	Spring	Piano Wire	
⑩	Spring Holder	Free Cutting Steel	
⑪	Parallel Pin	Free Cutting Steel	
⑫	Poppet Valve Guide Gasket	NBR	
⑬	Spool Guide Gasket	NBR	
⑭	Washer	NBR	
⑮	Piston Packing	NBR	
⑯	Spool Packing	NBR	
⑰	Handel Stopping Screw	Carbon Steel	
⑱	Poppet Valve Nut	Carbon Steel	
⑲	Poppet Valve Washer	Stainless Steel	

■ Combination



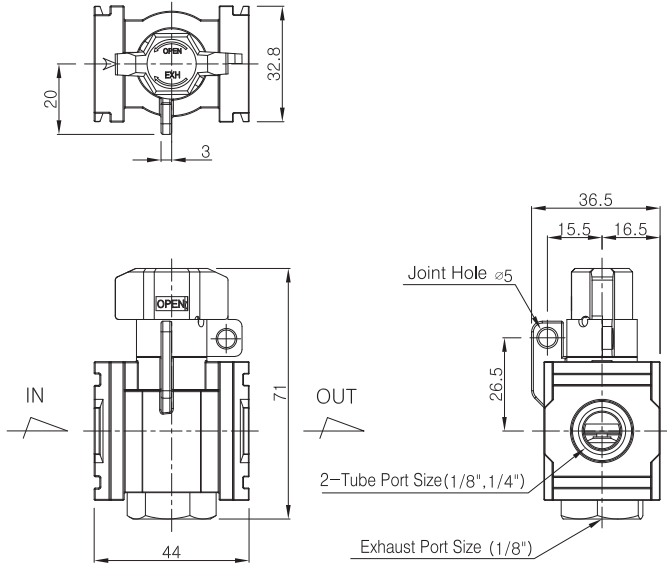
※ A Shut-off Valve has to be connected to the outlet side of FRL units.

■ Cautions

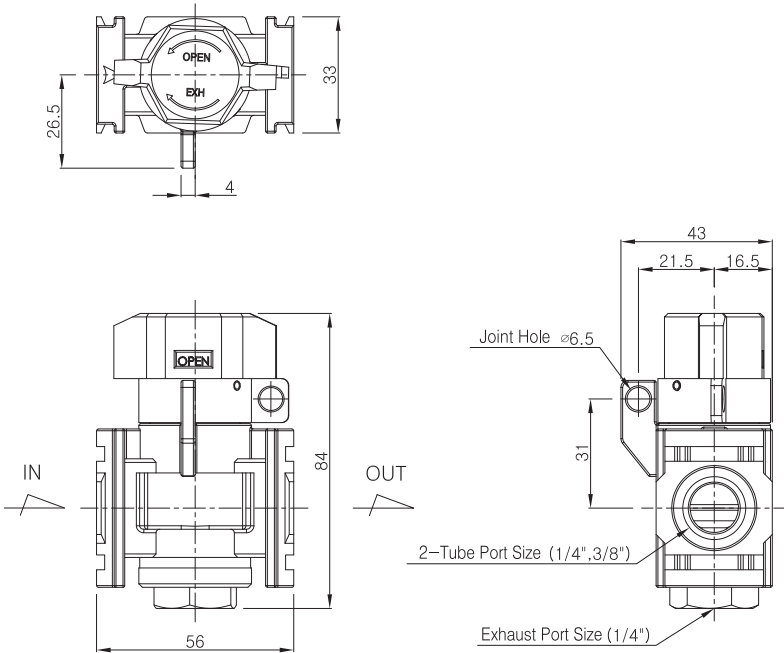
- ① “P” of “▷” mark which refers to input of compressed air is a inlet, and A port of oppsite side is outlet.
- ② Do not add pressure except P port, It causes a malfunction, R port which is right-angled direction is a outlet port, Please connect them with caution. It causes a malfunction.
- ③ A malfunction and air leak might be caused unless a handle will be stopped halfway, so conversion has to be done immediately. Please change the handle surely.
- ④ Do not remove attached screw on the handle. It causes a malfuncton by omission off the screw.

PC2  
PF2  
PR2  
PL2  
PP2  
PC3  
PF3  
PR3  
PL3  
PP3  
PC4  
PF4  
PR4  
PL4  
PP4  
PC5  
PF5  
PR5  
PL5  
PP5  
PFH(U)2~  
PFH(U)5  
PPH(U)3~  
PPH(U)4  
PLV  
PSH  
PCV  
MB

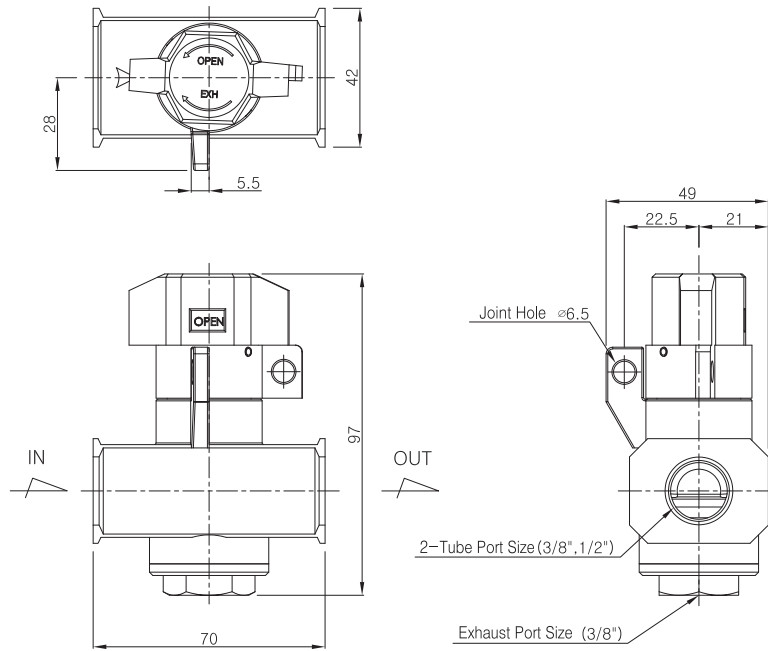
■ PSH2 Dimensions



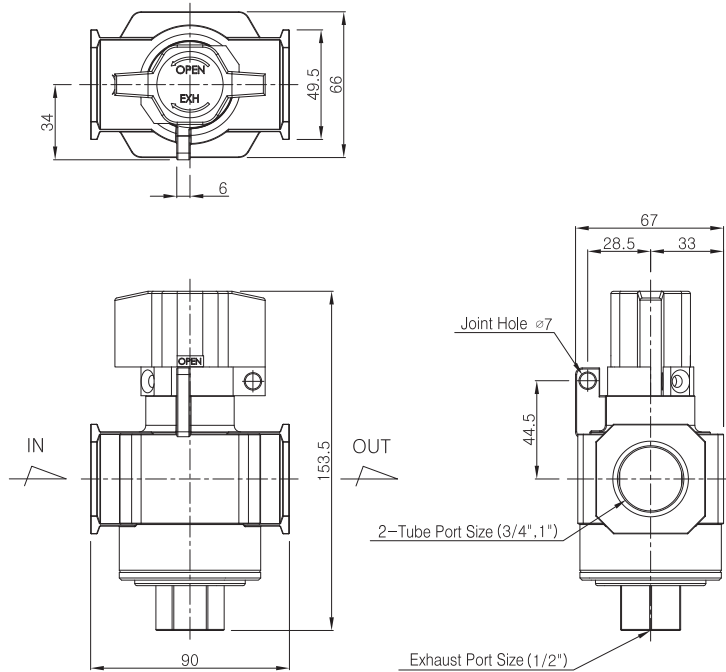
■ PSH3 Dimensions



■ PSH4 Dimensions



■ PSH5 Dimensions



PC2
PF2
PR2
PL2
PP2
PC3
PF3
PR3
PL3
PP3
PC4
PF4
PR4
PL4
PP4
PC5
PF5
PR5
PL5
PP5
PFH(U)2~ PFH(U)5
PPH(U)3~ PPH(U)4
PLV
<b>PSH</b>
PCV
MB

# Series PCV

## Accessories Modular Check Valve

The modular check valve is used to prevent downstream pressure loss. Acting as a one-way directional flow valve, this device is generally installed downstream of the regulator.

□ PCV2



□ PCV3



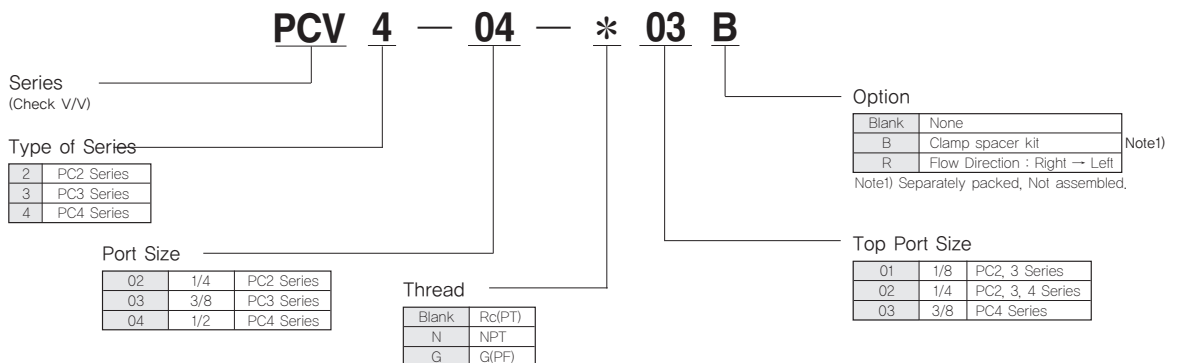
□ PCV4



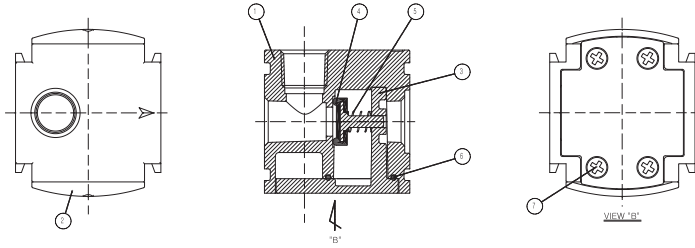
### Standard Specifications

Specifications	PCV2	PCV3	PCV4
Port Size (No Threads)	1/4" Hole	3/8" Hole	1/2" Hole
Top Port Size Rc(PT), NPT, G(PF)	1/8", 1/4"	1/8", 1/4"	1/4", 3/8"
Max. Flow Capacity (N l /min)	1,200(42scfm)	3,500(124scfm)	5,000(177scfm)
Weight(kg)	0.01 (0.02lb)	0.23(0.51lb)	0.43(0.95lb)

