

OPERATION MANUAL

PRODUCT NAME: FILTER REGULATOR

MODEL: AW10-M5(B,C,G,H)(-1,2,6,N,R,Z)

AW20-(F,N)01~(F,N)02(B,C,E,G,H)(-1,2,6,C,J,N,R,Z)

AW30-(F,N)02~(F,N)03(B,C,D,E,G,H)(-1,2,6,8,J,N,R,W,Z)

AW40-(F,N)02~(F,N)04(B,C,D,E,G,H)(-1,2,6,8,J,N,R,W,Z)

AW40-(F,N)06(B,C,D,E,G,H)(-1,2,6,8,J,N,R,W,Z)

AW60-(F,N)06~(F,N)10(B,C,D,E,G)(-1,2,6,8,J,N,R,W,Z)

○Read this operation manual carefully to understand before installation and operation.

○Pay extra attention on the clause concerning the safety.

○Keep this operation manual available whenever necessary.

SMC CORPORATION

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1. PRECAUTIONS FOR SAFETY

Precautions shown here are to ensure the product is used correctly and safely, and to prevent hazard and damage inflicting upon people from occurring. These precautions are divided into three categories, "Caution", "Warning", and "Danger" to indicate the degree of possible hazard and damage, and urgency.

As all these are important for safety, never fail to follow them in addition of ISO 4414(※1), JIS B 8370(※2), and other safety regulations.

-  **Caution** : Possible harmful effects are expected to be on people and possible loss is expected only of objects when wrong operation occurred.
-  **Warning** : Possible loss or serious injury of people is expected when wrong operation occurred.
-  **Danger** : Imminent danger that possible loss or serious injury of people is expected without evacuation.

※1) ISO 4414 Pneumatic fluid power—General rules relating to systems

※2) JIS B 8370 Common regulations for pneumatic systems.

WARNING

① **Suitability of pneumatic equipment should be determined by a designer of the pneumatic system or a person who prescribes its specifications.**

Since the product shown here is used in various operating conditions, its suitability to a system should be determined by the pneumatic system designer or the person prescribes its specifications based on necessary analysis and tests. The person who determined the suitability of the system is responsible for the performance at a certain point of time and safety assurance of this system.

A system should be constructed by referring to the latest product information and catalogues, discussing all the contents of specifications, and considering possibilities of equipment failure.

② **Equipment should be handled by those who have sufficient knowledge and experience**

Compressed air fluid could be hazardous if it is handled incorrectly. Assembly, operation and maintenance of machinery and equipment for which pneumatic apparatuses are used should be performed by those who have sufficient knowledge and experience.

③ **Never handle the machinery or equipment, or never take out the apparatus until safety is confirmed**

- a. Check and maintenance of machinery or equipment should be performed after it is confirmed that dropping or uncontrollable running prevention measures are taken for the equipment on which the product is mounted.
- b. Apparatuses should be taken out after it is confirmed equipment corresponding to air supply, that is an energy source, should be turned off; and compressed air in the system should be exhausted.
- c. Re-starting of machinery or equipment should be done with ample care after it is confirmed that prevention measures for sudden movement are taken.

④ **When the product is used in the following conditions or environment, considerations for safety measures should be given along with consultation to our company**

- a. Outdoor usage, or usage in conditions or environment outside of the specifications indicated.
- b. Usage for nuclear power, railroad, air navigation, vehicle, medical equipment, appliances contacting food and beverage, entertainment apparatuses, emergency shutdown circuits, clutch/break circuits for pressing, and safety devices.
- c. Usage for applications which especially require safety because considerable effects to people and properties are expected.

Precautions for design



WARNING

- ① External parts including the bonnet, handle, cover are made of resin. Organic solvents including synthetic fluid, chemicals including acetone, alcohol, ethylene chloride, sulphuric acid, nitrate, hydrochloric acid, cutting oil, kerosene, gasoline, lock material of screw are harmful. Don't use the regulator where containing those.
- ② Avoid the application where charge and discharge of pressure to standard bowl is switched frequently. The bowl may be broken. For this kind of application, the metal bowl is recommended.
- ③ Consult SMC if no leakage is allowed due to the environment, or operating fluid is not air.
- ④ Protect from ultra violet ray and radiation heat by shield.
- ⑤ Safety device needs to be installed if output pressure exceeding set pressure lead to cause the breakage of outlet device and equipment or malfunction.



CAUTION

- ① The use outside specifications is prohibited.
- ② Air consumption from release port is 0.1L/min(ANR) or less.
- ③ AD17 and 27 with auto drain may leak the drain pooled there during exhaust of pressure. (This leakage is allowed in their constructions and not failure.) Be sure to connect piping for drain.

Selection



WARNING

- ① Mineral grease used for internal sliding surface and packing may leak to the outlet. Please contact SMC if this is a problem.
- ② Residual pressure(outlet pressure) is not released even if releasing inlet pressure. Select the filter regulator with counter flow function. Without the function, residual pressure may not be eliminated.
- ③ Long absence of operation or operation with outlet circuit sealed or balance circuit may cause pressure fluctuation in outlet set pressure. Please consult SMC if this is a problem.
- ④ Set pressure of outlet pressure shall be 85% or less of inlet pressure. Pressure over 85% makes operation susceptible to flow and inlet pressure which lead to cause unstable operation.
- ⑤ Maximum set pressure range in the spec. has margin. Pressure set may be higher than the maximum value.
- ⑥ If regulator is used with circuit which require high exhaust sensitivity or set precision, please consult SMC.
- ⑦ N.O type auto drain should be used under the following requirements to avoid operating failure.
Output of compressor: 0.75kW or more.
Discharged flow rate: 100L/min (ANR) or more.
If multiple auto drains are used, confirm used compressor has capacity over the result of multiplying the above capacity and the number of used auto drains.
[For example, in case of two auto drain, the compressor need the capacity over 1.5kW [200L/min (ANR)].]
- ⑧ N.C. type auto drain should be used under the following requirements to avoid operating failure.
Operating pressure: 0.1MPa at min. for AD17 and 27, 0.15MPa at min. for AD37 and 47.

Installation



CAUTION

- ① Connect the filter regulator ensuring the direction of "IN" and "OUT" for air direction or an arrow. Wrong connection lead to cause malfunction.
- ② Install vertically so that outlet of drain would turn downward. Use with the outlet of drain turned lateral or upward causes malfunction.
- ③ Keep the space for maintenance and operation on the top, bottom and front face. The required space is shown on 「10. Dimensions」 (P22).
- ④ Don't drop nor apply impact during transportation or installation. gauge. These lead to cause precision failure of pressure .
- ⑤ Don't install where highly humid or temperature is high. Or pressure gauge may malfunction.

Adjustment



WARNING

- ① Adjust the pressure ensuring inlet pressure and outlet pressure. Excessive rotation may cause internal parts.
- ② Operate the pressure adjusting handle manually. Tools may break the handle.



CAUTION

- ① Check primary pressure before setting up.
- ② For the regulator with the pressure gauge, don't apply pressure over the maximum scale of the pressure gauge in order to protect the gauge.
- ③ Adjust pressure incrementally. Pressure may become lower than set pressure if adjusted by decreasing the value. Rotate the handle clockwise to raise the set pressure. Counterclockwise, reduce the pressure
- ④ Outlet pressure may rise if eliminate the inlet pressure after pressure setting and supply pressure again. The pressure becomes close to the set pressure after air is consumed in outlet.
- ⑤ Outlet pressure might change if uses for a long time. Please confirm set pressure regularly.

Piping



WARNING

- ① Flash or clean piping before piping to eliminate swarf, cutting oil, solid foreign material. Remaining of these lead to cause malfunction.
- ② When screw in piping or fitting, avoid entering of chips and sealing materials from piping screws into the inside of equipment. Or malfunction is led to occur. When use sealing tapes, leave 1.5~2 threads of a screw and starts taping.
- ③ Hold the female screw side and screw in piping with recommended tightening torque. Insufficient tightening torque lead to cause loose piping or sealing failure. Excessive torque may lead to cause screw breakage. Tightening without holding female screw side applies excessive force to the piping bracket which lead to cause breakage.

Recommended torque unit: N·m

Screw	M5	1/8	1/4	3/8	1/2	3/4	1
Torque	* 1	7~9	12~14	22~24	28~30	28~30	36~38

*1: First, tighten it by hand , then give it an additional 1/6 turn with a wrench.

- ④ Don't apply any torsional moment, or bending moment except the weight of the regulator itself. External pipings need its support separately. Hard piping like steel tube is susceptible to excessive moment load or vibration. Insert the flexible tube to cancel the influence.
- ⑤ Drain guide is not equipped with valve function. Be sure to connect piping for drain. No piping for drain allows the drain and compressed air to exhaust freely. Also, the piping should be performed with drain guide held by spanner to prevent breakage of bowl.
- ⑥ The piping for drain from auto drain should be connected under the following requirements to avoid operating failure.
AD17, 27: I.D. $\phi 2.5$ ($\phi 3/32''$) at min., Length 5m (200'') at max.
AD37, 47(N): I.D. $\phi 4$ ($\phi 3/16''$) at min., Length 5m (200'') at max.
AD38, 48(N): I.D. $\phi 6.5$ ($\phi 1/4''$) at min., Length 5m (200'') at max.

Air Source



WARNING

- ① Use clean air. Compressed air containing chemicals, organic solvent, synthetic oil or corrosive gas may lead to cause breakage of parts or malfunction.
- ② Air containing much drain lead to cause malfunction. Install the air drier or the after-cooler before the filter regulator.

Maintenance



WARNING

- ① Maintenance or check should be done by following the procedure in the operation manual. Incorrect handling of the product may cause breakage or malfunction of the equipment or device.
- ② Perform periodical check to find crack, flaw or other deterioration on resin bowl. If any of them is seen, as malfunction is caused, replace with new bowl or metal bowl.
- ③ Check the dirt of resin bowl periodically. If any dirt is seen, replace with new bowl. And if removing off the dirt by washing instead of replacement, never use washing material other than neutral detergent. Otherwise, the bowl is damaged.
- ④ Replace the element before 2 years passed since purchase or pressure drop from initial outlet pressure reaches 0.1MPa. Or the element is broken.
- ⑤ Open and close drain cock manually. Open and close by a too may damage the drain cock.
- ⑥ Drain the bowl by opening drain cock before the drain level in the bowl reaches baffle.



