

Serial No.	H-A055-E-9
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Diaphragm Valve Type 16 Pneumatic Actuated Type AD 15-50mm (1/2"-2")



User's Manual





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This user's guide contains very important information for the proper installation, maintenance and safe use of an ASAHI AV Product. Please store this manual in an easily accessible location.

<Warning & Caution Signs>

 Warning	This symbol reminds the user to take caution due to the potential for serious injury or death.
 Caution	This symbol reminds the user to take caution due to the potential for damage to the valve if used in such a manner.

<Prohibited & Mandatory Action Signs>

	Prohibited: When operating the valve, this symbol indicates an action that should not be taken.
	Mandatory action: When operating the valve, this symbol indicates mandatory actions that must be adhered to.

(1) Be sure to read the following warranty clauses of our product

- Always observe the specifications of and the precautions and instructions on using our product.
- We always strive to improve product quality and reliability, but cannot guarantee perfection. Therefore, should you intend to use this product with any equipment or machinery that may pose the risk of serious or even fatal injury, or property damage, ensure an appropriate safety design or take other measures with sufficient consideration given to possible problems. We shall assume no responsibility for any inconvenience stemming from any action on your part without our written consent in the form of specifications or other documented approval.
- The related technical documents, operation manuals, and other documentation prescribe precautions on selecting, constructing, installing, operating, maintaining, and servicing our products. For details, consult with our nearest distributor or agent.
- Our product warranty extends for one and a half years after the product is shipped from our factory or one year after the product is installed, whichever comes first. Any product abnormality that occurs during the warranty period or which is reported to us will be investigated immediately to identify its cause. Should our product be deemed defective, we shall assume the responsibility to repair or replace it free of charge.
- Any repair or replacement needed after the warranty period ends shall be charged to the customer.
- The warranty does not cover the following cases:
 - (1) Using our product under any condition not covered by our defined scope of warranty.
 - (2) Failure to observe our defined precautions or instructions regarding the construction, installation, handling, maintenance, or servicing of our product.
 - (3) Any inconvenience caused by any product other than ours.
 - (4) Remodeling or otherwise modifying our product by anyone other than us.
 - (5) Using any part of our product for anything other than the intended use of the product.
 - (6) Any abnormality that occurs due to a natural disaster, accident, or other incident not stemming from something inside our product.

(2) General operating instructions



Warning

- Do not disassemble or modify the actuator.
(If disassembled under tension, internal parts may jump out and this is very dangerous.)



- Using a positive-pressure gas with our plastic piping may pose a dangerous condition due to the repellent force particular to compressible fluids even when the gas is under similar pressures used for liquids. Therefore, be sure to take the necessary safety precautions such as covering the piping with protective material. For inquiries, please contact us. For conducting a leak test on newly installed piping, be sure to check for leaks under water pressure. If absolutely necessary to use a gas in testing, please consult your nearest service station beforehand.



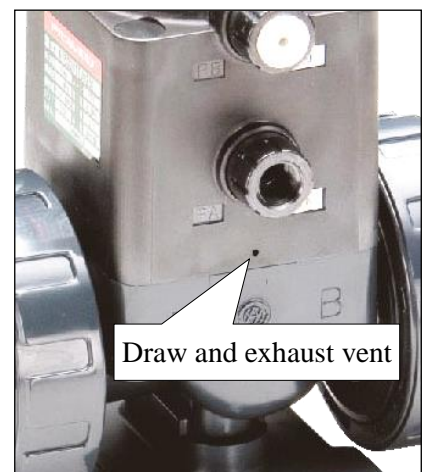
Caution

- Do not step on or apply excessive weight on valve. (It can be damaged.)
- Do not use AV valves in a place where they may become submerged in water. (Submergence will make AV valve fail)
- Do not use the valve in conditions where the fluid may have crystallized. (The valve will not operate properly.)
- Do not disassemble the actuator. (Injury may occur)
- Do not use the valve in vacuum service. (It can be damaged)
- Keep the valve away from excessive heat or fire. (It can be damaged, or destroyed.)!
- Always operate the valve within the pressure vs. temperature range. (The valve can be damaged or deformed by operating beyond the allowable range.)
- Allow sufficient space for maintenance and inspection.
- Select a valve material that is compatible with the media. For chemical resistance information, refer to “CHEMICAL RESISTANCE ON ASAHI AV VALVE”. (Some chemicals may damage incompatible valve materials.)
- Please contact us, when use for the fluid containing the crystalline substance. (It would make the valve unable to seal)
- Keep the valve out of direct sunlight, water and dust. Use cover to shield the valve. (The valve will not operate properly.)
- Perform periodic maintenance. (Leakage may develop due to temperature changes or periods of prolonged storage, rest, or operation.)





Warning


- The actuator of diaphragm valve have draw and exhaust vent. The fluid might spout when the diaphragm is damaged by the condition. Perform periodic maintenance.



(3) General instructions for transportation, unpacking and storage

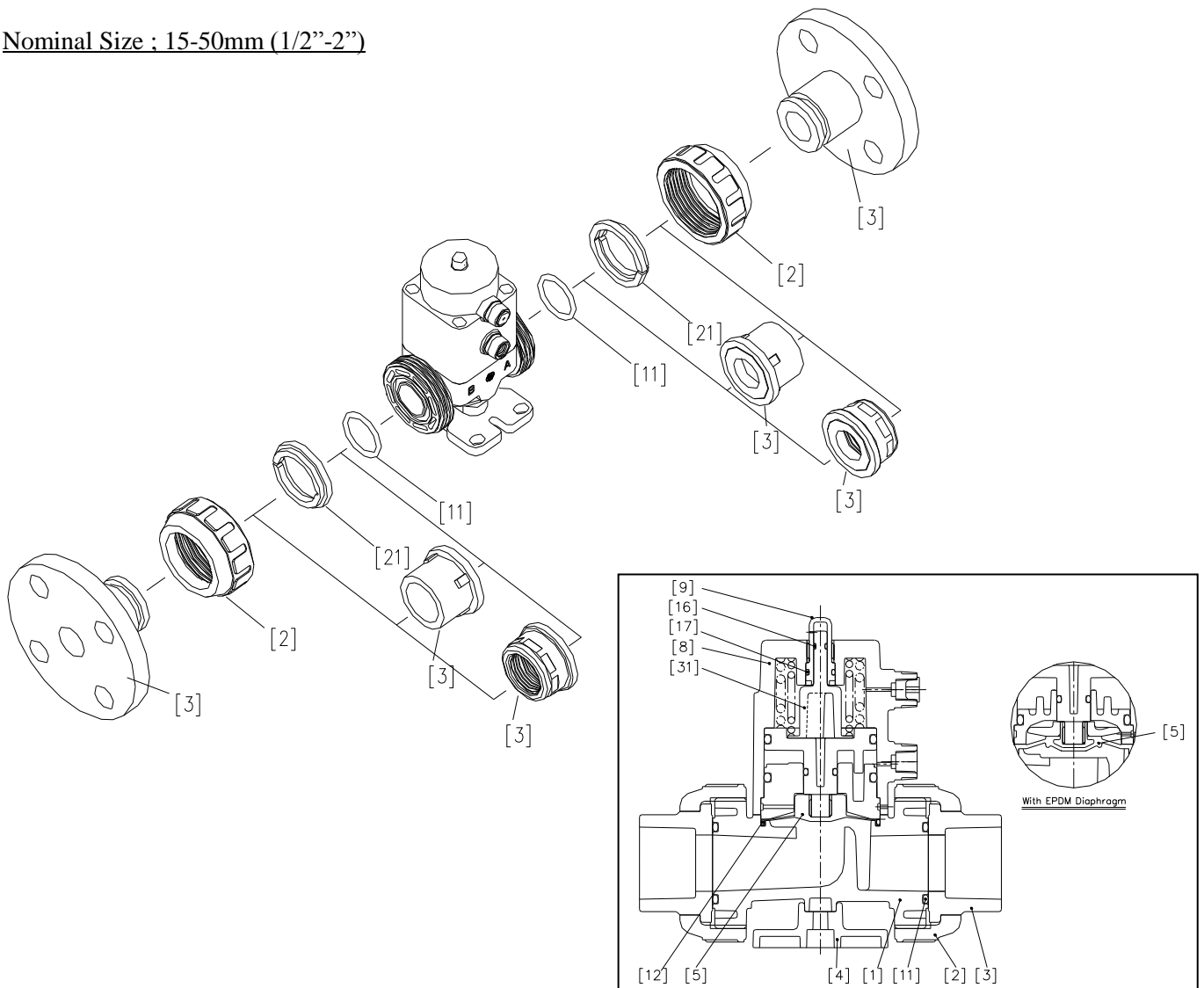
 - When suspending and supporting a valve, take care and do not stand under a suspended valve.