### How to Order



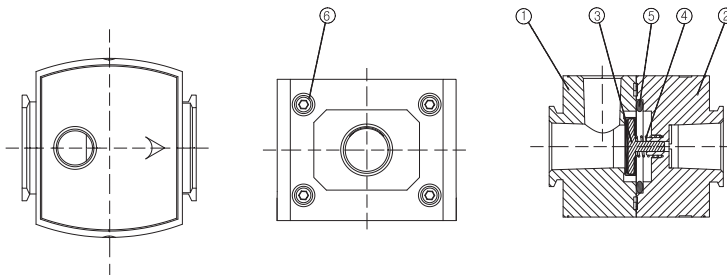
## PCV2 Construction



Main Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	F-Body Cover	Nylon	
③	Body Cover	Aluminum	
④	Valve Assembly	Brass+NBR	
⑤	Spring	Stainless Steel	
⑥	Gasket of Body Cover	NBR	
⑦	Bolt of Cover	Rolled Steel	

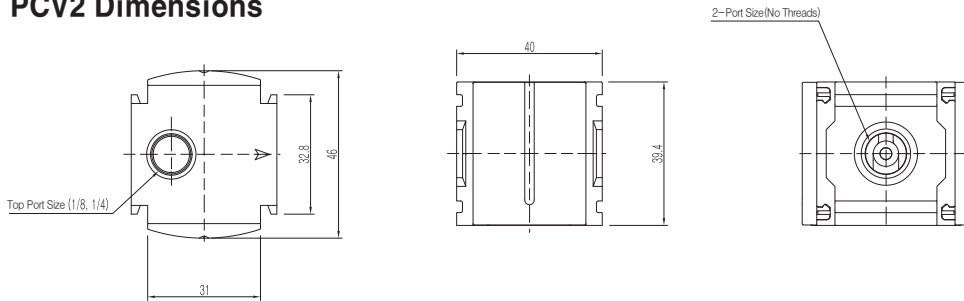
## PCV3, 4 Construction



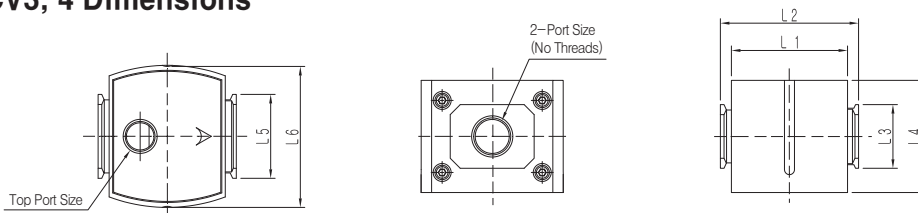
Main Parts List

NO.	Description	Material	Remark
①	Body R	Aluminum	
②	Body L	Aluminum	
③	Valve Assembly	Brass+NBR	
④	Return Spring	Stainless Steel	
⑤	Gasket	NBR	
⑥	Wrench Bolt	Rolled Steel	

## PCV2 Dimensions



## PCV3, 4 Dimensions



Series	Main Dimensions								Remarks
	Port Size (No Threads)	Top Port Size Rc.(PT), NPT, G.(PF)	L 1	L 2	L 3	L 4	L 5	L 6	
PCV3	3/8"	1/8" 1/4"	46	56	45	49	33	56	
PCV4	1/2"	1/4", 3/8"	58	69	31.8	56	41.9	71	

- PC2
- PF2
- PR2
- PL2
- PP2
- PC3
- PF3
- PR3
- PL3
- PP3
- PC4
- PF4
- PR4
- PL4
- PP4
- PC5
- PF5
- PR5
- PL5
- PP5
- PFH(U)2~PFH(U)5
- PPH(U)3~PPH(U)4
- PLV
- PSH
- PCV
- MB

# Series **MB**

## Modular Manifold Block

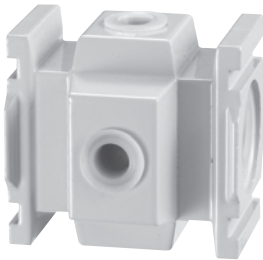
□ MB2



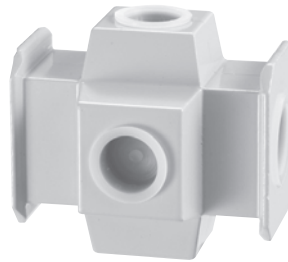
### ■ Standard Specifications

Specifications	MB2	MB3	MB4
Port Size (No Threads)	1/4"	1/4", 3/8"	3/8", 1/2"
Top Port Size Rc(PT), NPT, G(PF)	1/8", 1/4"	1/8", 1/4"	1/4", 3/8"
Weight(kg)	0.09(0.2lb)	0.14(0.31lb)	0.17(0.37lb)

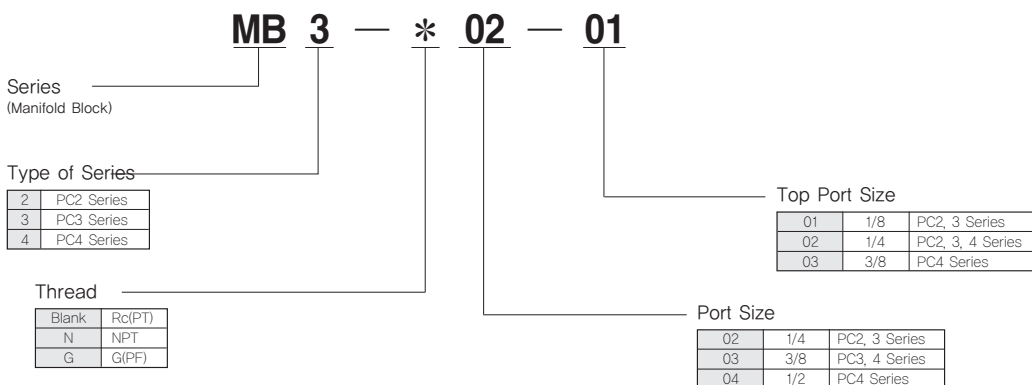
□ MB3



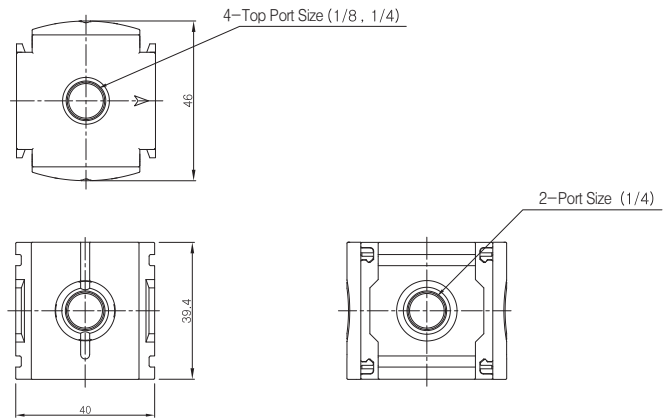
□ MB4



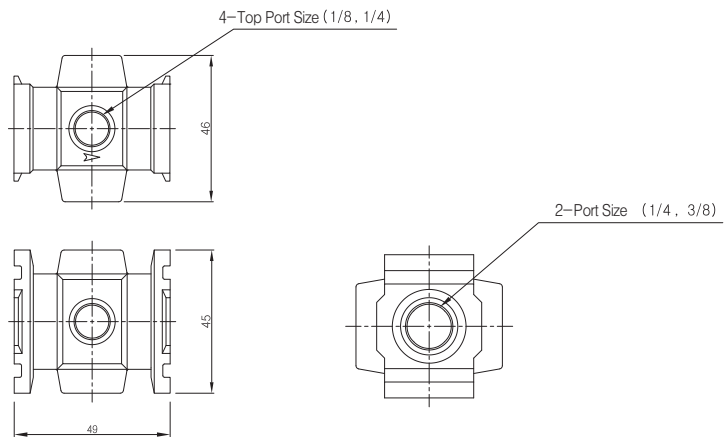
### ■ How to Order



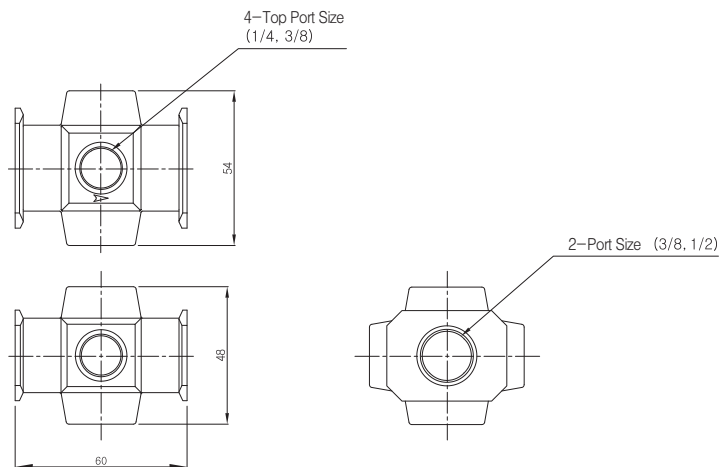
■ MB2 Dimensions



■ MB3 Dimensions



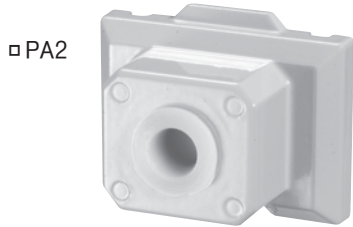
■ MB4 Dimensions



PC2
PF2
PR2
PL2
PP2
PC3
PF3
PR3
PL3
PP3
PC4
PF4
PR4
PL4
PP4
PC5
PF5
PR5
PL5
PP5
PFH(U)2~ PFH(U)5
PPH(U)3~ PPH(U)4
PLV
PSH
PCV
<b>MB</b>

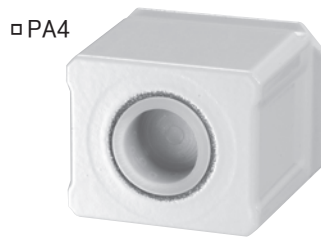
# Series PA

## Modular Pipe Adapter

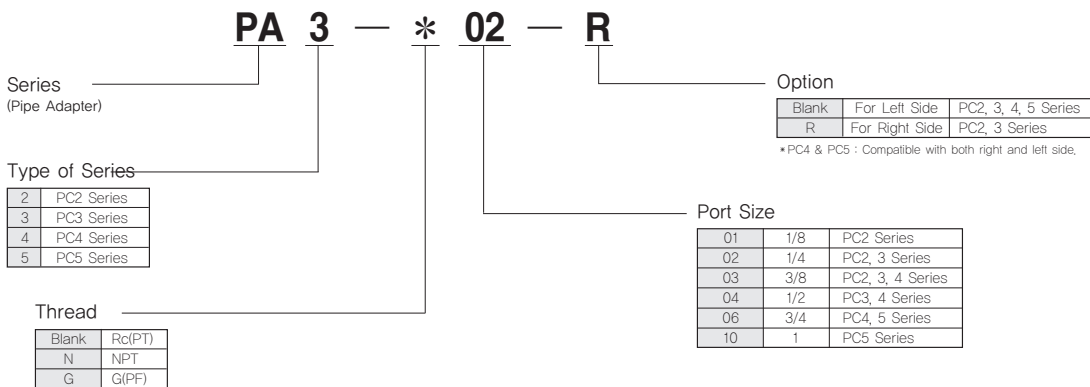


### ■ Standard Specifications

Specifications	PA2	PA3	PA4	PA5
Port Size	1/8", 1/4"	1/4", 3/8"	3/8", 1/2"	3/4", 1"
Rc(PT), NPT, G(PF)	3/8"	1/2"	3/4"	
Weight (kg)	0.03(0.07lb)	0.04(0.09lb)	0.07(0.15lb)	0.13(0.29lb)