CAUTION

- ① For First-aid for setting failure or leakage, check the internal valve sliding surface or the valve seat before giving first-aid treatment.
- ② Check the element periodically and replace it with new one if necessary.
If it is found that secondary pressure lowers or the flow is restricted, check the condition of element.
- ③ The manual exhaust for emergency case can be performed by counterclockwise rotation of the handle in AD17 and 27. (O←direction)
For AD37, 38, 47 and 48, rotate the drain cock counterclockwise in that case.(O←direction)

2. APPLICATION

This instrument aims at , eliminating excess saturated water of the air line and solid foreign material,pressure controlling of air lines.

3. SPECIFICATIONS

Model	AW10	AW20	AW30	AW40	AW40－06	AW60
Port size	M5	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	4/3, 1
Fluid	Air					
Proof pressure	1.5MPa					
Max. operating pressure	1.0MPa					
Set pressure range	0.05～0.7MPa	0.05～0.85MPa				
Note1) Gauge port size	Note2) 1/16	1/8	1/8	1/4	1/4	1/4
Relieving pressure	－	Note3) Set pressure plus 0.05MPa {When relieving flow is 0.1L/min (ANR) }				
Ambient and fluid temperature	－5～60℃(Should be no freezing)					
Filtration	5 μm					
Drain capacity (cm ³)	2.5	8	25	45	45	45
Construction	0.75kg					
Weight (kg)	0.09kg	0.32kg	0.40kg	0.72kg	0.75kg	2.00kg
Note4) Bowl guard	×	△	○	○	○	○

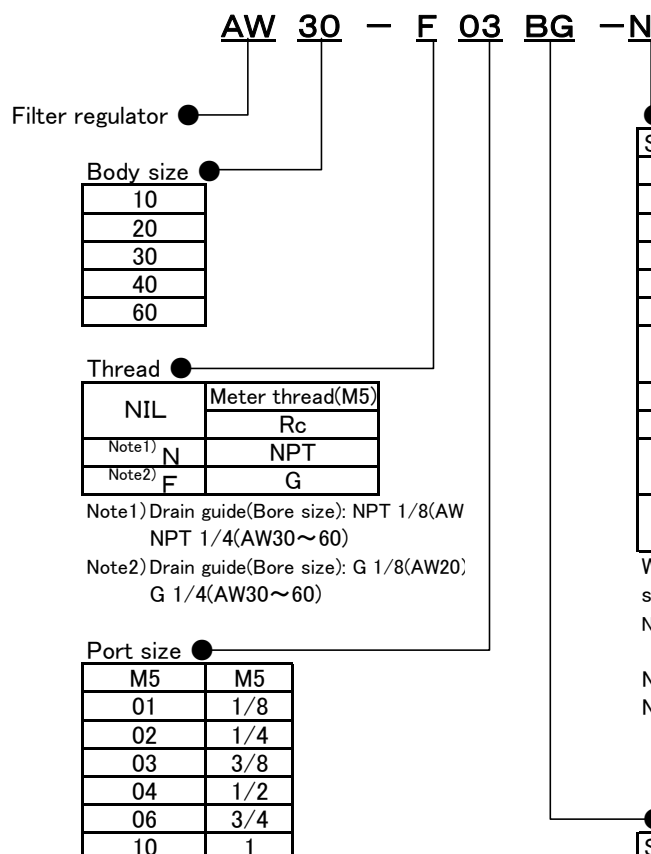
Note1) Square embedded pressure gauge (AW20~60) , Without pressure gauge mounting threads.

Note2) Use bush(part no. 131368) when connecting pressure gauge port size R1/8 to R1/16.

Note3) Except AW10.

Note4) ○ : Combinable to standard △ : Combinable to option × : Impossible

4. HOW TO ORDER



● Option

Symbol	Description	Applicable model
Nil	—	AW10~60
Note4) 1	Setting pressure 0.02~0.2MPa	AW10~60
2	Metal bowl	AW10~60
6	Nylon bowl	AW10~60
8	Metal bowl with sight glass	AW30~60
C	Bowl guard	AW20
Note5) J	With drain guide 1/8	AW20
	With drain guide 1/4	AW30~60
N	Non-relieving style	AW10~60
R	Flow direction: From right to left	AW10~60
W	With drain cock and barb fitting (For nylon φ6×φ4)	AW30~60
Note6) Z	Nameplate, Pressure gauge Unit: PSI·° F	AW10~60

When specifying more than one option, indicate symbols numerically then alphabetically.

Note4) Only the adjusting spring is different from the standard model. Max. outlet pressure is 0.2MPa or more and it might go up.

Note5) Without valve function.

Note6) Thread: NPT

Z is applicable to only overseas because of new measure ment law in Japan(SI unit).

● Accessory Note3)

Symbol	Description	Applicable model
Nil	—	AW10~60
B	With Bracket	AW20~60
C	With float auto drain (N.C.)	AW20~60
D	With float auto drain (N.O.)	AW30~60
E	Square embedded pressure gauge (With limit indicator)	AW20~60
G	Circular gauge(Without limit indicator)	AW10
	Circular gauge(With limit indicator)	AW20~60
H	Panel mounting(With set nut)	AW10~40

Note3) Accessory is packed together and is not mounted. (Except type C,D,E)

5. TROUBLESHOOTING

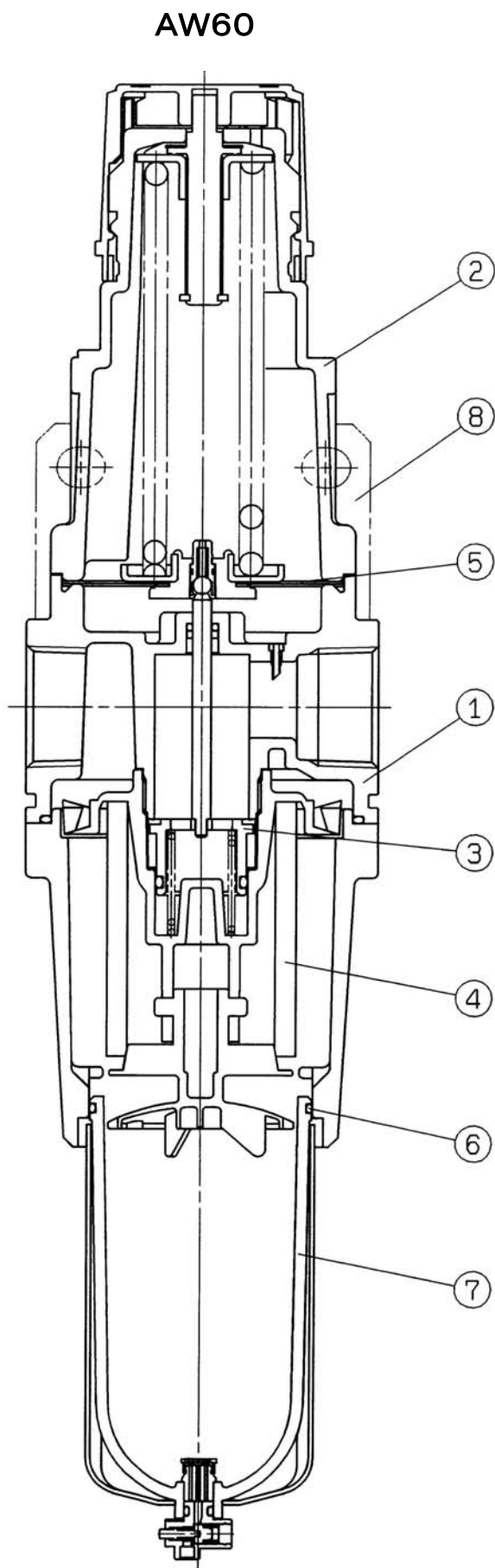
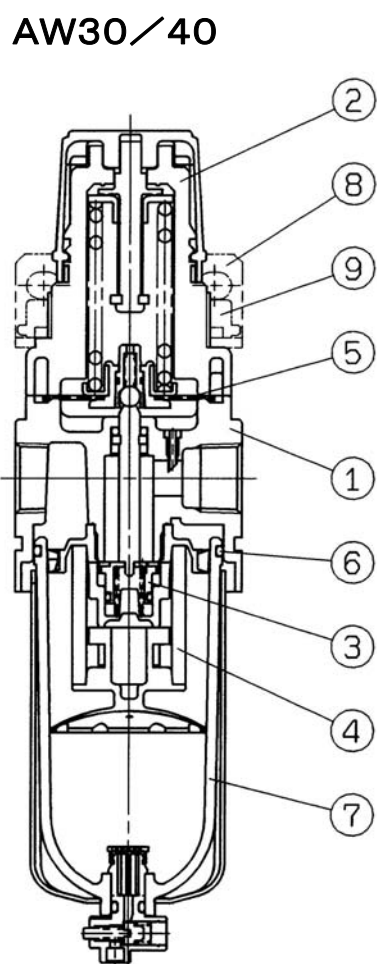
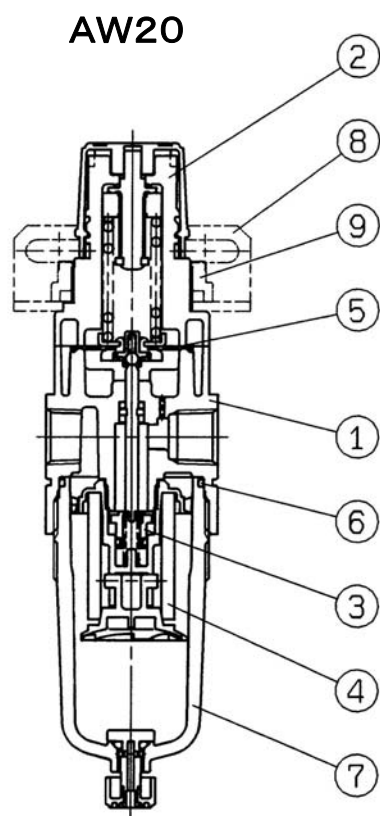
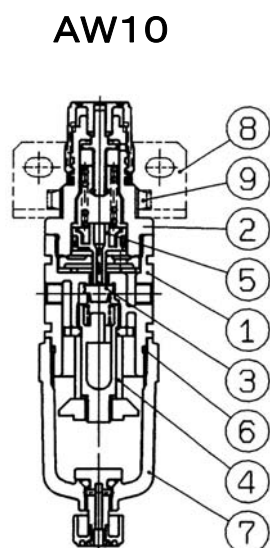
Refer to 「6.CONSTRUCTION」(P7),「9.DISASSEMBLY DRAWING」(P15～P18).

