



To achieve the optimization of system performance, the first thing is to get the gas source which accords with the specifications. Preparation unit with good performance are the precondition to make sure the gas source. AirTAC has many kinds of preparation unit for your choice:

1. GA series; 2. GP series; 3. A, B series; 4. Other accessory series.

GA Series

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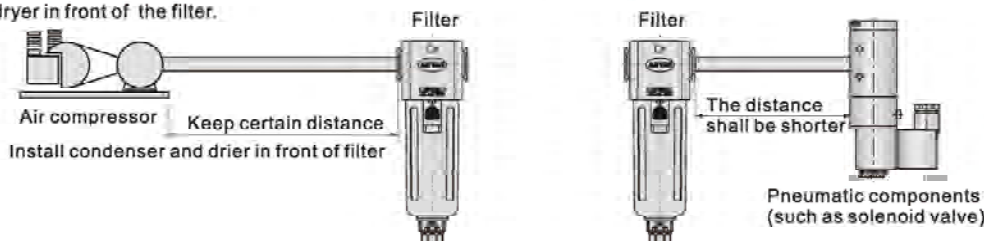


The installation and application of the filter

1. Before installation, the sundry granule such as dust, oil pollution and chipping in pipeline shall be cleaned up to prevent the mixture of fragments of seal materials.
2. Never install reversingly the direction of intake and outlet. It shall be installed vertically and the bowl is downward. For the convenient of maintenance, proper space around the device shall be left. The installation height of filter shall accord with the elevation that the filter bowl can be dismantled.



3. Never install the device near the air compressor. It shall be installed next to the pneumatic components at the end of pipeline, since the water and oil in the compressed air with high temperature from air compressor take on gaseous state which will not only influence the filter effect, but are easy to damage the seals. Please install condenser and drier in front of the filter.

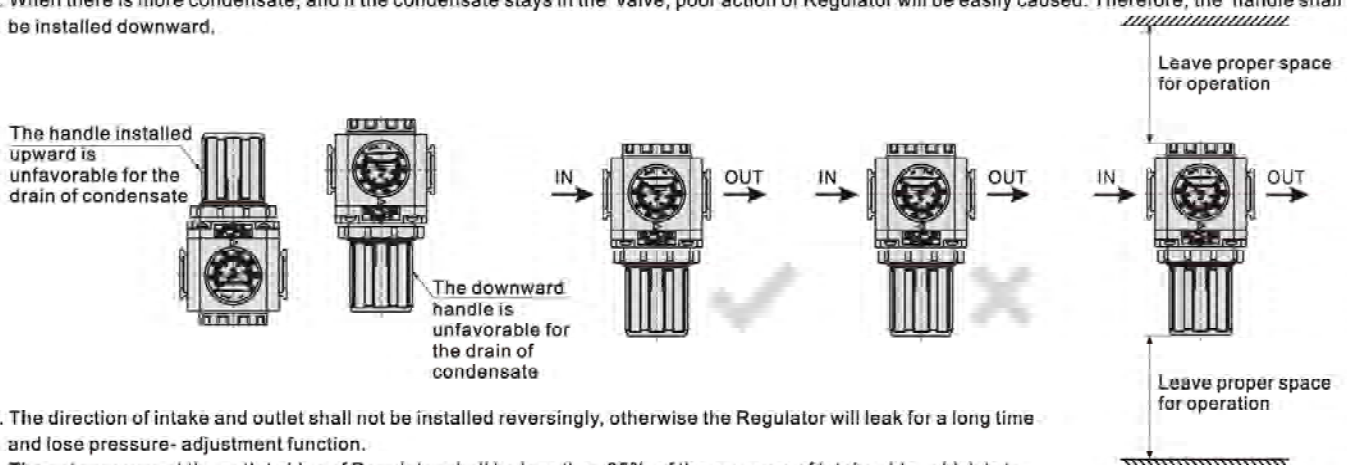


1. To prevent the external force to damage the filter bowl, never install it in the side of access of delivery vehicles or a protection barrier may be built.
2. The drain bowl is made of polycarbonate which can not be used in the environment with synthetic oil, organic solvent, chemicals, cooling fluid, alkali and acidic matter, gluwater; and the site additive with the above matters. Meanwhile, the direct sunshine shall be avoided.
3. Regular draining of bowl shall be conducted. Once water level surpasses the breakwater, the sewage filtered will be carried to the output compressed air again, causing secondary pollution.
4. To guarantee the filter effect, the filter core shall be cleaned or changed regularly.
5. Please regularly examine whether the plastic drain bowl has crack, damage or other aging.



Installation and application of regulator

1. Before installation, the sundry granule such as dust, oil pollution and chipping in pipeline shall be cleaned up to prevent the mixture of fragments of seal materials.
2. When there is more condensate, and if the condensate stays in the valve, poor action of Regulator will be easily caused. Therefore, the handle shall be installed downward.



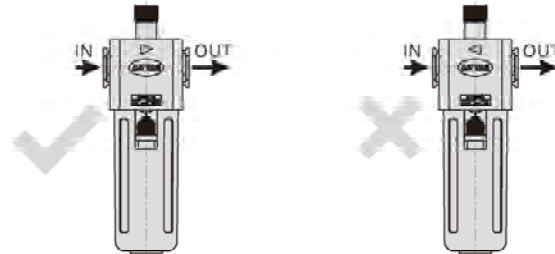
3. The direction of intake and outlet shall not be installed reversingly, otherwise the Regulator will leak for a long time and lose pressure-adjustment function.
4. The set pressure at the outlet sides of Regulator shall be less than 85% of the pressure of intake side, which is to avoid overlarge pressure drop and failing in meeting the application requirement.
5. Two Regulator act as the loop for the intake by turns of high and low pressure. Please use free flow valve to prevent reflux.
6. If there are condensate, oil pollution and dust in pressure pipe at intake side, the jam in discharge orifice and restriction orifice and poor action of valve will be caused. Therefore, filter shall be installed additionally in front of Regulator.
7. It shall be applied in the stipulated temperature range and direct sunshine shall be avoided.
8. Proper space around the device shall be left for pressure-adjustment operation and maintenance.
9. After the pressure-adjustment operation is finished, the adjustment button of Regulator shall be locked.



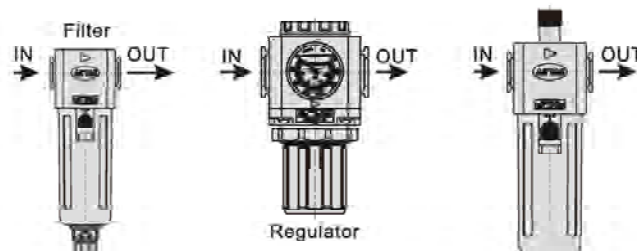


The installation and application of oil feeder

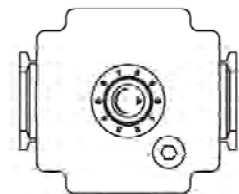
1. The direction of intake and outlet shall not be installed reversingly. Before installation, the sundry granule such as dust, oil pollution and chipping in pipeline shall be cleaned up to prevent the mixture of fragments of seal material.



2. It will be difficult to supply oil and conduct maintenance if the Lubricator is set too high.
 3. Lubricator shall be installed after the air filter and Regulator to prevent moisture entering the oil bowl and avoid oil emulsification. The throttle orifice in Regulator shall not be polluted by oil and the rubber parts shall not be influenced by oil mist. It is good for the atomization of oil that the velocity of flow after Regulator is higher than that in front of the valve.



The correct installation sequence of Filter Regulator and Lubricator



The bigger the number in dial is, the higher the quantity of oil dripping is

4. The number in dial in adjustment ring of Lubricator shows the position of oil quantity adjustment. The larger the number is, the more the oil dripping is. It is not for oil drops.
 5. When Lubricator works, if there is a part in the pipeline loop that can not be supplied with oil, this part shall be set with one-way valve to prevent reflux.
 6. The air flow that is used by Lubricator must meet the requirement of necessary quantity of oil dripping (minimal flow for mist). The insufficient air flow will cause the failure of oil dripping.
 7. The Lubricator can be added oil under pressure. When oil is added, the oil-fill plug shall be slowly opened and dismantled after the pressure in oil bowl has been completely eliminated to prevent oil-fill plug flying off or oil spraying.
 8. The oil level in oil bowl shall stay between the up limit and down limit, and please supplement oil on a timely basis.

◆ Method for supplementing oil

When Lubricator is supplemented with oil, the oil-fill plug shall be turned off. Turbine oil poured into the oil bowl shall reach 80% of its volume.

Oil shall be regularly examined and supplemented to allow the device to work under the situation that oil is sufficient.

(As when the oil level is under the oil suction pipe, it can not supply oil for the system. Therefore, the oil shall be supplemented before the bottom of oil suction pipe is exposed).

◆ Oil quantity and its adjustment

Generally speaking, the free air of each 10m³ uses 1cm³ as the benchmark oil supply quantity.

◆ Lubricant

The lubricant that is recommended for pneumatic components is one kind (ISO VG32) of turbine oil. Especially when pneumatic components are lubricated, its particularity shall be considered. Lubricant shall be anti-rust and avoid swelling, shrink and deterioration of seal materials (pneumatic components mostly adopt NBR as the seal's material). In addition, the performance of oil dripping of lubricant shall be considered. The viscosity that is too high or too low is not proper.

9. Please regularly examine whether the plastics bowl and inspection window of Lubricator have crack, damage or other aging situation.





Compendium of GA Series preparation unit

P182	Product feature	Photo	P184	Product feature	Photo
GAC Series F.R.L Unit	<ul style="list-style-type: none"> ● The efficiency of eliminating moisture and solid grain is high. ● Adjusting pressure steadily ● The flow of miststart is low. Filling oil under pressure is possible. ● 200/300/400/600 Series ● Port size: 1/8" 1/4" 3/8" 1/2" 3/4" 1" 		G AFC Series F.R.L Unit	<ul style="list-style-type: none"> ● The efficiency of eliminating moisture and solid grain is high. ● Adjusting pressure steadily ● The flow of miststart is low. Filling oil under pressure is possible. ● 200/300/400/600 Series ● Port size: 1/8" 1/4" 3/8" 1/2" 3/4" 1" 	
P186	Product feature	Photo	P188	Product feature	Photo
GAFR Series Filter-Regulator	<ul style="list-style-type: none"> ● The efficiency of eliminating moisture and solid grain is high. ● Adjusting pressure steadily ● With fixing bracket ● 200/300/400/600 Series ● Port size: 1/8" 1/4" 3/8" 1/2" 3/4" 1" 		GAF Series Filter	<ul style="list-style-type: none"> ● Low pressure loss ,high efficiency in separating water ● 5µm and 40µm filtering grade(Optional) ● Manual drain, semi-auto drain and automatic drain ● With fixing bracket ● 200/300/400/600 Series ● Port size: 1/8" 1/4" 3/8" 1/2" 3/4" 1" 	
P190	Product feature	Photo	P192	Product feature	Photo
GAR Series Regulator	<ul style="list-style-type: none"> ● Adjusting pressure steadily ● Faceplate fixing and bracket fixing is optional ● Standard type, lower pressure type is optional ● 200/300/400/600 Series ● Port size: 1/8" 1/4" 3/8" 1/2" 3/4" 1" 		GAL Series Lubricator	<ul style="list-style-type: none"> ● The flow of miststart is low. Filling oil under pressure is possible. ● With fixing bracket. ● The adjustment of oil supply more reliable. ● 200/300/400/600 Series. ● Port size: 1/8" 1/4" 3/8" 1/2" 3/4" 1" 	
P195	Product feature	Photo	P197	Product feature	Photo
GT Series preparation unit	<ul style="list-style-type: none"> ● Short PC bowl type ● GTC/GTFC/GTFR/GTF/GTL ● Port size: 1/8" 1/4" 		GA Series Gas distribution block	<ul style="list-style-type: none"> ● Be used with G series ● The air flow can be divided by the device ● 200/300/400/600 Series ● Port size: 1/8" 1/4" 3/8" 1/2" 3/4" 1" 	

Installation and application



1. Check whether the components have been damaged during transportation before installing and using.
2. Pay attention to whether the flow direction of air (notice "→" direction) and thread type are correct.
3. Please notice whether installation condition accords with technical requirements (such as "working pressure" and "applied temperature range").
4. The medium used or installation environment shall be noticed. The matters with chlorine, carbon compound, aromatic compound and oxidizing acid and alkali shall be avoided to prevent the damage of bowl and oil bowl.
5. Regularly clean or change filter core. Lubricators and regulators shall be in descending order.
6. Keep dust away. The dust cover shall be installed in intake and outlet when the device is dismantled and stored.



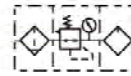
Preparation unit—GA Series

GAC Series F.R.L. combination

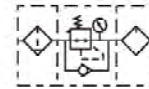


Symbol

No reflux valve is attached



Reflux valve is attached



Product feature

1. Oil dripping adopts gap seal structure, which makes the adjustment of oil supply more reliable.
2. Oil feed ring can only make one full turn. The quantity of oil supply, basically taking on linear distribution. The quantity of oil supply can be generally calculated according to the position of graduation ring.
3. Filling of oil while the lubricator is under pressure is made possible.
4. Special drip nozzle structure will produce negative pressure in oil dripping outlet and the mist flow is minimal.
5. Quick and reliable mounting clamps makes it convenient to install and use.
6. The performance of pressure adjustment is reliable with high precision.
7. The efficiency of eliminating moisture and solid grain is high.
8. Two drain types are available: manual drain+semi-auto drain and automatic drain.
9. Three bowl materials are available: PC, Metal and Nylon.

Specification

Model	GAC200-06	GAC200-08	GAC300-08	GAC300-10	GAC300-15	GAC400-10	GAC400-15	GAC600-20	GAC600-25	
Fluid	Air									
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"	3/8"	1/2"	3/4"	1"	
Filtering grade	40 μm or 5 μm									
Pressure range	0.15~0.9MPa(20~130psi)									
Max. pressure	1.0MPa(145psi)									
Proof pressure	1.5MPa(215psi)									
Temperature range	-5~70°C(Unfreeze)									
Capacity of drain bowl	25CC			60CC			100CC		205CC	
Capacity of oil bowl	36CC			98CC			185CC		410CC	
Recommended lubricant	ISO VG 32 or equivalent									
Weight	750g			1300g			2390g		4600g	
Constitute	Filter	GAF200-06	GAF200-08	GAF300-08	GAF300-10	GAF300-15	GAF400-10	GAF400-15	GAF600-20	GAF600-25
	Regulator	GAR200-06	GAR200-08	GAR300-08	GAR300-10	GAR300-15	GAR400-10	GAR400-15	GAR600-20	GAR600-25
	Lubricator	GAL200-06	GAL200-08	GAL300-08	GAL300-10	GAL300-15	GAL400-10	GAL400-15	GAL600-20	GAL600-25

[Note1] PT thread, G thread and NPT thread are available.

Ordering code

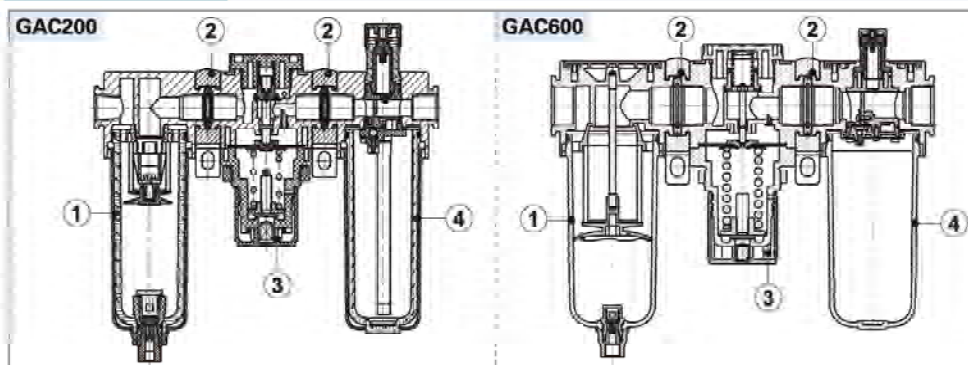
GAC300 □ 10 □ S □ W G K

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Model	② Bowl material	③ Port size	④ Drain type	⑤ Type code	⑥ Pressure gauge	⑦ Filtering grade	⑧ Thread type	⑨ Code of reflux valve
GAC200:GA200 Series F.R.L unit	Blank: PC bowl	06: 1/8" 08: 1/4"	Blank: Semi-auto drain +Manual drain A: Automatic drain	S: Standard L: Lower pressure [Note1]	Blank: Circular N: No gauge	Blank: 40μm W: 5μm	Blank: PT (MPa/psi) G: G (bar/MPa) T: NPT (psi/bar)	Blank: No reverse flow valve is attached K: Reverse flow valve is attached [Note2]
GAC300:GA300 Series F.R.L unit	C: Metal bowl	08: 1/4" 10: 3/8" 15: 1/2"						
GAC400:GA400 Series F.R.L unit	N: Nylon bowl	10: 3/8" 15: 1/2"						
GAC600:GA600 Series F.R.L unit	C: Metal bowl	20: 3/4" 25: 1"						

[Note1] The maximum work pressure of lower pressure type is 0.4MPa(58psi); [Note2] Please refer to page 194 for details of reflux valve.

Inner structure

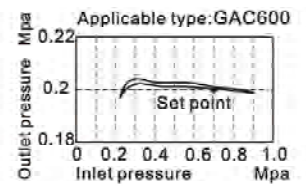
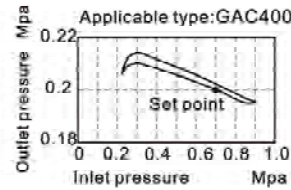
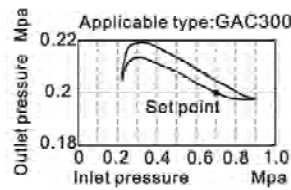
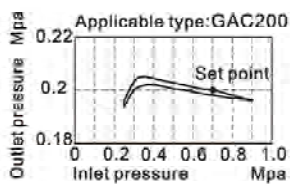


No.	Item	No.	Item
1	GA series filter	3	GA series regulator
2	Bracket	4	GA series lubricator

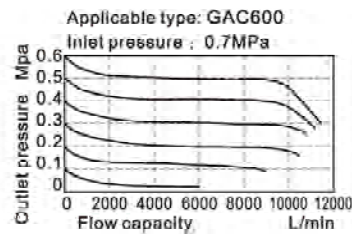
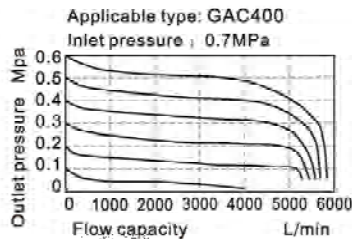
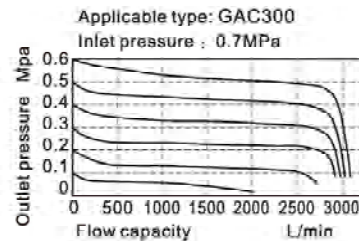
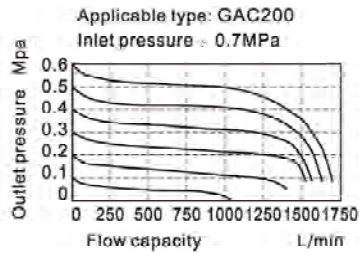
Preparation unit—GA Series

GAC Series F.R.L. combination

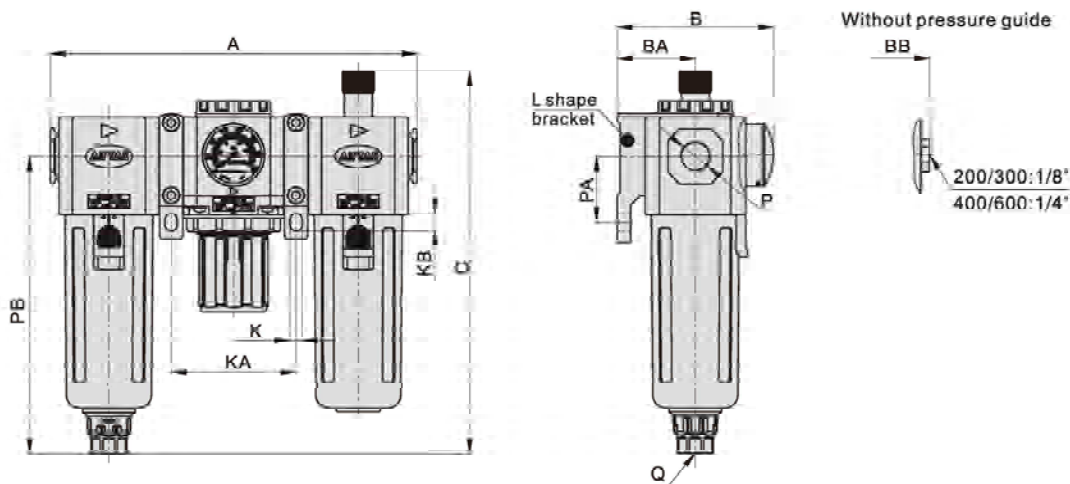
Pressure chart



Flow chart



Dimensions



Model\Item	A	B	BA	BB	C	K	KA	KB	P	PA	PB	Q
GAC200-06	163.5	69	30	55.5	160	5.5	55.5	8.5	1/8"	25	120	M5X0.8
GAC200-08	163.5	69	30	55.5	160	5.5	55.5	8.5	1/4"	25	120	M5X0.8
GAC300-08	195	83	41.5	72	203.5	6.5	66.5	9	1/4"	35	158	G1/4
GAC300-10	195	83	41.5	72	203.5	6.5	66.5	9	3/8"	35	158	G1/4
GAC300-15	195	83	41.5	72	203.5	6.5	66.5	9	1/2"	35	158	G1/4
GAC400-10	248	99	50	88	227	8.6	84	12	3/8"	40	177.5	G1/4
GAC400-15	248	99	50	88	227	8.6	84	12	1/2"	40	177.5	G1/4
GAC600-20	312	128	70	117	267.5	11	106	16	3/4"	50	205	G1/4
GAC600-25	312	128	70	117	267.5	11	106	16	1"	50	205	G1/4

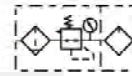
Preparation unit—GA Series

GAFC Series FR.L. combination

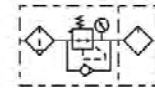


Symbol

No reflux valve is attached



Reflux valve is attached



Product feature

1. Quick and reliable mounting clamps makes it convenient to install and use.
2. The performance of pressure adjustment is reliable with high precision.
3. The efficiency of eliminating moisture and solid grain is high.
4. Two drain types are available: manual drain+semi-auto drain and automatic drain.
5. Three bowl materials are available: PC, Metal and Nylon.

Specification

Model	GAFC200-06	GAFC200-08	GAFC300-08	GAFC300-10	GAFC300-15	GAFC400-10	GAFC400-15	GAFC600-20	GAFC600-25	
Fluid	Air									
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"	3/8"	1/2"	3/4"	1"	
Filtering grade	40 μm or 5 μm									
Pressure range	0.15~0.9MPa(20~130psi)									
Max. pressure	1.0MPa(145psi)									
Proof pressure	1.5MPa(215psi)									
Temperature range	-5~70°C(Unfreeze)									
Capacity of drain bowl	25CC			60CC			100CC		205CC	
Capacity of oil bowl	36CC			98CC			185CC		410CC	
Recommended lubricant	ISO VG 32 or equivalent									
Weight	590g		1020g			1810g		3430g		
Constitute	Filter & Regulator	GAFR200-06	GAFR200-08	GAFR300-08	GAFR300-10	GAFR300-15	GAFR400-10	GAFR400-15	GAFR600-20	GAFR600-25
	Lubricator	GAL200-06	GAL200-08	GAL300-08	GAL300-10	GAL300-15	GAL400-10	GAL400-15	GAL600-20	GAL600-25

[Note1] PT thread, G thread and NPT thread are available.

Ordering code

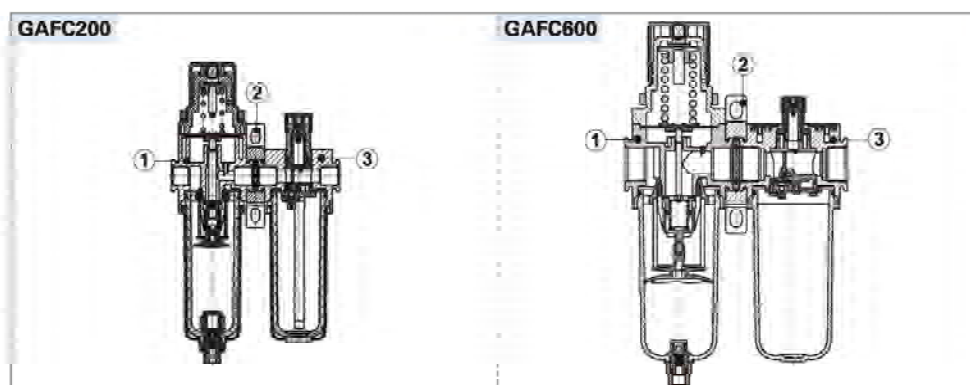
GAFC300 □ 10 □ S □ W G K

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Model	② Bowl material	③ Port size	④ Drain type	⑤ Type code	⑥ Pressure gauge	⑦ Filtering grade	⑧ Thread type	⑨ Code of reflux valve
GAFC200:GA200 Series FR.L unit	Blank; PC bowl	06: 1/8" 08: 1/4"					Blank: PT (MPa/psi)	Blank: No reverse flow valve is attached
GAFC300:GA300 Series FR.L unit	C: Metal bowl	08: 1/4" 10: 3/8" 15: 1/2"	Blank: Semi-auto drain +Manual drain	S: Standard	Blank: Circular	Blank: 40μm	G: G (bar/MPa)	K: Reverse flow valve is attached [Note2]
GAFC400:GA400 Series FR.L unit	N: Nylon bowl	10: 3/8" 15: 1/2"	A: Automatic drain	L: Lower pressure [Note1]	N: No gauge	W: 5μm	T: NPT (psi/bar)	
GAFC600:GA600 Series FR.L unit	C: Metal bowl	20: 3/4" 25: 1"						

[Note1] The maximum work pressure of lower pressure type is 0.4MPa(58psi); [Note2] Please refer to page 194 for details of reflux valve.

Inner structure

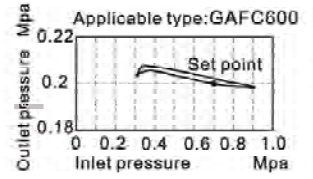
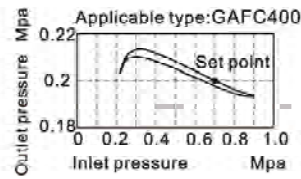
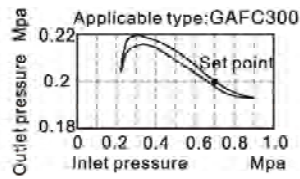
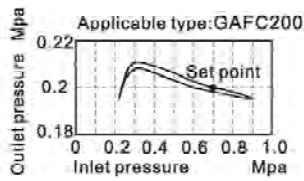


No.	Item
1	GA series filter & regulator
2	Bracket
3	GA series lubricator

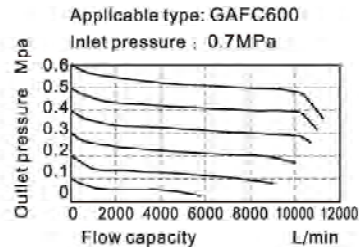
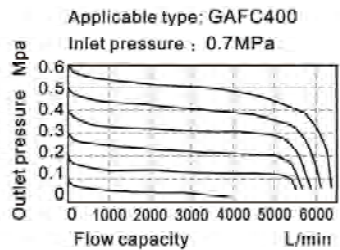
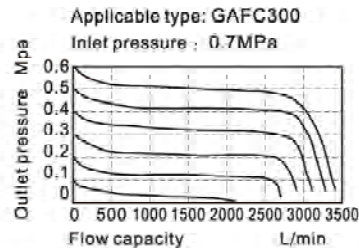
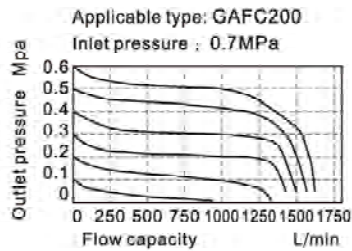
Preparation unit—GA Series

GAFC Series FR.L. combination

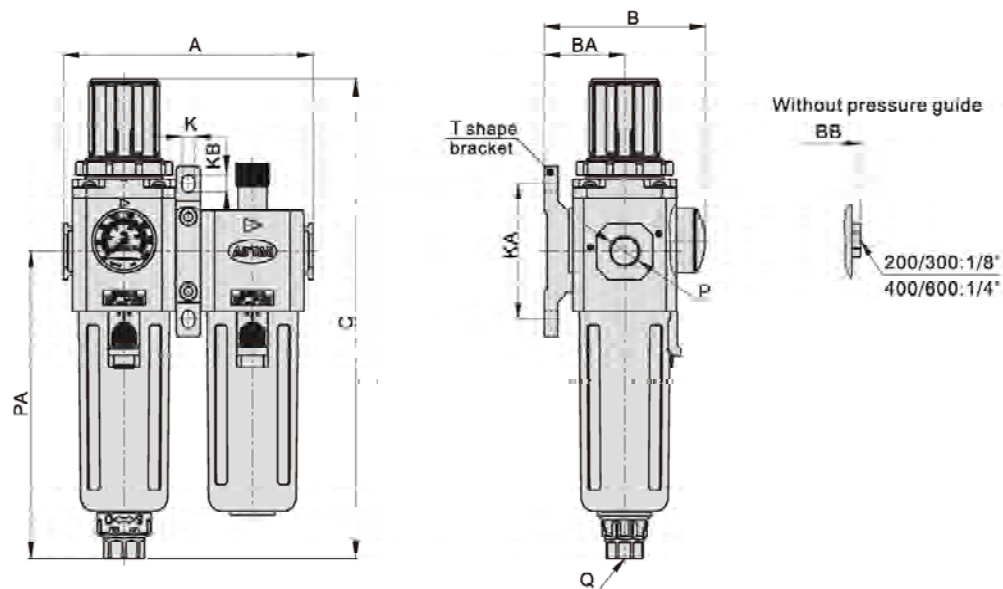
Pressure chart



Flow chart



Dimensions



Model/Item	A	B	BA	BB	C	K	KA	KB	P	PA	Q
GAFC200-06	107.5	69	30	55.5	192.5	5.5	50	8.5	1/8"	120	M5X0.8
GAFC200-08	107.5	69	30	55.5	192.5	5.5	50	8.5	1/4"	120	M5X0.8
GAFC300-08	128.5	83	41.5	72	247	6.5	70	9	1/4"	158	G1/4
GAFC300-10	128.5	83	41.5	72	247	6.5	70	9	3/8"	158	G1/4
GAFC300-15	128.5	83	41.5	72	247	6.5	70	9	1/2"	158	G1/4
GAFC400-10	164	99	50	88	285.5	8.6	80	12	3/8"	177.5	G1/4
GAFC400-15	164	99	50	88	285.5	8.6	80	12	1/2"	177.5	G1/4
GAFC600-20	206	128	70	117	336.5	11	100	16	3/4"	205	G1/4
GAFC600-25	206	128	70	117	336.5	11	100	16	1"	205	G1/4

Preparation unit—GA Series

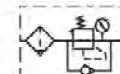
GAFR Series filter & regulator



Symbol

No reflux valve is attached

Reflux valve is attached



Product feature

1. Circular square pressure gauge which with clip and magnifier is used to save installation space.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. Balanced design is adopted for the pressure adjustment mechanism.
4. Unique diversion structure spins the air flowing through to effectively separate the liquid from the air and reliably filter the solid grain.
5. The filtering grade includes 5 μm and 40 μm (optional).
6. Two drain types are available: semi-auto drain and automatic drain.
7. Three material of bowl are available: PC, Nylon and metal.
8. The bracket can be selected for installation.

Specification

Model	GAFR200-06	GAFR200-08	GAFR300-08	GAFR300-10	GAFR300-15	GAFR400-10	GAFR400-15	GAFR600-20	GAFR600-25
Fluid	Air								
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"	3/8"	1/2"	3/4"	1"
Filtering grade	40 μm or 5 μm								
Pressure range	0.15~0.9MPa(20~130psi)								
Max. pressure	1.0MPa(145psi)								
Proof pressure	1.5MPa(215psi)								
Temperature range	-5~70°C(Unfreeze)								
Capacity of drain bowl	25CC			60CC			100CC		205CC
Weight	290g			500g			880g		1880g

[Note1] PT thread, G thread and NPT thread are available.

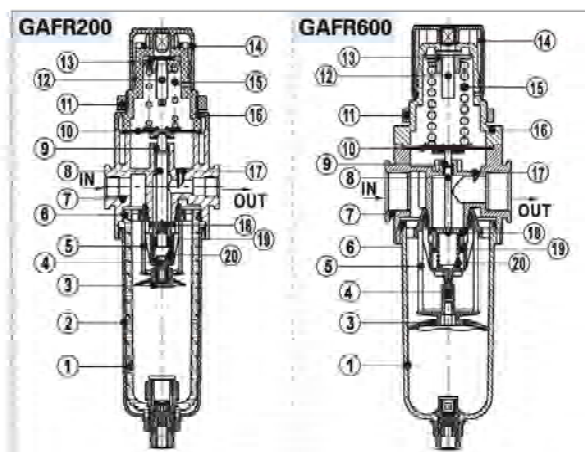
Ordering code

GAFR300 10 S W G K
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Model	② Bowl material	③ Port size	④ Drain type	⑤ Type code	⑥ Accessories	⑦ Pressure gauge	⑧ Filtering grade	⑨ Thread type	⑩ Code of reflux valve
GAFR200:GA200 Series Filter & regulator	Blank: PC bowl	06: 1/8" 08: 1/4"						Blank: PT (MPa/psi)	Blank: No reverse flow valve is attached
GAFR300:GA300 Series Filter & regulator	C: Metal bowl	08: 1/4" 10: 3/8" 15: 1/2"	Blank: Semi-auto drain +Manual drain	S: Standard L: Lower pressure [Note1]	Blank: Bracket J: No bracket	Blank: Circular N: No gauge	Blank: 40μm W: 5μm	G: G (bar/MPa) T: NPT (psi/bar)	K: Reverse flow valve is attached [Note2]
GAFR400:GA400 Series Filter & regulator	N: Nylon bowl	10: 3/8" 15: 1/2"	A: Automatic drain						
GAFR600:GA600 Series Filter & regulator	C: Metal bowl	20: 3/4" 25: 1"							

[Note1] The maximum work pressure of lower pressure type is 0.4MPa(58psi); [Note2] Please refer to page 194 for details of reflux valve.

Inner structure



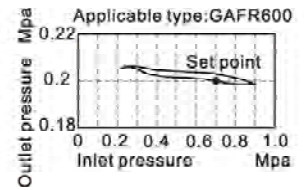
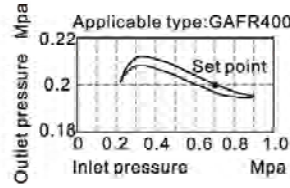
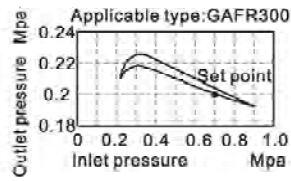
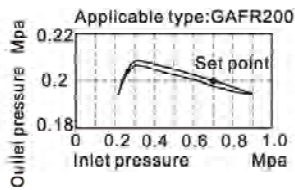
No.	Item	Material
1	Drain bowl	Aluminum alloy\PC\Nylon
2	Meter cover	SPCC
3	Umbrella baffle	High viscosity POM
4	Air guider	High viscosity POM
5	Filter core	HDPC
6	O-ring	NBR
7	Body of filter-regulator	Aluminum alloy
8	Adjusting spool	Brass(GAFR600)\POM(others)
9	O-ring	NBR
10	Diaphragm	NBR
11	Fixation ring cap	Aluminum alloy (GAFR600)\POM(others)
12	Adjusting spindle	Steel
13	Regulator nut	Steel
14	Pressure knob	POM
15	Spring	SWPB
16	Adjusting seat	Aluminum alloy (GAFR600)\POM(others)
17	Feedback tube	POM
18	Adjusting plug	Brass & Rubber
19	O-ring	NBR
20	Spring	SWPB



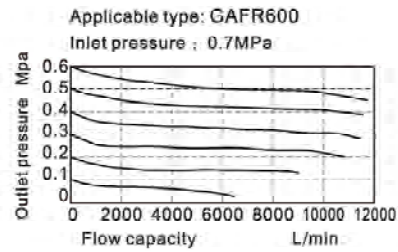
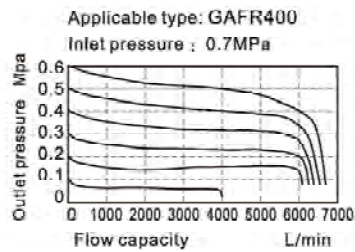
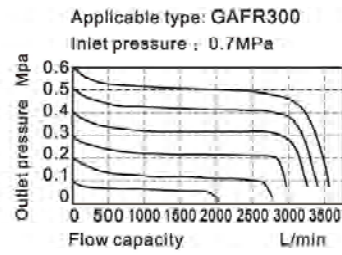
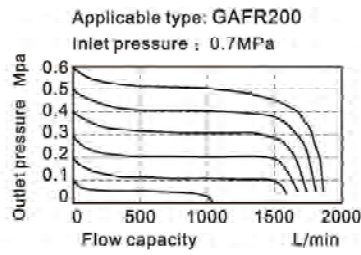
Preparation unit—GA Series

GAFR Series filter & regulator

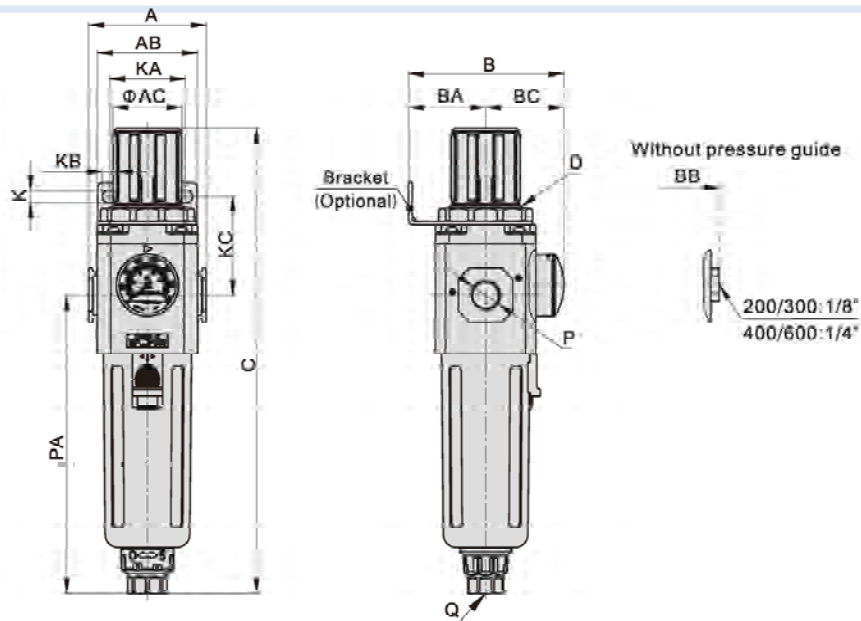
Pressure chart



Flow chart



Dimensions



Model/Item	A	AB	AC	B	BA	BB	BC	C	D	K	KA	KB	KC	P	PA	Q
GAFR200-06	52.5	55	31	69	30	55.5	39	192.5	M33x1.5	5.4	34	15.4	52	1/8"	120	M5X0.8
GAFR200-08	52.5	55	31	69	30	55.5	39	192.5	M33x1.5	5.4	34	15.4	52	1/4"	120	M5X0.8
GAFR300-08	62.5	53	38	82.5	41	72	41.5	247	M40x1.5	6.5	40	8	52.5	1/4"	158	G1/4
GAFR300-10	62.5	53	38	82.5	41	72	41.5	247	M40x1.5	6.5	40	8	52.5	3/8"	158	G1/4
GAFR300-15	62.5	53	38	82.5	41	72	41.5	247	M40x1.5	6.5	40	8	52.5	1/2"	158	G1/4
GAFR400-10	80	72	52	99	50	88	49	285.5	M55x2.0	8.5	55	11	57	3/8"	177.5	G1/4
GAFR400-15	80	72	52	99	50	88	49	285.5	M55x2.0	8.5	55	11	57	1/2"	177.5	G1/4
GAFR600-20	100	90	59	128	70	117	58	336.5	M62x1.5	11	66	13	76	3/4"	205	G1/4
GAFR600-20	100	90	59	128	70	117	58	336.5	M62x1.5	11	66	13	76	1"	205	G1/4

Preparation unit—GA Series

GAF Series Filter



Symbol



Product feature

1. Unique diversion structure spins the air flowing through to effectively separate the liquid from the air and reliably filter the solid grain.
2. It has low pressure loss, high efficiency in separating water and large drain bowl capacity.
3. Filtering grade includes 5 μ m and 40 μ m (Optional).
4. Three drain types are available: manual drain, semi-auto drain and automatic drain.
5. Two drain types are available: semi-auto drain and automatic drain.
6. Three material of bowl are available: PC, Nylon and metal.
7. The bracket can be selected for installation.

Specification

Model	GAF200-06	GAF200-08	GAF300-08	GAF300-10	GAF300-15	GAF400-10	GAF400-15	GAF600-20	GAF600-25
Fluid	Air								
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"	3/8"	1/2"	3/4"	1"
Filtering grade	40 μ m or 5 μ m								
Pressure range	0.15~0.9MPa(20~130psi)								
Proof pressure	1.5MPa(215psi)								
Temperature range	-5~70°C(Unfreeze)								
Capacity of drain bowl	25CC		60CC			100CC		205CC	
Weight	200g		360g			640g		1040g	

[Note1] PT thread, G thread and NPT thread are available.

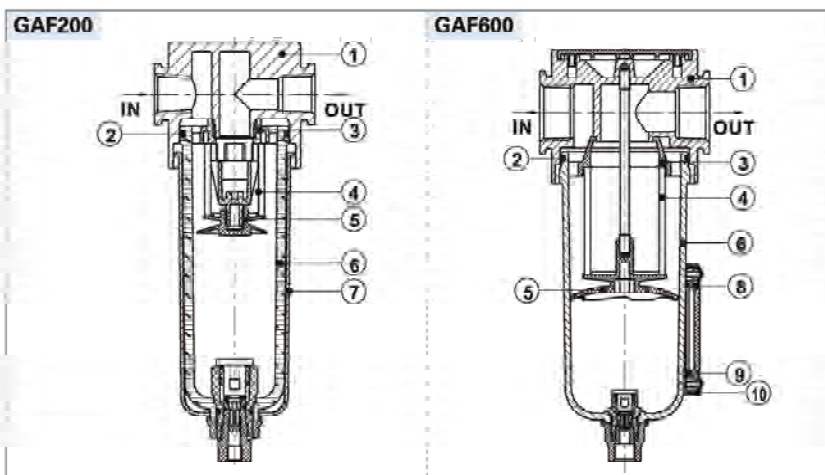
Ordering code

GAF 300 □ 10 □ □ W G

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Bowl material	③ Port size	④ Drain type	⑤ Accessories	⑥ Filtering grade	⑦ Thread type
GAF200:GA200 Series Filter	Blank: PC bowl	06: 1/8"	Blank: Semi-auto drain +Manual drain	Blank: Bracket J: No bracket	Blank: 40 μ m W: 5 μ m	Blank: PT G: G T: NPT
GAF300:GA300 Series Filter		08: 1/4"				
GAF400:GA400 Series Filter	N: Nylon bowl	10: 3/8"	A: Automatic drain			
GAF600:GA600 Series Filterlator	C: Metal bowl	15: 1/2"				
		20: 3/4"				
		25: 1"				

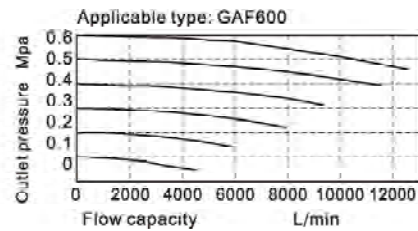
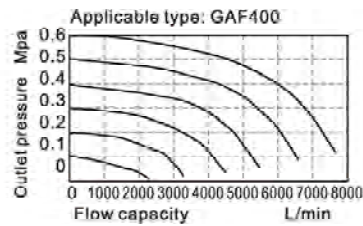
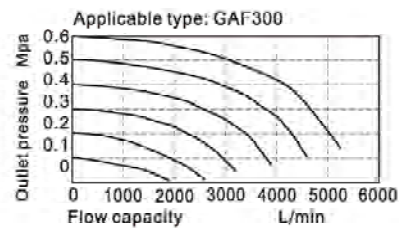
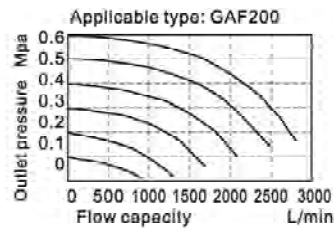
Inner structure



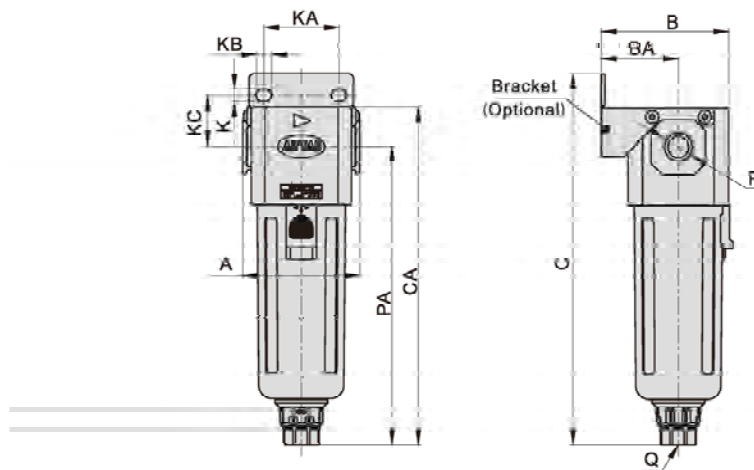
No.	Item	Material
1	Body	Aluminum alloy
2	O-ring	NBR
3	Air guide	High viscosity POM
4	Filter core	HDPE
5	Umbrella baffle	High viscosity POM
6	Drain bowl	Aluminum alloy\PC\Nylon
7	Meter cover	SPCC
8	Liquid meter inside cover	PC
9	Liquid meter seal	NBR
10	Liquid meter cover	SPCC

GAF Series Filter

Flow chart



Dimensions



Model/Item	A	B	BA	C	CA	K	KA	KB	KC	P	PA	Q
GAF200-06	52.5	54.5	33	150	137	5.4	27	8.4	23	1/8"	120	M5X0.8
GAF200-08	52.5	54.5	33	150	137	5.4	27	8.4	23	1/4"	120	M5X0.8
GAF300-08	82.5	87.5	41	197	179	6.5	40	8	27	1/4"	158	G1/4
GAF300-10	62.5	67.5	41	197	179	6.5	40	8	27	3/8"	158	G1/4
GAF300-15	62.5	67.5	41	197	179	6.5	40	8	27	1/2"	158	G1/4
GAF400-10	80	84	50	220	202.5	8.5	55	11	33.5	3/8"	177.5	G1/4
GAF400-15	80	84	50	220	202.5	8.5	55	11	33.5	1/2"	177.5	G1/4
GAF600-20	100	113	70	266	242	11	66	13	50	3/4"	205	G1/4
GAF600-25	100	113	70	266	242	11	66	13	50	1"	205	G1/4

Preparation unit—GA Series

GAR Series Regulator



Symbol

No reflux valve is attached



Reflux valve is attached



Product feature

1. Circular square pressure gauge which with clip and magnifier is used to save installation space.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. Balanced design is adopted for the pressure adjustment mechanism.
4. In addition to panel installation, the bracket is optional for installation.

Specification

Model	GAR200-06	GAR200-08	GAR300-08	GAR300-10	GAR300-15	GAR400-10	GAR400-15	GAR600-20	GAR600-25
Fluid	Air								
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"	3/8"	1/2"	3/4"	1"
Pressure range	0.05~0.9MPa(7~130psi)								
Max. pressure	1.0MPa(145psi)								
Proof pressure	1.5MPa(215psi)								
Temperature range	-20~70°C								
Weight	170g		300g			570g		1390g	

[Note1] PT thread, G thread and NPT thread are available.

Ordering code

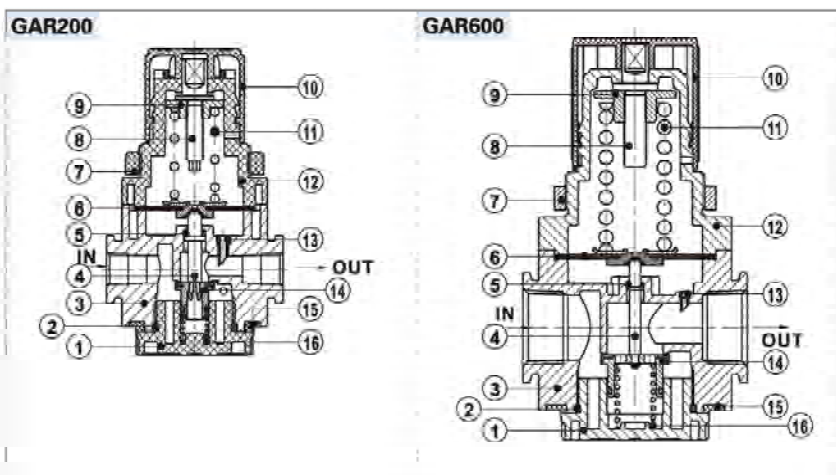
GAR300 10 S □ □ G K

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Port size	③ Type code	④ Accessories	⑤ Pressure gauge	⑥ Thread type	⑦ Code of reflux valve
GAR200:GA200 Series regulator	06: 1/8" 08: 1/4"					
GAR300:GA300 Series regulator	08: 1/4" 10: 3/8" 15: 1/2"	S: Standard L: Lower pressure [Note1]	Blank: Bracket J: No bracket	Blank: Circular N: No gauge	Blank: PT (MPa/psi) G: G (bar/MPa) T: NPT (psi/bar)	Blank: No reverse flow valve is attached K: Reverse flow valve is attached [Note2]
GAR400:GA400 Series regulator	10: 3/8" 15: 1/2"					
GAR600:GA600 Series regulator	20: 3/4" 25: 1"					

[Note1] The maximum work pressure of lower pressure type is 0.4MPa(58psi); [Note2] Please refer to page 194 for details of reflux valve.

Inner structure

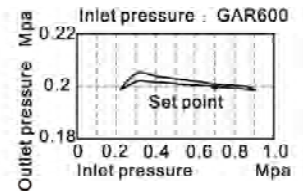
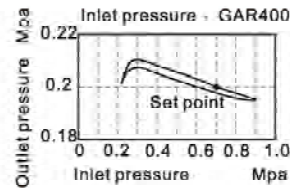
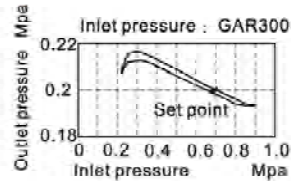
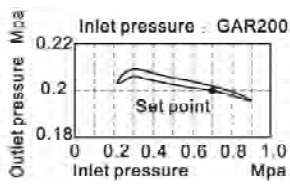


No.	Item	Material
1	Valve cap	Aluminum alloy(GR600)\POM(others)
2	O-ring	NBR
3	Body	Aluminum alloy
4	Spool	Brass(GR600)\POM(others)
5	O-ring	NBR
6	Diaphragm	NBR
7	Fixed ring	Aluminum alloy (GR600)\POM(others)
8	Adjusting spindle	Steel
9	Regulator nut	Steel
10	Pressure knob	POM
11	Pressure spring	SWPB
12	Adjusting seat	Aluminum alloy (GR600)\POM(others)
13	Feed back tube	POM
14	Pressure plug	Aluminum alloy & steel
15	Bottom cover	POM
16	Spring	SWPB

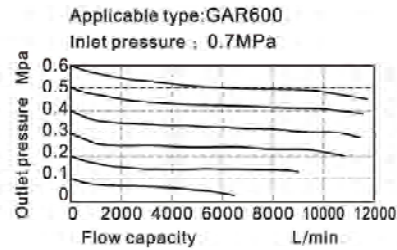
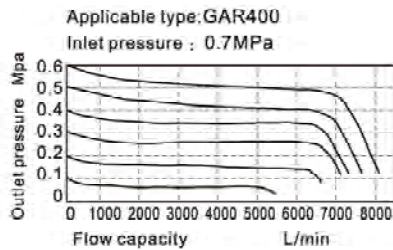
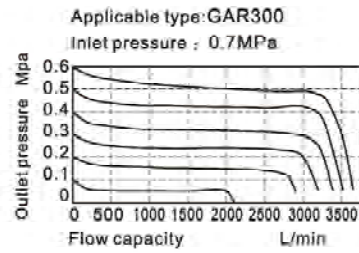
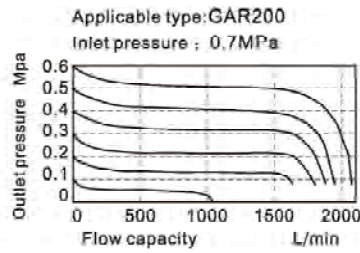
Preparation unit—GA Series

GAR Series Regulator

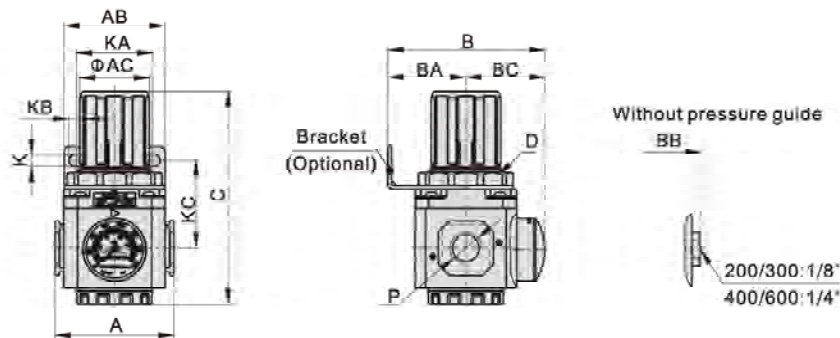
Pressure chart



Flow chart



Dimensions



Model\Item	A	AB	AC	B	BA	BB	BC	C	D	K	KA	KB	KC	P
GAR200-06	52.5	55	31	69	30	55.5	39	91	M33x1.5	5.4	34	15.4	45	1/8"
GAR200-08	52.5	55	31	69	30	55.5	39	91	M33x1.5	5.4	34	15.4	45	1/4"
GAR300-08	62.5	53	38	82.5	41	72	41.5	112	M40x1.5	6.5	40	8	46	1/4"
GAR300-10	62.5	53	38	82.5	41	72	41.5	112	M40x1.5	6.5	40	8	46	3/8"
GAR300-15	62.5	53	38	82.5	41	72	41.5	112	M40x1.5	6.5	40	8	46	1/2"
GAR400-10	80	72	52	99	50	88	49	140.5	M55x2.0	8.5	55	11	53	3/8"
GAR400-15	80	72	52	99	50	88	49	140.5	M55x2.0	8.5	55	11	53	1/2"
GAR600-20	100	90	59	128	70	117	58	179.5	M62x1.5	11	66	13	73.5	3/4"
GAR600-25	100	90	59	128	70	117	58	179.5	M62x1.5	11	66	13	73.5	1"

Preparation unit——GA Series

GAL Series Lubricator



Symbol



Product feature

1. The structure of oil dripping adopts gap seal type, which makes the adjustment of oil supply more reliable.
2. Oil feed ring can only make one full turn. The quantity of oil supply basically takes on linear distribution. The quantity of oil supply can be generally calculated according to the position of graduation ring.
3. Special drip nozzle structure will produce negative pressure in oil dripping outlet and the mist flow is minimal.
4. Three material of bowl are available: PC, Nylon and metal.
5. Filling of oil while the lubricator is under pressure is made possible, and the oil bowl is large.
6. The bracket can be selected for installation.

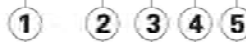
Specification

Model	GAL200-06	GAL200-08	GAL300-08	GAL300-10	GAL300-15	GAL400-10	GAL400-15	GAL600-20	GAL600-25
Fluid	Air								
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"	3/8"	1/2"	3/4"	1"
Pressure range	0.05~0.9MPa(7~130psi)								
Proof pressure	1.5MPa(215psi)								
Temperature range	-5~70°C(Unfreeze)								
Recommended lubricant	ISO VG 32 or equivalent								
Capacity of oil bowl	36CC			98CC		185CC		410CC	
Weight	200g			370g		660g		1040g	

[Note1] PT thread, G thread and NPT thread are available.