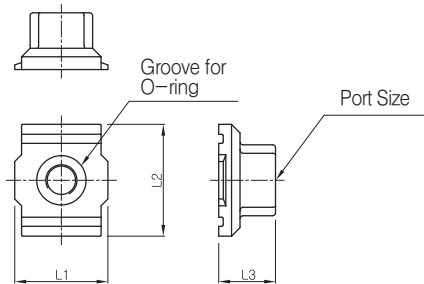
### ■ How to Order



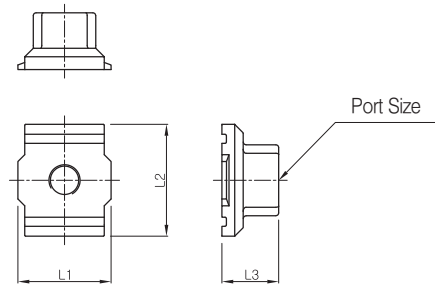


■ PA2, 3 Dimensions

(For Left Side)



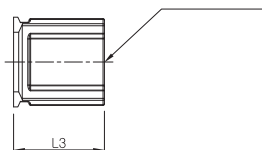
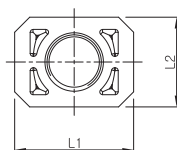
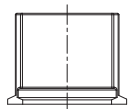
(For Right Side)



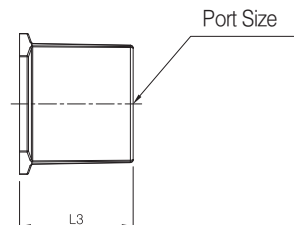
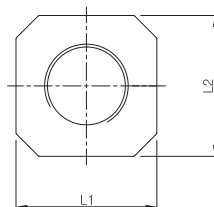
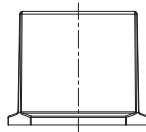
Series	Main Dimensions			
	Port Size Rc(PT),NPT,G(PF)	L1	L2	L3
PA2	1/8, 1/4, 3/8	32.8	39.4	20
PA3	1/4, 3/8, 1/2	33	45	25

■ PA4, 5 Dimensions

(PA4)



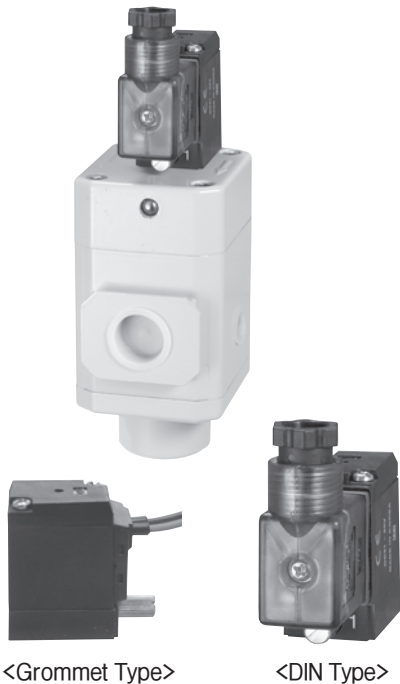
(PA5)



Series	Main Dimensions			
	Port Size Rc(PT),NPT,G(PF)	L1	L2	L3
PA4	3/8, 1/2, 3/4	41.9	31.6	32
PA5	3/4, 1	49.6	49.6	40

# Series SSV

## Slow-Start Valve



### Standard Specifications

Fluid	Air	
Operating Pressure Range	0.3~10MPa(44~140psi) (3~10 kgf/cm <sup>2</sup> )	
Port Size for Gauge(Rc(PT),NPT,G(PF))	1/2"	
Max. Fluid and Ambient Temperature	Max. 50°C (122°F)	
Allowable Voltage	-15 ~ +10 % of Rated Voltage	
Max. Operating Frequency	2 Positions	5 c/s
	3 Positions	3 c/s
Min. Operating Frequency	1 Time per 30 Days (Based on KS B6356)	
Lubrication	Non Lube	
Impact/Vibration Resistance	30G / 5G (8.3~200 Hz)	
Protection Structure	Dust Proof	
Attached	Free	
Manual Operation	Non-locking, Lock	
Lead Wire	Grommet, Din Terminal	
Voltage	24V DC, 12V DC	
Effective Cross Section (Cv)	Over 63 mm <sup>2</sup> (3.5) (0.098 in <sup>2</sup> )	
Power Consumption (AC)	Inrush	5.6 VA(50 Hz), 5.0 VA(60 Hz)
	Holding	3.3 VA(50 Hz), 2.3 VA(60 Hz)
Power Consumption (DC)	1.8W / 2W(Lamp)	

### How to Order

SSV 4 — 5 DZ \* — \* 04 \*

Series (Slow-Start Valve) — SSV

PC4 Series — 4

Voltage — 5

1	AC110V (50/60Hz)
2	AC220V (50/60Hz)
3	AC120V (50/60Hz)
4	AC240V (50/60Hz)
5	DC24V
6	DC12V
7	DC6V
8	AC24V (50/60Hz)
9	DC100V

Electrical Entry — DZ

G	Grommet Type
DZ	Din Type Connector Attached (with indicator light/surge voltage suppressor)
N	Din Connector Type (No connector included)

Pressure Gauge — \*

Blank	None
P	With Pressure Gauge

Port Size — 04

04	1/2
----	-----

Threads — \*

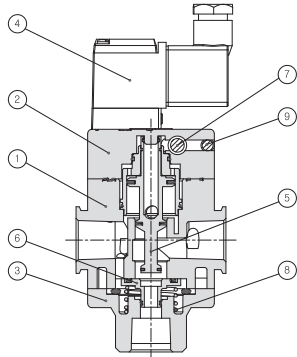
Blank	Rc (PT)
N	NPT
G	G (PF)

Manual Override — \*

Blank	Non-Locking Push Type
C	Locking(Rotation Type)

Note1) The grommet has direct coupling type lead wire, but without indicator light.

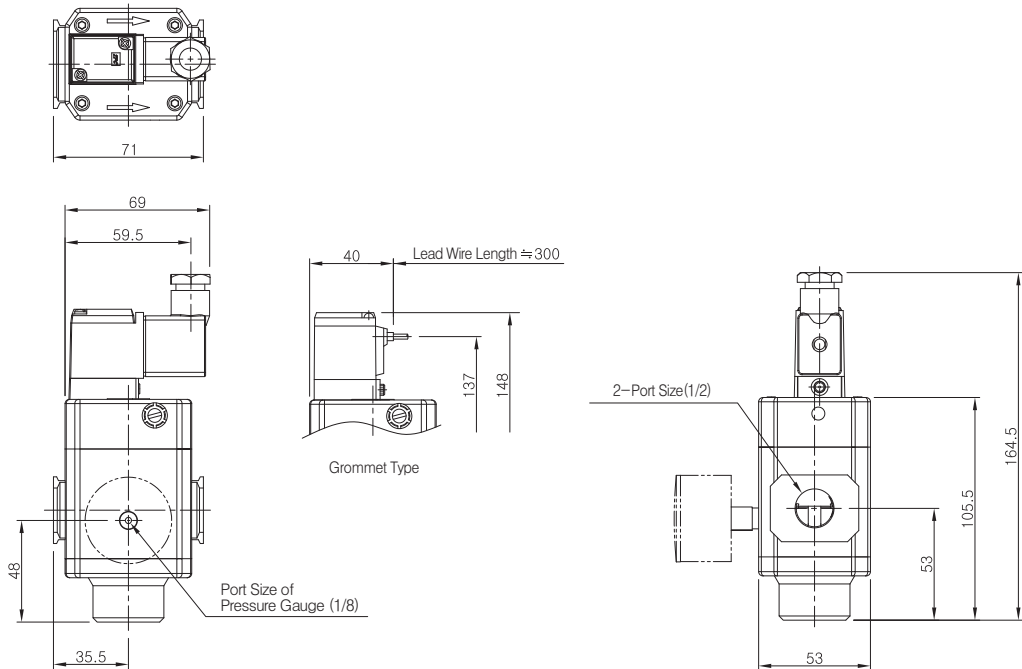
## Construction



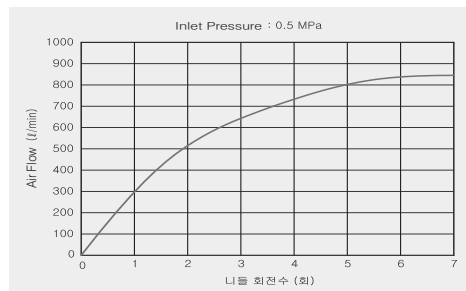
### Main Parts List

NO.	Description	Material	Remark
①	Body	Aluminum	
②	T-Cover	Aluminum	
③	B-Cover	Aluminum	
④	Pilot Ass'y	-	
⑤	Piston	Aluminum	
⑥	Poppet	Brass	
⑦	Needle	Brass	
⑧	Poppet Spring	Stainless Steel	
⑨	Steel Ball	Stainless Steel	

## Dimensions



## Flow Characteristics



# Series SMS1000

## Pressure Switch

- Compact and unified pressure switch.