TROUBLE		POSSIBLE CAUSE	REMEDY	Applicable model
Demarcation	Phenomenon			
Pressure	Pressure is not regulated	1) Opposite flow direction or opposite installation of regulator.	1) Check flow direction and install the regulator correctly if wrong.	AW10～60
		2) Adjust spring is damaged.	2) Replace the adjust spring.	AW10～60
		3) Valve spring is damaged.	3) Replace the valve spring.	AW10～60
		4) Foreign materials caught in valve seat or valve "O" ring.	4) Remove the valve guide to clean valve, valve seat and the valve "O" ring. Then, grease up the valve "O" ring and the sliding surface.	AW10～60 (No valve "O" ring for AW10)
		5) Valve rubber seat is damaged.	5) Replace the valve.	AW10～60
	Set pressure does not return to zero when pressure handle is loosened	1) Foreign materials caught in valve seat or valve "O" ring.	1) Remove the valve guide to clean valve, valve seat and the valve "O" ring. Then, grease up the valve "O" ring and the sliding surface.	AW10～60 (No valve "O" ring for AW10)
		2) Valve rubber seat is damaged.	2) Replace the valve.	AW10～60
		3) Valve spring is damaged.	3) Replace the valve spring.	AW10～60
		4) Valve adheres to the valve guide.	4) Wash the sliding surface of valve "O" ring and grease up.	AW20～60
Flow rate	Large air resistance reduces flow rate.	1) Clog of the element.	1) Replace the element.	AW10～60
Air leaks	Air leaks from the bonnet exhaust port	1) Diaphragm is damaged.	1) Replace the diaphragm assembly.	AW20～60
		2) Piston packing is damaged.	2) Replace the piston packing, or clean. Then, grease up the piston packing and the sliding surface.	AW10
		3) Foreign material is caught in the relieving valve seat.	3) Clean the relieving valve seat, or replace the diaphragm assembly.	AW20～60
		4) Foreign material is caught in the valve seat of valve "O" ring.	4) Remove the valve guide to clean valve, valve seat and the valve "O" ring. Then, grease up the valve "O" ring and the sliding surface.	AW10～60 (No valve "O" ring for AW10)
		5) Valve rubber seat is damaged.	5) Replace the valve.	AW10～60
		6) Back pressure exceeding the set pressure is applied to the outlet.	6) Revise the air circuit so that back pressure does not exceed the set pressure.	AW10～60
	Air leaks between the bonnet and the body.	1) Loosened bonnet. 2) Diaphragm is damaged.	1) Fasten the bonnet. 2) Replace the diaphragm assembly.	AW10～60 AW20～60
	Air leaks from the bowl and the body.	1) Breakage of "O" ring.	1) Replace the "O" ring. Grease up before assembling.	AW10～60
	Air leaks from the bowl.	1) Breakage of bowl.	1) Replace the bowl assembly or with metal bowl.	AW10～60
	Air leaks from the drain cock.	1) The foreign matter caught in the valve of the drain cock. the drain cock.	1) Open the drain cock for a few seconds for blowing.	AW10～60
		2) Breakage of the seating part of the drain cock	2) Replace the bowl assembly.	AW10～60
Operational	Draining isn't performed though the drain cock is opened.	1) Clog of outlet of the drain cock due to solid foreign matter etc.	1) Replace the bowl assembly.	AW10～60
	Too much drain comes from the piping of secondary side.	1) Drain level reaches the baffle plate.	1) Open the drain cock for draining and replace the element.	AW10～40

Note) The grease used recommends Mitsubishi diamond multipurpose No.2.

6. CONSTRUCTION/PARTS LIST

1) Construction



2) PARTS LIST

Component Parts

	Description	Material				Note
		AW10	AW20	AW30・40(-06)	AW60	
①	Body	Zinc die cast		Aluminium die cast		Painted platinum silver
②	Bonnet	POM			Aluminium die cast	Painted black

Option/Replacement Parts

No.	Description	Thread	Option	Material	Part No.						
					AW10	AW20	AW30	AW40 (-06)	AW60		
③	Valve assembly	—	—	HNBR	AR10P-090S	AW20P-340AS	AW30P-340AS	AW40P-340AS	AW60P-090AS		
④	Element	—	—	POLYOLEFIN	AF10P-060S	AF20P-060S	AF30P-060S	AF40P-060S	AW60P-060S		
⑤ ^{Note1)}	Piston assembly	—	—	POM・NBR	AR10P-150AS	—	—	—	—		
		—	N	POM・NBR	AR10P-150AS-N	—	—	—	—		
	Diaphragm assembly	—	—	Wheatherproof NBR	—	AR20P-150AS	AR30P-150AS	AR40P-150AS	AR50P-150AS		
		—	N	Wheatherproof NBR	—	AR20P-150AS-N	AR30P-150AS-N	AR40P-150AS-N	AR50P-150AS-N		
⑥	Bowl O ring	—	—	NBR	C1SFP-260S	C2SFP-260S	C3SFP-260S	C4SFP-260S			
⑦	Bowl assembly	Refer to 「7. SPECIFICATIONS OF BOWL ASSEMBLY」(P8～P10).									
	Auto drain (N.C.)										
	Auto drain (N.O.)										
⑧ ^{Note2)}	Bracket assembly	—	—	Steel plate・POM	AR10P-270AS	AW20P-270AS	AR30P-270AS	AR40P-270AS	^{Note3)} AW60P-270AS		
⑨	Set nut	—	—	POM	AR10P-260S	AR20P-260S	AR30P-260S	AR40P-260S	—		
⑩ ^{Note4)}	Square embedded pressure gauge	—	—	—	—	GC3-10AS					
		NPT	Z	—	—	GC3-P10AS					
⑪	Pressure gauge cover	—	—	—	GC3P-010AS						
⑫	Circular pressure gauge	M5	—	—	^{Note5)} G27-10-R1	—	—	—	—		
			Z	—	^{Note5)} G27-P10-R1	—	—	—	—		
		Rc	—	—	—	^{Note6)} G36-10-01		^{Note7)} G46-10-02			
		NPT	—	—	—	^{Note6)} G36-10-N01		^{Note7)} G46-10-N02			
			Z	—	—	^{Note6)} G36-P10-N01		^{Note7)} G46-P10-N02			
		G	—	—	—	^{Note6)} G36-10-01		^{Note7)} G46-10-02			
		⑬	Pressure gauge adaptor assembly	Rc	—	Aluminium die cast	—	AR20P-310AS-01		AR20P-310AS-02	
				NPT	—	Aluminium die cast	—	AR20P-310AS-N01		AR20P-310AS-N02	
G	—			Aluminium die cast	—	AR20P-310AS-F01		AR20P-310AS-F012			
⑭	Plug assembly	Rc	—	—	—	AR20P-320AS-01		AR40P-320AS-02			
		NPT	—	—	—	AR20P-320AS-N01		AR40P-320AS-N02			
		G	—	—	—	AR20P-320AS-F01		AR40P-320AS-F02			
⑮	Plug	Rc	—	PA	—	AR20P-370AS-01		AR20P-370AS-02			
		NPT	—	PA	—	AR20P-370AS-N01		AR20P-370AS-N02			
		G	—	PA	—	AR20P-370AS-01		AR20P-370AS-02			
⑯	Blanking plate	—	—	—	—	AR20P-250AS					

Note1) Piston and Packing (Part number: KSYP-13) assembly.

Note2) Bracket and Set nut assembly.

Note3) Bracket with mounting screws.(2pcs)

Note4) With O ring (1 piece) and Mounting screws(2 pcs). For 0.2MPa part number: GC3-2AS/GC3-P2AS(NPT・Z).

Note5) For 1.0MPa pressure gauge only.

Note6) For 0.2MPa part number: G36-2-01(Rc)/G36-2-N01(NPT)/G36-P2-N01(NPT・Z).

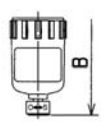
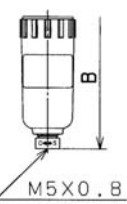
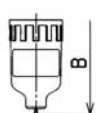
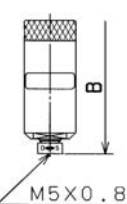
Note7) For 0.2MPa part number: G46-2-02(Rc)/G46-2-N02(NPT)/G46-P2-N02(NPT・Z).

Note8) The number in the table is corresponding to the number in structural drawing (above-mentioned figure) and

「7.SPECIFICATIONS OF BOWL ASSEMBLY」(P9~P11),「9.DISASSEMBLY DRAWING」(P16~P19)

7. SPECIFICATIONS OF BOWL ASSEMBLY

1) Bowl assembly/Auto drain for AW10

Accessory	—		Note2) C	
Option	—	6	—	6
External appearance drawing	Option 「-」 (Standard)		Option 「-」	
	⑦Part no. C1SF(-Z)		⑦Part no. AD17(-Z)	
	Option 「6」		Option 「6」	
	⑦Part no. C1SF-6(Z)		⑦Part no. AD17-6(Z)	
Part no.				
			M5X0.8	
Accessory	—		Note2) C	
Option	2		2	
External appearance drawing	⑦Part no. C1SF-2(Z)		⑦Part no. AD17-2(Z)	
				
			M5X0.8	

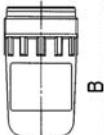
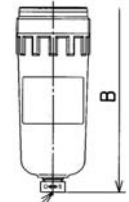
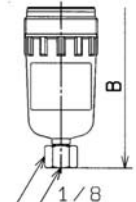
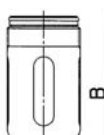
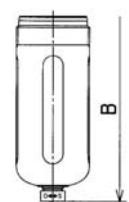
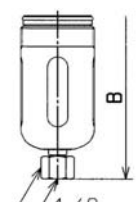
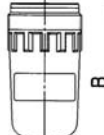
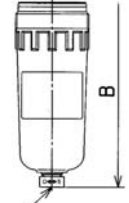
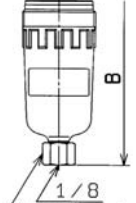
Note1) B in the table shows the total length of the product. Refer to 「10. DIMENSIONS」(P22).

Note2) The lowest pressure is 0.1MPa.

Note3) "Z" in the part number ⑦ is a option, and the unit of the pressure and the temperature are PSI and ° F.

Note4) Refer to 「4. HOW TO ORDER」(P5) for an accessories symbol and option symbol.

