

LEVER-FREE BALL FLOAT AIR TRAP

AGC1V

USER'S MANUAL



 **MIYAWAKI INC.**

SAFETY GUIDE

The model AGC1V is a stainless steel lever-free ball float air trap designed for small condensate loads.

In order to get maximum benefit from this product, be sure to read this manual before installing it.

The following warnings and cautions are shown at appropriate places in this manual.



Failure to observe this type of precaution may lead to serious injury or death.



Failure to follow this type of precaution can lead to injury or damage to equipment and property.

Table of Contents

1	SPECIFICATIONS AND MARKINGS	1
2	CONSTRUCTION DETAILS	2
3	INSTALLATION	3
4	OPERATION	4
5	MAINTENANCE	5
6	TROUBLESHOOTING	7
7	WARRANTY	8
8	SERIAL NUMBER (S. No.) DESIGNATION	9
9	GUIDANCE FOR READING SPECIAL PRODUCT NAME	10

1 SPECIFICATIONS AND MARKINGS



WARNING

Be sure not to use this product at higher pressures than the specified maximum allowable pressure (PMA) or at temperatures higher than the specified maximum allowable temperature (TMA).

The following items are displayed on the name plate or the side of the product.

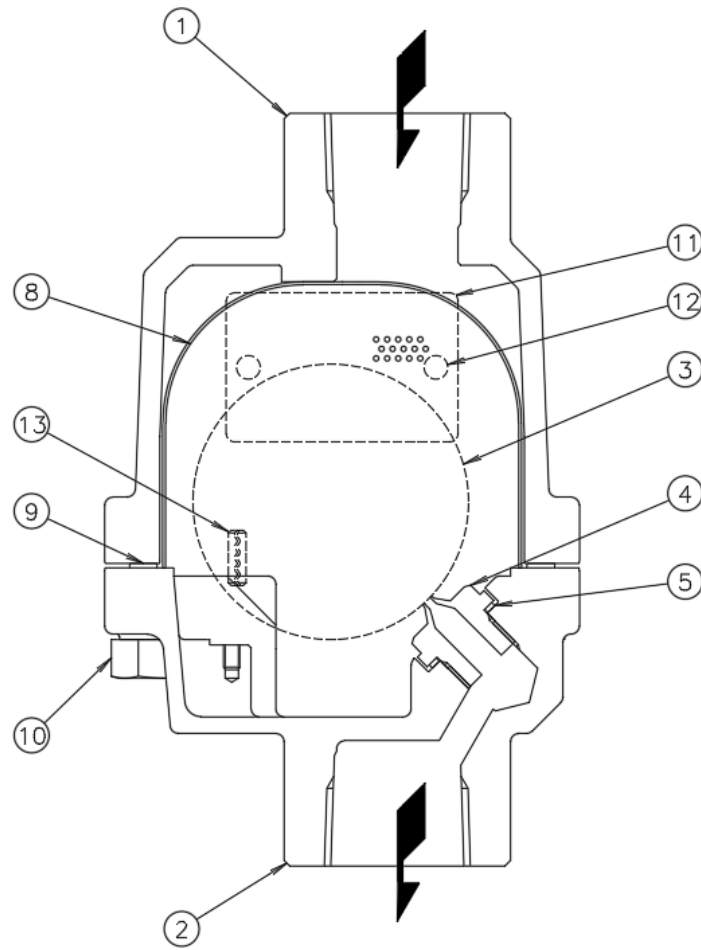
Check the operating characteristics to avoid misuse of the product.

- 1) Maximum allowable pressure (PMA): 2.1 MPa (305 psig)
- 2) Maximum allowable temperature (TMA): 350 °C (662 °F)
- 3) Maximum operating pressure (PMO): 2.1 MPa (305 psig)
- 4) Maximum operating temperature (TMO): 350 °C (662 °F)
- 5) Size: 15 – 25 mm (1/2" – 1")
- 6) Year of production: The two leftmost digits in the four-digit or nine-digit 'S. No.' are the last two digits of the year of production.
- 7) Flow direction: Shown by an arrow
- 8) Body material: Stainless steel SCS13A
- 9) Model : Showing the product model name

- Some pictures and illustrations in this manual are examples of AGC1V models. For more details regarding dimensions and other specifications, please refer to the catalog.