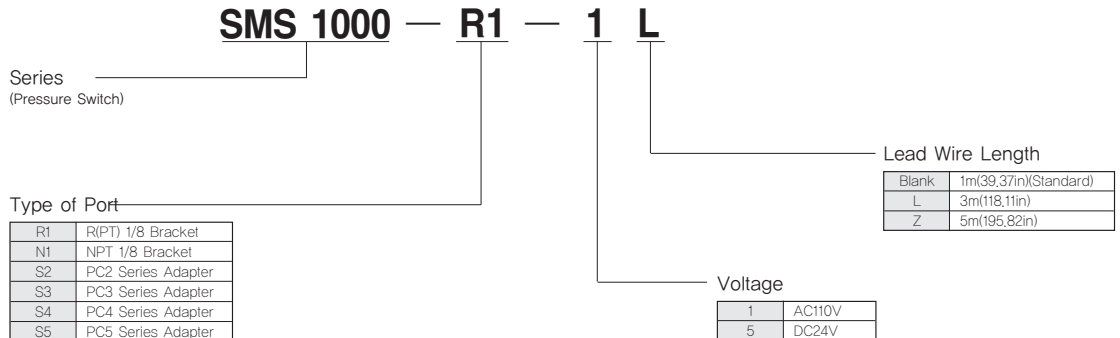
### Standard Specifications

Fluid	Air
Ambient and Fluid Temperature (°C)	-5~60(23~140° F)(Non-Freezing)
Operating Pressure Range (MPa)	0.1~0.4(15~60psi)
Proof Pressure (MPa)	1.0(140psi)
Max. Pressure (MPa)	0.7(100psi)
Hysteresis (MPa)	0.16(24psi)
Scale Variation (MPa)	±0.05(7psi)
Repeatability (MPa)	±0.05(7psi)
Contact	1a
Lead Wire Length	1m(39.7in)Standard(Grommet Type)
Port Size (R(PT), NPT)	1/8"
Weight (kg)	0.042(0.09lb)

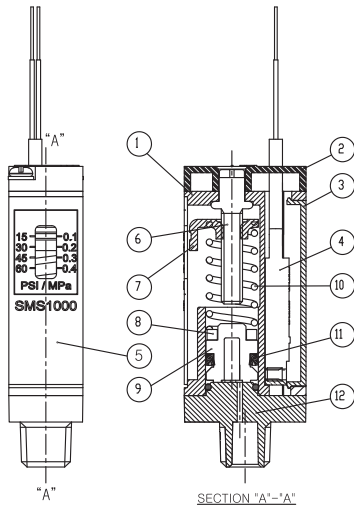
### Auto-Switch Specification

Applied Model	W8H	
Voltage	DC24V	AC110V
Electric Current	5~40mA	5~20mA

### How to Order



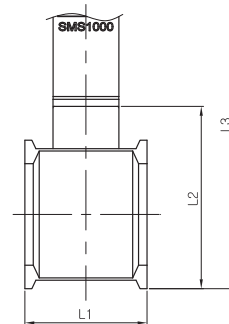
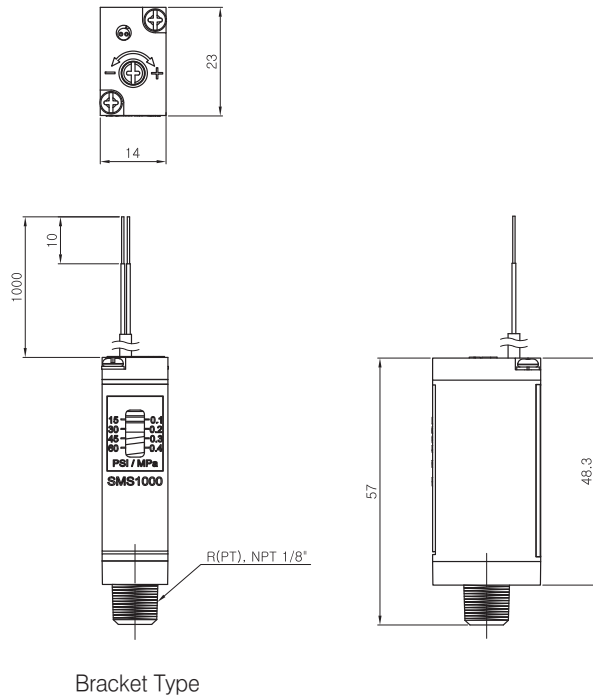
Construction



Main Parts List

NO.	Description	Material	Remark
①	Body	Nylon	
②	Top Cover	Resin	
③	Body Back Cover	Resin	
④	Auto Switch Ass'y	-	
⑤	Name Plate	Resin/Aluminum	
⑥	Adjustment Screw	Rolled Steel	
⑦	Pointer	Rolled Steel	
⑧	Magnet	Rare Earth Magnet	
⑨	Piston	Polyacetal	
⑩	Spring	SUS304	
⑪	Miniseal Y Type	NBR	
⑫	PT Fittings	Zinc Die Cast	

Dimensions



Adapter Type

Series	Dimension of Main Parts			Remarks
	L1	L2	L3	
PC2 Series	14	44.5	88	
PC3 Series	13	51	94.5	
PC4 Series	26	39	82	
PC5 Series	31	57.5	101	

Bracket Type

PA

SSV

SMS1000

Accessories

OPTION

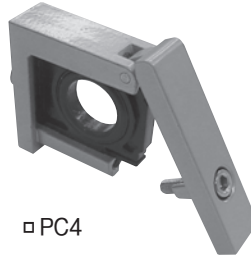
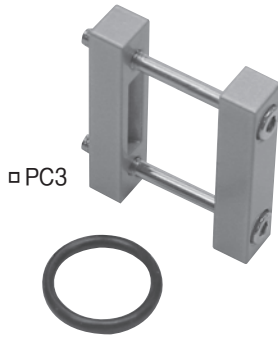
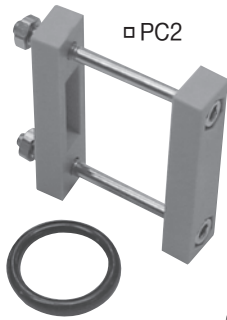
PER2000, 3000

PVR3000

PNR4000

# Accessories

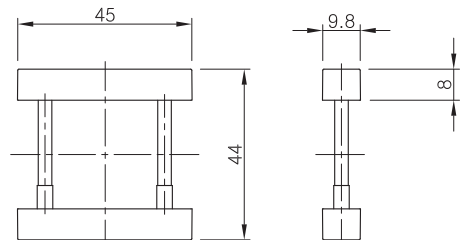
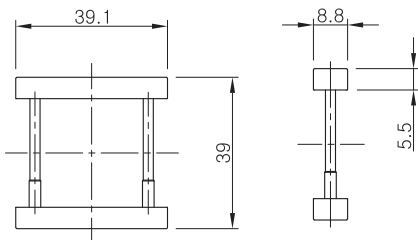
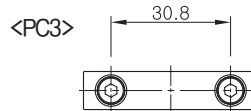
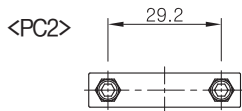
## Modular Clamp Spacer kit



### Standard Specifications

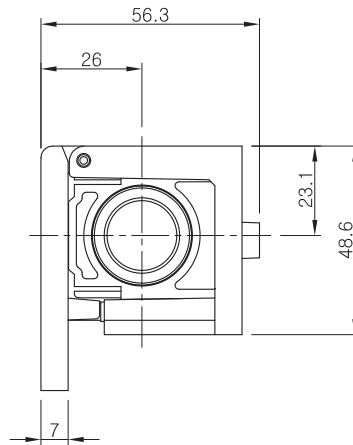
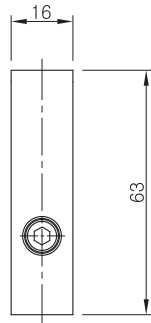
Specifications	PC2	PC3	PC4	PC5
Item Number	PC2A-33A002	PC3A-33A002	PC4A-33A002	PC5A-33A002
Material	Nylon	Aluminum	Aluminum+Zinc	Aluminum

### Dimensions

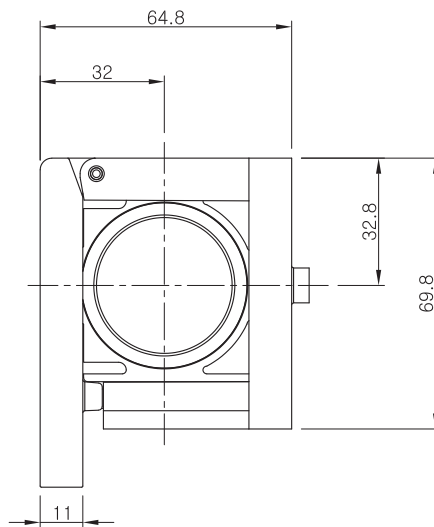
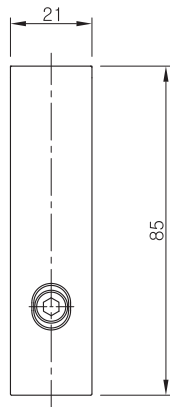


▣ Dimensions

<PC4>



<PC5>



# Accessories

## T-Bracket assembly

### ■ Standard Specifications

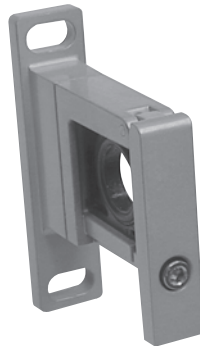
Specifications	PC2	PC3	PC4	PC5
Item Number	PC2A-33A001	PC3A-33A001	PC4A-33A001	PC5A-33A001
Material	Nylon	Aluminum	Aluminum+Zinc	Aluminum



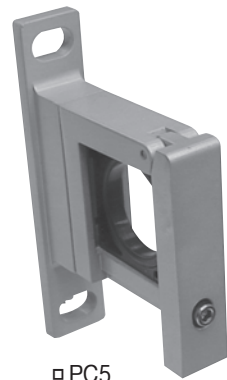
□ PC2



□ PC3



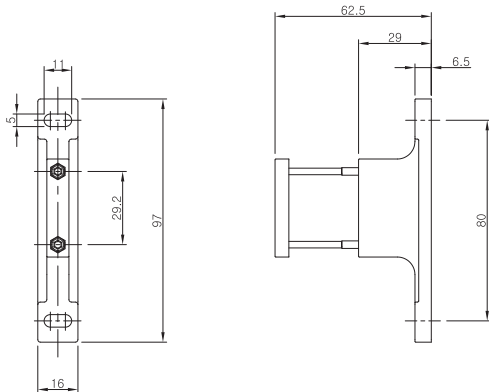
□ PC4



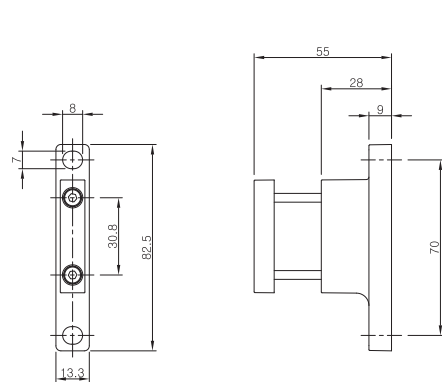
□ PC5

### ■ Dimensions

<PC2>



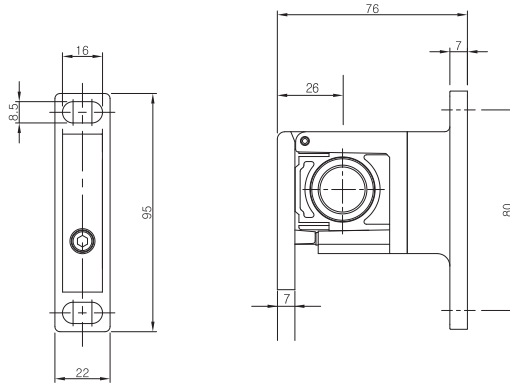
<PC3>



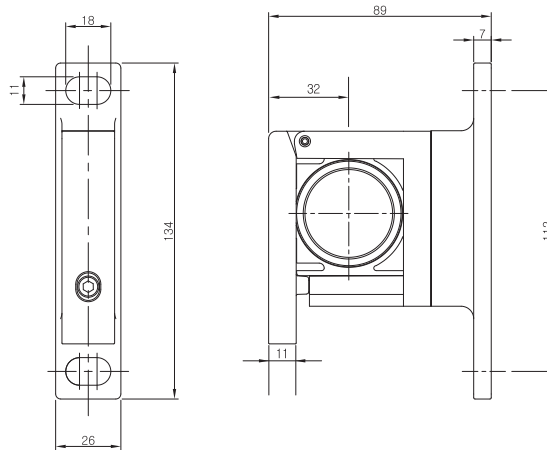


■ Dimensions

<PC4>



<PC5>



PA

SSV

SMS1000

Accessories

OPTION

PER2000,  
3000

PVR3000

PNR4000

# Accessories

## L-Bracket Unit



□ PC2



□ PC3



□ PC4



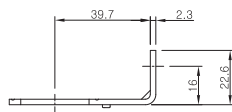
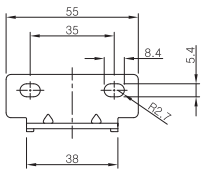
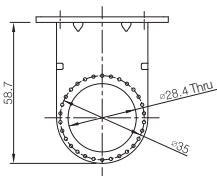
□ PC5