2) Bowl assembly/Auto drain for AW20

Accessory	—		Note2) C		—	
Option	—	6	—	6	J	6J
External appearance drawing	Option 「-」 (Standard)		Option 「-」		Option 「J」	
	Port thread	⑦Part no.	Port thread	⑦Part no.	Port thread	⑦Part no.
	Rc	C2SF	Rc	AD27	Rc	C2SF-J
	G	C2SF(-Z)	G	AD27(-Z)	G	C2SFF-J
Part no.	Option 「6」		Option 「6」		Option 「6J」	
	Port thread	⑦Part no.	Port thread	⑦Part no.	Port thread	⑦Part no.
	Rc	C2SF-6	Rc	AD27-6	Rc	C2SF-6J
	G	C2SF-6(Z)	G	AD27-6(Z)	G	C2SFF-6J
NPT	C2SF-6(Z)	NPT	AD27-6(Z)	NPT	C2SFN-6J(Z)	
						
			M5X0.8		1/8 HEX.14	
Accessory	—		Note2) C		—	
Option	C	6C	C	6C	CJ	6CJ
External appearance drawing	Option 「C」		Option 「C」		Option 「CJ」	
	Port thread	⑦Part no.	Port thread	⑦Part no.	Port thread	⑦Part no.
	Rc	C2SF-C	Rc	AD27-C	Rc	C2SF-CJ
	G	C2SF-C(Z)	G	AD27-C(Z)	G	C2SFF-CJ
Part no.	Option 「6C」		Option 「6C」		Option 「6CJ」	
	Port thread	⑦Part no.	Port thread	⑦Part no.	Port thread	⑦Part no.
	Rc	C2SF-6C	Rc	AD27-6C	Rc	C2SF-6CJ
	G	C2SF-6C(Z)	G	AD27-6C(Z)	G	C2SFF-6CJ
NPT	C2SF-6C(Z)	NPT	AD27-6C(Z)	NPT	C2SFN-6CJ(Z)	
						
			M5X0.8		1/8 HEX.14	
Accessory	—		Note2) C		—	
Option	2		2		2J	
External appearance drawing	Option 「-」 (Standard)		Option 「-」		Option 「-」	
	Port thread	⑦Part no.	Port thread	⑦Part no.	Port thread	⑦Part no.
	Rc	C2SF-2	Rc	AD27-2	Rc	C2SF-2J
	G	C2SF-2(Z)	G	AD27-2(Z)	G	C2SFF-2J
Part no.	Option 「2」		Option 「2」		Option 「2J」	
	Port thread	⑦Part no.	Port thread	⑦Part no.	Port thread	⑦Part no.
	Rc	C2SF-2	Rc	AD27-2	Rc	C2SF-2J
	G	C2SF-2(Z)	G	AD27-2(Z)	G	C2SFF-2J
NPT	C2SF-2(Z)	NPT	AD27-2(Z)	NPT	C2SFN-2J(Z)	
						
			M5X0.8		1/8 HEX.14	

Note 1) B in the table shows full dimensions of the product. Refer to 「10. DIMENSIONS」(P22).


Note 2) Min. operating pressure is 0.15MPa .

Note 3) The part with no. ⑦ includes ⑥ Bowl O ring. Refer to 「9. DISASSEMBLY DRAWING」(P16~P21).

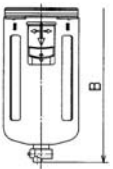
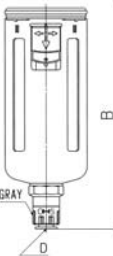
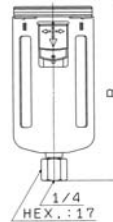
Note 4) "Z" of the part with no. ⑦ is semi-standard for indicated unit of pressure and temperature, which is PSI and ° F

Note 5) The symbol for option and semi-standard are described as 「4. HOW TO ORDER」(P5).

3) Bowl assembly/Auto drain for AW30

Accessory	—		Note2) C		Note2) D		—		—		
Option	—		6		6		J		6J		
External appearance drawing	Option 「-」 (Standard)		Option 「-」		Option 「-」		Option 「J」		Option 「W」		
	Port thread	⑦Part no.	Port thread	⑦Part no. D	Port thread	⑦Part no. D	Port thread	⑦Part no.	Port thread	⑦Part no. D	
	Rc	C3SF	Rc	AD37 ϕ 10	Rc	AD38 ϕ 10	Rc	C3SF-J	Rc	C3SF-W T0604	
	G	C3SF(-Z)	G	AD37N(-Z) ϕ 3/8"	G	AD38N(-Z) ϕ 3/8"	G	C3SFF-J	G	C3SF-W(Z)	
Part no.	Option 「6」		Option 「6」		Option 「6」		Option 「6J」		Option 「6W」		
	Port thread	⑦Part no.	Port thread	⑦Part no. D	Port thread	⑦Part no. D	Port thread	⑦Part no.	Port thread	⑦Part no. D	
	Rc	C3SF-6	Rc	AD37-6 ϕ 10	Rc	AD38-6 ϕ 10	Rc	C3SF-6J	Rc	C3SF-6W T0604	
	G	C3SF-6(Z)	G	AD37N-6(Z) ϕ 3/8"	G	AD38N-6(Z) ϕ 3/8"	G	C3SFF-6J	G	C3SF-6W(Z)	
NPT		C3SF-6(Z)	NPT		AD37N-6(Z) ϕ 3/8"	NPT		C3SFN-6J(Z)	NPT		C3SF-6W(Z)
			D: APPLICABLE TUBE EXTERNAL DIAMETER		D: APPLICABLE TUBE EXTERNAL DIAMETER		D: APPLICABLE TUBE EXTERNAL DIAMETER		D: APPLICABLE TUBE		
Accessory	—		Note2) C		Note2) D		—				
Option	2		2		2		2J				
External appearance drawing	Port thread ⑦Part no.		Port thread ⑦Part no. D		Port thread ⑦Part no. D		Port thread ⑦Part no.				
	Rc	C3SF-2	Rc	AD37-2 ϕ 10	Rc	AD38-2 ϕ 10	Rc	C3SF-2J			
	G	C3SF-2(Z)	G	AD37N-2(Z) ϕ 3/8"	G	AD38N-2(Z) ϕ 3/8"	G	C3SFF-2J			
	NPT	C3SF-2(Z)	NPT		AD37N-2(Z) ϕ 3/8"	NPT		C3SFN-2J(Z)			
Part no.	Option 「2」		Option 「2」		Option 「2」		Option 「2J」				
	Port thread	⑦Part no.	Port thread	⑦Part no. D	Port thread	⑦Part no. D	Port thread	⑦Part no.			
	Rc	C3SF-2	Rc	AD37-2 ϕ 10	Rc	AD38-2 ϕ 10	Rc	C3SF-2J			
	G	C3SF-2(Z)	G	AD37N-2(Z) ϕ 3/8"	G	AD38N-2(Z) ϕ 3/8"	G	C3SFF-2J			
NPT		C3SF-2(Z)	NPT		AD37N-2(Z) ϕ 3/8"	NPT		C3SFN-2J(Z)			
			D: APPLICABLE TUBE EXTERNAL DIAMETER		D: APPLICABLE TUBE EXTERNAL DIAMETER		D: APPLICABLE TUBE EXTERNAL DIAMETER				
Accessory	—		Note2) C		Note2) D		—				
Option	8		8		8		8J		Metal bowl with sight glass		
External appearance drawing	Port thread ⑦Part no.		Port thread ⑦Part no. D		Port thread ⑦Part no. D		Port thread ⑦Part no.				
	Rc	C3LF-8	Rc	AD37-8 ϕ 10	Rc	AD38-8 ϕ 10	Rc	C3LF-8J			
	G	C3LF-8(Z)	G	AD37N-8(Z) ϕ 3/8"	G	AD38N-8(Z) ϕ 3/8"	G	C3LFF-8J			
	NPT	C3LF-8(Z)	NPT		AD37N-8(Z) ϕ 3/8"	NPT		C3LFN-8J(Z)			
Part no.	Option 「8」		Option 「8」		Option 「8」		Option 「8J」				
	Port thread	⑦Part no.	Port thread	⑦Part no. D	Port thread	⑦Part no. D	Port thread	⑦Part no.			
	Rc	C3LF-8	Rc	AD37-8 ϕ 10	Rc	AD38-8 ϕ 10	Rc	C3LF-8J			
	G	C3LF-8(Z)	G	AD37N-8(Z) ϕ 3/8"	G	AD38N-8(Z) ϕ 3/8"	G	C3LFF-8J			
NPT		C3LF-8(Z)	NPT		AD37N-8(Z) ϕ 3/8"	NPT		C3LFN-8J(Z)			
			D: APPLICABLE TUBE EXTERNAL DIAMETER		D: APPLICABLE TUBE EXTERNAL DIAMETER		D: APPLICABLE TUBE EXTERNAL DIAMETER				

4) Bowl assembly/Auto drain for AW40,60

Accessory		—		Note2) C		Note2) D		—		—			
Option		—		6		6		J		6J			
External appearance drawing	Option 「-」 (Standard)				Option 「-」				Option 「J」				
	Port thread ⑦Part no.		Rc C4SF		Port thread ⑦Part no. D		Rc AD47 φ 10		Port thread ⑦Part no.		Rc C4SF-J		
Part no.	Option 「6」		Rc C4SF-6		Option 「6」		Rc AD47-6 φ 10		Option 「6J」		Rc C4SF-6J		
	Port thread ⑦Part no.		G C4SF-6(Z)		Port thread ⑦Part no. D		G AD47N-6(Z) φ 3/8"		Port thread ⑦Part no.		G C4SFF-6J		
		NPT C4SF-6(Z)				NPT AD47N-6(Z) φ 3/8"				Port thread ⑦Part no.		NPT C4SFN-6J(Z)	
				D: APPLICABLE TUBE EXTERNAL DIAMETER		D: APPLICABLE TUBE EXTERNAL DIAMETER				D: APPLICABLE TUBE			
										1/4 HEX. : 17			
												T0604	
												D: APPLICABLE TUBE	

Note 1) B in the table shows full dimensions of the product. Refer to 「10. DIMENSIONS」 (P22).

Note 2) Min. operating pressure is 0.15MPa for N.C. type and 0.1MPa for N.O. type.

Note 3) The part with no. ⑦ includes ⑥ Bowl O ring. Refer to 「9. DISASSEMBLY DRAWING」 (P16~21).

Note 4) "Z" of the part with no. ⑦ is semi-standard for indicated unit of pressure and temperature, which is PSI and ° F

Note 5) The symbol for option and semi-standard are described as 「4. HOW TO ORDER」 (P5).

7. REPLACEMENT PROCEDURE

WARNING

Before replacement, ensure that the regulator is not pressurized.

Rotate the pressure adjusting handle to zero.

Replace referring to 「9. DISASSEMBLY DRAWING」 (P16~P21).

After replacement, ensure that specified function is satisfied and external leakage is not found before starting operation.