 - This valve is not designed to handle impacts of any kind. Avoid throwing or dropping the valve.
 - Avoid scratching the valve with any sharp object.
 - Do not over-stack cardboard shipping boxes. Excessively stacked packages may collapse.
 - Avoid contact with any coal tar creosote, insecticides, vermicides or paint.
 (These chemicals may cause damage to the valve.)

 - Store products in their corrugated cardboard boxes. Avoid exposing products to direct sunlight, and store them indoors (at room temperature). Also avoid storing products in areas with excessive temperatures. (Corrugated cardboard packages become weaker as they become wet with water or other liquid. Take care in storage and handling.)
 - After unpacking the products, check that they are defect-free and meet the specifications.

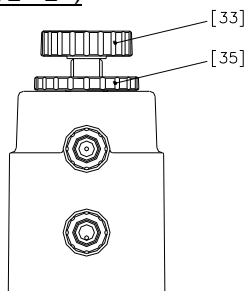
(4) Name of parts

Nominal Size ; 15-50mm (1/2"-2")

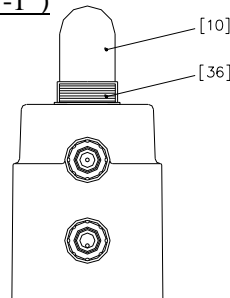


Options

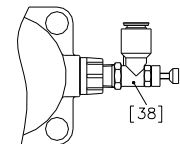
A. Travel Stop
15-50mm (1/2"-2")



B. Travel Stop and Indicator
15-25mm (1/2"-1")

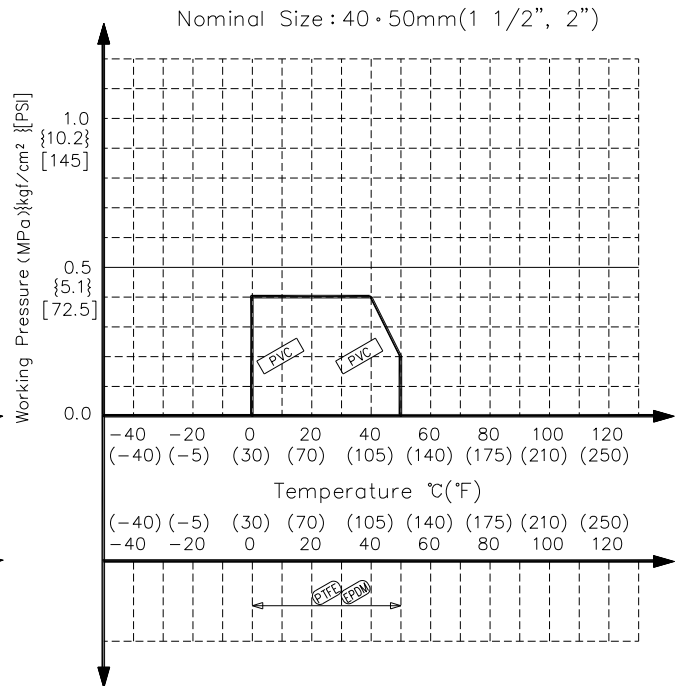
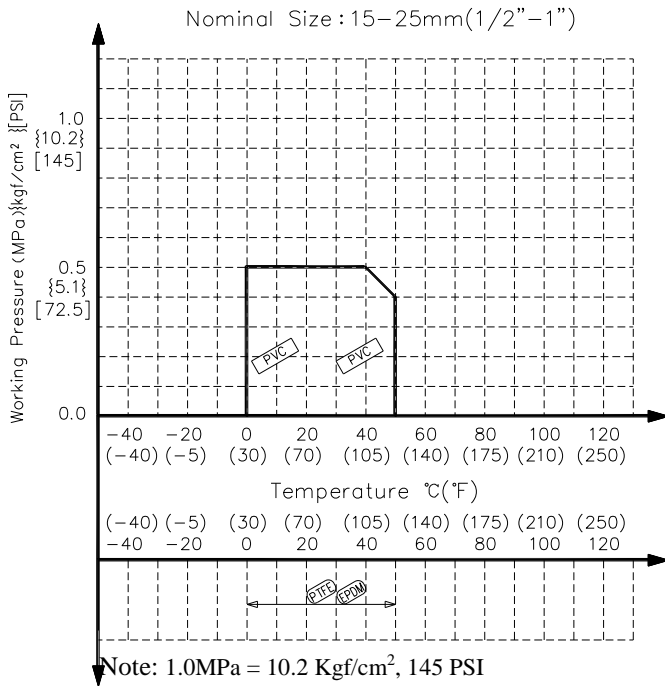