### ■ Standard Specifications

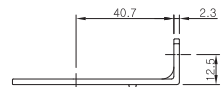
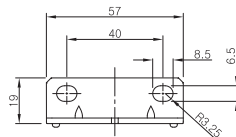
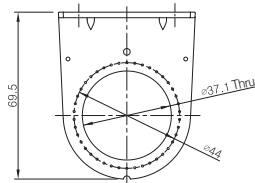
Specifications	PC2	PC3	PC4	PC5
Item Number	PR2-33-001-01	PR3-33-001-01	PR4-33-001-01	PR5-33-001-01
Material	Rolled Steel	Rolled Steel	Rolled Steel	Rolled Steel

### ■ Dimensions

<PC2>

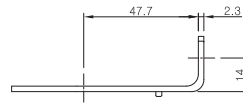
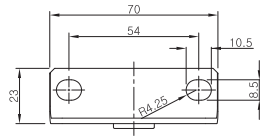
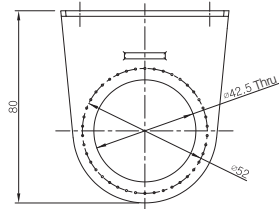


<PC3>

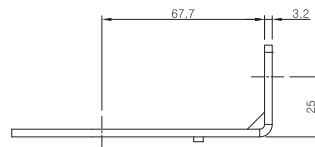
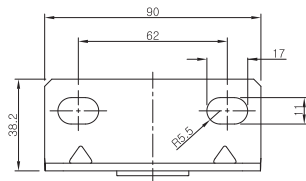
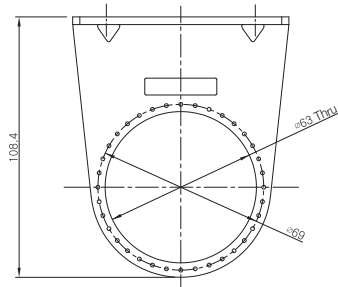


▣ Dimensions

<PC4>



<PC5>



# Accessories

## C-Bracket Unit



□ PC2

### ■ Standard Specifications

Specifications	PC2	PC3	PC4	PC5
Item Number	PF2-33-001-01	PF3-33-001-01	PF4-33-001-01	PF5-33-001-01
Material	Rolled Steel	Rolled Steel	Rolled Steel	Rolled Steel



□ PC3



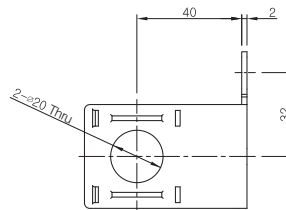
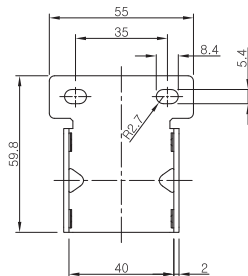
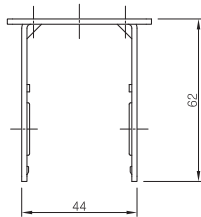
□ PC4



□ PC5

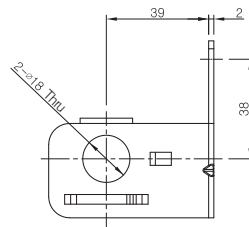
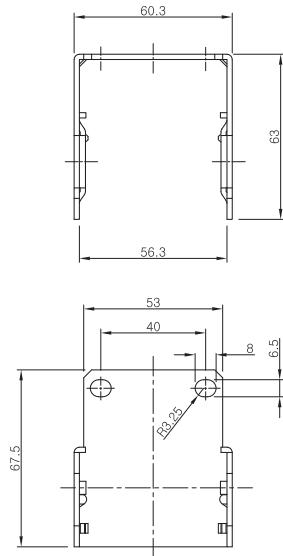
### ■ Dimensions

<PC2>

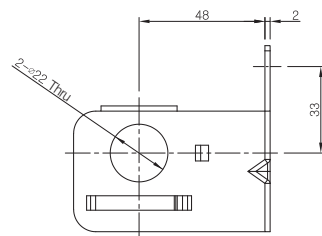
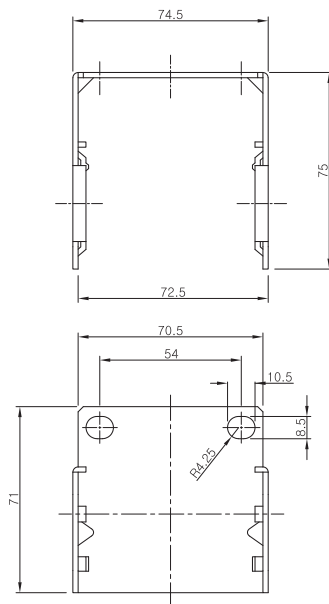


## ■ Dimensions

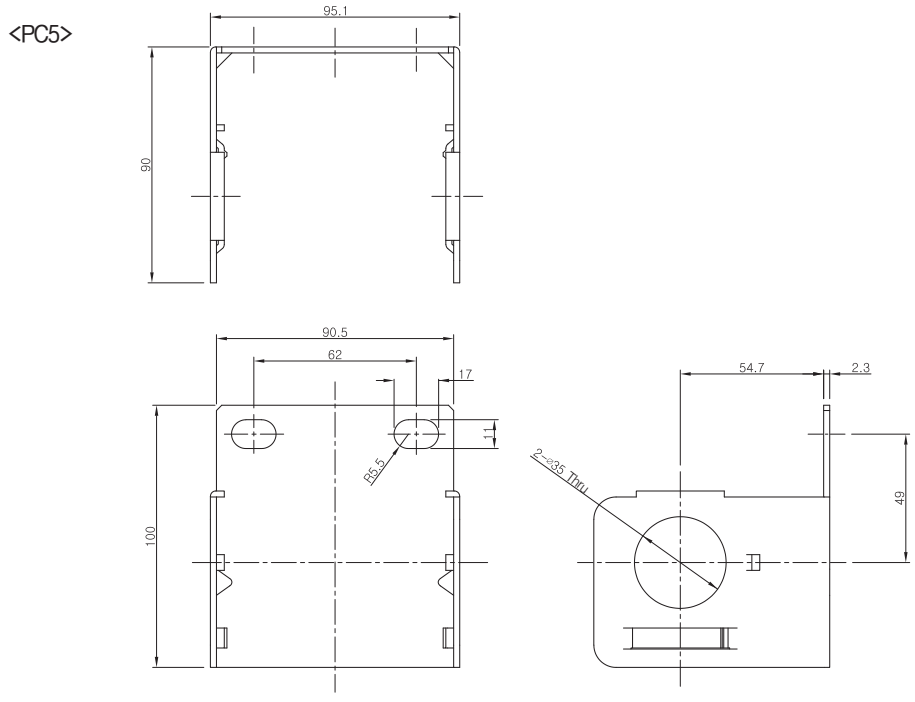
<PC3>



<PC4>



## ■ Dimensions



# Option

PA

SSV

SMS1000

Accessories

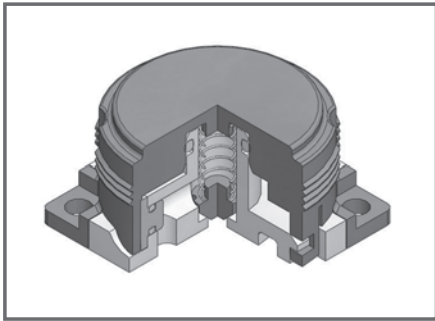
**OPTION**

PER2000,  
3000

PVR3000

PNR4000

## Built-In Check Valve

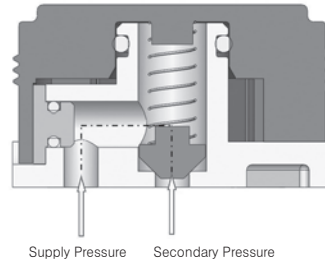


Exhausts pressure and prevents a counter flow air.

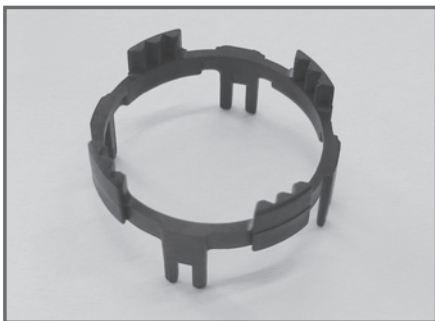
### Standard Specifications

Fluid	Air
Ambient and Fluid Temperature(°C)	-5 ~ 60(23~140° F)(Non-Freezing)
Operating Pressure Range(MPa)	Under 0.15(20psi)
Applicable Standard	PC2~5 Series

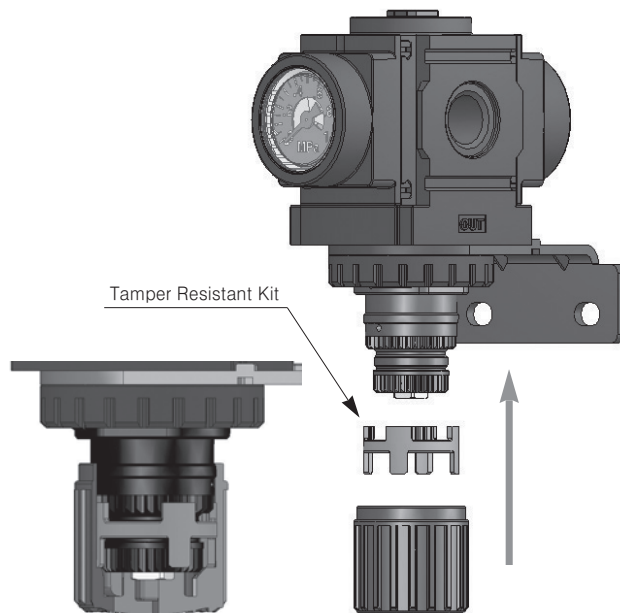
### Construction



## Tamper Resistant Kit

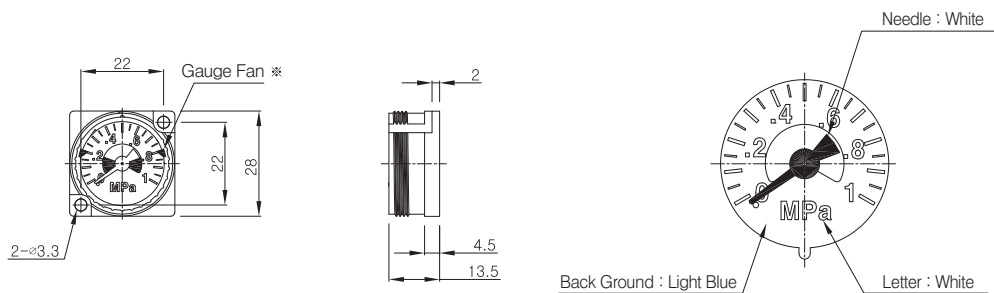


Prevent unauthorized adjustment to the pressure setting.