1) Bowl assembly/element

Applicable model	Process	Procedure	Tools	Check item
AW10	Disassembly	1) Remove the bowl assembly Hold the bowl assembly by hand and rotate counterclockwise to remove the bowl assembly. If the bowl assembly is tightened too much to be removed, use hook spanner until it can be loosened by hand.	(Hook spanner Nominal: 25/28)	—
		2) Remove the baffle element Rotate the baffle by hand and counterclockwise to remove the baffle and element.	—	—
	Assembly	3) Mount the element. Mount the element to the element guide.	—	—
		4) Mount the baffle. Hold the baffle by hand to rotate it clockwise and mount the element. Baffle has mount direction. See disassembly drawing. For baffle tightening torque, see check item.	Spanner Nominal: 16	Tightening torque: 0.35±0.05N·m
		5) Mount the bowl assembly. Hold the bowl assembly by hand and rotate clockwise. Do not use tool for mounting because the bowl may be damaged. See check item for referential tightening torque.	—	Referential tightening torque: 1.5 N·m
AW20	Disassembly	1) Remove the bowl assembly Hold the bowl assembly by hand and rotate counterclockwise to remove the bowl assembly. If the bowl assembly is tightened too much to be removed, use hook spanner until it can be loosened by hand.	(Hook spanner Nominal: 34/38)	—
		2) Remove the baffle element Rotate the baffle by hand and counterclockwise to remove the baffle and element.	—	—
	Assembly	3) Mount the element. Mount the element to the element guide.	—	—
		4) Mount the baffle. Insert the baffle so that concave on the valve guide could meet T convex on the baffle. And rotate it clockwise manually until feeling snap fit (approx. 110°) to fix to the element.	—	—
		5) Mount the bowl assembly. Hold the bowl assembly by hand and rotate clockwise. Do not use tool for mounting because the bowl may be damaged. See check item for referential tightening torque.	—	Referential tightening torque: 2.2 N·m
AW30 AW40 AW60	Disassembly	1) Remove the bowl assembly Push the bowl assembly lock button. Lifting the bowl assembly, rotate the assembly 45 degree(right or left) to pull out the assembly.	—	—
		2) Remove the baffle element Rotate the baffle by hand and counterclockwise to remove the baffle and element.	—	—
	Assembly	3) Mount the element. Mount the element to the element guide.	—	—
		4) Mount the baffle. Insert the baffle so that concave on the valve guide could meet T convex on the baffle. And rotate it clockwise manually until feeling snap fit (approx. 110°) to fix to the element.	—	Direction of baffle. For element convex side.
		5) Mount the bowl assembly. Match the mating mark of the body and the bowl assembly to insert the assembly to the body. Rotate the assembly 45 degree(right or left) until the lock button is tossed up to mount the bowl assembly. Ensure the lock button is up.	—	Lock button is up.

2) Diaphragm assembly

Applicable model	Process	Procedure	Tool	Check item								
AW10	Disassembly	1) Remove the bonnet assembly Hold the bonnet with a spanner on the spanner flat, and rotate counterclockwise to remove the bonnet assembly.	Spanner Nominal : 16	—								
		2) Remove the piston assembly from the bonnet assembly Pull out the piston assembly facing the handle downwards. Otherwise, pressure adjusting screw assembly or pressure adjusting spring fall off.	—	—								
	Assembly	3) Mount the piston assembly to the bonnet assembly Insert the piston assembly to the bonnet so that the piston assembly convex faces the body. If pressure adjusting screw or pressure adjusting spring is not mounted on the bonnet, mount it before mounting the piston assembly.	—	—								
		4) Ensure the chamber is mounted on the body If the chamber is removed during disassembly, mount the chamber ensuring the right direction of the chamber. Convex of the chamber shall face the bonnet.	—	Presence of chamber. Mount if there is not a chamber direction								
		5) Mount the bonnet assembly to the body Hold the bonnet assembly with a spanner on the spanner flat, and rotate the body clockwise to settle. See check item for the tightening torque.	Spanner Nominal : 16	Tightening torque : 1.8±0.3N·m								
AW20 AW30 AW40 AW60	Disassembly	1) Remove the bonnet Rotate the set screw counterclockwise with cross pointed driver to remove the bonnet from the body.	Cross pointed driver	—								
		2) Remove parts in order of the pressure adjusting screw assembly, pressure adjusting spring, and the diaphragm assembly. Please be noted that the diaphragm assembly adheres to the bonnet if disassemble parts with the handle facing downwards	—	—								
	Assembly	3) Mount parts to the body in order of the diaphragm assembly, pressure adjusting spring, and pressure adjusting screw. Mind the direction of the diaphragm assembly and pressure adjusting screw assembly. See attached disassembly drawing.	—	Direction of pressure adjusting screw assembly and diaphragm assembly								
		4) Mount the bonnet to the body Mount the bonnet to the body, and settle it roughly with four(4) set screws with a cross pointed driver. Then, Tighten screws diagonally with the tightening torque in the check item to settle.	Cross pointed driver	<table><tr><td colspan="2">Tightening torque</td></tr><tr><td>AW20</td><td>2.15±0.3N·m</td></tr><tr><td>AW30</td><td>2.35±0.3N·m</td></tr><tr><td>AW40</td><td>3.5±0.3N·m</td></tr><tr><td>AW60</td><td>4.5±1.0N·m</td></tr></table>	Tightening torque		AW20	2.15±0.3N·m	AW30	2.35±0.3N·m	AW40	3.5±0.3N·m
Tightening torque												
AW20	2.15±0.3N·m											
AW30	2.35±0.3N·m											
AW40	3.5±0.3N·m											
AW60	4.5±1.0N·m											

3) Valve assembly

Applicable model	Process	Procedure	Tools	Check item				
AW10	Disassembly	1) Remove valve guid after removeing bowl assembly and element. Hold the valve guide with a spanner to rotate it couterclockwise and remove the valve guide.	Spanner Nominal : 4	—				
		2) Remove the valve spring.	—	—				
		3) Remove the valve.	—	—				
	Assembly	4) Mount the valve. Mount the valve so that convex on the valve could be turned to the valve guide.	—	The convex surface of the valve is a valve guide side.				
		5) Mount the valve spring. Insert internal circumference of the valve spring to the convex on the valve.	—	—				
		6) Mount the valve guide. Hold the valve guide with a spanner to rotate it clockwise and mount the valve guide. See check item for the tightening torque.	Spanner Nominal : 4	Tightening torque : 0.35±0.05N•m				
AW20 AW30 AW40	Disassembly	1) Remove valve guid after removing bowl assembly and element. Hold the valve guide with a spanner to rotate it couterclockwise and remove the valve guide.	Spanner Nominal : 7	—				
		2) Remove the valve spring.	—	—				
		3) Remove the valve assembly.	—	—				
	Assembly	4) Mount the valve assembly. Mate the stem convex and the valve center hole.	—	Positioning the stem and the valve(centering)				
		5) Mount the valve spring. Insert the valve spring to the valve hole	—	—				
		6) Mount the valve guide. Hold the valve guide with a spanner to rotate it clockwise and mount the valve guide. See check item for the tightening torque.	Spanner Nominal : 7	Tightening torque : <table><tr><td>AW20</td><td>0.8±0.1N•m</td></tr><tr><td>AW30</td><td>2.35±0.3N•m</td></tr><tr><td>AW40</td><td>3.5±0.3N•m</td></tr></table>	AW20	0.8±0.1N•m	AW30	2.35±0.3N•m
AW20	0.8±0.1N•m							
AW30	2.35±0.3N•m							
AW40	3.5±0.3N•m							

Applicable model	Process	Procedure	Tools	Check items
AW60	Disassembly	1) Remove the bowl assembly, housing, and element. Remove a housing from a body by turning 4 mounting screws to the left with a hexagon wrench key.	Hexagon wrench key Nominal: 5	
		2) Remove the valve guide. Hold the valve guide with a spanner to rotate it counterclockwise and remove the valve guide.	Spanner Nominal: 30	—
		3) Remove the valve spring.	—	—
		4) Remove the valve assembly.	—	—
	Assembly	5) Mount the valve assembly. Mate the stem convex and the valve center hole.	—	Positioning the stem and the valve(centering)
		6) Mount the valve spring. Insert the valve spring to the valve hole.	—	—
		7) Mount the valve guide. Hold the valve guide with a spanner to rotate it clockwise and mount the valve guide. See check item for the tightening torque.	Spanner Nominal: 30	Tightening torque: $6.5 \pm 0.3 \text{ N} \cdot \text{m}$
		8) Mount the housing. Mount an O-ring on the body, assemble the housing, and tighten the 4 mounting screws temporary. Tighten the screws additionally and evenly with the tightening torque shown on the right using the hexagon wrench key.	Hexagon wrench key Nominal: 5	Tightening torque: $4.5 \pm 1.0 \text{ N} \cdot \text{m}$

4) Bracket assembly, panel mount

Applicable model	Process	Procedure	Tools	Check items																	
AW10 AW20 AW30 AW40	Assembly	1) Mount the parts to the bracket(panel) Mate the bracket(panel) concave and the bonnet convex to mount the bracket.	—	—																	
		2) Settle the bracket(panel) with set nut. Rotate the set nut clockwise with a hook spanner(spanner for AW10) to settle the parts to the bracket(panel). See check item for tightening torque. Set nut knurling surface shall face the bracket.(except AW10) When mounting with bracket, set nut tightened manually is adequate fir general used.(except AW10)	AW10: spanner Nominal: 24 AW20~40: Hook spanner Nominal <table><tr><td>AW20</td><td>34/38</td></tr><tr><td>AW30</td><td>52/55</td></tr><tr><td>AW40</td><td>52/55</td></tr></table>	AW20	34/38	AW30	52/55	AW40	52/55	<table><tr><td colspan="2">Tightening torque</td></tr><tr><td>AW10</td><td>0.8±0.1N•m</td></tr></table> <table><tr><td colspan="2">Tightening torque</td></tr><tr><td>AW20</td><td>2.0±0.2N•m</td></tr><tr><td>AW30</td><td>3.5±0.3N•m</td></tr><tr><td>AW40</td><td>4.0±0.4N•m</td></tr></table>	Tightening torque		AW10	0.8±0.1N•m	Tightening torque		AW20	2.0±0.2N•m	AW30	3.5±0.3N•m	AW40
	AW20	34/38																			
	AW30	52/55																			
AW40	52/55																				
Tightening torque																					
AW10	0.8±0.1N•m																				
Tightening torque																					
AW20	2.0±0.2N•m																				
AW30	3.5±0.3N•m																				
AW40	4.0±0.4N•m																				
AW60	Assembly	1) Mount the product to the bracket. Two mounting screws are tightened by hexagon spanner for holding.	Spanner Nominal: 10	Tightening torque: 2.6N•m																	