C. Speed Controller
15-50mm (1/2"-2")

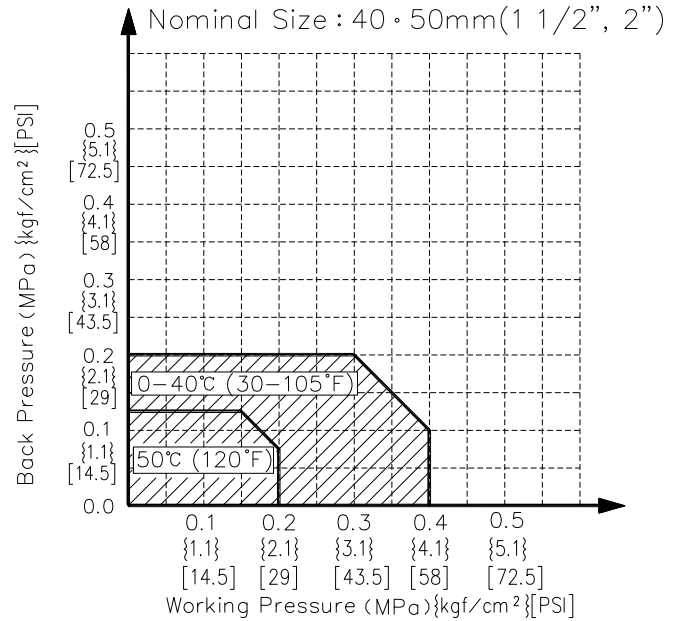
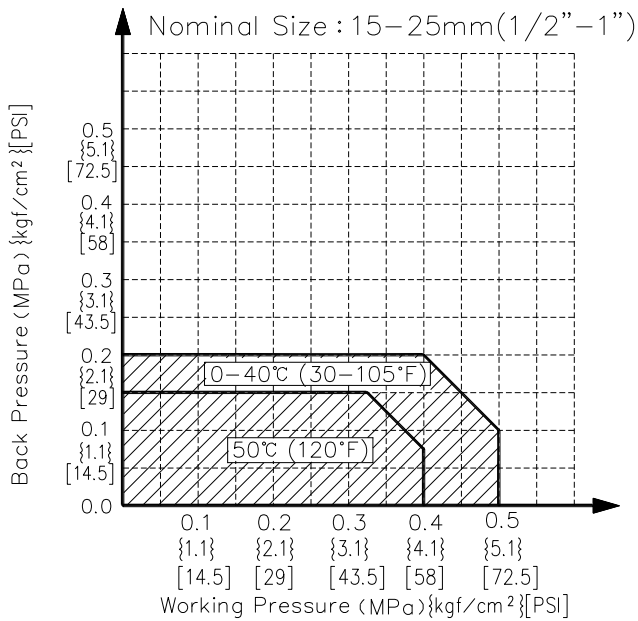


[1]	Body	[5]	Diaphragm	[21]	Stop Ring
[2]	Union Nut	[8]	Cylinder Body	[31]	Indicator (A)
[3b]	End Connector (Socket End)	[9]	Gauge Cover (A)	[33]	Travel Stop Handle
[3c]	End Connector (Threaded End)	[10]	Gage Cover	[35]	Travel Stop Lock Nut (A)
[3d]	End Connector (Flanged End)	[11]	O ring (A)	[36]	Travel Stop Lock Nut (B)
[4]	Base	[12]	O ring (B)	[38]	Speed Controller

(5) Working pressure vs. temperature



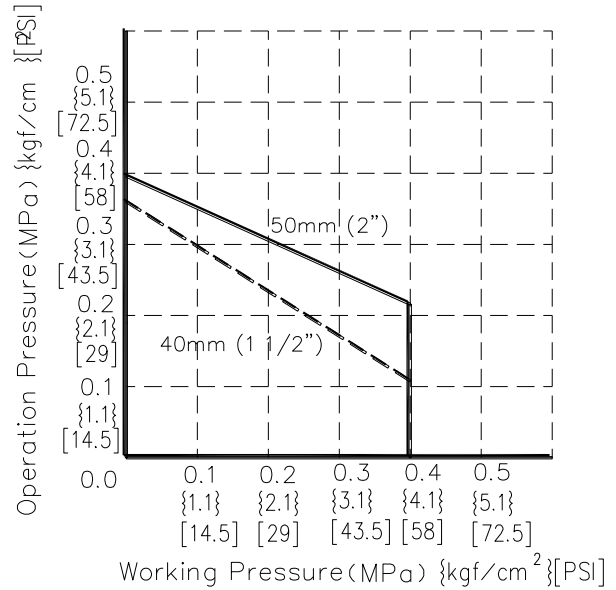
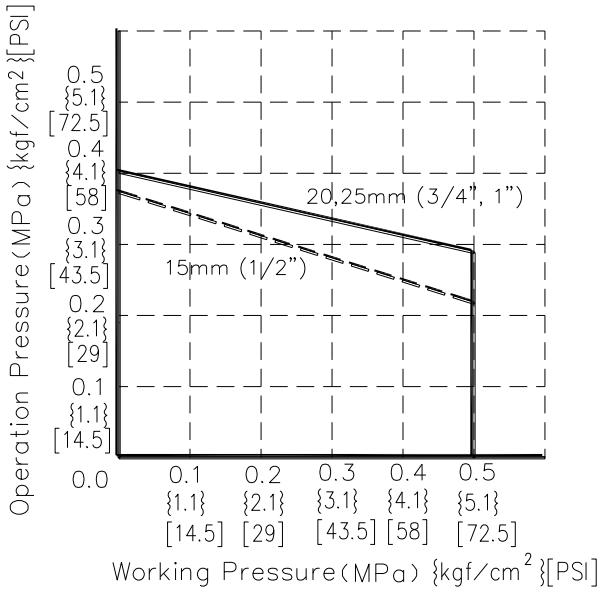
(6) Working pressure vs. back pressure



(7) Working pressure vs. operation pressure

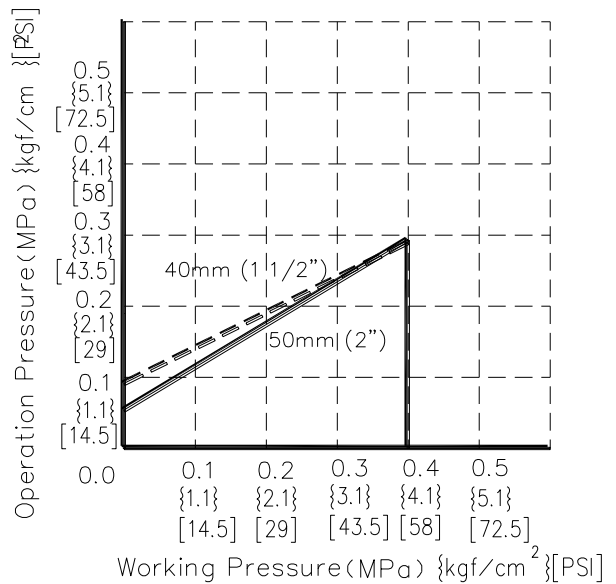
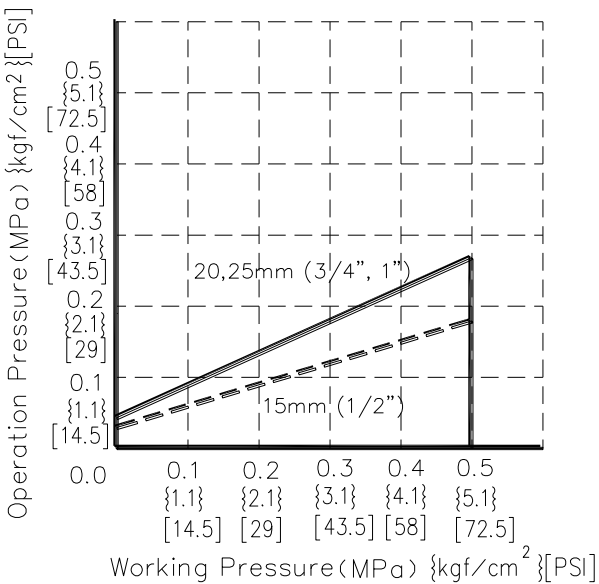
(Air to Open)

Working Pressure and Operation Pressure



(Double Acting)

Working Pressure and Operation Pressure



(8) Specification of products

Items	Nominal Size				
	15mm (1/2")	20mm (3/4")	25mm (1")	40mm (1 1/2")	50mm (2")
Action	Air to Open, Double Acting				
Fluid	Pure water, Chemical				
Fluid Temperature	0-50°C (30-122°F) *1				
Working Pressure Range	0-0.5MPa {5.1kgf/cm ² } [72.5PSI]			0-0.4MPa {4.1kgf/cm ² } [58PSI]	
Valve Seat Leakage	0cm ³ /min (Hydraulic)				
Back Pressure Range	0-0.2MPa {2.1kgf/cm ² } [29PSI] *2				
Ambient Temperature	0-50°C (30-122°F)				
Frequency of Opening and Closing	Within 20 times/min			Within 15 times/min	
Orifice Diameter	16mm(0.63")	22mm(0.87")	22mm(0.87")	40mm(1.57")	50mm(1.97")
Cv Value	4.8	8	9.5	26	44
Operating Pressure	Air to Open; 0.4-0.5MPa {4.1-5.1kgf/cm ² } [58-72.5PSI] Double Acting; 0.3-0.4MPa {3.1-4.1kgf/cm ² } [43.5-58PSI]				
Air Supply Port Size	Rc1/8				
Installation Direction	Any direction				

*1 Refer to (4) "Comparison between working temperature and pressure" for details.