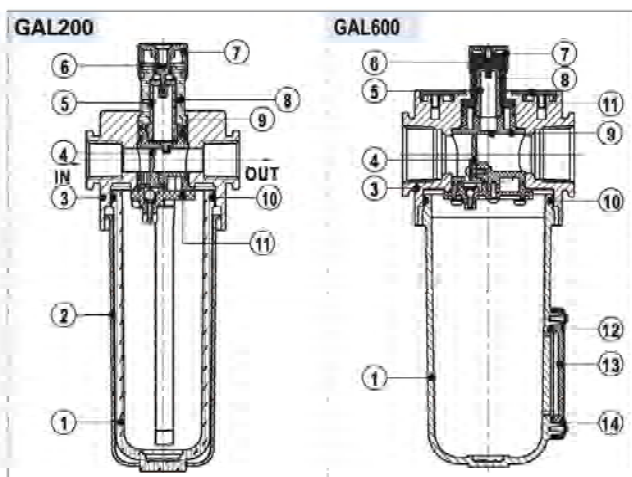
Ordering code

GAL300 □ 10 □ G



① Model	② Bowl material	③ Port size	④ Accessories	⑤ Thread type
GAL200: GA200 Lubricator	Blank: PC bowl	06: 1/8" 08: 1/4"		Blank: PT
GAL300: GA300 Lubricator	C: Metal bowl	08: 1/4" 10: 3/8" 15: 1/2"	Blank: Bracket	G: G
GAL400: GA400 Lubricator	N: Nylon bowl	10: 3/8" 15: 1/2"	J: No bracket	T: NPT
GAL600: GA600 Lubricator	C: Metal bowl	20: 3/4" 25: 1"		

Inner structure

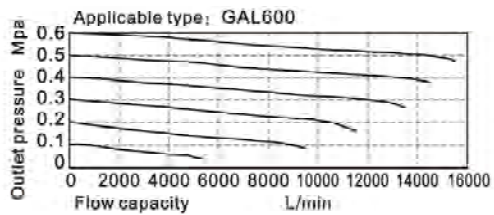
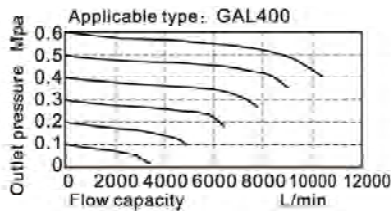
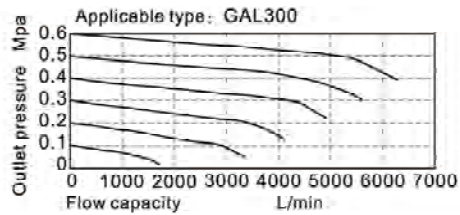
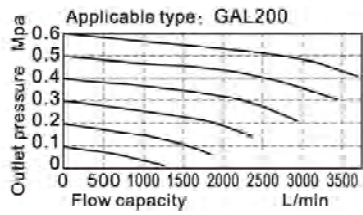


No.	Item	Material
1	Oil bowl	Aluminum alloy \ PC \ Nylon
2	Meter cover	SPCC
3	Body of lubricator	Aluminum alloy
4	Distance block	PU
5	O-ring	NBR
6	Drip pipe	PC
7	Ejector pin	Brass
8	Adjusting ring	POM
9	O-ring	NBR
10	Adjusting looker	PC
11	Sprayer body	PA66
12	O-ring	NBR
13	Sprayer bottom cap	POM
14	Oil tube	PU
15	Filter pluger	Brass
16	Pluger	Carbon steel
17	Buttom	POM
18	Liquid meter seal	NBR
19	Liquid meter inside cover	PC
20	Liquid meter cover	SPCC

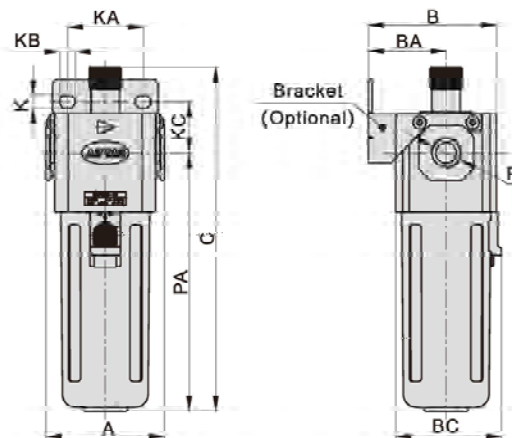
Preparation unit—GA Series

GAL Series Lubricator

Flow chart



Dimensions



Model\Item	A	B	BA	C	K	KA	KB	KC	P	PA
GAL200-06	52.5	54.5	33	146.5	5.4	27	8.4	23	1/8"	107
GAL200-08	52.5	54.5	33	146.5	5.4	27	8.4	23	1/4"	107
GAL300-08	62.5	67.5	41	181	6.5	40	8	27	1/4"	136
GAL300-10	62.5	67.5	41	181	6.5	40	8	27	3/8"	136
GAL300-15	62.5	67.5	41	181	6.5	40	8	27	1/2"	136
GAL400-10	80	84	50	204.5	8.5	55	11	33.5	3/8"	155
GAL400-15	80	84	50	204.5	8.5	55	11	33.5	1/2"	155
GAL600-20	100	113	70	246	11	66	13	50	3/4"	182.5
GAL600-25	100	113	70	246	11	66	13	50	1"	182.5

Preparation unit——GA Series

GA Series Reverse Flow valve



Product feature

1. This reverse flow valve can be used with GA series regulator but can not be ordered individually.
2. When it is used with GA series regulator, one only needs to change the seal board in the back of regulator for the reverse flow valve. It is convenient to install and won't change the external dimension of regulator.

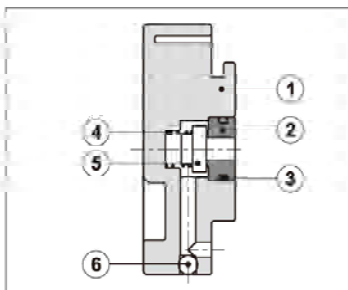
Applicable products

Reflux valve type\Applicable products's type	GA F.R.L Comination	GA FR.L Comination	GA Filter & regulator	GA Regulator
GAR200-P1	GAC200	GAFC200	GAFR200	GAR200
GAR300-P1	GAC300、400、600	GAFC300、400、600	GAFR300、400、600	GAR300、400、600

Ordering code

When GA series regulator is assembled with the reverse flow valve, the valve can be ordered together with the standard product. What needs to do is to add "-K" to the end of the ordering code of the standard product. Please refer to relevant content for more detailed order method.

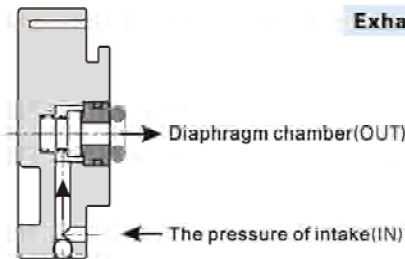
Inner structure



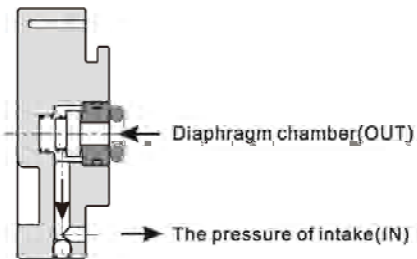
No.	Item	Material
1	Reverse flow valve's body	PBT
2	Plug	Brass
3	O-ring	NBR
4	Spring	SUS304
5	Gasket	NBR
6	Steel ball	SUS304

Working principle

Normally



Exhaust

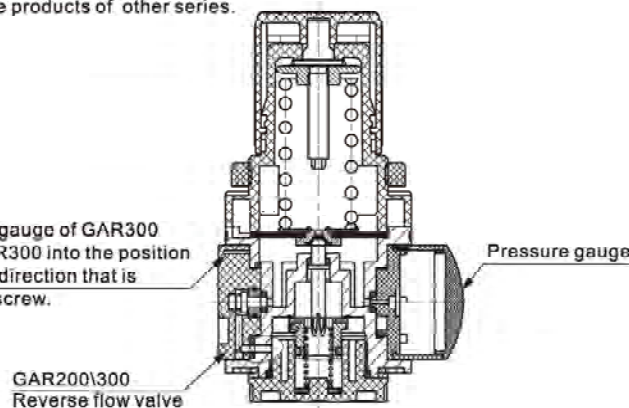


Normally, as the pressure of intake (IN) is higher than the set valve (pressure of outlet), the reverse flow valve closed; if the pressure of intake (IN) is cut off and starts exhaust, reverse flow valve opens. The pressure of diaphragm chamber is exhausted from IN orifice. At this moment, the pressure of diaphragm chamber decreases and the diaphragm is pressed down by the force from adjusting spring to open valve. The pressure from outlet is exhausted from IN port.

Example for assemble the reflux valve

Take GAR300 for example, it is in the same way to use products of other series.

Take out the back seal board of pressure gauge of GAR300 product and press reverse flow valve GAR300 into the position where original seal board stays upon the direction that is showed and then tighten the connection screw.



Preparation unit—GT Series(Short PC bowl type)

GTC, GTFC, GTFR, GTF, GTL Series

Product feature

1. The short PC bowl type is upgraded GA200 series. Besides its speciality are the same as GA200 series, it's below speciality:
2. The bowl is made of PC and is short which allows for litter space application.
3. Two drain types are available: semi-auto drain, and automatic drain.



Ordering code

GTC200 08 S W G K
 GTFC200 08 S W G K
 GTFR200 08 S W G K

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①Model	②Port size	③Type code	④Accessories	⑤Pressure gauge	⑥Filtering grade	⑦Thread type	⑧Code of reflux valve
GTC200: GT200 Series F.R.L unit (Short PC bowl)		S: Standard	No this code				Blank: No reverse flow valve is attached
GTFC200: GT200 Series FR.L unit (Short PC bowl)	06: 1/8" 08: 1/4"	L: Lower pressure [Note1]		Blank: Circular N: No gauge	Blank: 40 μm W: 5 μm	Blank: PT(MPa/psi) G: G(bar/MPa) T: NPT(psi/bar)	K: Reverse flow valve is attached [Note2]
GTFR200: GT200 Series Filter & regulator (Short PC bowl)			Blank: Bracket J: No bracket				

[Note1] The maximum work pressure of lower pressure type is 0.4MPa(58psi); [Note2] Please refer to page 194 for details of reflux valve.

GTF200 08 W G

① ② ③ ④ ⑤

①Model	②Port size	③Accessories	④Filtering grade	⑤Thread type
GTF200: GT200 Series Filter (Short PC bowl)	06: 1/8" 08: 1/4"	Blank: Bracket J: No bracket	Blank: 40 μm W: 5 μm	Blank: PT G: G T: NPT

GTL200 08 G

① ② ③ ④

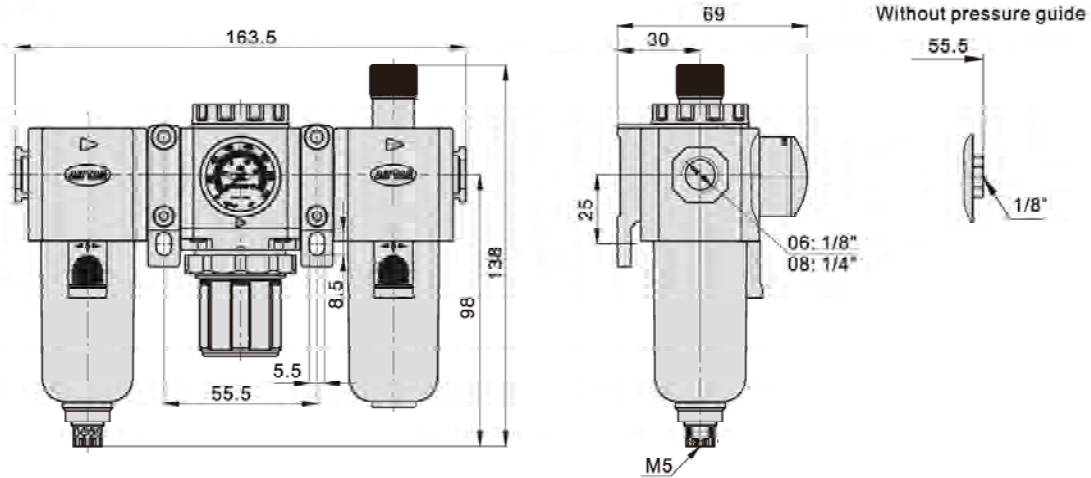
①Model	②Port size	③Accessories	④Thread type
GTL200: GT200GA200 Lubricator (Short PC bowl)	06: 1/8" 08: 1/4"	Blank: Bracket J: No bracket	Blank: PT G: G T: NPT

Preparation unit—GT Series (Short PC bowl type)

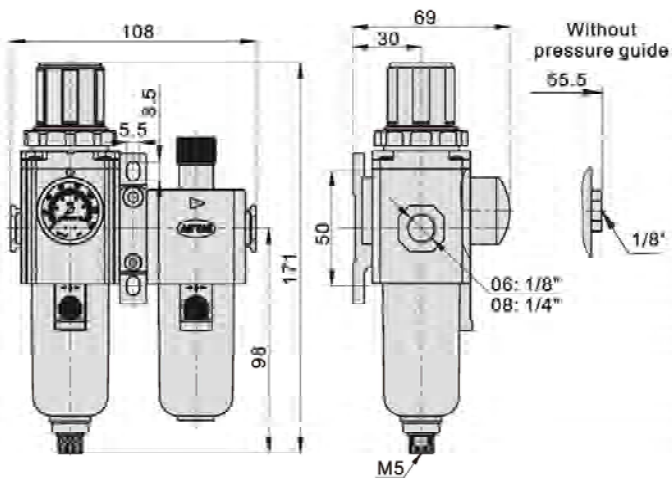
GTC, GTFC, GTFR, GTF, GTL Series

Dimensions

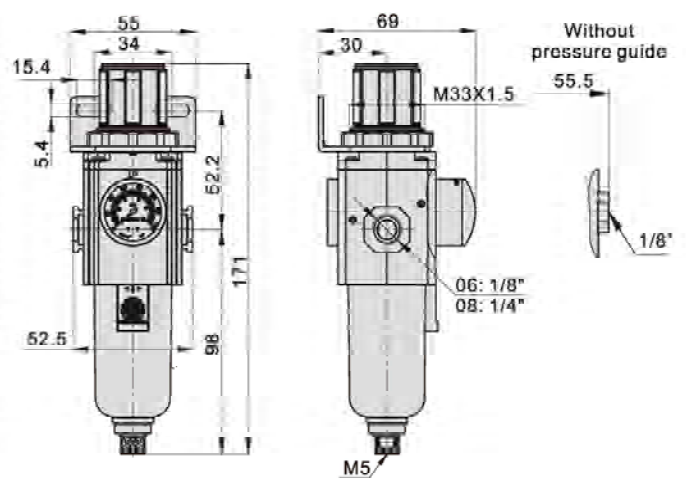
GTC200



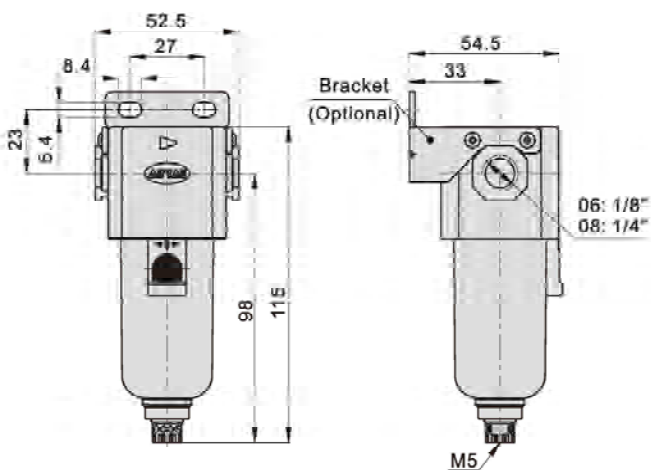
GTFC200



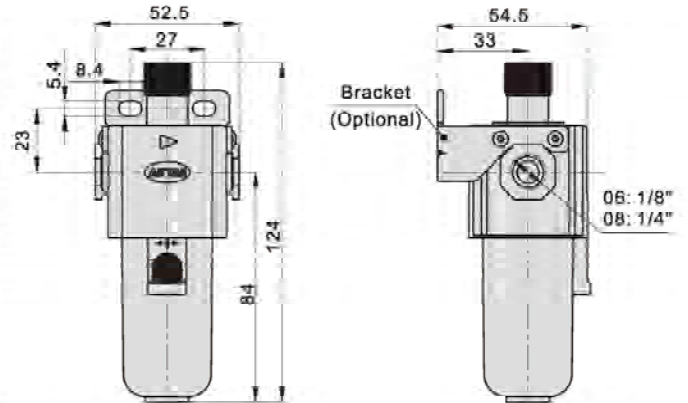
GTFR200



GTF200



GTL200



Preparation unit—G Series

GA series of gas-distribution block



Product feature

1. It is installed between GA series regulator (or filter & regulator) and G series Lubricator. The air flow is divided by the device that one enters Lubricator to supply oil for lubrication and the other (the second way) directly enters the equipment.
2. Several kinds of bracket can be selected to connect regulator and lubricator. Optional brackets are type T, type L and type U.

Specification

Model	GA200-06	GA200-08	GA300-08	GA300-10	GA400-10	GA400-15	GA600-20	GA600-25
Fluid	Air							
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Way number	Four							
Pressure range	0~1.0MPa(0~145psi)							
Proof pressure	1.5MPa(215psi)							
Temperature range	-20~70°C							

[Note1] PT thread, G thread and NPT thread are available.

Ordering code

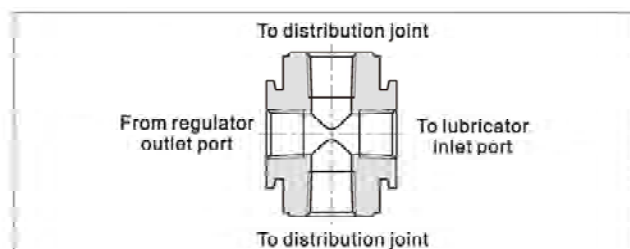
GA200 08 G



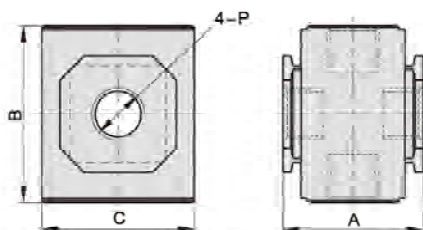
① Model	② Port size	③ Thread type
GA200: 200 Series gas-distribution block	06: 1/8" 08: 1/4"	Blank: PT G: G T: NPT
GA300: 300 Series gas-distribution block	08: 1/4" 10: 3/8"	
GA400: 400 Series gas-distribution block	10: 3/8" 15: 1/2"	
GA600: 600 Series gas-distribution block	20: 3/4" 25: 1"	

Note : When it is used with F.R.L. combination, extra mounting bracket needed. Please refer to P198 for order detail.

Inner structure



Dimensions



Model\Item	A	B	C	P	
GA200	06	28.5	36	30	1/8"
	08	28.5	36	30	1/4"
GA300	08	35	44	38	1/4"
	10	35	44	38	3/8"
GA400	10	42	52	52	3/8"
	15	42	52	52	1/2"
GA600	20	60	76	68	3/4"
	25	60	76	68	1"

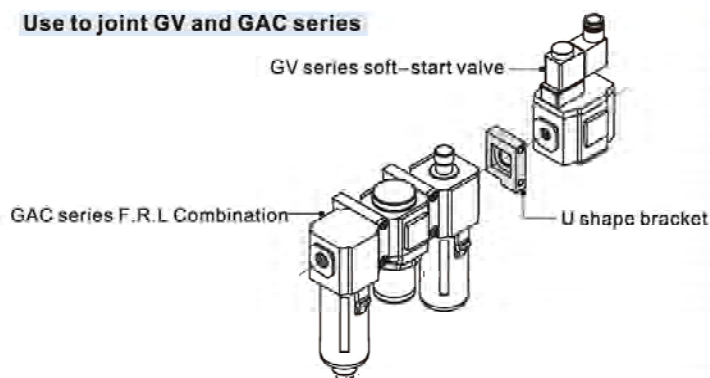
Joint accessories—Bracket

How to select the bracket

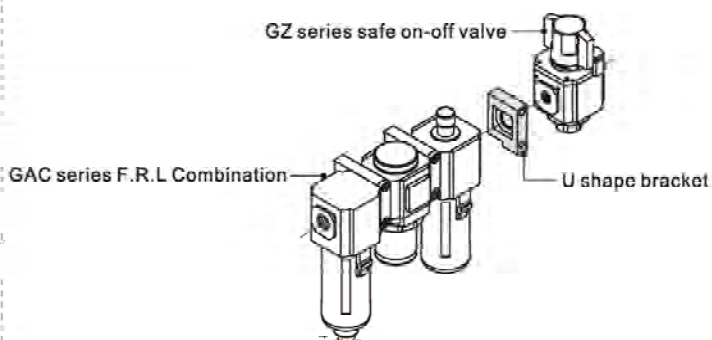
Bracket name	Code	Photo	Adapt accessories model		
			GV200	GZ200	GA200
T shape bracket	GA200T-P1		GV200	GZ200	GA200
	GA300T-P1		GV300	GZ300	GA300
	GA400T-P1		GV400	GZ400	GA400
	GA600T-P1		-	-	GA600
L shape bracket	GA200L-P1		GV200	GZ200	GA200
	GA300L-P1		GV300	GZ300	GA300
	GA400L-P1		GV400	GZ400	GA400
	GA600L-P1		-	-	GA600
U shape bracket	GA200U-P1		GV200	GZ200	GA200
	GA300U-P1		GV300	GZ300	GA300
	GA400U-P1		GV400	GZ400	GA400
	GA600U-P1		-	-	GA600

How to use the bracket

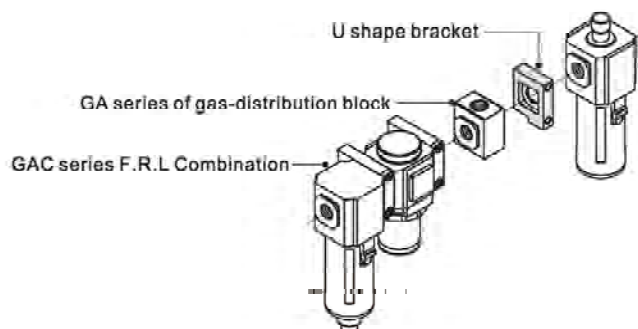
Use to joint GV and GAC series



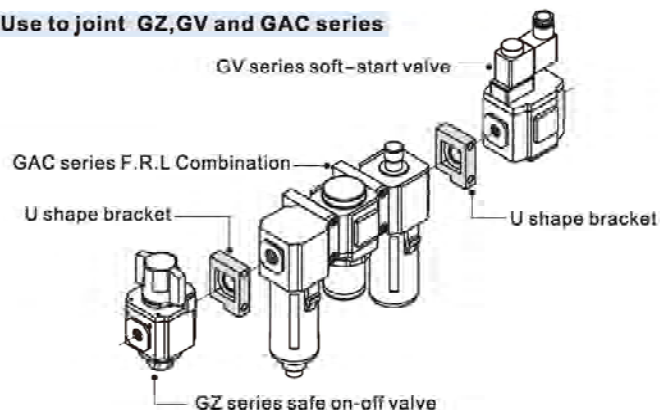
Use to joint GZ and GAC series



Use to joint GA and GAC series






Use to joint GZ, GV and GAC series





Compendium of GP Series preparation unit

P200	Product feature	Photo	P202	Product feature	Photo
GPF Series Oil mist filter	<ul style="list-style-type: none"> •The pressure loss is low •Filter efficiency more than 99% •0.3μm and 0.01μm filtering grade(Optional) •With fixing bracket •200/300/400 Series •Port size: 1/8" 1/4" 3/8" 1/2" 		GPR Series Precision regulator	<ul style="list-style-type: none"> •Higher precision adjustment pressure, sensitive to reaction •Excellence pressure chart and flow chart •Lower, Middle and high pressure are optional •With fixing bracket •Port size: 1/8" 1/4" 3/8" 1/2" 	
P206	Product feature	Photo			
GPFR Series precision Filter-Regulator	<ul style="list-style-type: none"> •The pressure loss is low •Filter efficiency more than 99% •0.3μm and 0.01μm filtering grade(Optional) •With fixing bracket •200/300/400 Series •Port size: 1/8" 1/4" 3/8" 1/2" 				

Installation and application



1. Check whether the components have been damaged during transportation before installing and using.
2. Pay attention to whether the flow direction of air (notice "→" direction) and thread type are correct.
3. Please notice whether installation condition accords with technical requirements (such as "working pressure" and "applied temperature range").
4. The medium used or installation environment shall be noticed. The matters with chlorine, carbon compound, aromatic compound and oxidizing acid and alkali shall be avoided to prevent the damage of bowl and oil bowl.
5. Regularly clean or change filter core. Lubricators and regulators shall be in descending order.
6. Keep dust away. The dust cover shall be installed in intake and outlet when the device is dismantled and stored.



Preparation unit—G Series

GPF Series Oil mist filter



Specification

Model	GPF20006	GPF20008	GPF30008	GPF30010	GPF40010	GPF40015
Fluid	Air					
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"
Filtering grade	M: 0.3 μm (Capture efficiency 99.9%)					
	D: 0.01 μm (Capture efficiency 99.9%)					
Pressure range	0.15~1.0MPa(20~145psi)					
Proof pressure	1.5MPa(215psi)					
Temperature range	-5~70°C(Unfreeze)					
Bowl Material	Polycarbonate, Nylon, Metal					
Capacity of drain bowl	19CC		54.5CC		89CC	
	PC bowl		356g		620g	
Weight	207g		397g		627g	
	Metallic bowl		356g		627g	

[Note1] PT thread, G thread and NPT thread are available.

Symbol



Product feature

1. Low pressure drop, high oil mist remove efficiency up to 99% and large drain bowl.
2. 0.3 μm and 0.01 μm filtering grade are available.
3. Two drain types are available: manual and semi-auto drain, and automatic drain.
4. To meet the needs of different environment the bowl material has Poly Carbonate, nylon and metal can be selected.
5. Monomeric products can select the bracket for installation, others can be used with F.R.L Combination.

Ordering code

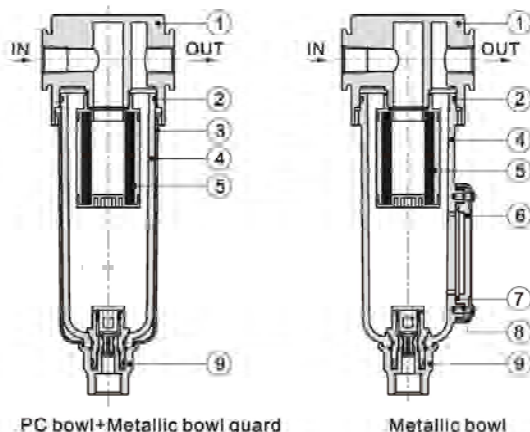
GPF300 □ 08 □ □ M G

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Bowl Material	③ Port size	④ Drain type	⑤ Accessories	⑥ Filtering grade	⑦ Thread type
GPF200: 200 Series Oil mist filter	Blank: PC bowl+Metallic bowl guard	08: 1/8" 08: 1/4"				
GPF300: 300 Series Oil mist filter	C: Metallic bowl N: Nylon bowl+Metallic bowl guard	08: 1/4" 10: 3/8"	Blank: Manual and Semi-auto drain A: Automatic drain	Blank: Bracket J: No bracket	M: 0.3 μm D: 0.01 μm	Blank: PT G: G T: NPT
GPF400: 400 Series Oil mist filter		10: 3/8" 16: 1/2"				

Innerstructure

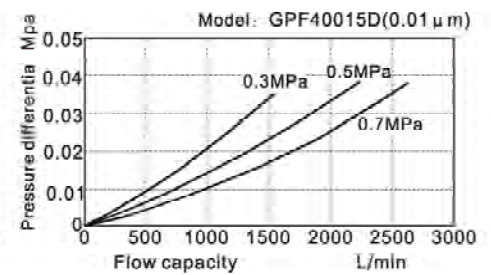
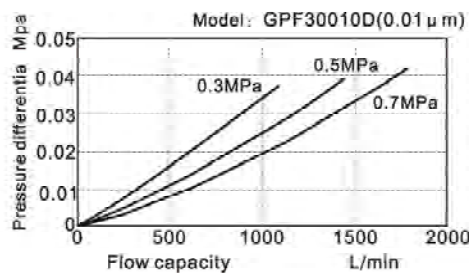
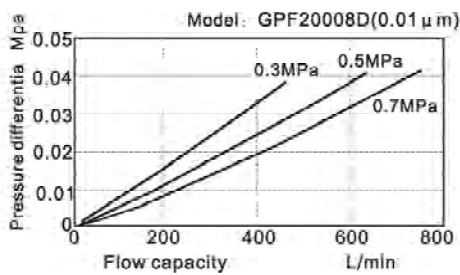
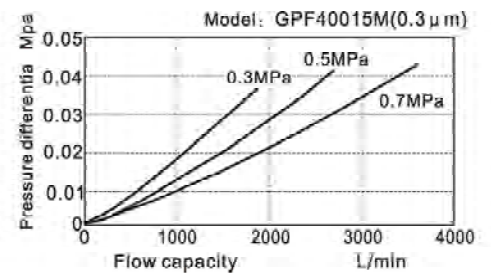
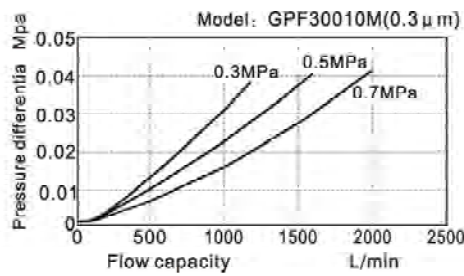
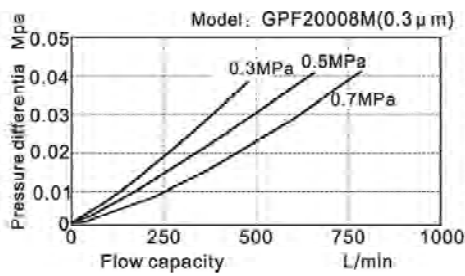
GPF300



No.	Item	Material
1	Body	Aluminium alloy
2	O-ring	NBR
3	Meter cover	SPCC
4	Drain bowl	PC\nylon\aluminium alloy
5	Filter core	Polymer materials
6	Liquid meter cover	PC
7	Liquid meter seal	NBR
8	Liquid meter inside cover	SPCC
9	Drain connection	Plastic

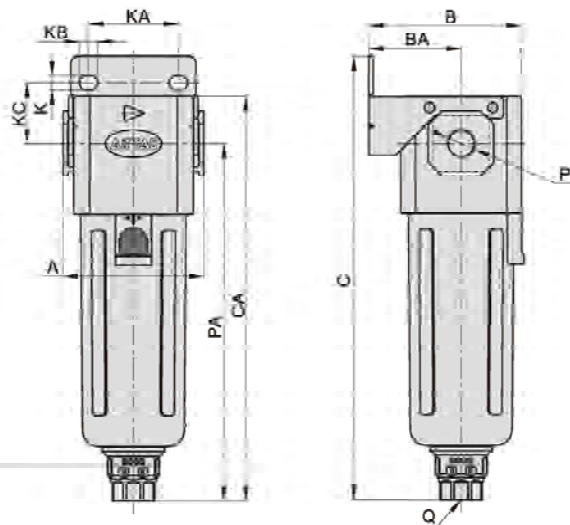
GPF Series Oil mist filter

Flow chart

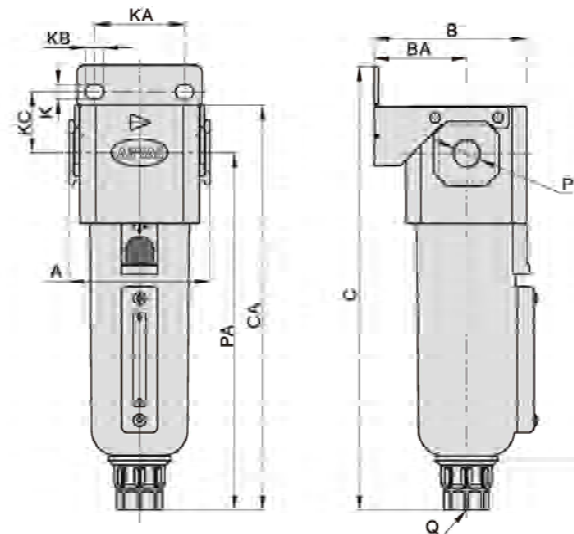


Dimensions

PC bowl+Metallic bowl guard



Metallic bowl



Model/Item	A	B	BA	C	CA	K	KA	KB	KC	P	PA	Q
GPF200(C/N)06	52.5	54.5	33	150	137	5.4	27	8.4	23	1/8"	120	M5X0.8
GPF200(C/N)08	52.5	54.5	33	150	137	5.4	27	8.4	23	1/4"	120	M5X0.8
GPF300(C/N)08	62.5	67.8	41	197	179	6.5	40	8	27	1/4"	158	G1/4
GPF300(C/N)10	62.5	67.8	41	197	179	6.5	40	8	27	3/8"	158	G1/4
GPF400(C/N)10	80	84	50	220	202.5	8.5	55	11	33.5	3/8"	177.5	G1/4
GPF400(C/N)15	80	84	50	220	202.5	8.5	55	11	33.5	1/2"	177.5	G1/4

Preparation unit—G Series

GPR Series Precision Regulator



Specification

Model	GPR20006	GPR30008	GPR40008	GPR40010	GPR40015
Fluid	Air				
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"
Max. supply pressure	1.0MPa(145psi)				
Operating pressure	Lower pressure	0.005~0.2MPa(0.73~29psi)		0.01~0.2MPa(1.45~29psi)	
	Medium pressure	0.01~0.4MPa(1.45~58psi)			
	High pressure	0.01~0.8MPa(1.45~116psi)			
Sensitivity	Within 0.2%F.S.				
Repeatability	Within ±0.5%F.S.				
Air consumption (ANR)	≤4L/min	≤4L/min	≤9.5L/min		≤11.5L/min
Temperature range	-20~70°C(Unfreeze)				
Weight	144g	336g	717g		

[Note1] PT thread, G thread and NPT thread are available.

Symbol



Product feature

1. High pressure regulating accuracy and rapid-response.
2. Good pressure and flow chart.
3. Easy installation, it can be installed independently by bracket or directly with existing filter combination components of module type.
4. In addition to high pressure type, the type of medium pressure and lower pressure can be selected.

Ordering code

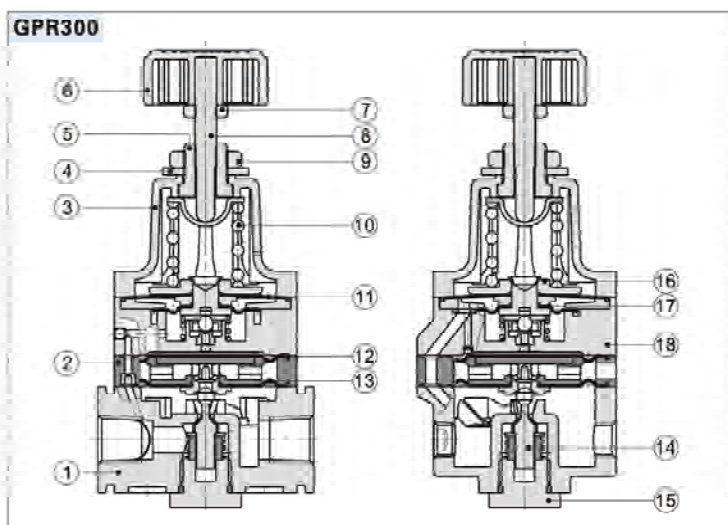
GPR300 08 H □ □ G

① ② ③ ④ ⑤ ⑥

① Model	② Port size	③ Regulating pressure range	④ Accessories	⑤ Pressure gauge	⑥ Thread type [Note1]
GPR200: 00 Series Precision Regulator	06: 1/8"	L: 0.005~0.2MPa(0.73~29psi) M: 0.01~0.4MPa(1.45~58psi)	Blank: Bracket J: No bracket	Blank: With pressure gauge N: Without pressure gauge	Blank: PT(Scale:MPa&psi) G: G(Scale:MPa&bar) T: NPT(Scale:bar&psi)
GPR300: 300 Series Precision Regulator	08: 1/4"	H: 0.01~0.8MPa(1.45~116psi)			
GPR400: 400 Series Precision Regulator	08: 1/4" 10: 3/8" 15: 1/2"	L: 0.01~0.2MPa(1.45~29psi) M: 0.01~0.4MPa(1.45~58psi) H: 0.01~0.8MPa(1.45~116psi)			

[Note1] Please consult us for special correspondence.

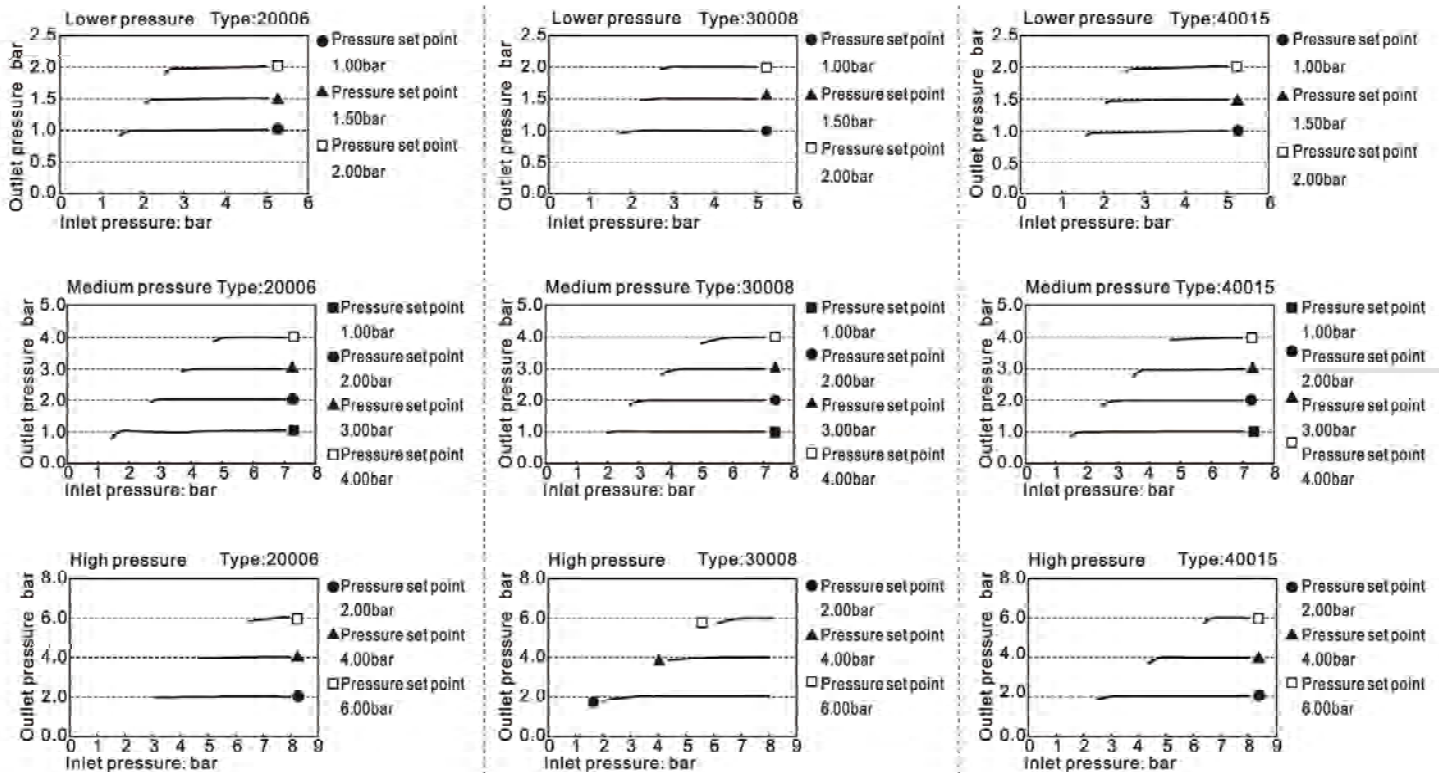
Inner structure



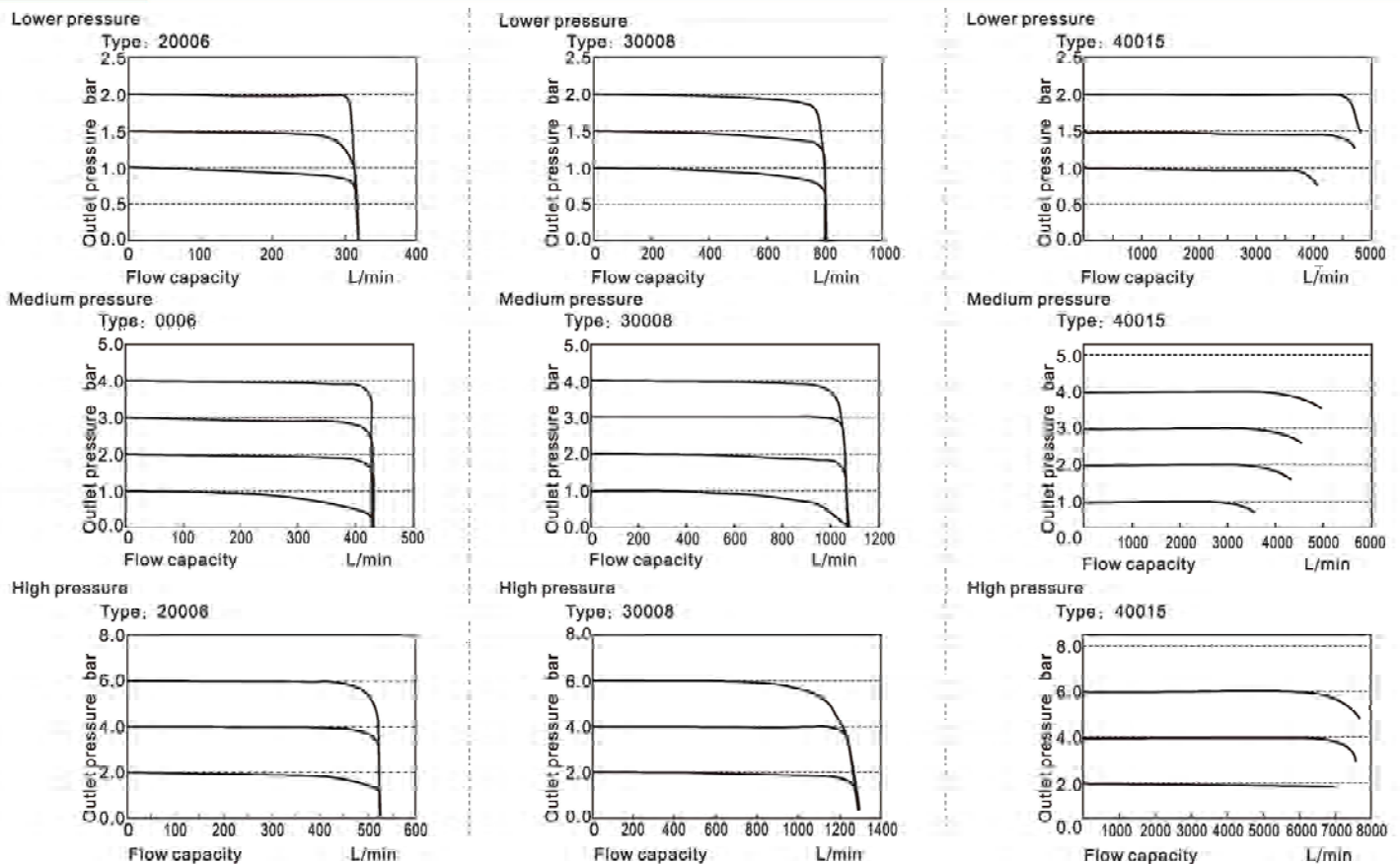
No.	Item	Material
1	Regulator body	Aluminum alloy
2	Pilot body	Plastic
3	Regulator seat	Aluminum alloy
4	Bracket gasket	SPCC
5	Adjusting nut	Carbon steel
6	Regulator knob	Plastic
7	Nut	Carbon steel
8	Regulator spindle	Carbon steel
9	Nut	Carbon steel
10	Spring	Spring steel
11	Pilot upper diaphragm	NBR
12	Regulator upper diaphragm	NBR
13	Regulator lower diaphragm	NBR
14	Main valve	Stainless steel+NBR
15	Bonnet	Carbon steel
16	Pilot diaphragm upper hard core	Aluminum alloy
17	Pilot lower diaphragm	NBR
18	Nozzle body	Aluminum alloy

GPR Series Precision Regulator

Pressure chart

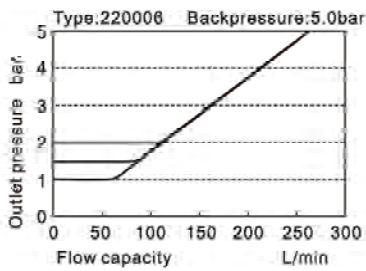


Flow chart

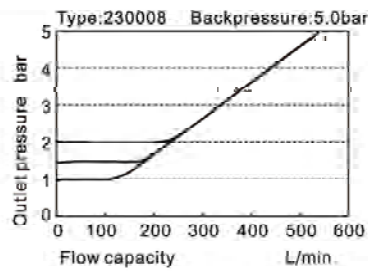


Overflow chart

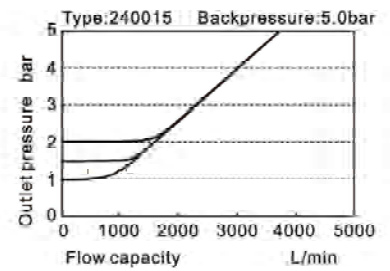
Lower pressure



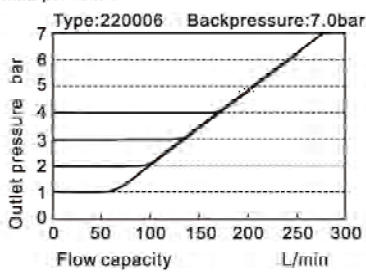
Lower pressure



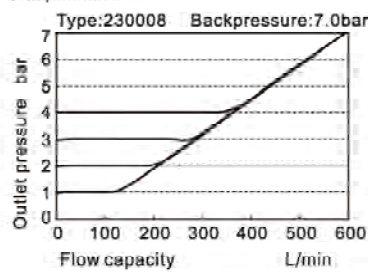
Lower pressure



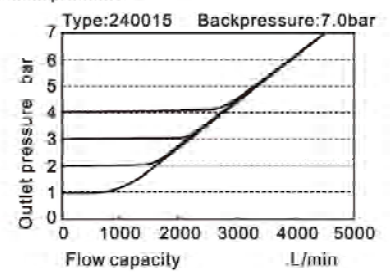
Medium pressure



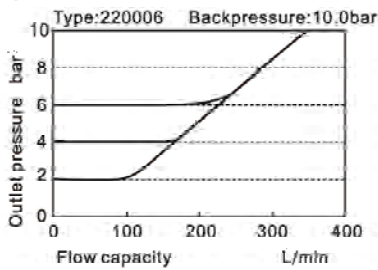
Medium pressure



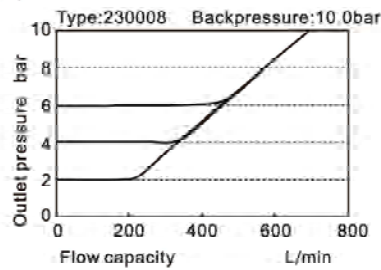
Medium pressure



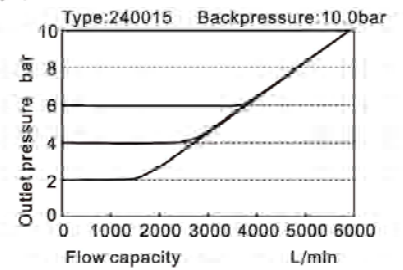
High pressure



High pressure



High pressure

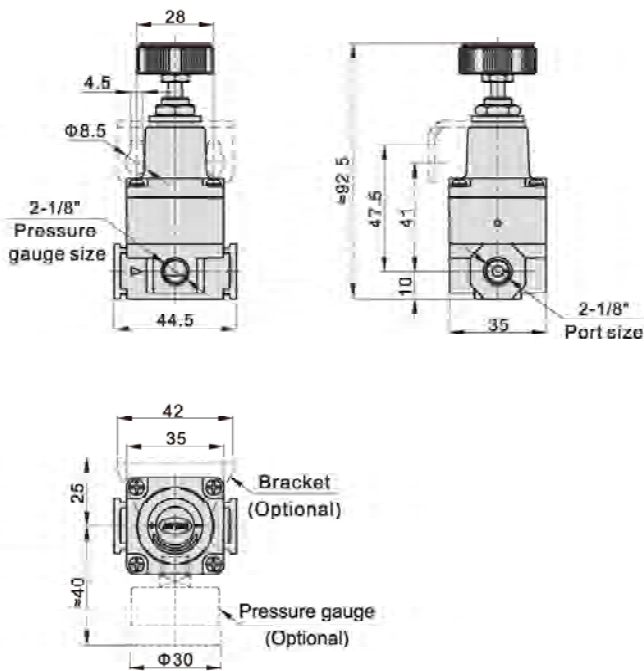


Preparation unit—G Series

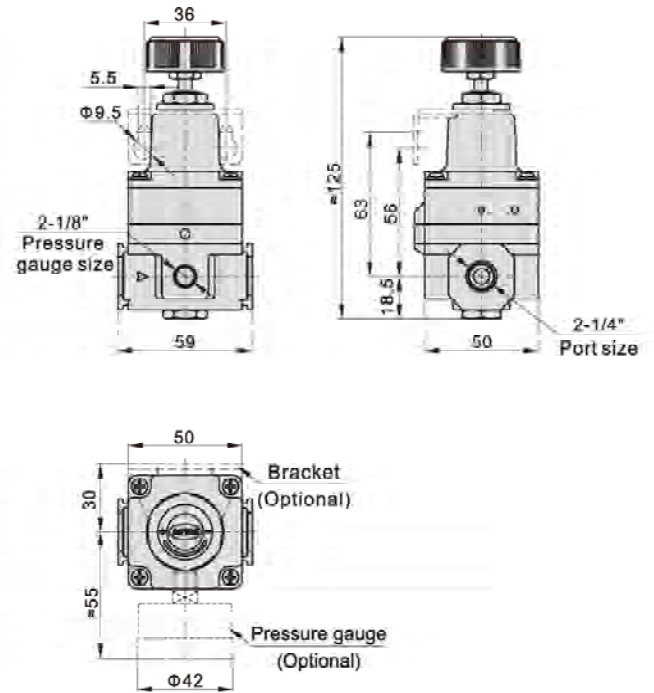
GPR Series Precision Regulator

Dimensions

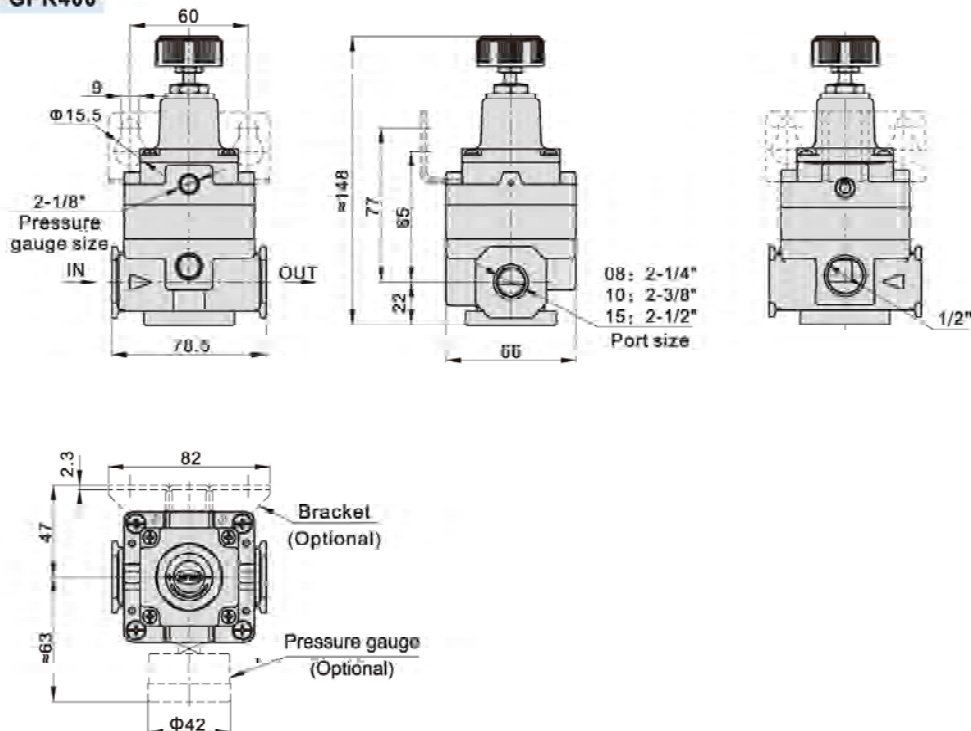
GPR200



GPR300



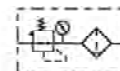
GPR400



Preparation unit—GP Series

GPFR Series Precision Filter & Regulator

Symbol



Product feature

1. Circular square pressure gauge which with clip and magnifier is used to save installation space.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. Balanced design is adopted for the pressure adjustment mechanism.
4. Unique diversion structure spins the air flowing through to effectively separate the liquid from the air and reliably filter the solid grain.
5. The filtering grade includes 0.3 μm and 0.01 μm (optional).
6. Two drain types are available: semi-auto drain and automatic drain.
7. Three material of bowl are available: PC, Nylon and metal.
8. The bracket can be selected for installation.

Specification

Model	GPFR200-06	GPFR200-08	GPFR300-08	GPFR300-10	GPFR400-10	GPFR400-15
Fluid	Air					
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"
Filtering grade	0.3 μm or 0.01 μm					
Pressure range	0.15~0.9MPa(20~130psi)					
Max. pressure	1.0MPa(145psi)					
Proof pressure	1.5MPa(215psi)					
Temperature range	-5~70°C(Unfreeze)					
Capacity of drain bowl	25CC		60CC		100CC	
Weight	310g		500g		910g	

[Note1] G thread, NPT thread are available.

Ordering code

GPFR300 □ 10 □ S □ □ M G

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

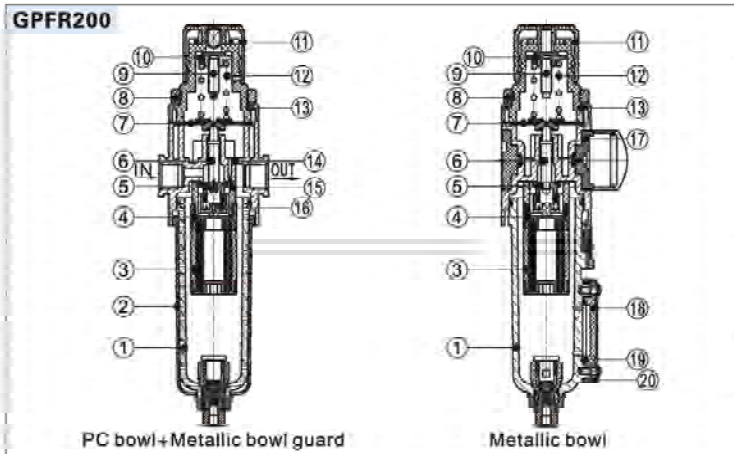
① Model	② Material of bowl	③ Port size	④ Drain type	⑤ Type code	⑥ Accessories	⑦ Pressure gauge	⑧ Filtering grade	⑨ Thread type
GPFR200:GP200 Series Precision filter-regulator	Blank: PC N: Nylon C: Metal	06: 1/8" 08: 1/4"	Blank: Semi-auto drain	S: Standard	Blank: Bracket	Blank: Circular with clip	M: 0.3μm D: 0.01μm	Blank: PT (MPa/psi) G: G(bar/MPa) T: NPT(psi/bar)
GPFR300:GP300 Series Precision filter-regulator		08: 1/4" 10: 3/8"		A: Automatic drain				
GPFR400:GP400 Series Precision filter-regulator		10: 3/8" 15: 1/2"						

[Note1] The maximum work pressure of lower pressure type is 58psi(0.4MPa).