5) Square embedded pressure gauge

Applicable model	Process	Procedure	Tools	Check items
AW20 AW30 AW40 AW60	Disassembly	1) Remove the pressure gauge cover Rotate the pressure gauge cover 15 degree counterclockwise to pull out the pressure gauge cover	—	—
		2) Remove the pressure gauge Rotate two set screws counterclockwise with cross pointed driver to remove the pressure gauge and two set screws.	Cross pointed driver	—
	Assembly	3) Ensure "O" ring is mounted to the pressure gauge Mount "O" ring to the pressure gauge if the ring fall off.	—	Presence of "O" ring
		4) Mount the pressure gauge Rotate two set screws clockwise with cross pointed driver to set screws temporary. Then settle them with tightening torque in check item.	Cross pointed driver	Tightening torque: $0.3 \pm 0.05 \text{ N} \cdot \text{m}$
		5) Mount the pressure gauge cover Insert the pressure gauge mating two detent of the pressure gauge and holes for them so that the arrow of the pressure gauge cover comes upper right. Rotate the pressure gauge cover 15 degree opposite to the arrow to mount the pressure gauge.	—	—

6) Circular pressure gauge

Applicable model	Process	Procedure	Tools	Check item
AW10 AW20 AW30 AW40 AW60	Disassembly	1) Remove the pressure gauge Hold the pressure gauge with a spanner on the spanner flat. Then, rotate the gauge counterclockwise to remove the gauge. Spanner for AW10 is a compact spanner.	Spanner Nominal: AW10 21 AW20 12 AW30 14 AW40 AW60	—
	Assembly	2) Rap the pressure gauge thread with the seal tape leaving 1.5 to 2 threads from the end.	—	Wrap seal tape leaving 1.5 to 2 threads
		3) Mount the pressure gauge Hold the pressure gauge on the spanner flat with a spanner, and rotate it clockwise to mount the circular pressure gauge. Use compact spanner for AW10. See Check item for tightening torque of pressure gauge.	Spanner Nominal: AW10 21 AW20 12 AW30 14 AW40 AW60	Tightening torque: AW10 3~4N·m AW20 7~9N·m AW30 AW40 12~14N·m AW60

7) Pressure gauge adapter, Plug assembly

Applicable model	Process	Procedure	Tools	Check item
AW20 AW30 AW40 AW60	Disassembly	1) Remove the plug Insert the hexagon spanner to hexagon hole of hexagon plug. Rotate the plug counterclockwise to remove the plug.	Spanner Nominal: AW20 4 AW30 6 AW40 AW60	—
		2) Remove the pressure gauge adapter Rotate two set screws counterclockwise with cross pointed driver to remove the pressure gauge and two set screws.	Cross pointed driver	—
	Assembly	3) Confirm pressure gauge adapter has "O" ring. If not, mount "O" ring.	—	—
		4) Mount pressure gauge adapter. Rotate two screws clockwise by Phillips driver to fix pressure gauge adapter. See Check item for tightening torque of two screws.	Cross pointed driver (Torque driver)	Tightening torque: 0.3~0.05 N·m
		5) Mount plug assembly. Insert hexagon spanner into hexagon hole on the plug and rotate clockwise to fix the plug. See Check item for tightening torque of two screws.	Spanner Nominal: AW20 4 AW30 6 AW40 AW60	Tightening torque: AW20 0.6~0.05N·m AW30 AW40 1.0~0.1 N·m AW60

8) Plug

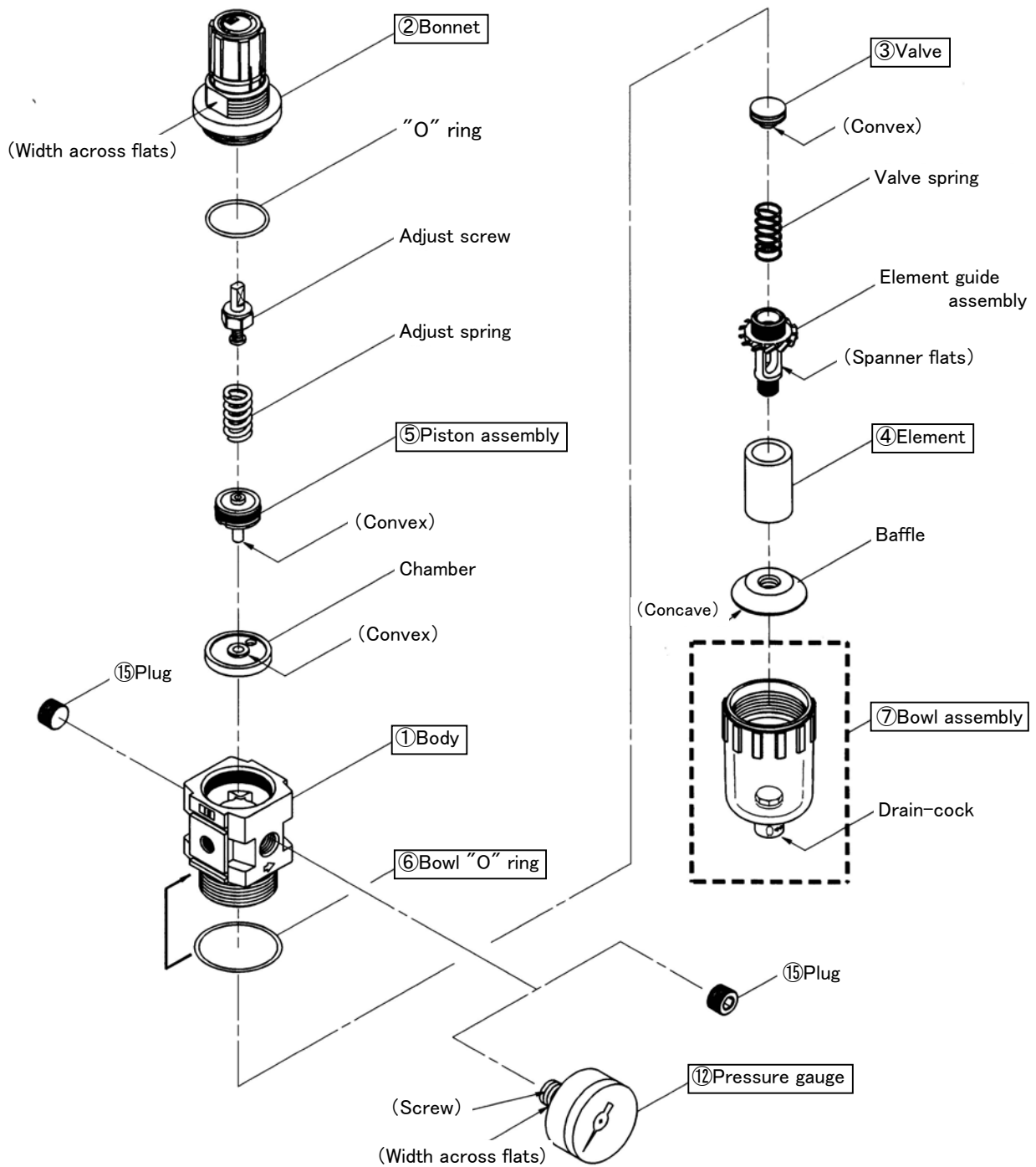
Applicable model	Process	Procedure	Tools	Check item
AW10	Disassembly	1) Remove the plug Insert the hexagon spanner to hexagon hole of hexagon plug. Rotate the plug counterclockwise to remove the plug.	Nominal hexagon spanner: 4	—

9) Blanking plate

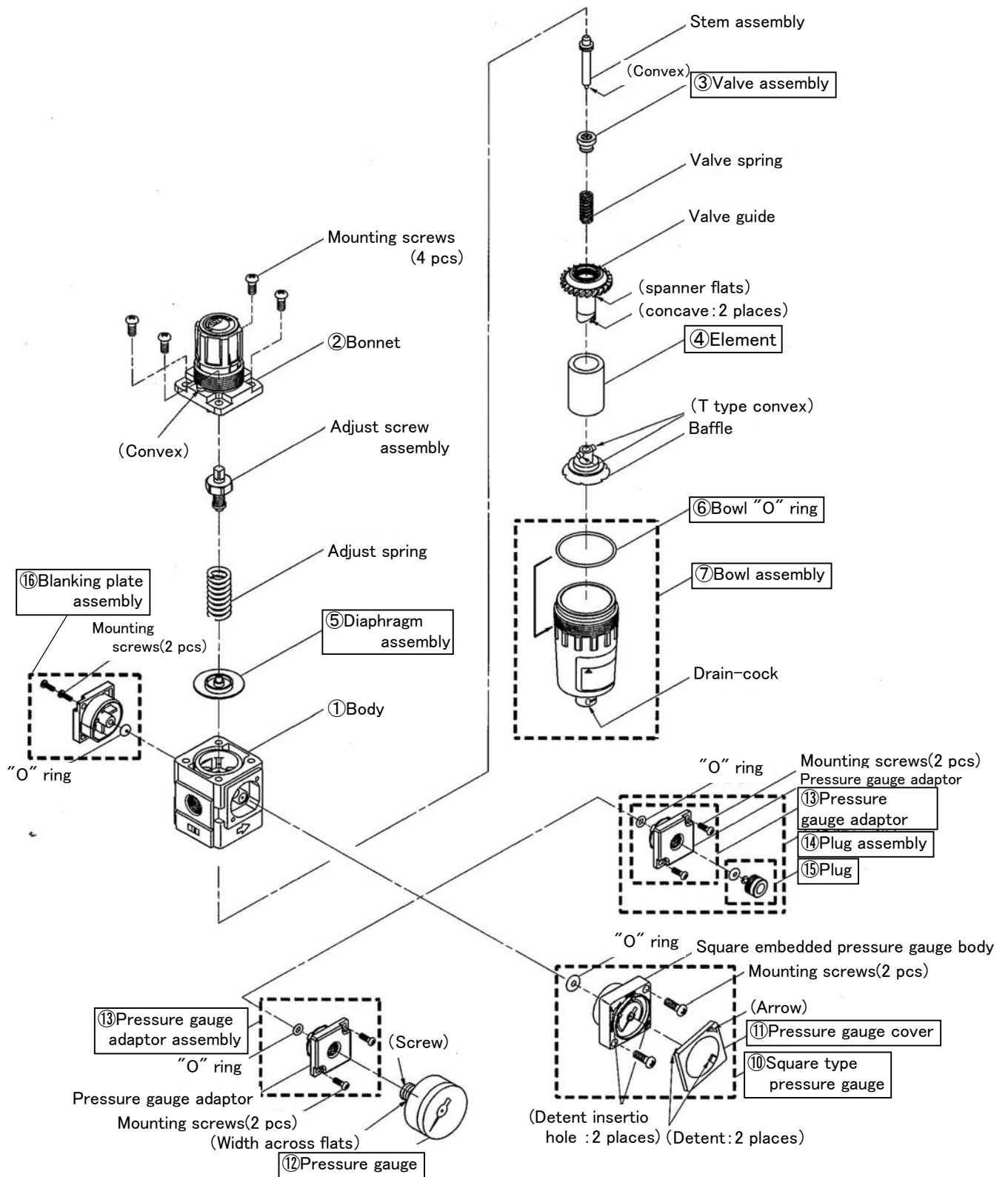
Applicable model	Process	Procedure	Tools	Check item
AW20 AW30 AW40 AW60	Disassembly	1) Rotate two set screws counterclockwise with cross pointed driver to remove the blanking plate and two set screws.	Cross pointed driver	—
	Assembly	2) Remove the pressure gauge adapter Confirm blanking plate has "O" ring. If not, mount "O" ring.	—	—
		3) Mount the blanking plate. Rotate two screws clockwise by Phillips driver to fix blanking plate. See Check item for tightening torque of two screws.	Cross pointed driver (Torque driver)	Tightening torque: 0.3~0.05 N·m