*2 Refer to (5) "Comparison between working pressure and back pressure" for details.

(9) Specifications of actuator

Nominal size		15mm (1/2")	20mm (3/4")	25mm (1")	40mm (1 1/2")	50mm (2")
Operating Pressure	Double Acting	0.3-0.4 MPa {3.1-4.1 kgf/cm ² } [43.5-58 PSI]				
	Air to Open	0.4-0.5 MPa {4.1-5.1 kgf/cm ² } [58-72.5 PSI]				
Air Consumption L/Times (ANR) (at 0.4MPa)	Double Acting	0.14	0.32	0.32	1.24	2.19
	Air to Open	0.12	0.26	0.26	1.02	1.78
Air Supply Port Size	Double Acting Air to Open	Rc 1/8				

(10) Specifications of options

Travel Stop

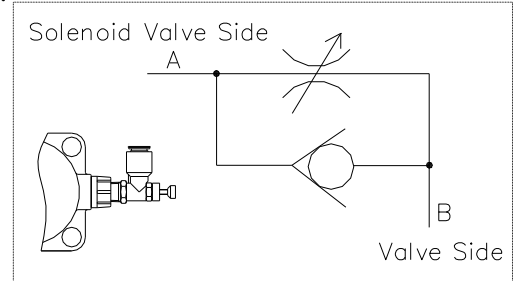
It is used for adjusting flow rate. Flow can be adjusted by travel stop.

Speed Controller

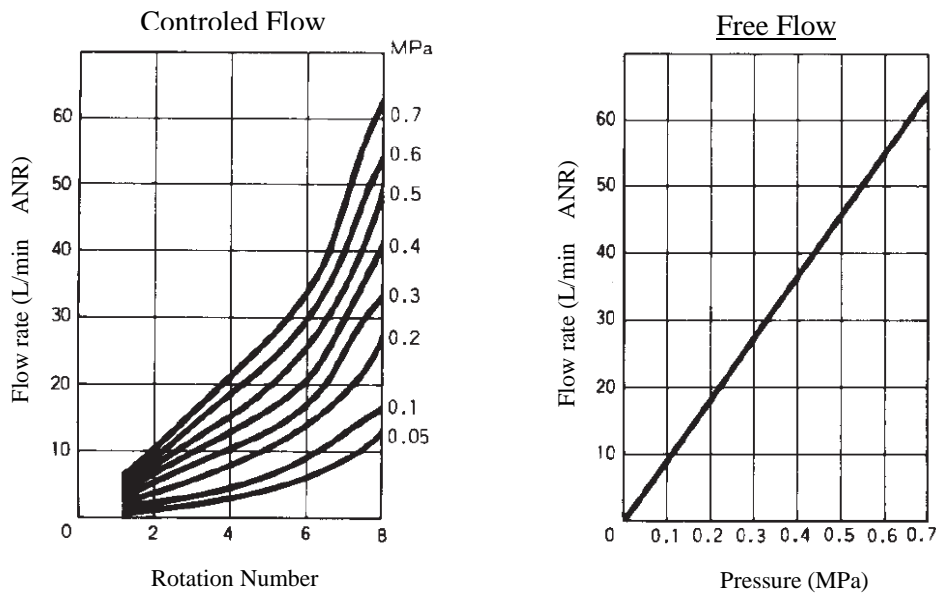
It is used for adjusting the opening-and-closing speed of a valve.

JIS Sign

Action	Nom.Size	Type	Size
Double Acting Air to Open	15-50 mm (1/2"-2")	M6R-01-O	O.D. 6mm tube



<Flow property of Speed Controller>



* Please refer to section 14 "Adjustment procedure for options" for details.

<Combination of Options>

Nominal Size; 15-25mm(1/2"-1")

Combination No.	1	2	3	4	5	6
Indicator	○*	○*	-	-	○	○
Speed Controller	-	○	-	○	-	○
Travel Stop	-	-	○	○	○	○

* Standard equipment

Nominal Size; 40, 50mm(1 1/2"-2")

Combination Patterns	1	2	3	4
Indicator	○*	○*	-	-
Speed Controller	-	○	-	○
Travel Stop	-	-	○	○

* Standard equipment

(11) Installation procedure



Warning

- When suspending and supporting a valve, take care and do not stand under a suspended valve.



- Be sure to conduct a safety check on all hand and power tools to be used before beginning work.
 - Wear protective gloves and safety goggles as fluid remain in the valve even if the pipeline is empty. (You may be injured.)



Caution

- When installing a pipe support by means of a U-band or something similar, take care not to over-tighten. (Excessive force may damage the pipe.)
 - When installing, disassembling, or reassembling the piping, fix the End Connector.
 - Before a water test, be sure that the Union Nut is tightly fastened.
 - Fasten the Union Nut while avoiding the parallelism and axial misalignment of the flange surface.
 - When connecting an ASAHI AV Valve to metal piping, take care not to let the pipe stress on the ASAHI AV Valve.
 - Take care not to over-tighten the Union Nut. (The valve can be damaged.)
 - Do not use the pipe wrench. (The valve can be damaged.)

Socket type



Warning

- When using an adhesive, ventilate the space sufficiently, prohibit the use of a fire in the vicinity, and do not inhale adhesive vapors directly.



- If an adhesive gets into contact with your skin, wash it off immediately. If you feel sick or find any anomaly, receive a physician's diagnosis and take appropriate measures promptly.



Caution

- Take care in doing work at low temperatures. Solvent vapors are hard to evaporate and are likely to remain. (Solvent cracks may occur, damaging the equipment.) After assembling the piping system, open both ends of the piping and use a fan (of the Low-Voltage Type) or something similar to ventilate the space, thus removing the solvent vapors.
 - Use the appropriate Asahi AV cement.
 - Conduct a water test at least 24 hours after joining the pipes with an adhesive.

Necessary items

- Adhesive for hard vinyl chloride pipes
- Strap Wrench

Procedure

- 1) Loosen the union nut [2] with a strap wrench.
- 2) Remove the union nut [2] and end connector [3].
- 3) Lead the union nut through the pipe.
- 4) Make sure the hub part of the end connector [3] is clean with waste cloth.
- 5) Apply adhesive evenly to the hub part of the end connector [3] and the pipe spigot.

* Do not apply more adhesive than necessary.