Preparation unit—GP Series

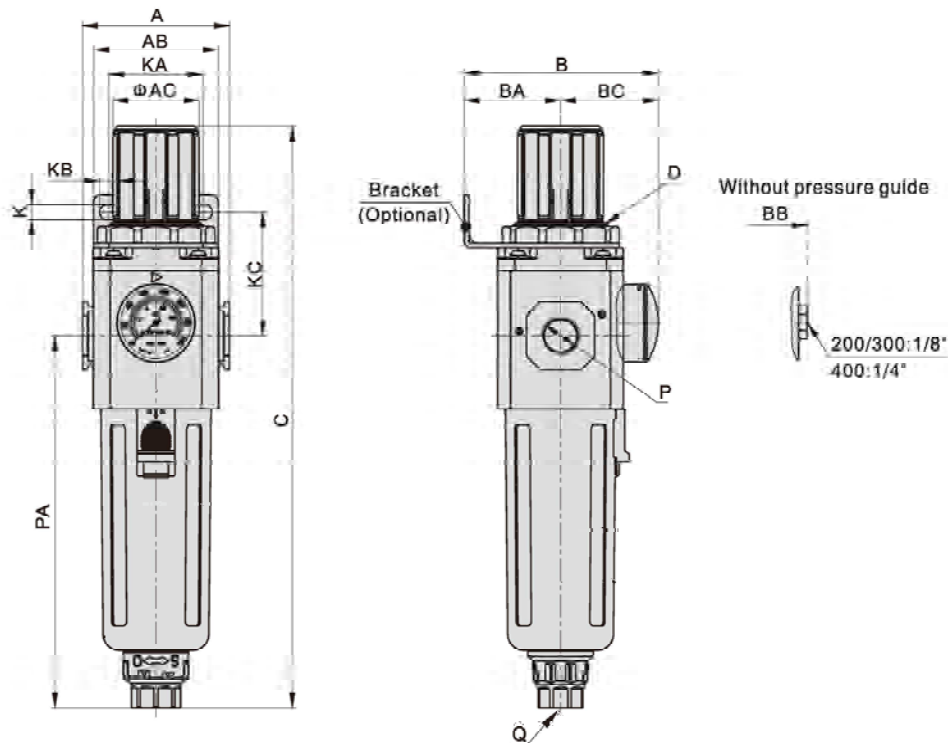
GPFR Series Precision Filter & Regulator

Inner structure



No.	Item	Material
1	Drain bowl	PC\nylon\aluminium alloy
2	Meter cover	SPCC
3	Filter core	Polymer materials
4	Gasket	NBR
5	Adjusting plug	Aluminum alloy & Rubber
6	Adjusting spool	POM
7	Diaphragm	NBR
8	Fixation ring cap	POM
9	Adjusting spindle	Steel
10	Regulator nut	Steel
11	Pressure knob	POM
12	Spring	SWPB
13	Adjusting seat	POM
14	Body of filter-regulator	Aluminium alloy
15	Gas distribution	POM
16	Spring	SWPB
17	Gauge	-
18	Liquid meter cover	PC
19	Liquid meter seal	NBR
20	Liquid meter inside cover	SPCC

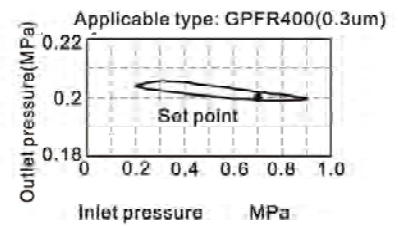
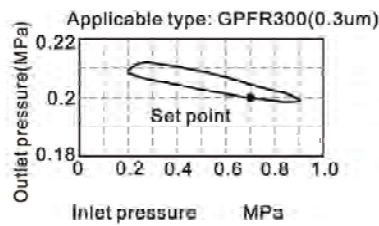
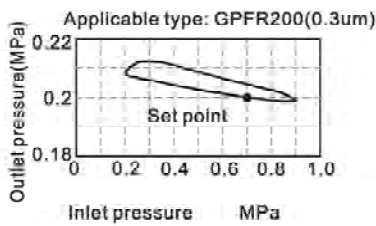
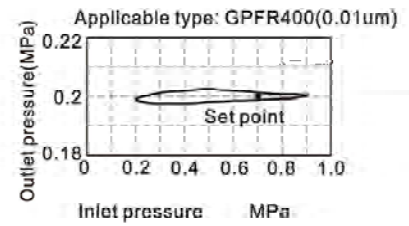
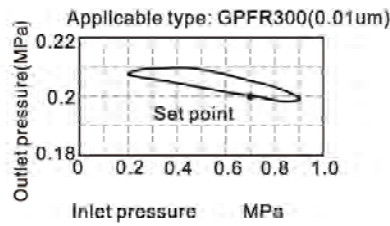
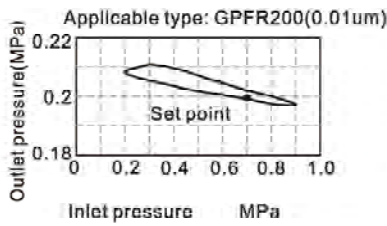
Dimensions



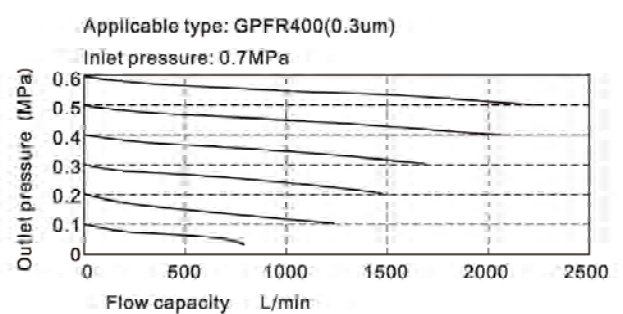
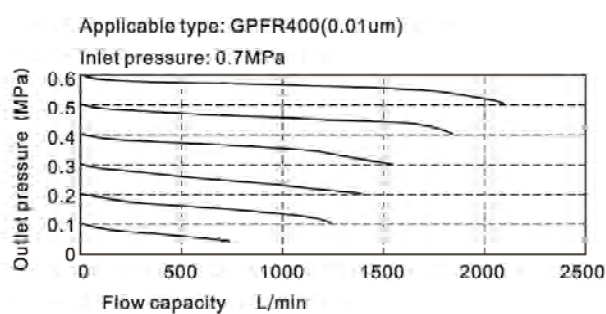
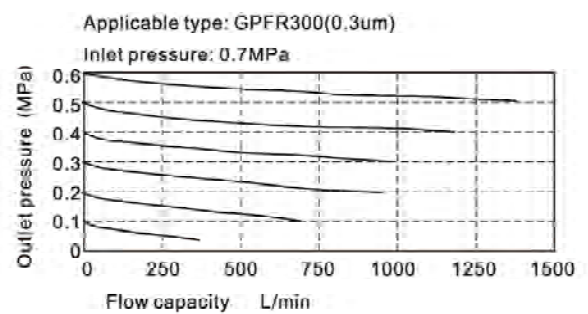
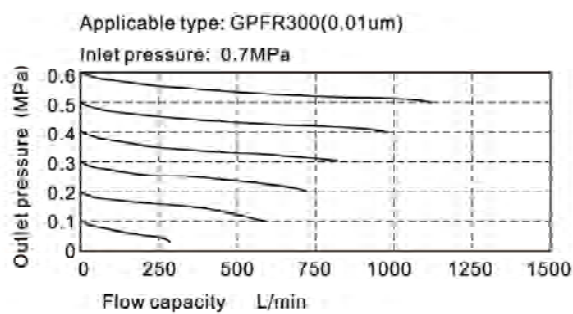
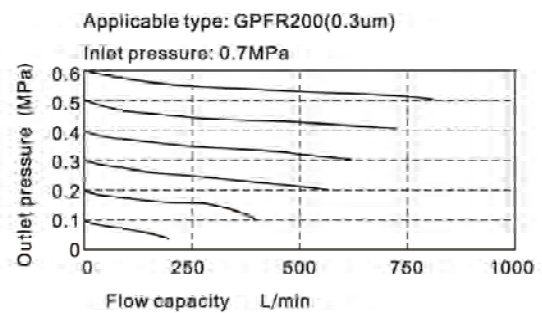
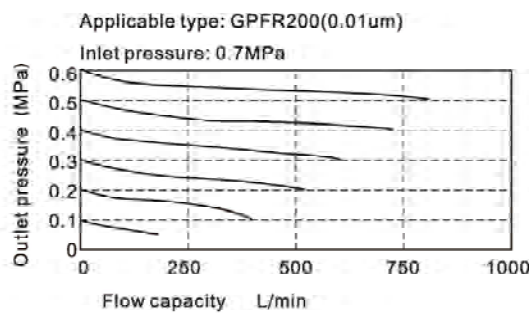
Model\Item	A	AB	AC	B	BA	BB	BC	C	D	K	KA	KB	KC	P	PA	Q
GPFR200-06	52.5	55	31	69	30	55.5	39	192.5	M33x1.5	5.4	34	15.4	52	1/8"	120	M5X0.8
GPFR200-08	52.5	55	31	69	30	55.5	39	192.5	M33x1.5	5.4	34	15.4	52	1/4"	120	M5X0.8
GPFR300-08	62.5	53	38	82.5	41	72	41.5	247	M40x1.5	6.5	40	8	52.5	1/4"	158	G1/4
GPFR300-10	62.5	53	38	82.5	41	72	41.5	247	M40x1.5	6.5	40	8	52.5	3/8"	158	G1/4
GPFR400-10	80	72	52	99	50	88	49	285.5	M55x2.0	8.5	55	11	57	3/8"	177.5	G1/4
GPFR400-15	80	72	52	99	50	88	49	285.5	M55x2.0	8.5	55	11	57	1/2"	177.5	G1/4

GPFR Series Precision Filter & Regulator

Pressure chart



Flow chart





Compendium of A, B Series preparation unit

P210	Product feature	Photo	P212	Product feature	Photo
AC, BC Series F.R.L Unit	<ul style="list-style-type: none"> ● The efficiency of water separating is high ● The pressure loss is low ● The flow of miststart is low ● Convenient for installation and application ● AC/BC series is optional ● High-strength plastic shields is optional ● Port size: 1/8" 1/4" 3/8" 1/2" 		AFC, BFC Series FR.L Unit	<ul style="list-style-type: none"> ● The efficiency of water separating is high ● The pressure loss is low ● The flow of miststart is low ● Convenient for installation and application ● AFC/BFC series is optional ● High-strength plastic shields is optional ● Port size: 1/8" 1/4" 3/8" 1/2" 	
P214	Product feature	Photo	P216	Product feature	Photo
AFR, BFR Series Filter-Regulator	<ul style="list-style-type: none"> ● The efficiency of water separating is high ● The pressure loss is low ● With fixing bracket convenient for use ● AFR/BFR series is optional ● High-strength plastic shields is optional ● Port size: 1/8" 1/4" 3/8" 1/2" 		AF, BF Series Filter	<ul style="list-style-type: none"> ● The pressure loss is low ● High-strength plastic shields is optional ● The filter precision includes 5μm and 40μm(optional) ● AF/BF series is optional ● Port size: 1/8" 1/4" 3/8" 1/2" 	
P217	Product feature	Photo	P219	Product feature	Photo
AR, BR Series Regulator	<ul style="list-style-type: none"> ● Adjusting pressure steadily ● Faceplate fixing and bracket fixing is optional ● Standard type, lower pressure type is optional ● AR/BR series is optional ● Port size: 1/8" 1/4" 3/8" 1/2" 		AL, BL Series Lubricator	<ul style="list-style-type: none"> ● The flow of miststart is low ● The pressure loss is low ● High-strength plastic shields is optional ● AL/BL series is optional ● Port size: 1/8" 1/4" 3/8" 1/2" 	

Installation and application



1. Check whether the components have been damaged during transportation before installing and using.
2. Pay attention to whether the flow direction of air (notice "→" direction) and thread type are correct.
3. Please notice whether installation condition accords with technical requirements (such as "working pressure" and "applied temperature range").
4. The medium used or installation environment shall be noticed. The matters with chlorine, carbon compound, aromatic compound and oxidizing acid and alkali shall be avoided to prevent the damage of bowl and oil bowl.
5. Regularly clean or change filter core. Lubricators and regulators shall be in descending order.
6. Keep dust away. The dust cover shall be installed in intake and outlet when the device is dismantled and stored.

Preparation unit—A, B Series

AC、BC Series F.R.L. Combination

Symbol



Product feature

1. The structure is delicate and compact, which is convenient for installation and application.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. The pressure loss is low and the efficiency of water separating is high.
4. The quantity of oil dripping can be directly observed through transparent check-dome.
5. In addition to standard type, lower pressure type is optional (The highest adjustable pressure is 0.4MPa).

Specification

Model	Ac1500	AC2000	BC2000	BC3000	BC4000	
Fluid			Air			
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"	
Filtering grade	40 μm or 5 μm					
Pressure range	Semi-auto and automatic drain: 0.15~0.9MPa(20~130Psi) Manual drain: 0.05~0.9MPa(7~130Psi)					
Max. pressure	1.0MPa(145Psi)					
Proof pressure	1.5MPa(215Psi)					
Temperature range	-5~70°C(unfreeze)					
Capacity of drain bowl	15CC		60CC			
Capacity of oil bowl	25CC		90CC			
Recommended lubricant	ISO VG 32 or equivalent					
Weight	700g		900g			
Constitute	Filter	AF1500	AF2000	BF2000	BF3000	BF4000
	Regulator	AR1500	AR2000	BR2000	BR3000	BR4000
	Lubricator	AL1500	AL2000	BL2000	BL3000	BL4000

[Note1] PT thread, G thread and NPT thread are available.

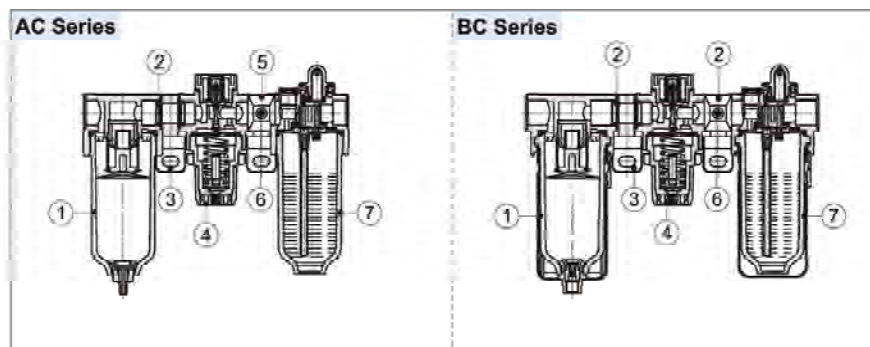
Ordering code

AC 2000 M 1 W

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Model	② Port size	③ Drain type	④ Type code	⑤ Pressure gauge	⑥ Scale	⑦ Filtering grade	⑧ Thread type
AC: A Series F.R.L unit	1500: 1/8" 2000: 1/4"	Blank: Semi-auto drain M: Manual drain	Blank: Standard (0.9MPa) L: Lower pressure (0.4MPa)	Blank: Pressure gauge N: No pressure gauge	1: MPa 2: psi 3: bar 4: kgf/cm ² & psi	Blank: 40 μm W: 5 μm	Blank: PT (Scale: MPa or kgf/cm ² & psi) G: G(Scale: bar) T: NPT(Scale: psi)
BC: B Series F.R.L unit	2000: 1/4" 3000: 3/8" 4000: 1/2"	Blank: Semi-auto drain M: Manual drain A: Automatic drain					

Inner structure



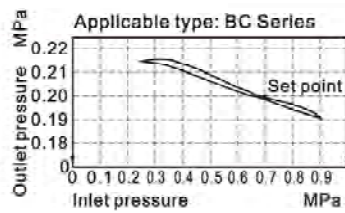
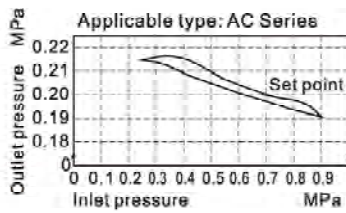
No.	Item	No.	Item
1	AF, BF Series filter	5	A, B Series fix kit
2	A, B Series gasket	6	Screw
3	A, B Series bracket	7	AL, BL Series lubricator
4	AR, BR Series regulator		

Preparation unit—A, B Series

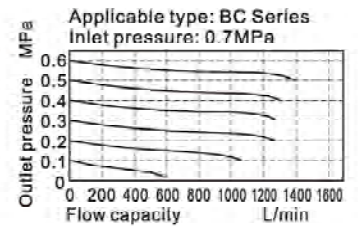
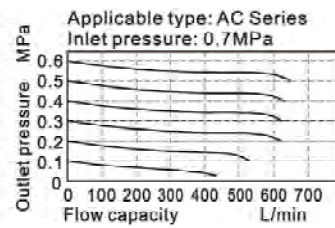
AC、BC Series F.R.L. Combination

Pressure and feature of flow

Pressure chart



Flow chart



Selection of drain mode

AC Series

Manual drain



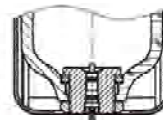
Semi-auto drain



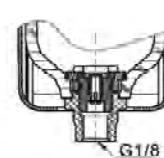
This semi-auto drain can also achieve the function of manual drain.
PU tube with an inner diameter of φ4mm is recommended.

BC Series

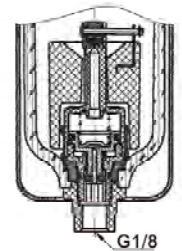
Manual drain



Semi-auto drain

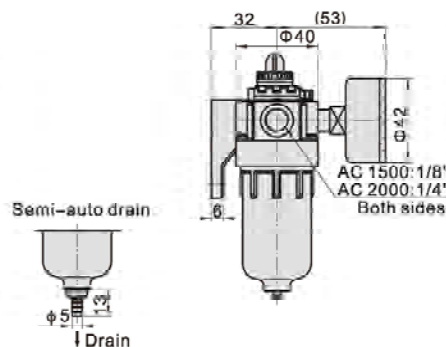
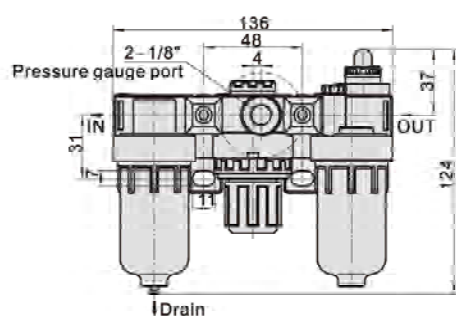


Automatic drain

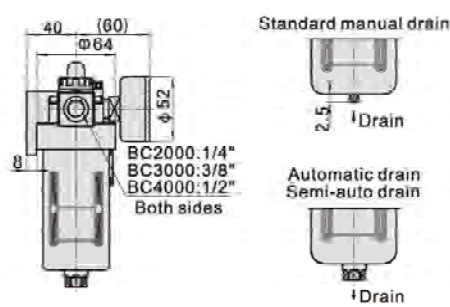
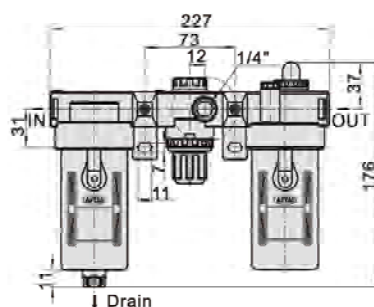


Dimensions

AC Series



BC Series



Preparation unit—A, B Series

AFC、BFC Series FR.L. Combination

Symbol



Product feature

1. The structure is delicate and compact, which is convenient for installation and application.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. The pressure loss is low and the efficiency of water separating is high.
4. The quantity of oil dripping can be directly observed through transparent check dome.
5. In addition to standard type, lower pressure type is optional (The highest adjustable pressure is 0.4MPa).

Specification

Model	AFC1500	AFC2000	BFC2000	BFC3000	BFC4000	
Fluid	Air					
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"	
Filtering grade	40 μm or 5 μm					
Pressure range	Semi-auto and automatic drain: 0.15~0.9MPa(20~130Psi) Manual drain: 0.05~0.9MPa(7~130Psi)					
Max. pressure	1.0MPa(145Psi)					
Proof pressure	1.5MPa(215Psi)					
Temperature range	-5~70°C(unfreeze)					
Capacity of drain bowl	15CC		60CC		90CC	
Capacity of oil bowl	25CC					
Recommended lubricant	ISO VG 32 or equivalent					
Weight	500g			700g		
Constitute	Filter-Regulator	AFR1500	AFR2000	BFR2000	BFR3000	BFR4000
	Lubricator	AL1500	AL2000	BL2000	BL3000	BL4000

[Note1] PT thread, G thread and NPT thread are available.

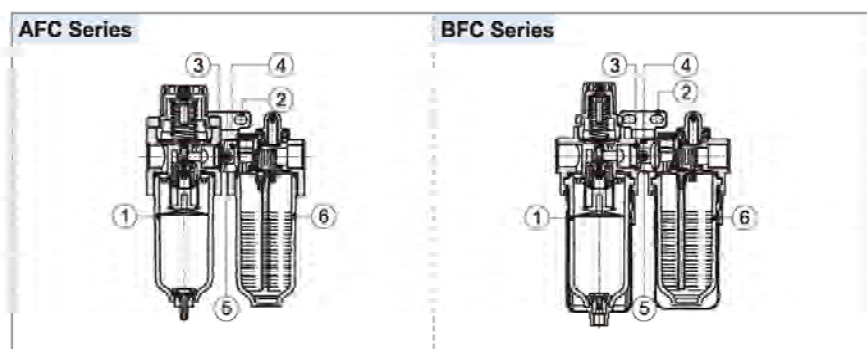
Ordering code

AFC 2000 M □ □ 1 W □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Model	② Port size	③ Drain type	④ Type code	⑤ Pressure gauge	⑥ Scale	⑦ Filtering grade	⑧ Thread type
AFC: A Series FR.L unit	1500: 1/8" 2000: 1/4"	Blank: Semi-auto drain M: Manual drain	Blank: Standard (0.9MPa)	Blank: Pressure gauge	1: MPa 2: psi	Blank: 40 μm W: 5 μm	Blank: PT (Scale: MPa or kgf/cm ² & psi) G: G(Scale: bar) T: NPT(Scale: psi)
BFC: B Series FR.L unit	2000: 1/4" 3000: 3/8" 4000: 1/2"	Blank: Semi-auto drain M: Manual drain A: Automatic drain	L: Lower pressure (0.4MPa)	N: No pressure gauge	3: bar 4: kgf/cm ² & psi		

Inner structure



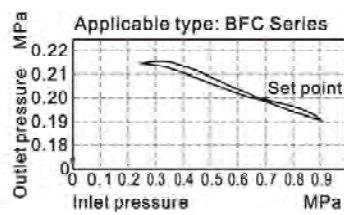
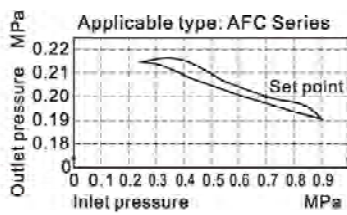
No.	Item
1	AFR, BFR Series filter & regulator
2	A, B Series bracket
3	A, B Series gasket
4	A, B Series fixed kit
5	Screw
6	AL, BL Series lubricator

Preparation unit—A, B Series

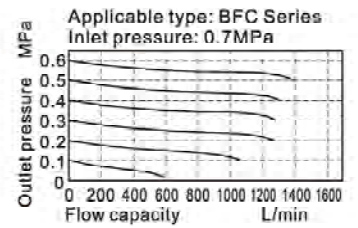
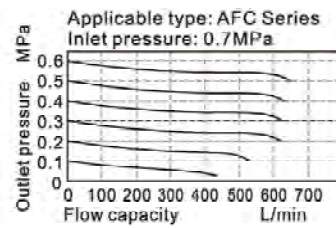
AFC, BFC Series FR.L. Combination

Pressure and feature of flow

Pressure chart



Flow chart

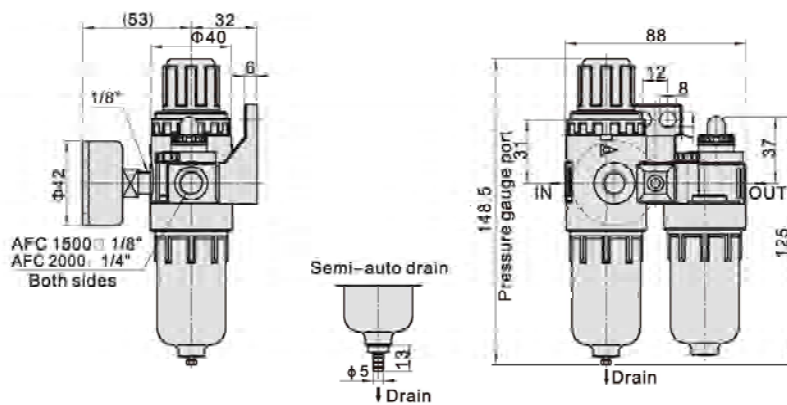


Selection of drain mode

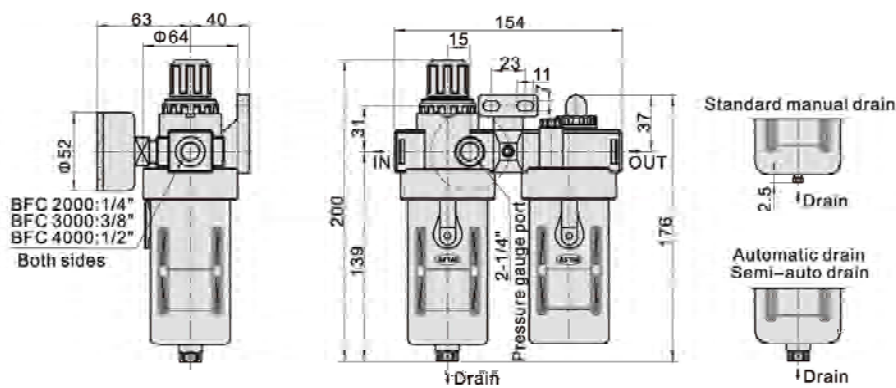
The drain modes of different series are different. Please refer to P211 for details.

Dimensions

AFC Series



BFC Series



Preparation unit—A, B Series

AFR, BFR Series Filter & regulator



Symbol



Product feature

1. The structure is delicate and compact, which is convenient for installation and application.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. The pressure loss is low and the efficiency of water separating is high;
4. In addition to standard type, lower pressure type is optional(The highest adjustable pressure is 0.4MPa).

Specification

Model	AFR1500	AFR2000	BFR2000	BFR3000	BFR4000
Fluid	Air				
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"
Filtering grade	40 μm or 5 μm				
Pressure range	Semi-auto and automatic drain:0.15~0.9MPa(20~130Psi) Manual drain:0.05~0.9MPa(7~130Psi)				
Max. pressure	1.0MPa(145Psi)				
Proof pressure	1.5MPa(215Psi)				
Temperature range	-5~70°C(unfreeze)				
Capacity of drain bowl	15CC			60CC	
Weight	260g			400g	

[Note1] PT thread, G thread and NPT thread are available.

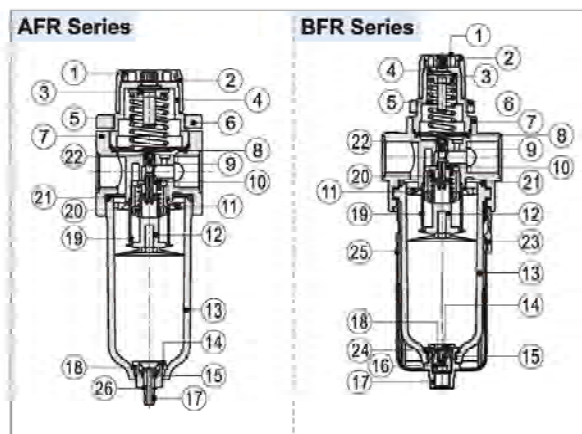
Ordering code

AFR 2000 M □ □ □ 1 W □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Model	② Port size	③ Drain type	④ Type code	⑤ Accessories	⑥ Pressure gauge	⑦ Scale	⑧ Filtering grade	⑨ Thread type
AFR: A Series Filter & regulator	1500: 1/8" 2000: 1/4"	Blank: Semi-auto drain M: Manual drain	Blank: Standard (0.9MPa)	Blank: Bracket	Blank: Pressure gauge	1: MPa 2: psi	Blank: 40 μm W: 5 μm	Blank: PT (Scale: Mpa (orkg/cm ² & psi) G: G(Scale:bar) T: NPT(Scale:psi)
BFR: B Series Filter & regulator	2000: 1/4" 3000: 3/8" 4000: 1/2"	Blank: Semi-auto drain M: Manual drain A: Automatic drain	L: Lower pressure (0.4MPa)	J: No bracket	N: No pressure gauge	3: bar 4: kgf/cm ² & psi		

Inner structure



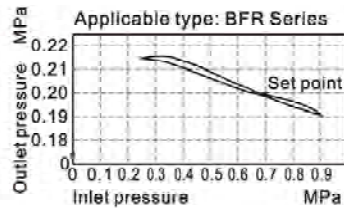
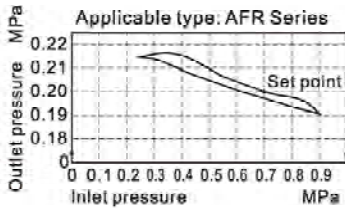
No.	Item	Material	No.	Item	Material
1	Push button	POM	14	Drain kit	POM
2	Adjusting button	POM	15	Return spring	Stainless steel
3	Adjusting nut	Steel	16	Drain seat	POM
4	Adjusting seat	POM	17	Drain pillar	POM
5	Adjusting spring	SWC	18	Drain O-ring	NBR
6	Fixed ring	POM	19	Filter element	5 μm Makrolon fiber
7	Body	Aluminum alloy			40 μm Agglomerated by bronze grain
8	Diaphragm	SUS304 & rubber	20	Return spring	Stainless steel
9	Balance needle	POM	21	Drain bowl O-ring	NBR
10	Needle gasket	Aluminum alloy & rubber	22	Needle O-ring	NBR
11	Air guider	POM	23	Bowl guard switch	POM
12	Umbrella baffle	POM	24	Gasket	POM
13	Drain bowl	PC	25	Bowl guard	PA66
			26	Clip	Spring steel

Preparation unit—A, B Series

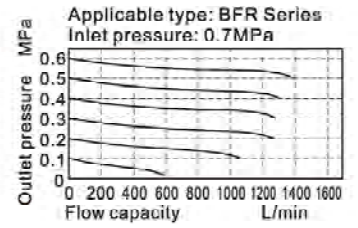
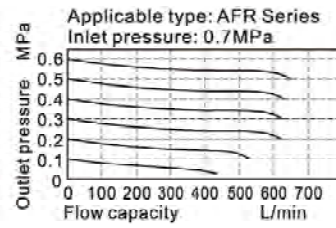
AFR, BFR Series Filter & regulator

Pressure and feature of flow

Pressure chart



Flow chart

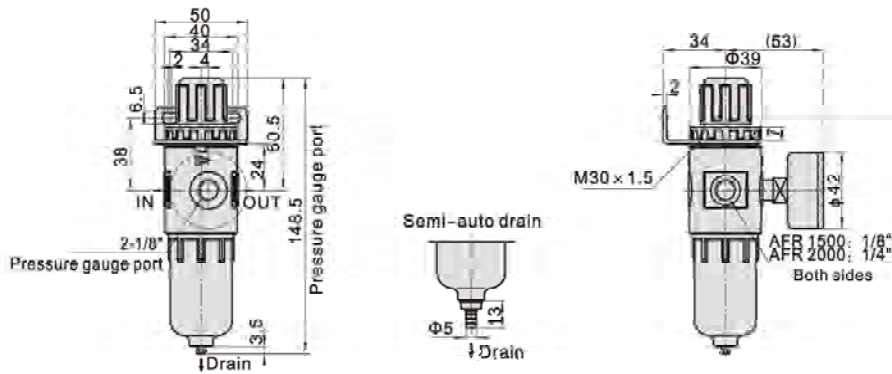


Selection of drain mode

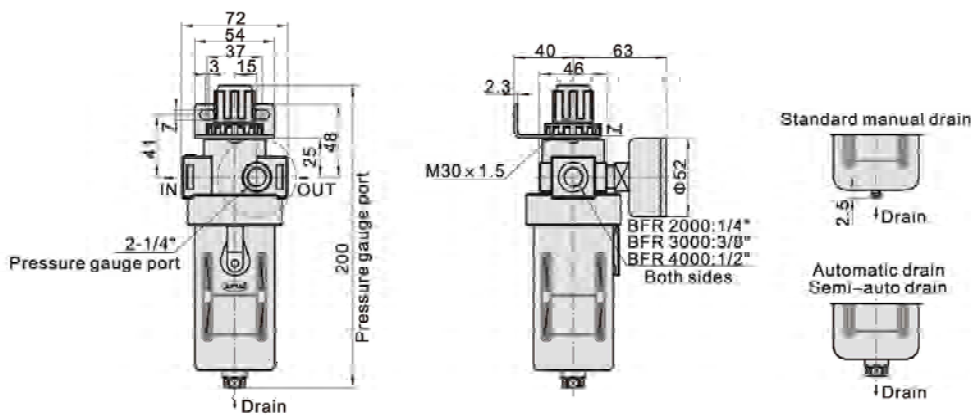
The drain modes of different series are different. Please refer to P211 for details.

Dimensions

AFR Series



BFR Series



Preparation unit—A, B Series

AF, BF Series Filter



Symbol



Product feature

AF Series

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

BF Series

1. The pressure loss is low and the efficiency of water separating is high.
2. The bowl has high-strength plastic shields outside, which is more safe and reliable to use.
3. The filter precision includes 5 μm and 40 μm (optional).

Specification

Model	AF1500	AF2000	BF2000	BF3000	BF4000
Fluid	Air				
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"
Filtering grade	40 μm or 5 μm				
Pressure range	Semi-auto and automatic drain: 0.15~1.0MPa(20~145Psi) Manual drain: 0~1.0MPa(0~145Psi)				
Proof pressure	1.5MPa(215Psi)				
Temperature range	-5~70°C(unfreeze)				
Capacity of drain bowl	15CC		60CC		
Weight	140g		330g		

[Note1] PT thread, G thread and NPT thread are available.

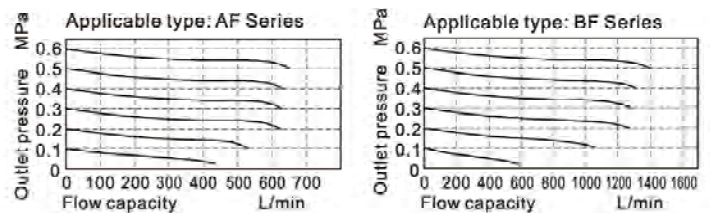
Ordering code

AF 2000 M W □
① ② ③ ④ ⑤

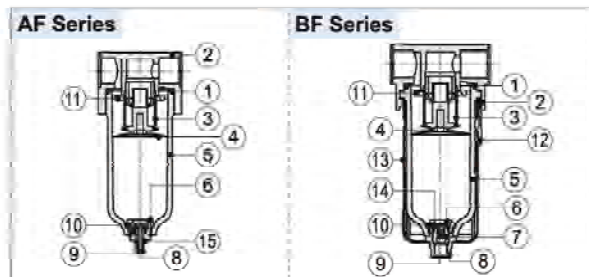
① Model	② Port size	③ Drain type [Note]	④ Filtering grade	⑤ Thread type
AF:A Series Filter	1500: 1/8" 2000: 1/4"	Blank: Semi-auto drain M: Manual drain	Blank: 40 μm W: 5 μm	Blank: PT G: G T: NPT
BF:B Series Filter	2000: 1/4" 3000: 3/8" 4000: 1/2"	Blank: Semi-auto drain M: Manual drain A: Automatic drain		

[Note1] The drain modes of different series are different. Please refer to P211 for details.

Flow chart



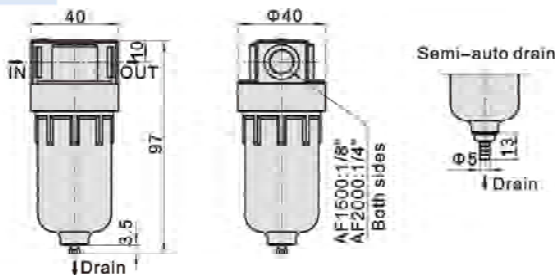
Inner structure



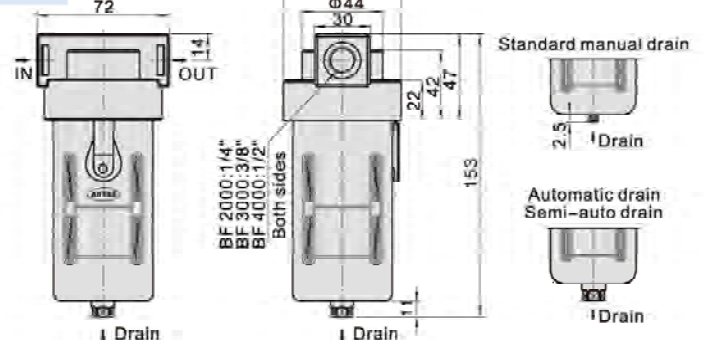
No.	Item	Material	No.	Item	Material
1	Drain bowl O-ring	NBR	8	Drain pillar	POM
2	Body	Aluminum alloy	9	Return spring	Stainless steel
3	Filter element	5 μm Makrolon fiber 40 μm Agglomerated by bronze grain	10	Gasket	POM
4	Umbrella baffle	POM	11	Air guider	POM
5	Drain bowl	PC	12	Bowl guard switch	POM
6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

Dimensions

AF Series



BF Series



Preparation unit—A, B Series

AR, BR Series Regulator



Symbol



Product feature

1. The structure is delicate and compact, which is convenient for installation and application.
2. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
3. In addition to standard type, lower pressure type is optional (The highest adjustable pressure is 0.4MPa).

Specification

Model	AR1500	AR2000	BR2000	BR3000	BR4000
Fluid	Air				
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"
Pressure range	0.05~0.9MPa(7~130Psi)				
Max. pressure	1.0MPa(145Psi)				
Proof pressure	1.5MPa(215Psi)				
Temperature range	-20~70°C				
Weight	200g			230g	

[Note1] PT thread, G thread and NPT thread are available.

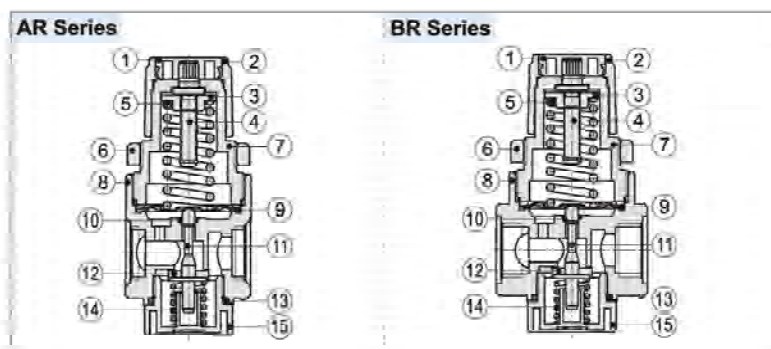
Ordering code

AR 2000 L 1

① ② ③ ④ ⑤ ⑥ ⑦

①Model	②Port size	③Type code	④Accessories	⑤Pressure gauge	⑥Scale	⑦Thread type
AR: A Series Regulator	1500: 1/8" 2000: 1/4"	Blank: Standard (0.9MPa) L: Lower pressure (0.4MPa)	Blank: Bracket J: No bracket	Blank: Pressure gauge N: No pressure gauge	1: MPa 2: psi 3: bar 4: kgf/cm ² & psi	Blank: PT (Scale: Mpa orkgf/cm ² & psi) G: G(Scale:bar) T: NPT(Scale:psi)
BR: B Series Regulator	2000: 1/4" 3000: 3/8" 4000: 1/2"					

Inner structure



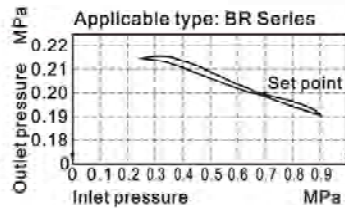
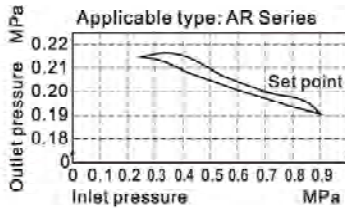
No.	Item	Material
1	Push button	POM
2	Adjusting button	POM
3	Adjusting nut	Steel
4	Adjusting pillar	Steel
5	Adjusting spring	SWC
6	Fixed ring	POM
7	Adjusting seat	POM
8	Body	Aluminum alloy
9	Diaphragm	SUS304 & rubber
10	Needle O-ring	NBR
11	Balance needle	POM
12	Needle gasket	Aluminum alloy & rubber
13	Cap O-ring	NBR
14	Return spring	Stainless steel
15	Regulator cap	POM

Preparation unit—A, B Series

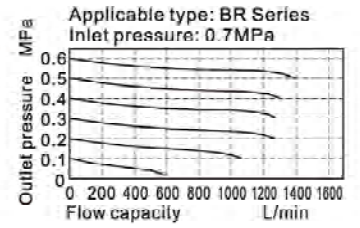
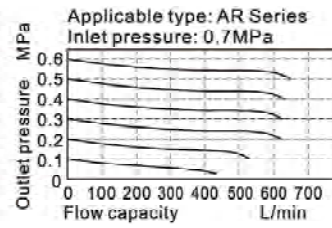
AR, BR Series Regulator

Pressure and feature of flow

Pressure chart

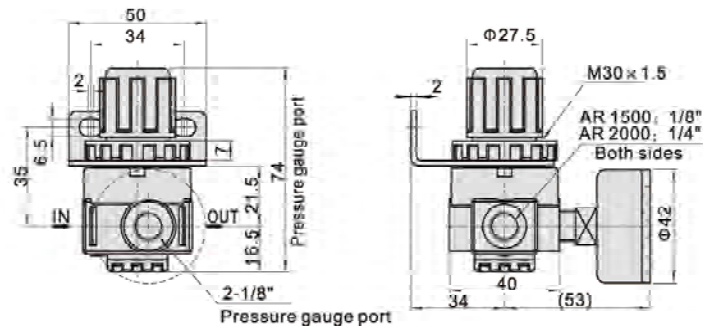


Flow chart

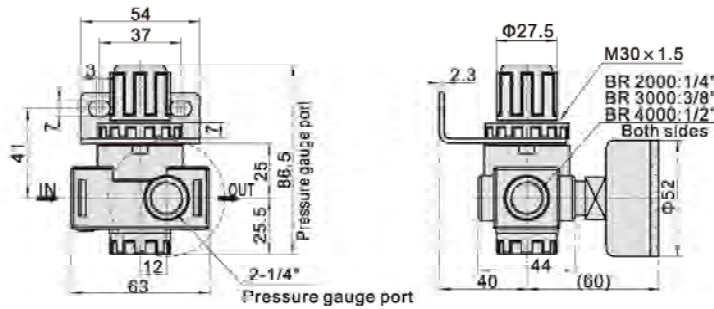


Dimensions

AR Series



BR Series



Preparation unit—A, B Series

AL, BL Series Lubricator



Symbol



Product feature

1. The structure is delicate and compact.
2. The quantity of oil dripping can be directly observed through transparent inspection sheet.
3. BL has high-strength plastic shields, which is more safe and reliable to use.
4. The pressure loss and the flow of miststart is low.

Specification

Model	AL1500	AL2000	BL2000	BL3000	BL4000
Fluid	Air				
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"
Pressure range	0.05~1.0MPa(7~145Psi)				
Proof pressure	1.5MPa(215Psi)				
Temperature range	-5~70°C(unfreeze)				
Capacity of oil bowl	25CC		90CC		
Recommended lubricant	ISO VG 32 or equivalent				
Weight	170g		250g		

[Note1] PT thread, G thread and NPT thread are available.

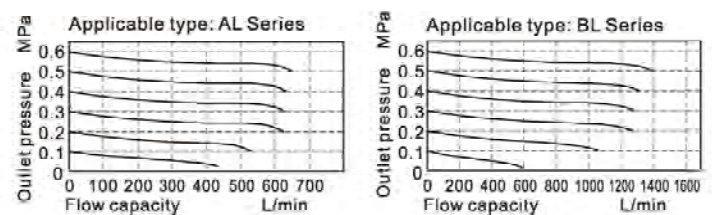
Ordering code

AL 2000

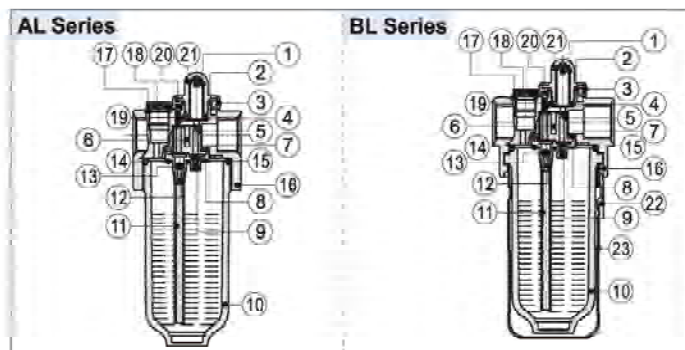
① ② ③

① Model	② Port size	③ Thread type
AL: A Series Lubricator	1500: 1/8" 2000: 1/4"	Blank: PT G: G T: NPT
BL: B Series Lubricator	2000: 1/4" 3000: 3/8" 4000: 1/2"	

Flow chart

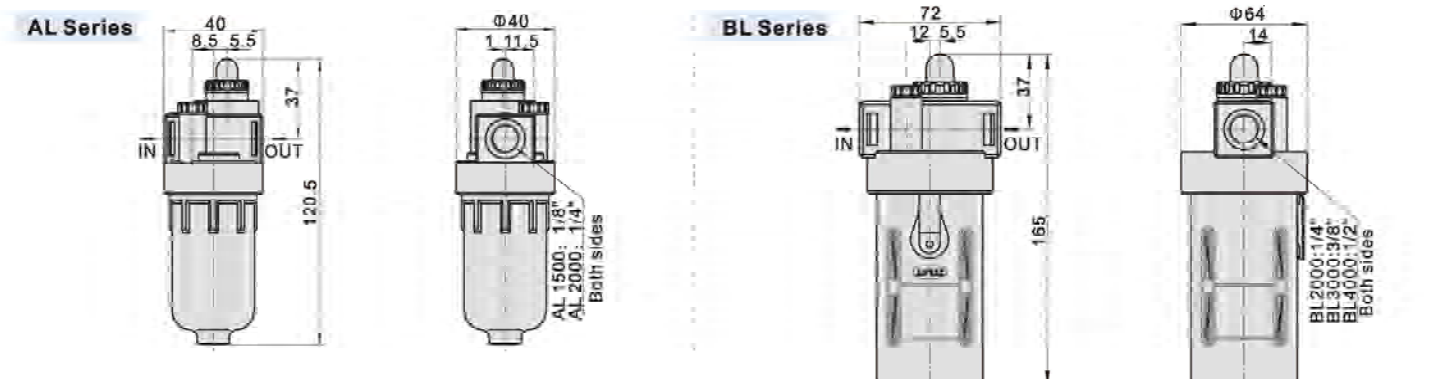


Inner structure



No.	Item	Material	No.	Item	Material
1	Drip pipe	PC	13	Ball	Stainless steel
2	Dripper O-ring	NBR	14	Lubricator fixed plate	SPCC
3	Oil adjusting dial	POM	15	Oil bowl O-ring	NBR
4	Adjusting ring	NBR	16	Body	Aluminum alloy
5	Lubricator seat	POM	17	Oil filling nut O-ring	NBR
6	Partition	PU	18	Oil filling plug	Steel
7	Lubricator kit gasket	NBR	19	Needle spring	Stainless steel
8	Adjustor	HDPE	20	Injector pin	Bronze
9	Return spring	Stainless steel	21	Check-dome	PC
10	Oil bowl	PC	22	Bowl guard switch	POM
11	Sunk tube	PU	23	Bowl guard	PA6
12	Lubricator kit	POM			

Dimensions



Compendium of Other Series preparation unit

P221	Product feature	Photo	P222	Product feature	Photo
SR200 Series Regulator	<ul style="list-style-type: none"> ● Delicate and compact design ● Panel support or be used in pipeline ● Adjustment is reliable and steady. ● Standard and lower pressure type are available ● Port size: 1/8" 1/4" 		SDR Series Regulator	<ul style="list-style-type: none"> ● Back pressure structure ● Compact type, cost-effective ● Broad regulating range ● Standard and lower pressure type are available ● Single unit installation ● Port size: M5 1/8" 1/4" 	
P224	Product feature	Photo	P225	Product feature	Photo
ADW Series Drip leg drain	<ul style="list-style-type: none"> ● The float is with lever structure ● Low position enables more stable drain ● Large capacity bowl ● Large size inlet port ● Double strainer ● Port size: 3/8" 1/2" 		DPS Series Digital Display Pressure Switch	<ul style="list-style-type: none"> ● PNP、NPN Output type ● Terminal and grommet to be choosed ● Wide measurement range ● Higher precision ● Digital Display type Precision and intuitionistic 	
P228	Product feature	Photo	P235	Product feature	Photo
DPH Series digital display pressure sensor (Analog output)	<ul style="list-style-type: none"> ● PNP、NPN Output type ● Terminal and grommet to be choosed ● Wide measurement range ● Higher precision ● Digital Display type Precision and intuitionistic 		DPC Series Minitype No Display Pressure Switch	<ul style="list-style-type: none"> ● Wide measurement range ● Easy to install ● Two lines or three lines or NPN/PNP outlet types ● Single button to finish learning setting ● Facility and middle va 	
P237	Product feature	Photo	P238	Product feature	Photo
GS, GF, GU Series Pressure gauge	<ul style="list-style-type: none"> ● Sensitive reaction Can work under low pressure ● Several pressure units to be selected ● Several installation ways ● Several installation accessories to be selected ● Various dimensions of screw thread are available 		GVR Series Vacuum regulator	<ul style="list-style-type: none"> ● In addition to panel installation, the bracket is optional for installation. ● Suitable to adjust the vacuum pressure. ● The pressure regulation is stable, the drift is small and the pressure characteristic is good. ● Port size: 1/8" 1/4" 3/8" 	

Installation and application



1. Check whether the components have been damaged during transportation before installing and using.
2. Pay attention to whether the flow direction of air (notice "→" direction) and thread type are correct.
3. Please notice whether installation condition accords with technical requirements (such as "working pressure" and "applied temperature range").
4. The medium used or installation environment shall be noticed. The matters with chlorine, carbon compound, aromatic compound and oxidizing acid and alkali shall be avoided to prevent the damage of bowl and oil bowl..
5. Regularly clean or change filter core. Lubricators and regulators shall be in descending order.
6. Keep dust away. The dust cover shall be installed in intake and outlet when the device is dismantled and stored.

SR Series regulator



Symbol



Product feature

1. Panel support can be chosen for the installation of regulator with independent use in pipeline.
2. The structure is delicate and compact, which is convenient for installation and application.
3. The performance of pressure adjustment is reliable and steady.
4. In addition to standard type, lower pressure type is optional (The highest adjustable pressure is 0.4 MPa).

Specification

Model	SR200-06	SR200L-06	SR200-08	SR200L-08
Fluid	Air			
Port size (Note1)	1/8"		1/4"	
Pressure range	Standard type: 0.05~0.9MPa(7~130psi); Lower pressure type: 0.03~0.4MPa(4~57psi)			
Max. pressure	1.0MPa(145psi)			
Proof pressure	1.5MPa(215psi)			
Temperature range	-20~70°C			

[Note1] PT thread, G thread and NPT thread are available.

Ordering code

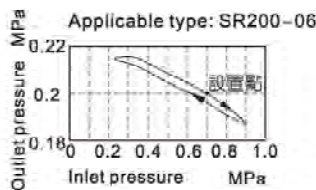
SR 200 08 L 1

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

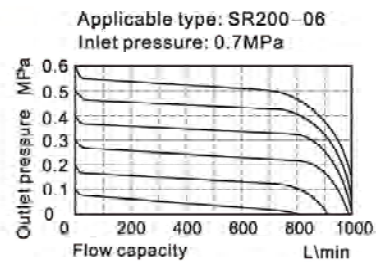
①Model	②Series code	③Port size	④Type code	⑤Accessories	⑥Pressure gauge	⑦Scale	⑧Thread type
SR: Regulator (Mini type)	200: 200 Series	06: 1/8" 08: 1/4"	Blank: Standard L: Lower pressure	Blank: Bracket J: No bracket	Blank: Pressure gauge N: No pressure gauge	1: MPa 2: psi 3: bar 4: kgf/cm ² & psi	Blank: PT (Scale: Mpa or kgf/cm ² & psi) G: G(Scale: bar) T: NPT(Scale: psi)

Pressure and feature of flow

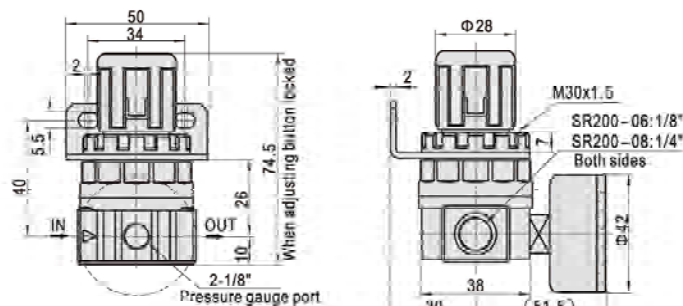
Pressure chart



Flow chart



Dimensions



SDR Series regulator



Symbol



Product feature

1. Back pressure structure, compact type, cost-effective, installation time saving.
2. Broad regulating range; low-pressure type is optional other than the standard type; stable output pressure; applicable to situation which has low expectation on output pressure but high expectation on performance and cost-effectiveness.
3. Single unit installation; easy to mount

Specification

Model	SDR100-M5	SDR100-06	SDR200-06	SDR200-08	SDR100L-M5	SDR100L-06	SDR200L-06	SDR200L-08
Fluid	Air							
Pressure range	0.05-0.9MPa(7-130psi)				0.03-0.4MPa(4-57psi)			
Max. pressure					1.0MPa(145psi)			
Proof pressure					1.5MPa(215psi)			
Temperature range	-20-70°C							
Port size [Note1]	M5	1/8"	1/4"	M5	1/8"	1/4"		

[Note1] PT thread, G thread and NPT thread are available.

Ordering code

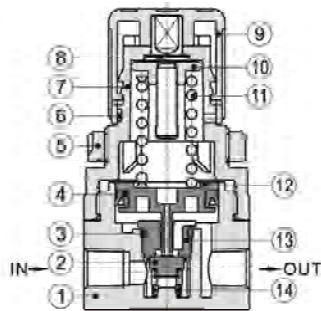
SDR 200 08 L 1

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Model	② Series code	③ Port size	④ Type code	⑤ Accessories	⑥ Pressure gauge	⑦ Scale	⑧ Thread type
SDR: SDR series regulator	100: 100 series	M5: M5 06: 1/8"	Blank: Standard L: Lower pressure	Blank: Bracket J: No bracket	Blank: Pressure gauge N: No pressure gauge	1: MPa 2: psi 3: bar	Blank:PT G:G T:NP
	200: 200 series	06: 1/8" 08: 1/4"					

Inner structure and material of major parts

SDR Series

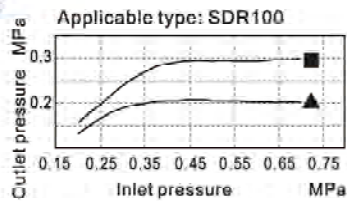


No.	Item	Material
1	Body	Aluminum alloy
2	Needle gasket	NBR
3	O-ring	NBR
4	O-ring	NBR
5	Fixed ring	POM
6	Identification ring	POM
7	Adjusting seat	POM
8	Adjusting pillar	Brass
9	Adjusting button	POM
10	Adjusting nut	Steel
11	Adjusting spring	SWC
12	Piston rod	POM
13	Adjusting seat	POM
14	Return spring	SUS304

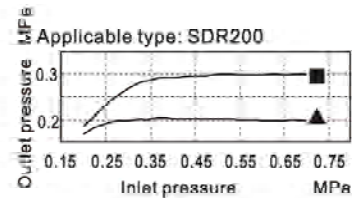
SDR Series regulator

Pressure and feature of flow

Pressure chart

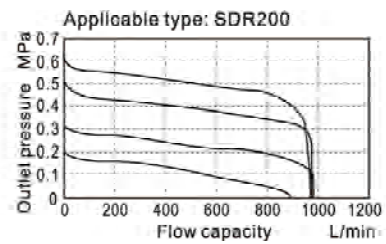
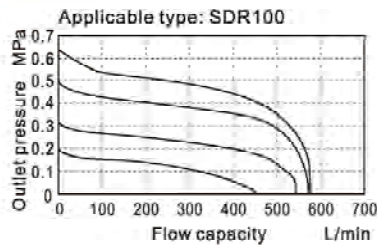


▲ Inlet pressure 0.2MPa ■ Inlet pressure 0.3MPa

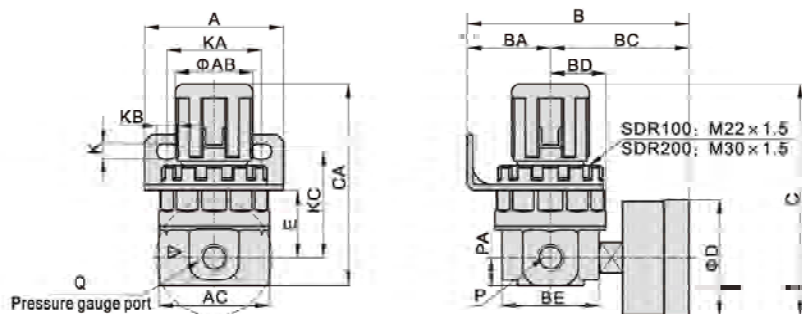


▲ Inlet pressure 0.2MPa ■ Inlet pressure 0.3MPa

Flow chart



Dimensions



Model/Item	A	AB	AC	B	BA	BC	BD	BE	C	CA	D	E	K	KA	KB	KC	P	PA	Q
SDR100□M5	35	20	32	65.5	26	39.5	14.5	29	62.5	54.5	33	17	5.5	22	7	29	M5	7.5	1/16"
SDR100□06	35	20	32	65.5	26	39.5	14.5	29	62.5	54.5	33	17	5.5	22	7	29	1/8"	7.5	1/16"
SDR200□06	50	28	40	80	30	50	20	35	83.5	72.5	42	24	5.5	34	7.5	38	1/8"	10	1/8"
SDR200□08	50	28	40	80	30	50	20	35	83.5	72.5	42	24	5.5	34	7.5	38	1/4"	10	1/8"

Note: Bracket and pressure gauge are optional.

Attentions of application

Unlock the regulating knob before pressure adjustment, then lock it after the adjustment. Otherwise, may cause the regulating knob damage or the outlet pressure change.

1. Pull the regulating knob to unlock, when the orange marking ring below the regulating knob appears, indicating that the regulating knob is unlocked.
2. Push the regulating knob to lock, when the orange marking ring below the regulating knob disappears completely, indicating that the regulating knob is locked.



ADW Series dripleg drain



Symbol



Product feature

1. The float is with lever structure. Low position enables more stable drain.
2. The bowl made of High intensity PC and covered by steel case is safer to use.
3. Double strainer guarantees the operation of the drainer.
4. Inlet with large port size prevents accumulation of particles or rust.
5. The drainage bowl with large capacity can keep more rust and dirt than general drains.
6. The drain is equipped with large float and sensitive to control.
7. The bowl with large size can store a certain amount of water which reduces discharging time and extends the service life.

Specification

Model	ADW400-10	ADW400-15
Fluid	Air	
Pressure range	0.15~1.0MPa(22~145psi)	
Max. pressure	1.0MPa(145psi)	
Proof pressure	1.5MPa(215psi)	
Temperature range	-5~70°C(Unfreezeing)	
Port size [Note1]	IN=3/8"	IN=1/2"

[Note1] PT thread, G thread and NPT thread are available.