9. DISASSEMBLY DRAWING

1)AW10



2)AW20



Note.) It is possible to mount ⑩ Square embedded pressure gauge or ⑬ Pressure gauge adaptor assembly or ⑭ Plug assembly instead of ①⑥ Blanking plate assembly.

This diagram illustrates the exploded view of a pressure gauge assembly, showing the following components and their assembly sequence:

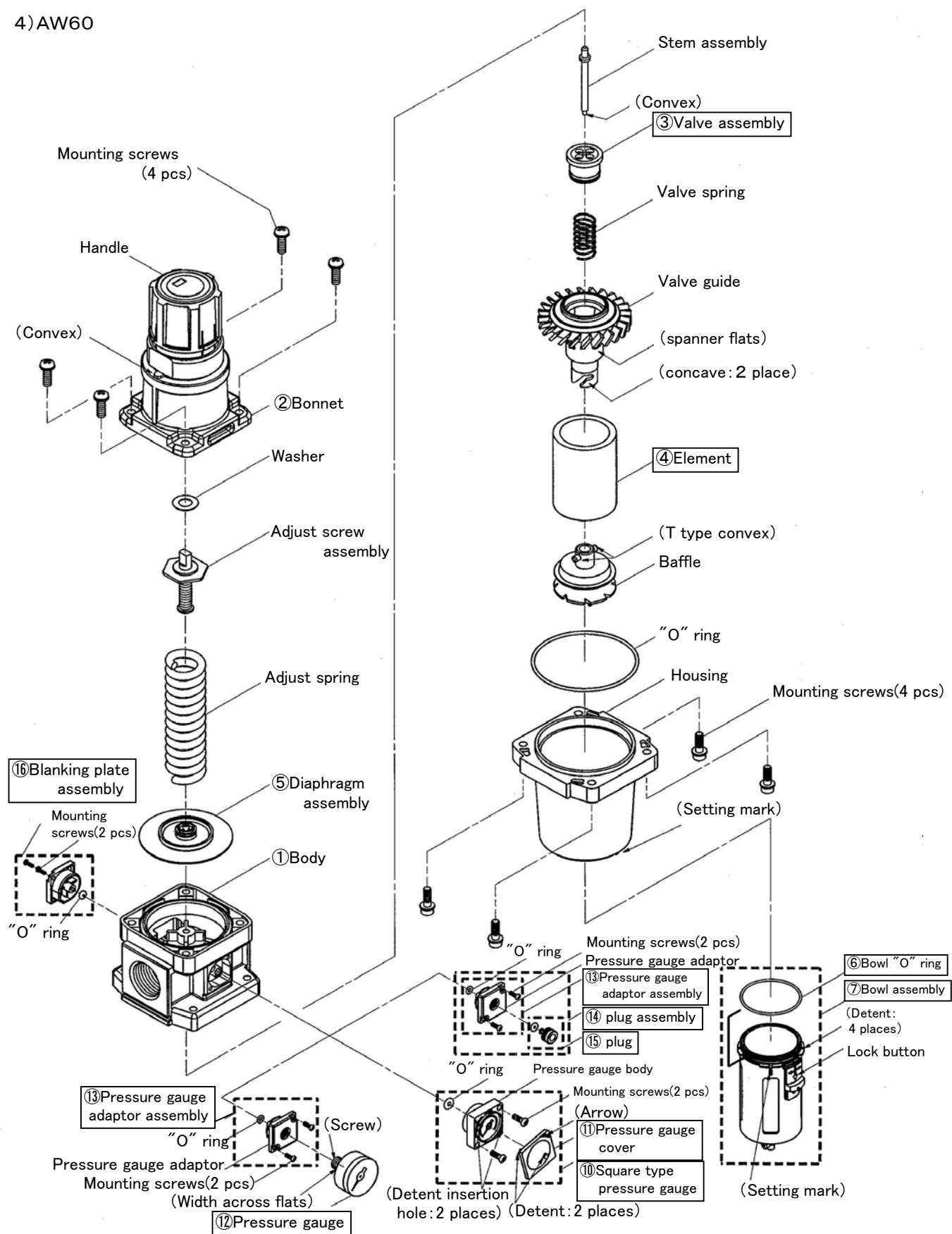
- 1 Body**: The main housing of the gauge.
- 2 Bonnet**: The protective top cover.
- 3 Valve assembly**: Includes the **Stem assembly**, **Valve spring**, **Valve guide**, and **Element**.
- 4 Element**: The internal sensing element.
- 5 Diaphragm assembly**: The internal diaphragm.
- 6 Bowl "O" ring**: The seal for the bowl.
- 7 Bowl assembly**: The outer protective bowl.
- 8 Lock button**: The button used to lock the gauge.
- 9 Baffle**: The internal baffle.
- 10 Square type pressure gauge**: The gauge face.
- 11 Pressure gauge cover**: The cover for the gauge face.
- 12 Pressure gauge**: The gauge body.
- 13 Pressure gauge adaptor assembly**: The adaptor for the gauge.
- 14 plug assembly**: The plug for the gauge.
- 15 plug**: The plug for the gauge.
- 16 Blanking plate assembly**: The blanking plate for the gauge.

Additional labels and notes include:

- (Convex)**: Indicates the convex side of the bonnet and valve assembly.
- (Concave: 2 place)**: Indicates the concave side of the valve guide.
- (T type convex)**: Indicates the T type convex side of the element.
- (Detent: 4 places)**: Indicates the detent positions for the bowl assembly.
- (Setting mark)**: Indicates the setting mark for the body and bowl assembly.
- (Screw)**: Indicates the screw for the pressure gauge.
- (Width across flats)**: Indicates the width across flats for the pressure gauge.
- (Detent insertion hole: 2 places)**: Indicates the detent insertion hole for the pressure gauge.
- (Detent: 2 places)**: Indicates the detent positions for the pressure gauge.
- (Arrow)**: Indicates the arrow for the pressure gauge cover.