The model AGC1V fully complies with the requirements of the European Pressure Equipment Directive 2014/68/EU. It is classified according to Article 4, Section 3 of the PED, which does not allow to bear the CE marking.

2 CONSTRUCTION DETAILS



-
- | | |
|----------------------|-----------------|
| 1. Body | 8. Screen |
| 2. Bottom Cover | 9. Cover Gasket |
| 3. Float | 10. Bolt |
| 4. Valve Seat | 11. Name Plate |
| 5. Valve Seat Gasket | 12. Rivet |
| | 13. Spring Pin |

3 INSTALLATION



WARNING

Pay very careful attention when working in hazardous environments. There is a risk of explosion and the possibility of dangerous gases leaking. Always check whether the pipeline contains flammable, high pressure or high temperature materials before starting to work.

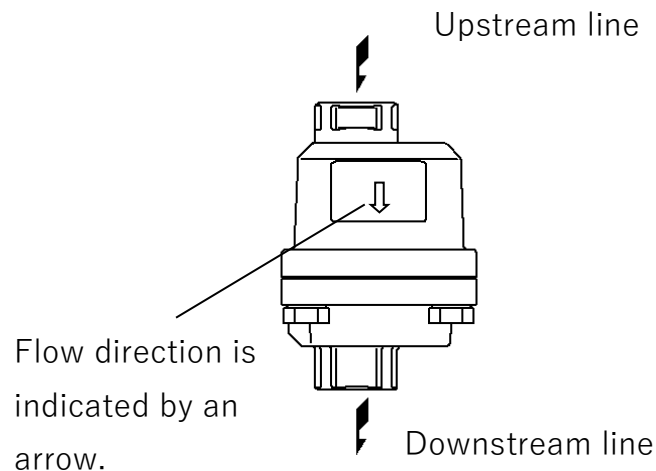
- Make sure that isolation valves are installed on both the upstream and downstream lines.



CAUTION

Before installing the product, open both isolation valves and the bypass valve, if one exists, to blow out any debris or dirt inside the pipeline. After blowing out the line, before starting to work, close the isolation valves and allow time for the temperature to drop to a safe working temperature.

When installing the product, be sure to leave clearance for maintaining it.



- 1) Remove the dustproof seals covering both connections.
※Products shipped in plastic bags may not have dustproof seals.
- 2) Check the flow direction indicated on the body.
- 3) When installing the model AGC1V, install it so that the flow from the upstream line to the downstream line is a vertical one upside down.
- 4) Open the isolation valve on the downstream side. Then open the isolation valve on upstream line slowly and make sure the product works normally.

4 OPERATION



CAUTION

Before starting operation, open the bypass valve or blow valve completely and blow off the scale in the piping.

4.1 Operation procedure

- 1) After blowing off the scale from the piping, close the bypass valve or blow valve.
- 2) Open the stop valve on the trap outlet side.
- 3) Open the stop valve on the trap inlet side.

4.2 Stop procedure

- 1) Close the stop valve on the trap inlet side.
- 2) Close the stop valve on the trap outlet side.

* When stopping for a long time, completely drain the condensate from the piping and trap and close the valves before and after the trap.

5 MAINTENANCE



WARNING

- Before removing the trap from the pipe or disassembling it, be sure to close the isolation valves. Then, release the residual pressure from the trap body (make sure that the pressure in the main body is equal to the atmospheric pressure). After it has fully cooled down (after the temperature of the main body has reached ambient temperature), confirm for safe conditions and then begin to work.
- Even when the isolation valves are closed, there may be residual internal pressure due to leaks from the isolation valves. Therefore, be very careful.