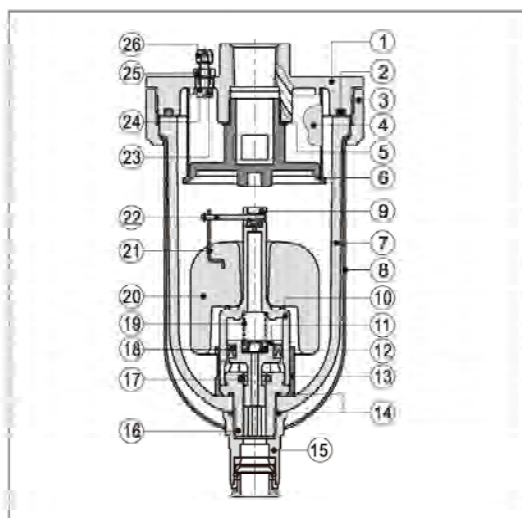
Ordering code

ADW 400 10 □

① ② ③ ④

①Model	②Series code	③Port size	④Thread type
ADW: Dripleg drain	400: 400 Series	10: 3/8" 15: 1/2"	Blank: PT G: G T: NPT

Inner structure and material of major parts

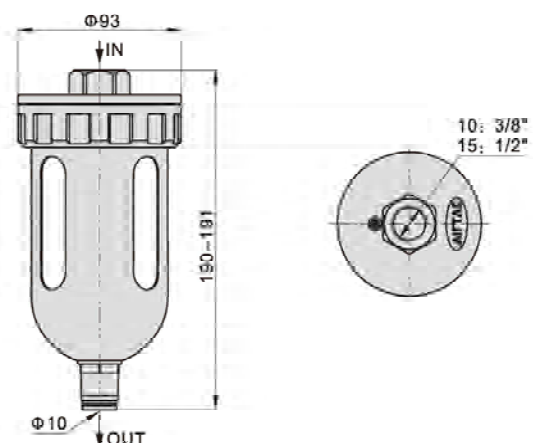


No.	Item	Material	No.	Item	Material
1	Body	Aluminum alloy	14	O-ring	NBR
2	O-ring	NBR	15	Drain joint set	
3	Body nut	Aluminum alloy	16	Drain baffle	POM
4	Filter gauze	Stainless steel	17	O-ring	VITON
5	Fixed ring	NBR	18	O-ring	NBR
6	Filter	POM	19	Spring	Spring steel
7	Drain bowl	PC	20	Float	PU rigid foam
8	Bowl guard	08F	21	Link iron	Stainless steel
9	Valve	Stainless steel & rubber	22	Lever	Stainless steel
10	Piston	Aluminum alloy	23	Adjustable screw	Stainless steel
11	Float	PC+ABS	24	Gasket	EPDM
12	Silencer	Agglomerated by brass grain	25	Balance needle seat	Stainless steel
13	Filter element	Stainless steel & rubber	26	Screw	Steel

Installation and application

1. ADW400 series are applicable to following air compressing equipments: air storage tank, dryer, filter, and piping.
2. Minimum 300mm room is required if the bottom end of above-mentioned equipments being connected with a (1/2") joint.
3. Using a 1/2" hand lever valve between the air compressing equipment and the inlet of ADW400 is good for maintenance.
4. The air displacement of the air compressing equipment can't be lower than 182 L/min.
5. Make sure the drain is vertical downward and the drain pipe is not bended upside.
6. Do not use acidoid or volatile oil gas (hydrochloric acid, petrol, methylbenzene, etc.) to clean the PC bowl. This may cause break.
7. Push the hexagon nut of the body to release the residual pressure before dissembling the PC bowl and metal protection case to avoid any injury or harm.

Dimensions



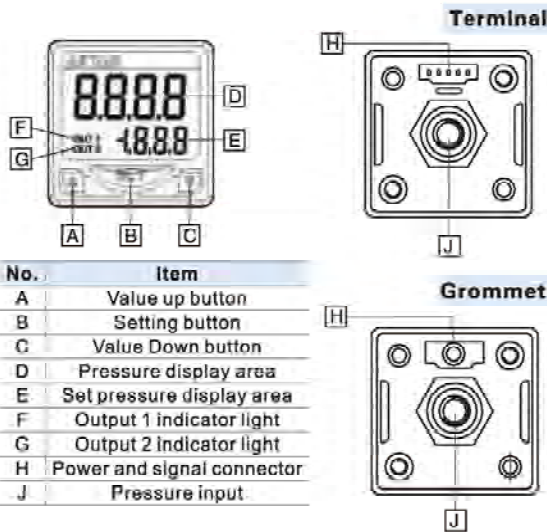
DPS Series digital display pressure switch



Symbol



User interface Instruction



No.	Item
A	Value up button
B	Setting button
C	Value Down button
D	Pressure display area
E	Set pressure display area
F	Output 1 indicator light
G	Output 2 indicator light
H	Power and signal connector
J	Pressure input

Specification

Input power	Voltage	12~24 VDC \pm 10% Ripple(p-p) < 10%
	Fluid	Non-corrosive gas
Measurement range	DPSN1(P1)-01	-100kPa~100kPa
	DPSN1(P1)-10	-100kPa~1,000kPa
Pressure range	Withstand pressure	DPSN1(P1)-01: 200kPa DPSN1(P1)-10: 1500kPa
	Measurement error	\pm 2% F.S. , \pm 1digit(Temperature:25 \pm 3 $^{\circ}$ C)
Display	Repetitive accuracy	\pm 0.2% F.S.
	Temperature error	\pm 3% F.S.(Base 25 $^{\circ}$ C, Range 0 to 50 $^{\circ}$ C)
	Type	Double row LCD display,4-digit measurement, 3,5-digit setting
	Color	2-color LCD (Red/Green)
Output group	Display period	100ms, 250ms, 500ms, 1,000ms
	Output group	DPSN1:Built-in two sets of NPN output DPSP1:Built-in two sets of PNP output
Output	Transistor output	NPN:Maximum applied voltage 30V/100mA,Retained voltage <1.5V PNP:Maximum applied voltage 30V/100mA,Retained voltage <1.5V
	Output delay time	2ms, 20ms, 50ms, 100ms, 250ms, 500ms 1,000ms, 2,500ms, 5,000ms
Hysteresis	DPSN1(P1)-01	0.1, 0.2, 0.3..... 0.8(kPa)
	DPSN1(P1)-10	1, 2, 3..... 8(kPa)
Output mode	Basic mode, Hysteresis mode, Window comparator mode	
	Pressure Unit	DPSN1(P1)-01 kPa, kgf/cm 2 , bar, psi, mmHg, inHg DPSN1(P1)-10 MPa, kPa, kgf/cm 2 , bar, psi, cmHg, inHg
Vibration resistance	10 to 500Hz with 10mm Amplitude in X, Y, Z directions for 2hrs	
Impact resistance	Maximum 100m/s 2 , X, Y, Z directions 3 times each	
Operating Temp. range	0~50 $^{\circ}$ C	
Stored Temp. range	-20~65 $^{\circ}$ C	
Humidity range	35%~80% RH(No condensation)	

Ordering code

DPS N1 □ -01 020 □

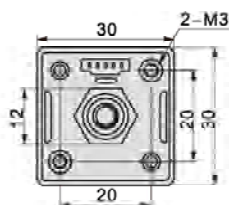
① ② ③ ④ ⑤ ⑥

① Model	② Output type	③ Electrical entry	④ Measurement range	⑤ Lead wire length	⑥ Piping specifications
DPS: Digital Display Pressure Switch	N1: NPN P1: PNP	Space: Plug-in connector B: Pre-wired type [Note]	01: -100kPa~100kPa 10: -100kPa~1,000kPa	020: Length 2m 030: Length 3m 050: Length 5m	Space: PT 1/8 with M5 female thread T: Male thread NPT1/8; female thread: 10-32UNF G: Male thread G1/8; female thread: M5

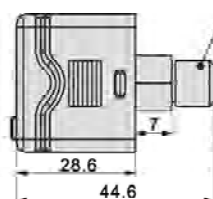
[Note] The safety grade of pre-wired type is IP63.

Dimensions

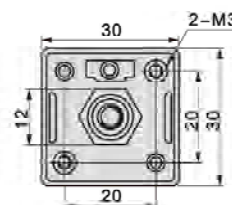
Plug-in connector



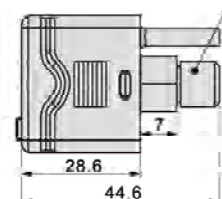
Piping specifications:
Space: PT 1/8 with M5 female thread
T: Male thread NPT1/8; female thread: 10-32UNF
G: Male thread G1/8; female thread: M5



Pre-wired type



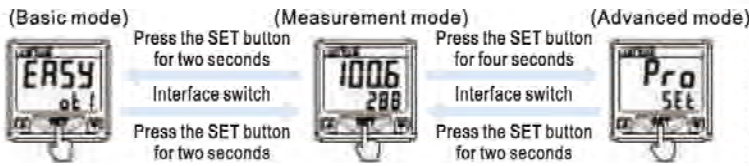
Piping specifications:
Space: PT 1/8 with M5 female thread
T: Male thread NPT1/8; female thread: 10-32UNF
G: Male thread G1/8; female thread: M5



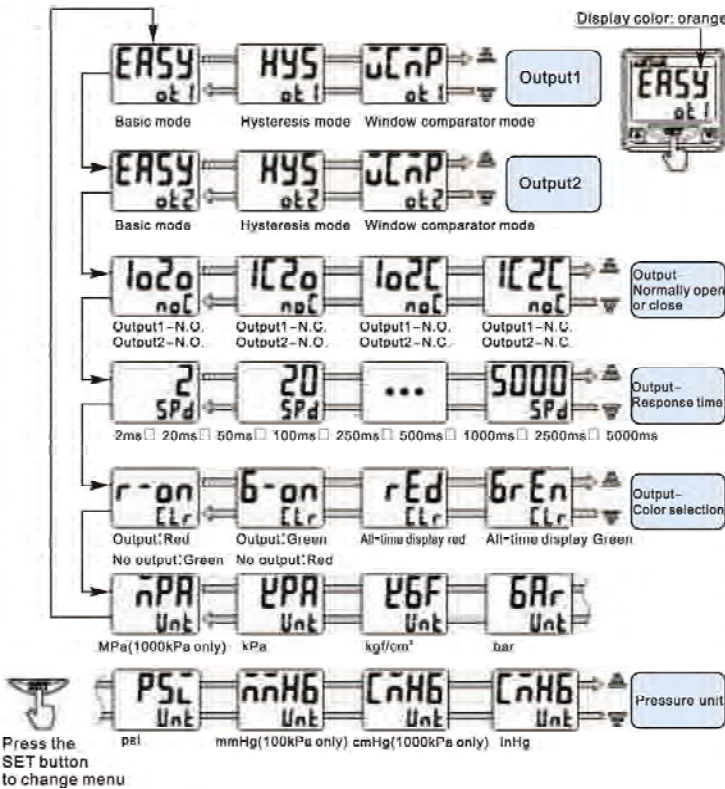
DPS Series digital display pressure switch

User Interface Instructions

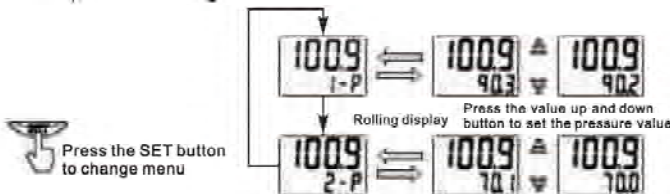
1. Mode switch



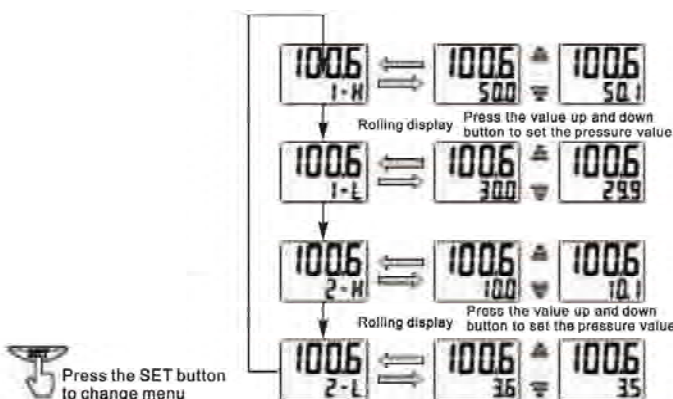
2. Basic mode



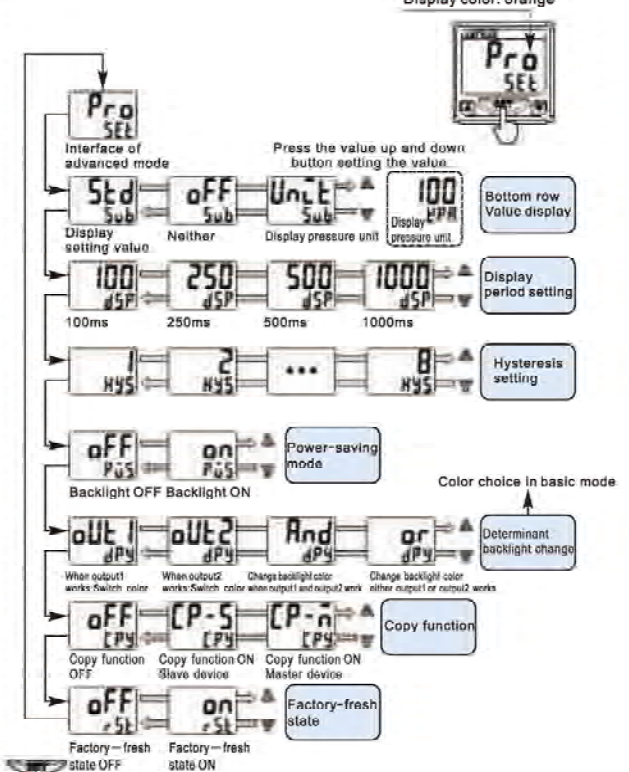
3. Base mode pressure setting



4. Hysteresis /window comparator mode

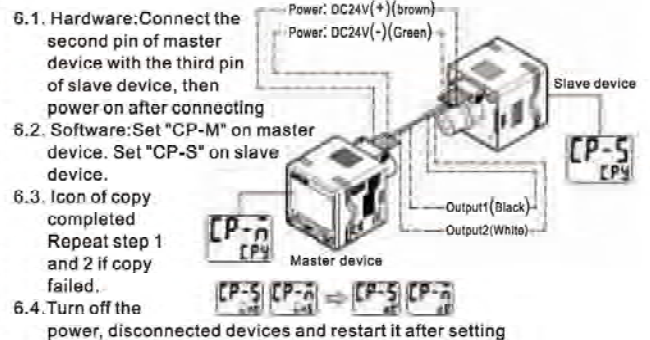


5. Interface of advanced mode



Press the SET button to change menu

6. Copy function

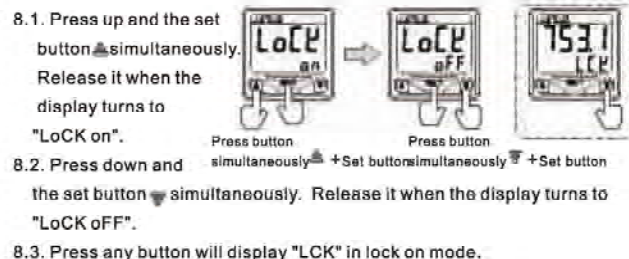


7. Zero-Clear Function

Press up and down simultaneously to reset the display value to zero.

Press button simultaneously

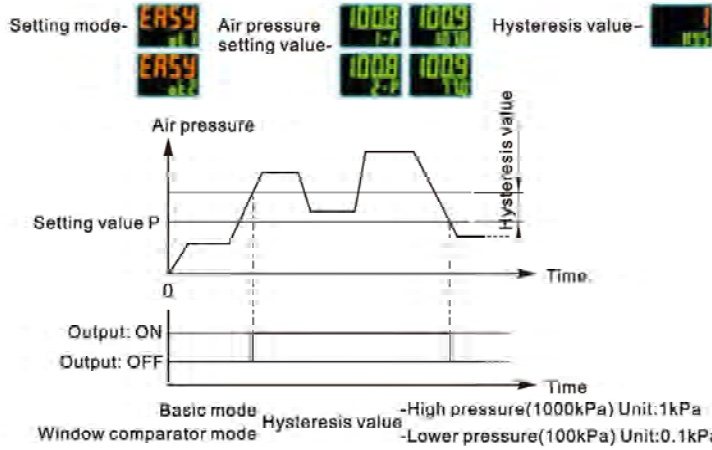
8. Key lock Function



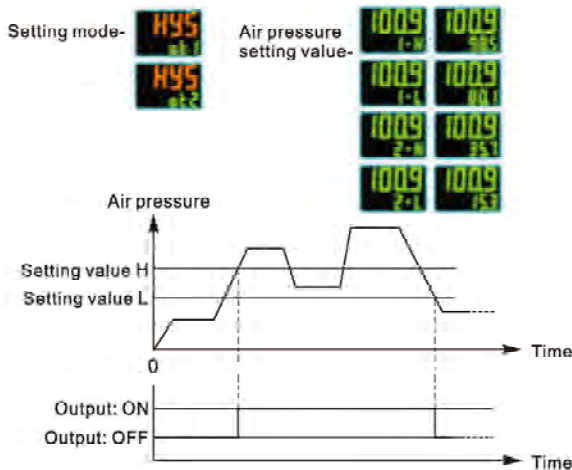
DPS Series digital display pressure switch

Output mode

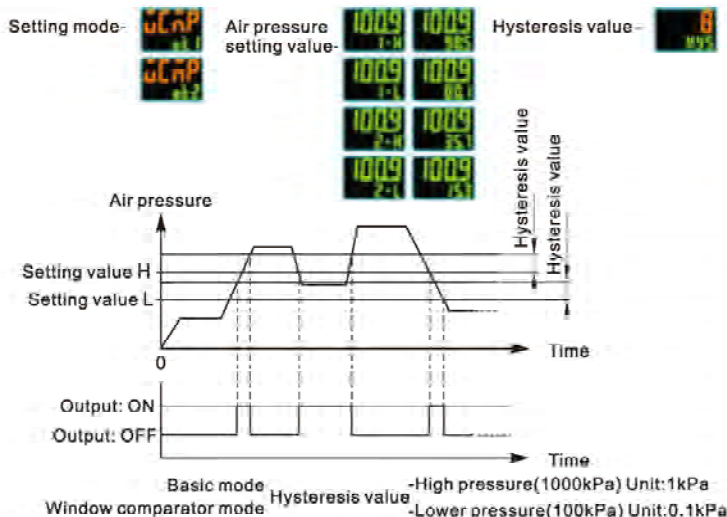
- 1. Basic mode:** Air pressure setting value 'P'. When air pressure large then (Setting value P+Hysteresis value), the output is 'NO' □ When air pressure less than setting value 'P', the output is 'OFF'.



- 2. Hysteresis mode:** Air pressure setting value 'H/L'. When air pressure large then setting value 'H', the output is 'NO' □ When air pressure less than setting value 'L', the output is 'OFF'.

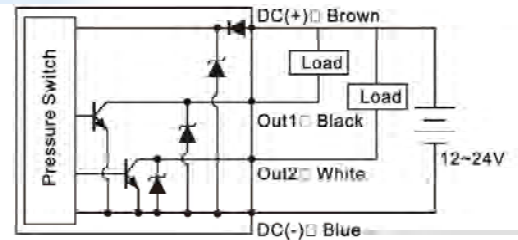


- 3. Window comparator mode:** Air pressure setting value 'H/L'. When air pressure large then value 'H' or less than value 'L', the output is 'OFF' □ When air pressure large then value 'L' and less than value 'H', the output is 'ON'.

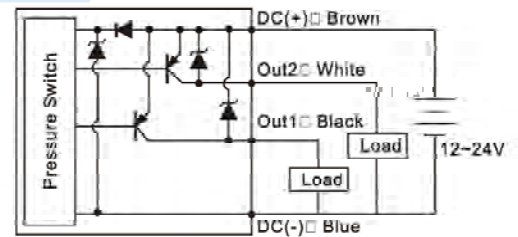


Connection Example

NPN Output



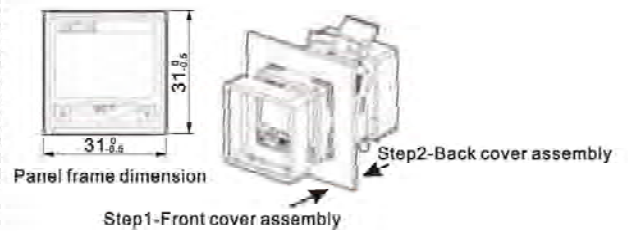
PNP Output



Dimensions/Assembly Instruction

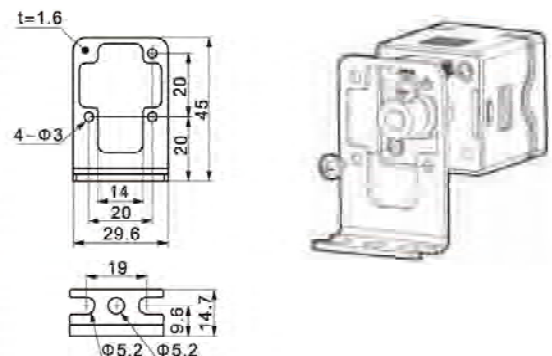
Panel mount adapter + Front protective cover

Order the Install accessories (Ordering code: F-DPSEB)



Bracket

Order the Install accessories (Ordering code: F-DPSLB)



Notes

- Do not drop - knock or apply excessive impact while handling. Otherwise could cause damage and a malfunction.
- The tensile strength of the cord is 60N. Applying a greater pulling force on it can cause a malfunction.
- Do not exceed the screw-in torque of 7N.m when installing piping. Exceeding this value may cause malfunctioning of the sensor.
- Do not use it with corrosive and/or flammable gases or liquids.
- Please use it within rated pressure range.
- Turn off the power before connecting the wires.
- Don't use in an environment with spattering liquid of oil or solvent.
- Separate power lines from high voltage lines, avoiding wiring in the same conduit with these lines.

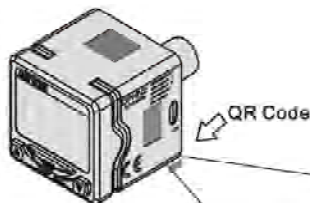
DPH Series digital display pressure sensor(Analog output)



Symbol



On-line Manual



Get full documentation

1. Install QR Code APP, and scan the QR Code on the shall.
2. Documentation website, <http://www.airtac.net/OM/main.htm>.

Specification

Model	DPHN2(3)(B)-01 / DPHP2(3)(B)-01 / DPHN2(3)(B)-10 / DPHP2(3)(B)-10	
Input power	Voltage	12-24 VDC \pm 10% Ripple(p-p) < 10%
	Current Consumption	40mA or less
Pressure range	Fluid	Non-corrosive gas
	Measurement range	DPHN2(3)(B)-01/DPHP2(3)(B)-01: -15psi~15psi DPHN2(3)(B)-01/DPHP2(3)(B)-10: -15psi~150psi
	Withstand pressure	DPHN2(3)(B)-01/DPHP2(3)(B)-01: -15psi~22psi DPHN2(3)(B)-01/DPHP2(3)(B)-10: -15psi~175psi
	Measurement error	\pm 2% F.S. , \pm 1 digit(Temperature:25 \pm 3 $^{\circ}$ C)
	Repetitive accuracy	\pm 0.2% F.S.
	Temperature error	\pm 3% F.S.(Base 25 $^{\circ}$ C, Range 0 to 50 $^{\circ}$ C)
Display	Type	4-digit measurement, 3.5-digit setting
	Output	LCD Analog and Double row LCD display
	Color	2-color LCD (Red/Green)
Switch Output	Output model	Basic mode, Hysteresis mode, Window comparator mode Suction check mode, Leakage mode
	Transistor output	NPN:Maximum applied voltage 30V/100mA,Retained voltage <2V PNP:Maximum applied voltage 30V/100mA,Retained voltage <2V
	Analog Voltage Output	1 to 5V \pm 3% F.S. (Minimum load impedance 1k Ω)
	Analog Current Output	4 to 20mA \pm 3% F.S.(Range of Load impedance is 50 ~ 260 Ω)
	Output-delay time	2ms, 20ms, 100ms, 500ms, 1000ms, 2000ms
	Pressure Unit	DPHN2(3)(B)-01 DPHP2(3)(B)-01
DPHN2(3)(B)-10 DPHP2(3)(B)-10		MPa, kPa, kgf/cm 2 , bar, psi, cmHg, inHg
Vibration resistance	10 to 500Hz with 10mm Amplitude in X, Y, Z directions for 2hrs	
Impact resistance	Maximum 100m/s 2 , X, Y, Z directions 3 times each	
Operating Temp. range	0~50 $^{\circ}$ C	
Stored Temp. range	-20~65 $^{\circ}$ C	
Humidity range	35%~80% RH(No condensation)	

Ordering code

DPH N2 - 01 020

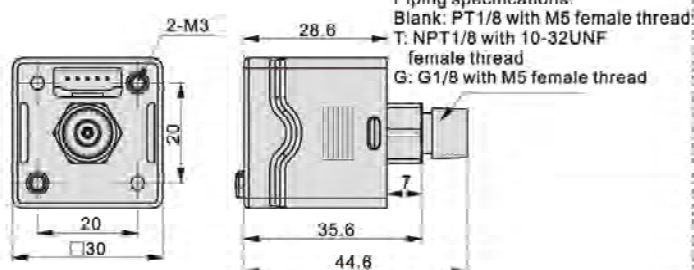
① ② ③ ④ ⑤ ⑥

①Model	②Output type	③Electrical entry	④Measurement range	⑤Lead wire length	⑥Piping specifications
DPH: Digital Display Pressure Sensor (Analog output)	N2: NPN+Analog voltage output(1-5V) P2: PNP+Analog voltage output(1-5V) N3: NPN+Analog current output(4-20mA) P3: PNP+Analog current output(4-20mA)	Space: Terminal B: Grommet [Note]	01: -100kPa~100kPa 10: -100kPa~1,000kPa	020: Length 2m 030: Length 3m 050: Length 5m	Blank: PT1/8 with M5 female thread T: NPT1/8 with 10-32UNF female thread G: G1/8 with M5 female thread

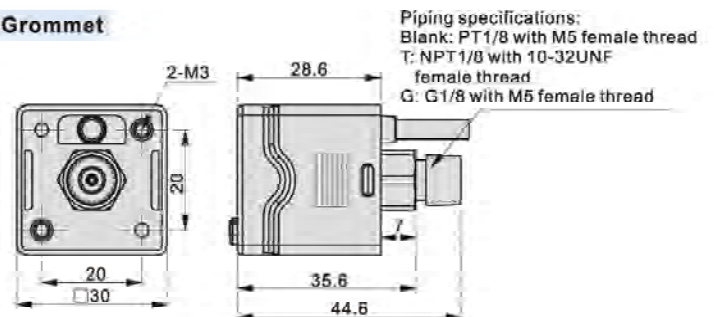
[Note] The safety grade of grommet type is IP63.

Dimensions

Terminal



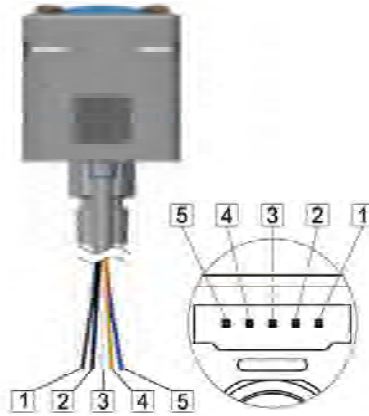
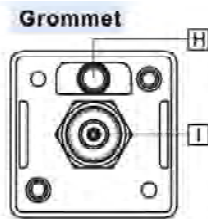
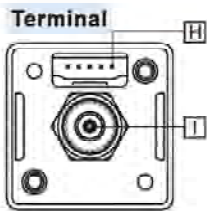
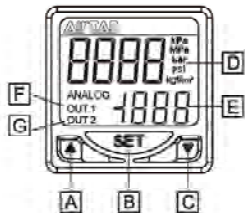
Grommet



Preparation unit—Accessories

DPH Series digital display pressure sensor(Analog output)

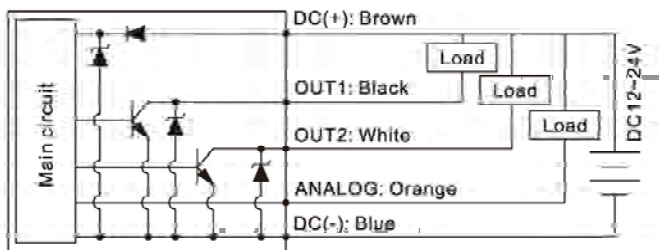
User interface Instruction



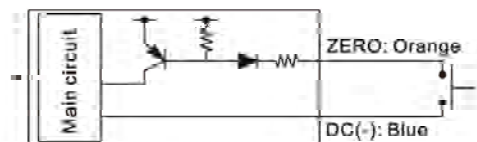
No.	Item
A	Value up button
B	Setting button
C	Value Down button
D	Pressure display area
E	Set pressure display area
F	Output 1 indicator light
G	Output 2 indicator light
H	Power and signal connector
1	Pressure input
1	DC(+) Input (Brown)
2	OUT1 (Black)
3	OUT2 (White)
4	Analog/Zero (Orange)
5	DC(-) input (Blue)

Connection Example

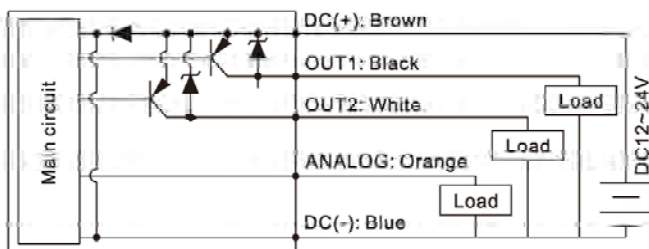
NPN Output



Zero-shift Input



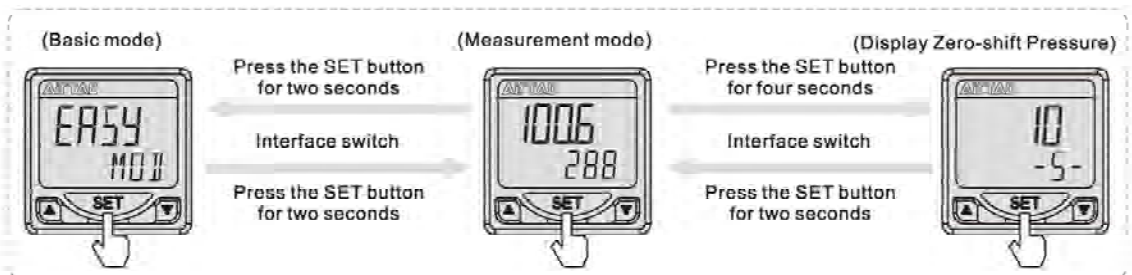
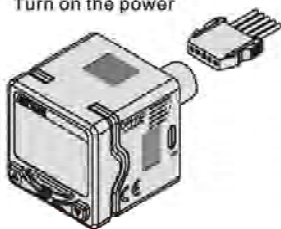
PNP Output



User Interface Instructions

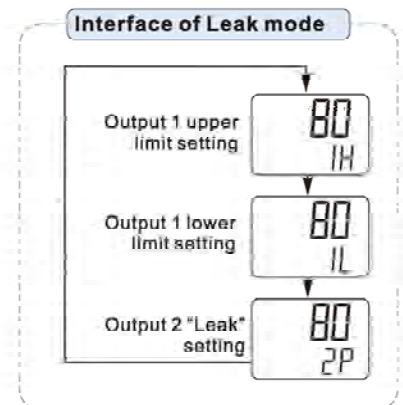
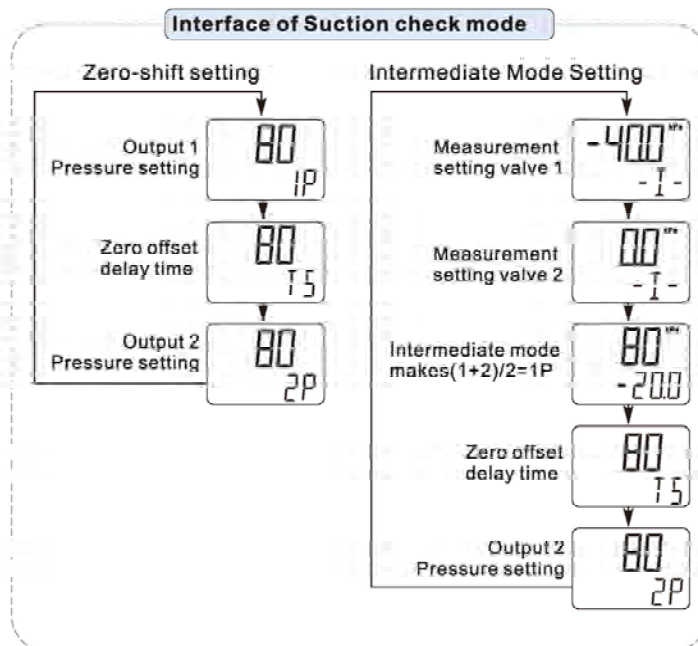
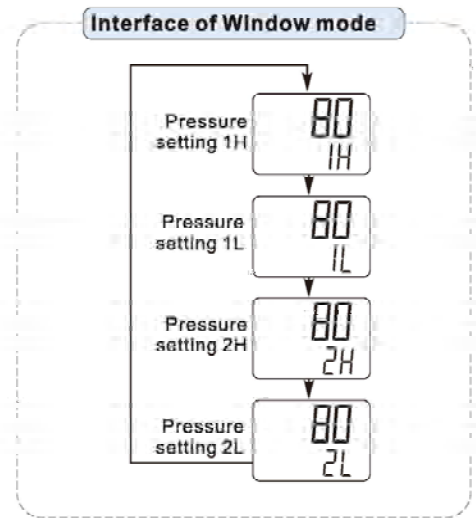
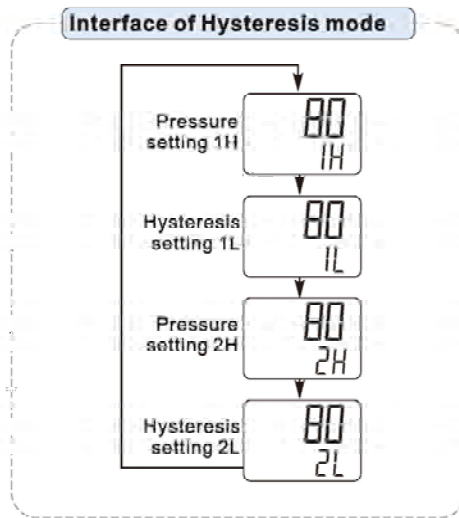
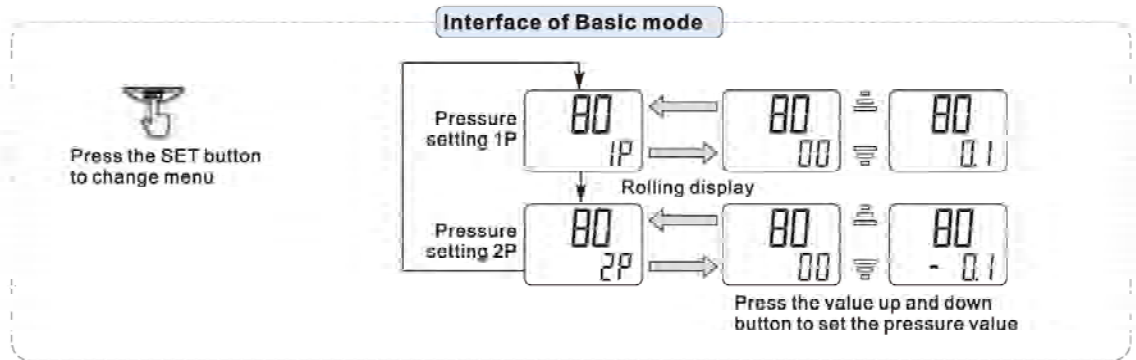
1. Mode switch

Install the connector
Turn on the power



DPH Series digital display pressure sensor(Analog output)

2. Measurement mode

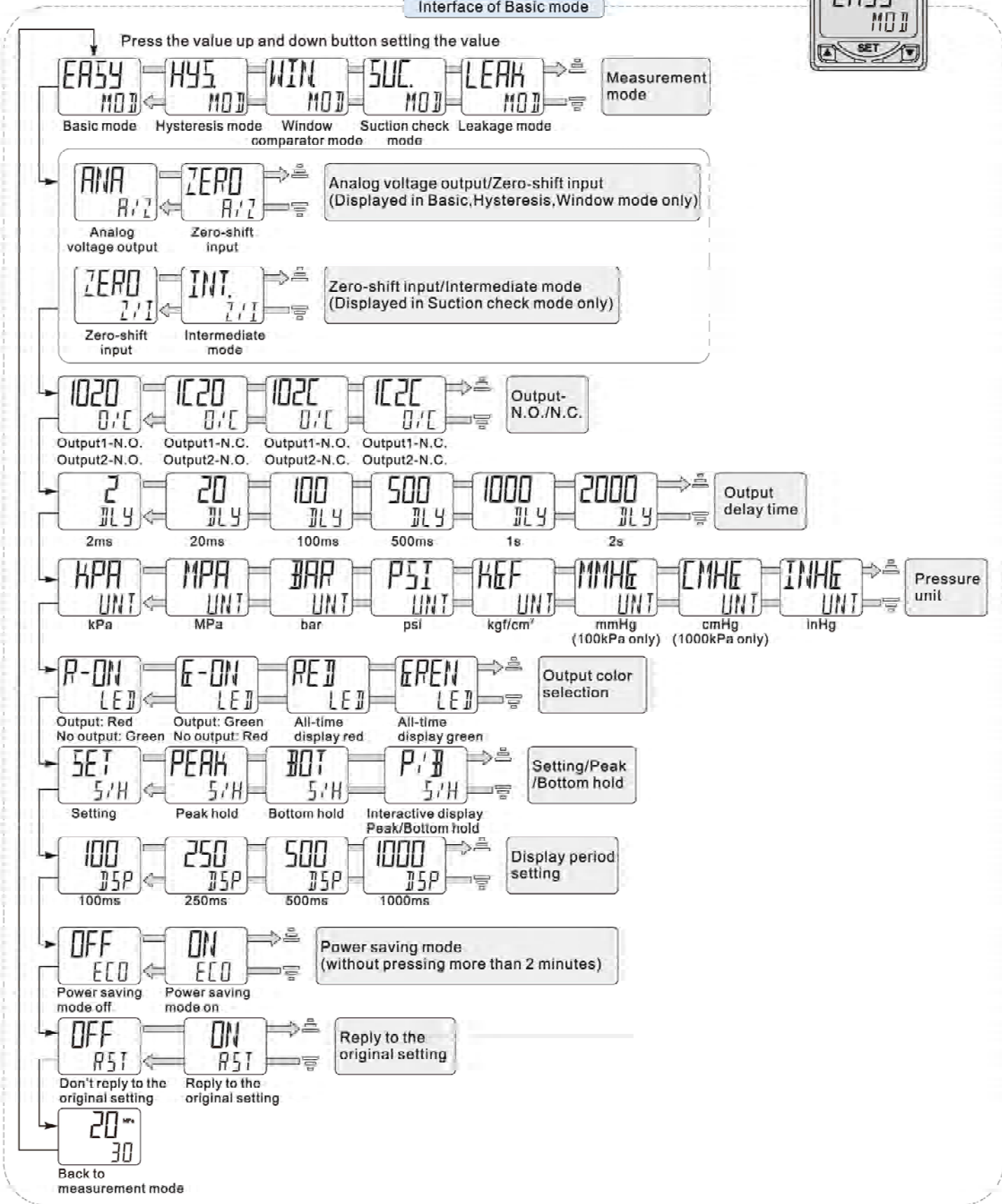


Preparation unit—Accessories

DPH Series digital display pressure sensor(Analog output)

3. Basic mode

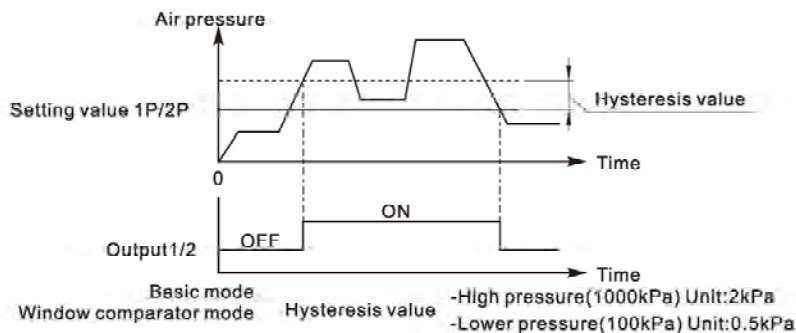
Interface of Basic mode



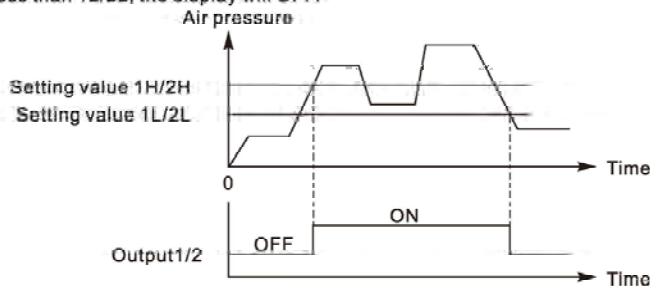
DPH Series digital display pressure sensor(Analog output)

Output mode description

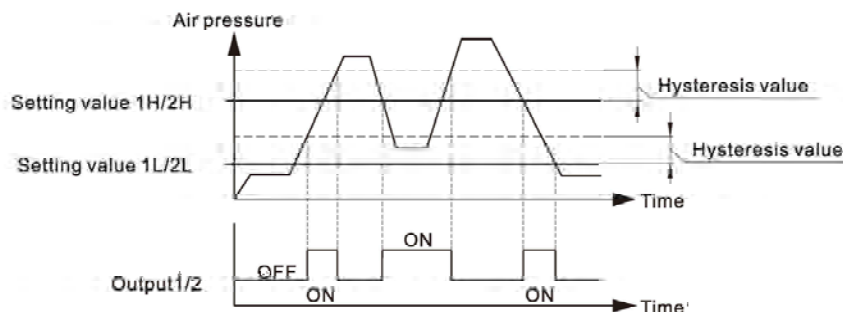
1. Basic mode: Set the pressure value 1P/2P. When the applied pressure value is greater than 1P/2P + hysteresis value, the display will ON. When the applied pressure value is less than P + hysteresis value, the display will OFF.



2. Hysteresis mode: Set the pressure value 1H/2H/1L/2L. When the applied pressure value is greater than 1H/2H, the display will ON. When the applied pressure is less than 1L/2L, the display will OFF.



3. Window comparator mode: Set the pressure value H/L. When the pressure is greater than the H value or less than the L value, the output is OFF; when the air pressure is greater than the L value and less than the H value, the output is ON.



4. Suction check mode: Generally used for suction check detection applications. After the zero-shift signal is triggered, the zero-shift is completed after the TS time.

- TS: Zero-shift delay time.

- 1P: "Pressure" setting value of output 1 before zero-shift (or without zero-shift).

- 1P': Output 1 after zero-shift. Relative to the reference value of the suction starting point pressure (zero offset point).

- 2P: Pressure setting of output 2.

- Output 1: Suction pressure detection;

- In (N.O.) mode, the output 1 is ON when the measured pressure value is less than the setting value 1P (1P');

- Without zero-shift input, output 1 ON/OFF judgment based on 1P, which is the suction pressure setting value relative to atmospheric pressure.

- With a zero-shift input, output 1 ON/OFF judgment based on 1P', which is the reference setting value with relative to the zero-shift point.

- Output 2: Vacuum plate break detection. In (N.O.) mode, output 2 turns ON when the air pressure is greater than the setting value 2P.

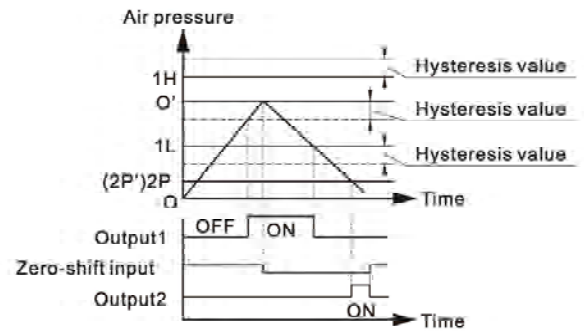


Preparation unit—Accessories

DPH Series digital display pressure sensor(Analog output)

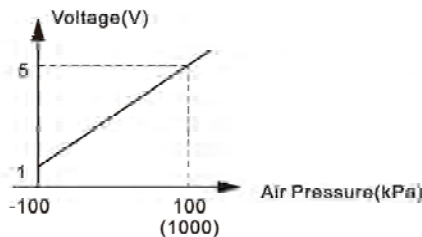
5. Leakage Mode: Generally used for leak detection applications.
The zero-shift is completed after the zero-shift signal is triggered

- ◇ 1H: Output 1 upper limit setting value; 1L: Output 1 lower limit setting value.
- ◇ 2P(2P'): Output 2's "Leak" setting (Negative value).
- Output 1: Fill pressure detection. In the normally mode, output 1 is ON when the pressure is between 1H and 1L
- Output 2: Leakage detection. when only the zero-shift input, it will make output 2 ON/OFF judgment; In the normal mode, Output 2 is ON, when the leakage is greater than the setting value 2P (2P ').



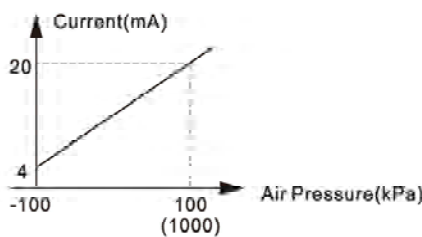
6. Analog output

6.1) Analog Voltage Output (1-5V)



- ◆ In the analog voltage output mode, the orange line should pay attention to the following wiring:
 1. Don't directly connect 0V or any bias voltage under no load to avoid internal circuit damage.
 2. The minimum load impedance needs to be >1kΩ (Don't float) to avoid distortion of the output voltage.

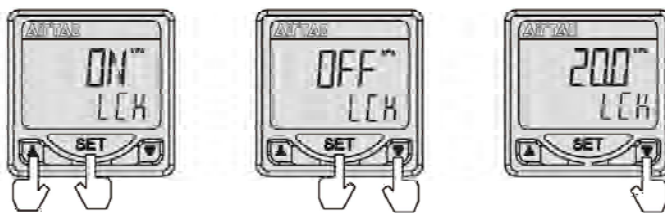
6.2) Analog Current Output (4-20mA)



- ◆ In the analog current output mode, the orange line should pay attention to the following wiring:
 1. Don't directly connect 0V or any bias voltage under no load to avoid internal circuit damage.
 2. The range of load impedance is 50Ω to 260Ω. (Don't float) to avoid distortion of the output current.

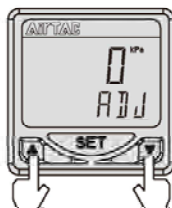
7. Key lock Function

- Lock: Press and the SET button simultaneously. Release it when the display turns to "LCK on".
- Unlock: Press and the SET button simultaneously. Release it when the display turns to "LCK OFF".
- Press any button will display "LCK" in lock on mode.



8. Zero-Clear Function

Press and simultaneously to reset the display value to zero.



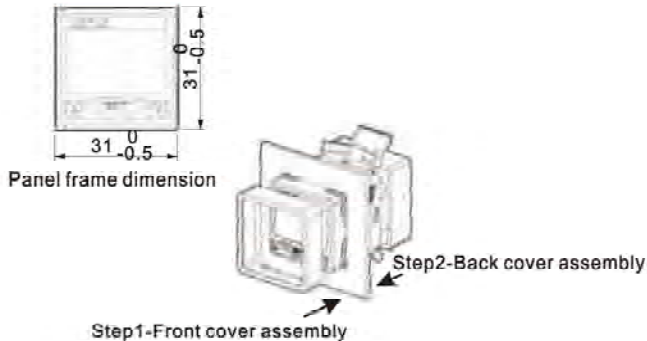
Press and simultaneously.

DPH Series digital display pressure sensor(Analog output)

Dimensions/Assembly Instruction

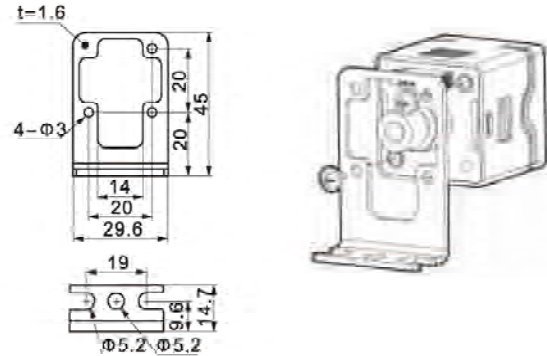
Panel mount adapter + Front protective cover

Order the Install accessories (Ordering code: F-DPSEB)



Bracket

Order the Install accessories (Ordering code: F-DPSLB)



Notes

1. Do not drop, knock or apply excessive impact while handling. Otherwise could cause damage and a malfunction.
2. The tensile strength of the cord is 60N. Applying a greater pulling force on it can cause a malfunction.
3. Do not exceed the screw-in torque of 7N.m when installing piping. Exceeding this value may cause malfunctioning of the sensor.
4. Do not use it with corrosive and/or flammable gases or liquids
5. Please use it within rated pressure range.
6. Turn off the power before connecting the wires.
7. Don't use in an environment with spattering liquid of oil or solvent.
8. Separate power lines from high voltage lines, avoiding wiring in the same conduit with these lines.

DPC Series minitype no display pressure switch



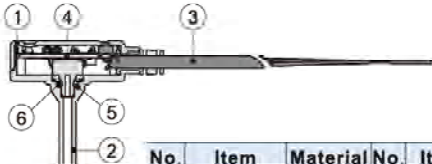
Symbol



Product feature

1. Larger measurement range. Easy to install.
2. Two lines type or three lines type (NPN/PNP output mode) to be chosen.
3. Single button to finish learning setting. Normally close and normally open can be exchanged.
4. Two kinds of setting mode (Simple mode and middle value mode) to be chosen.

Inner structure



No.	Item	Material	No.	Item	Material
1	Up cover	PC	4	PCBA	
2	Basic seat	PC+ABS	5	Gasket	POM
3	Wire Line	PVC	6	O-ring	NBR

Specification

Item\Model	DPC	DPCN	DPCP
Voltage	DC24V±10%	DC12~24V±10%	
Pressure range	DPC□10: -100kPa~1000kPa; DPC□01: -100kPa~100kPa		
Applied fluid	Air, Non-corrosive gas, Incombustibility gas		
Repetitive accuracy	±0.7%F.S		
Temperature accuracy	±2.5%F.S		
Hysteresis	<2%F.S		
Operating Temp. range	0~60℃		
Output style	5~40mA	30V/100mA Max.	
Voltage drop	5.5V Max.	0.7V Max.	
Method of adjusting pressure	Learning button		
Leakage current	1.0mA Max.		
Stored Temp. range	-20~75℃		
Tube O.D.	Φ4mm, Φ6mm, Φ1/4"		
Special function	Two sets model, NO/NC switch		
Production circuit	Power reverse polarity, surge suppression		
Protection	IP40		

[Note1] Two lines type be used under DC20V, leakage current might excess 1mA to lead PLC damage and error acting.

[Note2] If relay be used as joint points, capacitance(>50V/100uF) should be used to recede leakage current.

Ordering code

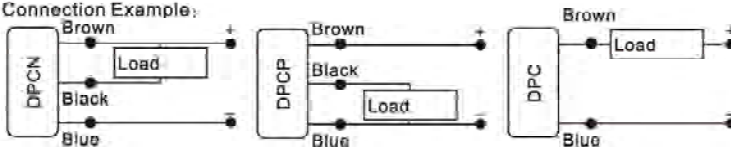
DPC □ - □ □ □

① ② ③ ④ ⑤

① Model	② Output type	③ Measurement range	④ Lead wire length	⑤ Tube O.D.
DPC: Minitype no display pressure switch	Blank: Two-lines N: NPN P: PNP	01: -100kPa~100kPa 10: -100kPa~1000kPa	020: Length 2m 030: Length 3m 050: Length 5m	D4: Φ4mm D6: Φ6mm 08: Φ1/4"

Installation and application

1. Connection Example:



2. Function operation:

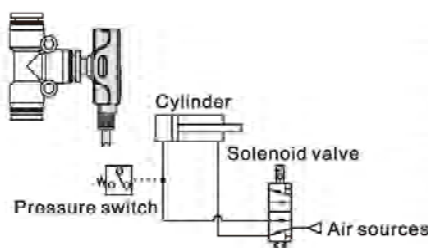
- 2.1) Quick setting: Press the SET button for less then two seconds to finish quick setting.
- 2.2) Middle value setting: Press the SET button for two to five seconds to finish setting valve A; Press the SET button again to finish setting valve B. * Middle valve=(A+B)/2 *
- 2.3) N.O./N.C. switch: Press the SET button for six to ten seconds to finish N.O./N.C. switching.
- 2.4) Lock/Unlock switch: Press the SET button for eleven to twenty seconds to finish Lock/Unlock switching.
- 2.5) Factory-fresh state: Press the SET button for over twenty seconds to return factory-fresh state.

3. Notes:

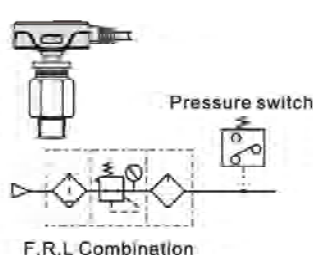
- 3.1) Avoid dropping, beating, impacting which might damage DPC and bring error acting.
- 3.2) Wire line drawing force is 30N, more then this force might damage it.
- 3.3) Causticity or flammability gas and liquid can't be used.
- 3.4) Can't binding with power wire line and higher voltage wire line when wiring.
- 3.5) If use DPC to drive relay, solenoid valve directly which easy create overrun voltage load, the overrun voltage absorb unit should be set.

Use example

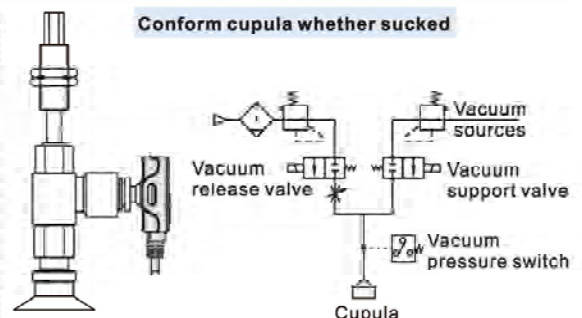
Check cylinder pressure



Conform air sources pressure



Conform cupula whether sucked



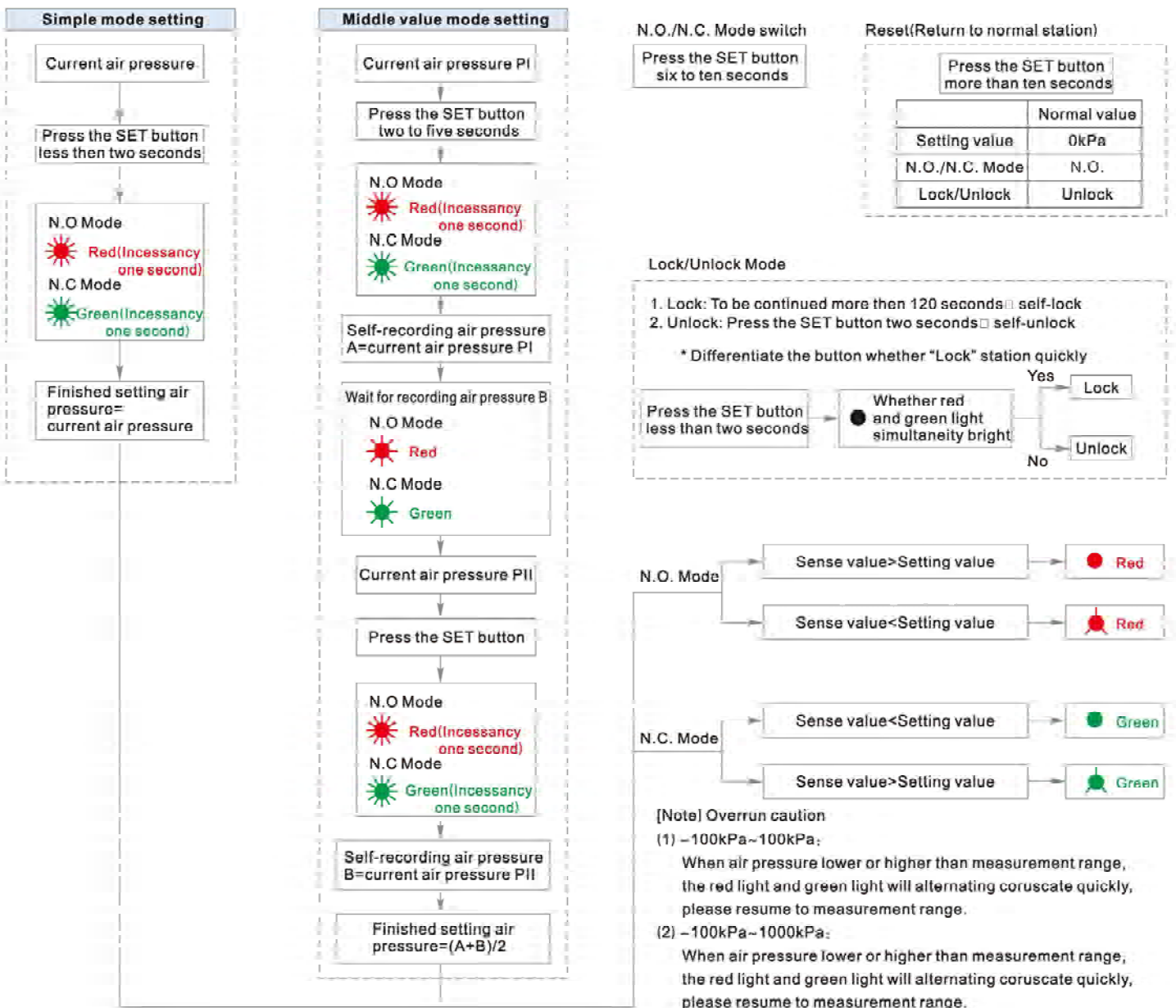
DPC Series minitype no display pressure switch

Cresset explanation

● Invariance light Coruscate quickly(Per 0.1 sec.) Coruscate(Per 1 sec.) Slowness coruscate(Per 3 sec.)