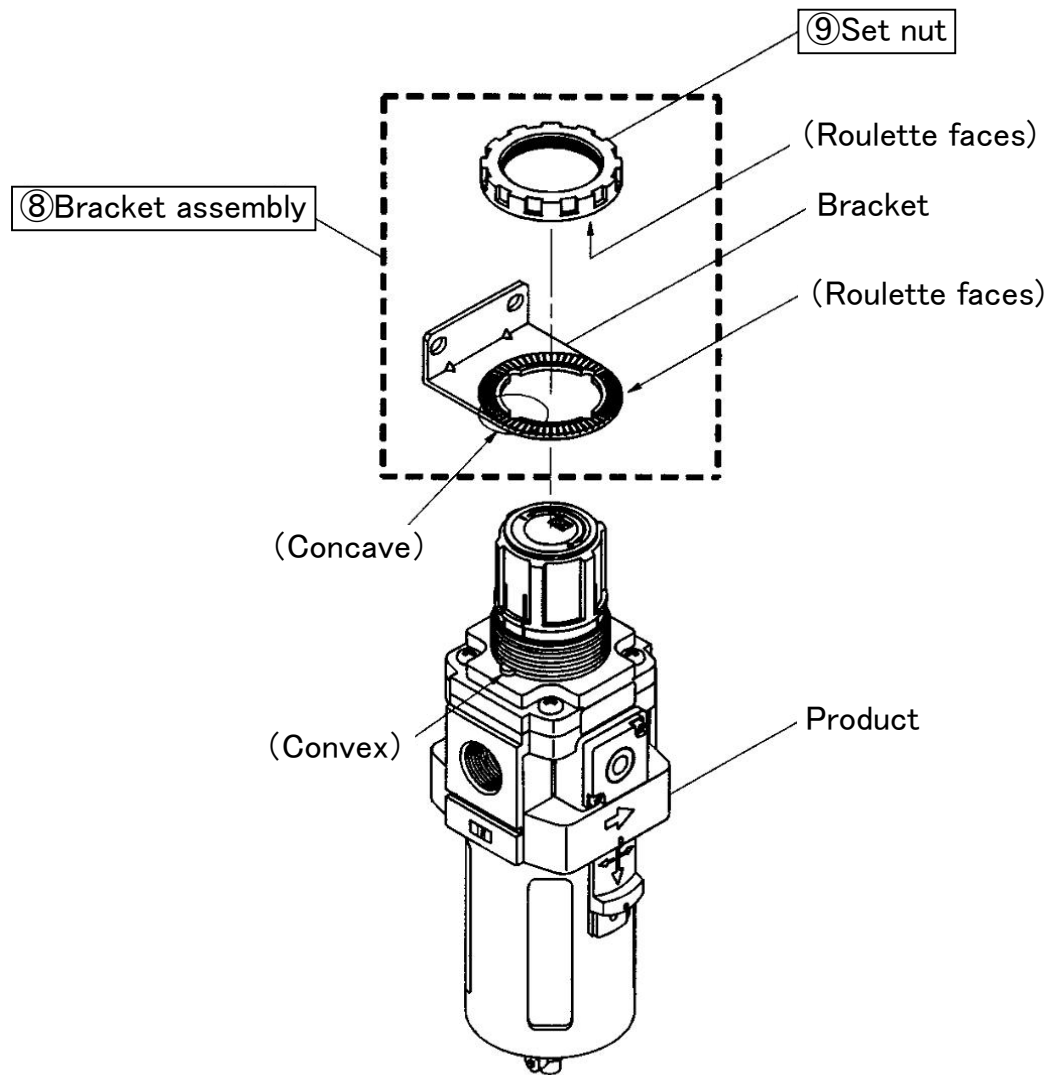
- 18 -

4) AW60



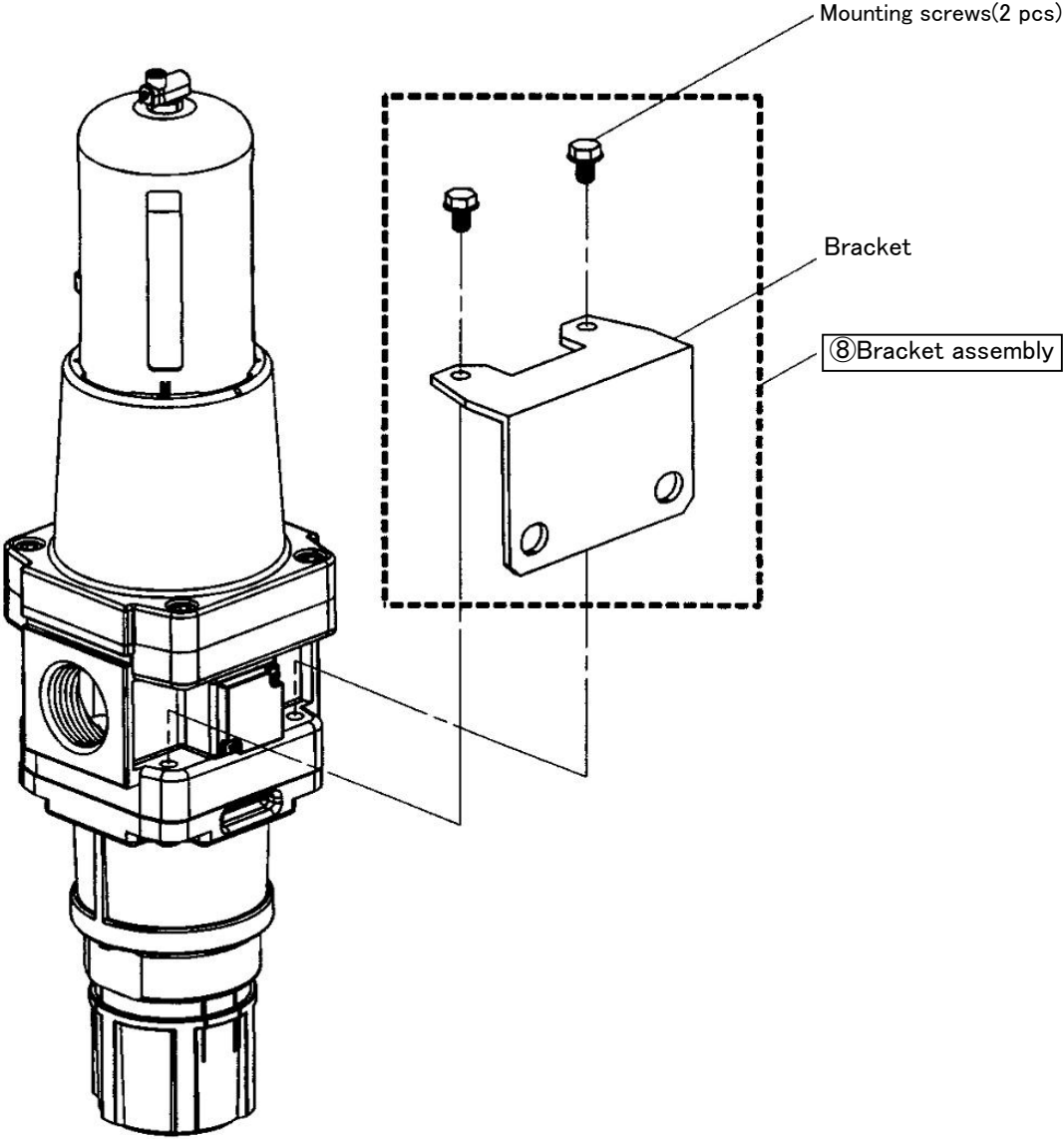
Note.) It is possible to mount ⑩ Square embedded pressure gauge or ⑬ Pressure gauge adaptor assembly or ⑭ Plug assembly instead of ⑯ Blanking plate assembly.

5)AW10／20／30／40 Bracket assembly・Panel mounting Disassembly drawing.

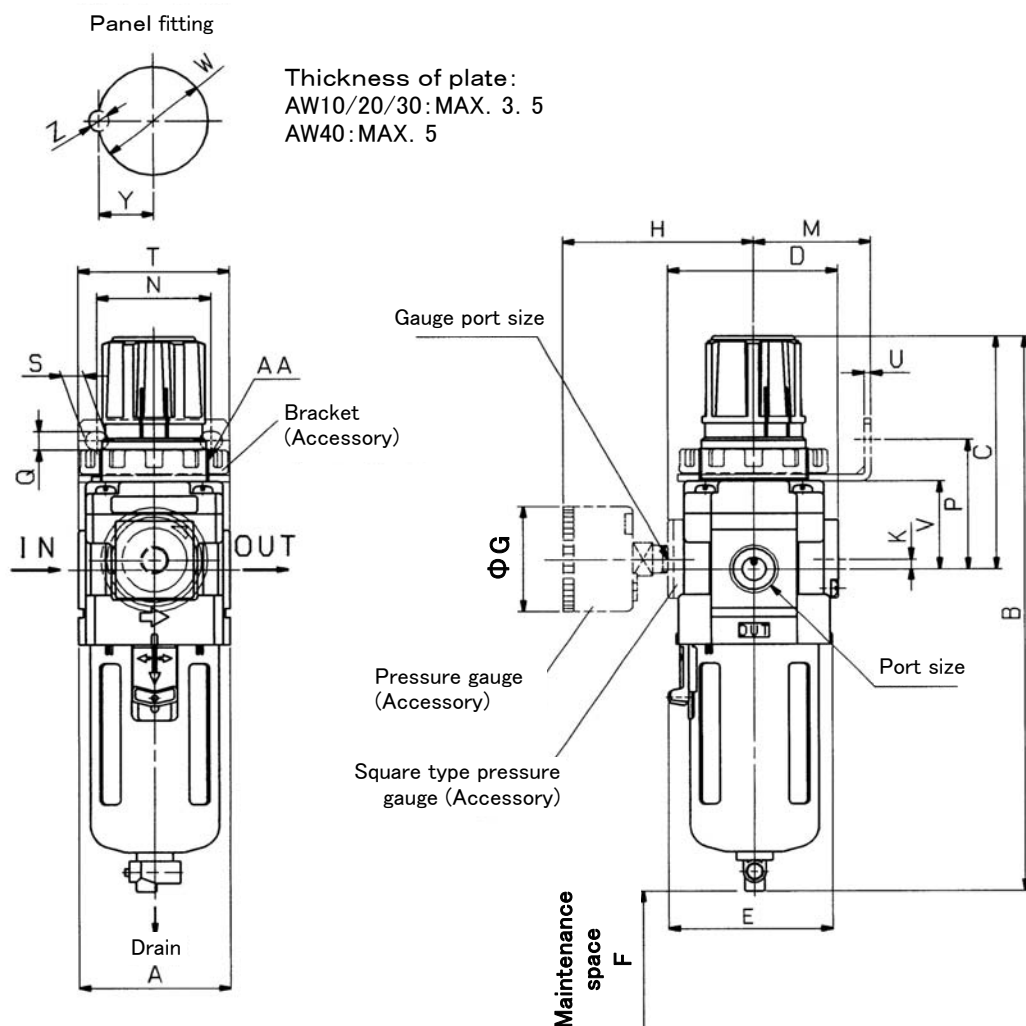


Note) Set nut and Bracket for AW10 is not equipped with roulette faces.
Product and bracket for AW10 is not equipped with convex and concave to mate.

6)AW60 Bracket assembly Disassembly drawing.



10. DIMENSIONS



Dimensions

Model	Port size	Gauge port size	Standard							Accessory									
										Pressure gauge			Bracket mounting dimensions						
			A	<small>Note1)</small> B	C	D	E	F	G	H	K	M	N	P	Q	S	T	U	
AW10	M5	1/16	25	108	48	26	—	25	26	26	—	25	28	30	4.5	6.5	40	2	
AW20	1/8•1/4	1/8	40	160	73	52	—	40	37.5	63	5	30	34	44	5.4	15.4	55	2.3	
AW30	1/4•3/8	1/8	53	201	86	59	57	55	37.5	66	3.5	41	40	46	6.5	8	53	2.3	
AW40	1/4•3/8•1/2	1/4	70	239	92	75	73	80	42.5	76	1.5	50	54	54	8.5	10.5	70	2.3	
AW40-O6	3/4	1/4	75	242	93	75	73	80	42.5	76	1.2	50	54	56	8.5	10.5	70	2.3	
AW60	3/4•1	1/4	95	405	171	88	95	20	42.5	84	3.2	70	66	66	11	13	90	3.2	

Model	Accessory				
	Panel mounting				
	V	W	Y	Z	AA
AW10	18	18.5	—	—	M18×1
AW20	30	28.5	14	6	M28×1
AW30	31	38.5	19	7	M38×1.5
AW40	35.5	42.5	21	7	M42×1.5
AW40-O6	37	42.5	21	7	M42×1.5
AW60	—	—	—	—	—

B for Auto-drain/Optional bowl assembly

Accessory Option Model		-												C						D				
		2	6	8	C	6C	J	2J	6J	8J	CJ	6CJ	W	6W	-	2	6	8	C	6C	-	2	6	8
AW10		107	108	—	—	—	—	—	—	—	—	—	—	125	125	125	—	—	—	—	—	—	—	—
AW20		160	160	—	160	160	164	167	164	—	164	164	—	—	177	177	177	—	177	177	—	—	—	—
AW30		214	201	234	—	—	208	208	208	228	—	—	209	209	242	242	242	242	—	—	242	242	242	242
AW40		251	239	272	—	—	246	246	246	266	—	—	247	247	278	280	278	280	—	—	278	280	278	280
AW40-O6		255	242	275	—	—	249	249	249	269	—	—	250	250	282	284	282	284	—	—	282	284	282	284
AW60		418	405	438	—	—	412	412	412	432	—	—	413	413	445	447	445	447	—	—	445	447	445	447

Note 1) The specifications of auto-drain and optional bowl assembly are described in 「7. SPECIFICATIONS OF BOWL ASSEMBLY」 (P9~P11).