(The valve can be damaged due to solvent cracking)

Adhesive Quantity (guideline)

Nom. Size	15mm (1/2")	20mm (3/4")	25mm (1")	40mm (1 1/2")	50mm (2")
Quantity(g)	1.0	1.3	2.0	3.5	4.8

- 6) After applying adhesive, insert the pipe quickly to the end connector [3] and leave it alone for at least 60 seconds.
- 7) Wipe away overflowing adhesive.
- 8) Make sure that O-ring(A) [9] is mounted
- 9) Set the end connector [3] and union nut [2] directly on the body without allowing the O-ring(A) [9] to come off.
- 10) Make sure that flow direction is correct.
- 11) Tighten union nut [2] on each valve until hand tight.
- 12) Using a strap wrench tighten union nuts [2] uniformly on each side approx. 1/4 to 1/2 turns.

* Avoid excessive tightening. (The valve can be damaged)

Threaded type



Caution

- Avoid excessive tightening. (The valve can be damaged.)



- Make sure that the threaded connections are plastic x plastic.
(Metallic thread can cause damage.)

- Wrap the threaded joints on our plastic piping with sealing tape. Using a liquid sealing agent or liquid gasket may cause stress cracks (Environmental Stress Cracking). Our product warranty shall not apply in case of said use, even when said use is unavoidable.

Necessary items

● Sealing tape

● Strap wrench

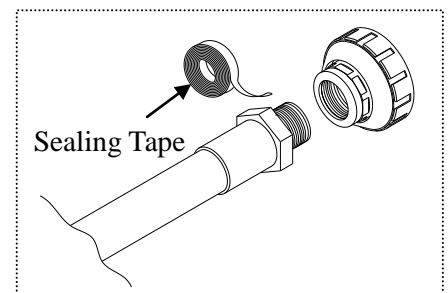
● Spanner wrench

Procedure

- 1) Wind a sealing tape around the external thread of joint, leaving the end (about 3mm) free.
- 2) Loosen the union nut [2] with a strap wrench.
- 3) Remove the union nut [2] and the end connector [3].
- 4) Tighten the external thread of the joint and the end connector [3] hard by hand.
- 5) Using a spanner wrench, screw in the end connector [3] by turning 180° -360° carefully without damaging it.



* Avoid excessive tightening. (The valve can be damaged.)

- 6) Make sure that the O ring (A) [11] is mounted.
- 7) Set the end connector [3] and union nut [2] directly on the body without allowing the O ring (A) [11] to come off.



- 8) Make sure that flow direction is correct.
- 9) Tighten union nut [2] on each valve until hand tight.
- 10) Using a strap wrench tighten union nuts [2] uniformly on each side approx. 1/4 to 1/2 turns.
 - * Avoid excessive tightening. (The valve can be damaged)

Flanged type



Caution   - Use flat faced flanges for connection to AV Valves.
 - Ensure that the mating flanges are of the same standards.
 - Be sure to use sealing gaskets (AV Gasket), bolts, nuts, and washers and tighten them to specified torques.
 (When a non-AV gasket is used, a different tightening torque instruction should be followed)

Necessary items

- Torque wrench
- Spanner wrench
- AV gasket
- Bolt, Nut, Washer (For many flanges specification)

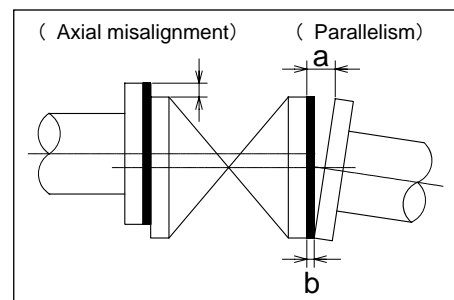
Procedure

- 1) Make sure that flow direction is correct.
- 2) Set the AV gasket between the flanges.
- 3) Insert washers and bolts from the pipe side, insert washers and nuts from the valve side, then temporarily tighten by hand.



Caution   - The parallelism and axial misalignment of the flange surface should be under the values shown in the following table to prevent damage to the valve.
 (A failure to observe them can cause destruction due to stress application to the pipe.)

Unit: mm (inch)

Nominal size	Axial misalignment	Parallelism (a-b)
15mm - 25mm (1/2" - 1")	1.0 (0.04)	0.5 (0.02)
40mm, 50mm (1 1/2" - 2")	1.0 (0.04)	0.8 (0.03)



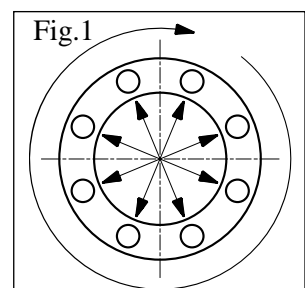
- 3) Tighten the bolts and nuts gradually with a torque wrench to the specified torque level in a diagonal manner. (Refer to Fig.1)
- 4) Tighten it more than 2 turns clockwise with specified torque. (Refer to Fig.1)

Caution   - Do not tighten at the specified torque or more.
 (The valve can be damaged or leak.)

Specified torque value

Unit : N·m {kgf·cm} [lb·inch]

Nom. Size	15-20mm (1/2"-3/4")	25-40mm (1"-1 1/2")	50 mm (2")
PTFE·PVDF coated	17.5 {179} [155]	20.0 {204} [177]	22.5 {230} [200]
Rubber	8.0 {82} [71]	20.0 {204} [177]	22.5 {230} [200]



* When union nut is removed from body, please equip by the following methods.

- 1) Make sure that the O ring (A) [11] is mounted.
- 2) Set the end connector [3] and union nut [2] directly on the body without allowing the O ring (A) [9] to come off.
- 3) Make sure that flow direction is correct.
- 4) Tighten union nut [2] on each valve until hand tight.
- 5) Using a strap wrench tighten union nuts [2] uniformly on each side approx. 1/4 to 1/2 turns.

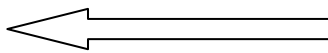
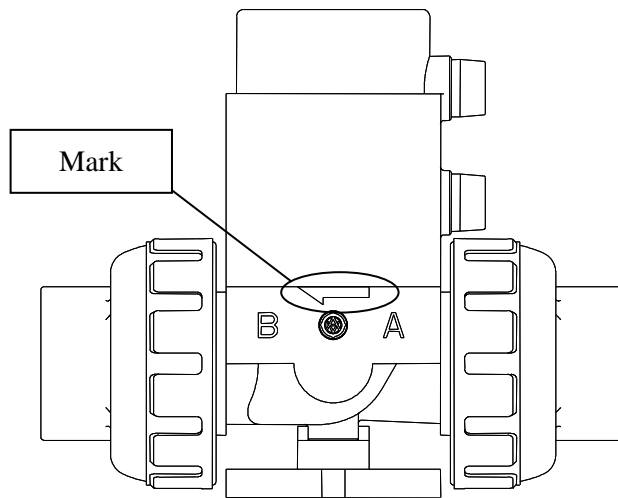
* Avoid excessive tightening. (The valve can be damaged)



Caution

- Tighten union nut on each valve until tight by hand, after that tighten union nuts uniformly on each side approx. 1/4 to 1/2 turns by using a strap wrench. At this point, make sure that there is no piping stress. (If piping stress is applied, a cap nut cannot be closed easily and the leak of fluid will become easy to occur.)
- Avoid excessive tightening. (The valve can be damaged.)
- Make sure that flow direction is correct. (The valve can be damaged.)

Flow Direction



Flow Direction

※ Flow Direction ; upstream is "A", downstream is "B".