Simple mode			Middle value mode		
Light station	DPC station		Light station	DPC station	
	Red(continuance 1 sec.): N.O. mode Green(continuance 1 sec.): N.C.mode	Finished setting action		Red(continuance 1 sec.): N.O. mode Green(continuance 1 sec.): N.C.mode	Finished setting air pressure value
●	Red N.O. mode, Sense value>Setting value Green N.C. mode, Sense value<Setting value			Red N.O. mode Green N.C. mode	Wait to press
	Red N.O. mode, Sense value<Setting value Green N.C. mode, Sense value>Setting value		●	Red N.O. mode, Sense value>Setting value Green N.C. mode, Sense value<Setting value	
				Red N.O. mode, Sense value<Setting value Green N.C. mode, Sense value>Setting value	
To be continued mode			Overrun caution		
Light station	DPC station		Light station	DPC station	
	Red and green counterchange: DPC wait to set			Red and green alternating coruscate: Overrun caution	

Operation explanation



Preparation unit—Accessories

GS, GF, GU Series pressure gauge



Symbol



Product feature

1. It has sensitive reaction and can work under low pressure.
2. The displayed words in the dial are clear and there are several pressure units to be selected.
3. There are several installation ways and installing accessories to be selected.
4. Various dimensions of screw thread are available.

Ordering code

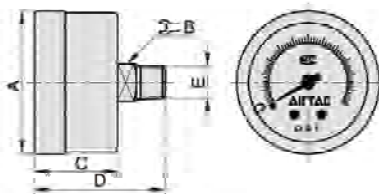
F-G S 40 10 M



① Accessories code	② Model	③ Mount Type Code	④ Dial diameter	⑤ Max.pressure scale	⑥ Scale and thread type
F: Accessories	G: Pressure gauge	S: Standard Mount F: Flange Mount U: Pannel Mount	30: OD 30mm 40: OD 40mm 50: OD 50mm 60: OD 60mm	04: 0.4MPa 10: 1.0MPa	M: MPa(PT) P: psi(NPT) B: bar(G) Z: kgf/cm ² & psi(PT)

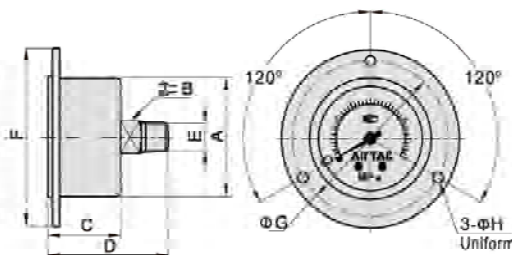
Dimensions

GS Series



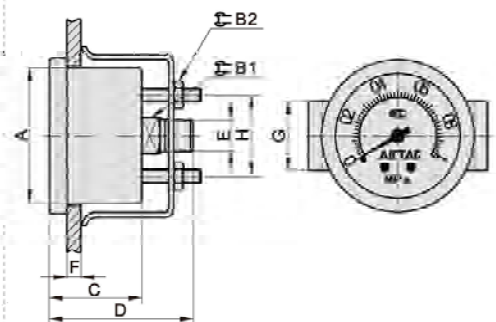
Model	A	B	C	D	E
GS-40	42	11	24.5	38.5	1/8"
GS-50	52	14	26.5	44.5	1/4"

GF Series



Model	A	B	C	D	E	F	G	H
GF-40	42	11	24.5	40.5	1/8"	60	52.5	3.4
GF-50	52	14	27.5	47.5	1/4"	71	62	4.4
GF-60	62	14	30	50	1/4"	82	71.5	4.4

GU Series



Model	A	B	B1	C	D	E	F(max)	G	H
GU-40	42	11	7	28	43.5	1/8"	5	21	24.5
GU-50	52	14	8	30.5	50	1/4"	7	24	35
GU-60	62	14	8	30.5	50	1/4"	7	25	35



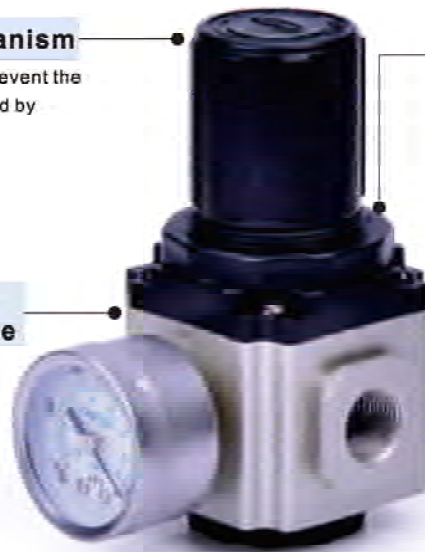
GVR Series Vacuum regulator

Compendium of GVR Series

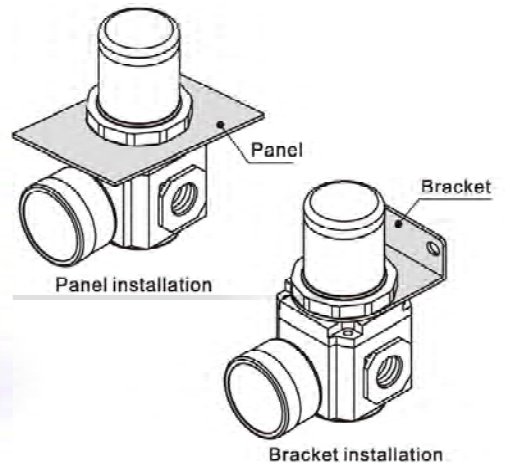
Pressed-in self-locking mechanism

The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.

Suitable to adjust the vacuum pressure

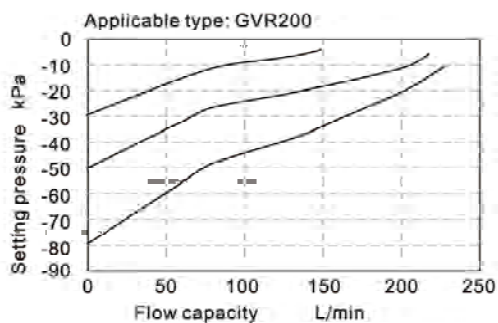


Panel installation and bracket installation are optional

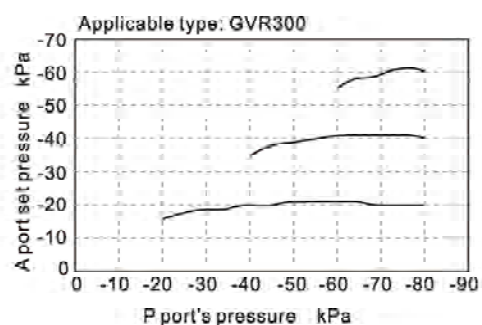
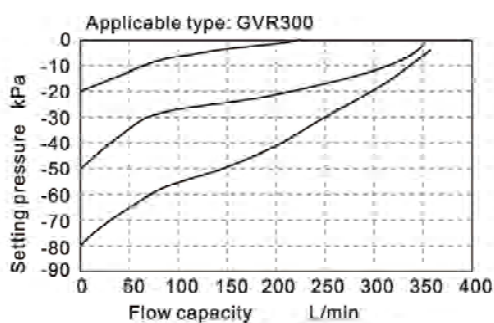
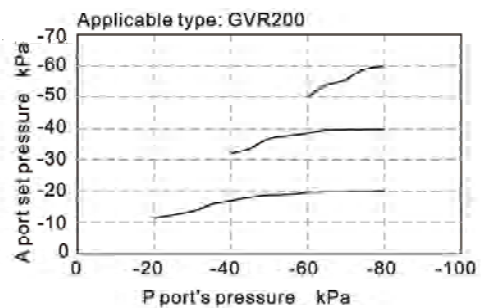


Flow chart and Pressure chart

Flow chart



Pressure chart



Installation and Application

1. Please be used with safety circuit to avoid accidents when power failure, vacuum pump and vacuum regulator fail.
2. When checking, please set the pressure to 0 (atmospheric pressure) and completely cut off the pressure of the vacuum pump before pulling down the tube of the regulator.
3. The vacuum regulator can not be used to regulate the pressure of the vacuum pump, if the flow capacity of the vacuum generator is less than the flow capacity of the vacuum regulator, it is not suitable as a vacuum source.
4. The regulating knob rotates clockwise, the atmospheric pressure changes to the vacuum pressure, turns counterclockwise, the vacuum pressure changes to atmospheric pressure.
5. After setting the pressure, press the button on the pressure adjusting button until you hear the click.
6. The vacuum regulator is used for negative pressure, and no positive pressure should be applied.



Vacuum regulator

GVR Series



Symbol



Specification

Model	GVR200-06	GVR200-08	GVR300-08	GVR300-10
Fluid	Air			
Port size [Note1]	1/8"	1/4"	1/4"	3/8"
Pressure range	-100~-1.3kPa			
Max. pressure	-1.0kPa			
Air inhalation consumption	0.6 L/min(ANR) and below			
Temperature range	-20~70°C			
Weight g	204	198	342	336

[Note1] NPT thread and G thread are available.

Product feature

1. The pressed-in self-locking mechanism can prevent the abnormal movement of the set pressure caused by external interfere.
2. The pressure regulation is stable, the drift is small and the pressure characteristic is good.
3. In addition to panel installation, the bracket is optional for installation.

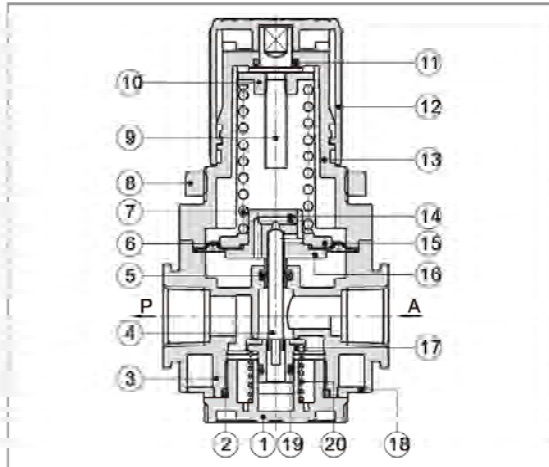
Ordering code

GVR300 10 □ □ □

① ② ③ ④ ⑤

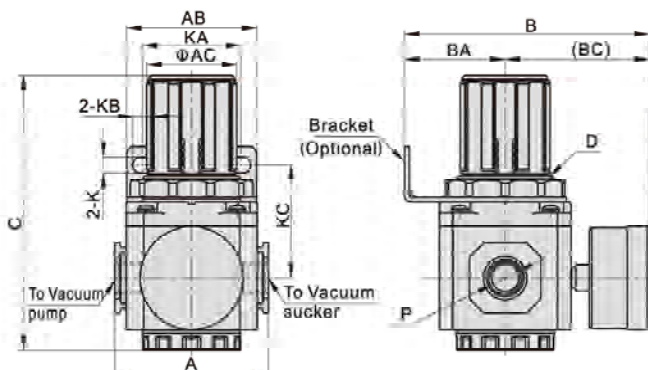
① Model	GVR200: 200 series vacuum regulator	GVR300: 300 series vacuum regulator
② Port size	06: PT1/8 08: PT1/4	08: PT1/4 10: PT3/8
③ Accessories	Blank: Bracket J: No bracket	
④ Pressure gauge	Blank: Pressure gauge N: No pressure gauge	
⑤ Thread type	Blank: PT(kPa & psi) G: G(kPa & psi) T: NPT(kPa & psi)	

Inner structure



No.	Item	Material	No.	Item	Material
1	Valve cap	POM	11	O-ring	NBR
2	O-ring	NBR	12	Pressure knob	POM
3	Body	Aluminum alloy	13	Adjusting seat	POM
4	Spool	Aluminum alloy	14	Gas resistance	Aluminum alloy
5	O-ring	NBR	15	Diaphragm up core	Aluminum alloy
6	Diaphragm	NBR	16	Diaphragm down core	Aluminum alloy
7	Spring	SWC	17	Pressure plug	Aluminum alloy
8	Fixed ring	PA66+Glass fibre	18	Bottom cover	POM
9	Adjusting spindle	Steel	19	O-ring	NBR
10	Regulator nut	Steel	20	Spring	Stainless steel

Dimensions



Model\Item	A	AB	AC	B	BA	BC	C	D	K	KA	KB	KC	P
GVR20006	52.5	55	31	83	30	53	89	M33X1.5	5.4	34	15.4	43	1/8"
GVR20008	52.5	55	31	83	30	53	89	M33X1.5	5.4	34	15.4	43	1/4"
GVR30008	62.5	53	38	99.5	41	58.5	112	M40X1.5	6.5	40	8	46	1/4"
GVR30010	62.5	53	38	99.5	41	58.5	112	M40X1.5	6.5	40	8	46	3/8"



The accessories is necessary for intact air system. AirTAC has many types of accessories for your choice:
1. Polyurethane re-coil Hosepart; 2. Fitting; 3. Silencer; 4. Speed Controller.

Polyurethane re-coil hosepart

P243



US98A、UE95A Series PU tube.....	243
UCS Series PU tube.....	244
PA12、PA6 Series nylon tube.....	245
UN54D Series flame resistant tube.....	246

Fitting, Silencer

P247



One—Touch fittings: tube_thread type.....	247
Metal one—Touch fittings.....	253
One—Touch fittings: tube_tube type.....	255
One—Touch fittings: threaded type.....	259
Silencers.....	261

Speed Controller, Finger valve

P263



PSA、PSL、PSS Series Speed controllers.....	263
PTL Series Push-lock Speed controllers.....	267
PHV Series finger valve.....	270

Stainless steel fitting, Stainless steel silencer

P271



Stainless steel one—Touch fillings: tube_thread type.....	271
Stainless steel one—Touch fittings: threaded type.....	276
Stainless steel Silencers.....	278

Stainless steel speed Controller

P280



PSA、PSL、PSS Series Stainless steel Speed controllers....	280
PTL Series Stainless steel Push-lock Speed controllers.....	284





Installation and Operation of tube and fitting

1. Installation and removal of tubing:

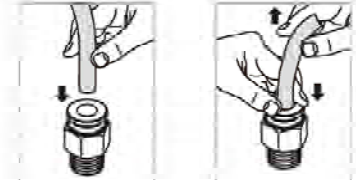
1.1. Installation of tubing

Grasp the tubing and slowly push it into the fitting until it comes to a stop. The tubing will be locked by the spring gasket.

1.2. Removal of tubing

Push the release button to open the spring gasket so that the tubing can be released.

Note: When remove the tubing, make sure the pressure in the tubing is Zero.



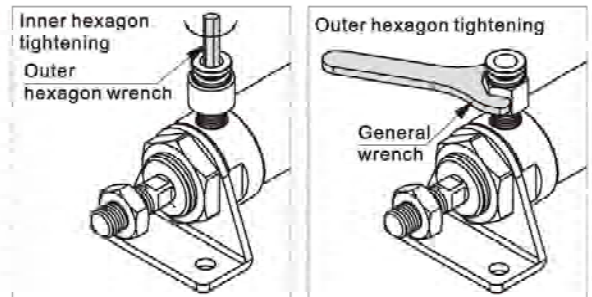
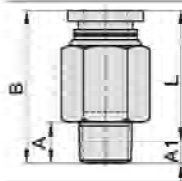
2. Connection thread tightening method

Use an inner or outer hexagon wrench to tighten the fitting as show in the picture below.

Note: Please refer to the tables below for the tightening torque and the depth of the thread screw-in.

Recommended tightening torque(N.m)					
Thread type	M5	1/8"	1/4"	3/8"	1/2"
Tightening torque	1-1.5	7-9	12-14	22-24	28-30

Depth of the thread screw-in (mm)			
Model\Item	Thread Length A	Depth of the thread A1	
M5	3	3	
1/8"	7.5	4	
1/4"	10	6	
3/8"	11	6.5	
1/2"	14	8	

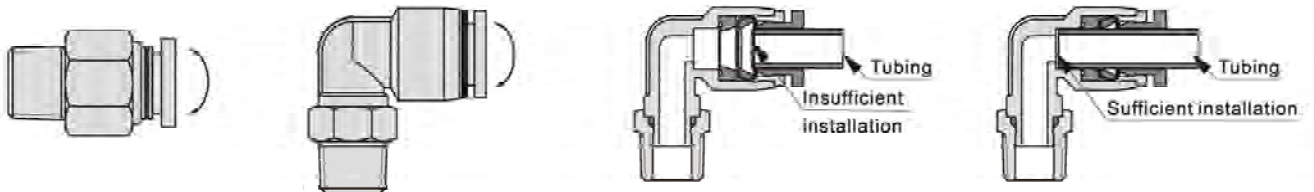


Note: If the fitting is connected with other parts, the external dimension L will be the value of the overall length of the fitting (B) minus the depth of the thread screw-in (A1).

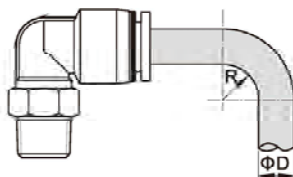
3. Caution

3.1. External force (bend, twist, and tension) may damage the fitting and cause air leakage.

3.2. Insufficient installation may cause air leakage or the tubing to release.



3.3. Pulling or twisting the tubing excessively may damage the fitting. For a mounting guide, see the table below.



Minimum bending radius of the tubing(mm)					
Tubing O.D.(ΦD)	4	6	8	10	12
Minimum bending radius(R)	20	30	50	80	150

4. Connection thread tightening method of the fitting with M5 type thread

First, tighten by hand, then use a wrench to tighten an additional 1/4 turn. Excessive tightening may damage the thread portion or deform the gasket and cause air leakage. Insufficient tightening may loosen the threads, or cause air leakage.

5. Tolerance of the Polyurethane tubing O.D.

Polyurethane tubing O.D.(mm)	4	6	8	10	12
Tolerance(mm)	±0.1	±0.1	±0.1	±0.15	±0.15





Other precautions

1. Before piping is connected, it should be washed to remove chips and other debris from inside the pipe.
2. Ensure the tubing being cut perpendicularly and no damage or scratch on the surface of the tubing outside diameter.
3. Use pipe length with sufficient margin to avoid over-bending on the top of the fitting.
4. Pull the tubing back gently to make sure it has a positive seal before using.
5. Push the release button flange evenly and sufficiently to release the button. If the release button is not held down sufficiently, the tubing cannot be with drawn and the outer surface of the tubing may be scratched and cause air leakage.
6. When removing tubing, do not rotate around or 360 degree. This may result in scratch and removal of the tubing difficult.
7. When screwing together pipes and fittings, be certain that chips from the pipe threads and sealing material do not get inside the pipe. Also, when the pipe tape is used, leave approx. 1.5~2 thread ridges exposed at the end of the threads.



Notes

Safety instructions

1. When remove the tubing, make sure the pressure in the tubing is Zero.
2. Do not use the ordinary fittings and tubing in locations where spatter is generated. Spattering may result in a fire hazard.
3. Ensure that the pressure and ambient temperature are within the specified range.
4. Do not use in an atmosphere having corrosive gases, chemicals, sea water, water, water steam, or where there is direct contact with any of these.
5. Do not use in a place subject to heavy vibration and/or shock.



Warning



Polyurethane re-coil hosepart

US98A, UE95A Series



Product feature

1. Plastic polyurethane material conforms to the ROHS environment protection requirement.
2. High elasticity: small bend radius enables PU tube to pass through the tight space.
3. Anti-knot: better anti-knot effect than other plastic tube.
4. Excellent flexibility: it can bear repeated expansion.
5. Anti-abrasion: long working life and suitable for the environment in which it is easy to be worn.
6. Low permeability of gas: relieve the problems of leakage and pollution.
7. Good anti-solubility: no solvent leaks, therefore it will not pollute the environment.
8. Low compression: maintain excellent physical character.
9. Wide resistance: it has certain resistance to chemicals, water, fuel, oil and bacterium.

Specification(Standard pressure type)

Type [Note1]	Tube OD (mm)	Tube ID (mm)	Wall Thickness (mm)	Package Length(m)	Working Pressure at 23°C(MPa)[Note2]	Burst pressure at 23°C(MPa)	Bend radius (mm)	Weight per 100M(kg)	Temperature (°C)
US98A040025□□	4.0	2.5	0.75	100/200	1.0	3.0	10	0.94	-20~70
US98A060040□□	6.0	4.0	1.00	100/200	1.0	3.0	15	1.93	
US98A080050□□	8.0	5.0	1.50	100	1.0	3.0	20	3.68	
US98A100065□□	10.0	6.5	1.75	100	1.0	3.0	25	5.44	
US98A120080□□	12.0	8.0	2.00	100	1.0	3.0	35	7.56	
US98A160110□□	16.0	11.0	2.50	100	1.0	3.0	80	10.03	
UE95A040025□□	4.0	2.5	0.75	20/200	1.0	2.5	8	0.94	-40~70
UE95A060040□□	6.0	4.0	1.00	20/200	1.0	2.5	12	1.91	
UE95A080050□□	8.0	5.0	1.50	20/100	1.0	2.5	17	3.58	
UE95A100065□□	10.0	6.5	1.75	20/100	1.0	2.5	20	5.32	
UE95A120080□□	12.0	8.0	2.00	20/100	1.0	2.5	30	7.27	

[Note1] The first square of "□" in the type column is for ordering code "unit" and the second is for "color". Blue, black, orange and clear are standard colors. Individual orders shall be placed for other colors.

[Note2] Working pressure:3 to 1 safety factor.

Specification(Lower pressure type)

Type [Note1]	Tube OD (mm)	Tube ID (mm)	Wall Thickness (mm)	Package Length(m)	Working Pressure at 23°C(MPa)[Note2]	Burst pressure at 23°C(MPa)	Bend radius (mm)	Weight per 100M(kg)	Temperature (°C)
US98A080055□□	8.0	5.5	1.25	100	0.8	2.0	20	3.25	-20~70
US98A080060□□	8.0	6.0	1.00	100	0.4	1.5	25	2.70	
US98A100080□□	10.0	8.0	1.00	100	0.4	1.5	40	3.47	
US98A120100□□	12.0	10.0	1.00	100	0.4	1.5	60	4.24	
US98A160120□□	16.0	12.0	2.00	100	0.4	2.0	80	8.32	
UE95A080055□□	8.0	5.5	1.25	20/100	0.8	1.5	17	3.18	-40~70

[Note1] The first square of "□" in the type column is for ordering code "unit" and the second is for "color". Blue, black, orange and clear are standard colors. Individual orders shall be placed for other colors.

[Note2] Working pressure:3 to 1 safety factor.

Ordering code

US98A 060 040 100M BU

① ② ③ ④ ⑤

① Model	② Tube OD	③ Tube ID	④ Material length	⑤ Standard color [Note1]
US98A: Ester Base, Shore A98±2	040: Φ4.0mm 060: Φ6.0mm	025: Φ2.5mm 040: Φ4.0mm	100M: 100 m/coil 200M: 200 m/coil	BU: Blue BK: Black GE: Orange CR: Clear WH: White CB: Clear Blue R: Red Y: Yellow GA: Gray
	080: Φ8.0mm 100: Φ10.0mm 120: Φ12.0mm 160: Φ16.0mm	050: Φ5.0mm 055: Φ5.5mm 060: Φ6.0mm	100M: 100 m/coil	
	040: Φ4.0mm 060: Φ6.0mm	025: Φ2.5mm 040: Φ4.0mm	20M: 20 m/coil 200M: 200 m/coil	
	080: Φ8.0mm 100: Φ10.0mm 120: Φ12.0mm	050: Φ5.0mm	20M: 20 m/coil 100M: 100 m/coil	
UE95A: Ether Base, Shore A95±2	040: Φ4.0mm 060: Φ6.0mm	025: Φ2.5mm 040: Φ4.0mm	100M: 100 m/coil	BU: Blue BK: Black GE: Orange CR: Clear WH: White CB: Clear Blue R: Red Y: Yellow GA: Gray
	080: Φ8.0mm 100: Φ10.0mm 120: Φ12.0mm	050: Φ5.0mm	20M: 20 m/coil 100M: 100 m/coil	
	040: Φ4.0mm 060: Φ6.0mm	025: Φ2.5mm 040: Φ4.0mm	20M: 20 m/coil 200M: 200 m/coil	
	080: Φ8.0mm 100: Φ10.0mm 120: Φ12.0mm	050: Φ5.0mm	20M: 20 m/coil 100M: 100 m/coil	

[Note1] Blue, black, orange and clear are standard colors. Individual orders shall be placed for other colors.

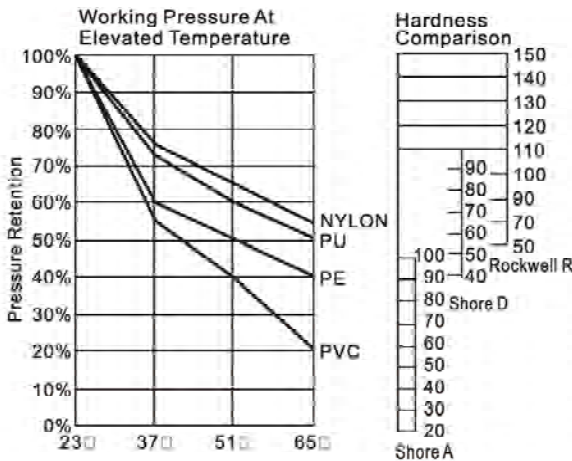
UCS Series



Product feature

1. Plastic polyurethane material conforms to the ROHS environment protection requirement.
2. High elasticity: small bend radius enables PU tube to pass through the tight space.
3. Anti-knot: better anti-knot effect than other plastic tube.
4. Excellent flexibility: it can bear repeated expansion.
5. Anti-abrasion: long working life and suitable for the environment in which it is easy to be worn.
6. Low permeability of gas: relieve the problems of leakage and pollution.
7. Good anti-solubility: no solvent leaks, therefore it will not pollute the environment.
8. Low compression: maintain excellent physical character.
9. Wide resistance: it has certain resistance to chemicals, water, fuel, oil and bacterium.

Technical chart



Specification (Standard pressure type)

Type [Note1]	Tube OD (mm)	Tube ID (mm)	Working Pressure at 23°C (MPa) [Note2]	Burst pressure at 23°C (MPa)	Bend radius (mm)	Length (m) [Note3]	Temp. (°C)
UCS060040□030□□	6.0	4.0	1.0	3.0	38	3	-20~70
UCS060040□060□□	6.0	4.0	1.0	3.0	38	6	
UCS060040□090□□	6.0	4.0	1.0	3.0	38	9	
UCS060040□120□□	6.0	4.0	1.0	3.0	38	12	
UCS060040□150□□	6.0	4.0	1.0	3.0	38	15	
UCS080050□060□□	8.0	5.0	1.0	3.0	38	6	
UCS080050□090□□	8.0	5.0	1.0	3.0	38	9	
UCS080050□120□□	8.0	5.0	1.0	3.0	38	12	
UCS080050□150□□	8.0	5.0	1.0	3.0	38	15	
UCS100065□060□□	10.0	6.5	1.0	3.0	50	6	
UCS100065□090□□	10.0	6.5	1.0	3.0	50	9	
UCS100065□120□□	10.0	6.5	1.0	3.0	50	12	
UCS100065□150□□	10.0	6.5	1.0	3.0	50	15	
UCS120080□060□□	12.0	8.0	1.0	3.0	60	6	
UCS120080□090□□	12.0	8.0	1.0	3.0	60	9	
UCS120080□120□□	12.0	8.0	1.0	3.0	60	12	
UCS120080□150□□	12.0	8.0	1.0	3.0	60	15	

Specification (Lower pressure type)

Type [Note1]	Tube OD (mm)	Tube ID (mm)	Working Pressure at 23°C (MPa) [Note2]	Burst pressure at 23°C (MPa)	Bend radius (mm)	Length (m) [Note3]	Temp. (°C)
UCS080055□060□□	8.0	5.5	0.8	2.0	38	6	-20~70
UCS080055□090□□	8.0	5.5	0.8	2.0	38	9	
UCS080055□120□□	8.0	5.5	0.8	2.0	38	12	
UCS080055□150□□	8.0	5.5	0.8	2.0	38	15	

[Note1] "□" in the type column is for "color", and "□□" is for "coupling type" and "coupling mode". Blue, black, orange and clear are standard colors. Individual orders shall be placed for other colors.

[Note2] Working pressure: 3 to 1 safety factor.

[Note3] Material length: length of operating status=(0.8-0.9)×Material length.

Ordering code

UCS 080 050 BU 090M A 1

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Tube OD	③ Tube ID	④ Standard color [Note1]	⑤ Material length	⑥ Coupling type	⑦ Coupling form
UCS: Ester Base	060: Φ6.0mm 080: Φ8.0mm 100: Φ10.0mm 120: Φ12.0mm	040: Φ4.0mm 050: Φ5.0mm 055: Φ5.5mm 065: Φ6.5mm 080: Φ8.0mm	BU: Blue BK: Black GE: Orange CR: Clear WH: White CB: Clear Blue R: Red Y: Yellow	030M: 3m 060M: 6m 090M: 9m 120M: 12m 150M: 15m	A: one end is 30cm and the other end is 10cm B: Both of the tubes of the couplings are 10cm C: Both of the tubes of the couplings are 0cm	1: Without coupling 2: With female-male coupling 3: With male-male coupling

[Note1] Blue, black, orange and clear are standard colors. Individual orders shall be placed for other colors.

Pipe end coupling

Male quick coupling PP40 Φ12 × Φ8	Female quick coupling SP40 Φ12 × Φ8	Male quick coupling PP30 Φ10 × Φ6.5	Female quick coupling SP30 Φ10 × Φ6.5	Male quick coupling PP20 Φ8 × Φ5	Female quick coupling SP20 Φ8 × Φ5	Male quick coupling PP10 Φ6 × Φ4	Female quick coupling SP10 Φ6 × Φ4
PP40/SP40-PU tube (12 × 8) quick coupling use		PP30/SP30-PU tube (10 × 6.5) quick coupling use		PP20/SP20-PU tube (8 × 5) quick coupling use		PP10/SP10-PU tube (6 × 4) quick coupling use	



Nylon tube

PA12、PA6 Series



Product feature

1. PA12、PA6 Nylon tube has excellence capability to be used high temperature conditions widely.
2. Many kinds of colors to be choosed.
3. Steady size. Little osmotic rate.
4. Be used widely for it's aging resistant, good anti-oil, and high temperature resistant capability.

Specification

Type [Note1]	Tube OD (mm)	Tube ID (mm)	Wall Thikness (mm)	Package Length(m)	Working Pressure at 23℃(MPa) [Note2]	Burst pressure at 23℃(MPa)	Bend radius (mm)	Weight per 100M(kg)	Temperature (℃)
PA6040025□□	4.0	2.5	0.75	200	3.5	11.0	30	0.90	-10~70
PA6060040□□	6.0	4.0	1.00	100	3.0	10.0	45	1.80	
PA6080060□□	8.0	6.0	1.00	100	2.0	7.0	65	2.50	
PA6100075□□	10.0	7.5	1.25	100	2.0	7.0	75	3.90	
PA6120090□□	12.0	9.0	1.50	100	2.0	7.0	100	5.70	
PA12040025□□	4.0	2.5	0.75	200	2.5	7.5	25	0.80	-40~70
PA12060040□□	6.0	4.0	1.00	100	2.0	7.0	35	1.60	
PA12080060□□	8.0	6.0	1.00	100	1.5	5.0	55	2.30	
PA12100075□□	10.0	7.5	1.25	100	1.5	5.0	75	3.50	
PA12120090□□	12.0	9.0	1.50	100	1.5	5.0	75	5.10	

[Note1] The first square of "□□" in the type column is for ordering code "unit" and the second is for "color".

[Note2] Working pressure:3 to 1 safety factor.

Relationship of operation pressure and temperature

Temperature	PA6 the percentage of work pressure reached at different temperatures					PA12 the percentage of work pressure reached at different temperatures				
	20℃	40℃	60℃	80℃	100℃	20℃	30℃	50℃	60℃	80℃
Percentage	100%	74%	57%	47%	40%	100%	83%	75%	64%	47%

Ordering code

Pa12 060 040 100M BU

① ② ③ ④ ⑤

① Model	② Tube OD	③ Tube ID	④ Material length	⑤ Standard color
PA6: Nylon 6 PA12: Nylon 12	040: Φ4.0mm 060: Φ6.0mm 080: Φ8.0mm 100: Φ10.0mm 120: Φ12.0mm	025: Φ2.5mm 040: Φ4.0mm 060: Φ6.0mm 075: Φ7.5mm 090: Φ9.0mm	200M: 200 m/coil(4X2.5) 100M: 100 m/coil(Others)	BU : Blue BK : Black GE : Orange N : Clear WH : White GN : Green R : Red Y : Yellow

Flame resistant tube

UN54D Series

Product feature

1. Monolayer tube with flame resistant.
2. Excel in elasticity: can pass compactness space with lesser bend radius.
3. Excellent water-resistant and flexibility.
4. Super doughty wearable and higher intensity of stretch.



Specification

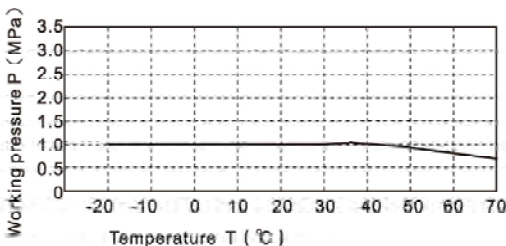
Type [Note1]	Tube OD (mm)	Tube ID (mm)	Wall Thickness (mm)	Package Length(m)	Working Pressure at 23℃ (MPa)	Burst pressure at 23℃	Bend radius (mm)	Weight per 100M(kg)	Temperature (℃)
UN54D□060040□□	6.0	4.0	1.00	100	1.0	4.0	12	1.93	-20~70
UN54D□080050□□	8.0	5.0	1.50	100	1.0	4.0	18	3.66	
UN54D□100065□□	10.0	6.5	1.75	100	1.0	4.0	20	5.44	
UN54D□120080□□	12.0	8.0	2.00	100	1.0	4.0	20	7.56	

[Note1] "□□" in the type column is for "color"

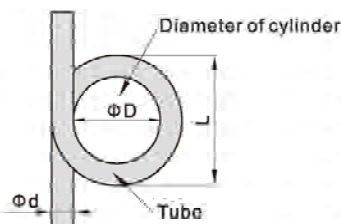
Ordering code

UN54D 120 080 100M Y				
① Model	② Tube OD	③ Tube ID	④ Material length	⑤ Standard color
UN54D: Flame resistant tube54D±3	060: Φ6.0mm 080: Φ8.0mm 100: Φ10.0mm 120: Φ12.0mm	040: Φ4.0mm 050: Φ5.0mm 065: Φ6.5mm 080: Φ8.0mm	100M: 100 m/coil	BU: Blue BK: Black GN: Green WH: White R: Red Y: Yellow

Relationship of operation pressure and temperature



Mini bend radius



The least bend radius (JIS method)

JIS method (Base on JIS B8381 standard)

When the tube circle the cylinder tightly and the distortion rate is 25%, the cylinder radius is the least bend radius.

Testing condition: 20℃, 65%RH

$$N = \{1 - (L - D) / 2d\} \times 100$$

N=Distortion rate (%), less than 25% of standard value.

d=Tube diameter (mm)

L=Measure value (mm)

D=Diameter of cylinder (mm)

Accessories—One-Touch Fittings

PC, POC series

Ordering code

PC 6 01 □ □

① ② ③ ④ ⑤

① Model	② Port size	③ Thread connection		④ Standard color		⑤ Thread type
PC: Male connector 	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm 10: Φ 10mm 12: Φ 12mm	Thread connection M5: M5X0.8	Adaptable port size Φ 4, Φ 6	Standard color Blank: Gray	Specification Release button: Gray	Blank: PT
POC: Male connector 		01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Φ 4, Φ 6 Φ 8, Φ 10 Φ 12	D: Black	Release button: Black	

Specification

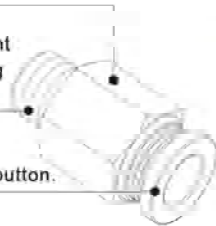
Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Table for interface port and tube O.D.

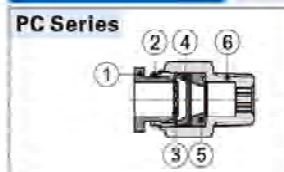
Product series	Thread type	Port size				
		Φ 4	Φ 6	Φ 8	Φ 10	Φ 12
PC	M5	●	●	●	●	●
	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
	3/8"	●	●	●	●	●
POC	1/2"	●	●	●	●	●
	M5	●	●	●	●	●
	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
	3/8"	●	●	●	●	●

Product feature

- The compact appearance space saving.
- The threaded portion is covered with sealant and the M5 thread is attached with a sealing gasket to prevent air leakage over the connection thread portion.
- Grey and black are optional for the release button.



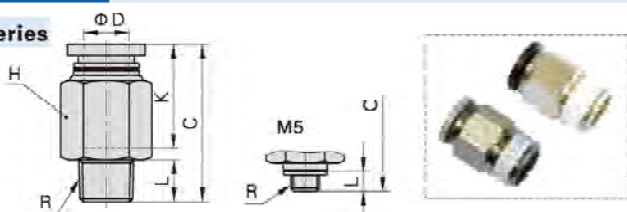
Inner structure



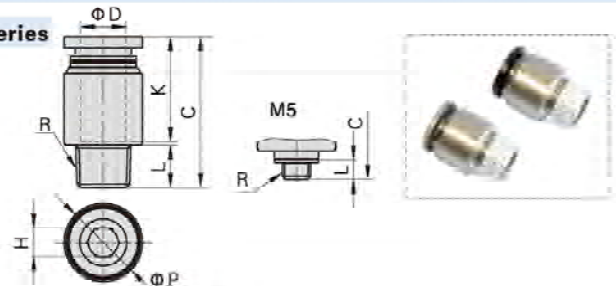
No.	Item	Material
1	Release button	POM
2	Guide	Aluminum alloy
3	Spring gasket	Stainless steel
4	Chuck	POM
5	O-ring	NBR
6	Body	Brass

Dimensions

PC Series



POC Series



Model/Item	Φ D	R	L	C	K	H(Across flat)	Weight(g)
PC4M5	4	M5×0.8	3.5	19.5	14	9	6.5
PC401		1/8"	7.5	19.5	14	10	7
PC402		1/4"	10	19.5	14	14	13.5
PC6M5	6	M5×0.8	3.5	22.5	16.5	12	8.5
PC601		1/8"	7.5	22.0	18.5	12	7.5
PC602		1/4"	10	24.5	18.5	14	15.5
PC603		3/8"	11	22.5	18.5	17	24
PC804	8	1/2"	14	26.0	18.5	21	46
PC801		1/8"	7.5	28	18.5	14	13.5
PC802		1/4"	10	27	18.5	14	13
PC803		3/8"	11	23.5	18.5	17	21
PC804		1/2"	14	27	18.5	21	43.5
PC1001	10	1/8"	7.5	30	21	17	20.5
PC1002		1/4"	10	32.5	21	17	24
PC1003		3/8"	11	28	21	17	20.5
PC1004	12	1/2"	14	26.5	21	21	36
PC1201		1/8"	7.5	32.5	23	21	38.5
PC1202		1/4"	10	36	23	21	40.5
PC1203		3/8"	11	30.5	23	21	28.5
PC1204	1/2"	14	32.5	23	21	41.5	

Model/Item	Φ D	R	Φ P	L	C	K	H(Across flat)	Weight(g)
POC4M5	4	M5×0.8	9	3.5	18.5	14	2.5	3.6
POC401		1/8"	10	7.5	18	14	3	5.5
POC402		1/4"	14	10	19.5	14	3	12.6
POC6M5	6	M5×0.8	12	3.5	21.5	16.5	2	5.9
POC601		1/8"	12	7.5	22.0	18.5	4	6.3
POC602		1/4"	14	10	22.0	18.5	4	11.8
POC603		3/8"	14	7.5	26.5	18	5	9.9
POC802	8	1/4"	14	10	25	18	6	10.1
POC803		3/8"	17	11	23.5	18	6	19.3
POC1001		1/8"	17	7.5	30	21	5	16.5
POC1002	10	1/4"	17	10	29	21	6	15.4
POC1003		3/8"	17	11	28	21	6	18.7
POC1004	12	1/2"	21	14	26.5	21	8	35.3
POC1202		1/4"	21	10	34.5	23	6	32.3
POC1203		3/8"	21	11	30	23	8	25.1
POC1204	1/2"	21	14	32	23	8	37.5	

Accessories—One-Touch Fittings

PC, PL mini series

Ordering code

PC 6 01 □ □ - M

① ② ③ ④ ⑤ ⑥

① Model	② Port size	③ Thread connection	④ Standard color	⑤ Thread type	⑥ Style type
PC: Male connector 	3.2: Φ 3.2mm 4: Φ 4mm 6: Φ 6mm	Thread connection: Adaptable port size	Standard color: Specification	Blank: PT	M: Mini type
PL: Male elbow 		M3: M3X0.5 Φ 3.2, Φ 4 M5: M5X0.8 Φ 3.2, Φ 4, Φ 6 01: 1/8" Φ 4, Φ 6	Blank: Gray Release button: Gray D: Black Release button: Black		

Specification

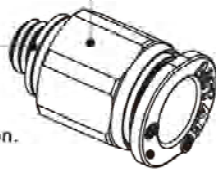
Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Table for interface port and tube O.D.

Product series	Thread type	Port size		
		Φ 3.2	Φ 4	Φ 6
PC/PL	M3	●	●	
	M5	●	●	●
	1/8"		●	●

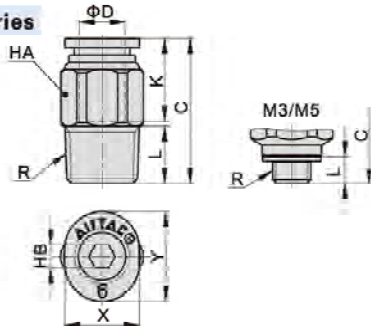
Product feature

- The compact appearance space saving.
- The threaded portion is covered with sealant and the M3/M5 thread is attached with a sealing gasket to prevent air leakage over the connection thread portion.
- Grey and black are optional for the release button.

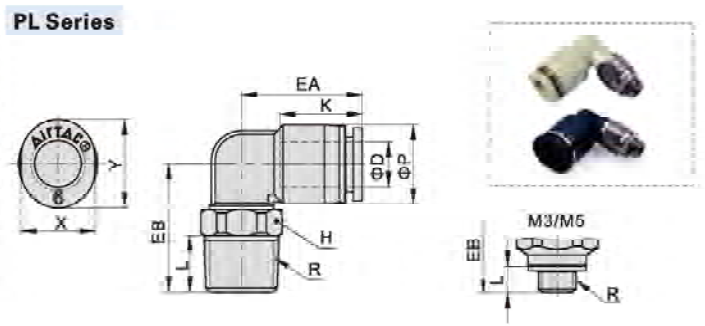


Dimensions

PC Series



PL Series



Model/Item	ΦD	R	L	C	K	X	Y	HA	HB	Weight(g)
PC3.2M3-M	3.2	M3×0.5	3	16	11.5	6.8	8.7	7	1.5	1.7
PC3.2M5-M		M5×0.8	3.5	16	11.5	6.8	8.7	7	2	2.0
PC4M3-M	4	M3×0.5	3	17.5	12.5	7.8	9.5	8	1.5	2.4
PC4M5-M		M5×0.8	3.5	17	12.5	7.8	9.5	8	2	2.7
PC401-M	1/8"	7.5	17.5	13.5	7.8	9.5	10	3	5.5	
PC6M5-M	6	M5X0.8	3.5	18.5	13.5	9.8	11.7	10	2	3.6
PC601-M		1/8"	7.5	19.0	15.5	9.8	11.7	10	4	6.0

Model/Item	ΦD	R	ΦP	L	K	EA	EB	H	X	Y	Weight(g)
PL3.2M3-M	3.2	M3×0.5	7.5	3	12	14.5	14	7	6.8	8.7	2.4
PL3.2M5-M		M5×0.8		3.5	12		14.5	7	6.8	8.7	2.7
PL4M3-M	4	M3×0.5	8.5	3	12.5	15	14	7	7.8	9.5	3.0
PL4M5-M		M5×0.8		3.5	12.5		14.5	7	7.8	9.5	3.3
PL401-M	1/8"	7.5	12.5	16	10	7.8	9.5	6.2			
PL6M5-M	6	M5X0.8	10.5	3.5	13.5	16.0	15.5	7	9.8	11.7	4.0
PL601-M		1/8"		7.5	13.5		16.5	10	9.8	11.7	6.8

Accessories—One-Touch Fittings

One-touch fittings—threaded type

Ordering code

Same diameter type fittings

PL 6 01

① ② ③ ④ ⑤

① Model	② Port size	③ Thread connection	④ Standard color	⑤ Thread type
PHW: Double universal male elbow 	PL: Male elbow 	Thread connection: Adaptable port size	Standard color: Specification	Adaptable model
PHF: Universal female elbow 	PLL: Extended male elbow 	M5: M5X0.8	Blank: Gray	Release button: Gray PCF PMF
PEB: Male branch tee 	PLF: Female elbow 	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm 10: Φ 10mm 12: Φ 12mm	Blank: Gray	Release button: Gray Body: Gray Others
PED: Male run tee 	PCF: Female connector 			Blank: PT Release button: Black PCF PMF
PYB: Branch "Y" 	PMF: Bulkhead connector 	01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	D: Black	Release button: Black Body: Black Others
PZB: Threaded cross 	PH: Universal male elbow 			

Different diameter type fittings

PKD 6 - 4 01

① ② ③ ④ ⑤ ⑥

① Model	② Port size	③ Port size	④ Thread connection	⑤ Standard color	⑥ Thread type
PKD: Male reducer triple branch 	6: Φ 6mm 8: Φ 8mm 10: Φ 10mm	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm	01: 1/8" 02: 1/4" 03: 3/8"	Standard color: Specification Blank: Gray D: Black	Release button: Gray/Body: Gray Release button: Black/Body: Black Blank: PT

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Product feature

- Variable models can be widely used in every kind of pneumatic systems.
- High circulation performance: bear the same flow with the volume of the tubing inside diameter.
- Connect tubing easily and conveniently. The tubing connection portion is safe and durable.
- The threaded portion is covered with sealant and the M5 thread is attached with a sealing gasket to prevent air leakage over the connection thread portion.
- The nickel plated body is anti-corrosion and anti-pollution, which allows a broader application.

Inner structure

No.	Item	Material
1	Release button	POM
2	Guide	Aluminum alloy
3	Spring gasket	Stainless steel
4	Chuck	POM
5	O-ring	NBR
6	Body	PBT
7	O-ring	NBR
8	Stud	Brass

Table for interface port and tube O.D.

Product series	Thread type	Port size				
		Φ 4	Φ 6	Φ 8	Φ 10	Φ 12
PL	M5	●	●			
	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
	3/8"		●	●	●	●
PLL	M5	●	●			
	1/8"	●	●	●	●	
	1/4"	●	●	●	●	●
	3/8"		●	●	●	●
PEB	M5	●	●			
	1/8"	●	●	●	●	
	1/4"	●	●	●	●	●
	3/8"		●	●	●	●
PED	M5	●	●			
	1/8"	●	●	●	●	
	1/4"	●	●	●	●	●
	3/8"		●	●	●	●
PYB	M5	●	●			
	1/8"	●	●	●	●	
	1/4"	●	●	●	●	●
	3/8"		●	●	●	●
PH	M5	●	●			
	1/8"	●	●	●		
	1/4"		●	●	●	
	3/8"		●	●	●	●
PHF	M5	●	●			
	1/8"	●	●	●	●	
	1/4"		●	●	●	●
	3/8"		●	●	●	●
PHW	M5	●	●			
	1/8"	●	●	●	●	
	1/4"		●	●	●	●
	3/8"		●	●	●	●
PZB	M5	●	●			
	1/8"	●	●	●	●	
	1/4"		●	●	●	●
	3/8"		●	●	●	●

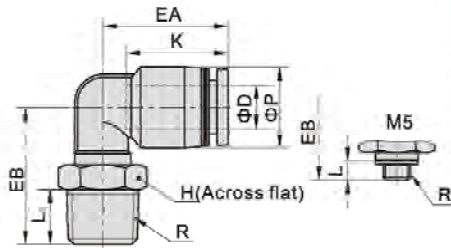
Product series	Thread type	Port size			
		Φ 6- Φ 4	Φ 8- Φ 6	Φ 10- Φ 8	
PKD	1/8"	●			
	1/4"		●		
	3/8"			●	

Accessories—One-Touch Fittings

One-touch fittings—threaded type

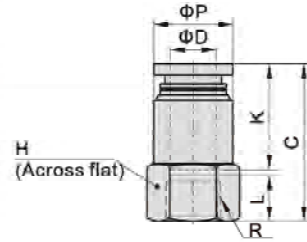
Dimensions

PL Series



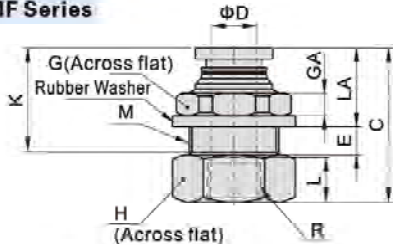
Model/Item	ΦD	R	ΦP	L	K	EA	EB	H	Weight(g)
PL4M5		M5×0.8	9	3.5	14	17	15	8	3
PL401	4	1/8"	9	7.5	14	17	18.5	10	4.5
PL402		1/4"	9	10	14	17	22.0	14	12
PL6M5		M5×0.8	12.5	3.5	17	20	17.0	8	4.5
PL601	6	1/8"	12.5	7.5	17	20	20.5	10	6
PL602		1/4"	12.5	10	17	20	24.0	14	13.5
PL603		3/8"	12.5	11	17	20	25.5	17	20.5
PL604		1/2"	12.5	14	17	20	30.0	21	36
PL801	8	1/8"	15	7.5	18.5	23	20.5	10	7.5
PL802		1/4"	15	10	18.5	23	25.0	14	13
PL803		3/8"	15	11	18.5	23	26.5	17	21
PL804		1/2"	15	14	18.5	23	31.0	21	36
PL1001	10	1/8"	18	7.5	21	25.5	25.0	17	16.5
PL1002		1/4"	18	10	21	25.5	27.0	17	19
PL1003		3/8"	18	11	21	25.5	28.0	17	21
PL1004		1/2"	18	14	21	25.5	32.5	21	37
PL1201	12	1/8"	21	7.5	23	28.5	28.5	17	19
PL1202		1/4"	21	10	23	28.5	28.5	17	21.5
PL1203		3/8"	21	11	23	29.5	33	17	25.5
PL1204		1/2"	21	14	23	29.5	34	21	37

PCF Series



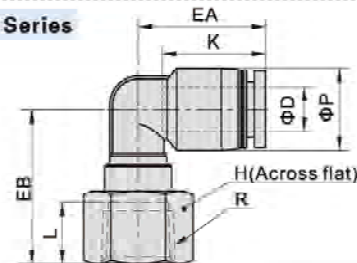
Model/Item	ΦD	R	ΦP	L	C	K	H	Weight(g)
PCF4M5		M5×0.8	9	5	21	14	10	2.7
PCF401	4	1/8"	9.5	8	23	14	14	4.5
PCF402		1/4"	9.5	11	26	14	17	6.5
PCF6M5		M5×0.8	12	5	21.5	16.5	12	3.9
PCF601	6	1/8"	12.5	8	25.5	16.5	14	5.6
PCF602		1/4"	12.5	11	28.5	16.5	17	7.5
PCF603		3/8"	13	12	29.5	16.5	21	10.7
PCF604		1/2"	13	13.5	31.0	16.5	25	13.8
PCF801	8	1/8"	14	8	27.5	18.5	14	5.8
PCF802		1/4"	14.5	11	30.5	18.5	17	8.4
PCF803		3/8"	14.5	12	31.5	18.5	21	11.2
PCF804		1/2"	14.5	13.5	33	18.5	25	14.4
PCF1001	10	1/8"	17	8	29	21	17	9.5
PCF1002		1/4"	17	11	33	21	17	9.9
PCF1003		3/8"	18	12	34	21	21	14
PCF1004		1/2"	18	13.5	35.5	21	25	17.1
PCF1202	12	1/4"	21	11	33.5	23	21	17.5
PCF1203		3/8"	21	12	35.5	23	21	16.6
PCF1204		1/2"	21	13.5	37	23	25	19.7

PMF Series



Model/Item	ΦD	R	M	L	C	K	LA	E	GA	G	H	Weight(g)
PMF401	4	1/8"	M12X1	8	25	14	12	4	4	14	14	6.4
PMF402		1/4"	M12X1	11	29	14	12	4	4	14	17	9
PMF601	6	1/8"	M14X1	8	25.5	16.5	12.5	5	4	17	17	8.1
PMF602		1/4"	M14X1	11	30.5	16.5	12.5	5	4	17	17	10.9
PMF603		3/8"	M14X1	12	31.5	16.5	12.5	5	4	17	21	13.2
PMF801	8	1/8"	M16X1	8	27.5	18.5	13.5	5.5	4	19	19	12.8
PMF802		1/4"	M16X1	11	32	18.5	13.5	5.5	4	19	19	15.7
PMF803		3/8"	M16X1	12	33	18.5	13.5	5.5	4	19	21	15
PMF804		1/2"	M16X1	13.5	34.5	18.5	13.5	5.5	4	19	25	18.1
PMF1001	10	1/8"	M20X1	8	30	21	14.5	7.5	5	24	22	19.6
PMF1002		1/4"	M20X1	11	35	21	14.5	7.5	5	24	22	22.8
PMF1003		3/8"	M20X1	12	36	21	14.5	7.5	5	24	22	21.1
PMF1004		1/2"	M20X1	13.5	37.5	21	14.5	7.5	5	24	25	23.2
PMF1202	12	1/4"	M22X1	11	34.5	23	15.5	8	6	27	24	26.2
PMF1203		3/8"	M22X1	12	37.5	23	15.5	8	6	27	24	27
PMF1204		1/2"	M22X1	13.5	39	23	15.5	8	6	27	25	26.2

PLF Series

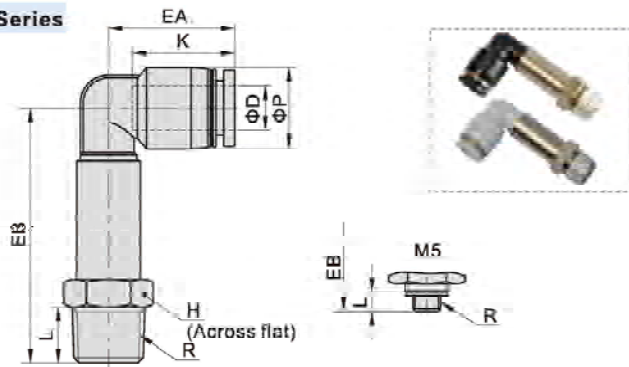


Model/Item	ΦD	R	ΦP	L	K	EA	EB	H	Weight(g)
PLF4M5		M5×0.8	9	5	14	17	16	10	2.9
PLF401	4	1/8"	9	8	14	17	21	14	4.6
PLF402		1/4"	9	11	14	17	24	17	6.8
PLF6M5		M5×0.8	12.5	5	17	20	18.5	10	7
PLF601	6	1/8"	12.5	8	17	20	23	14	5.8
PLF602		1/4"	12.5	11	17	20	26	17	8
PLF603		3/8"	12.5	12	17	20	27	21	10.7
PLF801	8	1/8"	15	8	18.5	23	20	14	6.6
PLF802		1/4"	15	11	18.5	23	27.5	17	9.2
PLF803		3/8"	15	12	18.5	23	28.5	21	11.9
PLF804		1/2"	15	13.5	18.5	23	30	25	15.2
PLF1001	10	1/8"	18	8	21	25.5	24	17	11.3
PLF1002		1/4"	18	11	21	25.5	26.5	17	11.2
PLF1003		3/8"	18	12	21	25.5	30	21	14.5
PLF1004		1/2"	18	13.5	21	25.5	31.5	25	17.4
PLF1202	12	1/4"	21	11	23	28.5	28.5	17	13.7
PLF1203		3/8"	21	12	23	29.5	32	21	17.4
PLF1204		1/2"	21	13.5	23	29.5	33	25	20.4