CAUTION

- When replacing parts, make sure the replacement parts are supplied by MIYAWAKI.

The performance of air traps deteriorates gradually over time due to wear, corrosion or dirt accumulating around the valve and the valve seat. Please conduct periodic diagnosis of traps in order to keep the equipment working well.

5.1 Repairs

When a trap fails, it is necessary to clean the internal parts and to replace damaged parts. Take the failed trap apart following the steps below.

5.1.1 Disassembling the air trap

- 1) Untighten the cover bolts (10) and remove the bottom cover (2).
- 2) Take off the screen (8), the float (3) and the cover gasket (9) in that order.
- 3) Unscrew the valve seat (4) and remove it together with the seat gasket (5).
- 5) Clean and inspect all parts. Replace any that are worn or damaged.



CAUTION

Clean the Body and Cover with care not to damage the sealing surface. Scratches on the sealing surface may cause air leakage.

Take appropriate measures according to “6. Troubleshooting”. After cleaning the trap and replacing damaged parts, reassemble the parts in the opposite way as disassembling. Refer to the torque table for the necessary torque.

5.1.2 Reassembling the trap

- 1) Attach the seat gasket (5) to the bottom cover (2) and screw the valve seat (4) into the bottom cover (2).
- 2) Put the screen (8) and the float (3) into the body (1).
- 3) Mount the cover gasket (9) on the body (1), put the bottom cover (2) on the body (1) and tighten the cover bolts (10). Pay attention to the right location of the cover gasket (9). When reassembling the AGC1V, insert the spring pin (13) of the body (1) into the related hole of the bottom cover (2).

Torque table

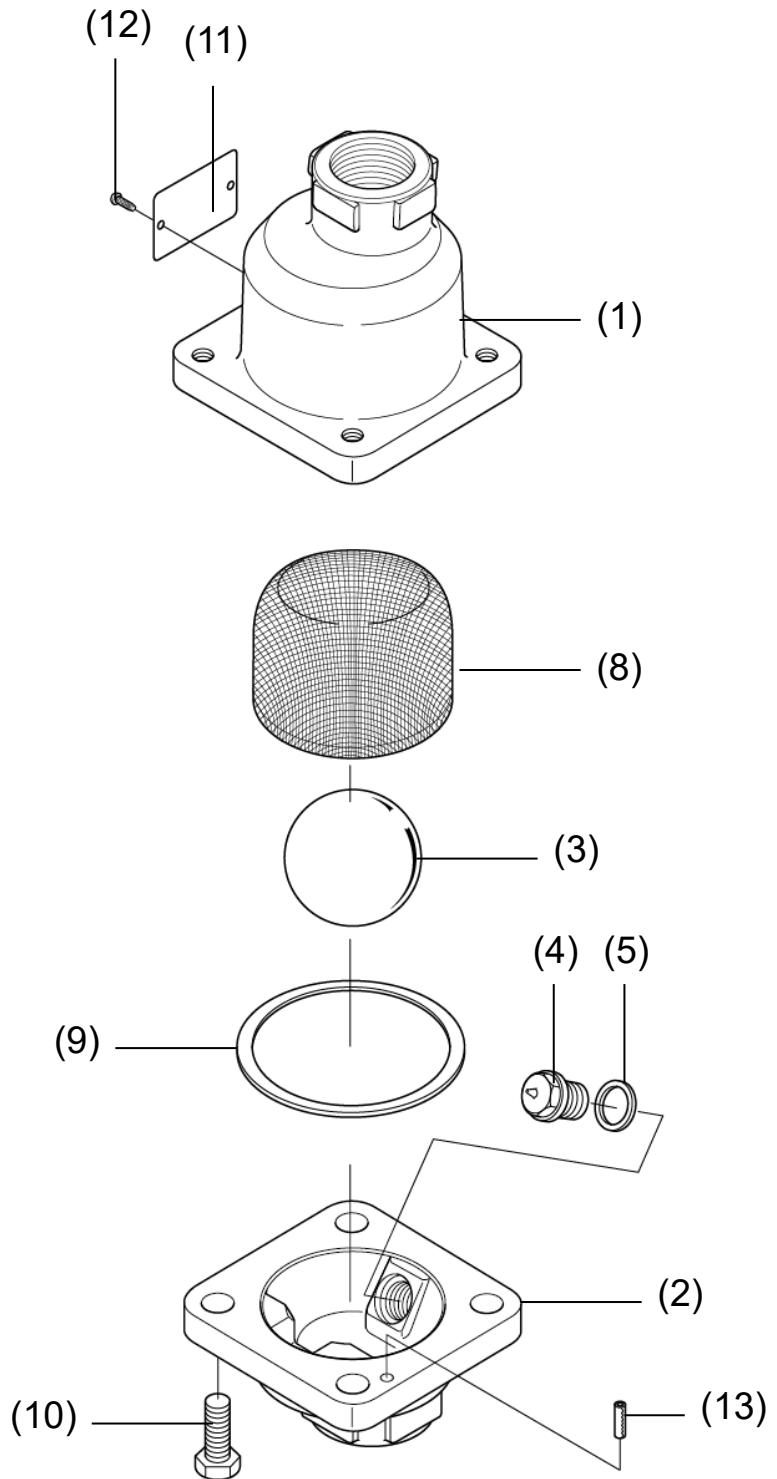
Parts	Tools	Across the flats	Torque
Valve seat (4)	Torque wrench	13 mm (0.51")	25 N·m
Cover bolt (10)	Torque wrench	17 mm (0.67")	28 N·m