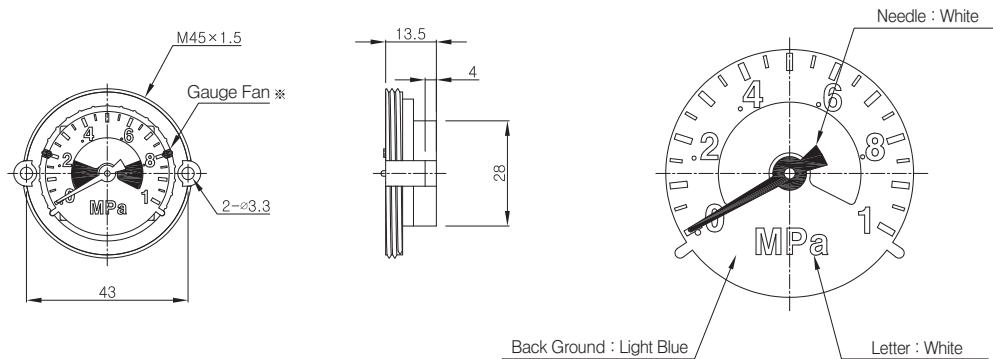


## Pressure Gauge

Integral Pressure Gauge (Ø24)



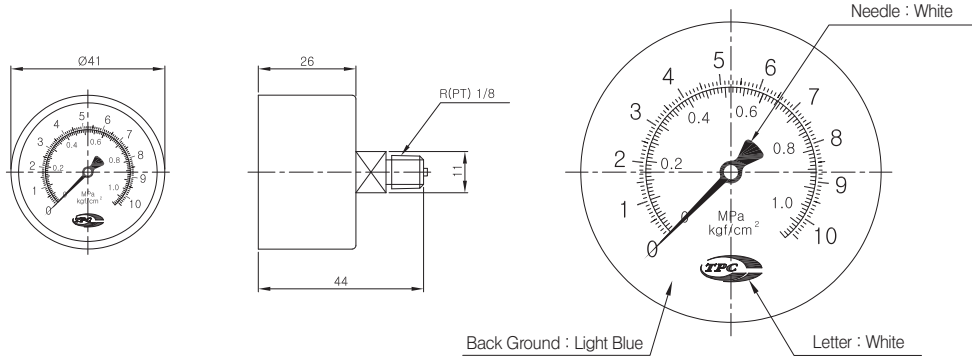
Integral Pressure Gauge (Ø36)



Gauge	Pressure Range(MPa)	Applicable Standard	Remarks
Integral Pressure Gauge(Ø24)	Max 1.0	PC2,3 Series	Not Sold Separately
Integral Pressure Gauge(Ø36)		PC4,5 Series	



Pressure Gauge



Item No.	Pressure Range(MPa)	Applicable Standard	Remarks
PR2-49-002	Max 0.2	PC2 ~ PC5 Series	Not Sold Separately
PR2-49-004	Max 0.4		
PR2-49-010	Max 1.0		

PA

SSV

SMS1000

Accessories

OPTION

PER2000, 3000

PVR3000

PNR4000

### ■ Manual Operation

#### [Lock C Type]

Using a screwdriver turn manual button on the pilot valve coil side clockwise (to digit "0") Manual operation will be released if the button is turned counterclockwise (to digit "1")

#### [Non-Lock Push]

Press manual button on the pilot valve coil. It immediately returns to automatic after releasing the manual button.

### ■ Piping Line

- 1) The arrow "→" indicates the flow direction of the compressed air.
- 2) Check that No. 1(P) port is connected.  
Air leakage will occur if air is supplied from other port.
- 3) Connect this product to the outlet of the F.R.L.
- 4) Connect lubricator to the inlet of this product.  
If, the lubricator is connected to the outlet, oil will flow back into the exhaust.

### ■ Use Environment

- 1) Take actions against freezing if this product is used at low temperature.
- 2) Attach silencer to No. 3(R) port if the product is used in a dusty area or valve switchover noise is serious.

### ■ Wiring and Use Precautions

- 1) Take care when the electronic valve or driving device is connected to the outlet of the product.
- 2) Consult us if the electronic valve is continuously used.  
Otherwise the capacity of electronic valve will deteriorate and other peripherals will be baldly affected due to the over heating of the coil and will result temperature increase.
- 3) When electronic valve is used on the secondary side of this product, use a electronic valve after confirming that the outlet pressure is equal to the inlet pressure through the pressure gauge.
- 4) If the pressure remained at outlet (port No. 2), the low speed air supply function does not work even though the pilot valve operates.



# Precision Pressure Regulator Series PER

## Series PER 2000

### FEATURES

**Highly Accurate Pressure Regulation :** The PER2000 Regulator controls output pressure with an accuracy of 0.1%, and has very low sensitivity to changes in supply pressure and flow.

**Start-Up Stability :** The Series PER 2000 has been designed to eliminate the need for any readjustment of the regulated pressure after long "down time." At start-up, the regulated pressure will return to its output setting.

**Flow Stability :** The regulated pressure is held constant over substantial changes in flow due to the high-gain pneumatic servo amplifier. Particularly good from dead end to 20 cubic meters per hour (12 SCFM).

**Automatic High Downstream Relief Capacity :** An integral relief valve provides for exhaust flow whenever the regulated pressure is reset to a lower value. The exceptionally large capacity of this relief valve assures immediate response when the downstream regulated pressure must be reduced under dead-end conditions.

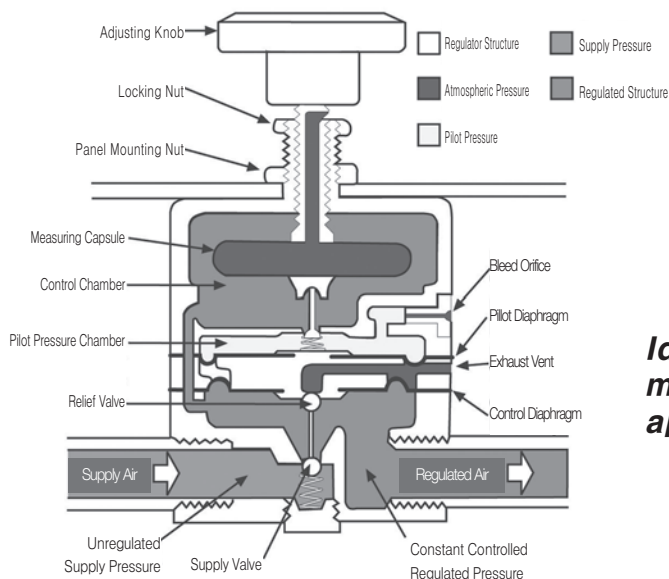
**Pressure Stability :** A high performance servo-operated control mechanism is utilized in the regulator. The pressure supplied to the pneumatic servo amplifier is reduced and held constant.

**Locking Capability :** The standard Series PER 2000 regulator has a locking nut which, when tightened, prevents inadvertent adjustment of pressure.

**Temperature Stability :** Shifts in the regulated pressure over wide ambient temperature variations are minimized by the use of a measuring capsule made of specially selected stainless steel alloys.

**Proven reliability :** Thousands of Series PER 2000 regulators are in the field. Proof of the accuracy of the regulator is reflected by its use in most air gauging systems and other precision pressure control applications.

**Mounting :** The unit may be installed in any position. It can be panel mounted or supported by in-line plumbing.



# PER 2000

PA

SSV

SMS1000

Accessories

OPTION

PER2000,  
3000

PVR3000

PNR4000

### APPLICATIONS

Industrial processes, inspection procedures, control and analytical instrumentation require precise regulation of air pressure in pipes and vessels. Maintaining constant pressures in these applications is usually complicated by the presence of numerous disturbances, such as changes in supply pressure, flow, and ambient temperature, that tend to upset prevailing conditions.

TPC pressure Regulators provide accuracy, precision control, and maximum stability under the most adverse operating conditions.

Here are a few of the many applications for the Series PER 2000 Regulator:

- Gas Mixing
- Valve Operators
- Gate Actuators
- Positioner Signal
- Calibration Stands
- Air Hoists
- Air Gauging
- Cylinder Loading
- Force Balance Hoists
- Disc & Shoe Air Brakes
- Clamp Units
- Web Tensioning
- Press Units
- Roll Loading

**Ideal for  
medical  
applications!**



# Precision Pressure Regulator Revolution



## Series PER 3000 High Flow Air Pressure Regulator

### FEATURES

- High flow capacity—up to 80 SCFM (2266 LPM)
- Responds quickly to minute changes in downstream pressure
- Dampening action of aspirator tube maintains downstream pressure
- Balanced supply valve minimizes the effect of supply pressure changes
- Buna-N & polyester rolling diaphragms are designed to give millions of cycles
- Honking & buzzing eliminated by action of integral baffle and aspirator tube
- Stack up construction can be disassembled & serviced without removal from air line

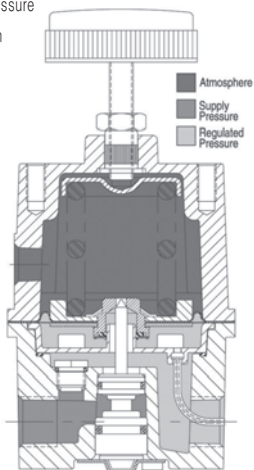


### DESCRIPTION

Series PER 3000 Regulator is specifically designed for applications that require substantial flow capacity and accurate pressure controls. Flows of 80 SCFM (2250LPM) can be attained.

Downstream pressure can be set within 0.25 in. (6.3mm) of water column and is accurately maintained under varying flow conditions with the help of an aspirator tube which adjusts the air supply in accordance with the flow velocity. A balanced supply valve, utilizing a rolling diaphragm, makes the regulator virtually immune to changes in supply pressure.

Series PER 3000 has a rugged precision die-cast aluminum housing, and is pressure-tested and chromate-treated for internal corrosion resistance. The regulator housing is finished with vinyl paint which resists scratching, weathering and other physical abuse.