Accessories—One-Touch Fittings

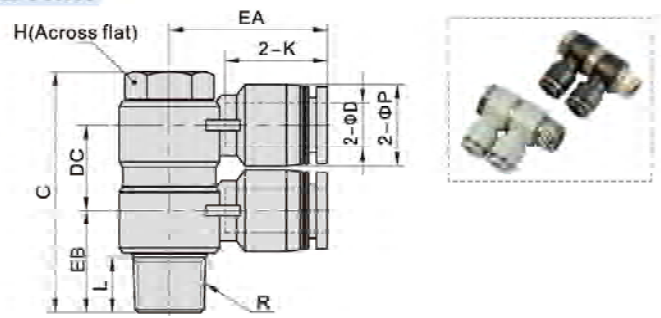
One-touch fittings—threaded type

PLL Series



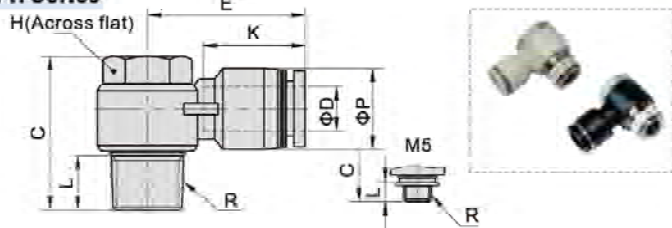
Model/Item	ΦD	R	ΦP	L	K	EA	EB	H	Weight(g)
PLL4M5	4	M5×0.8	9	3.5	14	17	32.5	8	8.9
PLL401		1/8"	9	7.5	14	17	35.5	10	12.3
PLL402		1/4"	9	10	14	17	38.5	14	18.9
PLL6M5	6	M5×0.8	12.5	3.5	17	20	34.5	8	9.9
PLL601		1/8"	12.5	7.5	17	20	37.5	10	13
PLL602		1/4"	12.5	10	17	20	40.5	14	18
PLL603	6	3/8"	12.5	11	17	20	43	17	23.4
PLL801		1/8"	15	7.5	18.5	23	43.5	12	16.6
PLL802		1/4"	15	10	18.5	23	45.5	14	22.7
PLL803	8	3/8"	15	11	18.5	23	48	17	27.7
PLL1001		1/8"	18	7.5	21	25.5	50.5	15	37.5
PLL1002		1/4"	18	10	21	25.5	53.5	15	40.6
PLL1003	10	3/8"	18	11	21	25.5	54.5	17	40.7
PLL1004		1/2"	18	14	21	25.5	59	21	47.4
PLL1202		1/4"	21	10	23	28.5	55.5	15	43
PLL1203	12	3/8"	21	11	23	29.5	60	17	55.4
PLL1204		1/2"	21	14	23	29.5	63	21	56.7

PHW Series



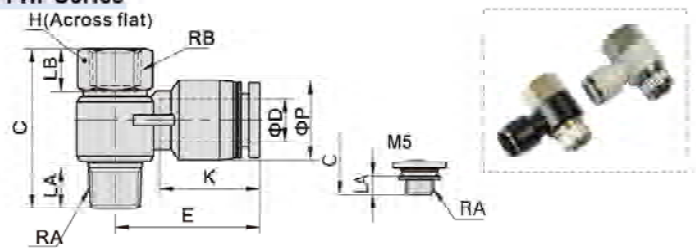
Model/Item	ΦD	R	ΦP	L	C	K	EA	EB	DC	H	Weight(g)
PHW401	4	1/8"	9	7.5	38	14	20.5	14.5	13	11	19
PHW601	6	1/8"	12.5	7.5	38	16.5	23.0	15	13	11	21
PHW602		1/4"	12.5	10	43.5	18.5	25.0	17.5	15.5	14	40.2
PHW603		3/8"	12.5	11	50	16.5	27.0	20	16.5	19	69.2
PHW801	8	1/8"	15	7.5	40.5	18.5	26.5	16.5	15.5	11	23.6
PHW802		1/4"	15	10	43.5	18.5	28.5	18.5	15.5	14	40.8
PHW803		3/8"	15	11	50	18.5	29.5	20	16.5	19	70.4
PHW804	8	1/2"	15	14	61	18.5	32	24.5	22	24	134.8
PHW1002		1/4"	18	10	46.5	21	31	20	18.5	14	47
PHW1003		3/8"	18	11	55	21	33	21	22	19	87.5
PHW1004	10	1/2"	18	14	61	21	35.5	25	22	24	137.7
PHW1203		3/8"	21	11	55	23	36	23	22	19	86.4
PHW1204	12	1/2"	21	14	61	23	38	26.5	22	24	147.5

PH Series



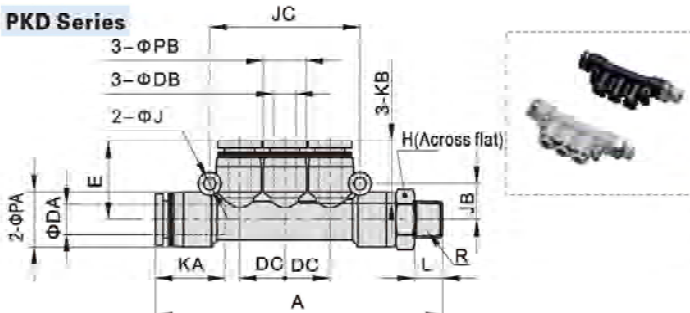
Model/Item	ΦD	R	ΦP	L	C	K	E	H	Weight(g)
PH4M5	4	M5×0.8	9	3.5	17	14	19	8	5.8
PH401	4	1/8"	9	7.5	25	14	20.5	11	12.8
PH6M5		M5×0.8	12.5	3.5	17	16.5	23.5	8	6.8
PH601		1/8"	12.5	7.5	25	16.5	23	11	14
PH602	6	1/4"	12.5	10	28	16.5	25	14	25.4
PH603		3/8"	12.5	11	33	16.5	27	19	50.2
PH801		1/8"	15	7.5	25	18.5	26.5	11	14.7
PH802	8	1/4"	15	10	28	18.5	28.5	14	26.4
PH803		3/8"	15	11	33	18.5	29.5	19	49.4
PH804		1/2"	15	14	39	18.5	32	24	89
PH1002	10	1/4"	18	10	28	21	31	14	27.7
PH1003		3/8"	18	11	33	21	33	19	51.1
PH1004		1/2"	18	14	39	21	35.5	24	88.5
PH1203	12	3/8"	21	11	33	23	36	19	53
PH1204		1/2"	21	14	39	23	38	24	92.8

PHF Series



Model/Item	ΦD	RA	RB	ΦP	LA	LB	C	K	E	H	Weight(g)
PHF4M5	4	M5×0.8	M5×0.8	9	3.5	6	20	14	19	8	6.2
PHF401	4	1/8"	1/8"	9	7.5	8	29.5	14	20.5	12	12.9
PHF6M5		M5×0.8	M5×0.8	12.5	3.5	6	20	16.5	23.5	8	7.1
PHF601		1/8"	1/8"	12.5	7.5	8	29.5	16.5	23	12	13.9
PHF602	6	1/4"	1/4"	12.5	10	11	35	16.5	25	17	30.3
PHF603		3/8"	3/8"	12.5	11	12	40	16.5	27	19	44.2
PHF801		1/8"	1/8"	15	7.5	8	29.5	18.5	26.5	12	15
PHF802	8	1/4"	1/4"	15	10	11	35	18.5	28.5	17	30.7
PHF803		3/8"	3/8"	15	11	12	40	18.5	29.5	19	44.8
PHF804		1/2"	1/2"	15	14	13.5	47.5	18.5	32	24	84.7
PHF1002	10	1/4"	1/4"	18	10	11	35	21	31	17	32
PHF1003		3/8"	3/8"	18	11	12	40	21	33	19	46.2
PHF1004		1/2"	1/2"	18	14	13.5	47.5	21	35.5	24	86.1
PHF1203	12	3/8"	3/8"	21	11	12	40	23	36	19	48.4
PHF1204		1/2"	1/2"	21	14	13.5	47.5	23	38	24	89.7

PKD Series



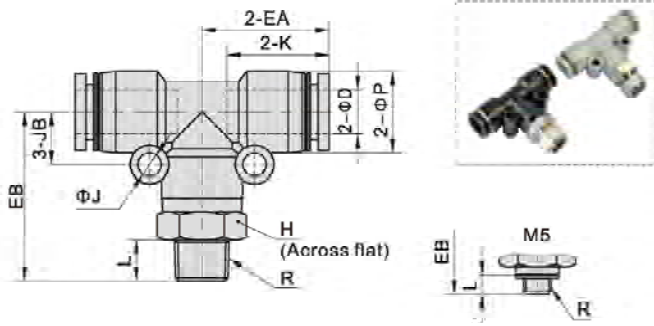
Model/Item	ΦDA	ΦDB	R	L	A	ΦPA	ΦPB	KA
PKD6-401	6	4	1/8"	7.5	66.5	12.5	9	16.5
PKD8-602	8	6	1/4"	10	79	15	12.5	18.5
PKD10-803	10	8	3/8"	11	91.5	18	15	21

Model/Item	KB	ΦJ	JB	JC	DC	E	H	Weight(g)
PKD6-401	14	3.2	8	34	10	17.5	12	15.8
PKD8-602	16.5	3.2	9.5	40	12	21	14	26.5
PKD10-803	18.5	4.3	11	48	14.5	24	17	38.2

Accessories—One-Touch Fittings

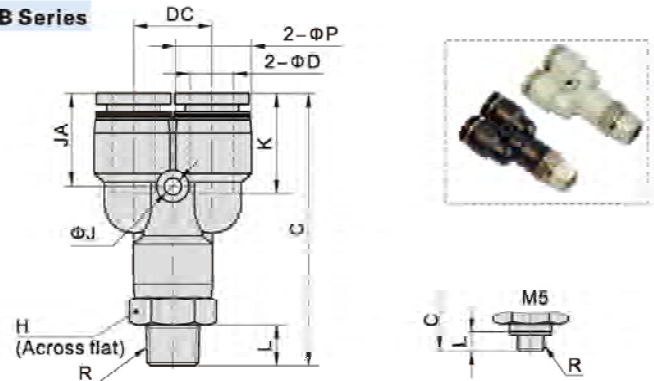
One-touch fittings—threaded type

PEB Series



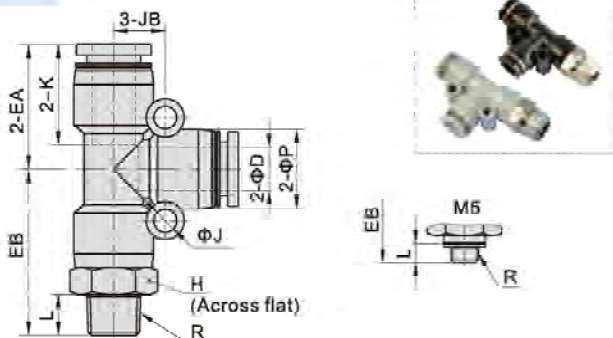
Model/Item	ΦD	R	ΦP	L	K	EA	EB	ΦJ	JB	H	Weight(g)
PEB4M5		M5×0.8	9	3.5	14	17	21	3.2	6.5	9	6.8
PEB401	4	1/8"	9	7.5	14	17	25	3.2	6.5	10	8.8
PEB402		1/4"	9	10	14	17	28	3.2	6.5	14	15.5
PEB6M5		M5×0.8	12.5	3.5	16.5	20	23.5	3.2	8	12	11.2
PEB601	6	1/8"	12.5	7.5	16.5	20	27.5	3.2	8	12	13.5
PEB602		1/4"	12.5	10	16.5	20	30.5	3.2	8	14	18.6
PEB603		3/8"	12.5	11	16.5	20	32	3.2	8	17	25.3
PEB801	8	1/8"	15	7.5	18.5	23	30.5	4.3	9.5	14	18.4
PEB802		1/4"	15	10	18.5	23	33	4.3	9.5	14	21.3
PEB803		3/8"	15	11	18.5	23	34.5	4.3	9.5	17	28.2
PEB804		1/2"	15	14	18.5	23	38.5	4.3	9.5	21	41
PEB1001	10	1/8"	18	7.5	21	26.5	34	4.3	11	17	26.7
PEB1002		1/4"	18	10	21	26.5	36.5	4.3	11	17	29.2
PEB1003		3/8"	18	11	21	26.5	37.5	4.3	11	17	31.9
PEB1004		1/2"	18	14	21	26.5	41.5	4.3	11	21	45.4
PEB1202	12	1/4"	21	10	23	30	41	4.3	13	21	49.6
PEB1203		3/8"	21	11	23	30	42	4.3	13	21	51.2
PEB1204		1/2"	21	14	23	30	45	4.3	13	21	57.3

PYB Series



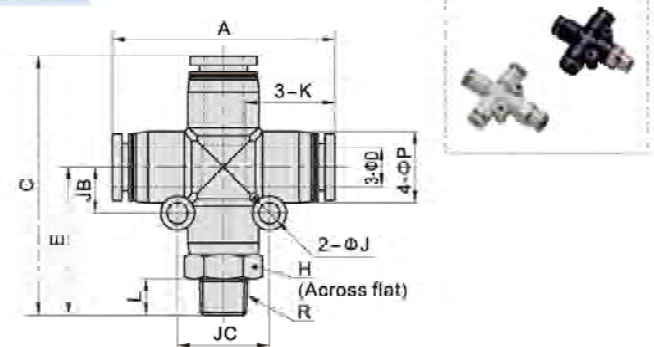
Model/Item	ΦD	R	ΦP	L	C	K	ΦJ	JA	DC	H	Weight(g)
PYB4M5		M5×0.8	9	3.5	35.5	14	3.2	13	10	9	6.7
PYB401	4	1/8"	9	7.5	39.5	14	3.2	13	10	10	9
PYB402		1/4"	9	10	42.5	14	3.2	13	10	14	10.8
PYB6M5		M5×0.8	12.5	3.5	40.5	16.5	3.2	15.5	12	12	11.1
PYB601	6	1/8"	12.5	7.5	44.5	16.5	3.2	15.5	12	12	13.7
PYB602		1/4"	12.5	10	47.5	16.5	3.2	15.5	12	14	18.2
PYB603		3/8"	12.5	11	49.0	16.5	3.2	15.5	12	17	25
PYB801	8	1/8"	15	7.5	50	18.5	3.2	17	14.5	14	19.8
PYB802		1/4"	15	10	52.5	18.5	3.2	17	14.5	14	22
PYB803		3/8"	15	11	54	18.5	3.2	17	14.5	17	27.7
PYB804		1/2"	15	14	58	18.5	3.2	17	14.5	21	40.8
PYB1001	10	1/8"	18	7.5	56.5	21	4.3	19.5	18	17	27.4
PYB1002		1/4"	18	10	59	21	4.3	19.5	18	17	29.5
PYB1003		3/8"	18	11	60	21	4.3	19.5	18	17	32.5
PYB1004		1/2"	18	14	64	21	4.3	19.5	18	21	45.4
PYB1202	12	1/4"	21	10	66	23	4.3	21	20.5	21	27.3
PYB1203		3/8"	21	11	67	23	4.3	21	20.5	21	51.8
PYB1204		1/2"	21	14	70	23	4.3	21	20.5	21	56.8

PED Series



Model/Item	ΦD	R	ΦP	L	K	EA	EB	ΦJ	JB	H	Weight(g)
PED4M5		M5×0.8	9	3.5	14	17	21	3.2	6.5	9	6.8
PED401	4	1/8"	9	7.5	14	17	25	3.2	6.5	10	8.8
PED402		1/4"	9	10	14	17	28	3.2	6.5	14	15.5
PED6M5		M5×0.8	12.5	3.5	16.5	20	23.5	3.2	8	12	11.2
PED601	6	1/8"	12.5	7.5	16.5	20	27.5	3.2	8	12	13.5
PED602		1/4"	12.5	10	16.5	20	30.5	3.2	8	14	18.6
PED603		3/8"	12.5	11	16.5	20	32	3.2	8	17	25.3
PED801	8	1/8"	15	7.5	18.5	23	30.5	4.3	9.5	14	18.4
PED802		1/4"	15	10	18.5	23	33	4.3	9.5	14	21.3
PED803		3/8"	15	11	18.5	23	34.5	4.3	9.5	17	28.2
PED804		1/2"	15	14	18.5	23	38.5	4.3	9.5	21	41
PED1001	10	1/8"	18	7.5	21	26.5	34	4.3	11	17	26.7
PED1002		1/4"	18	10	21	26.5	36.5	4.3	11	17	29.2
PED1003		3/8"	18	11	21	26.5	37.5	4.3	11	17	31.9
PED1004		1/2"	18	14	21	26.5	41.5	4.3	11	21	45.4
PED1202	12	1/4"	21	10	23	30	41	4.3	13	21	49.6
PED1203		3/8"	21	11	23	30	42	4.3	13	21	51.2
PED1204		1/2"	21	14	23	30	45	4.3	13	21	57.3

PZB Series







Model/Item	ΦD	R	L	A	E	C	ΦP	K	ΦJ	JB	JC	H	Weight(g)
PZB601	6	1/8"	7.5		27.5	47.5						12	15.2
PZB602		1/4"	10	39.5	30.5	50.5	12.5	16.5	3.2	8	16	14	20.4
PZB603		3/8"	11		32	52						17	27
PZB801	8	1/8"	7.5		30.5	53.5						14	20.9
PZB802		1/4"	10		33	56						14	23.8
PZB803		3/8"	11	46	34.5	57.5	15	18.5	4.3	9.5	19	17	29.9
PZB804		1/2"	14		38.5	61.5						21	43.5
PZB1002	10	1/4"	10		36.5	63						17	33.5
PZB1003		3/8"	11	52.5	37.5	64	18	21	4.3	11	22	17	36.5
PZB1004		1/2"	14		41.5	68						21	49.2
PZB1203	12	3/8"	11		42	72						21	56.5
PZB1204		1/2"	14	59.5	45	75	21	23	4.3	13	26	21	65.4

Metal one-touch fittings

Ordering code


BPC 6 01 □

① ② ③ ④

① Model	② Port size	③ Thread connection	④ Thread type
BPC: Metal male connector 	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm 10: Φ 10mm 12: Φ 12mm	M5: M5X0.8 01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Blank: PT
BPCF: Metal female connector 			
BPOC: Hexagon socket head metal male connector 	BPMF: Metal bulkhead female connector 		

BPM 6

① ②

① Model	② Port size
BPM: Metal bulkhead connector 	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm 10: Φ 10mm 12: Φ 12mm

Specification

Operating pressure range	0~9kgf/cm ² (0~0.9MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	0~150
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Note: The temperature resistance level of the tubing should be confirmed first when used in high temperature environments.

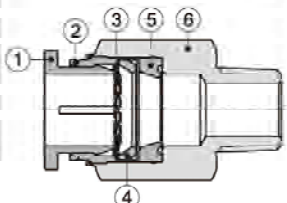
Product feature

- High flow capacity; The flow rate of these fittings is equivalent to that of the adaptable tubings.
- Inserting or removal tubing is simple and convenient, and the connecting portion is reliable and durable.
- Sealant is coated on threaded portion. The M5 metric thread is attached with a sealing gasket, to ensure no leakage of the threaded connection part.
- The fitting metal body adopts a special nickel-plating process, which has good corrosion resistance.
- Metal fittings can be used in high temperature environment.

Table for interface port and tube O.D.

Product series	Thread type	Port size				
		Φ 4	Φ 6	Φ 8	Φ 10	Φ 12
BPC	M5	●	●	●	●	●
	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
	3/8"	●	●	●	●	●
BPOC BPCF	1/2"	●	●	●	●	●
	M5	●	●	●	●	●
	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
BPMF	3/8"	●	●	●	●	●
	1/2"	●	●	●	●	●
	M5	●	●	●	●	●
	1/8"	●	●	●	●	●
BPM	1/4"	●	●	●	●	●
	3/8"	●	●	●	●	●
	1/2"	●	●	●	●	●
	1/2"	●	●	●	●	●

Inner structure

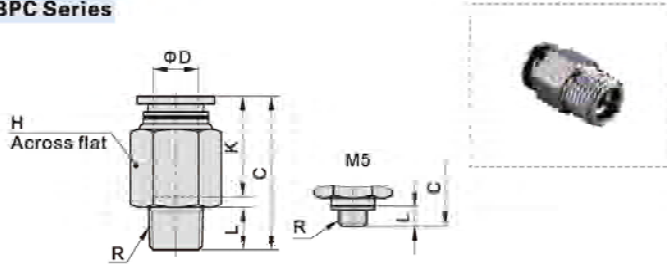
BPC Series		NO.	Name	Material
	1	Metal connector	Brass	
	2	Locating ring	Aluminum alloy	
	3	Spring gasket	Stainless steel	
	4	Locating seat	Aluminum alloy	
	5	Special shape O-ring	Viton	
	6	Straight connector body	Brass	

Accessories—One-Touch Fittings

Metal one-touch fittings

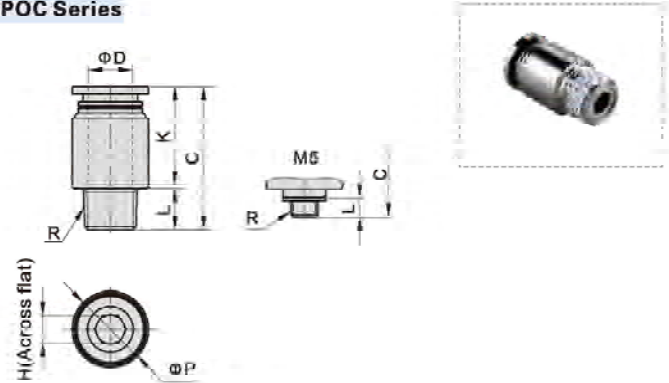
Dimensions

BPC Series



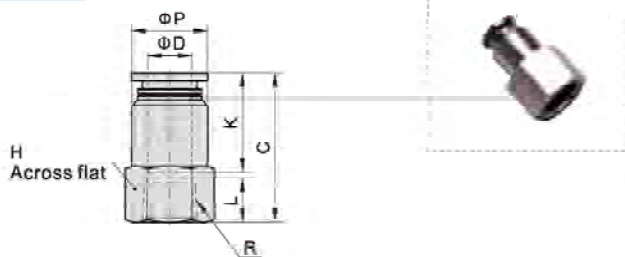
Model/Item	ØD	R	L	C	K	H	Weight(g)
BPC4M5	4	M5X0.8	3.5	19.5	14	9	5.5
BPC401		1/8"	7.5	19.5	14	10	7.9
BPC402		1/4"	10	19	14	14	8.7
BPC6M5	6	M5X0.8	3.5	22	16	12	10.1
BPC601		1/8"	7.5	21.5	18	12	14.2
BPC602		1/4"	10	24	18	14	19.1
BPC603	8	3/8"	11	22.5	18	17	26.8
BPC801		1/8"	7.5	27.5	18	14	16.1
BPC802		1/4"	10	26.5	18	14	16
BPC803	10	3/8"	11	23	18	17	25.4
BPC1001		1/8"	7.5	29.5	20.5	17	24.5
BPC1002		1/4"	10	32	20.5	17	28
BPC1003	12	3/8"	11	27.5	20.5	17	34.6
BPC1004		1/2"	14	25.5	20.5	21	39.3
BPC1202		1/4"	10	34.5	22	21	44.5
BPC1203	12	3/8"	11	30	22	21	34.2
BPC1204		1/2"	14	32	22	21	47

BPOC Series



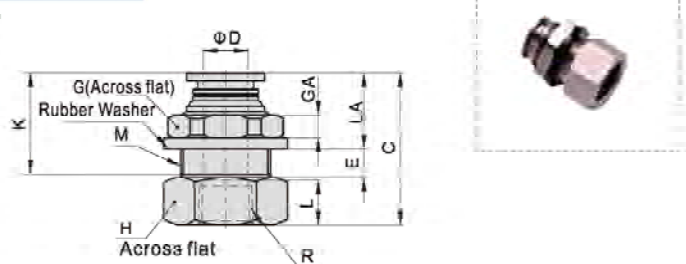
Model/Item	ØD	R	ØP	L	C	K	H	Weight(g)
BPOC4M5	4	M5X0.8	9	3.5	18.5	14	2	4.4
BPOC401		1/8"	10	7.5	17.5	14	2.5	6.6
BPOC6M5	6	M5X0.8	12	3.5	21	16	2	7.1
BPOC601		1/8"	12	7.5	21.5	18	4	8.4
BPOC602	8	1/4"	14	10	21.5	18	4	13.6
BPOC801		1/8"	14	7.5	26	17.5	5	12.3
BPOC802	10	1/4"	14	10	24.5	17.5	6	12.7
BPOC1002		1/4"	17	10	28.5	20.5	6	18.5
BPOC1003	12	3/8"	17	11	27.5	20.5	8	24.9
BPOC1203		3/8"	21	11	29.5	22	8	30.4
BPOC1204	12	1/2"	21	14	31.5	22	8	42.4

BPCF Series



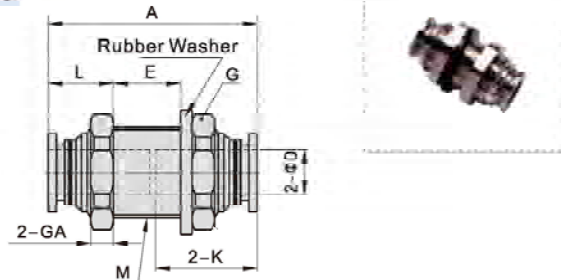
Model/Item	ØD	R	ØP	L	C	K	H	Weight(g)
BPCF4M5	4	M5X0.8	9	5	21	14	10	3.5
BPCF401		1/8"	9.5	8	23	14	14	5.3
BPCF6M5	6	M5X0.8	12	5	21	16	12	5.6
BPCF601		1/8"	12.5	8	25	16	14	7.2
BPCF602	8	1/4"	12.5	11	28	16	17	9.2
BPCF801		1/8"	14	8	27	18	14	7.1
BPCF802	10	1/4"	14.5	11	30	18	17	10.6
BPCF1002		1/4"	17	11	32.5	20.5	17	13.5
BPCF1003	12	3/8"	18	12	33.5	20.5	21	17.6
BPCF1203		3/8"	21	12	35	22	21	22
BPCF1204	12	1/2"	21	13.5	36.5	22	25	24.9

BPMF Series



Model/Item	ØD	R	M	L	C	K	LA	E	GA	G	H	Weight(g)
BPMF401	4	1/8"	M12X1	8	25	14	12	4	4	14	14	7.6
BPMF601		1/8"	M14X1	8	25	16	12	5	4	17	17	10.4
BPMF602	6	1/4"	M14X1	11	30	16	12	5	4	17	17	12.2
BPMF801		1/8"	M16X1	8	27	18	13	5.5	4	19	19	13.9
BPMF802	8	1/4"	M16X1	11	31.5	18	13	5.5	4	19	19	15.3
BPMF1002		1/4"	M20X1	11	34.5	20.5	14	7.5	5	24	22	26.2
BPMF1003	10	3/8"	M20X1	12	35.5	20.5	14	7.5	5	24	22	24.4
BPMF1203		3/8"	M22X1	12	37	22	15	8	6	27	24	32.6
BPMF1204	12	1/2"	M22X1	13.5	38.5	22	15	8	6	27	25	31.8

BPM Series



Model/Item	ØD	M	A	K	L	E	G(Across flat)	GA	Weight(g)
BPM4	4	M12X1	28.5	14	10	7	14	4	6.4
BPM6	6	M14X1	33	18	10	11	17	4	16.4
BPM8	8	M16X1	37	18	11	13	19	4	15.8
BPM10	10	M20X1	41.5	20.5	12	16	24	5	28.9
BPM12	12	M22X1	45	22	13	17.5	27	6	40.3

One-touch fittings—tube-tube type

Ordering code

Same diameter type fittings

PE 6 □

① ② ③

① Model				② Port size	③ Standard color		
PM: Bulkhead union 	PE: Union tee 	PP: Plug 	PV: Union elbow 	4: Φ4mm 6: Φ6mm 8: Φ8mm 10: Φ10mm 12: Φ12mm	Standard color	Specification	Adaptable model
PLM: Bulkhead male elbow 	PY: Union "Y" 	PZ: Cross 	PU: Straight union 		Blank: Gray	Release button: Gray Body: Gray	PM Others
					D: Black	Release button: Black Body: Black	PM Others

Different diameter type fittings

PEG 6-4 □

① ② ③ ④

① Model					② Port size I	③ Port size II	④ Standard color	
PG: Different diameter straight 	PZG: Different diameter cross 	PEW: Different diameter tee 	PYW: Different diameter union "Y" 	PGJ: Plug-in reducer 	4: Φ4mm 6: Φ6mm 8: Φ8mm 10: Φ10mm 12: Φ124mm	4: Φ4mm 6: Φ6mm 8: Φ8mm 10: Φ10mm	Standard color	Specification
PEG: Different diameter tee 	PKG: Reducer triple branch union 	PHK: Universal reducer triple branch union 	PHD: Universal reducer four branch union 				Blank: Gray	Release button: Gray Body: Gray
							D: Black	Release button: Black Body: Black

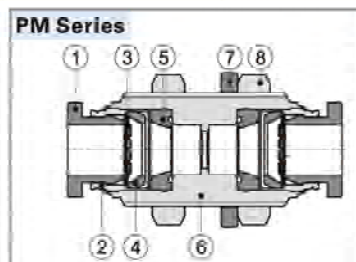
Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Product feature

1. Variable models can be widely used in every kind of pneumatic systems.
2. High circulation performance: bear the same flow with the volume of the tubing inside diameter.
3. Connect tubing easily and conveniently. The tubing connection portion is safe and durable.
4. The threaded portion is covered with sealant and the M5 thread is attached with a sealing gasket to prevent air leakage over the connection thread portion.

Inner structure



No.	Item	Material
1	Release button	POM
2	Guide	Aluminum alloy
3	Spring gasket	Stainless steel
4	Chuck	POM
5	O-ring	NBR
6	Body	Aluminum alloy
7	Rubber washer	NBR
8	Nut	Aluminum alloy

Table for interface port and tube O.D.

Product series	Port size I	Port size II			
		Φ4	Φ6	Φ8	Φ10
PG PGJ	Φ4	●			
	Φ6	●			
	Φ8	●	●		
	Φ10		●	●	
PEG PEW PYW	Φ12			●	●
	Φ4				
	Φ6	●			
	Φ8		●		
PZG	Φ10			●	
	Φ12				●
	Φ4				
	Φ6	●			
PKG	Φ8		●		
	Φ10			●	
	Φ12				●
	Φ4				
PHK PHD	Φ6				
	Φ8		●		
	Φ10			●	
	Φ12				●

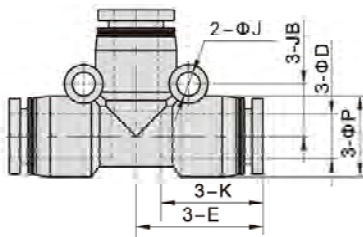
Product series	Port size				
	Φ4	Φ6	Φ8	Φ10	Φ12
PE, PY, PV, PU PM, PLM, PP, PZ	●	●	●	●	●

Accessories—One-Touch Fittings

One-touch fittings—tube-tube type

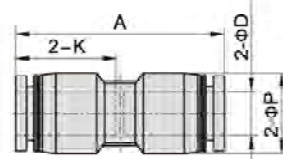
Dimensions

PE Series



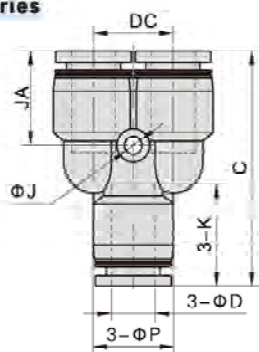
Model\Item	ΦD	ΦP	K	E	ΦJ	JB	Weight(g)
PE4	4	9	14	17	3.2	6.5	3.1
PE6	6	12.5	16.5	20	3.2	8	6.1
PE8	8	15	18.5	23	4.3	9.5	8.8
PE10	10	18	21	26.5	4.3	11	13.8
PE12	12	21	23	30	4.3	13	21

PU Series



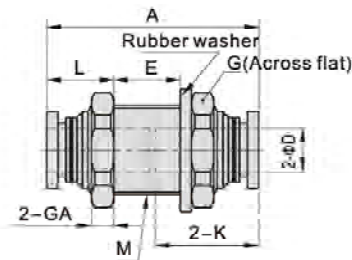
Model\Item	ΦD	ΦP	K	A	Weight(g)
PU4	4	9	14	29.5	1.7
PU6	6	12.5	16.5	34	3.6
PU8	8	15	18.5	38.5	5
PU10	10	18	21	43	8.1
PU12	12	21	23	47	12

PY Series



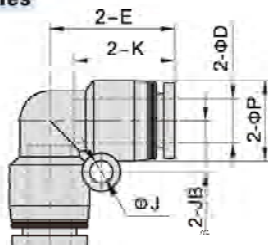
Model\Item	ΦD	ΦP	C	K	ΦJ	JA	DC	Weight(g)
PY4	4	9	31.5	14	3.2	13	10	3
PY6	6	12.5	37	16.5	3.2	15.5	12	6
PY8	8	15	42.5	18.5	3.2	17	14.5	8.6
PY10	10	18	48.5	21	4.3	19.5	18	14
PY12	12	21	54.5	23	4.3	21	20.5	21.2

PM Series



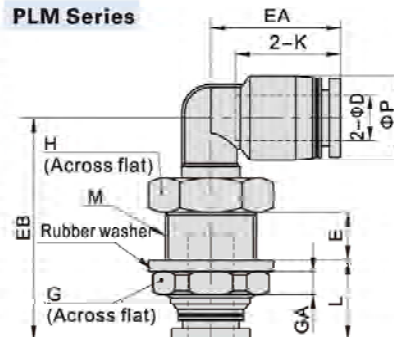
Model\Item	ΦD	M	A	K	L	E	GA	G	Weight(g)
PM4	4	M12X1	29	14	10	7	4	14	6.2
PM6	6	M14X1	34	16.5	10.5	11	4	17	9.5
PM8	8	M16X1	38	18.5	11.5	13	4	19	15.7
PM10	10	M20X1	43	21	12.5	16	5	24	22.5
PM12	12	M22X1	46.5	23	13.5	17.5	6	27	29.5

PV Series



Model\Item	ΦD	ΦP	K	E	ΦJ	JB	Weight(g)
PV4	4	9	14	17	3.2	6.5	1.9
PV6	6	12.5	16.5	20	3.2	8	4.2
PV8	8	15	18.5	23	4.3	9.5	6
PV10	10	18	21	26.5	4.3	11	9.3
PV12	12	21	23	30	4.3	13	14.6

PLM Series

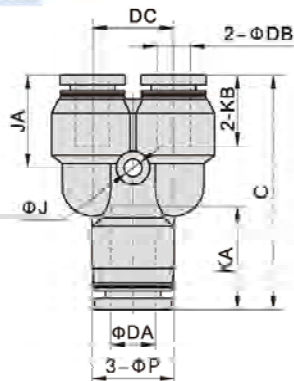


Model\Item	ΦD	ΦP	M	L	E	K	EA	EB	GA	G	H	Weight(g)
PLM4	4	9	M12X1	12	7.5	14	17	31	4	14	14	7.5
PLM6	6	12.5	M14X1	12.5	8.5	17	20	35.5	4	17	17	12.1
PLM8	8	15	M16X1	13.5	9	18.5	23	39	4	19	19	16.6
PLM10	10	18	M20X1	14.5	11	21	25.5	44.5	5	24	22	26.2
PLM12	12	21	M22X1	15.5	11	23	29.5	48	6	27	24	34

Accessories—One-Touch Fittings

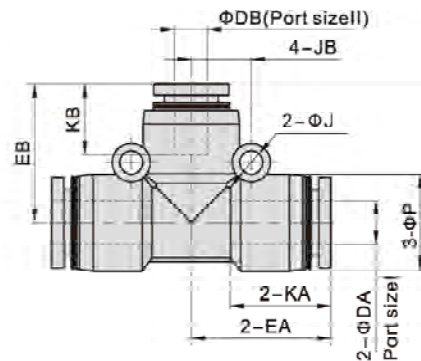
One-touch fittings—tube-tube type

PYW Series



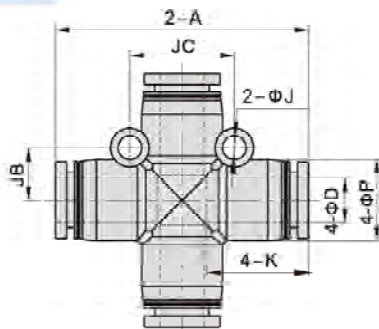
Model\Item	φDA	φDB	C	φP	KA	KB	φJ	JA	DC	Weight(g)
PYW6-4	6	4	36.5	12.5	16.5	14	3.2	15	12	5.8
PYW8-6	8	6	42	15	18.5	16.5	3.2	16.5	14.5	9.1
PYW10-8	10	8	48.5	18	21	18.5	4.3	19	18	14.1
PYW12-8	12	8	54	21	23	18.5	4.3	20.5	20.5	22.3
PYW12-10	12	10	54.5	21	23	21	4.3	21	20.5	21.7

PEG Series



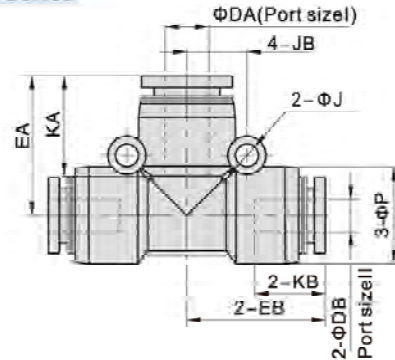
Model\Item	φDA	φDB	φP	KA	KB	EA	EB	φJ	JB	Weight(g)
PEG6-4	6	4	12.5	16.5	14	20.0	19.5	3.2	8	7
PEG8-6	8	6	15	18.5	16.5	22.5	22	4.3	9.5	22.8
PEG10-8	10	8	18	21	18.5	25.5	25.5	4.3	11	15.1
PEG12-8	12	8	21	23	18.5	29	28.5	4.3	13	2.2
PEG12-10	12	10	21	23	21	29	29	4.3	13	21.5

PZ Series



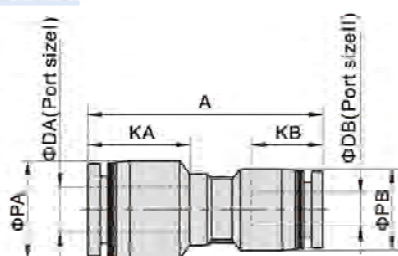
Model\Item	φD	A	φP	K	φJ	JB	JC	Weight(g)
PZ4	4	34	9	14	3.2	6.5	13	3.9
PZ6	6	39.5	12.5	16.5	3.2	8	16	7.9
PZ8	8	46	15	18.5	4.3	9.5	19	11.1
PZ10	10	52.5	18	21	4.3	11	22	17.5
PZ12	12	59.5	21	23	4.3	13	26	26.6

PEW Series



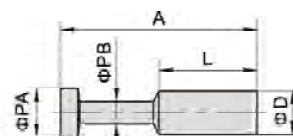
Model\Item	φDA	φDB	φP	KA	KB	EA	EB	φJ	JB	Weight(g)
PEW6-4	6	4	12.5	16.5	14	20	19.5	3.2	8	7
PEW8-6	8	6	15	18.5	16.5	22.5	22	4.3	9.5	22.8
PEW10-8	10	8	18	21	18.5	25.5	25.5	4.3	11	15.1
PEW12-8	12	8	21	23	18.5	29	28.5	4.3	13	2.2
PEW12-10	12	10	21	23	21	29	29	4.3	13	21.5

PG Series



Model\Item	φDA	φDB	φPA	φPB	KA	KB	A	Weight(g)
PG6-4	6	4	12.5	9	16.5	14	33.5	2.7
PG8-4	8	4	15	12.5	18.5	14	37.5	4.5
PG8-6	8	6	15	12.5	18.5	16.5	38	4.5
PG10-6	10	6	18	15	21	16.5	42	6.9
PG10-8	10	8	18	15	21	18.5	42.5	6.7
PG12-8	12	8	21	18	23	18.5	46.5	10.3
PG12-10	12	10	21	18	23	21	47	10.2

PP Series

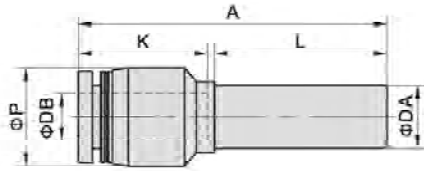


Model\Item	φD	φPA	φPB	L	A	Weight(g)
PP4	4	5	3	15	27.5	0.7
PP6	6	7	3	17	32	0.9
PP8	8	9	4	18	36	1.6
PP10	10	11	5	20	42	2.5
PP12	12	13	6	23	44	4.3

Accessories—One-Touch Fittings

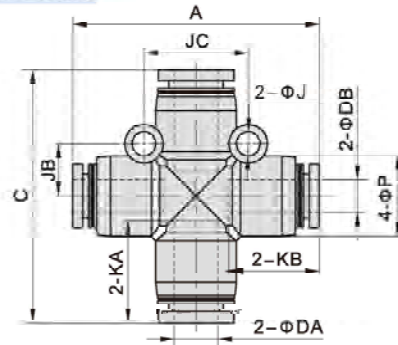
One-touch fittings—tube-tube type

PGJ Series



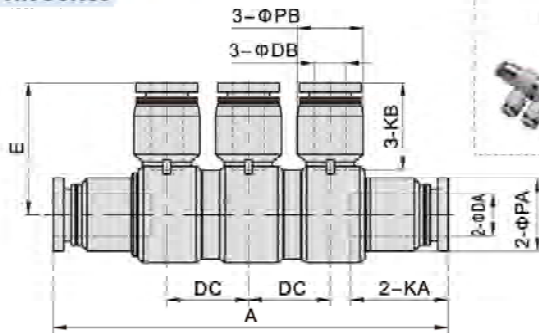
Model\Item	ΦDA	ΦDB	ΦP	K	L	A	Weight(g)
PGJ6-4	6	4	9	14	21	35	1.5
PGJ8-4	8	4	12.5	14	22	39	2.6
PGJ8-6	8	6	12.5	16.5	22	39.5	3.2
PGJ10-6	10	6	15	16.5	25	44	4.1
PGJ10-8	10	8	15	18.5	25	44.5	3.9
PGJ12-8	12	8	18	18.5	26	48.5	6.2
PGJ12-10	12	10	18	21	26	49	6

PZG Series



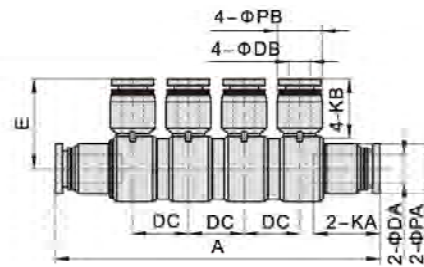
Model\Item	ΦDA	ΦDB	A	C	ΦP	KA	KB	ΦJ	JB	JC	Weight(g)
PZG6-4	6	4	39	39.5	12.5	16.5	14	3.2	8	16	8.2
PZG8-6	8	6	45	46	15	18.5	16.5	4.3	9.5	19	12
PZG10-8	10	8	52	52.5	18	21	18.5	4.3	11	22	18.1
PZG12-10	12	10	59	59.5	21	23	21	4.3	13	26	29

PHK Series



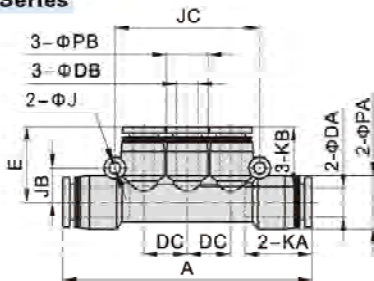
Model\Item	ΦDA	ΦDB	A	ΦPA	ΦPB	KA	KB	DC	E	Weight(g)
PHK8-6	8	6	75	14	12.5	18.5	16.5	15.5	25	28.4
PHK10-8	10	8	85.5	17	15	21	18.5	16.5	29.5	45

PHD Series



Model\Item	ΦDA	ΦDB	A	ΦPA	ΦPB	KA	KB	DC	E	Weight(g)
PHD8-6	8	6	90.5	14	12.5	18.5	16.5	15.5	25	18.7
PHD10-8	10	8	102.5	17	15	21	18.5	16.5	29.5	52.7

PKG Series



Model\Item	ΦDA	ΦDB	A	ΦPA	ΦPB	KA	KB	ΦJ	JB	JC	DC	E	Weight(g)
PKG6-4	6	4	58	12.5	9	16.5	14	3.2	8	34	10	17.5	8.6
PKG8-6	8	6	69	15	12.5	18.5	16.5	3.2	9.5	40	12	21	13.5
PKG10-8	10	8	80	18	15	21	18.5	4.3	11	48	14.5	24	20.7

Accessories—One-Touch Fittings

One-touch fittings—threaded type

Ordering code

BB 01 01 □

① ② ③ ④

① Model	② Thread connection I	③ Thread connection II	④ Thread type
BB: Male connector 	BD: Male & female connector[Note1] 	BU: Double female connector 	BZ: Hexagon head cap plug[Note2]
	01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Blank: PT

[Note1] For BD series, Thread I is Female thread, Thread II is male thread; [Note2] For BZ series, no thread II and thread I is male thread.

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	3.0MPa
Ambient and fluid temperature (°C)	0~150

Configuration table of tubing thread

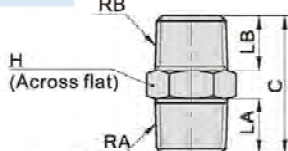
Product series	Thread connection I	Thread connection II			
		01	02	03	04
BB	01	●	●	●	
	02		●	●	●
	03			●	●
	04				●
BD	01		●	●	●
	02			●	●
	03				●
	04				
BU	01	●			
	02		●		
	03			●	
	04				●
Product series	Thread connection				
	01	02	03	04	
BZ	●	●	●	●	

Product feature

1. Variable models can be widely used in every kind of pneumatic systems.
2. High circulation performance bear the same flow with the volume of the tube inner diameter.
3. The nickel plated body is anti-corrosion and anti-pollution, which allows a broader application.
4. Metal fittings can be used in high temperature environment.

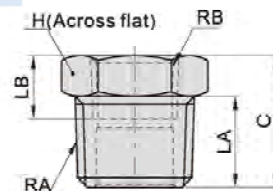
Dimensions

BB Series



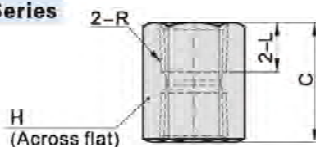
Model\Item	RA	RB	LA	LB	C	H	Weight(g)
BB0101	1/8"	1/8"	7.5	7.5	19.5	10	6.6
BB0102	1/4"	1/8"	10	7.5	22.5	14	12.1
BB0103	3/8"	1/8"	11	7.5	24	17	18.3
BB0202	1/4"	1/4"	10	10	25	14	14.6
BB0203	3/8"	1/4"	11	10	26.5	17	20.3
BB0204	1/2"	1/4"	14	10	30	21	34.3
BB0303	3/8"	3/8"	11	11	27.5	17	23.2
BB0304	1/2"	3/8"	14	11	31	21	36.2
BB0404	1/2"	1/2"	14	14	34	21	42.8

BD Series



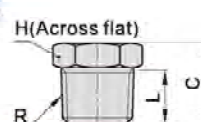
Model\Item	RA	RB	LA	LB	C	H	Weight(g)
BD0102	1/4"	1/8"	10	8	14.5	14	8.8
BD0103	3/8"	1/8"	11	8	16	17	17.1
BD0104	1/2"	1/8"	14	8	19.5	21	33.1
BD0203	3/8"	1/4"	11	11	16	17	12.7
BD0204	1/2"	1/4"	14	11	19.5	21	29.9
BD0304	1/2"	3/8"	14	12	19.5	21	22.5

BU Series



Model\Item	R	L	C	H	Weight(g)
BU0101	1/8"	8	17	12	8.4
BU0202	1/4"	11	23	17	25.4
BU0303	3/8"	12	25	21	40
BU0404	1/2"	13.5	28	24	46.6

BZ Series




Model\Item	R	L	C	H	Weight(g)
BZ01	1/8"	7.5	11	10	4.6
BZ02	1/4"	10	14.5	14	10.8
BZ03	3/8"	11	16	17	17.4
BZ04	1/2"	14	19.5	21	33

One-touch fittings—threaded type

Ordering code

BKC 06 04 - 01 □

① ② ③ ④ ⑤

① Model	② Tubing outer diameter	③ Tubing inner diameter	④ Thread connection	⑤ Thread type
BKC: Straight locknut connector 	04: Φ4mm 06: Φ6mm 08: Φ8mm 10: Φ10mm 12: Φ12mm	25: Φ2.5mm 04: Φ4mm 05: Φ5mm 06: Φ6mm 65: Φ6.5mm 75: Φ7.5mm 08: Φ8mm 09: Φ9mm	M3; M3X0.5 M5; M5X0.8 01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Blank; PT

Note: When using the tubing Φ8×Φ5.5, the straight lock nut connector of BKC0806 can be used.

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	3.0MPa
Ambient and fluid temperature (°C)	0~150

Note: The temperature resistance level of the tubing should be confirmed first when used in high temperature environments.

Product feature

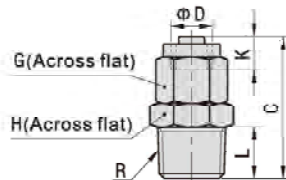
- Variable models can be widely used in every kind of pneumatic systems.
- High circulation performance bear the same flow with the volume of the tube inner diameter.
- The nickel plated body is anti-corrosion and anti-pollution, which allows a broader application.
- Metal fittings can be used in high temperature environments.

Configuration table of tubing and tubing thread

Product series	Tubing outer diameter	Tubing inner diameter	Thread connection					
			M3	M5	01	02	03	04
BKC	04	25	●	●	●			
	06	04			●	●	●	
	08	05			●	●	●	●
		06			●	●	●	●
	10	65				●	●	●
		75				●	●	●
	12	08				●	●	●
		09				●	●	●

Dimensions

BKC Series



Model/Item	Tubing diameter ΦD		R	L	C	K	G	H	Weight(g)	Model/Item	Tubing diameter ΦD		R	L	C	K	G	H	Weight(g)	
	O.D	I.D									O.D	I.D								
BKC0425-M3	4	2.5	M3×0.5	3	17	5	8	8	4.4	BKC1065-02	10	6.5	1/4"	10	30	7.5	15	15	25.3	
BKC0425-M5			M5×0.8	3.5	17.5			8	4.8	BKC1065-03			3/8"	11	31.5			17	29.1	
BKC0425-01			1/8"	7.5	20.5			10	7.1	BKC1065-04			1/2"	14	35.5			21	44	
BKC0604-01	6	4	1/8"	7.5	22	10	9.9	BKC1075-02	7.5	8		1/4"	10	30	15			24.1		
BKC0604-02			1/4"	10	25.5	5.5	10	14				15.8	BKC1075-03	3/8"	11			31.5	17	28.9
BKC0604-03			3/8"	11	27	17	22.5	BKC1075-04				1/2"	14	35.5	21			43.6		
BKC0805-01	8	5	1/8"	7.5	24	6.5	12	12	12.8	BKC1208-02	12	8	1/4"	10	30	7.5	17	17	30.5	
BKC0805-02			1/4"	10	27.5			14	17.2	BKC1208-03			3/8"	11	31.5			17	32.1	
BKC0805-03			3/8"	11	29			17	23.7	BKC1208-04			1/2"	14	35.5			21	46.7	
BKC0806-01	8	5.5 or 6	1/8"	7.5	24	12	13.1	BKC1209-02	g	10		1/4"	10	30	17			30.6		
BKC0806-02			1/4"	10	27.5	14	17.2	BKC1209-03				3/8"	11	31.5	17			31.9		
BKC0806-03			3/8"	11	29	17	23.6	BKC1209-04				1/2"	14	35.5	21			46.4		

Installation and application

1. Method of inserting or removal a tubing

1.1 Inserting a tubing

Place the locking cap over the tubing, and insert the tubing into the body, then tighten the locking cap. (As figure 1)

1.2 Removing a tubing

Loosen the locking cap first, then remove the tubing. (As figure 2)

2. Method of tightening the connector thread

Tighten the connector with a hex wrench, as shown right.

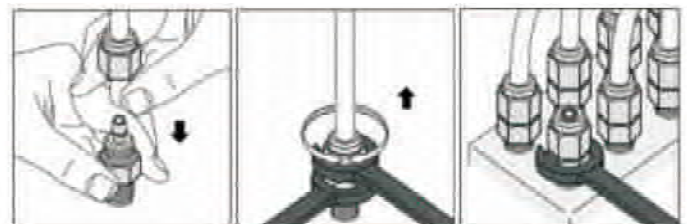


Figure 1

Figure 2

Figure 3

Accessories—Silencers

BSL, BSLM, BESL, PAL, PALM series

Ordering code

BSL 01 □

① ② ③

① Silencer Type	② Thread connection	③ Standard color		
BSL: Universal silencer BSLM: Mini Silencer BESL: Throttling silencer PAL: Plastic silencer PALM: Mini plastic Silencer	M5: M5X0.8 01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Type	Color code	Color definition
		PAL、PALM	Blank: grey D: Black	Top cover: grey/Body: gray Top cover: black/Body: black
		Others	No such code	

Product feature

BSL、BSLM、BESL Series:

1. This silencers have excellent noise silencing performance.
2. The installation of the silencer is simple and convenient, and the connecting portion is reliable and durable.
3. It is easy to adjust the exhaust flow of the throttling type silencer.

PAL Series、PALM Series:

1. The silencer body is made of plastic.
2. The mini type silencer has the characteristics of small volume and compact structure.

Configuration table of tubing thread

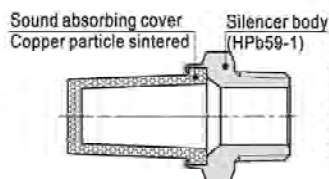
Product series	Thread connection				
	M5	01	02	03	04
BSL	●	●	●	●	●
BSLM	●	●	●	●	●
BESL		●	●	●	●
PAL		●	●	●	●
PALM		●	●		

Specification

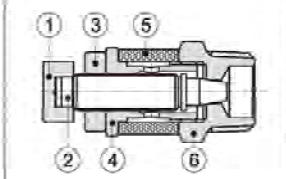
Model	BSLM5	BSL01	BSL02	BSL03	BSL04	BSLMM5	BSLM01	BSLM02	BSLM03	BSLM04
Thread connection	M5×0.8	1/8"	1/4"	3/8"	1/2"	M5×0.8	1/8"	1/4"	3/8"	1/2"
Silencing effect(dB)(0.5MPa)	15	20	20	20	12	15	20	20	20	20
Model	BESL01	BESL02	BESL03	BESL04	PAL01	PAL02	PAL03	PAL04	PALM01	PALM02
Thread connection	1/8"	1/4"	3/8"	1/2"	1/8"	1/4"	3/8"	1/2"	1/8"	1/4"
Silencing effect(dB)(0.5MPa)	20	20	20	20	25	25	25	25	25	25
Operating pressure	0~10kgf/cm ² (0~1.0MPa)									
Negative pressure	-750mmHg(10Torr)									
Proof pressure	1.5MPa									
Temperature range	-20~70℃									

Inner structure

BSL Series

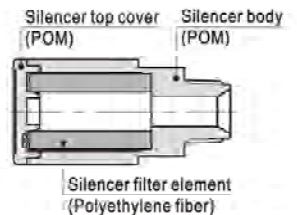


BESL Series



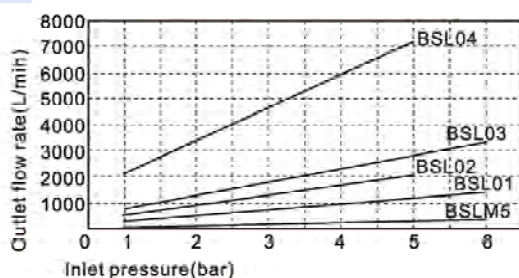
NO.	Name	Material
1	Adjusting cap	Aluminum alloy
2	Throttling column	Aluminum alloy
3	Locking cap	Aluminum alloy
4	Locking ring	Aluminum alloy
5	Silencer ring	Copper particle sintered
6	Silencer body	Brass

PAL Series

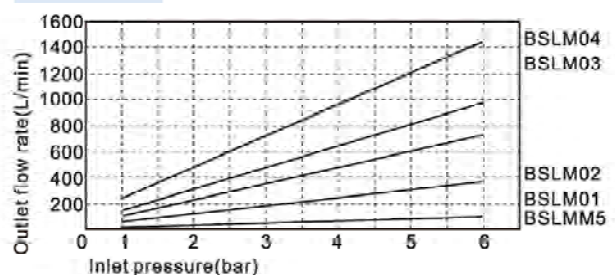


Flowrate characteristic

BSL Series



BSLM Series

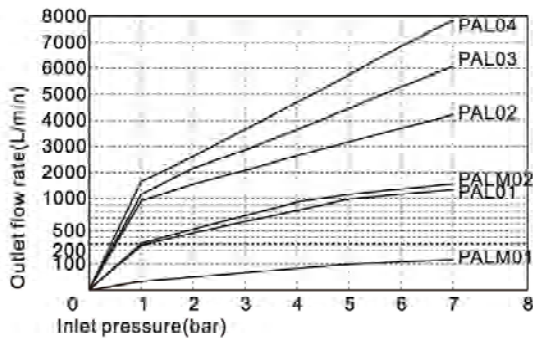


Accessories—Silencers

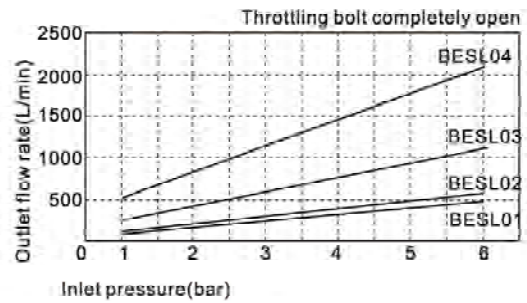
BSL, BSLM, BESL, PAL, PALM series

Flowrate characteristic

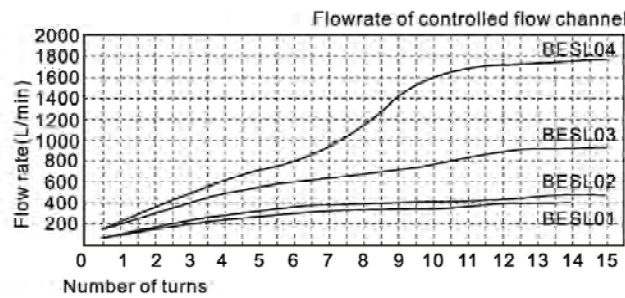
PAL, PALM Series



BESL Series (Inlet pressure and outlet flow rate)

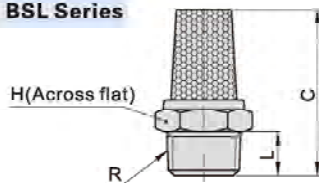


BESL Series



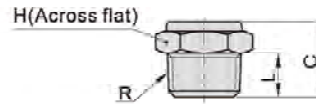
Dimensions

BSL Series



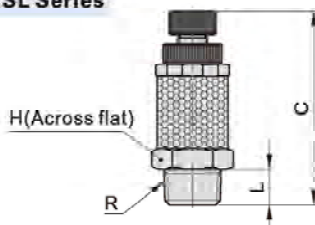
Model/Item	R	L	C	H	Weight(g)
BSLM5	M5×0.8	3.5	19.5	8	2.9
BSL01	1/8"	6	24	12	6.7
BSL02	1/4"	8	30	15	11.6
BSL03	3/8"	9	38.5	19	22
BSL04	1/2"	10.5	46	22	35

BSLM Series



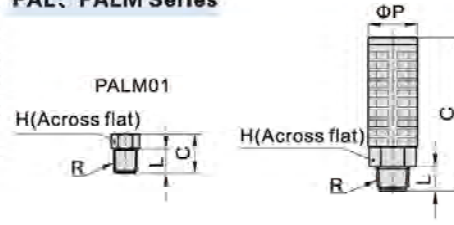
Model/Item	R	L	C	H	Weight(g)
BSLMM5	M5×0.8	3.5	9.5	8	2.3
BSLM01	1/8"	6	11	12	4.3
BSLM02	1/4"	8	13.5	15	8.4
BSLM03	3/8"	9	15.5	19	15.8
BSLM04	1/2"	10.5	19	22	25.9

BESL Series



Model/Item	R	L	C		H	Weight(g)
			max	min		
BESL01	1/8"	6	40.5	33	12	10
BESL02	1/4"	8	42.5	35	14	18.1
BESL03	3/8"	9	49	41.5	17	31.1
BESL04	1/2"	10.5	59.5	52	24	69.8

PAL, PALM Series



Model/Item	R	ΦP	L	C	H	Weight(g)
PAL01	1/8"	16	7	33	14	4.2
PALM01	1/8"	/	10	16	10	0.9
PAL02	1/4"	20	10	62.5	17	10.7
PALM02	1/4"	16	10	36	14	5.1
PAL03	3/8"	26	12	68	24	20
PAL04	1/2"	28	12	73	24	23.1

PSA, PSL, PSS series

Ordering code

PSL 6 01 A □ □

① ② ③ ④ ⑤ ⑥

① Model	② Port size	③ Thread connection		④ Control method	⑤ Standard color		⑥ Thread type
PSL: Speed controller		Thread	Adaptable port size	A: Meter-out	Standard color	Specification	
	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm 10: Φ 10mm 12: Φ 12mm	M5: M5X0.8	Φ 4, Φ 6	 Handle marking "A" Controlled flow Free flow	Blank: Gray	Release button: Gray Body: Gray	
PSS: Universal speed controller		01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Φ 4, Φ 6 Φ 8, Φ 10 Φ 12	B: Meter-in	D: Black	Release button: Black Body: Black	
				 Handle marking "B" Free flow Controlled flow		Blank: PT	

PSA 6 □

① ② ③

① Model	② Port size	③ Standard color	
PSA: Straight speed controller	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm 10: Φ 10mm 12: Φ 12mm	Standard color	Specification
		Blank: Gray	Release button: Gray Body: Gray
		D: Black	Release button: Black Body: Black

Product feature

1. The silencer is small size, and light weight with small installation space.
2. Excellent flow characteristics, high sensitivity and easy to adjust.
3. The silencer brass body adopts a special nickel-plating process, which has good corrosion resistance and anti-pollution property.
4. Anti-drop structure is designed on the regulating rod.
5. The sealant being coated on threaded portion can ensure no leakage of the threaded connection part.
6. The inserting direction of universal speed controller can be adjusted in 360°.