(12) Support setting procedure

- Caution**
- Do not subject the valve pump vibrations. (The valve may be damaged)
 - When installing a pipe support by means of a U-band or something similar, take care not to fasten it too much. (Excessive tension may damage it.)
 - Set the valve support. (The valve may be damaged because the actuator is heavy)

Necessary items

- Spanner Wrench
- U-type Clamp (with Bolt)
- Rubber Sheet

Level Plumber

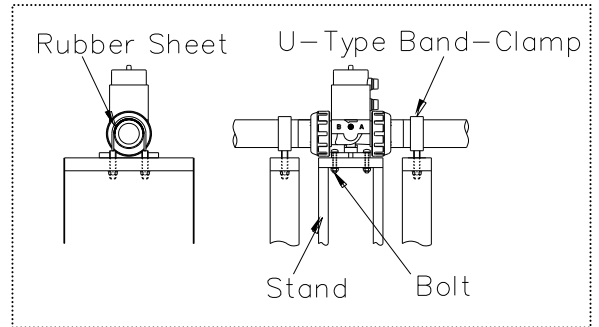
- Using mounting Thread or Base.

Fix the installation jig (under the valve) and stand with bolts (Refer to page 14)

- * Make sure that the length of screw bolt.
(The valve may be damaged)

Spread the rubber sheet on the pipe and secure pipe with U-type clamp.

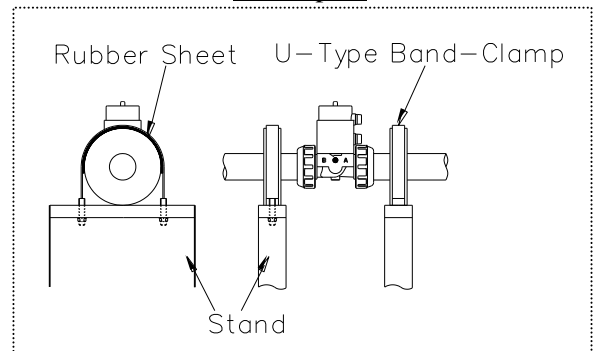
Example



- Using U-type Clamp (Only Flanged End)

Spread the rubber sheet on the flange and secure flange with U-type clamp.

Example

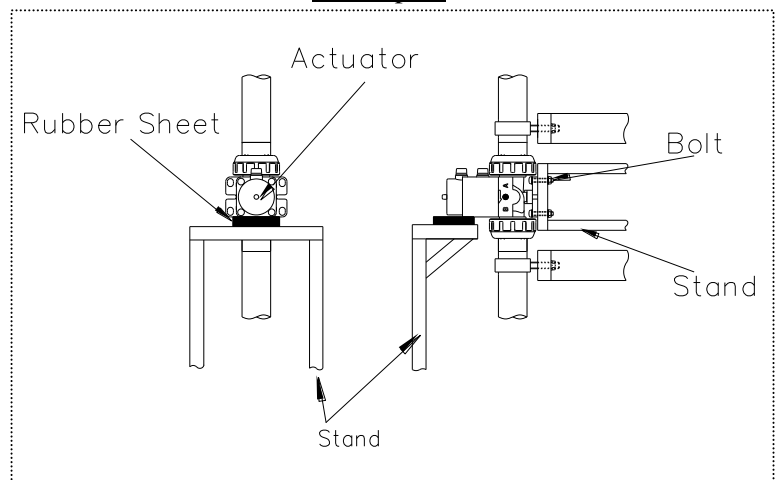


Perpendicular Plumber

Fix the installation jig (under the valve) and stand with bolts (Refer to page 14)

Spread the rubber sheet between the actuator and stand.

Example



(13) Dimension of mounting thread and base



Caution

- When screwing in a Metal Insert (Ensat), install it vertically. Refer to the User's Manual for Metal Insert (ENSAT) by the Maker.

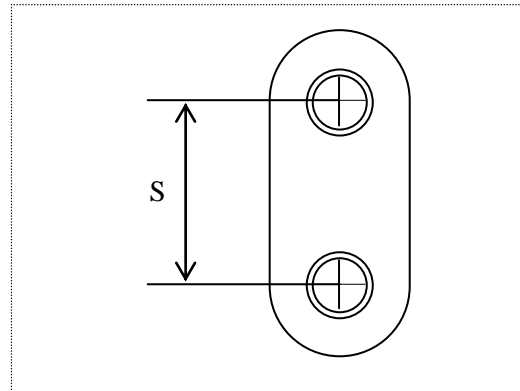


- Avoid excessive tightening. (The valve can be damaged)
- Make sure that the length of screw bolt. (The valve may be damaged)

<Mounting Thread>

Mounting Thread Dimension Unit:mm(inch)

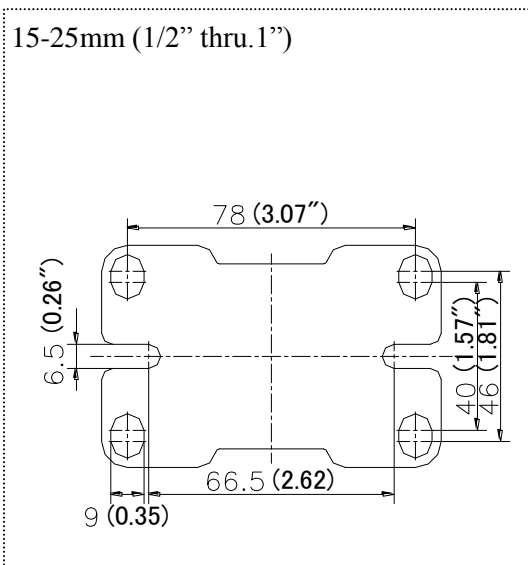
Nominal size	S	Thread Size	Thread Depth
15mm (1/2")	20 (0.79)	M6	7 (0.28)
20mm (3/4")	25 (0.98)	M6	7 (0.28)
25mm (1")	25 (0.98)	M6	7 (0.28)
40mm (1 1/2")	45 (1.77)	M10	10 (0.39)
50mm (2")	45 (1.77)	M10	17 (0.67)



<Base>

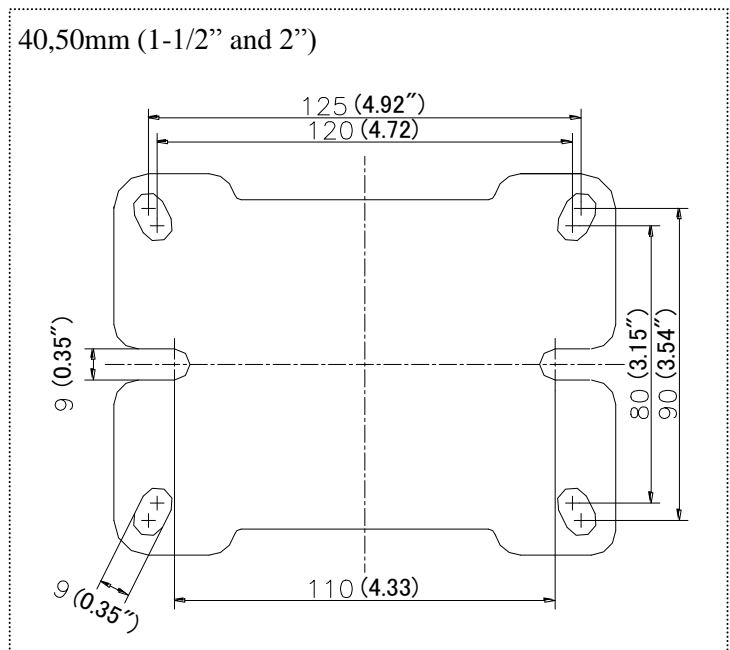
Unit:mm(inch)