CAUTION

When reassembling always replace the Cover Gasket (9) and the Seat Gasket (5) with new ones. Tighten the Cover Bolts (10) evenly crosswise.

1. Body
2. Bottom Cover
3. Float
4. Valve Seat
5. Seat Gasket
8. Screen
9. Cover Gasket
10. Cover Bolt
11. Name Plate
12. Rivet
13. Spring Pin



6 TROUBLESHOOTING

Problem	Possible cause	Solution
Air leaks or blows through.	The float (3) is damaged.	Replace the float (3).
	Dirt has built up around the valve seat (4).	Disassemble and clean the parts.
	The valve seat (4) is corroded or damaged.	Replace the valve seat (4) with a new one.
	The valve seat (4) is loose.	Check and tighten the valve seat (4). *1
	The seat gasket (5) is damaged.	Replace the seat gasket (5).
Air leaks from the body.	The cover bolts (10) are loose.	Tighten the cover bolts (10). *2
	The sealing surface of the body (1) or the bottom cover (2) is damaged.	Replace the related part with a new one.
	The cover gasket (9) is damaged.	Replace the cover gasket (9).
Insufficient condensate discharged, or no condensate discharged.	The air pressure exceeds the trap's maximum operating pressure.	Reduce the air pressure or replace the trap with a trap with higher PMO.
	Insufficient condensate capacity.	Replace the trap with a larger capacity trap.
	Dirt has plugged the valve seat (4).	Clean the valve seat (4).
	The float (3) is damaged.	Replace the float (3) with a new one.
	The screen (8) is clogged.	Clean the screen (8).

*1 and *2: Refer to the torque table in Section 5, "Maintenance" to retighten the parts to the correct torque.

7 WARRANTY

7.1 Warranty period

The warranty period is 18 months after shipment or 12 months after installation, whichever occurs first.

7.2 Details of the warranty

If the product stops working correctly within the warranty period, we will repair or replace the product free of charge if the cause of the trouble is not one of the following items.