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Symbol

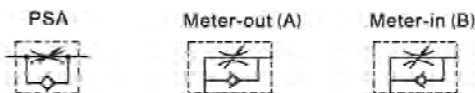
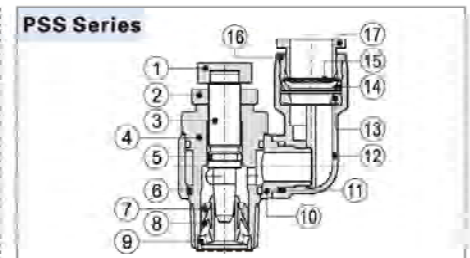
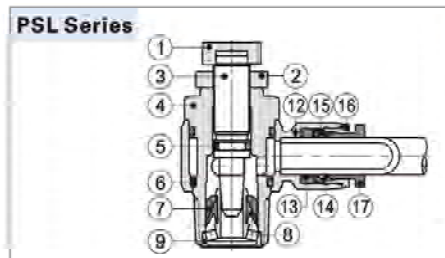
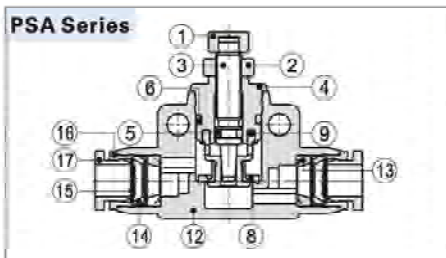


Table for interface port and tube O.D.

Product series	Thread type	Port size				
		Φ 4	Φ 6	Φ 8	Φ 10	Φ 12
PSA	-	●	●	●	●	●
	M5	●	●	●	●	●
PSL	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
	3/8"	●	●	●	●	●
	1/2"	●	●	●	●	●
PSS	M5	●	●	●	●	●
	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
	3/8"	●	●	●	●	●
	1/2"	●	●	●	●	●

Inner structure

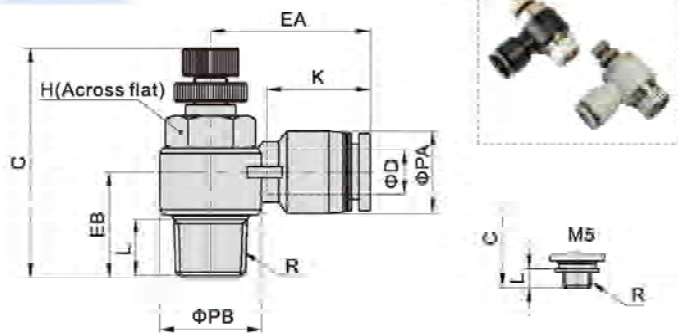


NO.	Name	Material	NO.	Name	Material	NO.	Name	Material
1	Adjusting cap	Aluminum alloy	7	Holder	PBT	13	O-ring	NBR
2	Locking cap	Aluminum alloy	8	O-ring	NBR	14	Locating seat	POM
3	Throttling column	Brass	9	Throttling sleeve	Aluminum alloy/Brass	15	Spring gasket	Stainless steel
4	Throttling body	Brass	10	Plastic body	PBT	16	Locating ring	Aluminum alloy
5	O-ring	NBR	11	O-ring	NBR	17	Plastic interface	POM
6	O-ring	NBR	12	Plastic body	PBT			

PSA, PSL, PSS series

Dimensions

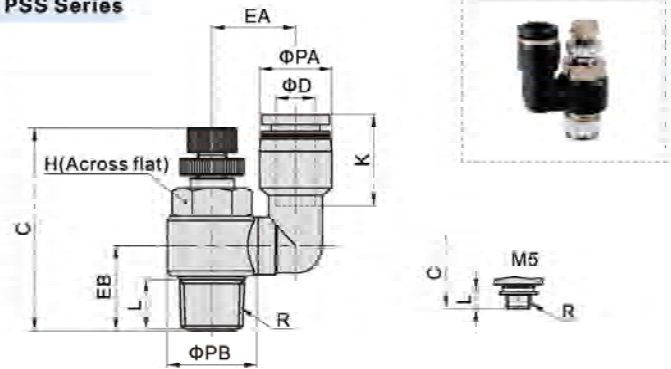
PSL Series



Model/Item [Note1]	ΦD	R	ΦPA	ΦPB	L	C		K	EA	EB	H	Weight (g)
						max	min					
PSL4M5□	4	M5×0.8	9	10	3.5	30	27.5	14	19	9.5	8	6.5
PSL401□		1/8"	9	14	7.5	41.5	35	14	20.5	15	11	16.5
PSL6M5□	6	M5×0.8	12.5	10	3.5	30	27.5	16.5	23.5	11.5	8	8
PSL601□		1/8"	12.5	14	7.5	41.5	35	16.5	23	15.5	11	17.5
PSL602□		1/4"	12.5	18	10	47.5	41	16.5	25	18	14	32
PSL603□		3/8"	12.5	22.5	11	52.5	45.5	16.5	27	20	19	59.5
PSL801□	8	1/8"	15	14	7.5	41.5	35	18.5	26.5	16.5	11	18
PSL802□		1/4"	15	18	10	47.5	41	18.5	28.5	19	14	33
PSL803□		3/8"	15	22.5	11	52.5	45.5	18.5	29.5	20	19	60
PSL804□		1/2"	15	28	14	58.5	51.5	18.5	32	25	24	96.5
PSL1002□	10	1/4"	18	18	10	47.5	41	21	31	20.5	14	34.5
PSL1003□		3/8"	18	22.5	11	52.5	45.5	21	33	21.5	19	62
PSL1004□		1/2"	18	28	14	58.5	51.5	21	35.5	25.5	24	98
PSL1203□	12	3/8"	21	22.5	11	52.5	45.5	23	36	23.5	19	64
PSL1204□		1/2"	21	28	14	58.5	51.5	23	38	27	24	100

[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.

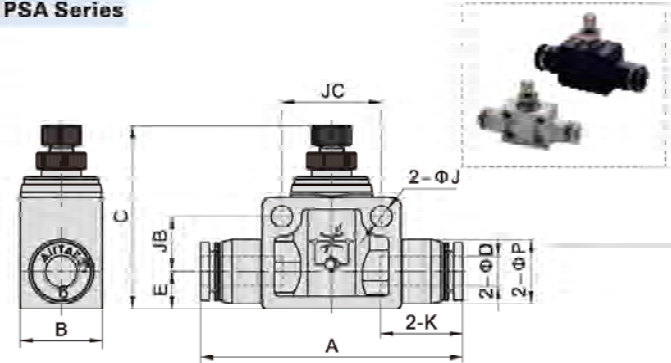
PSS Series



Model/Item [Note1]	ΦD	R	ΦPA	ΦPB	L	C		K	EA	EB	H	Weight (g)
						max	min					
PSS4M5□	4	M5×0.8	9	10	3.5	30	27.5	14	12.5	9.5	8	8.1
PSS601□	6	1/8"	12.5	14	7.5	41.5	35	17	17	15	11	19
PSS602□		1/4"	12.5	18	10	47.5	41	17	19	17.5	14	34.7
PSS801□	8	1/8"	15	14	7.5	41.5	35	18.5	17	15	11	20.2
PSS802□		1/4"	15	18	10	47.5	41	18.5	19	17.5	14	39.8
PSS1002□	10	1/4"	18	18	10	47.5	41	21	20.5	17.5	14	37.2
PSS1003□		3/8"	18	22.5	11	52.5	45.5	21	24	20	19	66
PSS1203□	12	3/8"	21	22.5	11	52.5	45.5	23	25.5	20	19	69.2
PSS1204□		1/2"	21	28	14	58.5	51.5	23	28	25	24	105.8

[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.

PSA Series

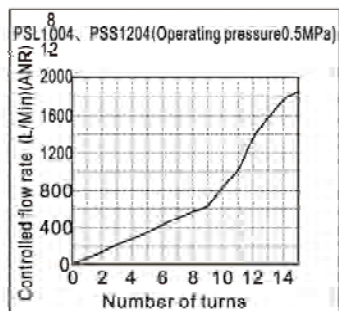
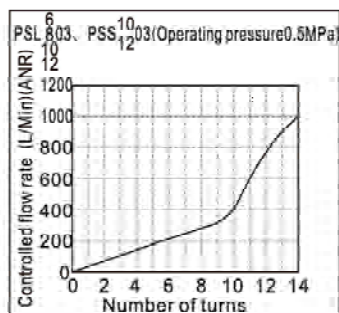
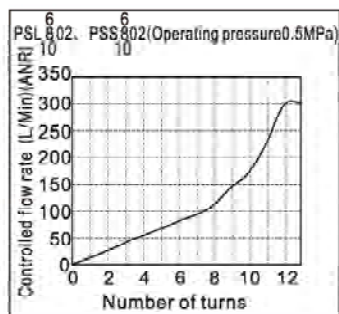
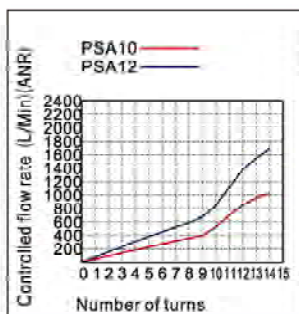
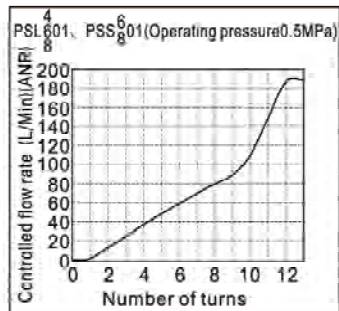
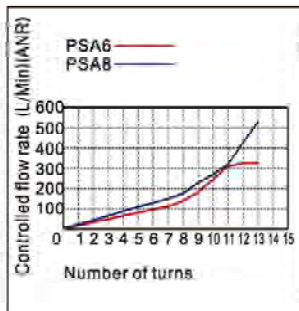
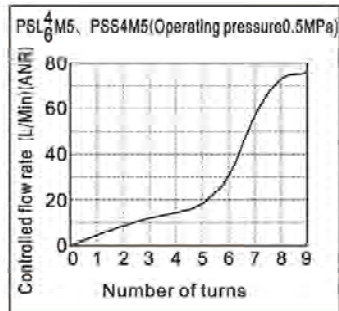
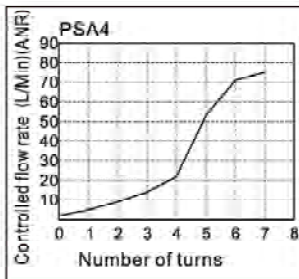


Model/Item	ΦD	A	B	C		ΦP	E	K	ΦJ	JB	JC	Weight (g)
				max	min							
PSA4	4	41	11	29	26.5	9.5	7	14	3.2	6	14	7.85
PSA6	6	52.5	16.5	43.5	36.5	13	7.5	16.5	4.3	11	20	18.3
PSA8	8	59.5	16.5	47	40	15	8.5	18.5	4.3	11	22	23.5
PSA10	10	69	21	53.5	46.5	18	10.5	21	4.3	14.5	26	42.4
PSA12	12	78.5	26	58.5	51	21.5	12	23	4.3	17.5	32	67.5

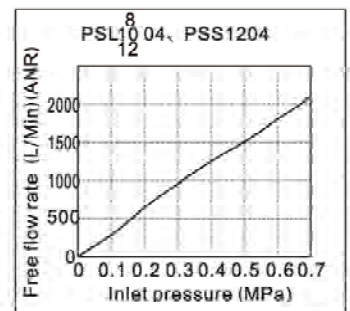
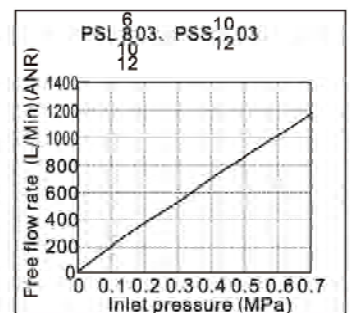
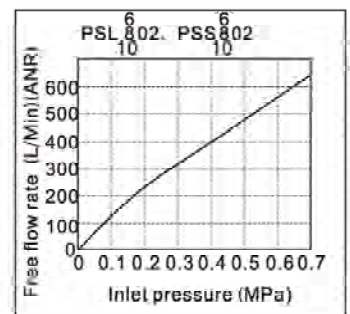
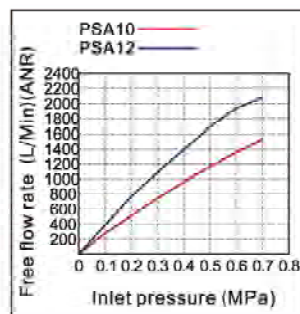
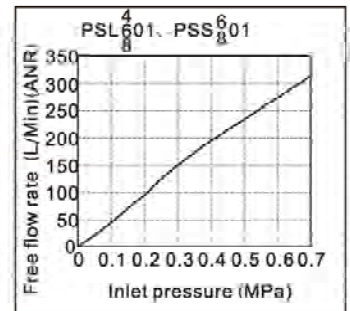
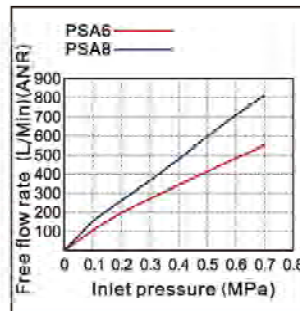
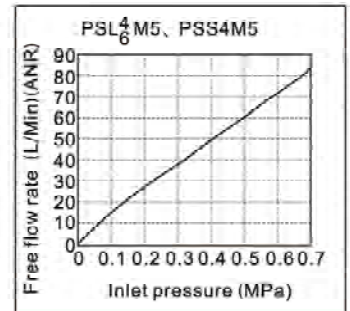
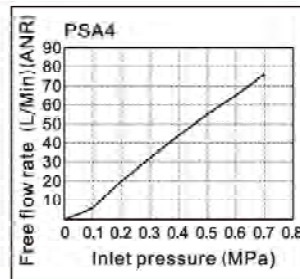
PSA, PSL, PSS series

Flowrate characteristic

Controlled flow rate



Free flow rate



Selection, Installation and Operation

Selection

- The speed controller has meter-out type and meter-in type:

	Working principle	Product identification
<p>Controlled flow Free flow</p>	A: Meter-out 1. The air flow is controlled from the threaded end to tubing connection end. 2. The air flow is free from the tubing connection end to the threaded end.	Handle marking "A"
<p>Free flow Controlled flow</p>	B: Meter-in 1. The air flow is free from the threaded end to tubing connection end. 2. The air flow is controlled from the tubing connection end to the threaded end.	Handle marking "B"

- Select the different control method according to the actual requirement. The meter-out type is the first priority.

2.1. The application example of the meter-out speed controller	2.2. The application example of the meter-in speed controller
Solenoid valve Double acting cylinder <p>Meter-out speed controller</p>	Solenoid valve Single acting cylinder <p>Meter-in speed controller</p>

Installation

- Installation and removal of tubing:

1.1. Installation of tubing

Grasp the tubing and slowly push it into the fitting until it comes to a stop. The tubing will be locked by the spring gasket.

1.2. Removal of tubing

Push the release button to open the spring gasket so that the tubing can be released.

Note: When remove the tubing, make sure the pressure in the tubing is Zero.



- Mounting of the speed controller

Mount the speed controller into the inlet and outlet port of the cylinder with a wrench.

Note: Please refer to the fittings for the tightening torque and thread screw-in depth.

Operation

- Adjustment of the cylinder speed

- 1.1. Make sure the speed controller is turned off before applying air pressure. The cylinder may fly out due to the high speed if the air is inlet when the speed controller is turned on.
- 1.2. Adjust the speed by opening the needle slowly from the fully closed state. When a needle valve is turned clockwise, the air flow through is reduced and the actuator speed decreases. When a needle valve is turned counter-clockwise, the air flow through is increased and the actuator speed increases.



- Operation of the speed controller


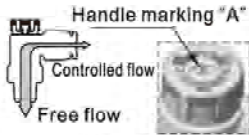
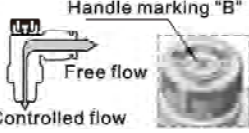
- 2.1. Do not use tools such as pliers to rotate the handle. Do not apply excessive force or shock when the needle is at the place of top or bottom. It can cause damage or air leakage.
- 2.2. A certain amount of leakage is allowed in the closed state of the speed controller. It is not designed for the use as stop valve with zero air leakage.

PTL Mini series

Ordering code

PTL 6 M5 A □ □ -M

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Port size	③ Thread connection	④ Control method	⑤ Standard color	⑥ Thread type	⑦ Style
PTL: Speed controller (Push lock) 	4: $\Phi 4$ mm 6: $\Phi 6$ mm	M5: M5X0.8 01: 1/8"	A: Meter-out 	Standard color: Specification Blank: Gray Release button: Gray Body: Gray	Blank: PT	M: Mini type
			B: Meter-in 	D: Black Release button: Black Body: Black		

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Product feature

1. Compare with standard speed controller, smaller size, lighter weight, suitable for more occasions.
2. Effectively control the action speed and the pressure signal transmission from pneumatic device.
3. Simple push-lock, operation.
4. Adjust quickly, easily and accurately.
5. Excellent flow rate characteristic, high sensitivity and easy to adjust.
6. Options of Meter-out and meter-in, applicable for every type actuator.
7. Effectively prevent from corrosion and pollution by nickle plated copper.
8. The sealant being coated on threaded portion can ensure no leakage of the threaded connection part.

Symbol

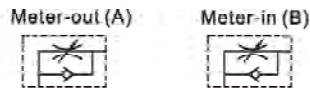


Table for interface port and tube O.D.

Product series	Thread type	Port size	
		$\Phi 4$	$\Phi 6$
PTL	M5	●	●
	1/8"	●	●

Selection, Installation and Operation

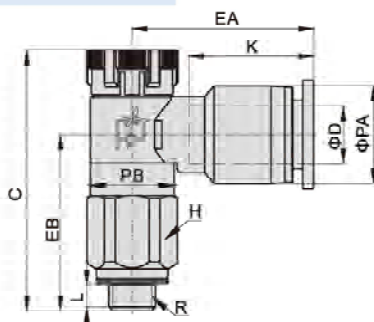
1. The rotation torque of the push-lock speed controller cap should not be too large to avoid damage.
It is recommended to use the torque below.

Thread size	Recommended torque(N.m)
M5	0.05
1/8"	0.08

2. Push-lock speed controller installation instructions is the same as general one. Please refer to general type for specific content.

Dimensions

PTL Mini series



Model/Item [Note1]	ΦD	R	ΦPA	ΦPB	L	C		K	EA	EB	H	Weight (g)
						Pull	Push					
PTL4M5□-M	4	M5×0.8	8.5	9	3.5	29.5	28	12.5	16.5	19	9	5
PTL401□-M		1/8"	8.5	9	3.5	29.5	28	12.5	16.5	19	10	11
PTL6M5□-M	6	M5×0.8	10.5	9	3.5	29.5	28	13.5	19.5	19	9	6.2
PTL601□-M		1/8"	10.5	9	3.5	29.5	28	13.5	19.5	19	10	12




[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.

PTL series

Ordering code

PTL 6 01 A □ □

① ② ③ ④ ⑤ ⑥

① Model	② Port size	③ Thread connection	④ Control method	⑤ Standard color	⑥ Thread type	
PTL: Speed controller (Push lock) 	6: $\Phi 6$ mm	01: 1/8"	A: Meter-out  Handle marking "A" Controlled flow Free flow	Standard color: Specification Blank: Gray	Blank: PT	
		02: 1/4" 03: 3/8"				
	8: $\Phi 8$ mm	01: 1/8"	02: 1/4" 04: 1/2"	B: Meter-in  Handle marking "B" Free flow Controlled flow		D: Black
		03: 3/8" 04: 1/2"				
10: $\Phi 10$ mm	02: 1/4" 03: 3/8" 04: 1/2"			Release button: Black Body: Black		
12: $\Phi 12$ mm	03: 3/8" 04: 1/2"					

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Product feature

1. Compare with standard speed controller, smaller size, lighter weight, suitable for more occasions.
2. Effectively control the action speed and the pressure signal transmission from pneumatic device.
3. Simple push-lock, operation.
4. Adjust quickly, easily and accurately.
5. Excellent flow rate characteristic, high sensitivity and easy to adjust.
6. Options of Meter-out and meter-in, applicable for every type actuator.
7. Effectively prevent from corrosion and pollution by nickle plated copper.
8. The sealant being coated on threaded portion can ensure no leakage of the threaded connection part.

Symbol

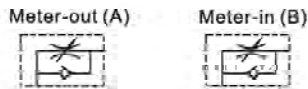


Table for interface port and tube O.D.

Product series	Thread type	Port size			
		$\Phi 6$	$\Phi 8$	$\Phi 10$	$\Phi 12$
PTL	1/8"	●	●		
	1/4"	●	●	●	
	3/8"	●	●	●	●
	1/2"		●	●	●

Selection, Installation and Operation

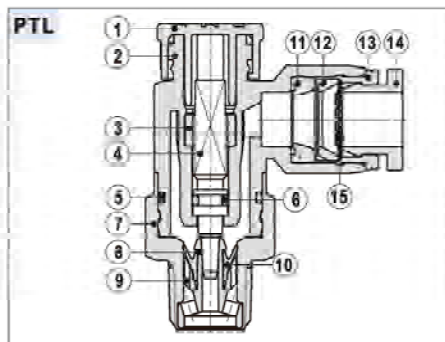
1. The rotation torque of the push-lock speed controller cap should not be too large to avoid damage.

It is recommended to use the torque below.

Thread size	Recommended torque(N.m)
1/8"	0.08
1/4"	0.16
3/8"	0.24
1/2"	0.32

2. Push-lock speed controller installation instructions is the same as general one. Please refer to general type for specific content.

Inner structure

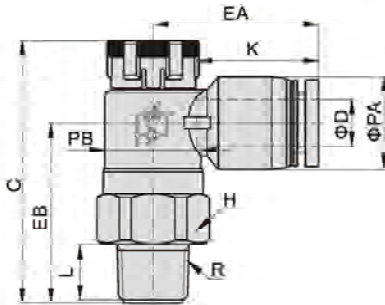


NO.	Name	Material	NO.	Name	Material
1	Adjusting cap	POM	9	Holder	PBT
2	Plastic body	PBT	10	O-ring	NBR
3	Locating ring	Aluminum alloy	11	O-ring	NBR
4	Throttling column	Aluminum alloy	12	Locating seat	POM
5	O-ring	NBR	13	Locating ring	Aluminum alloy
6	O-ring	NBR	14	Plastic interface	POM
7	Throttling body	Brass	15	Spring gasket	Stainless steel
8	Throttling sleeve	Aluminum alloy			

PTL series

Dimensions

PTL Series

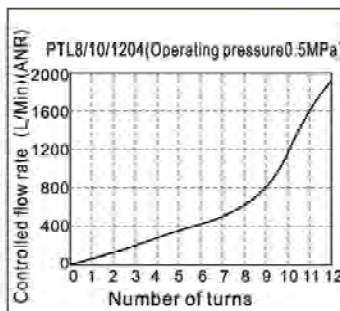
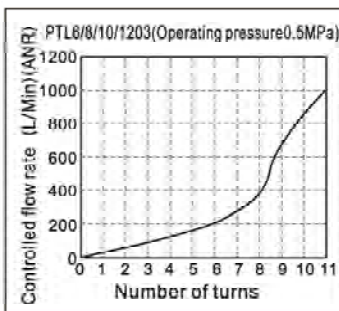
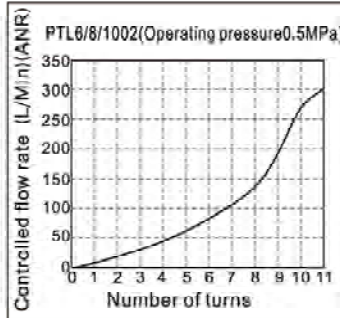
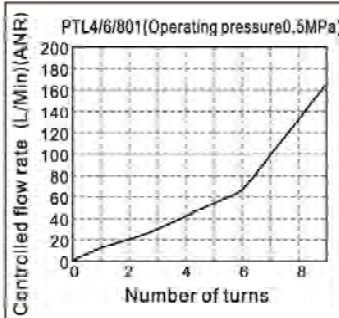
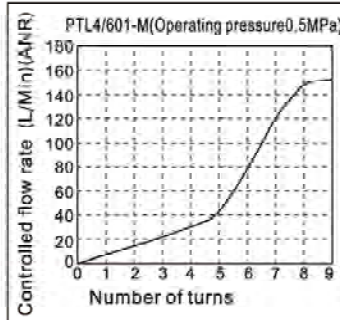
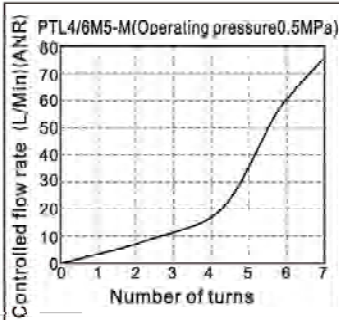


Model\Item [Note1]	φD	R	φPA	φPB	L	C		K	EA	EB	H	Weight (g)
						Pull	Push					
PTL601□	6	1/8"	12.5	13	8.5	36	34.5	16.5	22.5	23.5	14	12.5
PTL602□		1/4"	12.5	16.5	11	40.5	39	16.5	24	28	17	19.5
PTL603□		3/8"	12.5	19	12	44	42.5	16.5	25.5	31	19	28.5
PTL801□	8	1/8"	15	13	8.5	36	34.5	18.5	24.5	22.5	14	13
PTL802□		1/4"	15	16.5	11	40.5	39	18.5	26	27	17	20.5
PTL803□		3/8"	15	19	12	44	42.5	18.5	27	30	19	29
PTL804□		1/2"	15	24	15	52.5	51	18.5	29.5	37.5	24	49
PTL1002□	10	1/4"	18	16.5	11	40.5	39	21	31	26	17	22
PTL1003□		3/8"	18	19	12	44	42.5	21	29	29	19	30.5
PTL1004□		1/2"	18	24	15	52.5	51	21	31.5	36.5	24	50.5
PTL1203□	12	3/8"	21	19	12	44	42.5	23	34.5	28	19	32.5
PTL1204□		1/2"	21	24	15	52.5	51	23	34	36	24	53

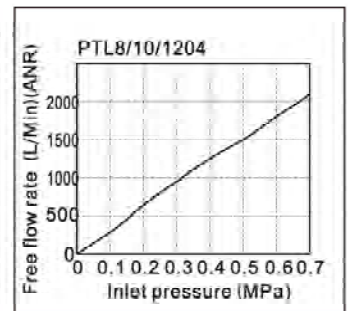
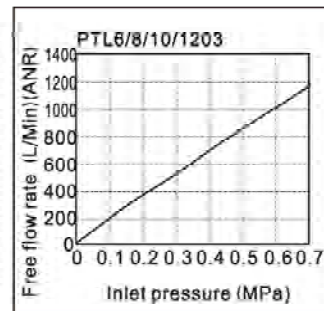
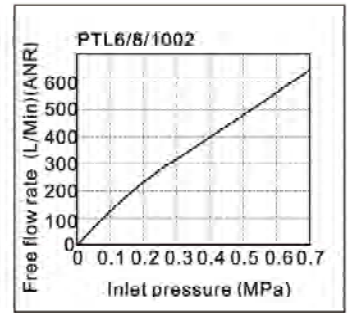
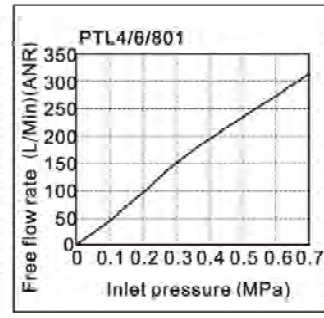
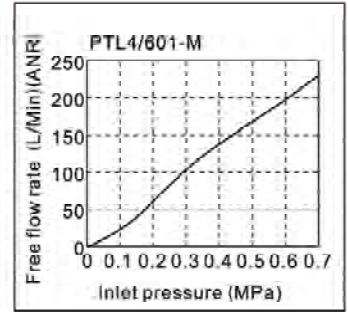
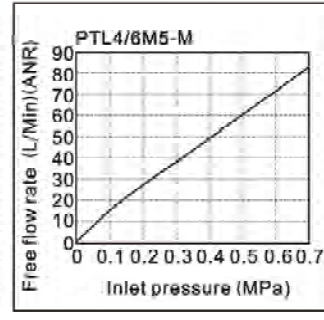
[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.

Flowrate characteristic

Controlled flow rate



Free flow rate



PHV series



Specification

Model	PHV6	PHV8	PHV10	PHV12
Operating pressure range	0~10kg/cm ² (0~1.0MPa)			
Negative pressure	-750mmHg(10Torr)			
Proof pressure	1.5MPa			
Ambient and fluid temperature (°C)	-20~70			
Applicable tubing	Soft nylon or polyurethane			
Color	Grey/black			

Symbol



Product feature

1. PHV series product doesn't contain brass, so can be used for forbidding brass condition.
2. When the three-way valve is closed, the outlet pressure is released, which facilitates in commissioning and maintenance.
3. The finger valve has excellent flow characteristic and high sensitive uni-direction characteristic.

Ordering code

PHV 6 A □



① Fitting type	② Port size	③ Valve specification		④ Standard color
PHV: Finger valve	6: Φ 6mm	A: Three-way Knob identifier "A"	B: Two-way Knob identifier "B"	Blank: Gray(Release button: Gray Body: Gray) D: Black(Release button: Black Body: Black)
	8: Φ 8mm			
	10: Φ 10mm			
	12: Φ 12mm			

Diagram of finger valve in the open and closed states

Closed state

Valve is closed, when the angle between the arrow on knob and the arrow on valve body is 90 degree

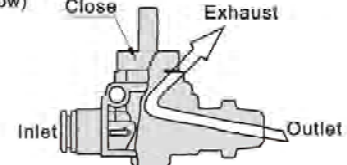


Opened state

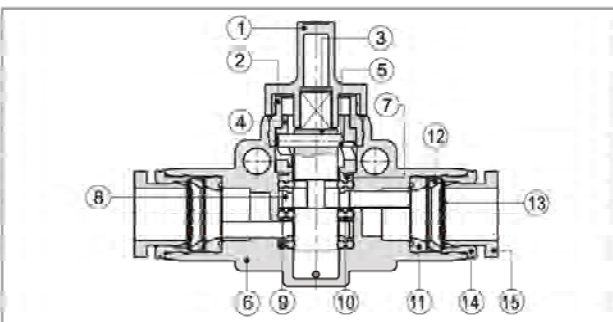
Valve is open, when the direction of the arrow on commutation knob is consistent with that on valve body.



When the three-way valve is closed, the outlet pressure is released, which facilitates in commissioning and maintenance. (as figure below)

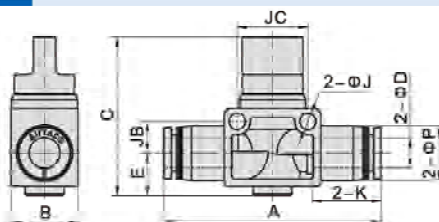


Inner structure



NO.	Name	Material	NO.	Name	Material
1	Knob	POM	9	Special shape O-ring	NBR
2	Fixing ring	Aluminum alloy	10	Spacer ring	Aluminum alloy
3	Spool	Aluminum alloy	11	Special shape O-ring	NBR
4	Cam groove block	POM	12	Locating seat	POM
5	Pin	Stainless steel	13	Spring gasket	Stainless steel
6	Plastic body	PBT	14	Locating ring	Aluminum alloy
7	Locating block	Aluminum alloy	15	Plastic interface	POM
8	Spacer	POM			

Dimensions



Model/Item	ΦD	A	B	C	ΦP	K	E	ΦJ	JB	JC	Weight(g)
PHV6□	6	51.5	17	40.5	12.5	16.5	10	4.3	8	18	14.3
PHV8□	8	58.5	18	42.5	15	18.5	11.5	4.3	8.5	19	17.5
PHV10□	10	66	21	42	18	21	11	4.3	11	24	25.1
PHV12□	12	71	22	46	21	23	13	4.3	11	24	31.4

Notes: "□" indicates "A" or "B", "A" indicates three-way, and "B" indicates two-way. The two kinds of valve have same dimensions.

PC, POC series

Ordering code

PC 6 01 □ □ - S

① ② ③ ④ ⑤ ⑥

① Model	② Port size	③ Thread connection	④ Standard color	⑤ Thread type	⑥ Material
PC: Male connector 	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm	Thread connection: Adaptable port size M5: M5X0.8 01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Standard color: Blank: Grey Release button: Grey D: Black Release button: Black	Specification: Blank: PT	S: Stainless steel 304
POC: Male connector 	10: Φ 10mm 12: Φ 12mm	Φ 4, Φ 6 Φ 8, Φ 10 Φ 12			

Specification

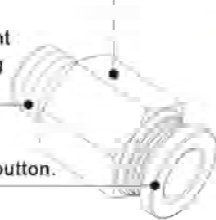
Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Table for interface port and tube O.D.

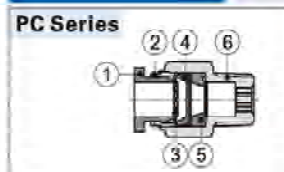
Product series	Thread type	Port size				
		Φ 4	Φ 6	Φ 8	Φ 10	Φ 12
PC	M5	●	●			
	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
	3/8"		●	●	●	●
	1/2"		●	●	●	●
POC	M5	●	●			
	1/8"	●	●	●	●	
	1/4"	●	●	●	●	●
	3/8"			●	●	●
	1/2"				●	●

Product feature

1. Body material is stainless steel, and all parts don't contain copper.
2. The threaded portion is covered with sealant and the M5 thread is attached with a sealing gasket to prevent air leakage over the connection thread portion.
3. Grey and black are optional for the release button.



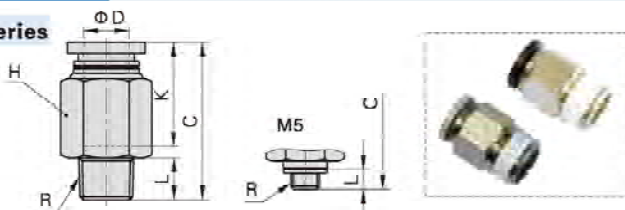
Inner structure



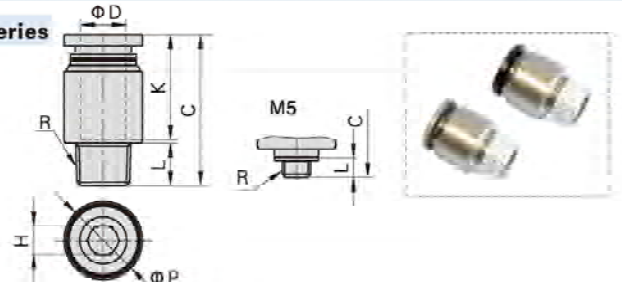
No.	Item	Material
1	Release button	POM
2	Guide	Aluminum alloy
3	Spring gasket	Stainless steel
4	Chuck	POM
5	O-ring	NBR
6	Body	Stainless steel 304

Dimensions

PC Series



POC Series



Model/Item	Φ D	R	L	C	K	H(Across flat)	Weight(g)
PC4M5	4	M5×0.8	3.5	19.5	14	9	6
PC401		1/8"	7.5	19.5	14	10	6.5
PC402		1/4"	10	19.5	14	14	12.5
PC6M5	6	M5×0.8	3.5	22.5	16.5	12	8
PC601		1/8"	7.5	22.0	18.5	12	7
PC602		1/4"	10	24.5	18.5	14	14.5
PC603		3/8"	11	22.5	18.5	17	22
PC604		1/2"	14	26.0	18.5	21	42
PC801	8	1/8"	7.5	28	18.5	14	12.5
PC802		1/4"	10	27	18.5	14	12
PC803		3/8"	11	23.5	18.5	17	19.5
PC804		1/2"	14	27	18.5	21	40
PC1001	10	1/8"	7.5	30	21	17	19
PC1002		1/4"	10	32.5	21	17	22
PC1003		3/8"	11	28	21	17	19
PC1004	12	1/2"	14	26.5	21	21	33
PC1201		1/8"	7.5	32.5	23	21	35.5
PC1202		1/4"	10	35	23	21	37.5
PC1203		3/8"	11	30.5	23	21	26.5
PC1204	1/2"	14	32.5	23	21	38.5	

Model/Item	Φ D	R	Φ P	L	C	K	H(Across flat)	Weight(g)
POC4M5	4	M5×0.8	9	3.5	18.5	14	2.5	3.5
POC401		1/8"	10	7.5	18	14	3	5
POC402		1/4"	14	10	19.5	14	3	11.5
POC6M5	6	M5×0.8	12	3.5	21.5	16.5	2.5	5.5
POC601		1/8"	12	7.5	22.0	18.5	4	6
POC602		1/4"	14	10	22.0	18.5	4	11
POC601		1/8"	14	7.5	26.5	18	5	9
POC602		1/4"	14	10	25	18	6	9.5
POC803	8	3/8"	17	11	23.5	18	6	18
POC1001		1/8"	17	7.5	30	21	5	15.5
POC1002		1/4"	17	10	29	21	6	14.5
POC1003		3/8"	17	11	28	21	6	17.5
POC1004	10	1/2"	21	14	26.5	21	8	32.5
POC1202		1/4"	21	10	34.5	23	6	30
POC1203		3/8"	21	11	30	23	8	23
POC1204	1/2"	21	14	32	23	8	34.5	

Accessories—One-Touch Fittings(Stainless steel)

One-touch fittings—threaded type

Ordering code

Same diameter type fittings

PL 6 01 □ □ - S

① ② ③ ④ ⑤ ⑥

① Model	② Port size	③ Thread connection	④ Standard color	⑤ Thread type	⑥ Material
PHW: Double universal male elbow 	PL: Male elbow 	Thread connection: Adaptable port size	Standard color: Specification	Adaptable model	
PHF: Universal female elbow 	PLL: Extended male elbow 	M5: M5X0.8	Blank: Gray	Release button: Gray	PGF PMF
PEB: Male branch tee 	PZB: Threaded cross 	④: Φ4mm ⑥: Φ6mm ⑧: Φ8mm ⑩: Φ10mm ⑫: Φ12mm	Body: Gray	Release button: Gray	Others
PED: Male run tee 	PH: Universal male elbow 	01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	D: Black	Release button: Black	PGF PMF
PYB: Branch "Y" 				Release button: Black	Others
				Body: Black	
				Blank: PT	S: Stainless steel 304

Different diameter type fittings

PKD 6 - 4 01 □ □ - S

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Port size	③ Port size	④ Thread connection	⑤ Standard color	⑥ Thread type	⑦ Material
PKD: Male reducer triple branch 	⑥: Φ6mm ⑧: Φ8mm ⑩: Φ10mm	④: Φ4mm ⑥: Φ6mm ⑧: Φ8mm	01: 1/8" 02: 1/4" 03: 3/8"	Standard color: Specification		S: Stainless steel 304
				Blank: Gray	Release button: Gray/Body: Gray	Blank: PT
				D: Black	Release button: Black/Body: Black	

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Product feature

1. Stainless steel 304 material can be used for forbidding copper condition.
2. Variable models can be widely used in every kind of pneumatic systems.
3. High circulation performance: bear the same flow with the volume of the tubing inside diameter.
4. Connect tubing easily and conveniently. The tubing connection portion is safe and durable.
5. The threaded portion is covered with sealant and the M5 thread is attached with a sealing gasket to prevent air leakage over the connection thread portion.

Inner structure

No.	Item	Material
1	Release button	POM
2	Guide	Aluminum alloy
3	Spring gasket	Stainless steel
4	Chuck	POM
5	O-ring	NBR
6	Body	PBT
7	O-ring	NBR
8	Stud	SUS304

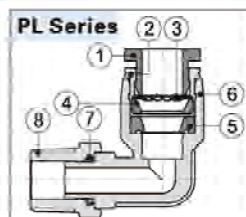


Table for interface port and tube O.D.

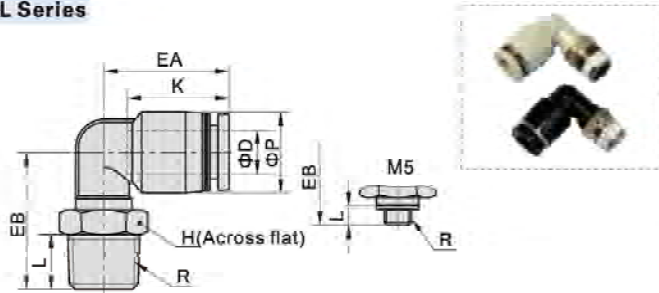
Product series	Thread type	Port size					Product series	Thread type	Port size		
		Φ4	Φ6	Φ8	Φ10	Φ12			Φ6-Φ4	Φ8-Φ6	Φ10-Φ8
PL	M5	●	●				PKD	1/8"	●		
	1/8"	●	●	●	●	●		1/4"		●	
	1/4"	●	●	●	●	●		3/8"			●
	3/8"	●	●	●	●	●					
	1/2"	●	●	●	●	●					
PLL	M5	●	●								
	1/8"	●	●	●	●						
	1/4"	●	●	●	●	●					
	3/8"	●	●	●	●	●					
PEB PED PYB	M5	●	●								
	1/8"	●	●	●	●						
	1/4"	●	●	●	●	●					
	3/8"	●	●	●	●	●					
PH PHF	1/2"	●	●	●	●	●					
	M5	●	●								
	1/8"	●	●	●	●						
	1/4"	●	●	●	●	●					
PHW	3/8"	●	●	●	●	●					
	1/2"	●	●	●	●	●					
	1/8"	●	●	●	●	●					
	1/4"	●	●	●	●	●					
PZB	3/8"	●	●	●	●	●					
	1/2"	●	●	●	●	●					
	1/8"	●	●	●	●	●					

Accessories—One-Touch Fittings(Stainless steel)

One-touch fittings—threaded type

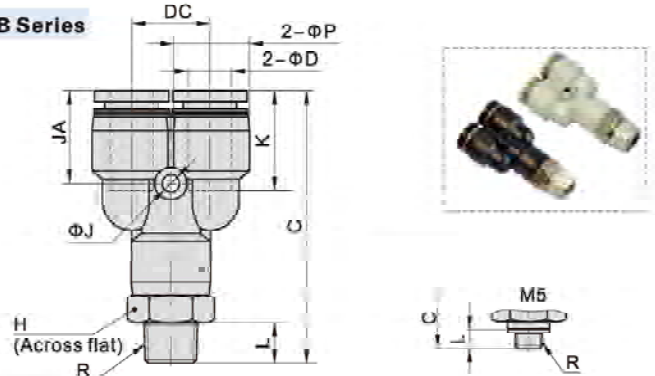
Dimensions

PL Series



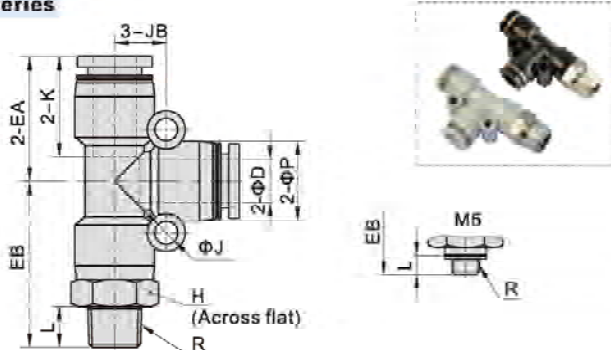
Model/Item	ΦD	R	ΦP	L	K	EA	EB	H	Weight(g)
PL4M5	4	M5×0.8	9	3.5	14	17	15	8	3
PL401		1/8"	9	7.5	14	17	18.5	10	4.5
PL402		1/4"	9	10	14	17	22.0	14	11
PL6M5	6	M5×0.8	12.5	3.5	17	20	17.0	8	4.5
PL601		1/8"	12.5	7.5	17	20	20.5	10	6
PL602		1/4"	12.5	10	17	20	24.0	14	12.5
PL603	6	3/8"	12.5	11	17	20	25.5	17	19
PL604		1/2"	12.5	14	17	20	30.0	21	33
PL801		1/8"	15	7.5	18.5	23	20.5	10	7
PL802	8	1/4"	15	10	18.5	23	25.0	14	12
PL803		3/8"	15	11	18.5	23	26.5	17	19.5
PL804		1/2"	15	14	18.5	23	31.0	21	33
PL1001	10	1/8"	18	7.5	21	25.5	25.0	17	15.5
PL1002		1/4"	18	10	21	25.5	27.0	17	18
PL1003		3/8"	18	11	21	25.5	28.0	17	20
PL1004	10	1/2"	18	14	21	25.5	32.5	21	34.5
PL1201		1/8"	21	7.5	23	28.5	26.5	17	18
PL1202		12	1/4"	21	10	23	28.5	28.5	17
PL1203	3/8"		21	11	23	29.5	33	17	24
PL1204	1/2"		21	14	23	29.5	34	21	34.5

PYB Series



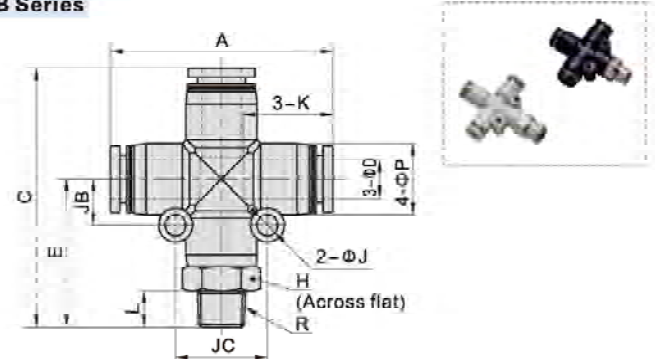
Model/Item	ΦD	R	ΦP	L	C	K	ΦJ	JA	DC	H	Weight(g)	
PYB4M5	4	M5×0.8	9	3.5	35.5	14	3.2	13	10	9	6.5	
PYB401		1/8"	9	7.5	39.5	14	3.2	13	10	10	8.5	
PYB402		1/4"	9	10	42.5	14	3.2	13	10	14	10	
PYB6M5	6	M5×0.8	12.5	3.5	40.5	16.5	3.2	15.5	12	12	10.5	
PYB601		1/8"	12.5	7.5	44.5	16.5	3.2	15.5	12	12	13	
PYB602		1/4"	12.5	10	47.5	16.5	3.2	15.5	12	14	17	
PYB603	6	3/8"	12.5	11	49.0	16.5	3.2	15.5	12	17	23.5	
PYB801		1/8"	15	7.5	50	18.5	3.2	17	14.5	14	19	
PYB802		8	1/4"	15	10	52.5	18.5	3.2	17	14.5	14	21
PYB803	3/8"		15	11	54	18.5	3.2	17	14.5	17	26	
PYB804	1/2"		15	14	58	18.5	3.2	17	14.5	21	38	
PYB1001	10	1/8"	18	7.5	56.5	21	4.3	19.5	18	17	26	
PYB1002		1/4"	18	10	59	21	4.3	19.5	18	17	28	
PYB1003		3/8"	18	11	60	21	4.3	19.5	18	17	31	
PYB1004	10	1/2"	18	14	64	21	4.3	19.5	18	21	42.5	
PYB1202		12	1/4"	21	10	66	23	4.3	21	20.5	21	26.5
PYB1203			3/8"	21	11	67	23	4.3	21	20.5	21	49
PYB1204	1/2"		21	14	70	23	4.3	21	20.5	21	53.5	

PED Series



Model/Item	ΦD	R	ΦP	L	K	EA	EB	ΦJ	JB	H	Weight(g)	
PED4M5	4	M5×0.8	9	3.5	14	17	21	3.2	6.5	9	6.5	
PED401		1/8"	9	7.5	14	17	25	3.2	6.5	10	8.5	
PED402		1/4"	9	10	14	17	28	3.2	6.5	14	14.5	
PED6M5	6	M5×0.8	12.5	3.5	16.5	20	23.5	3.2	8	12	10.5	
PED601		1/8"	12.5	7.5	16.5	20	27.5	3.2	8	12	13	
PED602		1/4"	12.5	10	16.5	20	30.5	3.2	8	14	17.5	
PED603	6	3/8"	12.5	11	16.5	20	32	3.2	8	17	23.5	
PED801		1/8"	15	7.5	18.5	23	30.5	4.3	9.5	14	17.5	
PED802		8	1/4"	15	10	18.5	23	33	4.3	9.5	14	20
PED803	3/8"		15	11	18.5	23	34.5	4.3	9.5	17	26.5	
PED804	1/2"		15	14	18.5	23	38.5	4.3	9.5	21	38	
PED1001	10	1/8"	18	7.5	21	26.5	34	4.3	11	17	25.5	
PED1002		1/4"	18	10	21	28.5	36.5	4.3	11	17	27.5	
PED1003		3/8"	18	11	21	28.5	37.5	4.3	11	17	30	
PED1004	10	1/2"	18	14	21	26.5	41.5	4.3	11	21	42.5	
PED1202		12	1/4"	21	10	23	30	41	4.3	13	21	47
PED1203			3/8"	21	11	23	30	42	4.3	13	21	48.5
PED1204	1/2"		21	14	23	30	45	4.3	13	21	54	

PZB Series

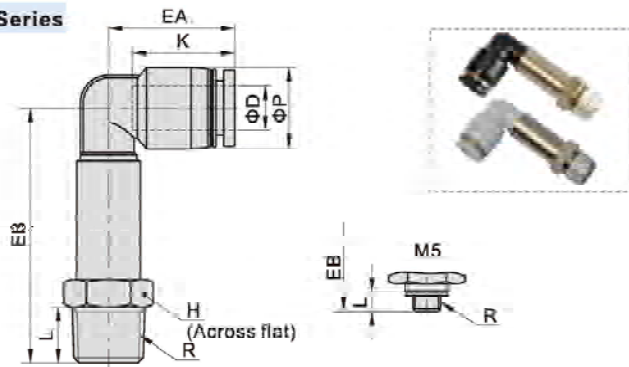


Model/Item	ΦD	R	L	A	E	C	ΦP	K	ΦJ	JB	JC	H	Weight(g)
PZB601	6	1/8"	7.5		27.5	47.5						12	14.5
PZB602		1/4"	10	39.5	30.5	50.5	12.5	16.5	3.2	8	16	14	19.5
PZB603		3/8"	11		32	52						17	25.5
PZB801	8	1/8"	7.5		30.5	53.5						14	20
PZB802		1/4"	10		33	56						14	22.5
PZB803		3/8"	11	46	34.5	57.5	15	18.5	4.3	9.5	19	17	28
PZB804	8	1/2"	14		38.5	61.5						21	40.5
PZB1002		1/4"	10		36.5	63						17	32
PZB1003		10	3/8"	11	52.5	37.5	64	18	21	4.3	11	22	17
PZB1004	1/2"		14		41.5	68						21	46.5
PZB1203	12		3/8"	11		42	72					21	53.5
PZB1204		1/2"	14	59.5	45	75	21	23	4.3	13	26	21	62

Accessories—One-Touch Fittings(Stainless steel)

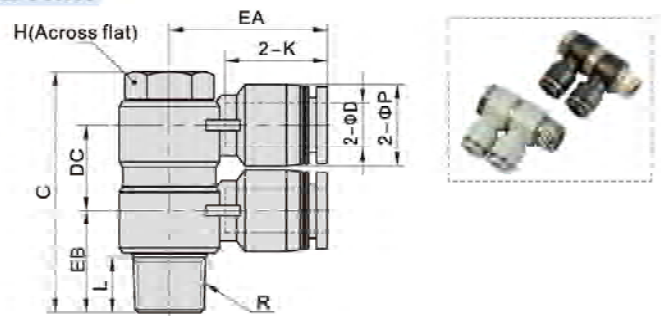
One-touch fittings—threaded type

PLL Series



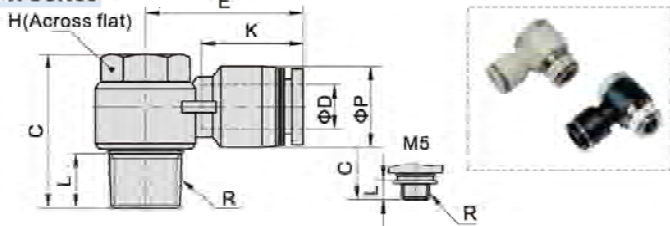
Model\Item	ΦD	R	ΦP	L	K	EA	EB	H	Weight(g)
PLL4M5	4	M5×0.8	9	3.5	14	17	32.5	8	8
PLL401		1/8"	9	7.5	14	17	35.5	10	11.5
PLL402		1/4"	9	10	14	17	38.5	14	15.5
PLL6M5	6	M5×0.8	12.5	3.5	17	20	34.5	8	9.5
PLL601		1/8"	12.5	7.5	17	20	37.5	10	12
PLL602		1/4"	12.5	10	17	20	40.5	14	16.5
PLL603	8	3/8"	12.5	11	17	20	43	17	21.5
PLL801		1/8"	15	7.5	18.5	23	43.5	12	15.5
PLL802		1/4"	15	10	18.5	23	45.5	14	21
PLL803	10	3/8"	15	11	18.5	23	48	17	25.5
PLL1001		1/8"	18	7.5	21	25.5	50.5	15	35
PLL1002		1/4"	18	10	21	25.5	53.5	15	37.5
PLL1003	12	3/8"	18	11	21	25.5	54.5	17	38
PLL1004		1/2"	18	14	21	25.5	59	21	44
PLL1202		1/4"	21	10	23	28.5	55.5	15	40
PLL1203	12	3/8"	21	11	23	29.5	60	17	61.5
PLL1204		1/2"	21	14	23	29.5	63	21	62.5