15-25mm (1/2" thru. 1")



Unit:mm(inch)

40,50mm (1-1/2" and 2")



(14) Air piping procedure



Caution

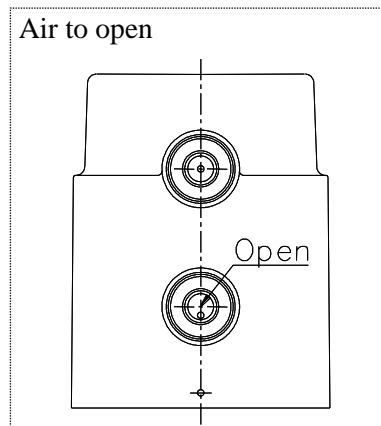
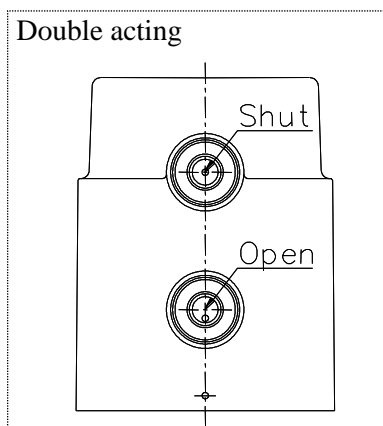
- Do not remove a dust-proof cap provided to piping port before piping work starts.
- Avoid excessive tightening. (The threaded area of a pipe can be damaged.)
- Check the connection locations, air pipe sizes, and screw types with the approved drawings and other documents for the product. Then lay the air piping.
- The operating fluid must be clean air filtered through a pertinent air filter.
- If the actuator is used in an environment below 5°C temperature, its operating fluid must be free from the water and moisture contained in it because of possible problems due to the freeze.
- Steel pipes must always be of the plated.
- Before installing an actuator in pipeline, flash the inside of pipeline completely.
- Do not apply a sealant excessively lest it fall off in the pipeline when an actuator is piped.
- Threaded area of a pipe must be free from the sharp edges and burr.
- The fitting for air supply piping must be plastic (Rc 1/8), and tightened to the proper torque of 0.4-0.6 (Nm). (Use of a metal fitting may damage air supply port)

Necessary items



- Plastic fitting for air piping (Rc1/8)
- Sealing tape

Procedure

- 1) Wind a seal tape onto the male screw of the joint with a blank about 3mm (about 2 threads) left at the end.
- 2) Screw the joint in the piping female screw of the actuator by hand fully.
 - * Avoid excessive tightening. (The valve can be damaged)
 - Do not use tools (spanner etc.). (The valve can be damaged)

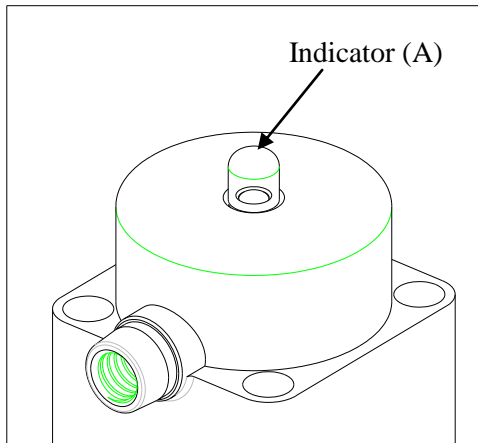


(15) Operating procedure

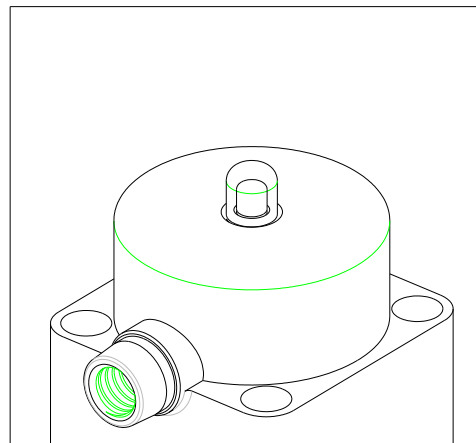
Caution   - Check that the supply pressure of the pressure reducing valve with a filter is Air to Open; 0.4 - 0.5MPa {4.1 - 5.1kgf/cm²} [58 - 72.5PSI], Double Acting; 0.3 - 0.4MPa {3.1 - 4.1kgf/cm²} [43.5 - 58PSI]. (AV valve may not function.)

Procedure

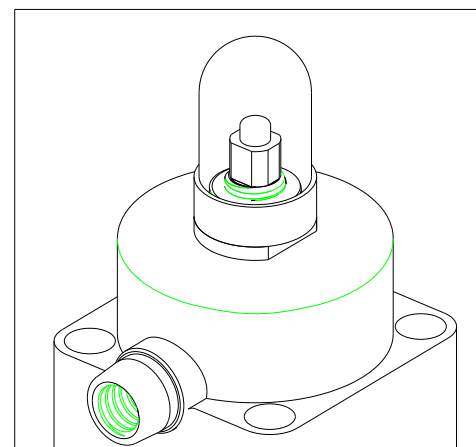
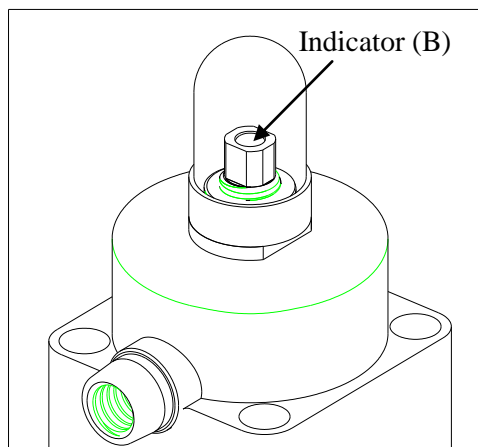
- 1) Supply air to the air supply opening.
- 2) Check that the air supplying side and the stopper [43] position are matching.
- 3) Stop supplying air.



Shut



Open



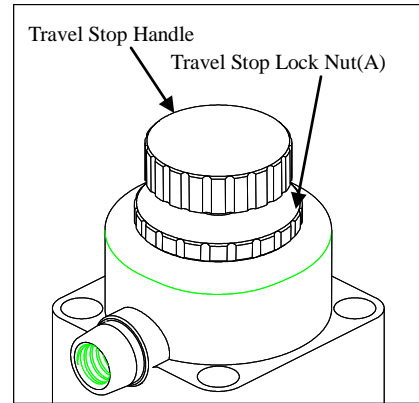
(16) Adjustment procedure for options

<Travel Stop>

*** Combination number of options; 3 & 4**

Procedure

- 1) Completely close valve by controlling the volume of air.
 - 2) Loosen the travel stop lock nut (A) [35].
 - 3) Screw travel stop handle [33] into required flow rate.
 - 4) While holding the travel stop handle [33] by hand, tighten the travel stop lock nut (A) [35].
- * Make sure that the travel stop handle [33] is tightened firmly.