## Series PER 3000H High Flow Back Pressure Regulator

### FEATURES

- High Flow Capacity—up to 50 SCFM (1400 LPM)
- Responds quickly to minute changes in upstream pressure
- Buna-N & polyester rolling diaphragms are designed to give millions of cycles
- Stack up construction can be disassembled & serviced without removal from air line

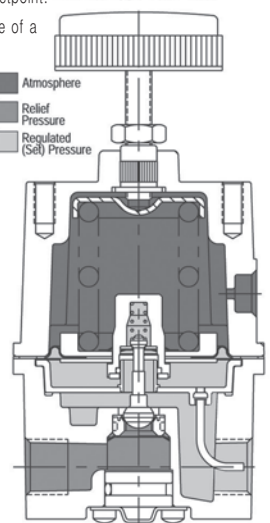
### DESCRIPTION

Series PER 3000H Pressure Regulator functions as a high flow, high precision pneumatic relief valve with an adjustable setpoint.

The Series PER3000H can be used in place of a standard relief valve to improve pressure control while maintaining protection against over pressurization, as in supply pressure lines to instruments and other control devices.

It is most often used in conjunction with a diaphragm-operated valve and bleed orifice as a compressor controller. Excess compressor pressure is relieved through the regulator to actuate the intake restricting valve. When the regulator is shut off, downstream air escapes through the bleed orifice, allowing the restricting valve to open.

※ 1N l /min ≈ 0,035SCFM  
1SCFM ≈ 28,57N l /min



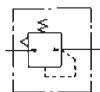
# Series **PER 2000, 3000**

## Precision Pressure Regulator



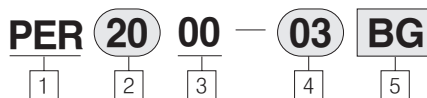
Model	Port size(PT)	Set Pressure Ranges kgf/cm <sup>2</sup>	PSIG	Accessories
PER2000	1/8, 1/4	0.1~1.7	2~25	Pressure Gauge
PER2010		0.1~4.1	2~60	
PER2020		0.1~8.3	2~120	
PER2030		0.1~8.3	2~120	
PER3000	1/4, 3/8	0.1~2.1	0~30	Pressure Gauge, Bracket
PER3010		0.1~4.1	1~60	
PER3020		0.1~10.3	2~150	

Symbol



PA
SSV
SMS1000
Accessories
OPTION
PER2000, 3000
PVR3000
PNR4000

### How to Order



① Precision Pressure Regulator

② Body Size

20 : 1/8, 1/4  
30 : 1/4, 3/8

③ Set Pressure Ranges(kgf/cm<sup>2</sup>)(PSI)

Model	PER2000	PER3000	Note
00	0.1~1.7(1.42~24.18)	0.1~2.1(0~29.86)	
10	0.1~4.1(1.42~58.3)	0.1~4.1(1.42~58.3)	
20	0.1~8.3(1.42~118.0)	0.1~10.3(1.42~678.3)	
30	0.1~8.3(1.42~118.0)	—	High emission EXHR

④ Port Size

01 : Rc(PT)1/8  
02 : Rc(PT)1/4  
03 : Rc(PT)3/8  
\* RER2000 Port Size:1/8, 1/4  
\* RER3000 Port Size:1/4, 3/8

⑤ Attachment

B : Bracket mounting  
G : Pressure Gauge  
\* For PER 2000 Series Bracket, inquire Separately.

### Specifications

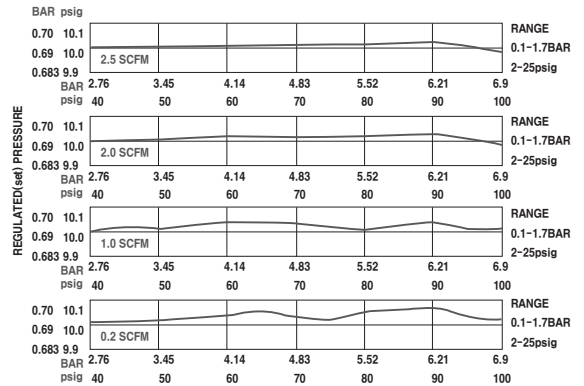
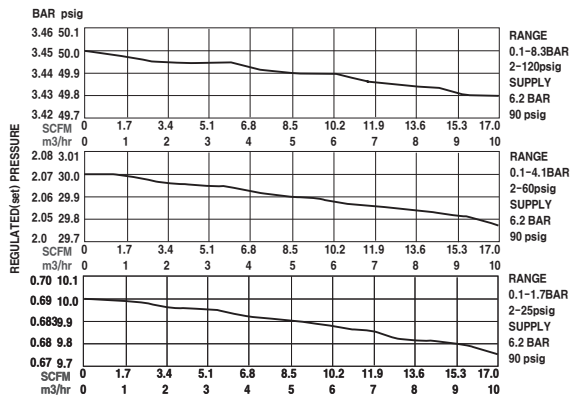
Type	PER2000	PER3000
Port Size Rc(PT)	1/8 1/4	1/4 3/8
Proof Pressure	Please refer to the table of model Specifications	
Max. Operating Pressure	Please refer to the table of model Specifications	
Ambient and Fluid Temperature · °C(°F)	5~60°C (41~140°F)	
Set Pressure Ranges(kgf/cm <sup>2</sup> )(psi)	0.1~8.3kgf/cm <sup>2</sup> (1.42~118.0psi)	0~1.03kgf/cm <sup>2</sup> (1.42~146.5psi)
Structure	Relief Type	
Gauge Port Size	1/4 NPT	

# Series RER 2000, 3000

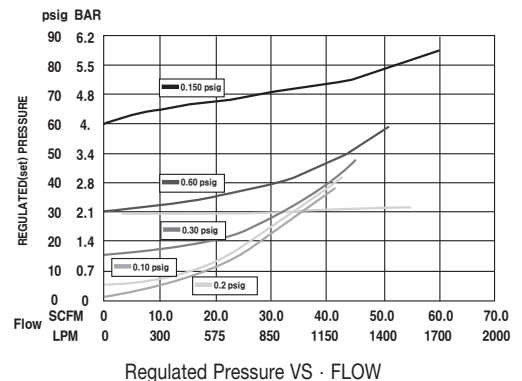
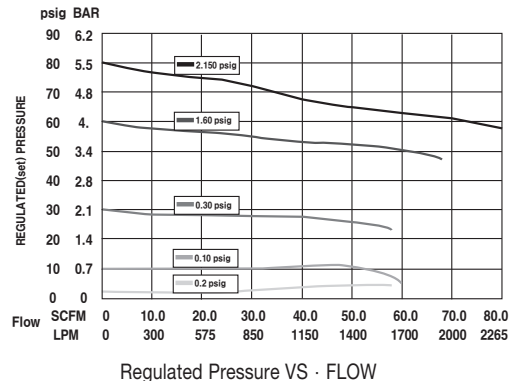
## Model Specifications

Model	PER 2000	PER 2000 EX-HR	PER 3000-02	PER 3000-03
Sensitivity	1/8" (3,2mm) Water Column	1/8" (3,2mm) Water Column	1/4" (6,4mm) Water Column	1/8" (3,2mm) Water Column
Flow Capacity	14CFM/396LPM	14CFM/396LPM	40,50 or 80SCFM(1113,1416,2266LPM)	50SCFM(1416LPM)
Effect of supply Pressure Variation(±psig) on Outlet Pressure	0,005psig/0,3mBAR per 25psig/1,7BAR Change	0,005psig/0,3mBAR per 25psig/1,7BAR Change	(0,025psig/1,7BAR)	-
Exhaust Capacity(5psig above 20psig set point)	25scfm/56LPM	15scfm/424LPM	4SCFM(113LPM)	-
Maximum Input / Supply Pressure	150psig/10,3BAR	150psig/10,3BAR	250psig(17,2BAR)	250psig(17,2BAR)
Effect of Changes in Flow on Regulated Pressure (100psig / 6,9 BAR Supply)	2,5psig 10,01BAR per 10scfm/283LPM	2,5psig 10,01BAR per 10scfm/283LPM	2,5psig(0,2BAR) over flow, 50SCFM(1416LPM)(3/8NPT, 0-30psig/0-2 BAR range, 15psig/1BAR set point)	-
Output Pressure Ranges	2-25, 2-60, 2-120psig 0,14-1,7, 0,14-4,1, 0,14-8,3BAR	2-120psig 0,14-8,3BAR	0-2psig, 0-10psig, 0-30psig, 1-60psig, 2-150psig, 3-200psig, 0,01BAR, 0,07BAR, 0,21BAR, 0,14-1,1BAR, 0,1-10,3BAR, 0,2-13,8BAR	-
Set Point Ranges			-	0-2psig, 0-10psig, 0-30psig, 0-60psig, 0-150psig, 0,01BAR, 0,07BAR, 0,21BAR, 0,14-1,1BAR, 0,1-10,3BAR
Total Air Consumption @ Maximum Output			from 1,0 to 12,5SCFH(0,5-6LPM)	-
Temperature Range(°F/°C)	-20 to 160° F (-29 to 70°c)	-20 to 160° F (-29 to 71°c)	-40° to 200° F (-40 to 93°c)	-40° to 200° F (-40 to 93°c)
Port Size	1/8", 1/4", 3/8"	1/8", 1/4", 3/8"	1/4", 3/8", 1/2" BSPT	1/4", 3/8", 1/2" BSPT
Size			3,0" x 3,0" x 6,0" (76 x 76 x 152mm)	3,0" x 3,0" x 6,0" (76 x 76 x 152mm)
Weight	1,47 / b(0,67kg)	1,47 / b(0,67kg)	1,41 / b(0,6kg)	1,51 / b(0,6kg)
Materials of Construction	Body : Diecast aluminum with vinyl paint Adjusting Screw : Plated steel Trim : Acetal, brass, plated steel, nitrile Diaphragm : Buna-N with polyester fabric Knob : Phenolic plastic Spring : Music Wire			
Preset Pressure	No			
Tamper Resistant Cover	Yes			
Mounting	Pipe, Panel		Pipe, Panel, or bracket	

## PER2000



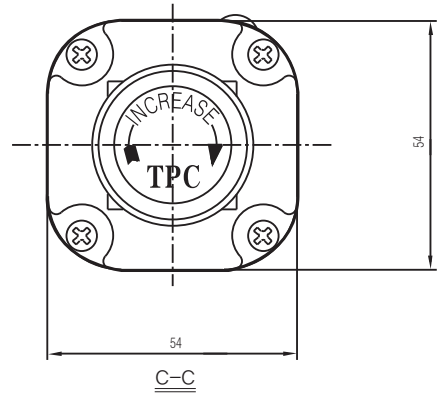
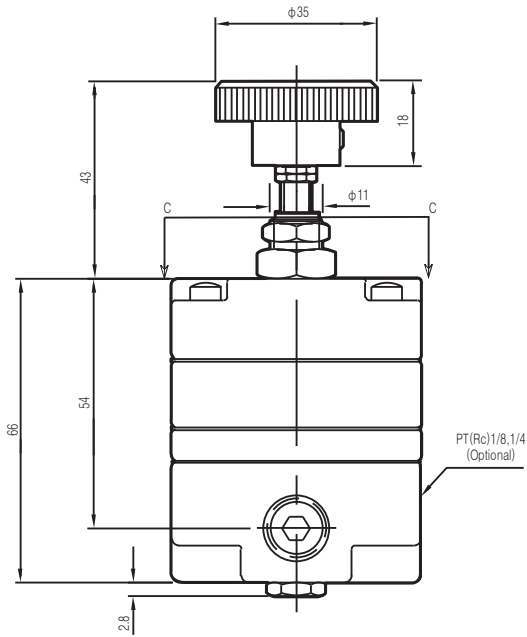
## PER3000