- 1) The precautions described in this manual were not observed.
- 2) User's errors or mistakes such as an inappropriate installation or incorrect handling, or an excessively large impact caused by dropping
- 3) Problems caused by devices or equipment other than MIYAWAKI's, or a disallowed use environment
- 4) When a repair or modification has been performed by anyone other than MIYAWAKI or people who are authorized to make such repairs
- 5) Intrusion of salt or other substances that promote significant rust or corrosion or problems from fluids that contain the same substances
- 6) Consumable parts such as Packing, Gasket, O-ring, Diaphragm, etc.
- 7) Attachment or accumulation of foreign matter in the pipe, such as dust and scale
- 8) Problems from fires, natural disasters, or other force majeure which is not MIYAWAKI's responsibility

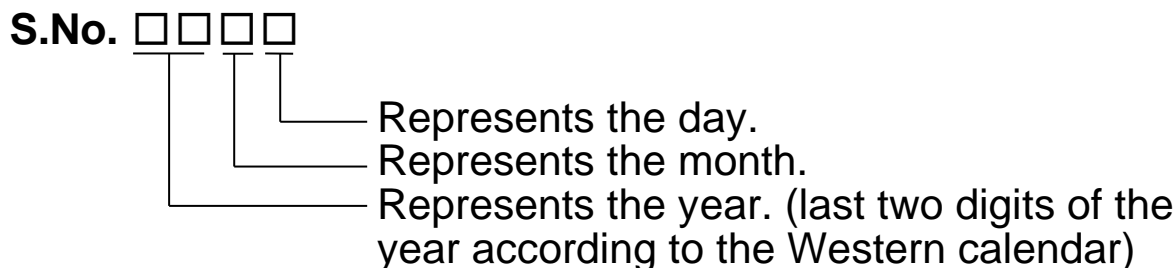
7.3 Warranty limitation

The remedy available under the warranty shall not exceed the sales price of the products delivered, for any cause whatsoever.

8 SERIAL NUMBER (S. No.) DESIGNATION

The following 4-digit or 9-digit 'S.No.' is displayed on the product.