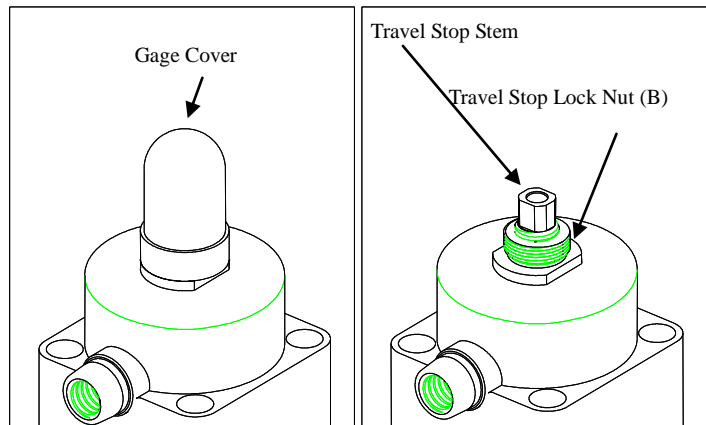
- 5) Open valve by controlling the volume of air, and check if the flow rate become required value. If not, repeat steps from 1) to 4).

<Travel Stop>

*** Combination number of options ;5, 6**

Procedure

- 1) Completely close valve by controlling the volume of air.
 - 2) Remove the gage cover [10].
 - 3) Loosen the travel stop lock nut (B)[36].
 - 4) Screw travel stop stem [34] into required flow rate.
 - 5) Holding travel stop stem [34] with hand and tightened travel stop lock nut (B) [36].
- * Make sure that the travel stop stem [34] is fixed firmly.



- 6) Open valve by air operation, and check if the flow rate become required value. If not, Repeat steps 1) to 4).
- 7) Attach the gage cover [10].

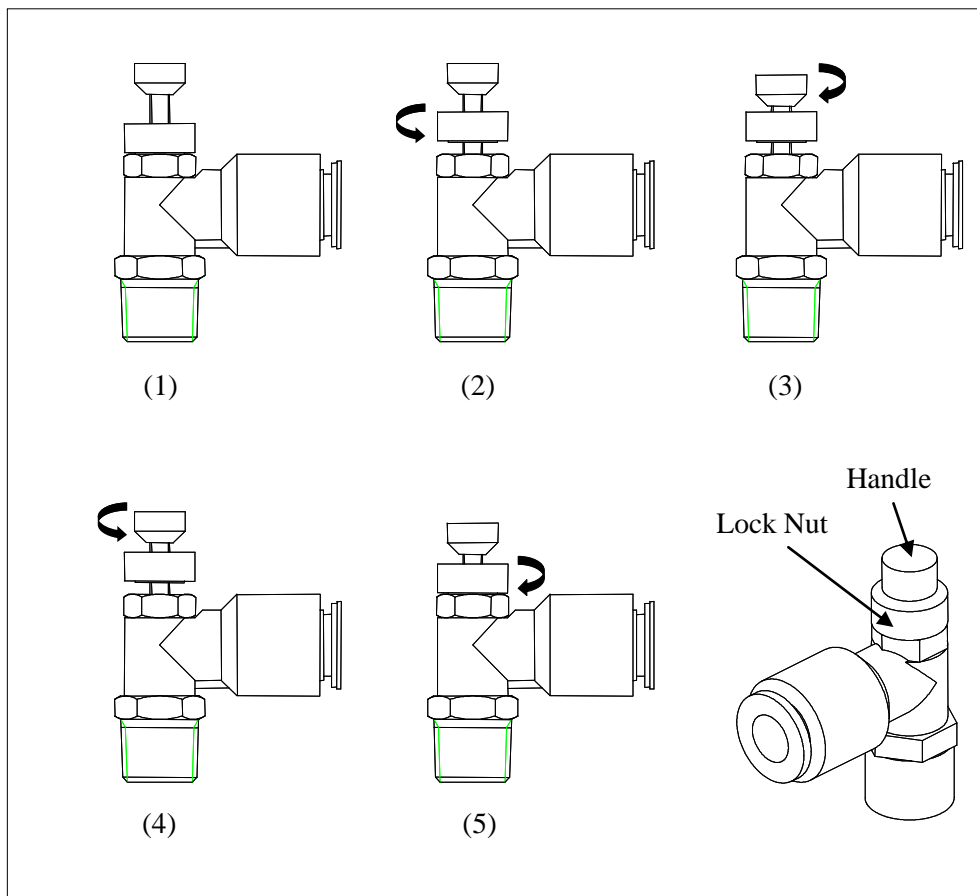
<Speed Controller>

Procedure


- 1) Loosen the lock nut by ccw. turning.(2)

Actuator	Opening Speed	Closing Speed
Air to Open	Not adjustable	Adjustable
Double Acting	Adjustable	Adjustable

- 2) Turn cw. the handle fully.(3)
- 3) Supply the air to speed controller.
- 4) Turn ccw the handle little by little to adjust the opening / closing speed required.(4)
- 5) When the adjustment is finished, tighten the handle lock nuts.(5)

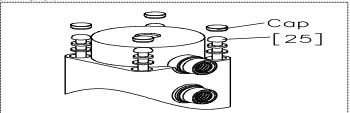


(17) Inspection items

 - Perform periodic maintenance. (Leakage may develop due to temperature changes or over periods of prolonged storage, rest or operation.)

Periodically inspect and maintain the AV valve in accordance with the plant schedule.
(Minimum one maintenance per year is recommended)


Portion to be inspected	Inspection Item
Actuator	① Existence of scratches, cracks, deformation, and discoloring. ② Tightening condition of bolt (A) [25].(If loose the bolt, tighten it diagonally with the torque of 2.0: 15-25mm,3.0: 32-40mm,10. 0: 50mm(N·m)) ③ Existence of abnormality in opening and closing operating sounds. ④ Existence of air leakage. * It is unnecessary to supply oil to this actuator.
Valve Body	① Existence of scratches, cracks, deformation, and discoloring. ② Existence of leakage from the valve to the outside. ③ Existence of leakage when the valve is shut. ④ Tightening condition of bolt (A) [25]. (Loose or not).



(18) Troubleshooting

Problem	Cause	Treatment
The valve does not operate by air operations	Air is not supplied to actuator	Supply air to actuator.
	The speed controller's handle is fully turned in a clockwise direction.	Turn speed controller's handle in a counterclockwise direction. (Refer to pages 18)
	The operation pressure is low.	Check the operating pressure.
Fluid leaks from the valve even when the valve is closed fully.	The diaphragm is worn.	Replace the valve with a new one.
	The diaphragm or the body is scratched.	
	Foreign matter is in the valve.	Check the operating pressure.
The operating pressure is low. (Double acting)		
Fluid leaks to outside from the valve.	The bolt between the body and actuator is loose.	Tighten up the bolt to the specified torque.
	The diaphragm or the body is scratched.	Replace the valve with a new one.
	There is foreign matter between the diaphragm and the body.	
	The union nut is loosened.	Tighten the union nut.
	The O ring (A) [11] is scratched or worn.	Replace the O ring (A) [11] with a new one.
The actuator operates, but the valve does not open or close.	The diaphragm or the joint of diaphragm is broken.	Replace the valve with a new one.

(19) Handling of residual and waste materials

 - Make sure to consult a waste treatment dealer for recommendations on the proper disposal of plastic valves. (Poisonous gas is generated when the valve is burned improperly.)

**Diaphragm Valve Type16
Pneumatic Actuated Type AD
15-50mm (1/2"-2")**

[Automatic Valve]

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