PHW Series



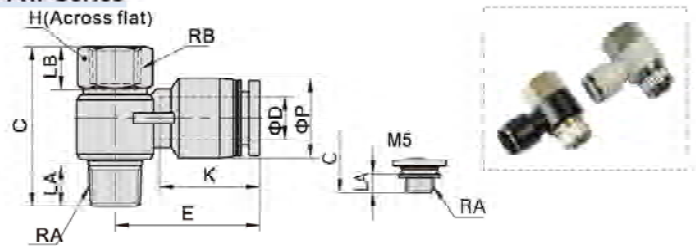
Model\Item	ΦD	R	ΦP	L	C	K	EA	EB	DC	H	Weight(g)
PHW401	4	1/8"	9	7.5	38	14	20.5	14.5	13	11	17.5
PHW601		1/8"	12.5	7.5	38	16.5	23.0	15	13	11	19.5
PHW602	6	1/4"	12.5	10	43.5	18.5	25.0	17.5	15.5	14	37.5
PHW603		3/8"	12.5	11	50	16.5	27.0	20	16.5	19	64
PHW801		1/8"	15	7.5	40.5	18.5	26.5	16.5	15.5	11	22.5
PHW802	8	1/4"	15	10	43.5	18.5	28.5	18.5	15.5	14	38
PHW803		3/8"	15	11	50	18.5	29.5	20	16.5	19	65
PHW804		1/2"	15	14	61	18.5	32	24.5	22	24	133.5
PHW1002	10	1/4"	18	10	46.5	21	31	20	18.5	14	44
PHW1003		3/8"	18	11	55	21	33	21	22	19	81.5
PHW1004		1/2"	18	14	61	21	35.5	25	22	24	127.5
PHW1203	12	3/8"	21	11	55	23	36	23	22	19	80.5
PHW1204		1/2"	21	14	61	23	38	26.5	22	24	137.5

PH Series



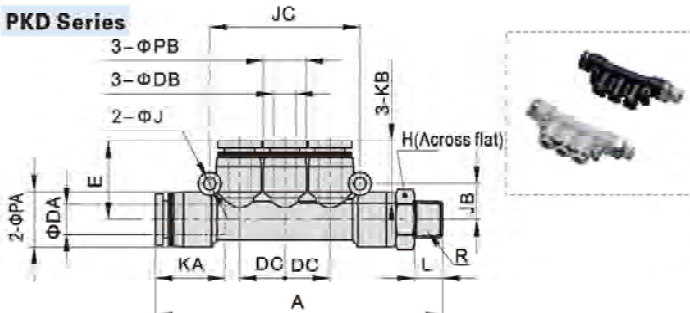
Model\Item	ΦD	R	ΦP	L	C	K	E	H	Weight(g)
PH4M5	4	M5×0.8	9	3.5	17	14	19	8	6.5
PH401		1/8"	9	7.5	25	14	20.5	11	12
PH6M5	6	M5×0.8	12.5	3.5	17	16.5	23.5	8	6.5
PH601		1/8"	12.5	7.5	25	16.5	23	11	13
PH602		1/4"	12.5	10	28	16.5	25	14	23.5
PH603	8	3/8"	12.5	11	33	16.5	27	19	48.5
PH801		1/8"	15	7.5	25	18.5	26.5	11	14
PH802		1/4"	15	10	28	18.5	28.5	14	24.5
PH803	10	3/8"	15	11	33	18.5	29.5	19	45.5
PH804		1/2"	15	14	39	18.5	32	24	82
PH1002		1/4"	18	10	28	21	31	14	26
PH1003	12	3/8"	18	11	33	21	33	19	47.5
PH1004		1/2"	18	14	39	21	35.5	24	81.5
PH1203		3/8"	21	11	33	23	36	19	49.5
PH1204	12	1/2"	21	14	39	23	38	24	86

PHF Series



Model\Item	ΦD	RA	RB	ΦP	LA	LB	C	K	E	H	Weight(g)
PHF4M5	4	M5×0.8	M5×0.8	9	3.5	6	20	14	19	8	6
PHF401		1/8"	1/8"	9	7.5	8	29.5	14	20.5	12	12
PHF6M5	6	M5×0.8	M5×0.8	12.5	3.5	6	20	16.5	23.5	8	7
PHF601		1/8"	1/8"	12.5	7.5	8	29.5	16.5	23	12	13
PHF602		1/4"	1/4"	12.5	10	11	35	16.5	25	17	28
PHF603	8	3/8"	3/8"	12.5	11	12	40	16.5	27	19	41
PHF801		1/8"	1/8"	15	7.5	8	29.5	18.5	26.5	12	14
PHF802		1/4"	1/4"	15	10	11	35	18.5	28.5	17	28.5
PHF803	10	3/8"	3/8"	15	11	12	40	18.5	29.5	19	41.5
PHF804		1/2"	1/2"	15	14	13.5	47.5	18.5	32	24	78
PHF1002		1/4"	1/4"	18	10	11	35	21	31	17	30
PHF1003	12	3/8"	3/8"	18	11	12	40	21	33	19	43
PHF1004		1/2"	1/2"	18	14	13.5	47.5	21	35.5	24	79.5
PHF1203		3/8"	3/8"	21	11	12	40	23	36	19	45
PHF1204	12	1/2"	1/2"	21	14	13.5	47.5	23	38	24	83

PKD Series



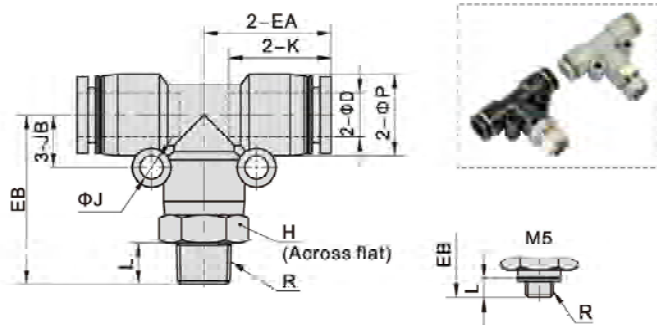
Model\Item	ΦDA	ΦDB	R	L	A	ΦPA	ΦPB	KA
PKD6-401	6	4	1/8"	7.5	66.5	12.5	9	16.5
PKD8-602	8	6	1/4"	10	79	15	12.5	18.5
PKD10-803	10	8	3/8"	11	91.5	18	15	21

Model\Item	KB	ΦJ	JB	JC	DC	E	H	Weight(g)
PKD6-401	14	3.2	8	34	10	17.5	12	15
PKD8-602	16.5	3.2	9.5	40	12	21	14	25.5
PKD10-803	18.5	4.3	11	48	14.5	24	17	36.5

Accessories—One-Touch Fittings(Stainless steel)

One-touch fittings—threaded type

PEB Series



Model/Item	φD	R	φP	L	K	EA	EB	φJ	JB	H	Weight(g)
PEB4M5	4	M5×0.8	9	3.5	14	17	21	3.2	6.5	9	6.5
PEB401		1/8"	9	7.5	14	17	25	3.2	6.5	10	8.5
PEB402		1/4"	9	10	14	17	28	3.2	6.5	14	14.5
PEB6M5	6	M5×0.8	12.5	3.5	16.5	20	23.5	3.2	8	12	10.5
PEB601		1/8"	12.5	7.5	16.5	20	27.5	3.2	8	12	13
PEB602		1/4"	12.5	10	16.5	20	30.5	3.2	8	14	17.5
PEB603		3/8"	12.5	11	16.5	20	32	3.2	8	17	23.5
PEB801	8	1/8"	15	7.5	18.5	23	30.5	4.3	9.5	14	17.5
PEB802		1/4"	15	10	18.5	23	33	4.3	9.5	14	20
PEB803		3/8"	15	11	18.5	23	34.5	4.3	9.5	17	26.5
PEB804		1/2"	15	14	18.5	23	38.5	4.3	9.5	21	38
PEB1001		1/8"	18	7.5	21	26.5	34	4.3	11	17	25.5
PEB1002	10	1/4"	18	10	21	26.5	36.5	4.3	11	17	27.5
PEB1003		3/8"	18	11	21	26.5	37.5	4.3	11	17	30
PEB1004		1/2"	18	14	21	26.5	41.5	4.3	11	21	42.5
PEB1202		1/4"	21	10	23	30	41	4.3	13	21	47
PEB1203	12	3/8"	21	11	23	30	42	4.3	13	21	48.5
PEB1204		1/2"	21	14	23	30	45	4.3	13	21	54

One-touch fittings—threaded type

Ordering code

BB 01 01 □ - S

① ② ③ ④ ⑤

① Model	② Thread connection I	③ Thread connection II	④ Thread type	⑤ Material			
BB: Male connector 	BD: Male & female connector[Note1] 	BU: Double female connector 	BZ: Hexagon head cap plug[Note2] 	01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Blank: PT	S: SUS304

[Note1] For BD series, Thread I is Female thread, Thread II is male thread; [Note2] For BZ series, no thread II and thread I is male thread.

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	3.0MPa
Ambient and fluid temperature (°C)	0~150

Configuration table of tubing thread

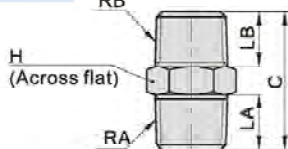
Product series	Thread connection I	Thread connection II			
		01	02	03	04
BB	01	●	●	●	
	02		●	●	●
	03			●	●
	04				●
BD	01		●	●	●
	02			●	●
	03				●
	04				
BU	01	●			
	02		●		
	03			●	
	04				●
Product series	Thread connection				
	01	02	03	04	
BZ	●	●	●	●	

Product feature

1. Variable models can be widely used in every kind of pneumatic systems.
2. High circulation performance bear the same flow with the volume of the tube inner diameter.
3. Metal fittings can be used in high temperature environment.

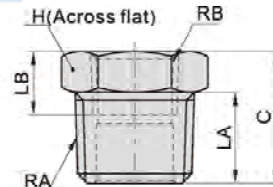
Dimensions

BB Series



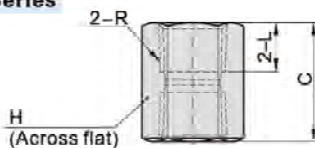
Model\Item	RA	RB	LA	LB	C	H	Weight(g)
BB0101	1/8"	1/8"	7.5	7.5	19.5	10	6
BB0102	1/4"	1/8"	10	7.5	22.5	14	11
BB0103	3/8"	1/8"	11	7.5	24	17	17
BB0202	1/4"	1/4"	10	10	25	14	13.5
BB0203	3/8"	1/4"	11	10	26.5	17	19
BB0204	1/2"	1/4"	14	10	30	21	31.5
BB0303	3/8"	3/8"	11	11	27.5	17	21.5
BB0304	1/2"	3/8"	14	11	31	21	33
BB0404	1/2"	1/2"	14	14	34	21	39.5

BD Series



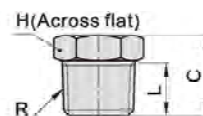
Model\Item	RA	RB	LA	LB	C	H	Weight(g)
BD0102	1/4"	1/8"	10	8	14.5	14	8
BD0103	3/8"	1/8"	11	8	16	17	15.5
BD0104	1/2"	1/8"	14	8	19.5	21	31
BD0203	3/8"	1/4"	11	11	16	17	11.5
BD0204	1/2"	1/4"	14	11	19.5	21	28
BD0304	1/2"	3/8"	14	12	19.5	21	20.5

BU Series



Model\Item	R	L	C	H	Weight(g)
BU0101	1/8"	8	17	12	8
BU0202	1/4"	11	23	17	23.5
BU0303	3/8"	12	25	21	36.5
BU0404	1/2"	13.5	28	24	42.5

BZ Series




Model\Item	R	L	C	H	Weight(g)
BZ01	1/8"	7.5	11	10	4
BZ02	1/4"	10	14.5	14	10
BZ03	3/8"	11	16	17	16.5
BZ04	1/2"	14	19.5	21	30

One-touch fittings—threaded type

Ordering code

BKC 06 04 - 01 □ - S

① ② ③ ④ ⑤ ⑥

① Model	② Tubing outer diameter	③ Tubing inner diameter	④ Thread connection	⑤ Thread type	⑥ Material
BKC: Straight locknut connector 	04: Φ4mm 06: Φ6mm 08: Φ8mm 10: Φ10mm 12: Φ12mm	25: Φ2.5mm 04: Φ4mm 05: Φ5mm 06: Φ6mm 65: Φ6.5mm 07: Φ7.5mm 08: Φ8mm 09: Φ9mm	M3: M3X0.5 M5: M5X0.8 01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Blank: PT	S: SUS304

Note: When using the tubing Φ8×Φ5.5, the straight lock nut connector of BKC0806can be used.

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	3.0MPa
Ambient and fluid temperature (°C)	0~150

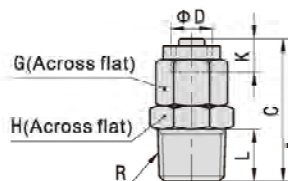
Note: The temperature resistance level of the tubing should be confirmed first when used in high temperature environments.

Product feature

1. Variable models can be widely used in every kind of pneumatic systems.
2. High circulation performance bear the same flow with the volume of the tube innerdiameter.
3. Metal fittings can be used in high temperature environments.

Dimensions

BKC Series



Model\Item	Tubing diameterΦD		R	L	C	K	G	H	Weight(g)	Model\Item	Tubing diameterΦD		R	L	C	K	G	H	Weight(g)					
	O.D	I.D									O.D	I.D												
BKC0425-M3	4	2.5	M3×0.5	3	17	5	8	8	4	BKC1065-02	10	6.5	7.5	10	30	7.5	15	15	22					
BKC0425 M5			M5×0.8	3.5	17.5					BKC1065-03										3/8"	11	31.5	17	26.5
BKC0425-01			1/8"	7.5	20.5					BKC1065-04										1/2"	14	35.5	21	40.5
BKC0604-01	6	4	1/8"	7.5	22	5.5	10	10	9	BKC1075-02	10	7.5	10	30	7.5	15	15	22						
BKC0604-02			1/4"	10	25.5					BKC1075-03									3/8"	11	31.5	17	26.5	
BKC0604-03			3/8"	11	27					BKC1075-04									1/2"	14	35.5	21	40	
BKC0805-01	8	5	1/8"	7.5	24	6.5	12	12	11.5	BKC1208-02	12	8	10	30	7.5	17	17	28						
BKC0805-02			1/4"	10	27.5					BKC1208-03									3/8"	11	31.5	17	29.5	
BKC0805-03			3/8"	11	29					BKC1208-04									1/2"	14	35.5	21	42.5	
BKC0806-01	8	5.5 or 6	1/8"	7.5	24	6.5	12	12	12	BKC1209-02	12	9	10	30	7.5	17	17	28						
BKC0806-02			1/4"	10	27.5					BKC1209-03									3/8"	11	31.5	17	29	
BKC0806-03			3/8"	11	29					BKC1209-04									1/2"	14	35.5	21	42.5	

Installation and application

1. Method of inserting or removal a tubing

1.1 Inserting a tubing

Place the locking cap over the tubing, and insert the tubing into the body, then tighten the locking cap. (As figure 1)

1.2 Removing a tubing

Loosen the locking cap first, then remove the tubing. (As figure 2)

2. Method of tightening the connector thread

Tighten the connector with a hex wrench, as shown right.

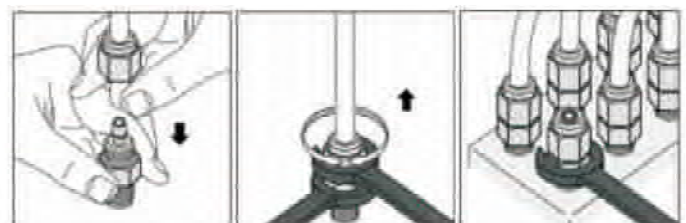


Figure 1

Figure 2

Figure 3

Accessories—Silencers(Stainless steel)

BSL, BSLM, BESL series

Ordering code

BSL 01 - S

① ② ③

① Silencer Type	② Thread connection	③ Material
BSL: Universal silencer BSLM: Mini Silencer BESL: Throttling silencer	M5: M5X0.8 01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	S: SUS304

Product feature

1. Stainless steel 304 material can be used in prohibiting copper condition.
2. This silencers have excellent noise silencing performance.
3. The installation of the silencer is simple and convenient. and the connecting portion is reliable and durable.
4. It is easy to adjust the exhaust flow of the throttling type silencer.

Configuration table of tubing thread

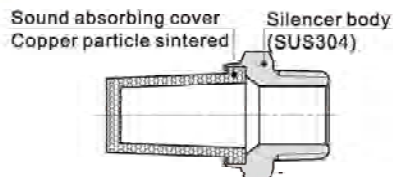
Product series	Thread connection				
	M5	01	02	03	04
BSL	●	●	●	●	●
BSLM	●	●	●	●	●
BESL		●	●	●	●

Specification

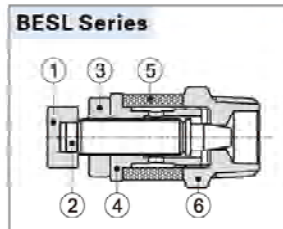
Model	BSLM5	BSL01	BSL02	BSL03	BSL04	BSLMM5	BSLM01	BSLM02	BSLM03	BSLM04	BESL01	BESL02	BESL03	BESL04
Thread connection	M5×0.8	1/8"	1/4"	3/8"	1/2"	M5×0.8	1/8"	1/4"	3/8"	1/2"	1/8"	1/4"	3/8"	1/2"
Silencing effect(dB)(0.5MPa)	15	20	20	20	12	15	20	20	20	20	20	20	20	20
Operating pressure	0~10kg/cm ² (0~1.0MPa)													
Negative pressure	-750mmHg(10Torr)													
Proof pressure	1.5MPa													
Temperature range	-20~70℃													

Inner structure

BSL Series



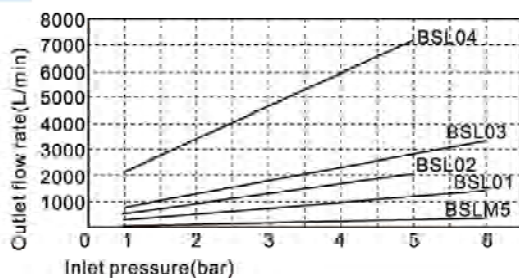
BESL Series



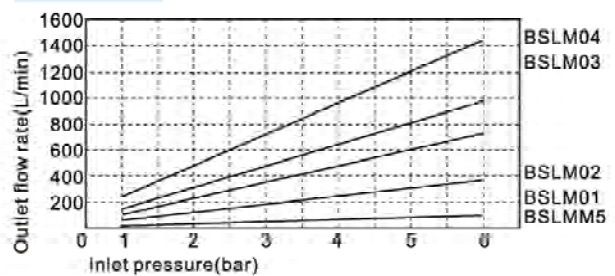
NO.	Name	Material
1	Adjusting cap	Aluminum alloy
2	Throttling column	Aluminum alloy
3	Locking cap	Aluminum alloy
4	Locking ring	Aluminum alloy
5	Silencer ring	Copper particle sintered
6	Silencer body	SUS304

Flowrate characteristic

BSL Series



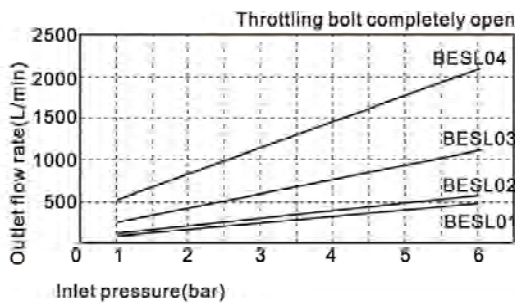
BSLM Series



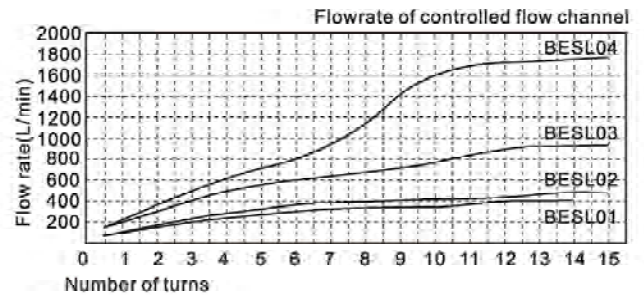
BSL, BSLM, BESL series

Flowrate characteristic

BESL Series (Inlet pressure and outlet flow rate)

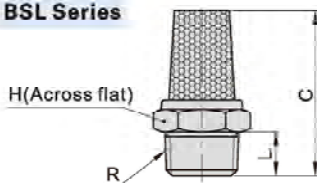


BESL Series



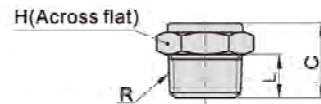
Dimensions

BSL Series



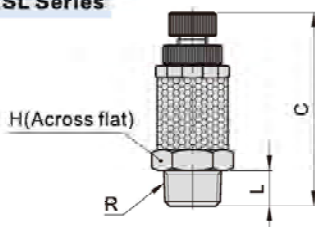
Model\Item	R	L	C	H	Weight(g)
BSLM5	M5×0.8	3.5	19.5	8	2.5
BSL01	1/8"	6	24	12	7
BSL02	1/4"	8	30	15	14
BSL03	3/8"	9	38.5	19	24.5
BSL04	1/2"	10.5	46	22	37.5

BSLM Series



Model\Item	R	L	C	H	Weight(g)
BSLMM5	M5×0.8	3.5	9.5	8	2.5
BSLM01	1/8"	6	11	12	5
BSLM02	1/4"	8	13.5	15	9
BSLM03	3/8"	9	15.5	19	15
BSLM04	1/2"	10.5	19	22	25.5

BESL Series



Model\Item	R	L	C		H	Weight(g)
			max	min		
BESL01	1/8"	6	40.5	33	12	11.5
BESL02	1/4"	8	42.5	35	14	17
BESL03	3/8"	9	49	41.5	17	30
BESL04	1/2"	10.5	59.5	52	24	66

Accessories—Speed controllers(Stainless steel)

PSA, PSL, PSS series

Ordering code

PSL 6 01 A □ □ - S

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Port size	③ Thread connection		④ Control method		⑤ Standard color		⑥ Thread type	⑦ Material
PSL: Speed controller	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm 10: Φ 10mm 12: Φ 12mm	Thread	Adaptable port size	A: Meter-out Handle marking "A" Controlled flow Free flow		Standard color	Specification		
PSS: Universal speed controller		01: 1/8" 02: 1/4" 03: 3/8" 04: 1/2"	Φ 4, Φ 6 Φ 8, Φ 10 Φ 12	B: Meter-in Handle marking "B" Free flow Controlled flow		D: Black	Release button: Black Body: Black	Blank: PT	S: SUS304

PSA 6 □ - S

① ② ③ ④

① Model	② Port size	③ Standard color		④ Material
PSA: Straight speed controller	4: Φ 4mm 6: Φ 6mm 8: Φ 8mm 10: Φ 10mm 12: Φ 12mm	Standard color	Specification	S: SUS304
		Blank: Gray	Release button: Gray Body: Gray	
		D: Black	Release button: Black Body: Black	

Product feature

1. Stainless steel 304 material can be used in prohibiting copper condition.
2. The silencer is small size, and light weight with small installation space.
3. Excellent flow characteristics, high sensitivity and easy to adjust.
4. The silencer brass body adopts a special nickel-plating process, which has good corrosion resistance and anti-pollution property.
5. Anti-drop structure is designed on the regulating rod.
6. The sealant being coated on threaded portion can ensure no leakage of the threaded connection part.
7. The inserting direction of universal speed controller can be adjusted in 360°.

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Symbol

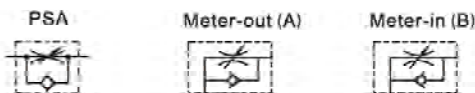
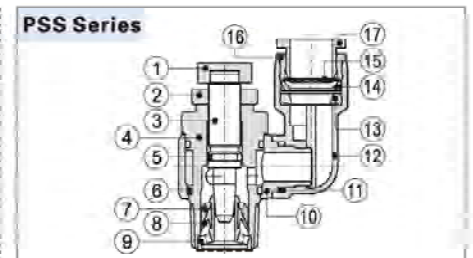
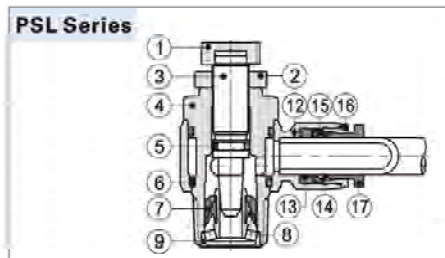
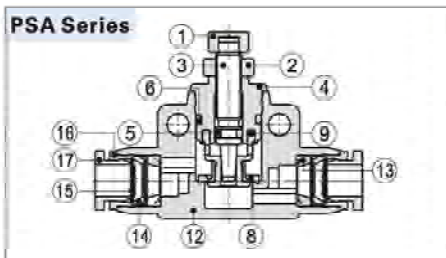


Table for interface port and tube O.D.

Product series	Thread type	Port size				
		Φ 4	Φ 6	Φ 8	Φ 10	Φ 12
PSA	-	●	●	●	●	●
	M5	●	●	●	●	●
PSL	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
	3/8"	●	●	●	●	●
	1/2"	●	●	●	●	●
PSS	M5	●	●	●	●	●
	1/8"	●	●	●	●	●
	1/4"	●	●	●	●	●
	3/8"	●	●	●	●	●
	1/2"	●	●	●	●	●

Inner structure



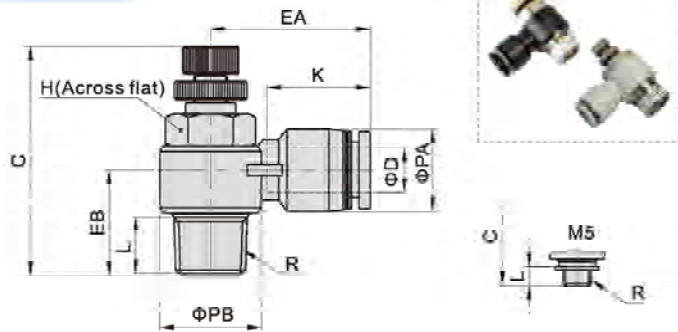
NO.	Name	Material	NO.	Name	Material	NO.	Name	Material
1	Adjusting cap	Aluminum alloy	7	Holder	PBT	13	O-ring	NBR
2	Locking cap	Aluminum alloy	8	O-ring	NBR	14	Locating seat	POM
3	Throttling column	SUS304	9	Throttling sleeve	SUS304	15	Spring gasket	Stainless steel
4	Throttling body	Aluminum alloy/SUS304	10	Plastic body	PBT	16	Locating ring	Aluminum alloy
5	O-ring	NBR	11	O-ring	NBR	17	Plastic interface	POM
6	O-ring	NBR	12	Plastic body	PBT			

Accessories—Speed controllers(Stainless steel)

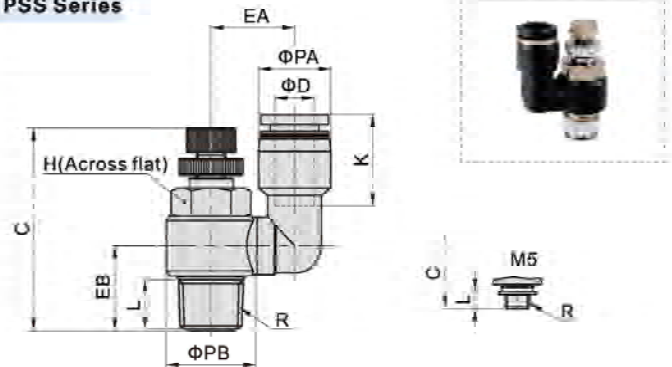
PSA, PSL, PSS series

Dimensions

PSL Series



PSS Series



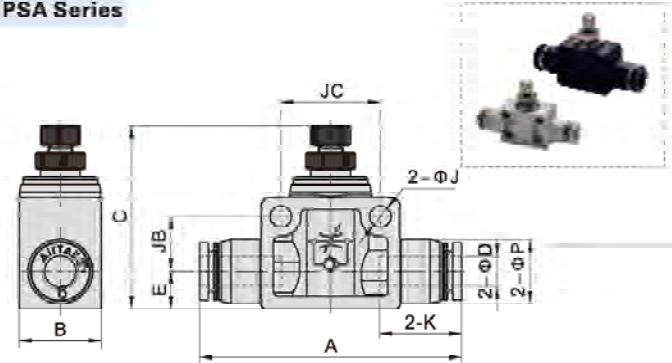
Model/Item [Note1]	ΦD	R	ΦPA	ΦPB	L	C		K	EA	EB	H	Weight (g)
						max	min					
PSL4M5□	4	M5×0.8	9	10	3.5	30	27.5	14	19	9.5	8	6
PSL401□	4	1/8"	9	14	7.5	41.5	35	14	20.5	15	11	15.5
PSL6M5□	6	M5×0.8	12.5	10	3.5	30	27.5	16.5	23.5	11.5	8	7.5
PSL601□	6	1/8"	12.5	14	7.5	41.5	35	16.5	23	15.5	11	16.5
PSL602□	6	1/4"	12.5	18	10	47.5	41	16.5	25	18	14	30
PSL603□	6	3/8"	12.5	22.5	11	52.5	45.5	16.5	27	20	19	55
PSL801□	8	1/8"	15	14	7.5	41.5	35	18.5	26.5	16.5	11	17
PSL802□	8	1/4"	15	18	10	47.5	41	18.5	28.5	19	14	31
PSL803□	8	3/8"	15	22.5	11	52.5	45.5	18.5	29.5	20	19	55.5
PSL804□	8	1/2"	15	28	14	58.5	51.5	18.5	32	25	24	89
PSL1002□	10	1/4"	18	18	10	47.5	41	21	31	20.5	14	32.5
PSL1003□	10	3/8"	18	22.5	11	52.5	45.5	21	33	21.5	19	57.5
PSL1004□	10	1/2"	18	28	14	58.5	51.5	21	35.5	25.5	24	90.5
PSL1203□	12	3/8"	21	22.5	11	52.5	45.5	23	36	23.5	19	59.5
PSL1204□	12	1/2"	21	28	14	58.5	51.5	23	38	27	24	92.5

Model/Item [Note1]	ΦD	R	ΦPA	ΦPB	L	C		K	EA	EB	H	Weight (g)
						max	min					
PSS4M5□	4	M5×0.8	9	10	3.5	30	27.5	14	12.5	9.5	8	7.5
PSS601□	6	1/8"	12.5	14	7.5	41.5	35	17	17	15	11	18
PSS602□	6	1/4"	12.5	18	10	47.5	41	17	19	17.5	14	32.5
PSS801□	8	1/8"	15	14	7.5	41.5	35	18.5	17	15	11	19
PSS802□	8	1/4"	15	18	10	47.5	41	18.5	19	17.5	14	37.5
PSS1002□	10	1/4"	18	18	10	47.5	41	21	20.5	17.5	14	35
PSS1003□	10	3/8"	18	22.5	11	52.5	45.5	21	24	20	19	61.5
PSS1203□	12	3/8"	21	22.5	11	52.5	45.5	23	25.5	20	19	65
PSS1204□	12	1/2"	21	28	14	58.5	51.5	23	28	25	24	98.5

[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.

[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.

PSA Series

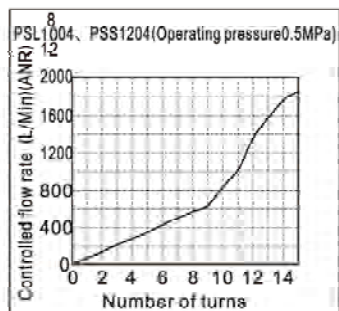
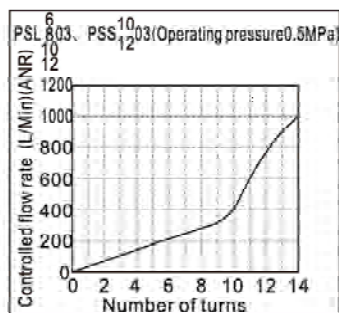
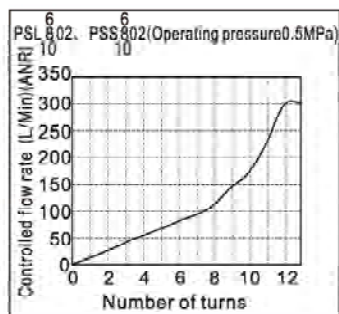
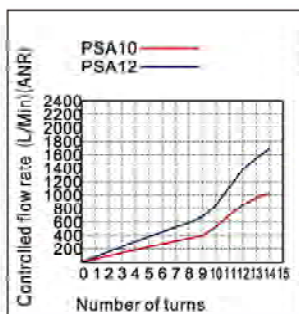
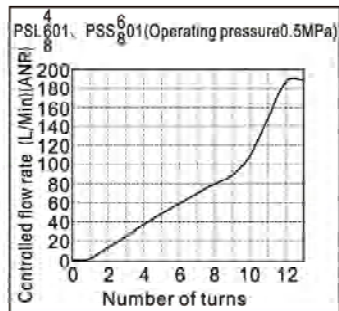
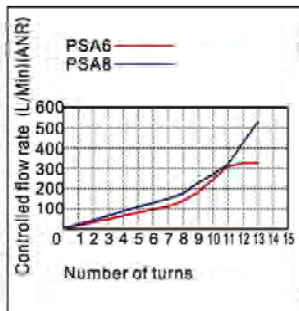
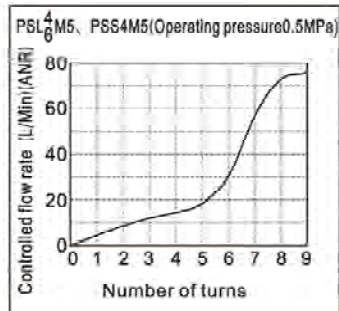
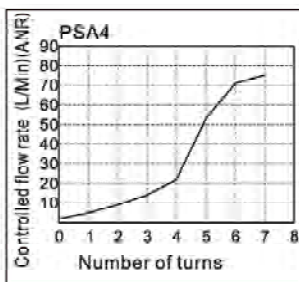


Model/Item	ΦD	A	B	C		ΦP	E	K	ΦJ	JB	JC	Weight (g)
				max	min							
PSA4	4	41	11	29	26.5	9.5	7	14	3.2	6	14	7.5
PSA6	6	52.5	16.5	43.5	36.5	13	7.5	16.5	4.3	11	20	18
PSA8	8	59.5	16.5	47	40	15	8.5	18.5	4.3	11	22	23
PSA10	10	69	21	53.5	46.5	18	10.5	21	4.3	14.5	26	41.5
PSA12	12	78.5	26	58.5	51	21.5	12	23	4.3	17.5	32	66

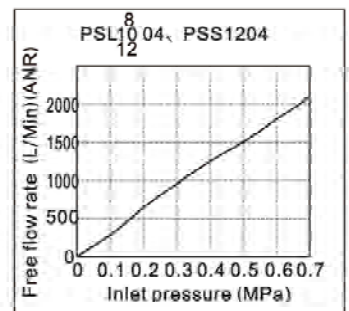
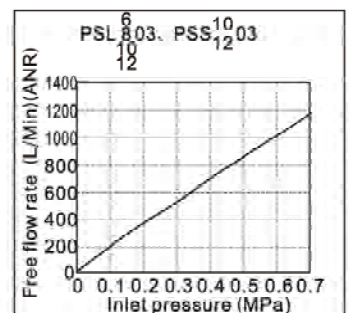
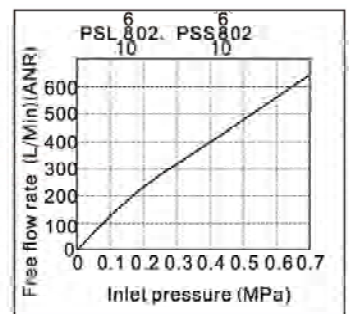
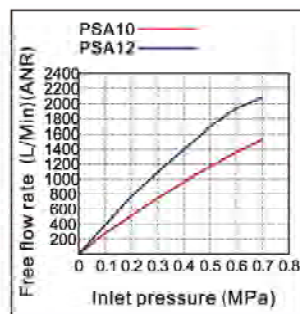
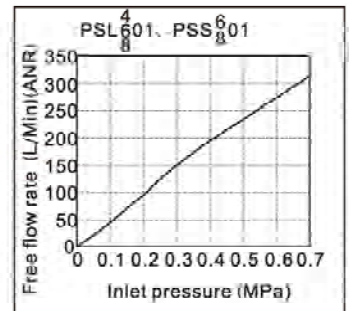
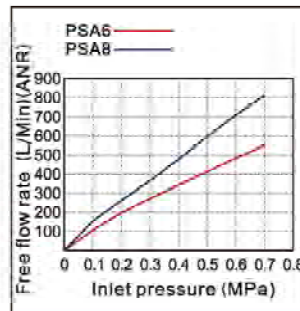
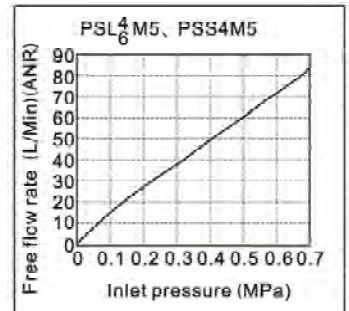
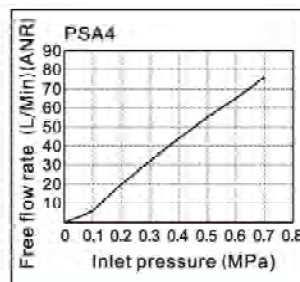
PSA, PSL, PSS series

Flowrate characteristic

Controlled flow rate



Free flow rate



Selection, Installation and Operation

Selection

- The speed controller has meter-out type and meter-in type:

	Working principle	Product identification
<p>Controlled flow Free flow</p>	A: Meter-out 1. The air flow is controlled from the threaded end to tubing connection end. 2. The air flow is free from the tubing connection end to the threaded end.	Handle marking "A"
<p>Free flow Controlled flow</p>	B: Meter-in 1. The air flow is free from the threaded end to tubing connection end. 2. The air flow is controlled from the tubing connection end to the threaded end.	Handle marking "B"

- Select the different control method according to the actual requirement. The meter-out type is the first priority.

2.1. The application example of the meter-out speed controller	2.2. The application example of the meter-in speed controller
<p>Solenoid valve Double acting cylinder</p> <p>Meter-out speed controller</p>	<p>Solenoid valve Single acting cylinder</p> <p>Meter-in speed controller</p>

Installation

- Installation and removal of tubing:

- 1.1. Installation of tubing

Grasp the tubing and slowly push it into the fitting until it comes to a stop. The tubing will be locked by the spring gasket.

- 1.2. Removal of tubing

Push the release button to open the spring gasket so that the tubing can be released.

Note: When remove the tubing, make sure the pressure in the tubing is Zero.



2. Mounting of the speed controller

Mount the speed controller into the inlet and outlet port of the cylinder with a wrench.

Note: Please refer to the fittings for the tightening torque and thread screw-in depth.

Operation

1. Adjustment of the cylinder speed

- 1.1. Make sure the speed controller is turned off before applying air pressure. The cylinder may fly out due to the high speed if the air is inlet when the speed controller is turned on.

- 1.2. Adjust the speed by opening the needle slowly from the fully closed state. When a needle valve is turned clockwise, the air flow through is reduced and the actuator speed decreases. When a needle valve is turned counter-clockwise, the air flow through is increased and the actuator speed increases.



2. Operation of the speed controller

- 2.1. Do not use tools such as pliers to rotate the handle. Do not apply excessive force or shock when the needle is at the place of top or bottom. It can cause damage or air leakage.



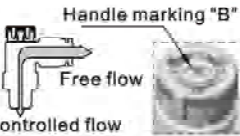
- 2.2. A certain amount of leakage is allowed in the closed state of the speed controller. It is not designed for the use as stop valve with zero air leakage.

Accessories——Speed controllers(Push lock/Stainless steel) **AIRTAC**

PTL Mini series

Ordering code

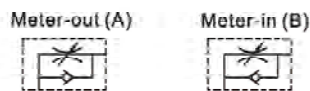
PTL 6 M5 A □ □ -M S
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Model	② Port size	③ Thread connection	④ Control method	⑤ Standard color	⑥ Thread type	⑦ Style	⑧ Material
PTL: Speed controller (Push lock) 	4: $\Phi 4$ mm 6: $\Phi 6$ mm	M5: M5X0.8 01: 1/8"	A: Meter-out  Handle marking "A" Controlled flow Free flow	Standard color: Specification Blank: Gray Release button: Gray Body: Gray	Blank: PT	M: Mini type	S: SUS304
			B: Meter-in  Handle marking "B" Free flow Controlled flow	D: Black Release button: Black Body: Black			

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Symbol



Selection, Installation and Operation

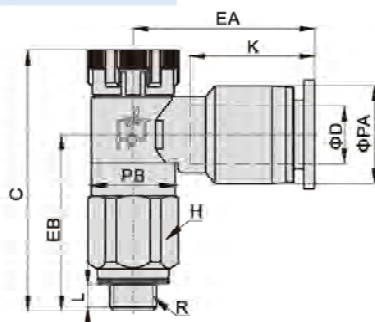
- The rotation torque of the push-lock speed controller cap should not be too large to avoid damage. It is recommended to use the torque below.

Thread size	Recommended torque(N.m)
M5	0.05
1/8"	0.08

- Push-lock speed controller installation instructions is the same as general one. Please refer to general type for specific content.

Dimensions

PTL Mini series



Model/Item [Note1]	ΦD	R	ΦPA	ΦPB	L	C		K	EA	EB	H	Weight (g)
						Pull	Push					
PTL4M5□-MS	4	M5×0.8	8.5	9	3.5	29.5	28	12.5	16.5	19	9	5
PTL401□-MS		1/8"	8.5	9	3.5	29.5	28	12.5	16.5	19	10	11
PTL6M5□-MS	6	M5×0.8	10.5	9	3.5	29.5	28	13.5	19.5	19	9	6.2
PTL601□-MS		1/8"	10.5	9	3.5	29.5	28	13.5	19.5	19	10	12

[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.



Product feature

- Compare with standard speed controller, smaller size, lighter weight, suitable for more occasions.
- Effectively control the action speed and the pressure signal transmission from pneumatic device.
- Simple push-lock, operation.
- Adjust quickly, easily and accurately.
- Excellent flow rate characteristic, high sensitivity and easy to adjust.
- Options of Meter-out and meter-in, applicable for every type actuator.
- Effectively prevent from corrosion and pollution by nickle plated copper.
- The sealant being coated on threaded portion can ensure no leakage of the threaded connection part.

Table for interface port and tube O.D.

Product series	Thread type	Port size	
		Φ4	Φ6
PTL	M5	●	●
	1/8"	●	●


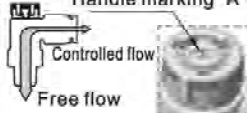
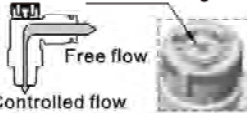
Accessories—Speed controllers(Push lock/Stainless steel) **AIRTAC**

PTL series

Ordering code

PTL 6 01 A □ □ - S

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Port size	③ Thread connection	④ Control method	⑤ Standard color	⑥ Thread type	⑦ Material
PTL: Speed controller (Push lock) 	6: Φ6mm	01: 1/8" 02: 1/4" 03: 3/8"	A: Meter-out Handle marking "A"  Controlled flow Free flow	Standard color: Specification	Blank: PT	S: SUS304
	8: Φ8mm	01: 1/8" 03: 3/8" 02: 1/4" 04: 1/2"		Blank: Gray Release button: Gray Body: Gray		
	10: Φ10mm	02: 1/4" 03: 3/8" 04: 1/2"	B: Meter-in Handle marking "B"  Free flow Controlled flow	D: Black Release button: Black Body: Black		
	12: Φ12mm	03: 3/8" 04: 1/2"				

Specification

Operating pressure range	0~10kgf/cm ² (0~1.0MPa)
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane
Color	Grey/black

Product feature

1. Compare with standard speed controller, smaller size, lighter weight, suitable for more occasions.
2. Effectively control the action speed and the pressure signal transmission from pneumatic device.
3. Simple push-lock, operation.
4. Adjust quickly, easily and accurately.
5. Excellent flow rate characteristic, high sensitivity and easy to adjust.
6. Options of Meter-out and meter-in, applicable for every type actuator.
7. Effectively prevent from corrosion and pollution by nickle plated copper.
8. The sealant being coated on threaded portion can ensure no leakage of the threaded connection part.

Symbol

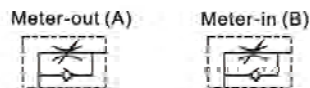


Table for interface port and tube O.D.

Product series	Thread type	Port size			
		Φ6	Φ8	Φ10	Φ12
PTL	1/8"	●	●		
	1/4"	●	●	●	
	3/8"	●	●	●	●
	1/2"		●	●	●

Selection, Installation and Operation

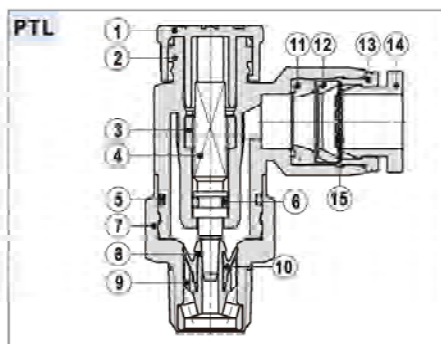
1. The rotation torque of the push-lock speed controller cap should not be too large to avoid damage.

It is recommended to use the torque below.

Thread size	Recommended torque(N.m)
1/8"	0.08
1/4"	0.16
3/8"	0.24
1/2"	0.32

2. Push-lock speed controller installation instructions is the same as general one. Please refer to general type for specific content.

Inner structure



NO.	Name	Material	NO.	Name	Material
1	Adjusting cap	POM	9	Holder	PBT
2	Plastic body	PBT	10	O-ring	NBR
3	Locating ring	Aluminum alloy	11	O-ring	NBR
4	Throttling column	Aluminum alloy	12	Locating seat	POM
5	O-ring	NBR	13	Locating ring	Aluminum alloy
6	O-ring	NBR	14	Plastic interface	POM
7	Throttling body	Brass	15	Spring gasket	Stainless steel
8	Throttling sleeve	Aluminum alloy			

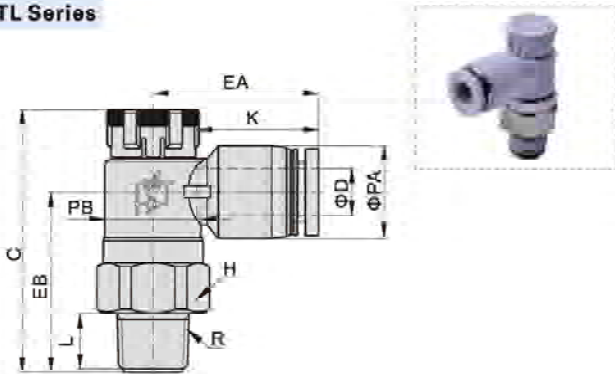


Accessories—Speed controllers(Push lock/Stainless steel) **AIRTAC**

PTL series

Dimensions

PTL Series

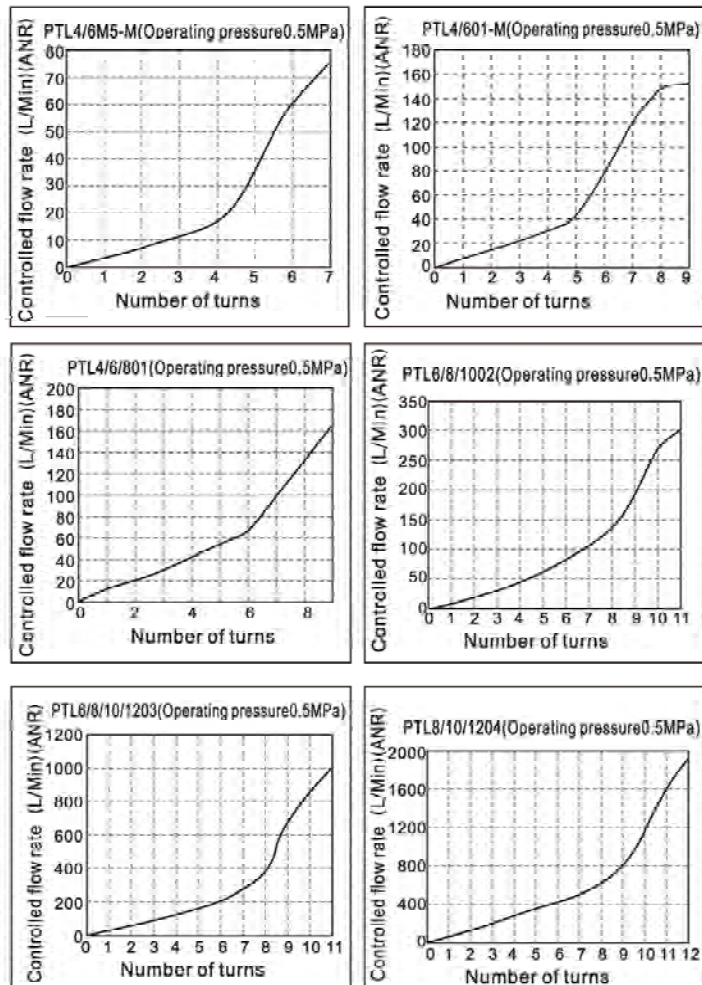


Model/Item [Note1]	ΦD	R	ΦPA	ΦPB	L	C		K	EA	EB	H	Weight (g)
						Pull	Push					
PTL601□-S	6	1/8"	12.5	13	8.5	36	34.5	16.5	22.5	23.5	14	12.5
PTL602□-S		1/4"	12.5	16.5	11	40.5	39	16.5	24	28	17	19.5
PTL603□-S		3/8"	12.5	19	12	44	42.5	16.5	25.5	31	19	28.5
PTL801□-S	8	1/8"	15	13	8.5	36	34.5	18.5	24.5	22.5	14	13
PTL802□-S		1/4"	15	16.5	11	40.5	39	18.5	26	27	17	20.5
PTL803□-S		3/8"	15	19	12	44	42.5	18.5	27	30	19	29
PTL804□-S	1/2"	15	24	15	52.5	51	18.5	29.5	37.5	24	49	
PTL1002□-S	10	1/4"	18	16.5	11	40.5	39	21	31	26	17	22
PTL1003□-S		3/8"	18	19	12	44	42.5	21	29	29	19	30.5
PTL1004□-S		1/2"	18	24	15	52.5	51	21	31.5	36.5	24	50.5
PTL1203□-S	12	3/8"	21	19	12	44	42.5	23	34.5	28	19	32.5
PTL1204□-S		1/2"	21	24	15	52.5	51	23	34	36	24	53

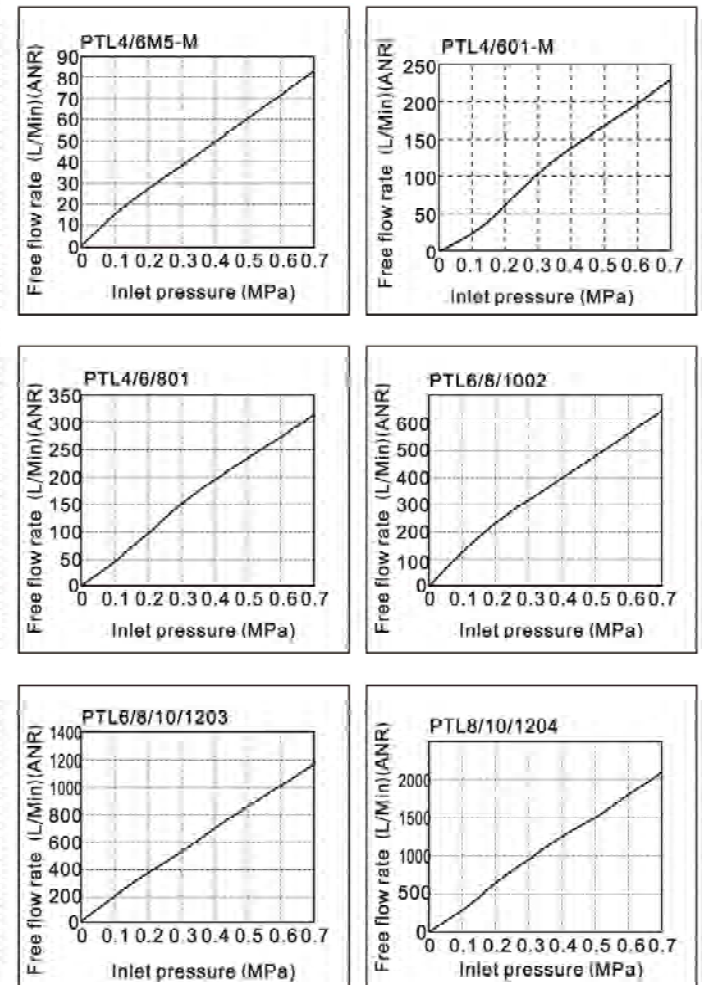
[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.

Flowrate characteristic

Controlled flow rate



Free flow rate



Cylinder bore size, theory basic speed and corresponding valves list

Bore size (mm)	Theory basic speed (mm/s)	Necessary orifice size (mm ²)	Corresponding valves				Corresponding accessories		Corresponding tube
			Single solenoid valve	Double solenoid valve	Single air control valve	Double air control valve	Speed control valve	Silencer	
Φ6	500	0.1							
Φ10	500	0.2	5V110M5	5V120M5			PTLM5	BSLM5	Φ4XΦ2.5 tube
Φ12	500	0.3	4V110M5	4V120M5	4A110M5	4A120M5	PSLM5	BSLMM5	
Φ16	500	0.5	4M110M5	4M120M5			PSSM5		
Φ20	300	0.5					PTLM5	BSLM5	Φ6XΦ4 tube
	400	0.7					PSLM5	BSLMM5	
	500	0.8	5V110M5	5V120M5	4A110M5	4A120M5	PSSM5	BSL01	
	600	1.0	4V110M5/4V11006	4V120M5/4V12006	4A11006	4A12006	PTL01	BESL01	
	700	1.2	4M110M5/4M11006	4M120M5/4M12006			PSL01	PAL01	
	800	1.3					PSS01	PALM01	
Φ25	300	0.8							Φ6XΦ4 tube
	400	1.0							
	500	1.3					PTLM5	BSLM5	
	600	1.5	5V110M5/5V11006	5V120M5/5V12006	4A110M5	4A120M5	PSLM5	BSLMM5	Φ8XΦ5 tube
	700	1.8	4V110M5/4V11006	4V120M5/4V12006	4A11006	4A12006	PSSM5	BSL01	
	800	2.0	4M110M5/4M11006	4M120M5/4M12006	4A11006	4A12006	PTL01	BESL01	
Φ32	300	1.3					PSS01	PAL01	Φ6XΦ4 tube
	400	1.7					ASC10006	PALM01	
	500	2.1							
	600	2.5	5V11006/5V21006	5V12006/5V22006	4A11006	4A12006	PTL01	BSL(M)01	Φ8XΦ5 tube
	700	2.9	4V11006/4V21006	4V12006/4V22006	4A21006	4A22006	PSL01	BESL01	
	800	3.4	4M11006/4M21006	4M12006/4M22006	4A21006	4A22006	PSS01	PAL(M)01	
Φ40	300	2.0							Φ6XΦ4 tube
	400	2.6	5V11006/5V21006	5V12006/5V22006			PTL01	BSL01/02	
	500	3.3	5V21008	5V22008	4A11006	4A12006	PSL01	BSLM01/02	
	600	3.9	4V11006/4V21006	4V12006/4V22006	4A21006	4A22006	PSS01	BESL01/02	Φ8XΦ5 tube
	700	4.6	4V21008/4M11006	4V22008/4M12006	4A21008	4A22008	ASC10006	PAL01/02	
	800	5.2	4M21006/4M21008	4M22006/4M22008	4A21008	4A22008	PTL02/PSL02	PALM01/02	
Φ50	300	3.1							Φ10XΦ6.5 tube
	400	4.1							
	500	5.1	5V21008	5V22008	4A21008	4A22008	PSS02	BESL02	
	600	6.1	4V21008	4V22008			ASC20008	PAL02	Φ10XΦ6.5 tube
	700	7.2	4M21008	4M22008				PALM02	
	800	8.3							
Φ63	300	4.9	5V21008/5V31008	5V22008/5V32008	4A21008	4A22008	PTL02	BSL02/03	Φ8XΦ5
	400	6.5	5V31010	5V32010	4A31008	4A32008	PSL02	BESL02/03	
	500	8.1	4V21008/4V31008	4V22008/4V32008	4A31008	4A32008	PSS02	BESL02/03	
	600	9.7	4V31010/4M21008	4V32010/4M22008	4A31010	4A32010	ASC20008	PAL01/02	Φ10XΦ6.5 tube
	700	11.4	4M31008/4M31010	4M32008/4M32010			PTL03	PAL02/03	
	800	13.0			4A31008	4A32008	PSL03	PALM02/03	
Φ80	300	7.9							Φ10XΦ6.5 tube
	400	10.5							
	500	13.1	5V31010	5V32010	4A31010	4A32010	PSS03	BESL03	
	600	15.7	4V31010	4V32010			ASC30010	PAL03	Φ16XΦ11 tube
	700	18.3	4M31010	4M32010				PALM03	
	800	20.9							
Φ100	300	12.3							Φ16XΦ11 tube
	400	16.4	5V31010	5V32010			PTL03	BESL03/04	
	500	20.4	5V41015	5V42015	4A31010	4A32010	PSL03	BESL03/04	
	600	24.5	4V31010	4V32010	4A41015	4A42015	PSS03	PAL03/04	
	700	28.6	4V41015	4V42015			ASC30010	PAL03/04	
	800	32.7	4M31010	4M32010			PTL04/PSL04	PALM03/04	