# Series RER 2000, 3000

Series PER 2000

(Unit:mm)



PA

SSV

SMS1000

Accessories

OPTION

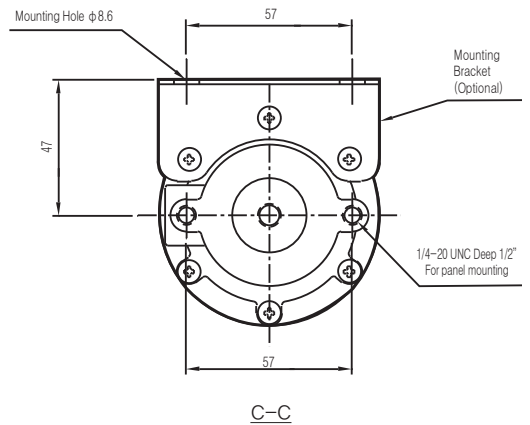
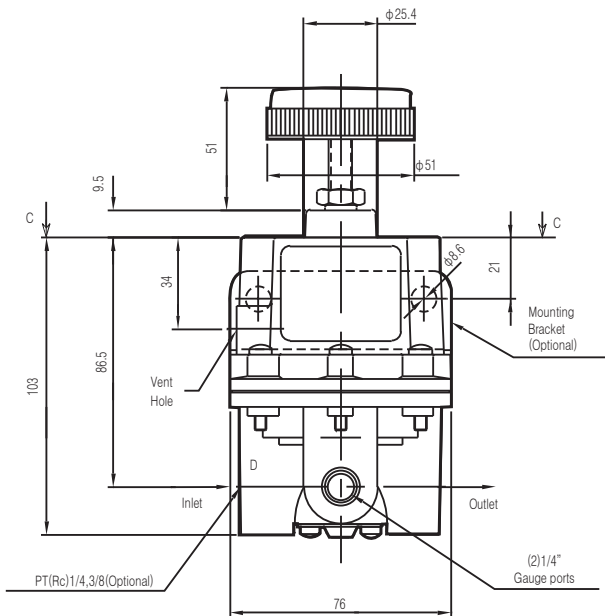
PER2000,  
3000

PVR3000

PNR4000

Series PER3000

(Unit:mm)





## Warning

Make sure to check the following Instruction prior to use. Make sure to check common precautions on the products mentioned in this catalog, and refer to main text for precautions on every series.

### Air Supply

#### Warning

1. In the event that condensate is not emptied in the drain bowl on a regular basis, over-flow the bowl and allow the condensate to enter the compressed air lines. In the event that it is difficult to check and remove, install a drain bowl with the an auto-drain option.

#### Caution

- In event that the supply pressure line is clogged with drainage or dirt, etc., the liked throttle could malfunction. In addition to an air filter, be sure to use a mist separator.
- The use of a lubricator on the supply side of the regulator should be avoided, because the fixed throttle could become clogged and lead to malfunction. In event that a lubrication for the terminal devices is needed, be sure to connect a lubricator on the output side of the regulator.

### Maintenance

#### Warning

##### Regulator

Set up the regulator while the pressure indicated is on the supply and the secondary pressure gauges are being verified. By turning the handle excessively, the internal parts could be damaged. Set the pressure gauge provided with the product between 0.02 to 0.2MPa based on the 0.2MPa type. In an attempt to prevail damage to the pressure gauge, be sure to check that a pressure in excess of 0.2Mpa is not applied.

##### Shut-down before maintenance

Make sure the supply pressure is shut off and all residual air pressure is released from the system prior to attempting any kind oil maintenance.

##### Start-up after maintenance

Apply operating pressure and power to the equipment and check for proper operation and possible air leaks. Be sure to verify product set-up parameters when operation is abnormal.

##### Any modification to the product should be avoided.

##### Taking the product apart should be avoided.

Malfunction and damage could occur when not following proper procedures.

##### Examine regularly the cracks, scratches and other sorts of degradation of air filter, standard resin bowl and sightdome.

#### Caution

##### Regulator

When the pressure adjustment handle is turned clockwise, the secondary pressure could increase, and when turning it counterclockwise, the pressure (To set the pressure, do so in the direction of pressure increase.) could decrease. Be sure to set the supply pressure before setting the secondary pressure.

It is preferred to set the range for secondary pressure at  $\leq 85\%$  of the supply pressure.

### Piping

#### Warning

- Use recommended torques so as to screw in piping materials. Less fastening torque could cause looseness and seal malfunction, and over fastening torque could damage threads. Over force could damage piping bracket.

#### Caution

- The use of a precision regulator outside the range of its specifications should be avoided.
- Make connections while confirming port indications during mounting.

#### Recommended proper Torque.

Connecting thread	Torque kgf · cm(N · m)
M5	15~20(213.3~284.4)
Rc(PT) 1/8	70~90(995.4~1279.8)
Rc(PT) 1/4	120~140(1706.4~1990.8)
Rc(PT) 3/8	220~240(3125.4~3412.8)
Rc(PT) 1/2	280~300(3981.6~4266)
Rc(PT) 3/4	280~300(3981.6~4266)
Rc(PT) 1	360~380(5119.2~5403.6)

- Do not twist or bend.  
Hold external piping separately so as to prevent damaged.
- In event that a directional switching valve(solenoid valve, mechanical valve, etc.) is provided on the supply side of the regulator and repeatedly switched ON and OFF, it may be accelerated due to wear of the nozzle/flapper section and a discrepancy in the setting value may occur. Avoid using a directional switching valve on the supply side. If a directional switching valve is used, install it on the output side of the regulator
- Though the bleed port (the hole on the side of the body's midsection), air is normally discharged. Air is necessarily consumed based on the construction of the precision regulator, which is not an abnormality.
- Make sure to tighten the lock-nut after pressure adjustment.

### Environment

#### Warning

- Use in atmospheres in which the valve is in direct contact with corrosive gases, chemicals, salt water or steam should be avoided.
- Use in an explosive atmosphere should be avoided.
- Use in a place subjected to heavy vibration and/or shock should be avoided. Check the specifications for each series.
- The valve should not be exposed to prolonged sun light. Use a protective cover.
- Remove emissive heat.
- In event that is used in an atmosphere in which there is possible contact with water drop-lets, oil, weld spatter, etc., take suitable protection measures.
- In event that the valve is used in the dusty ambient or the noise produced at the valve switching is unendurable, provide and install a silencer in R port so as to prevent dust from entering and reduce the noise.

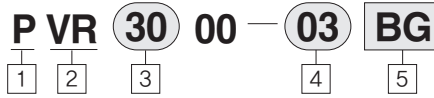


Vacuum Regulator  
**Series PVR 3000**



- HIGH FLOW CAPACITY
- COMPACT SIZE

How to Order



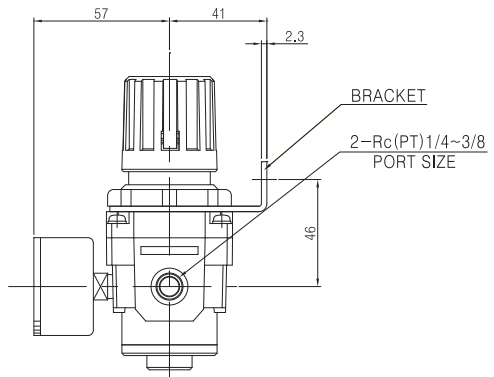
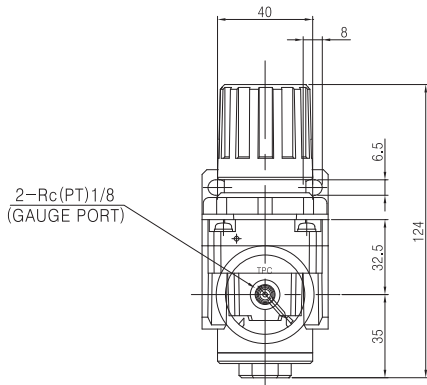
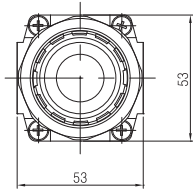
- |  |   |
|--|---|
| <p>1 Purity and Pressure Control Equipment</p> <p>2 Vacuum Regulator</p> <p>3 Body Size<br/>30 : 3/8</p> | <p>4 Port Size<br/>02 : Rc(PT)1/4<br/>03 : Rc(PT)3/8</p> <p>5 Accessory<br/>B : Bracket<br/>G : Gauge</p> |
|--|---|

Standard Specifications

Model	PVR3000
Fluid	Air
Regulating Range	-100 ~ -1.3kPa
Atmospheric Consumption	1.1ℓ /min(ANR)
Ambient and Media Temperature	0 ~ 60 °C
Port Size	Rc 1/4, 3/8
Port Size For Pressure Gauge	Rc 1/8
Weight(kg)	0.42

PA
SSV
SMS1000
Accessories
OPTION
PER2000, 3000
PVR3000
PNR4000

PVR3000



# Series PVR 3000

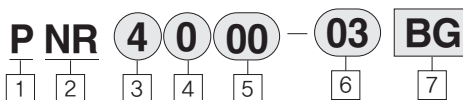
## Clean Regulator

# Series PNR 4000



- COMPACT SIZE
- HIGH FLOW CAPACITY
- COMPACT SIZE

### How to Order



- |  |   |
|--|---|
| <p><b>1</b> Purity and Pressure Control Equipment</p> <p><b>2</b> Nitrogen Regulator</p> <p><b>3</b> Body Size<br/>4 : 3/8</p> <p><b>4</b> Relief<br/>0 : Non Relief</p> | <p><b>5</b> Regulating Range<br/>00 : 0.05 ~ 0.7 MPa</p> <p><b>6</b> Port Size<br/>02 : Rc(PT)1/4<br/>03 : Rc(PT)3/8<br/>04 : Rc(PT)1/2</p> <p><b>7</b> Accessory<br/>B : Bracket<br/>G : Gauge</p> |
|--|---|

### Standard Specifications

Model	PNR4000
Relief	Non Relief
Fluid	Clean Air, N <sub>2</sub> , CO <sub>2</sub> , He, Ar
Proof	1.5 MPa
Max. Operating Pressure	1.0 MPa
Regulating Range	0.05 ~ 0.7 MPa
Ambient and Media Temperature	0 ~ 60 °C
Port Size	Rc(PT) 1/4, 3/8, 1/2, 7/8 - 14 UNF
Port Size For Pressure Gauge	Rc(PT) 1/8
Fluid Contact Material	SUS 316 (Body SUS316L)
Diaphragm Material	PTFE or FPM
Weight(kg)	0.8

### PNR4000