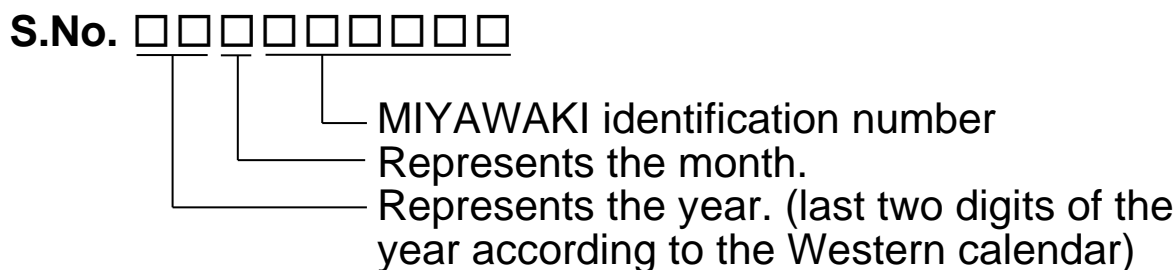
- For 4-digit display



Example of serial number designation

1 7 1 1 → Jan.1, 2017
2 9 X M → Oct. 21, 2029

- For 9-digit display



Example of serial number designation

1 7 1 1 2 C 0 2 0 → Jan., 2017
2 9 X 0 5 M 0 5 0 → Oct., 2029

Month designation system

Month	1	2	3	4	5	6	7	8	9	10	11	12
Symbol	1	2	3	4	5	6	7	8	9	X	Y	Z

Day designation system

Day	1	2	3	4	5	6	7	8	9	10	11	12
Symbol	1	2	3	4	5	6	7	8	9	A	B	C

Day	13	14	15	16	17	18	19	20	21	22	23	24
Symbol	D	E	F	G	H	J	K	L	M	N	O	P

Day	25	26	27	28	29	30	31
Symbol	Q	R	S	T	U	V	W

9 GUIDANCE FOR READING SPECIAL PRODUCT NAME

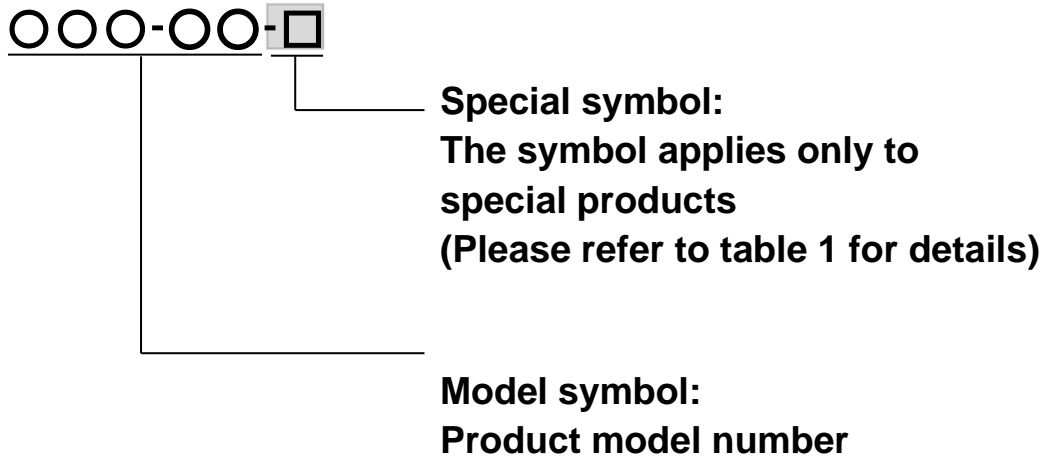


Table 1 Symbol description

Suffix	Special contents
A	Trap for high-pressure gas installed property (only for Gas Trap)
C	Blow valve attached
K	Change of gasket
L	Special face to face dimension
M	Change of parts material
P, T	Change of operating pressure, temperature, condensate capacity, etc
R	Change of screen mesh
V	Change of air vent
X	Other than mentioned above or complex of special contents above

-
- お買い上げの製品及びこの取扱説明書内容についてのご質問は下記にお問い合わせください。また、この取扱説明書を紛失したり、汚損により読めなくなった場合は、同じく下記へご請求ください。
 - 特殊仕様の製品については、取扱説明書の内容と一部異なる場合があります。特殊仕様に関する取扱説明書内容についてのご質問は、お買い上げ頂いた販売店若しくは最寄の弊社ミヤワキまでお問い合わせください。
 - 外観及び仕様などは、製品改良のため予告なしに一部変更させて頂くことがあります。
 - © 2021 MIYAWAKI INC.
This user's manual may not be reproduced or copied in whole or in part, without the written consent of MIYAWAKI INC.
 - Some special specifications of the product may found to be different from the ones in the user's manual. If you have any question, please contact MIYAWAKI, our local authorized agent, or the company where you purchased the product.
 - In the interest of the development and improvement of our products, MIYAWAKI Inc. reserves the right to change the specification of the products without prior notice.
-



お問い合わせ窓口

製品の使い方やアフターサポートなど、製品に関するお問い合わせは、右のQRコードから、最寄りの弊社事業所までご連絡ください。弊社事業所一覧(連絡先)は右のQRコードをスマートフォン、携帯電話等で読み取っていただくことでアクセスできます。



本社・工場

〒532-0021 大阪市淀川区田川北 2-1-30

Tel : 06-6302-5531(代)

www.miyawaki-inc.com



INTERNATIONAL SALES DEPT.

2-1-30, Tagawakita, Yodogawa-ku, Osaka, 532-0021, Japan

Tel: +81-6-6302-5549

www.miyawaki.net e-mail: export@miyawaki-inc.co.jp

EU Importer and Authorized representative:



Birnbaumsmühle 65, 15234 Frankfurt (Oder), Germany

Tel: +49-335-4007-0097

www.miyawaki.de e-mail: info@miyawaki.de

China Importer and Authorized representative:



Room 1705, No.1, Building No. 311, Yanxin Road, Huishan Economic Development Zone, Wuxi, Jiangsu, China

Tel: +86-510-8359-5125

www.miyawaki-inc.com.cn e-mail: mywkwest@miyawaki-inc.com.cn

808005-02 2105

AGC1V